



## **FINAL REPORT**

### **PRELIMINARY ASSESSMENT/SITE INSPECTION NICHIN COVE LOG TRANSFER FACILITY METALS BURY SITE TUXECAN ISLAND, ALASKA**

**FOR:**

**THE UNITED STATES DEPARTMENT OF AGRICULTURE/FOREST SERVICE  
CONTRACT NO. AG-0116-C-08-0039**

**FEBRUARY 2009**

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## 1.0 EXECUTIVE SUMMARY

The objectives of the work at the Metals Bury Site (MBS) on Tuxekan Island (Figure 1) described in this report were to evaluate the site in regards to the nature, extent, and magnitude of hazardous substance releases, the threat posed to human health and the environment by these releases, and the relevant factors to determine whether a removal or remedial response is warranted based upon observations and analytical results.

The MBS is located approximately 900 feet from the Nichin Cove Log Transfer Facility (LTF) barge landing area, and is comprised of a shot-rock fill pad adjacent to a wetland pond that was created by a beaver dam at a culvert. The MBS appeared to be a dumping area from previous activities associated with the LTF. The MBS is so named because metals, parts, and hoses from equipment were allegedly visible at the edge of the fill, adjacent to the wetland pond, during a previous limited site investigation conducted during 2005 by BNC International, Inc. (BNC). BNC collected sediment samples downgradient of the MBS, but evidence of contamination was not conclusive. The MBS was reportedly used for equipment maintenance, repair, fueling, or other activities.

During mid-October of 2008, BGES conducted a preliminary assessment/site investigation (PA/SI) at the MBS. Three test pits were excavated at the site; two groundwater monitoring wells were installed in two of the test pits; soil, groundwater, surface water, and sediment samples were collected; and background samples of soil, sediment, and surface water were also collected. Each of the soil samples collected from Test Pits 1, 2 and 3, as well as the background soil sample, were found to contain concentrations of arsenic [4.4, 23, 13, and 10 milligrams per kilogram (mg/Kg), respectively] that exceeded the most stringent Alaska Department of Environmental Conservation (ADEC) Method 2 cleanup criterion (direct contact pathway for the over 40 inches of precipitation zone) for arsenic (3.7 mg/Kg); however, none of the soil samples collected from the test pits contained arsenic concentrations that were greater than three times the concentration reported to exist in the background sample, the level at which a release is considered to have occurred. Concentrations of silver were not detected above the method reporting limits (MRLs) for the analyses of each of the soil samples collected. It should be noted however, that the MRLs for silver in each of the soil samples collected from the test pits were greater than three times the MRL listed for silver in the background sample. Additionally, the sample collected from the Test Pit 3, at a depth of approximately 8.4 feet below grade (bg) was found to contain a concentration (1,210 mg/Kg) of diesel range organics (DRO) that exceeded the most stringent ADEC

Method 2 cleanup criterion for this analyte (migration to groundwater, 230 mg/Kg). None of the background soil samples were analyzed for organic contaminant constituents.

Groundwater samples were collected at the MBS, from monitoring wells that were installed in Test Pits 2 and 3. Monitoring Well Sample MW-1, collected from the monitoring well installed in Test Pit 2, exhibited concentrations of arsenic and lead [0.031 and 0.90 milligrams per liter (mg/L), respectively] that exceeded the ADEC cleanup criteria for these analytes (0.010 and 0.015 mg/L, respectively). No organic contaminant constituents were detected in the sample. Monitoring Well Sample MW-2, collected from the monitoring well installed in Test Pit 3, was only analyzed for DRO and residual range organics (RRO) because of a limited recovery of water in the well. Sample MW-2 exhibited a concentration of 1.69 mg/L DRO (which exceeded the ADEC cleanup criterion of 1.5 mg/L), and RRO was not detected above the MRL for the sample. No background samples of groundwater at the site were collected as part of our scope of work.

Three sediment samples were collected downgradient of the MBS from three locations, and two background sediment samples were collected away from the MBS. Two of the sediment samples were collected immediately downgradient of the MBS (SED1 and SED2) and one of the sediment samples was collected near the western edge of the MBS, and approximately 30 feet north of the MBS (SED3). The sediment samples were collected in the same general locations as the surface water samples. Concentrations of arsenic were detected above the ADEC cleanup criterion, as well as the National Oceanic and Atmospheric Administration (NOAA) Screening Quick Reference Tables (SQuiRTs) threshold effects level (TEL) for freshwater sediments in Sediment Samples SED3 and SED2 (6.7 and 6.0 mg/Kg, respectively); as well as in the background sample that was analyzed for arsenic (6.5 mg/Kg). The downgradient samples did not contain concentrations of arsenic that were greater than three times the concentration present in the background sample (6.5 mg/Kg). It should also be noted that concentrations of cadmium within all of the sediment samples (including the background sample) were not detected above the respective MRLs for the analyses; however, the MRLs exceeded the SQuiRTs TEL for this analyte. None of the sediment samples exhibited concentrations of volatile organic compounds (VOCs), gasoline range organics (GRO), DRO, RRO, or polynuclear aromatic hydrocarbons (PAHs) above their respective MRLs. None of the background sediment samples were analyzed for organic contaminant constituents.

Surface water samples were collected downgradient of the MBS from four locations, and one

background surface water sample was collected. Surface Water Samples SW2 and SW3 (duplicate of SW2) contained concentrations of lead that exceeded the most stringent cleanup criterion for chronic exposure of fresh water aquatic life, as listed in the Alaska Water Quality Criteria Manual for Toxic and other Deleterious Organic and Inorganic Substances. Mercury was not detected above the MRLs in any of the surface water samples; however, the MRLs exceeded the most stringent cleanup criterion, protective of human health, based on the ingestion exposure pathway, as outlined in the Alaska Water Quality Criteria Manual for Toxic and other Deleterious Organic and Inorganic Substances. Cadmium was not detected in any of the surface water samples, at concentrations that exceeded the MRLs; however, the MRLs exceeded the most stringent cleanup criterion for chronic exposure of fresh water aquatic life, as listed in the Alaska Water Quality Criteria Manual for Toxic and other Deleterious Organic and Inorganic Substances. Silver was not detected in any of the surface water samples, at concentrations that exceeded the MRLs; however, the MRLs exceeded the most stringent cleanup criterion for acute exposure of fresh water aquatic life, as listed in the Alaska Water Quality Criteria Manual for Toxic and other Deleterious Organic and Inorganic Substances. None of the analyte concentrations or MRLs were greater than three times the reported concentrations of the analytes associated with the background surface water samples.

## **2.0 INTRODUCTION**

BGES, Incorporated (BGES) was contracted by the United States Department of Agriculture/Forest Service (USDA/FS) to implement a Preliminary Assessment (PA)/Site Inspection (SI) for the Nichin MBS in the Tongass National Forest, on Tuxekan Island, Alaska (Figure 1). The PA/SI was designed in a manner such that sufficient, relevant environmental data were collected to allow the Environmental Protection Agency (EPA) to score the Nichin site using the Hazard Ranking System (HRS). BGES reviewed, evaluated, and interpreted the Final Report for the Interim Removal Action at the nearby LTF barge ramp (BNC), provided by the USDA/FS, and with this in mind, prepared a Work Plan, as approved by the USDA/FS and the Alaska Department of Environmental Conservation (ADEC), to describe our methodologies to meet the above-described objectives at the MBS. This report addresses the SI methodologies that were used in the field to characterize the MBS, as approved, and the extent of contamination in the context of applicable ecological and human pathways present at the site.

The objectives listed above were accomplished by means of the excavation of test pits; the collection of soil samples from the excavations; the installation of groundwater monitoring wells in two of the

excavations; the collection of groundwater samples and surface water samples; and the collection of sediment samples. Background samples from each of these media (except for groundwater) were also collected. Analyses of the samples included GRO, VOCs, DRO, RRO, PAHs, and Resource, Conservation and Recovery Act (RCRA) metals.

The BGES site worker that conducted the work has completed a 40-hour HAZWOPER course, and has maintained a current 8-hour annual refresher. Furthermore, all work conducted under this contract was performed in compliance with all federal, state, and local regulations, as applicable. All technical project personnel were Qualified Persons as defined by the ADEC.

### **3.0 PHYSICAL SETTING AND BACKGROUND**

The MBS site is located on Tuxekan Island, Alaska, at the Nichin Cove LTF. The LTF is located on the eastern shore of Tuxekan Island, a coastal forest which opens into the Tuxekan Passage, and is located approximately 60 miles northwest of Ketchikan and 2 miles southwest of Naukati on Prince of Wales Island. The general coordinates for the LTF area are 55° 51' 15" north, and 133° 13' 45" west. The MBS area is shown on Figure 2. The LTF consists of a log transfer area, a log storage yard, a maintenance/shop area, a fuel farm, and a sorting yard.

#### **3.1 Physical Setting**

The LTF is located in the Tongass National Forest. Tuxekan Island has several roads that were constructed for the logging operations. The Tongass Forest is characterized by steep, forested mountains carved by glacial ice, which left deep, U-shaped valleys with streams, lakes, saltwater straits and bays. No permafrost exists in southeastern Alaska. The soils in the Tongass Forest are characterized as extensively mineral (primarily limestone and marble) and organic in nature. A bedrock outcrop was observed southeast of the MBS (USDA, Tongass Land and Resource Management Plan, Final Environmental Impact Statement, Volume I, Jan. 2008).

The geology and climate of Southeast Alaska are particularly favorable for karst development. Tuxekan Island has a karst topography, in which subsurface water flow paths are combined with surface water flow paths, thus the hydrogeologic processes in the watersheds are inextricably linked to karst systems. Karst subsurface drainage networks generally operate independently of, and with more complexity than, the surface drainage systems above, and the watershed characteristics of the surface may have little or no relationship to the subsurface system. Groundwater flows relatively slowly through porous rock and

soil, or via fracture flow, in non-karst terrain. In contrast, in karst terrain, groundwater may flow relatively quickly through complex underground systems of solution-widened conduits that vary from fissures a few inches wide to cave systems many feet wide (USDA, Tongass Land and Resource Management Plan, Final Environmental Impact Statement, Volume I, Jan. 2008).

Streams and rivers in the Tongass National Forest produce a large volume of water per unit of land. Much of the flow originates or passes through thousands of small to large lakes. Both glacial and non-glacial river and stream systems occur on the Tongass, and runoff varies greatly between the two stream systems. Runoff from glacially-fed streams usually starts in June in response to snow and ice melt, reaching peak flows in July and August. Runoff drops rapidly in October and low flows occur from December through April. Runoff from non-glacial streams tends to respond to high precipitation events; therefore, the greatest flows tend to be in October and December and the lowest flows between January and March, and mid-May to August (USDA, Tongass Land and Resource Management Plan, Final Environmental Impact Statement, Volume I, Jan. 2008). The MBS is adjacent to, and southeast of a wetland area. A map depicting the approximate locations of other wetlands near the LTF is included as Figure 3.

Tuxecan Island is dominated by a cool, moist, maritime climate from the moderating influence of the Pacific Ocean and the high coastal mountains. In the summer, this provides a cooling influence; while in the winter, temperatures are warmer than would be expected for these latitudes. Southeast Alaska experiences mild summers, with a summer mean maximum temperature of 62.4 degrees Fahrenheit. Winters are mild with minimal snowfall and an average temperature of 41.4 degrees Fahrenheit. From the years 1980 until 1989, the mean annual precipitation for the area was 88.02 inches, and the mean annual snowfall was 0 inches, according to the Western Regional Climate Center. During the warmer months, temperatures are highest inland and lowest along the coasts, while in the colder months, the reverse is true. Storms and moderate to heavy precipitation occur year-round, but most commonly from September through November. The abundant moisture supports an extensive temperate rain forest and feeds numerous streams, rivers, and lakes, which in turn provide valuable fish habitat.

The coastal forest of Southeast Alaska is part of the cool, temperate rain forest that extends along the Pacific coast from Northern California to the Cook Inlet of Alaska. Most of the Tongass National Forest is composed of old-growth conifers, primarily western hemlock and Sitka spruce, with a scattering of mountain hemlock, western red cedar, and Alaska yellow-cedar. Red alder is common along streams,



beach fringes, and on soils recently disturbed by management activities and landslides. Black cottonwood grows on the floodplains of major rivers and recently deglaciated areas. Blueberry, huckleberry, Sitka alder, devil's club, and salal are common shrubs in the Forest. The Forest floor is composed of plants, such as deerheart, dogwood, single delight, and skunk cabbage. Because of the high rainfall and resulting high humidity, mosses grow in great abundance on the ground, on fallen logs, on the lower branches of trees, and in forest openings. Grass-sedge meadows usually lie at low elevations, often along the coast; and stands of willows border many of the stream channels. Muskeg (bog plant) communities, dominated by sphagnum mosses and sedges, occur throughout the Forest (USDA, Tongass Land and Resource Management Plan, Final Environmental Impact Statement, Volume I, Jan. 2008).

The forests, shorelines, streams, and rivers of southeast Alaska provide habitat for over 300 species of birds and mammals, including game and non-game animals, such as brown and black bear, Sitka black-tailed deer, moose, wolf, mountain goat, beaver, otter, and marten. The coastline provides ideal habitat for a large population of bald eagles, and wetlands provide nesting habitat for many waterfowl. The highly productive marine environment in the area includes an abundance of marine mammals, halibut, herring, and hundreds of types of shellfish. Both resident and anadromous fish are found within and adjacent to the Tongass Forest. No sensitive freshwater fish species are known to exist on Tuxekan Island (USDA, Tongass Land and Resource Management Plan, Final Environmental Impact Statement, Volume I, Jan. 2008). Fish fry were observed while collecting the water and sediment samples downgradient of the site, but the species was not identified.

According to the United States Fish and Wildlife Service (USF&WS), there are threatened or endangered animal species listed as existing in Wrangell Passage. No threatened or endangered species are known to exist at the project site, and no threatened, endangered, or candidate fish species are known to exist in streams within Tuxekan Island.

The LTF does not have road access to a population center, but is accessible for vehicles, equipment, and personnel only by amphibious aircraft, helicopter, or boat. One of the primary recreational fishing areas on Tuxekan Island is located in Nichin Cove (USDA, Tongass Land and Resource Management Plan, Final Environmental Impact Statement, Volume I, Jan. 2008). Tuxekan Island is reportedly unpopulated by humans on the eastern side of the island; one part-time resident lives in a trailer near the site. No known drinking water wells are located on the island.

## 3.2 Background

The LTF and surrounding uplands have been used for multiple timber sale and road construction activities since the late 1960's. It was reported by the USDA/FS that the historical and future use of the site was for commercial logging activities. Contamination at the LTF was first discovered in 1994 by the USDA/FS during the construction of a barge landing area. An interim removal action (IRA) at the LTF barge ramp site was conducted by BNC in 2005. In addition to the IRA, the logging operation areas, ancillary to the barge landing area, were investigated for visual indications of obvious or suspected contamination.

The contamination identified at the LTF barge ramp area during the IRA included DRO and RRO, and was considered somewhat widespread due to contamination identified in the soils immediately below a biocell that had been created at the site, but the area of the primary excavation and soils that were placed in a biocell at the site met the ADEC Alternative Cleanup Levels (ACLs) developed for the IRA conducted in 2005. A groundwater monitoring well was placed into the excavation prior to backfilling, and groundwater samples collected from the well exhibited concentrations of DRO (1.07 mg/L), and RRO (1.82 mg/L). It was noted that no sheen or seeps were observed entering the marine waters from the barge landing area during the field work conducted in 2005.

Six test pits were excavated from outside of the perimeter of the main LTF barge excavation area, up to a distance of approximately 100 feet. One soil sample was collected from each of five test pits. A sample collected from Test Pit 2, which was located approximately 25 feet northeast of the MBS and had a strong odor of diesel, exhibited concentrations of DRO at 6,830 mg/Kg, and RRO at 652 mg/Kg. It should be noted that the DRO concentration from this sample was the greatest collected at the site during the entire site investigation. The remainder of the test pit sample concentrations were much less, with the greatest exhibiting a concentration of 296 mg/Kg DRO, and 552 mg/Kg RRO (in Test Pit 6, which was located approximately 25 feet south of the barge landing area). Based on the approved ADEC Method 3 cleanup criteria, the LTF barge landing site was granted a status of "conditional closure" (equivalent to the current designation "cleanup complete – institutional controls").

The MBS, which is the subject of this report, was discovered in an area between the east and west banks of two creeks, and south of a wetland area that drains to Nichin Cove (Figure 2). The MBS is located approximately 900 feet west-southwest of the LTF, adjacent to a former beaver dam located on the creek. The creek supports small fish, but it was reported by BNC that a study has not been conducted to

identify their species. The debris at the metals site identified by BNC consisted of vehicle frames, pieces of culverts and piping, and the remnants of three or four crushed drums. Much of the debris was unidentifiable, but raised enough cause for concern for both heavy metals and petroleum contamination that two sediment samples were collected.

One primary sediment sample and a duplicate sediment sample were collected from the water's edge, approximately 8 feet downgradient from the drum remains. The second primary sediment sample was collected from the water's edge as well, adjacent to a truck chassis. The sediment sample (and duplicate sample) collected from downgradient of the drum remains were analyzed for VOCs, and PAHs. None of the analytes were detected at concentrations that exceeded the MRLs for the analyses. It should be noted, however, that several of the laboratory's MRLs associated with PAHs exceeded the applicable ADEC cleanup criteria. The two primary sediment samples were also analyzed for DRO and RRO. The sediment sample downgradient of the drums exhibited 126 mg/Kg DRO and 536 mg/Kg RRO, and the sediment sample collected from near the truck chassis exhibited 2,430 mg/Kg DRO and 12,800 mg/Kg RRO. These primary sediment samples were also analyzed for RCRA metals (arsenic, barium, cadmium, chromium, mercury, selenium, silver, and lead). Concentrations of arsenic, barium, lead, and chromium were detected in the sediment samples.

A slight sheen, which reportedly appeared to be biogenic in nature, was observed on the pond's surface. A surface water sample was collected from the area of the MBS from water that was "upwelling" from the site. The sample was analyzed for VOCs, and all of the analytes were non-detectable. It was reported that the sheen, however, is a violation of the Alaska Surface Water Quality Standards. The fish-bearing stream leads into Nichin Cove.

This Nichin Cove MBS was designated as a separate contaminated site from the remainder of the LTF that was conditionally closed by the ADEC, and is the subject of this report. The ADEC file number for the MBS site is 1545.38.001.

#### **4.0 OCTOBER 2008 PA/SI ACTIVITIES**

One BGES representative flew to Prince of Wales Island, Alaska, on October 24, 2008 to characterize the MBS site in accordance with our work plan dated September 2008, and approved by the ADEC. The equipment and supplies necessary to accomplish the tasks were shipped via Alaska Airlines and Alaska Marine Lines prior to the field event. The weather encountered for the duration of the field activities

was mostly windy with rain.

#### 4.1 Scope

The objectives of this PA/SI included the evaluation of the site with regard to the nature, extent, and magnitude of hazardous substance releases, the threat posed to human health and the environment, and the relevant factors to determine whether a removal or remedial response is warranted based upon observations and analytical results. A thorough review and evaluation of BNC'S 2005 Final Report for the Interim Removal Action at the LTF, and photographs provided by the USDA/FS Contracting Officer's Representative (COR), was conducted prior to compiling the plans for this project to gain a thorough understanding of the site conditions. To characterize and evaluate the extent of contamination at the site, the following tasks were accomplished by ADEC-qualified environmental professional personnel in accordance with applicable ADEC guidance and regulations:

- The MBS perimeter was delineated with a metal detector.
- Test pits were excavated to characterize and evaluate the extent of soil contamination.
- Soil samples were collected from the test pits, and from background sources.
- Two groundwater monitoring wells were installed in selected test pits.
- Groundwater samples were collected from the monitoring wells.
- Sediment samples were collected downgradient of the MBS, adjacent to a wetland pond.
- Surface water samples were collected from non-visibly contaminated locations from the wetland pond, adjacent to the MBS.
- Background samples from soil, sediment, and freshwater areas that were not observably impacted were collected and analyzed to document the background concentrations for RCRA metals.

The site investigation addressed the extent of contamination in the applicable ecological and human pathways present at the site. Observations and other data were documented in a log book (Appendix E). Information that was recorded included diagrams of the site; soil sampling locations at the bury site (source area); sediment and water quality sample locations downgradient of the bury site; background sample locations; and field screening readings.

## 4.2 Modifications to the Work Plan

There were several modifications to the work plan for various reasons, as described below and detailed in their respective sections in the report.

- The apparently impacted soils encountered during the test pit excavation activities were not stockpiled on a liner, but rather placed back into the corresponding test pits, as requested by the USDA/FS contracting officer's representative (COR). Because the MBS was only approximately 5,000 square feet, and because of the increased size of each test pit excavated and the vast amount of metals encountered in the test pits, the COR recommended (after 3 test pits were excavated) that no additional test pits be excavated in the areas where gross amounts of metals would be encountered because of the lack of space to place excavated material, and because liner material or drum overpacks were not available.
- The ADEC Guidance for Monitoring Well Design and Construction for Investigation of Contaminated Sites (2008) specifies that after a monitoring well is installed, the well should not be developed (surging, pumping, or bailing) for at least 48 hours following installation; however, due to time constraints related to our field activities, the wells were developed and sampled within 48 hours of their installation.

## 4.3 Field Methods

Specific methodologies for a variety of site activities were explicitly described as part of our ADEC-approved work plan. These methodologies were associated with distinct tasks carried out as part of the 2008 field effort. These tasks included the excavation of test pits and the collection of soil samples from the test pits; the installation and sampling of groundwater monitoring wells; and sampling of surface waters and sediments.

### 4.3.1 Site Observations and Test Pit Excavations

BGES and our subcontractor, North End Construction and Logistics, mobilized to the LTF from Naukati with the sampling equipment, supplies, a truck, and a backhoe. Once at the site, and prior to test pit excavation activities, the approximate boundary of the buried metal debris was delineated with a Schoenstadt metal detector. It was determined that the main area of the MBS was approximately 5,000 square feet. Some minor metal detections were observed outside of the main MBS area, but appeared to

be from metal wire that extended throughout the site. The MBS was approximately 11 feet upgradient of the sediment and wetland pond to the north. A large diesel above-ground storage tank (AST) and a smaller gasoline AST, currently used for the LTF operations, were located approximately 30 feet to the south of the MBS. Sheen on puddles of water adjacent to the ASTs and on the roadway to the north of the ASTs was visible. It is possible that the sheen observed on the puddles in the roadway originated from drippings from machinery and equipment that traversed and was transported over the road. Copies of our field notes taken during site activities are included in Appendix E.

After the main MBS area was delineated with the metal detector, three test pits were excavated with a PC-120 backhoe, as part of the effort to characterize the degree of soil contamination at the site (Figure 4). Trees from the central portion of the MBS were removed. A vast amount of metals and rip rap, which most likely originated from the south side of the road, was encountered in the first test pit, Test Pit 1 (Figure 4). A minor amount of metals debris, but a large amount of rip rap, was encountered in Test Pits 2 and 3. Test Pit 3 was excavated closest to the road, and was located generally to the south of the first two test pits (Test Pit 1 and Test Pit 2).

During test pit excavation activities, soils were evaluated using visual (staining), and olfactory evidence as initial indicators of petroleum, oil, and lubricant (POL) contamination. The soils encountered in the test pits were predominantly organic in nature. Approximately 5 crushed drums were encountered in Test Pit 1, and many items associated with vehicles, such as large tires, a truck chassis, metal wire, and sewer pipe (Photographs 1 through 3 in Appendix A). It appeared that pieces of a lead-lead acid battery were located near the base of the excavation, but these pieces were not recoverable. One of the drums in Test Pit 1 appeared to be of military origin, as identified by the markings (Photograph 4 in Appendix A). Test Pit 1 was located towards the northeast portion of the metals area, approximately 5 feet south of the wetland pond. This test pit was excavated to a depth of approximately 10 feet below grade (bg).

Test Pit 2 was excavated approximately 15 feet to the southwest of Test Pit 1, and approximately 29 feet to the south of the wetland pond, to a depth of approximately 10.5 feet bg (Photograph 5 in Appendix A). Observed in Test Pit 2 were a drum top, an automobile battery, and small pieces of metal. Metals were observed buried to the west and northwest of Test Pit 2. What appeared to be rip rap was also encountered in Test Pit 2 (Photograph 6 in Appendix A). Sheen was observed in the groundwater, encountered at a depth of approximately 10 feet bg. Test Pit 3 was excavated approximately 26 feet to the south of Test Pit 1, and approximately 5 feet to the north of the roadway that bordered the south side

of the site (Photograph 7 in Appendix A). Large boulders and trees were encountered in this test pit (Photograph 8 in Appendix A). The soils excavated appeared oily, and the water exhibited sheen where it entered the excavation from the south sidewall at a depth of approximately 7 feet bg (Photographs 9 and 10 in Appendix A).

#### **4.3.2 Collection of Soil Samples from Test Pits**

Soils were screened with a photoionization detector (PID), as they were being excavated (in the ambient air), and screening of headspace associated with soils in sealable plastic bags was also conducted, when applicable. The soils were screened to detect volatile POL constituents during excavation activities utilizing methodologies in conformance with 18 Alaska Administrative Code (AAC) 75, Article 3 (October 9, 2008), and the Underground Storage Tank Procedures Manual (ADEC, November 7, 2002). The screening of soils in ambient air was conducted to aid with the direction of excavation activities. This method of screening was performed for soils within the excavator bucket, while taking care to avoid screening slough material. Care was also exercised to screen the samples upwind of other potential sources of hydrocarbon odors (when possible), and near the center of the excavator bucket to minimize the potential for odor intrusion from hydraulic oils or fuels associated with the excavator itself. The PID was calibrated prior to use with 100 parts per million (ppm) isobutylene calibration gas. Soil headspace screening was conducted by placing soil samples in sealable plastic bags, and allowing them to warm to ambient air temperature. The sealable plastic bags were partially filled (one-third to one-half) with the soil samples. Each sample received a unique sample number, and the location of the sample and the time of sampling were recorded in the log book. The samples were collected from freshly uncovered soil and the bags were quickly sealed. Headspace vapors were allowed to develop in the bags for at least 10 minutes, but not more than one hour. The bags were then agitated for approximately 15 seconds at the beginning and end of the headspace development period to assist volatilization. After headspace development, the PID probe was then inserted into the bags to a point about one-half of the headspace depth; the container opening was minimized and care was taken to avoid uptake of water droplets and soil particles by the PID. The greatest PID reading was then recorded for each sample. All field screening results and instrument calibrations were recorded in the field notes.

As indicated in our Sampling and Analysis Plan (SAP), a PID reading of greater than 20 parts per million (ppm) would be considered potentially POL-contaminated; however, because of the low-

volatility of weathered DRO contamination encountered at the MBS, any PID readings above 1 ppm were considered potentially contaminated. Of the three test pits, 12 ppm was the greatest PID result obtained.

Soil samples were collected from each of the three test pits, and were submitted to the laboratory for GRO, VOCs, DRO, RRO, PAHs, and RCRA metals analyses. The samples were labeled according to the date they were collected (08-1024), the test pit from which they originated (TP1), and the test pit sample number, such as 08-1024-TP1-1. Additional 4-ounce containers of soil were collected and placed on-hold at the laboratory as a contingency for possible analysis of other compounds besides the analytes listed above.

After the test pits were excavated and sampled, the pits were backfilled prior to demobilization from the site, regardless of whether the soils exhibited evidence of petroleum contamination or not. Prior to backfilling Test Pit 1 and Test Pit 2, pre-packed groundwater monitoring well screens were installed, as discussed below in Section 5.3.2. The slopes of each of the excavations were contoured as close to the original grade as possible, not considering the excess metals and the 10-foot monitoring wells.

Any metal debris, tires, or other trash that was uncovered during the characterization were stockpiled at the site directly next to the corresponding test pit, as directed by the COR. Pieces of a lead-acid battery were uncovered during the site characterization from Test Pit 2. The battery was properly containerized and secured onsite at the direction of the COR in a plastic container with a secured lid. Any items brought to the site to conduct the investigation that were not reusable were hauled offsite and were reported to have been properly disposed of by the excavation contractor.

Samples for total organic carbon (TOC) analysis were not collected from the test pits because none of the test pit soils appeared to be uncontaminated. Samples (BRSOIL1 and BRSOIL2) were collected for TOC analysis from upgradient and side-gradient locations of the site in similar-type soils (Figure 4), to measure the organic carbon content of the native soils for potential use in calculating ADEC Method 3 cleanup criteria for the site. Soil samples for RCRA metals analyses were also collected from these same areas to document background concentrations.

After the soil samples were collected, they were placed in a chilled cooler to await shipping by ACE Cargo to Anchorage, under chain of custody documentation, where BGES personnel received the sample coolers and delivered them to Test America Analytical Laboratories (Test America) in



Anchorage for analysis. A trip blank sample accompanied all samples scheduled for volatile analyses during the entire sample handling process.

### **4.3.3 Installation of Monitoring Wells in Test Pit Excavations**

Two pre-packed groundwater monitoring wells were installed in two of the test pit excavations (Test Pits TP2 and TP3), and the native materials that were excavated were backfilled around the wells. Efforts were made to eliminate as much of the metals and other debris as possible during the backfilling of soils around the monitoring well casings. Although the ADEC Guidance for Monitoring Well Design and Construction for Investigation of Contaminated Sites (2008) specifies that after a monitoring well is installed, the well should not be developed (surging, pumping, or bailing) for at least 48 hours following installation, at the request of the USDA/FS COR, groundwater samples were collected from both monitoring wells during the site visit, within 48 hours of installation.

Monitoring Well MW-1 was installed in Test Pit 2, and Monitoring Well MW-2 was installed in Test Pit 3 (Photographs 11 and 12 in Appendix A). Both wells were installed at an approximate depth of 10 feet bg. The 10 foot, 20-slot screen, monitoring wells were constructed with 20/40 Colorado silica sand placed within the annulus of the screen, and bentonite was placed above the sand in an attempt to create a seal. No cement seal or protective casing was placed around the monitoring well. Because both 10-foot wells were installed at a depth of approximately 10 feet bg, the soil that was backfilled around the well was mounded around the well above the well screen. Solid PVC risers were attached to the tops of the well screens, allowing the wells to be completed above-grade.

### **4.3.4 Groundwater Sampling**

After the groundwater monitoring wells were installed, no free product was observed in either of the monitoring wells, therefore both were sampled for laboratory analysis at the direction of the USDA/FS COR. Neither monitoring well was developed prior to sampling because of the small amount of water that was encountered in the wells. Both wells were installed at least 18 hours prior to collecting the samples. Samples were collected with clean polyethylene bailers, as discussed below. Samples were collected for analysis of GRO, VOCs, PAHs [also inadvertently analyzed for total aqueous hydrocarbons (TAqH) by the laboratory], DRO/RRO, and RCRA metals were collected from Monitoring Well MW-1. Samples were collected for only DRO and RRO analysis from MW-2, since the well was extremely slow to recharge at the time of sampling.

Typical stabilization measurements such as pH, temperature, and conductivity were not collected, and development of the wells prior to the collection of groundwater samples was not conducted. Because of the lack of available water in the wells, no duplicate groundwater samples were collected. Trip blank samples for both media (soil and water) accompanied all samples scheduled for volatile analyses during the entire sample handling process.

#### **4.3.5 Surface Water and Sediment Sampling**

Surface water samples were collected from the above-described pond and two streams originating from the northern boundary of the MBS. These samples were collected as grab samples with a clean “dipper” provided by the laboratory. The sediment south of the pond was located approximately 11 feet downgradient of the MBS. What appeared to be a retaining wall, as well as metals extruding from the MBS, were observed near the southwest portion of the site (Photograph 13 in Appendix A).

Three surface water samples and one duplicate surface water sample were collected (Figure 4). Surface Water Sample 08-1025-SW1 was collected from near the eastern edge of Test Pit 1, downgradient and approximately 2 feet north of the metals debris, from water that was running underneath the site and into the pond (Photograph 14 in Appendix A). Surface Water Sample 08-1025-SW2, and a duplicate, 08-1025-SW3, were collected approximately 18 feet west of SW1, and 11 feet north of the metals debris from fresh water that was flowing from underneath the MBS into the pond (Photograph 15 in Appendix A). Surface Water Sample 08-1025-SW4 was collected approximately 60 feet west of SW1, and approximately 40 feet north of the MBS, in the main portion of the pond (Photograph 16 in Appendix A).

The surface water samples collected were submitted for analysis of TAqH, total aromatic hydrocarbons (TAH), and RCRA metals. A background surface water sample was also collected from an area that was not observably impacted to document background analyte concentrations in this medium. This sample, 08-1025-SWB was collected from an area in a stream, located approximately 90 feet west of SW2 (Photograph 17 in Appendix A). This sample was also analyzed for TAqH, TAH, and RCRA metals.

A beaver dam that was formerly blocking a culvert at the outlet to the wetland pond, adjacent to the MBS, had been removed or had naturally degraded, which allowed access to properly characterize the sediment downgradient of the site. Although the beaver dam was not blocking the culvert, the majority

of the entire area downgradient of the MBS was covered in large tree branches overlying each other to a height of approximately 1 foot (Photograph 18 in Appendix A).

Samples were collected from sediment near the same locations of the surface water samples with the aid of a 1.25-inch diameter stainless steel soil probe. The probe was cleaned prior to each use with an Alconox (laboratory grade) detergent solution, and rinsed with distilled water. The sediment samples were placed directly into laboratory-supplied containers. The sediment samples utilized the same numbering scheme as the previous samples: 08-1025-SED1 through SED3. The sediment samples were analyzed for the same contaminant constituents as the soil samples. Background sediment samples were also collected from two areas that were not observably impacted to document background RCRA metals TOC concentrations in this medium, identified as Sediment Samples BRSED1 and BRSED2 (Figure 4).

## **5.0 EVALUATION OF RESULTS**

Site observations were made and field data were collected to create a description of subsurface and hydrogeological conditions present at the subject property. The laboratory data are discussed in the sections below and summarized in Tables 1, 2, and 3. The laboratory analytical results are provided in Appendix B, and the data quality was reviewed in accordance with the ADEC guidance and standard industry practices, as discussed in Section 5.2, below.

### **5.1 Analytical Data**

Discreet soil and sediment samples were collected as part of the October 2008 PA/SI. Grab groundwater samples were collected from the recently-installed monitoring wells, and surface water samples were collected from an unnamed pond located north of the MBS. Laboratory data received for this project are included in Appendix B.

#### **5.1.1 Soil Samples**

Three source-area soil samples were collected and analyzed from the excavated test pits, to document contaminant concentrations at the MBS. Two soil samples were collected side-gradient and upgradient of the MBS to document background analyte concentrations.

The soil samples collected from the site were analyzed for GRO by Alaska Method (AK) 101; DRO by AK 102; RRO by AK103; VOCs by EPA Method 8260; PAHs by EPA 8270C; and RCRA metals by EPA method 6010/7000 (arsenic and selenium were reanalyzed by EPA method 6020 in order to

achieve lower MRLs for the analyses). To determine if chromium encountered at the site is naturally occurring, the amount of hexavalent chromium within the soil sample collected from Test Pit 1, and the sediment sample collected as SED2 were analyzed using EPA Method 7196A.

Each of the soil samples collected from Test Pits 1, 2 and 3, as well as the background soil sample, were found to contain concentrations of arsenic (4.4 mg/Kg, 23 mg/Kg, and 13, mg/Kg, respectively) that exceeded the most stringent ADEC Method 2 cleanup criterion (direct contact pathway for the over 40 inches of precipitation zone) for arsenic (3.7 mg/Kg); however, none of the samples collected from the test pits contained arsenic concentrations that were greater than three times the concentration reported to exist in the background sample, the level at which a release is considered to have occurred (Table 1). A toxicity characteristic leaching procedure (TCLP) analysis was performed for arsenic in the sample collected from Test Pit 2, the result of which was reported to be 0.0056 mg/L, well below the threshold at which the material would be a considered to be a RCRA regulated waste (5.0 mg/L).

In addition to the above-mentioned arsenic concentrations, concentrations of barium, total chromium, lead, and mercury were detected within the sample collected from Test Pit 1 at 18 mg/Kg, 7.6 mg/Kg, 61 mg/Kg, and 0.066 mg/Kg, respectively. None of these concentrations exceeded the applicable ADEC cleanup criteria for these analytes.

Concentrations of barium, total chromium, lead, and mercury were detected within the sample collected from Test Pit 2 at 7.0 mg/Kg, 7.2 mg/Kg, 16 mg/Kg, and 0.082 mg/Kg, respectively. None of these concentrations exceeded the applicable ADEC cleanup criteria for these analytes. Concentrations of silver were not detected above the method reporting limits (MRLs) for the analyses of each of the soil samples collected. It should be noted however, that the MRLs for silver in each of the soil samples collected from the test pits were greater than three times the MRL listed for silver in the background sample.

Concentrations of 1,2,4 trimethylbenzene, naphthalene, barium, chromium, lead, and mercury were detected within the sample collected from Test Pit 2 at 0.220 mg/Kg, 0.360 mg/Kg, 21 mg/Kg, 6.9 mg/Kg, 8.0 mg/Kg, and 0.046 mg/Kg, respectively. None of these concentrations exceeded the applicable ADEC cleanup criteria for these analytes.

Concentrations of DRO and RRO were detected within the sample collected from Test Pit 1, at 67.9 mg/Kg and 177 mg/Kg, respectively. These concentrations did not exceed the applicable ADEC

cleanup criteria. A sample collected from Test Pit 3, at a depth of approximately 8.4 feet bg was found to contain a concentration (1,210 mg/Kg) of DRO that exceeded the most stringent ADEC Method 2 cleanup criterion for this analyte (migration to groundwater, 230 mg/Kg). No background samples were collected and analyzed for organic contaminant constituents.

TOC was analyzed by SW846 9060M in the background soil samples only, since all of the test pit soils appeared to be contaminated. TOC concentrations within Background Samples BRSOIL1 and BRSOIL2 were reported to be 330,000 mg/Kg and 130,000 mg/Kg, respectively.

### 5.1.2 Sediment Samples

Three sediment samples and a background sediment sample were collected from the wetlands area to the north of the site (Figure 4), in roughly the same locations from where the surface water samples were collected (as described in Section 5.1.3, below). The sediment samples were analyzed for the same analytes as the soil samples described above. None of the sediment samples exhibited concentrations of VOCs, GRO, DRO, RRO, or PAHs above their respective MRLs. None of the background sediment samples were analyzed for organic contaminant constituents.

Concentrations of arsenic measured within Sediment Samples SED2 and SED3, and Background Sediment Sample BRSED1 were reported to be 7.2 mg/Kg, 6.0, mg/Kg, and 6.5 mg/Kg, respectively (Table 2). These concentrations exceeded the ADEC Method 2 cleanup criterion and the NOAA SQuiRT Freshwater Sediment TEL for this analyte.

Concentrations of barium, chromium, lead, and mercury were detected within Background Sediment Sample BRSED1 at 6.5 mg/Kg, 10 mg/Kg, 15 mg/Kg, and 0.23 mg/Kg, respectively. With the exception of mercury, these concentrations did not exceed the ADEC cleanup criteria, nor did they exceed the NOAA SQuiRTS Freshwater Sediment TELs (for chromium and lead) for these analytes. The concentration of mercury in the background sample exceeded the NOAA SQuiRT Freshwater Sediment TEL for mercury (0.174 mg/Kg).

Concentrations of barium, chromium, and mercury were also detected within Sediment Sample SED1 at 5.1 mg/Kg, 6.0 mg/Kg, and 0.072 mg/Kg, respectively. These concentrations did not exceed the ADEC cleanup criteria, nor did they exceed the NOAA SQuiRTS Freshwater Sediment TELs for these analytes.

Concentrations of barium, chromium, and lead were detected within Sediment Sample SED2 at 5.4

mg/Kg, 11 mg/Kg, and 3.6 mg/Kg, respectively. These concentrations did not exceed the ADEC cleanup criteria, nor did they exceed the NOAA SQirTS Freshwater Sediment TELs for chromium and lead. No NOAA SQirTS Freshwater Sediment TEL for barium was available.

Concentrations of barium, chromium, lead, and mercury were detected within Sediment Sample SED3 at 8.2 mg/Kg, 14 mg/Kg, 2.5 mg/Kg, and 0.045 mg/Kg, respectively. These concentrations did not exceed the ADEC cleanup criteria, nor did they exceed the NOAA SQirTS Freshwater Sediment TELs for chromium, lead, and mercury. No NOAA SQirTS Freshwater Sediment TEL for barium was available. None of the reported metals concentrations or MRLs were greater than three times the reported concentrations of metals within the background sample.

TOC concentrations within Background Samples BRSED1 and BRSED2 were reported to be 200,000 mg/Kg and 40,000 mg/Kg, respectively.

### **5.1.3 Surface Water Samples**

Three primary surface water samples, one duplicate surface water sample, and one background surface water sample were collected and analyzed for TAH by EPA 624, TAqH by EPA 625, and RCRA metals analyses by EPA 6010, except for mercury, which was analyzed using method EPA 7470A.

Surface Water Samples SW2 and SW3 (duplicate of SW2) contained concentrations of lead (0.00060 mg/L and 0.00071 mg/Kg, respectively) that exceeded the most stringent cleanup criterion for chronic exposure of fresh water aquatic life, as listed in the Alaska Water Quality Criteria Manual for Toxic and other Deleterious Organic and Inorganic Substances. Mercury was not detected above the MRLs in any of the surface water samples; however, the MRLs exceeded the most stringent cleanup criterion, protective of human health, based on the ingestion exposure pathway as outlined in the Alaska Water Quality Criteria Manual for Toxic and other Deleterious Organic and Inorganic Substances. Cadmium was not detected in any of the surface water samples, at concentrations that exceeded the MRLs; however, the MRLs exceeded the most stringent cleanup criterion for chronic exposure of fresh water aquatic life, as listed in the Alaska Water Quality Criteria Manual for Toxic and other Deleterious Organic and Inorganic Substances. Silver was not detected in any of the surface water samples, at concentrations that exceeded the MRLs; however, the MRLs exceeded the most stringent cleanup criterion for acute exposure of fresh water aquatic life, as listed in the Alaska Water Quality Criteria Manual for Toxic and other Deleterious Organic and Inorganic Substances. None of the analyte

concentrations or MRLs were greater than three times the reported concentrations of the analytes associated with the background surface water samples.

Arsenic and barium were detected within Surface Water Background Sample SWB at concentrations equal to 0.00048 mg/L and 0.0073 mg/L, respectively (Table 3). Concentrations of arsenic, barium, and lead were also detected in Surface Water Sample SW1 at 0.0012 mg/L, 0.0051 mg/L, and 0.00050 mg/L, respectively. None of these concentrations exceeded the applicable ADEC cleanup criteria, nor were they greater than three times the concentrations of these analytes reported for Background Surface Water Sample SWB.

Concentrations of arsenic and barium were detected in Surface Water Sample SW2 at 0.0015 mg/L and 0.0047 mg/L, respectively. These concentrations did not exceed the applicable ADEC cleanup criteria, nor were they greater than three times the concentrations of these analytes as reported for Background Surface Water Sample SWB. Concentrations of arsenic and barium were also detected in Surface Water Sample SW3 (duplicate of SW2) at 0.0015 mg/L and 0.0043 mg/L, respectively. These concentrations did not exceed the applicable ADEC cleanup criteria, nor were they greater than three times the concentrations of these analytes as reported for Background Surface Water Sample SWB.

Concentrations of arsenic and barium were also detected in Surface Water Sample SW4 at 0.00057 mg/L and 0.0073 mg/L, respectively. These concentrations did not exceed the applicable ADEC cleanup criteria, nor were they greater than three times the concentrations of these analytes as reported for Background Surface Water Sample SWB.

#### **5.1.4 Groundwater Samples**

Two groundwater grab samples were collected from the monitoring wells that were installed in Test Pits 2 and 3. Groundwater Sample MW1 was analyzed for GRO, DRO, RRO, TAqHs (inadvertently by the laboratory), PAHs, VOCs, and RCRA metals using the same analytical methods as described above. Groundwater Sample MW2 was only analyzed for DRO and RRO contamination. Concentrations of arsenic (0.031 mg/L), barium (0.14 mg/L), cadmium (0.0018 mg/L), chromium (0.024 mg/L), lead (0.90 mg/L), mercury (0.00032 mg/L), and selenium (0.00088 mg/L) were detected within Groundwater Sample MW1 (Table 4); however, only the concentrations of arsenic and lead exceeded the respective ADEC cleanup criteria for these analytes. The concentration of DRO (1.69 mg/L) exhibited in Monitoring Well sample MW2 was 1.69 mg/L, which exceeds the ADEC cleanup criterion of 1.5 mg/L

for DRO in groundwater.

## 5.2 Laboratory Data Quality Review

All laboratory results, including the laboratory quality control (QC) samples, were reviewed for quality, validity, and usability. An assessment of the laboratory data and quality assurance requirements, as set forth in ADEC Technical Memorandum 06-002, was conducted and is discussed below. An ADEC laboratory data quality control checklist was completed and is attached in Appendix C, which includes an overview of the quality of the laboratory data. The following section discusses our evaluation of sample conditions, laboratory procedures, analytical results, and data quality during the 2008 sampling event at the MBS.

The soil, sediment, and water samples were transported to Test America Analytical Laboratories (Test America), a laboratory approved by the ADEC in Anchorage, in chilled coolers, and under chain of custody protocol. As a quality control measure, trip blanks of the appropriate media accompanied all samples scheduled for volatile analyses during the entire sample handling process.

A duplicate surface water sample was collected; however, sediment and soil duplicate samples were (inadvertently) not collected. The duplicate surface water sample was submitted "blindly" to the laboratory. The only analytes that were detected in both Surface Water Sample SW2 and its duplicate SW3 were arsenic, barium, and lead. The relative percent differences (RPDs) between these analytes were 0 percent, 5.84 percent, and 11.52 percent, respectively; all of which are below the laboratory quality control threshold of 30 percent.

The reported concentrations for benzidine (also known as diphenylamine) within the surface water samples and related laboratory control samples (LCS) and LCS duplicates (LCSD) were qualified "L6" by the laboratory, because as described in the EPA analytical method, benzidine is known to be subject to oxidative losses during solvent concentration. This potential for loss indicates that there is a potential for the reported benzidine concentrations to be biased low. However, because the concentrations were not detected within the samples above the MRLs (0.570 mg/L), and because no ADEC cleanup criteria for this analyte in surface water could be identified, it is our opinion that this potential for bias does not affect the acceptability of the data for their intended use.

The method reporting limits for PAH analytes as measured in association with the Soil Samples TP1-1 and TP3-1, and Sediment Samples SED1, SED2, and SED3, as well as a matrix spike (MS) sample and



a matrix spike duplicate (MSD) sample (associated with Soil Sample TP1-1), were elevated due to the presence of high concentrations of non-target analytes. With the exception of 2-methylnaphthalene in Soil Sample TP3-1 (3.24 mg/Kg), all of these analytes were not detected above the MRLs in these samples. For this reason, and because the reported concentration of 2-methylnaphthalene (as described above) was well below the applicable ADEC cleanup criterion for this analyte, it is our opinion that the elevated reporting limits do not affect the acceptability of the data for their intended use.

TAqH analyses were inadvertently performed by the laboratory on Groundwater Sample MW1. None of the analytes were detected at concentrations that exceeded the method reporting limits for the analyses in the sample. For this reason, it is our opinion that this inadvertant analysis does not affect the acceptability of the data for their intended use.

The TCLP analysis performed for arsenic on Sample TP2-1, as well as the analyses performed on an MS, an MSD, and a laboratory-prepared duplicate sample, were prepared or conducted beyond the specified holding time. Because the concentration of arsenic within the field sample (23 mg/Kg) was not greater than 20 times the threshold at which the material would be classified as a RCRA regulated waste based on TCLP analysis (5.0 mg/L), and because the reported concentration as a result of the analysis was three orders of magnitude below the RCRA threshold, it is our opinion that the performance of these analyses beyond the prescribed holding time does not affect the acceptability of the data for their intended use.

The analysis of hexavalent chromium associated with Sediment Sample SED2 was prepared or conducted beyond the specified holding time. Because the concentration of total chromium within the sample (11 mg/Kg) did not exceed the ADEC cleanup criterion for hexavalent chromium, and because the total chromium analysis was conducted within the required holding time, it is our opinion that the performance of the hexavalent chromium analysis beyond the prescribed holding time does not affect the acceptability of the data for their intended use.

The PAH analyses associated with the soil and sediment samples were reported on a wet weight basis. However, because none of the analytes were detected at concentrations that exceeded the MRLs (with the exception of 2-methylnaphthalene as detected within Soil Sample TP3-1, which was reported at a concentration that was only slightly greater than half of the ADEC cleanup criterion for this analyte), it is our opinion that this discrepancy does not affect the acceptability of the data for their intended use. BGES has requested receipt of amended analytical results that report the results of these analyses on a

dry weight basis; however, at the time of preparation of this report, the results had not been received. The amended results (if received prior to the preparation of a final report) will be incorporated into the report at a later time.

The reported MRLs for silver as measured in Soil Samples TP1-1, TP2-1, and TP3-1 were greater than three times the MRL for silver as reported in Background Soil Sample BRSOIL2. However, because silver was not detected in any of the above-mentioned samples at concentrations that exceeded the MRLs, and because the MRLs were well below the applicable ADEC cleanup criterion for silver, it is our opinion that these elevated MRLs do not affect the acceptability of the data for their intended use, and they do not indicate in and of themselves that a release has occurred.

The original laboratory results for arsenic and selenium (as analyzed using EPA Method 6010) for the project soil and sediment samples had MRLs that exceeded the ADEC cleanup criteria for these analytes. The samples were then reanalyzed using EPA Method 6020, and MRLs that were below the ADEC cleanup criteria were achieved (although there were detections of arsenic in the samples, some of which exceeded the ADEC cleanup criterion). For this reason, it is our opinion that the data are acceptable for their intended use.

The MRLs for cadmium in the sediment samples (including the background samples) exceeded the NOAA SQuiRTS for Freshwater Sediments TEL of 0.583 mg/Kg. However, because cadmium was not detected above the MRLs in any of the samples, and the MRLs for cadmium in the field samples were not greater than three times the MRL for the background sediment sample (the threshold for this project at which a release is considered to have occurred), it is our opinion that these elevated MRLs do not affect the acceptability of the data for their intended use. At the time of preparation of this report, laboratory data including estimated concentrations for this analyte (above the method detection limits but below the MRLs) that was requested from the laboratory have not yet been received. If the data are received prior to the completion of the final report, they will be included, as applicable.

The MRLs for cadmium in the surface water samples (including the background samples) exceeded the Alaska Water Quality Criteria Manual for Toxic and other Deleterious Organic and Inorganic Substances criteria for chronic exposure to freshwater aquatic life of 0.000094 mg/L. The MRLs for silver within the samples exceeded the Alaska Water Quality Criteria Manual for Toxic and other Deleterious Organic and Inorganic Substances criteria for acute exposure to freshwater aquatic life of 0.00032 mg/L. However, because these analytes were not detected above the MRLs in any of the

samples, and the MRLs for cadmium and silver in the field samples were not greater than three times the MRLs for the background surface water sample (the threshold for this project at which a release is considered to have occurred), it is our opinion that these elevated MRLs do not affect the acceptability of the data for their intended use. At the time of preparation of this report, laboratory data including estimated concentrations for this analyte (above the method detection limits but below the MRLs) that was requested from the laboratory have not yet been received. If the data are received prior to the completion of the final report, they will be included, as applicable.

The MRLs for mercury in the surface water samples (including the background samples) exceeded the Alaska Water Quality Criteria Manual for Toxic and other Deleterious Organic and Inorganic Substances criteria protective of human health via consumption of aquatic organisms and/or water of 0.000050 mg/L and 0.000051 mg/L. However, because these analytes were not detected above the MRLs in any of the samples, and the MRLs for cadmium and silver in the field samples were not greater than three times the MRLs for the background surface water sample (the threshold for this project at which a release is considered to have occurred), it is our opinion that these elevated MRLs do not affect the acceptability of the data for their intended use. At the time of preparation of this report, laboratory data including estimated concentrations for this analyte (above the method detection limits but below the MRLs) that was requested from the laboratory have not yet been received. If the data are received prior to the completion of the final report, they will be included, as applicable.

The recoveries of benzidine in an LCS and an LCSD, as well as the recovery of di-m-octyl phthalate in an LCSD were reported to exceed the laboratory quality control acceptance range indicating the potential for the reported concentration of these analytes within the field samples to be biased high. However, because these analytes were not detected above the MRLs for the analyses, it is our opinion that these exceedances do not affect the acceptability of the data for their intended use.

The recovery of 2,4-dinitrophenol in an LCSD was reported to exceed the laboratory quality control acceptance range, indicating the potential for the reported concentrations of this analyte within the field samples to be biased high. However, because this analyte was not detected above the MRLs for the analyses of the field samples, it is our opinion that this exceedance does not affect the acceptability of the data for their intended use.

The laboratory reported an inability to calculate the RPD between the concentrations of DRO within Groundwater Sample MW1 and a laboratory-prepared duplicate sample, because DRO was not detected

above the MRL for either the original sample or the duplicate sample. Because this analyte was not detected within the sample, and because the MRL for DRO was well below the ADEC cleanup criterion for this analyte, it is our opinion that this inability to calculate the RPD between the original and laboratory duplicate samples does not affect the acceptability of the data for their intended use.

The RPDs between the recoveries of 4,6-dinitro-2-methylphenol, 4-nitrophenol, and pentachlorophenol in an LCS and an LCSD [described as a laboratory fortified blank (LFB) and an LFB duplicate (LFBD) in the case narrative] exceeded the laboratory acceptance ranges for these analytes. Because the percent recoveries of each of these analytes within the LCS and the LCSD, respectively were within the acceptance ranges, and because these analytes were not detected within the field samples above the respective MRLs, it is our opinion that these QC failures do not affect the acceptability of the data for their intended use.

The recoveries of the surrogate trifluorotoluene associated with the VOCs analyses for the soil and sediment samples, as well as a laboratory blank sample and a matrix spike and a matrix spike duplicate sample were below the laboratory acceptance range. Because the recoveries of four other surrogates within the samples were within the acceptance range, and because the reported concentrations of the VOCs in the field samples were not detected above the MRLs (with the exceptions of 1,2,4-trimethylbenzene and naphthalene in Soil Sample TP3-1, which were roughly two orders of magnitude below the ADEC cleanup criteria for these analytes), it is our opinion that this QC failure does not affect the acceptability of the data for their intended use.

The recoveries of the surrogates fluorobenzene and ethylbenzene-d10 (123 percent and 132 percent, respectively) within an LCS associated with the VOCs analyses of the groundwater sample slightly exceeded the laboratory acceptance range (80-120 percent) for these surrogates, indicating the potential for the reported concentrations of VOCs within the project sample to be biased high. However, because the concentrations of these analytes did not exceed the MRLs for the analyses, it is our opinion that these QC failures do not affect the acceptability of the data for their intended use.

## **6.0 CONCEPTUAL SITE MODEL**

Utilizing on-site observations, historical information, and ADEC guidance documents, BGES has developed a graphical human health conceptual site model (CSM). This CSM is meant to depict exposure routes for both human and ecological receptors for the subject property as a whole (Appendix

D). Exposure pathways identified in the CSM are similar, but are discussed below in the context of their respective human and biota receptors.

Direct impacts to biota were not observed on site. Known current complete transport mechanisms include subsurface soils and groundwater. Contaminated groundwater could potentially intercept a creek located to the east and west of the MBS, and should this occur, surface water and sediment would also be complete exposure pathways; therefore, we have included surface water and sediment as potential transport mechanisms in our CSM. The potential for impacts to surficial soils exists, although no samples were taken from the surface soils at the site to confirm or refute this potential.

The identified potential current and future exposure pathways and contaminant receptors would include uptake by biota from the groundwater or from surface water, and to humans through incidental ingestion, inhalation, and dermal absorption of contaminated soils, groundwater, sediments, and surface water. A potential secondary exposure pathway to human receptors would be through ingestion of biota that have been exposed to contamination.

## **7.0 FINDINGS AND CONCLUSIONS**

The MBS is located approximately 900 feet to the south of the Nichin Cove LTF barge landing area, and is comprised of a shot-rock fill pad, adjacent to a wetland pond that was created by a beaver dam at a culvert. The MBS appeared to be a dumping area from previous activities associated with the LTF. The MBS is so named because metals, parts, and hoses from equipment were allegedly visible in the edge of the fill, adjacent to the wetland pond, during a previous limited site investigation conducted during 2005 by another consultant.

During mid-October of 2008, BGES conducted a PA/SI at the MBS. Three test pits were excavated at the site; two groundwater monitoring wells were installed in two of the test pits; and soil, groundwater, surface water, and sediment samples were collected, as well as background samples of soil, sediment, and surface water. At the conclusion of our sampling activities, the test pits were backfilled with the same material that was excavated, minus the metal debris that could be extracted from the soil. The extracted debris was piled adjacent to the test pit locations.

Arsenic was detected at concentrations that exceeded the ADEC cleanup criterion for this analyte in each of the soil samples collected from the site, however the reported concentrations fall within the range of naturally-occurring concentrations that are typically observed within Alaskan soils.

Furthermore, it should be noted that the concentrations of arsenic reported for the samples collected from the test pits were not greater than three times the concentration of arsenic reported for a background soil sample that was collected at the site.

DRO contamination was reported to exist in the soil sample collected from Test Pit 3 at a depth of approximately 8.4 feet bg, at a concentration of 1,210 mg/Kg, which exceeds ADEC cleanup criterion of 230 mg/Kg. A sheen was also observed on groundwater that was entering the test pit from the southern sidewall, at approximately 4 feet bg.

Concentrations of arsenic were also detected within the sediment samples, in excess of ADEC cleanup criteria and the NOAA SQuiRT Freshwater Sediment TEL for arsenic. Again, however, the observed concentrations are within the range of naturally-occurring background levels of arsenic in Alaskan soils. The arsenic concentrations within the field samples were not greater than three times the concentration reported to exist in the background sample that was collected.

Mercury was detected at a concentration of 0.23 mg/Kg in the background sediment sample. This concentration was approximately three times the greatest concentration of mercury observed in the field samples, and this concentration exceeded the NOAA SQuiRTS Freshwater Sediment TEL for mercury (0.174 mg/Kg).

Lead was detected in Surface Water Sample SW2 (0.00060 mg/L) and in its duplicate sample SW3 (0.00071 mg/L) at concentrations that exceeded the most conservative criteria protective of human health, via consumption of water and aquatic organisms, as defined in the Alaska Water Quality Criteria Manual for Toxic and other Deleterious Organic and Inorganic Substances. The lead that was encountered in the surface water samples may have resulted from the lead-acid batteries that were encountered in two of the test pits, because it appeared that the groundwater flow direction was generally to the north.

Arsenic and lead contaminant concentrations were reported in excess of ADEC cleanup criteria for groundwater in the samples collected from the two monitoring wells installed in Test Pits 2 and 3. The sample of groundwater collected from the monitoring well in Test Pit 3 also exhibited a concentration of DRO that exceeded the ADEC cleanup criterion for this analyte.

In addition to the above-described analyte detections, several analytes had MRLs that exceeded the applicable ADEC cleanup criteria, and the MRLs for silver as measured in the soil samples collected

from the test pits were greater than three times the MRL for silver reported for the background soil sample. No evidence to suggest that a release of contamination containing these contaminant constituents has occurred, however, was identified during the performance of this PA/SI. The source of soil and groundwater contamination encountered in the southernmost test pit (Test Pit 3) is unknown. A perched layer of groundwater that entered the test pit from the south exhibiting sheen is assumed to be flowing to the north-northwest; thus the source of this contamination may be located upgradient and possibly below the road bed. No indication of contamination was encountered further south of the roadway in a heavily wooded area. The diesel and gasoline ASTs that are located to the south and west of this test pit did not appear to have contributed significantly to the contamination in this test pit, although possible.

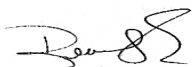
## **8.0 EXCLUSIONS AND CONSIDERATIONS**

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

This report was prepared by Renee LaFata, Senior Environmental Scientist of BGES. Ms. LaFata has over 13 years of environmental consulting experience, and has conducted numerous site characterization and remediation efforts throughout Alaska. The report was reviewed by Robert N. Braunstein, Principal Geologist of BGES. Mr. Braunstein has more than 25 years of geological/environmental consulting experience, and has conducted and managed thousands of environmental projects involving site characterization and remediation efforts throughout Alaska and the lower 48 states.

### **BGES, INC.**

Prepared By:



Renee LaFata  
Senior Environmental Scientist

Reviewed By:



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

**TABLE 1**  
**2008 NICHIN METALS BURY SITE PA/SI**  
**SOIL SAMPLE ANALYTICAL RESULTS**

BGES, INC.

Sample No.	Parameter	Results (mg/Kg)	MRL (mg/Kg)	ADEC Cleanup Criteria (mg/Kg) <sup>1</sup>	3X Background Conc. <sup>2</sup>	Analytical Method
08-1024-TP1-1 PID = 0 ppm Depth = 10 feet bg  (Test Pit 1)	VOCs	ND	Varies	Varies	--	8260B
	GRO	ND	11.5	260	--	AK 101
	DRO	61.9	45.4	230	--	AK102
	RRO	177	114	8,300	--	AK103
	PAHs	ND	Varies	Varies	--	8270C
	Arsenic	ND	6.9	3.7	30	6010
	Arsenic*	<b>4.4</b>	0.46	3.7	30	6020
	Barium	18	1.1	1,100	75	6010
	Cadmium	ND	1.1	5.0	1.17	6010
	Chromium (total)	7.6	3.0	25	24.3	6010
	Hexavalent Chromium	ND	0.61	25	135	6010
	Lead	61	3.4	800	135	6010
	Mercury	0.066	0.048	1.4	0.33	7471A
	Selenium	ND	1.1	3.4	2.28	6010
	Selenium*	ND	1.2	3.4	2.28	6020
	Silver	ND	2.3	11.2	0.90	6010
	08-1024-TP2-1 PID = 2 ppm Depth = 10 feet bg  (Test Pit 2)	VOCs	ND	Varies	Varies	--
GRO		ND	9.18	260	--	AK 101
DRO		ND	28.7	230	--	AK102
RRO		ND	71.6	8,300	--	AK103
PAHs		ND	Varies	Varies	--	8270C
Arsenic		<b>22</b>	2.8	3.7	30	6010
Arsenic*		<b>23</b>	0.24	3.7	30	6020
Barium		7.0	0.46	1,100	75	6010
Cadmium		ND	0.46	5.0	1.17	6010
Chromium (total)		7.2	1.2	25	24.3	6010
Lead		16	1.4	800	135	6010
Mercury		0.082	0.024	1.4	0.33	7471A
Selenium		ND	4.6	3.4	2.28	6010
Selenium*		ND	0.59	3.4	2.28	6020
Silver		ND	0.93	11.2	0.90	6010
TCLP Arsenic (mg/L)		0.0056	0.0040		--	ICP/MS

<sup>1</sup> Soil cleanup criteria for DRO, GRO, RRO based on 18 AAC 75.341, Method 2, Table B2, over 40-inch zone, migration to groundwater, except for RRO, which is based on ingestion value; all others based on 18 AAC 75.341, Method 2, Table B1, migration to groundwater.

<sup>2</sup> Concentrations are based on three times the background concentrations of analytes in Soil Sample 08-1025-BRISOIL-2. If the analyte was not detected above the MRL, the MRL was used in the calculation to provide the most conservative value.

\* = Sample re-analyzed by EPA Method 6020 to obtain a lower MRL.

ADEC = Alaska Department of Environmental Conservation; DRO = diesel range organics; GRO = gasoline range organics  
RRO = residual range organics; VOCs = volatile organic compounds; PAHs = polynuclear aromatic hydrocarbons  
mg/Kg = milligrams per kilogram; mg/L = milligrams per liter; MRL = method reporting limit; PID = photoionization detector  
ppm = parts per million; TCLP = Toxicity Characteristic Leaching Procedure (measured in mg/L)

*Italics* = the MRL exceeded the ADEC cleanup criterion and/or was greater than 3X the background concentration.

**BOLD** = Exceeds the ADEC cleanup criterion



**TABLE 1  
2008 NICHIN METALS BURY SITE PA/SI  
SOIL SAMPLE ANALYTICAL RESULTS**

Sample No.	Parameter	Results (mg/Kg)	MRL (mg/Kg)	ADEC Cleanup Criteria (mg/Kg) <sup>1</sup>	3X Background Conc. <sup>2</sup>	Analytical Method
<b>08-1024-TP3-1</b> PID = 8 ppm Depth = 8.4 feet bg  (Test Pit 3)	1,2,4-Trimethylbenzene	0.220	0.085	23	--	8260B
	Naphthalene	0.360	0.0825	20	--	8260B
	VOCs	ND	Varies	Varies	--	8260B
	GRO	ND	24.0	260	--	AK101
	DRO	<b>1,210</b>	62.9	230	--	AK102
	RRO	ND	157	8,300	--	AK103
	2-Methylnaphthalene	3.24	0.652	6.1	--	8270C
	PAHs	ND	Varies	Varies	--	8270C
	Arsenic	<b>7.0</b>	4.7	3.7	30	6010
	Arsenic*	<b>13</b>	0.47	3.7	30	6020
	Barium	21	0.78	1,100	75	6010
	Cadmium	ND	0.78	5.0	1.17	6010
	Chromium (total)	6.9	2.0	25	24.3	6010
	Lead	8.0	2.3	800	135	6010
	Mercury	0.046	0.043	1.4	0.33	7471A
	Selenium	ND	7.8	3.4	2.28	6010
	Selenium*	ND	1.2	3.4	2.28	6020
	Silver	ND	1.6	11.2	0.90	6010
<b>BACKGROUND SOIL SAMPLES</b>						
<b>08-1025-BRSOIL1</b>	TOC	330,000	2,000			9060 STD
<b>08-1025-BRSOIL2</b>	TOC	130,000	2,000			9060 STD
	Arsenic	<b>10</b>	0.30	3.7	--	6020
	Barium	25	0.30	1,100	--	6020
	Cadmium	0.39	0.30	5.0	--	6020
	Chromium (total)	8.1	0.30	25	--	6020
	Lead	45	0.30	800	--	6020
	Mercury	0.11	0.030	1.4	--	7471A
	Selenium	ND	0.76	3.4	--	6020
	Silver	ND	0.30	11.2	--	6020

<sup>1</sup> Soil cleanup criteria for DRO, GRO, RRO based on 18 AAC 75.341, Method 2, Table B2, over 40-inch zone, migration to groundwater, except for RRO, which is based on ingestion value; all others based on 18 AAC 75.341, Method 2, Table B1, migration to groundwater.

<sup>2</sup> Concentrations are based on three times the background concentrations of analytes in Soil Sample 08-1025-BRSOIL-2. If the analyte was not detected above the MRL, the MRL was used in the calculation to provide the most conservative value.

\* = Sample re-analyzed by EPA Method 6020 to obtain a lower MRL.

ADEC = Alaska Department of Environmental Conservation; DRO = diesel range organics; GRO = gasoline range organics  
RRO = residual range organics; VOCs = volatile organic compounds; PAHs = polynuclear aromatic hydrocarbons  
mg/Kg = milligrams per kilogram; mg/L = milligrams per liter; MRL = method reporting limit; PID = photoionization detector  
ppm = parts per million; TCLP = Toxicity Characteristic Leaching Procedure (measured in mg/L)

*Italics* = the MRL exceeded the ADEC cleanup criterion and/or was greater than 3X the background concentration.

**BOLD** = Exceeds the ADEC cleanup criterion

TABLE 2

BGES, INC.

**2008 NICHIN METALS BURY SITE PA/SI  
SEDIMENT SAMPLE ANALYTICAL RESULTS**

Sample No.	Parameter	Results (mg/Kg)	MRL (mg/Kg)	ADEC Cleanup Criteria (mg/Kg) <sup>1</sup>	Freshwater TEL (mg/kg) <sup>2</sup>	3X Background Conc. <sup>3</sup>	Analytical Method
<b>08-1025-SED1</b>	VOCs	ND	Varies	Varies	--	--	8260B
	GRO	ND	17.1	260	--	--	AK 101
	DRO	ND	76.6	230	--	--	AK 102
	RRO	ND	191	8,300	--	--	AK 103
	PAHs	ND	Varies	Varies	Varies	--	8270C
	Arsenic	ND	5.7	3.7	5.900	19.5	6010
	Arsenic*	2.9	0.49	3.7	5.900	19.5	6020
	Barium	5.1	0.95	1,100	--	30	6010
	Cadmium	ND	0.95	5.0	0.583	3.9	6010
	Chromium	6.0	2.5	25	36.286	30	6010
	Lead	ND	2.9	800	35.000	45	6010
	Mercury	0.072	0.050	1.4	0.174	0.69	7471A
	Selenium	ND	9.5	3.4	--	9.3	6010
	Selenium*	ND	1.2	3.4	--	9.3	6020
	Silver	ND	1.9	11.2	--	3.9	6010
<b>08-1025-SED2</b>	VOCs	ND	Varies	Varies	--	--	8260B
	GRO	ND	24.6	260	--	--	AK 101
	DRO	ND	62.6	230	--	--	AK 102
	RRO	ND	157	8,300	--	--	AK 103
	PAHs	ND	Varies	Varies	Varies	--	8270C
	Arsenic	<b>6.7</b>	4.0	3.7	5.900	19.5	6010
	Arsenic*	<b>7.2</b>	0.36	3.7	5.900	19.5	6020
	Barium	5.4	0.67	1,100	--	30	6010
	Cadmium	ND	0.67	5.0	0.583	3.9	6010
	Chromium	11	1.7	25	36.286	30	6010
	Hexavalent Chromium	ND	0.47	25	--	--	
	Lead	3.6	2.0	800	35.000	45	6010
	Mercury	ND	0.036	1.4	0.174	0.69	7471A
	Selenium	ND	6.7	3.4	--	9.3	6010
	Selenium*	ND	0.91	3.4	--	9.3	6020
Silver	ND	1.3	11.2	--	3.9	6010	

<sup>1</sup> Sediment cleanup criteria for DRO, GRO, RRO, based on 18 AAC 75.341, Method 2, Table B2, over 40-inch zone, migration to groundwater, except for RRO, which is based on ingestion value; PAHs and VOCs cleanup criteria based on 18 AAC 75.341, Method 2, Table B1.

<sup>2</sup> Sediment cleanup criteria based on NOAA Screening Quick Reference Tables (SQuiRT) as guidance. The SQuiRTs were developed by NOAA for *internal screening purposes only* and do not represent official NOAA policy, and do not constitute criteria or cleanup levels. For freshwater sediments, the upper effects threshold screening values were derived by NOAA as the Threshold Effects Level (TEL).

<sup>3</sup> Concentrations are based on three times the background concentration in Sediment Sample 08-1025-BRSED-1. For analytes that were not detected above the MRLs, the MRLs were used in the calculations to provide a conservative value.

\* = Sample re-analyzed by EPA Method 6020 to obtain a lower MRL.

DRO = diesel range organics; GRO = gasoline range organics; PAHs = polynuclear aromatic hydrocarbons; RRO = residual range organics

TOC = total organic carbon; VOCs = volatile organic compounds

mg/Kg = milligrams per kilogram; MRL = method reporting limit; NOAA = National Oceanic and Atmospheric Administration;

*Italics* = the MRL exceeded the ADEC cleanup criterion or NOAA SQuiRTs TEL for this analyte.

**BOLD** = Exceeds the ADEC and/or NOAA SQuiRTs TEL cleanup criteria.

TABLE 2

BGES, INC.

**2008 NICHIN METALS BURY SITE PA/SI  
SEDIMENT SAMPLE ANALYTICAL RESULTS**

Sample No.	Parameter	Results (mg/Kg)	MRL (mg/Kg)	ADEC Cleanup Criteria (mg/Kg) <sup>1</sup>	Freshwater TEL (mg/kg) <sup>2</sup>	3X Background Conc. <sup>3</sup>	Analytical Method
<b>08-1025-SED3</b>	VOCs	ND	Varies	Varies	--	--	8260B
	GRO	ND	17.1	260	--	--	AK 101
	DRO	ND	58.7	230	--	--	AK102
	RRO	ND	147	9,700	--	--	AK103
	PAHs	ND	Varies	Varies	--	--	8270C
	Arsenic	<b>6.0</b>	4.4	3.7	5.900	19.5	6010
	Arsenic*	<b>5.6</b>	0.39	3.7	5.900	19.5	6020
	Barium	8.2	0.73	1,100	--	30	6010
	Cadmium	ND	<i>0.73</i>	5.0	0.583	3.9	6010
	Chromium	14	1.9	25	37.300	30	6010
	Lead	2.5	2.2	800	35.000	45	6010
	Mercury	0.045	0.040	1.4	0.174	0.69	7471A
	Selenium	ND	7.3	3.4	--	9.3	6010
	Selenium*	ND	0.96	3.4	--	9.3	6020
	Silver	ND	1.5	11.2	--	3.9	6010
<b>08-1025-BRSED1</b> (Background Sample)	TOC	200,000	2,000	--	--	--	9060 STD
	Arsenic	<b>6.5</b>	1.3	3.7	5.900	--	6020
	Barium	10	1.3	1,100	--	--	6020
	Cadmium	ND	<i>1.3</i>	5.0	0.583	--	6020
	Chromium	10	1.3	25	36.286	--	6020
	Lead	15	1.3	800	35.000	--	6020
	Mercury	<b>0.23</b>	0.12	1.4	0.174	--	7471A
	Selenium	ND	3.1	3.4	--	--	6020
Silver	ND	1.3	11.2	--	--	6020	
<b>08-1025-BRSED2</b> (Background Sample)	TOC	40,000	2,000	--	--	--	9060 STD
				--	--	--	

<sup>1</sup> Cleanup criteria for DRO, GRO, RRO, based on 18 AAC 75.341, Method 2, Table B2, over 40-inch zone, migration to groundwater; except for RRO, which is based on ingestion value; PAHs, VOCs, and metals cleanup criteria based on 18 AAC 75.341, Method 2, Table B1.

<sup>2</sup> Sediment cleanup criteria based on NOAA Screening Quick Reference Tables (SQuiRT) as guidance. The SQuiRTs were developed by NOAA for *internal screening purposes only* and do not represent official NOAA policy, and do not constitute criteria or cleanup levels. For freshwater sediments, the upper effects threshold screening values were derived by NOAA as the Threshold Effects Level (TEL).

<sup>3</sup> Concentrations are based on three times the background concentration in Sediment Sample 08-1025-BRSED-1. For analytes that were not detected above the MRLs, the MRLs were used in the calculations to provide a conservative value.

\* = Sample re-analyzed by EPA Method 6020 to obtain a lower MRL.

DRO = diesel range organics; GRO = gasoline range organics; PAHs = polynuclear aromatic hydrocarbons; RRO = residual range organics

TOC = total organic carbon; VOCs = volatile organic compounds

mg/Kg = milligrams per kilogram; MRL = method reporting limit; NOAA = National Oceanic and Atmospheric Administration;

*Italics* = the MRL exceeded the ADEC cleanup criterion or NOAA SQuiRTs TEL for this analyte.

**BOLD** = Exceeds the ADEC and/or NOAA SQuiRTs TEL cleanup criteria.

**TABLE 3**  
**2008 NICHIN METALS BURY SITE PA/SI**  
**WATER SAMPLE ANALYTICAL RESULTS**

Sample Number	Parameter	Results (mg/L)	MRL (mg/L)	Aquatic Life Criteria for Fresh Waters (Table III) [acute / chronic] (mg/L) <sup>1</sup>	3X Back-Ground Levels (mg/L) <sup>3</sup>	ADEC Cleanup Criteria (mg/L) <sup>4</sup>	Human Health Criteria for Consumption of: (Table V) [Water and Aquatic Organisms / Aquatic Organisms Only] (mg/L) <sup>1</sup>	Analytical Method
<b>SURFACE WATER SAMPLES</b>								
<b>08-1025-SW1</b>	TAH	ND	Varies	--	Varies	--	--	624M
	TAqH	ND	Varies	--	Varies	--	--	625
	Arsenic	0.0012	0.00040	0.340 / 0.150	0.00144	--	--	6010
	Barium	0.0051	0.0012	--	0.0219	--	--	6010
	Cadmium	ND	<i>0.00040</i>	<i>0.00052<sup>2</sup> / 0.000094<sup>2</sup></i>	0.00120	--	--	6010
	Chromium (total)	ND	0.00040	0.180 <sup>2</sup> / 0.024 <sup>2</sup>	0.00120	--	--	6010
	Lead	0.00050	0.00040	0.014 <sup>2</sup> / 0.00054 <sup>2</sup>	0.00120	--	--	6010
	Mercury	ND	<i>0.00020</i>	0.0014 / 0.00077	0.00060	--	0.000050 / 0.000051	7470A
	Selenium	ND	0.00040	0.01183 / 0.0046	0.00120	--	0.170 / 11.000	6010
	Silver	ND	<i>0.00040</i>	0.00032 <sup>2</sup> / NA	0.00120	--	--	6010
<b>08-1025-SW2</b>	TAH	ND	Varies	--	Varies	--	--	624M
	TAqH	ND	Varies	--	Varies	--	--	625
	Arsenic	0.0015	0.00040	0.340 / 0.150	0.00144	--	--	6010
	Barium	0.0047	0.0012	--	0.0219	--	--	6010
	Cadmium	ND	<i>0.00040</i>	<i>0.00052<sup>2</sup> / 0.000094<sup>2</sup></i>	0.00120	--	--	6010
	Chromium (total)	ND	0.00040	0.180 <sup>2</sup> / 0.024 <sup>2</sup>	0.00120	--	--	6010
	Lead	<b>0.00060</b>	0.00040	0.014 <sup>2</sup> / 0.00054 <sup>2</sup>	0.00120	--	--	6010
	Mercury	ND	<i>0.00020</i>	0.0014 / 0.00077	0.00060	--	0.000050 / 0.000051	74070A
	Selenium	ND	0.00040	0.01183 / 0.0046	0.00120	--	0.170 / 11.000	6010
	Silver	ND	<i>0.00040</i>	0.00032 <sup>2</sup> / NA	0.00120	--	--	6010
<b>08-1025-SW3</b> (Duplicate of SW2) RPD = 0% RPD = 5.84%  RPD = 11.52%	TAH	ND	Varies	--	Varies	--	--	624M
	TAqH	ND	Varies	--	Varies	--	--	625
	Arsenic	0.0015	0.00040	0.340 / 0.150	0.00144	--	--	6010
	Barium	0.0043	0.0012	--	0.0219	--	--	6010
	Cadmium	ND	<i>0.00040</i>	<i>0.00052<sup>2</sup> / 0.000094<sup>2</sup></i>	0.00120	--	--	6010
	Chromium (total)	ND	0.00040	0.180 <sup>2</sup> / 0.024 <sup>2</sup>	0.00120	--	--	6010
	Lead	<b>0.00071</b>	0.00040	0.014 <sup>2</sup> / 0.00054 <sup>2</sup>	0.00120	--	--	6010
	Mercury	ND	<i>0.00020</i>	0.0014 / 0.00077	0.00060	--	0.000050 / 0.000051	7470A
	Selenium	ND	0.00040	0.01183 / 0.0046	0.00120	--	0.170 / 11.000	6010
	Silver	ND	<i>0.00040</i>	0.00032 <sup>2</sup> / NA	0.00120	--	--	6010

<sup>1</sup> = Cleanup criteria based on Tables III and V, 18 AAC 70, Alaska Water Quality Criteria Manual for Toxic and other Deleterious Organic and Inorganic Substances, dated May 15, 2003.

<sup>2</sup> = Assumes hardness of water that yields most stringent criteria, since specific water hardness is a factor for these analytes, and is unknown.

<sup>3</sup> = Most conservative, 3x background concentrations calculated from either reported analyte concentrations (if present) or method reporting limits.

<sup>4</sup> = Cleanup criteria based on ADEC 18 AAC 75, Table C values.

*Italics* = the MRL exceeded either the most stringent ADEC cleanup criterion for Aquatic Life for Fresh Waters (Table III) or Human Health for Consumption (Table V).

TAH = total aromatic hydrocarbons; TAqH = total aqueous hydrocarbons;

mg/L = milligrams per liter; MRL = method reporting limit; ND = non-detectable; below the MRL; NA = not applicable

**BOLD** = Exceeds either the most stringent ADEC cleanup criterion for Aquatic Life for Fresh Waters (Table III) or Human Health for Consumption (Table V).

**TABLE 3**  
**2008 NICHIN METALS BURY SITE PA/SI**  
**WATER SAMPLE ANALYTICAL RESULTS**

Sample Number	Parameter	Results (mg/L)	MRL (mg/L)	Aquatic Life Criteria for Fresh Waters (Table III) [acute / chronic] (mg/L) <sup>1</sup>	3X Back-Ground Levels (mg/L) <sup>3</sup>	ADEC Cleanup Criteria (mg/L) <sup>4</sup>	Human Health Criteria for Consumption of: (Table V) [Water and Aquatic Organisms / Aquatic Organisms Only] (mg/L) <sup>1</sup>	Analytical Method
<b>SURFACE WATER SAMPLES, Cont.</b>								
<b>08-1025-SW4</b>	TAH	ND	Varies	--	Varies	--	--	624M
	TAqH	ND	Varies	--	Varies	--	--	625
	Arsenic	0.00057	0.00040	0.340 / 0.150	0.00144	--	--	6010
	Barium	0.0078	0.0012	--	0.0219	--	--	6010
	Cadmium	ND	<i>0.00040</i>	0.00052 <sup>2</sup> / 0.000094 <sup>2</sup>	0.00120	--	--	6010
	Chromium (total)	ND	0.00040	0.180 <sup>2</sup> / 0.024 <sup>2</sup>	0.00120	--	--	6010
	Lead	ND	0.00040	0.014 <sup>2</sup> / 0.00054 <sup>2</sup>	0.00120	--	--	6010
	Mercury	ND	<i>0.00020</i>	0.0014 / 0.00077	0.00060	--	0.000050 / 0.000051	7470A
	Selenium	ND	0.00040	0.01183 / 0.0046	0.00120	--	0.170 / 11.000	6010
	Silver	ND	<i>0.00040</i>	0.00032 <sup>2</sup> / NA	0.00120	--	--	6010
<b>08-1025-SWB</b> (Background)	TAH or TAqH	ND	Varies	--	--	--	--	624M
	TAH or TAqH	ND	Varies	--	--	--	--	625
	Arsenic	0.00048	0.00040	0.340 / 0.150	--	--	--	6010
	Barium	0.0073	0.0012	--	--	--	--	6010
	Cadmium	ND	<i>0.00040</i>	0.00052 <sup>2</sup> / 0.000094 <sup>2</sup>	--	--	--	6010
	Chromium (total)	ND	0.00040	0.180 <sup>2</sup> / 0.024 <sup>2</sup>	--	--	--	6010
	Lead	ND	0.00040	0.014 <sup>2</sup> / 0.00054 <sup>2</sup>	--	--	--	6010
	Mercury	ND	<i>0.00020</i>	0.0014 / 0.00077	--	--	0.000050 / 0.000051	7470A
	Selenium	ND	0.00040	0.01183 / 0.0046	--	--	0.170 / 11.000	6010
	Silver	ND	<i>0.00040</i>	0.00032 <sup>2</sup> / NA	--	--	--	6010

<sup>1</sup> = Cleanup criteria based on Tables III and V, 18 AAC 70, Alaska Water Quality Criteria Manual for Toxic and other Deleterious Organic and Inorganic Substances, dated May 15, 2003.

<sup>2</sup> = Assumes hardness of water that yields most stringent criteria, since specific water hardness is a factor for these analytes, and is unknown.

<sup>3</sup> = Most conservative, 3x background concentrations calculated from either reported analyte concentrations (if present) or method reporting limits.

<sup>4</sup> = Cleanup criteria based on ADEC 18 AAC 75, Table C values.

*Italics* = the MRL exceeded either the most stringent ADEC cleanup criterion for Aquatic Life for Fresh Waters (Table III) or Human Health for Consumption (Table V).

TAH = total aromatic hydrocarbons; TAqH = total aqueous hydrocarbons;

mg/L = milligrams per liter; MRL = method reporting limit; ND = non-detectable; below the MRL; NA = not applicable

**BOLD** = Exceeds either the most stringent ADEC cleanup criterion for Aquatic Life for Fresh Waters (Table III) or Human Health for Consumption (Table V).

**TABLE 3**  
**2008 NICHIN METALS BURY SITE PA/SI**  
**WATER SAMPLE ANALYTICAL RESULTS**

Sample Number	Parameter	Results (mg/L)	MRL (mg/L)	Aquatic Life Criteria for Fresh Waters (Table III) [acute / chronic] (mg/L) <sup>1</sup>	3X Back-Ground Levels (mg/L) <sup>3</sup>	ADEC Cleanup Criteria (mg/L) <sup>4</sup>	Human Health Criteria for Consumption of: (Table V) [Water and Aquatic Organisms / Aquatic Organisms Only ] (mg/L) <sup>1</sup>	Analytical Method
<b>MONITORING WELL GROUNDWATER SAMPLES</b>								
<b>08-1025-MW1</b>	GRO	ND	0.0500	--	--	2.2	--	AK101
	DRO	ND	0.394	--	--	1.5	--	AK102
	RRO	ND	0.551	--	--	1.1	--	AK103
	TAqH	ND	Varies	--	--	Varies	--	EPA 625
	PAH	ND	Varies	--	--	Varies	--	8270
	Arsenic	<b>0.031</b>	0.00040	--	--	0.010	--	6010
	Barium	0.14	0.0012	--	--	2.0	--	6010
	Cadmium	0.0018	0.00040	--	--	0.005	--	6010
	Chromium (total)	0.024	0.00040	--	--	0.10	--	6010
	Lead	<b>0.90</b>	0.00040	--	--	0.015	--	6010
	Mercury	0.00032	0.00020	--	--	0.002	--	7470A
	Selenium	0.00088	0.00040	--	--	0.05	--	6010
	Silver	ND	0.00040	--	--	0.10	--	6010
	VOC	ND	Varies	--	--	Varies	--	8260
<b>08-1025-MW2</b>	DRO	<b>1.69</b>	0.394	--	--	1.5	--	AK102
	RRO	ND	0.551	--	--	1.1	--	AK103

<sup>1</sup> = Cleanup criteria based on Tables III and V, 18 AAC 70, Alaska Water Quality Criteria Manual for Toxic and other Deleterious Organic and Inorganic Substances, dated May 15, 2003.

<sup>2</sup> = Assumes hardness of water that yields most stringent criteria, since specific water hardness is a factor for these analytes, and is unknown.

<sup>3</sup> = Most conservative, 3x background concentrations calculated from either reported analyte concentrations (if present) or method reporting limits.

<sup>4</sup> = Cleanup criteria based on ADEC 18 AAC 75, Table C values.

*Italics* = the MRL exceeded either the most stringent ADEC cleanup criterion for Aquatic Life for Fresh Waters (Table III) or Human Health for Consumption (Table V).

TAH = total aromatic hydrocarbons; TAqH = total aqueous hydrocarbons;

DRO = diesel range organics, GRO = gasoline range organics; RRO = residual range organics;

PAHs = polynuclear aromatic hydrocarbons; VOCs = volatile organic compounds

mg/L = milligrams per liter; MRL = method reporting limit; ND = non-detectable; below the MRL; NA = not applicable

**BOLD** = Exceeds Alaska Department of Environmental Conservation Cleanup Criteria.

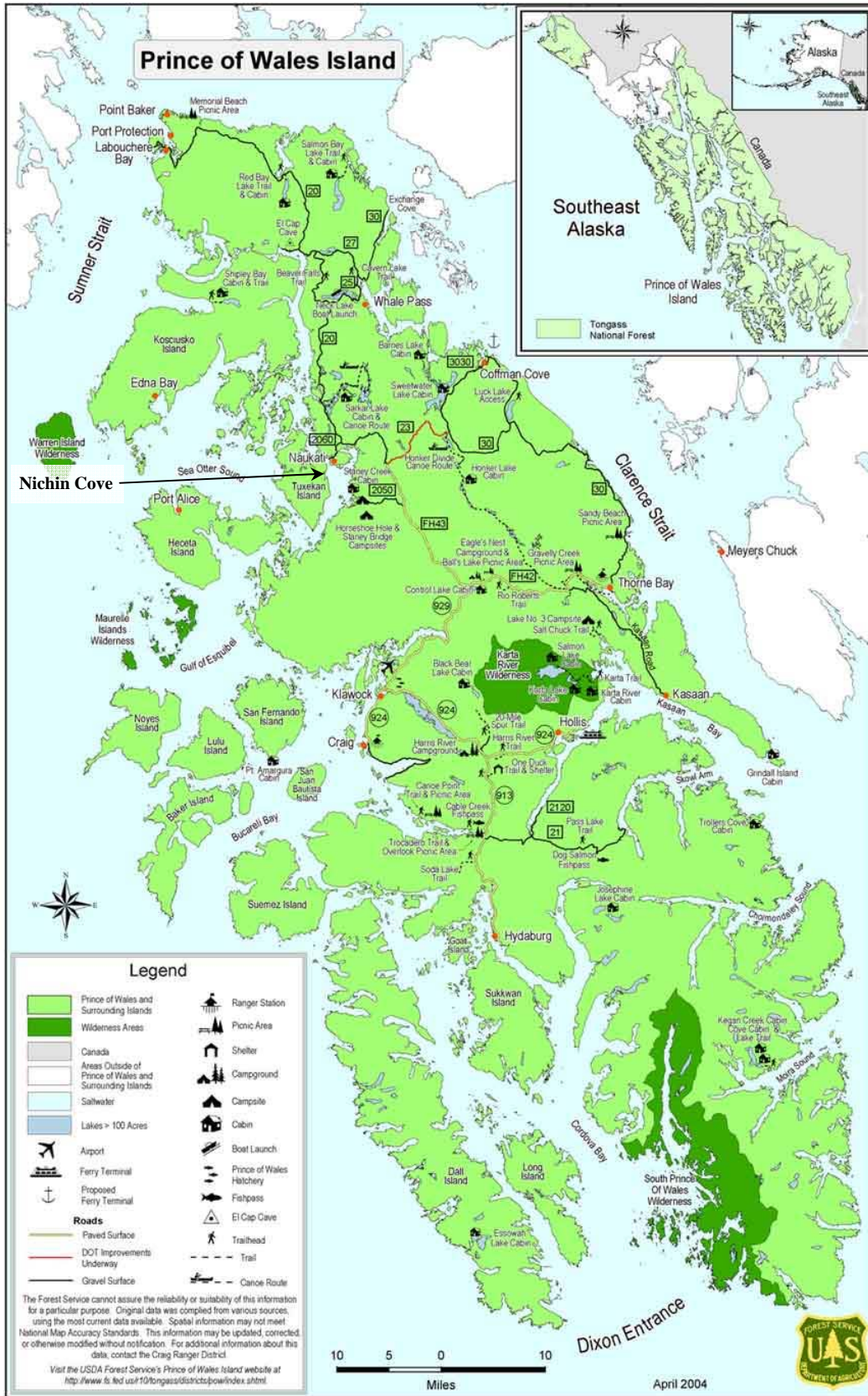


Figure Adapted from U.S. Department of Agriculture, Forest Service

**Nichin Cove Metals Bury Site  
Site Vicinity Map**

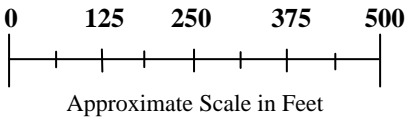
**BGES, INC.**

**February 2009**

**Figure 1**

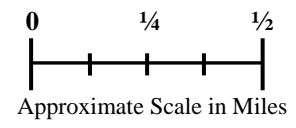
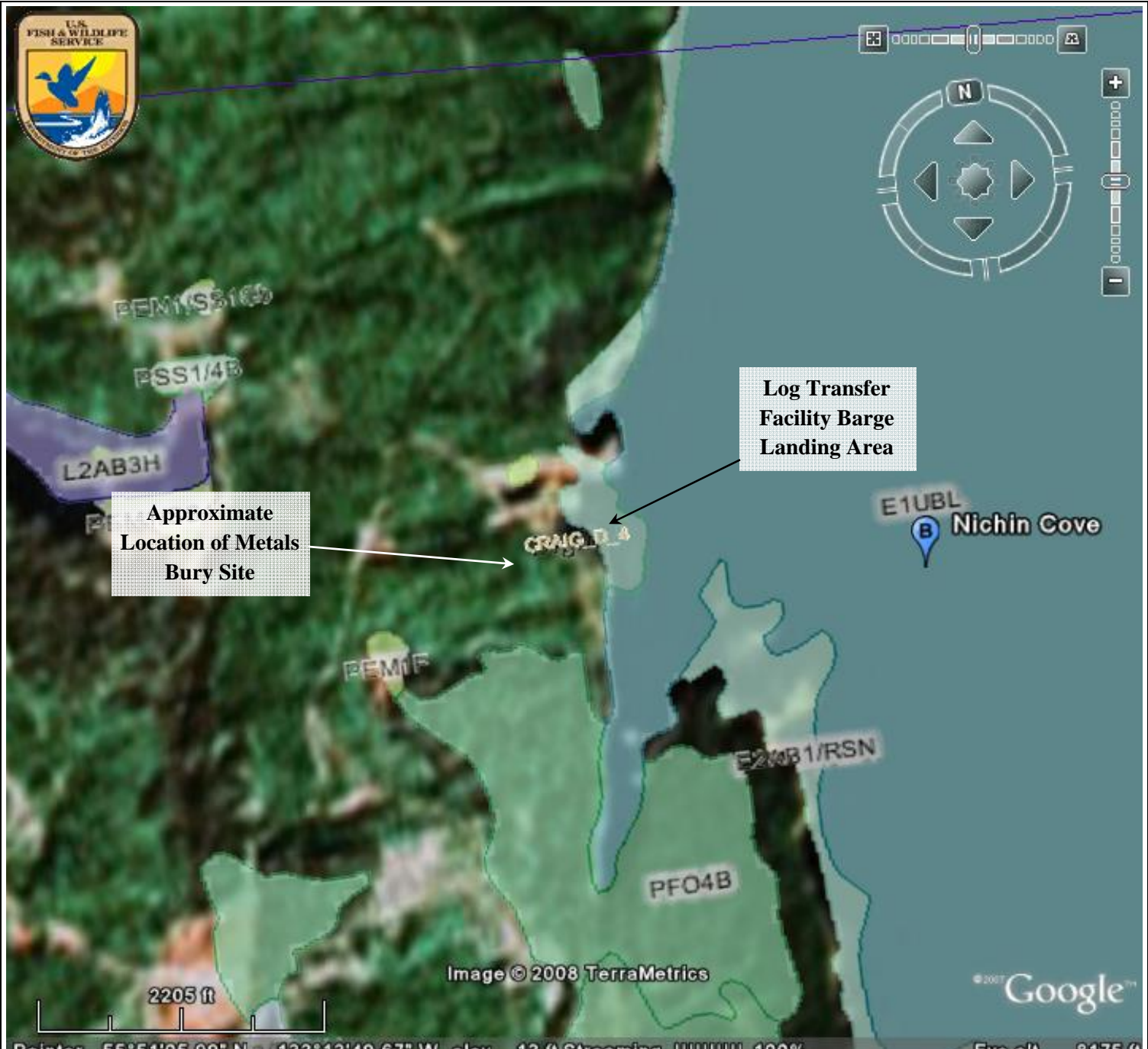


Photograph provided by the U.S. Department of Agriculture / Forest Service

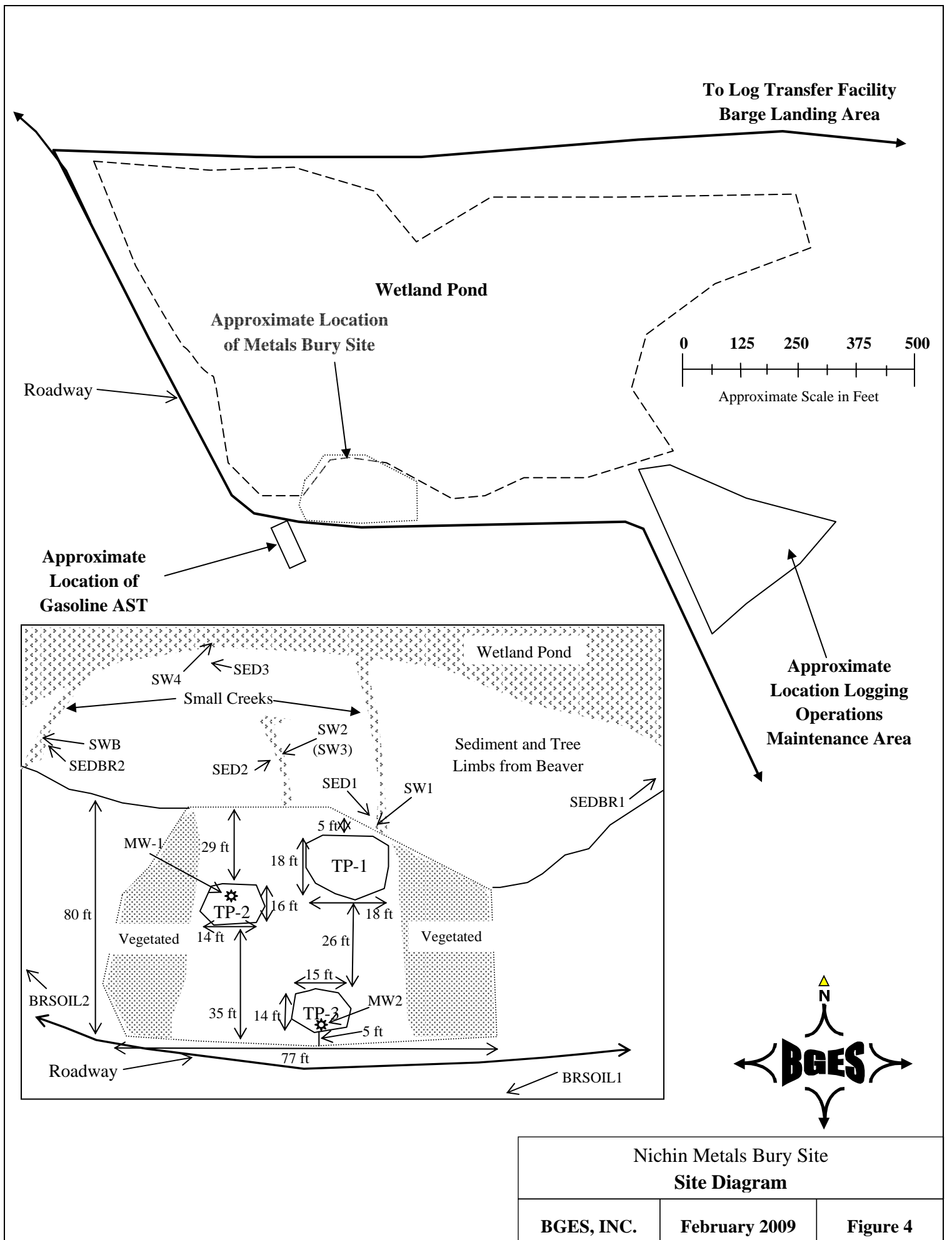


<p>Nichin Metals Bury Site Site Overview Aerial Photograph</p>		
<p>BGES, INC.</p>	<p>February 2009</p>	<p>Figure 2</p>





<b>Nichin Metals Bury Site Wetlands Diagram</b>		
<b>BGES, INC.</b>	<b>February 2009</b>	<b>Figure 3</b>



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



Photograph 1 ~ Commencement of Test Pit 1 Excavation (facing north-northwest)



Photograph 2 ~ Automobile Parts and Crushed Drum Uncovered in Test Pit 1.



Photograph 3 ~ Drums, Automobile Parts, and Various Metals Uncovered in Test Pit 1.



Photograph 4 ~ Likely Military Drum Uncovered in Test Pit 1.



Photograph 5 ~ Commencement of Test Pit 2, South and West of Test Pit 1 (facing north-northwest)



Photograph 6 ~ Rip Rap Encountered in Test Pit 2.

Nichin Cove Metals Bury Site  
Site Photographs

BGES, INC.

December 2008

Appendix A



Photograph 7 ~ Commencement of Test Pit 3 Excavation (facing north-northwest)



Photograph 8 ~ Large Rock Removed from Test Pit 3 (facing north)



Photograph 9 ~ Water with Sheen Observed in Test Pit 3



Photograph 10 ~ Water with Sheen Entering Test Pit 3 From South Sidewall



Photograph 11 ~ Groundwater Monitoring Wells (facing north-northwest)



Photograph 12 ~ Groundwater Monitoring Wells; MW-1 (left) and MW-2 (right); (facing NNE)

Nichin Cove Metals Bury Site  
**Site Photographs**

**BGES, INC.**

**February 2009**

**Figure A-2**



Photograph 13 ~ Retaining Wall and Metals Extruding from the MSB (facing southwest)



Photograph 14 ~ Surface Water Sample SW1 and Sediment Sample SED1 Area of Collection (facing SSE)



Photograph 15 ~ Surface Water Samples SW2 and SW3, and Sediment Sample SED 2 areas of collection (facing south-southeast)



Photograph 16 ~ Surface Water Sample SW4 and Sediment Sample SED3 Areas of Collection (facing north)



Photograph 17 ~ Background Surface Water Sample SWB and Sediment Sample SED2 Areas of Collection (facing southwest)



Photograph 18 ~ Tree branches and Pond, North of the MBS (facing north-northeast)

Nichin Cove Metals Bury Site  
Site Photographs

BGES, INC.

February 2009

Appendix A

**APPENDIX B**  
**LABORATORY ANALYTICAL DATA**

Amended Report

November 26, 2008

Renee Lafata  
BGES, INC.  
750 W. 2nd Ave, Ste 104  
Anchorage, AK 99501

RE: Nichin Cove

Enclosed are the results of analyses for samples received by the laboratory on 10/28/08 15:34.  
The following list is a summary of the Work Orders contained in this report, generated on 11/26/08 17:34.

If you have any questions concerning this report, please feel free to contact me.

---

<u>Work Order</u>	<u>Project</u>	<u>ProjectNumber</u>
ARJ0119	Nichin Cove	Nichin Cove

---



Amended Report





**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
08-1025-SW1	ARJ0119-01	Water	10/25/08 08:58	10/28/08 15:34
08-1025-SW2	ARJ0119-02	Water	10/25/08 09:20	10/28/08 15:34
08-1025-SW3	ARJ0119-03	Water	10/25/08 09:32	10/28/08 15:34
08-1025-SW4	ARJ0119-04	Water	10/25/08 10:06	10/28/08 15:34
08-1025-SWB	ARJ0119-05	Water	10/25/08 09:44	10/28/08 15:34
08-1025-MW1	ARJ0119-06	Water	10/25/08 11:55	10/28/08 15:34
08-1025-MW2	ARJ0119-07	Water	10/25/08 12:15	10/28/08 15:34
Trip Blank	ARJ0119-08	Water	10/25/08 00:00	10/28/08 15:34
08-1024-TP1-1	ARJ0119-09	Soil	10/24/08 13:02	10/28/08 15:34
08-1024-TP2-1	ARJ0119-10	Soil	10/24/08 14:09	10/28/08 15:34
08-1024-TP3-1	ARJ0119-11	Soil	10/24/08 16:27	10/28/08 15:34
08-1025-SED1	ARJ0119-12	Soil	10/25/08 10:27	10/28/08 15:34
08-1025-SED2	ARJ0119-13	Soil	10/25/08 10:53	10/28/08 15:34
08-1025-SED3	ARJ0119-14	Soil	10/25/08 11:10	10/28/08 15:34
08-1025-BRSED01	ARJ0119-15	Soil	10/25/08 10:40	10/28/08 15:34
08-1025-BRSED2	ARJ0119-16	Soil	10/25/08 11:20	10/28/08 15:34
08-1025-BRSoil1	ARJ0119-17	Soil	10/25/08 12:24	10/28/08 15:34
08-1025-BRSoil2	ARJ0119-18	Soil	10/25/08 12:29	10/28/08 15:34
Trip Blank	ARJ0119-19	Soil	10/25/08 12:29	10/28/08 15:34

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

**Amended Report**

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**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Diesel Range Organics (C10-C25) and Residual Range Organics (C25-C36) per AK102/RRO**  
 TestAmerica Anchorage

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
<b>ARJ0119-06 (08-1025-MW1)</b>		<b>Water</b>		<b>Sampled: 10/25/08 11:55</b>							
Diesel Range Organics	AK102/103	ND	----	0.394	mg/l	1x	8100088	10/31/08 09:53	10/31/08 16:51	JN	
Residual Range Organics	"	ND	----	0.551	"	"	"	"	"	JN	
<i>Surrogate(s): 1-Chlorooctadecane</i>				115%	50 - 150 %						"
<i>Triacontane</i>				104%	50 - 150 %						"
<b>ARJ0119-07 (08-1025-MW2)</b>		<b>Water</b>		<b>Sampled: 10/25/08 12:15</b>							
Diesel Range Organics	AK102/103	<b>1.69</b>	----	0.394	mg/l	1x	8100088	10/31/08 09:53	10/31/08 19:59	JN	
Residual Range Organics	"	ND	----	0.551	"	"	"	"	"	JN	
<i>Surrogate(s): 1-Chlorooctadecane</i>				99.8%	50 - 150 %						"
<i>Triacontane</i>				89.5%	50 - 150 %						"
<b>ARJ0119-09 (08-1024-TP1-1)</b>		<b>Soil</b>		<b>Sampled: 10/24/08 13:02</b>							
Diesel Range Organics	AK102/103	<b>61.9</b>	----	45.4	mg/kg dry	1x	8100084	10/29/08 15:43	10/31/08 21:01	JN	
Residual Range Organics	"	<b>177</b>	----	114	"	"	"	"	"	JN	
<i>Surrogate(s): 1-Chlorooctadecane</i>				99.1%	50 - 150 %						"
<i>Triacontane</i>				90.2%	50 - 150 %						"
<b>ARJ0119-10 (08-1024-TP2-1)</b>		<b>Soil</b>		<b>Sampled: 10/24/08 14:09</b>							
Diesel Range Organics	AK102/103	ND	----	28.7	mg/kg dry	1x	8100084	10/29/08 15:43	10/31/08 22:03	JN	
Residual Range Organics	"	ND	----	71.6	"	"	"	"	"	JN	
<i>Surrogate(s): 1-Chlorooctadecane</i>				105%	50 - 150 %						"
<i>Triacontane</i>				96.9%	50 - 150 %						"
<b>ARJ0119-11 (08-1024-TP3-1)</b>		<b>Soil</b>		<b>Sampled: 10/24/08 16:27</b>							
Diesel Range Organics	AK102/103	<b>1210</b>	----	62.9	mg/kg dry	1x	8100084	10/29/08 15:43	10/31/08 22:03	JN	
Residual Range Organics	"	ND	----	157	"	"	"	"	"	JN	
<i>Surrogate(s): 1-Chlorooctadecane</i>				104%	50 - 150 %						"
<i>Triacontane</i>				92.1%	50 - 150 %						"
<b>ARJ0119-12 (08-1025-SED1)</b>		<b>Soil</b>		<b>Sampled: 10/25/08 10:27</b>							
Diesel Range Organics	AK102/103	ND	----	76.6	mg/kg dry	1x	8100084	10/29/08 15:43	10/31/08 22:35	JN	
Residual Range Organics	"	ND	----	191	"	"	"	"	"	JN	
<i>Surrogate(s): 1-Chlorooctadecane</i>				103%	50 - 150 %						"

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Troy J. Engstrom, Lab Director

**Amended Report**

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Amended Report

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Diesel Range Organics (C10-C25) and Residual Range Organics (C25-C36) per AK102/RRO**  
 TestAmerica Anchorage

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
<b>ARJ0119-12 (08-1025-SED1)</b>		<b>Soil</b>		<b>Sampled: 10/25/08 10:27</b>							
<i>Triacontane</i>		97.5%			50 - 150 %	1x					10/31/08 22:35
<b>ARJ0119-13 (08-1025-SED2)</b>		<b>Soil</b>		<b>Sampled: 10/25/08 10:53</b>							
Diesel Range Organics	AK102/103	ND	----	62.6	mg/kg dry	1x	8100084	10/29/08 15:43	10/31/08 22:35	JN	
Residual Range Organics	"	ND	----	157	"	"	"	"	"	JN	
<i>Surrogate(s): 1-Chlorooctadecane</i>		104%			50 - 150 %	"					"
<i>Triacontane</i>		92.9%			50 - 150 %	"					"
<b>ARJ0119-14 (08-1025-SED3)</b>		<b>Soil</b>		<b>Sampled: 10/25/08 11:10</b>							
Diesel Range Organics	AK102/103	ND	----	58.7	mg/kg dry	1x	8100084	10/29/08 15:43	10/31/08 23:06	JN	
Residual Range Organics	"	ND	----	147	"	"	"	"	"	JN	
<i>Surrogate(s): 1-Chlorooctadecane</i>		105%			50 - 150 %	"					"
<i>Triacontane</i>		93.8%			50 - 150 %	"					"

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

Amended Report

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**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Physical Parameters by APHA/ASTM/EPA Methods**  
 TestAmerica Anchorage

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
<b>ARJ0119-09 (08-1024-TP1-1)</b>		<b>Soil</b>		<b>Sampled: 10/24/08 13:02</b>							
Dry Weight	TA-SOP	42.9	----	1.00	%	1x	8100089	10/31/08 14:26	11/03/08 09:00	JN	
<b>ARJ0119-10 (08-1024-TP2-1)</b>		<b>Soil</b>		<b>Sampled: 10/24/08 14:09</b>							
Dry Weight	TA-SOP	66.5	----	1.00	%	1x	8100089	10/31/08 14:26	11/03/08 09:00	JN	
<b>ARJ0119-11 (08-1024-TP3-1)</b>		<b>Soil</b>		<b>Sampled: 10/24/08 16:27</b>							
Dry Weight	TA-SOP	31.6	----	1.00	%	1x	8100089	10/31/08 14:26	11/03/08 09:00	JN	
<b>ARJ0119-12 (08-1025-SED1)</b>		<b>Soil</b>		<b>Sampled: 10/25/08 10:27</b>							
Dry Weight	TA-SOP	25.7	----	1.00	%	1x	8100089	10/31/08 14:26	11/03/08 09:00	JN	
<b>ARJ0119-13 (08-1025-SED2)</b>		<b>Soil</b>		<b>Sampled: 10/25/08 10:53</b>							
Dry Weight	TA-SOP	31.4	----	1.00	%	1x	8100089	10/31/08 14:26	11/03/08 09:00	JN	
<b>ARJ0119-14 (08-1025-SED3)</b>		<b>Soil</b>		<b>Sampled: 10/25/08 11:10</b>							
Dry Weight	TA-SOP	33.9	----	1.00	%	1x	8100089	10/31/08 14:26	11/03/08 09:00	JN	

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Troy J. Engstrom, Lab Director

**Amended Report**

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Amended Report

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Gasoline Range Organics (C6-C10) per AK101-MS**  
 TestAmerica Anchorage

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
<b>ARJ0119-06 (08-1025-MW1)</b>		<b>Water</b>			<b>Sampled: 10/25/08 11:55</b>						
Gasoline Range Organics	AK101 - MS	ND	----	50.0	ug/l	1x	8110008	11/04/08 17:42	11/05/08 05:43		ds
<i>Surrogate(s): 4-BFB</i>				102%		80 - 120 %	"				"
<i>Dibromofluoromethane</i>				106%		80 - 120 %	"				"
<i>Toluene-d8</i>				100%		80 - 120 %	"				"
<b>ARJ0119-08 (Trip Blank)</b>		<b>Water</b>			<b>Sampled: 10/25/08 00:00</b>						
Gasoline Range Organics	AK101 - MS	ND	----	50.0	ug/l	1x	8110008	11/04/08 17:42	11/05/08 06:51		ds
<i>Surrogate(s): 4-BFB</i>				101%		80 - 120 %	"				"
<i>Dibromofluoromethane</i>				107%		80 - 120 %	"				"
<i>Toluene-d8</i>				101%		80 - 120 %	"				"
<b>ARJ0119-09 (08-1024-TP1-1)</b>		<b>Soil</b>			<b>Sampled: 10/24/08 13:02</b>						
Gasoline Range Organics	AK101 - MS	ND	----	11.5	mg/kg dry	1.5x	8110005	11/03/08 15:43	11/04/08 20:03		ds
<i>Surrogate(s): 4-BFB</i>				99.5%		80 - 120 %	"				"
<i>Dibromofluoromethane</i>				104%		80 - 120 %	"				"
<i>a,a,a-TFT</i>				56.2%		50 - 150 %	"				"
<i>Toluene-d8</i>				102%		80 - 120 %	"				"
<b>ARJ0119-10 (08-1024-TP2-1)</b>		<b>Soil</b>			<b>Sampled: 10/24/08 14:09</b>						
Gasoline Range Organics	AK101 - MS	ND	----	9.18	mg/kg dry	3x	8110005	11/03/08 15:43	11/04/08 20:36		ds
<i>Surrogate(s): 4-BFB</i>				99.9%		80 - 120 %	"				"
<i>Dibromofluoromethane</i>				103%		80 - 120 %	"				"
<i>a,a,a-TFT</i>				24.1%		50 - 150 %	"				" Z6
<i>Toluene-d8</i>				102%		80 - 120 %	"				"
<b>ARJ0119-11 (08-1024-TP3-1)</b>		<b>Soil</b>			<b>Sampled: 10/24/08 16:27</b>						
Gasoline Range Organics	AK101 - MS	ND	----	24.0	mg/kg dry	2.25x	8110005	11/03/08 15:43	11/04/08 21:10		ds
<i>Surrogate(s): 4-BFB</i>				99.0%		80 - 120 %	"				"
<i>Dibromofluoromethane</i>				102%		80 - 120 %	"				"
<i>a,a,a-TFT</i>				55.8%		50 - 150 %	"				"
<i>Toluene-d8</i>				102%		80 - 120 %	"				"

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

Amended Report

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*



Amended Report

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Gasoline Range Organics (C6-C10) per AK101-MS**  
 TestAmerica Anchorage

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
<b>ARJ0119-12 (08-1025-SED1)</b>		<b>Soil</b>		<b>Sampled: 10/25/08 10:27</b>							
Gasoline Range Organics	AK101 - MS	ND	----	17.1	mg/kg dry	1x	8110005	11/03/08 15:43	11/05/08 00:33		ds
<i>Surrogate(s): 4-BFB</i>				100%		80 - 120 %	"				"
<i>Dibromofluoromethane</i>				104%		80 - 120 %	"				"
<i>a,a,a-TFT</i>				40.1%		50 - 150 %	"				" Z6
<i>Toluene-d8</i>				100%		80 - 120 %	"				"
<b>ARJ0119-13 (08-1025-SED2)</b>		<b>Soil</b>		<b>Sampled: 10/25/08 10:53</b>							
Gasoline Range Organics	AK101 - MS	ND	----	24.6	mg/kg dry	2.25x	8110005	11/03/08 15:43	11/05/08 01:07		ds
<i>Surrogate(s): 4-BFB</i>				99.6%		80 - 120 %	"				"
<i>Dibromofluoromethane</i>				106%		80 - 120 %	"				"
<i>a,a,a-TFT</i>				45.7%		50 - 150 %	"				" Z6
<i>Toluene-d8</i>				101%		80 - 120 %	"				"
<b>ARJ0119-14 (08-1025-SED3)</b>		<b>Soil</b>		<b>Sampled: 10/25/08 11:10</b>							
Gasoline Range Organics	AK101 - MS	ND	----	17.1	mg/kg dry	1.5x	8110005	11/03/08 15:43	11/05/08 01:41		ds
<i>Surrogate(s): 4-BFB</i>				100%		80 - 120 %	"				"
<i>Dibromofluoromethane</i>				107%		80 - 120 %	"				"
<i>a,a,a-TFT</i>				23.8%		50 - 150 %	"				" Z6
<i>Toluene-d8</i>				101%		80 - 120 %	"				"

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

Amended Report

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**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Purgeables per EPA Method 624 Modified**  
 TestAmerica Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
<b>ARJ0119-01 (08-1025-SW1)</b>		<b>Water</b>									
<b>Sampled: 10/25/08 08:58</b>											
Benzene	EPA 624	ND	----	1.00	ug/l	1x	8101179	10/30/08 09:00	10/30/08 21:17	rjh	
Bromodichloromethane	"	ND	----	1.00	"	"	"	"	"	rjh	
Bromoform	"	ND	----	1.00	"	"	"	"	"	rjh	
Bromomethane	"	ND	----	5.00	"	"	"	"	"	rjh	
Carbon tetrachloride	"	ND	----	1.00	"	"	"	"	"	rjh	
Chlorobenzene	"	ND	----	1.00	"	"	"	"	"	rjh	
Chloroethane	"	ND	----	5.00	"	"	"	"	"	rjh	
Chloroform	"	ND	----	1.00	"	"	"	"	"	rjh	
Chloromethane	"	ND	----	5.00	"	"	"	"	"	rjh	
Dibromochloromethane	"	ND	----	1.00	"	"	"	"	"	rjh	
1,2-Dichlorobenzene	"	ND	----	1.00	"	"	"	"	"	rjh	
1,3-Dichlorobenzene	"	ND	----	1.00	"	"	"	"	"	rjh	
1,4-Dichlorobenzene	"	ND	----	1.00	"	"	"	"	"	rjh	
1,1-Dichloroethane	"	ND	----	1.00	"	"	"	"	"	rjh	
1,2-Dichloroethane	"	ND	----	1.00	"	"	"	"	"	rjh	
1,1-Dichloroethene	"	ND	----	1.00	"	"	"	"	"	rjh	
trans-1,2-Dichloroethene	"	ND	----	1.00	"	"	"	"	"	rjh	
1,2-Dichloropropane	"	ND	----	1.00	"	"	"	"	"	rjh	
cis-1,3-Dichloropropene	"	ND	----	1.00	"	"	"	"	"	rjh	
trans-1,3-Dichloropropene	"	ND	----	1.00	"	"	"	"	"	rjh	
Ethylbenzene	"	ND	----	1.00	"	"	"	"	"	rjh	
Methylene chloride	"	ND	----	5.00	"	"	"	"	"	rjh	
1,1,2,2-Tetrachloroethane	"	ND	----	1.00	"	"	"	"	"	rjh	
Tetrachloroethene	"	ND	----	1.00	"	"	"	"	"	rjh	
Toluene	"	ND	----	1.00	"	"	"	"	"	rjh	
1,1,1-Trichloroethane	"	ND	----	1.00	"	"	"	"	"	rjh	
1,1,2-Trichloroethane	"	ND	----	1.00	"	"	"	"	"	rjh	
Trichloroethene	"	ND	----	1.00	"	"	"	"	"	rjh	
Trichlorofluoromethane	"	ND	----	1.00	"	"	"	"	"	rjh	
Vinyl chloride	"	ND	----	1.00	"	"	"	"	"	rjh	
Xylenes (total)	"	ND	----	2.00	"	"	"	"	"	rjh	

<i>Surrogate(s):</i>	<i>4-BFB</i>	<i>100%</i>	<i>75 - 120 %</i>	<i>"</i>	<i>"</i>
	<i>1,2-DCA-d4</i>	<i>99.3%</i>	<i>77 - 129 %</i>	<i>"</i>	<i>"</i>
	<i>Dibromofluoromethane</i>	<i>97.8%</i>	<i>80 - 121 %</i>	<i>"</i>	<i>"</i>
	<i>Toluene-d8</i>	<i>102%</i>	<i>80 - 120 %</i>	<i>"</i>	<i>"</i>

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

**Amended Report**

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**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Purgeables per EPA Method 624 Modified**  
 TestAmerica Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
<b>ARJ0119-02 (08-1025-SW2)</b>		<b>Water</b>									
<b>Sampled: 10/25/08 09:20</b>											
Benzene	EPA 624	ND	----	1.00	ug/l	1x	8110172	11/06/08 09:00	11/06/08 19:31	BJ	
Bromodichloromethane	"	ND	----	1.00	"	"	"	"	"	BJ	
Bromoform	"	ND	----	1.00	"	"	"	"	"	BJ	
Bromomethane	"	ND	----	5.00	"	"	"	"	"	BJ	
Carbon tetrachloride	"	ND	----	1.00	"	"	"	"	"	BJ	
Chlorobenzene	"	ND	----	1.00	"	"	"	"	"	BJ	
Chloroethane	"	ND	----	5.00	"	"	"	"	"	BJ	
Chloroform	"	ND	----	1.00	"	"	"	"	"	BJ	
Chloromethane	"	ND	----	5.00	"	"	"	"	"	BJ	
Dibromochloromethane	"	ND	----	1.00	"	"	"	"	"	BJ	
1,2-Dichlorobenzene	"	ND	----	1.00	"	"	"	"	"	BJ	
1,3-Dichlorobenzene	"	ND	----	1.00	"	"	"	"	"	BJ	
1,4-Dichlorobenzene	"	ND	----	1.00	"	"	"	"	"	BJ	
1,1-Dichloroethane	"	ND	----	1.00	"	"	"	"	"	BJ	
1,2-Dichloroethane	"	ND	----	1.00	"	"	"	"	"	BJ	
1,1-Dichloroethene	"	ND	----	1.00	"	"	"	"	"	BJ	
trans-1,2-Dichloroethene	"	ND	----	1.00	"	"	"	"	"	BJ	
1,2-Dichloropropane	"	ND	----	1.00	"	"	"	"	"	BJ	
cis-1,3-Dichloropropene	"	ND	----	1.00	"	"	"	"	"	BJ	
trans-1,3-Dichloropropene	"	ND	----	1.00	"	"	"	"	"	BJ	
Ethylbenzene	"	ND	----	1.00	"	"	"	"	"	BJ	
Methylene chloride	"	ND	----	5.00	"	"	"	"	"	BJ	
1,1,2,2-Tetrachloroethane	"	ND	----	1.00	"	"	"	"	"	BJ	
Tetrachloroethene	"	ND	----	1.00	"	"	"	"	"	BJ	
Toluene	"	ND	----	1.00	"	"	"	"	"	BJ	
1,1,1-Trichloroethane	"	ND	----	1.00	"	"	"	"	"	BJ	
1,1,2-Trichloroethane	"	ND	----	1.00	"	"	"	"	"	BJ	
Trichloroethene	"	ND	----	1.00	"	"	"	"	"	BJ	
Trichlorofluoromethane	"	ND	----	1.00	"	"	"	"	"	BJ	
Vinyl chloride	"	ND	----	1.00	"	"	"	"	"	BJ	
Xylenes (total)	"	ND	----	2.00	"	"	"	"	"	BJ	
<i>Surrogate(s): 4-BFB</i>				104%		75 - 120 %	"			"	
<i>1,2-DCA-d4</i>				106%		77 - 129 %	"			"	
<i>Dibromofluoromethane</i>				105%		80 - 121 %	"			"	
<i>Toluene-d8</i>				102%		80 - 120 %	"			"	

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

**Amended Report**

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**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Purgeables per EPA Method 624 Modified**  
 TestAmerica Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
<b>ARJ0119-03 (08-1025-SW3)</b>		<b>Water</b>		<b>Sampled: 10/25/08 09:32</b>							
Benzene	EPA 624	ND	----	1.00	ug/l	1x	8110172	11/06/08 09:00	11/06/08 19:53	BJ	
Bromodichloromethane	"	ND	----	1.00	"	"	"	"	"	BJ	
Bromoform	"	ND	----	1.00	"	"	"	"	"	BJ	
Bromomethane	"	ND	----	5.00	"	"	"	"	"	BJ	
Carbon tetrachloride	"	ND	----	1.00	"	"	"	"	"	BJ	
Chlorobenzene	"	ND	----	1.00	"	"	"	"	"	BJ	
Chloroethane	"	ND	----	5.00	"	"	"	"	"	BJ	
Chloroform	"	ND	----	1.00	"	"	"	"	"	BJ	
Chloromethane	"	ND	----	5.00	"	"	"	"	"	BJ	
Dibromochloromethane	"	ND	----	1.00	"	"	"	"	"	BJ	
1,2-Dichlorobenzene	"	ND	----	1.00	"	"	"	"	"	BJ	
1,3-Dichlorobenzene	"	ND	----	1.00	"	"	"	"	"	BJ	
1,4-Dichlorobenzene	"	ND	----	1.00	"	"	"	"	"	BJ	
1,1-Dichloroethane	"	ND	----	1.00	"	"	"	"	"	BJ	
1,2-Dichloroethane	"	ND	----	1.00	"	"	"	"	"	BJ	
1,1-Dichloroethene	"	ND	----	1.00	"	"	"	"	"	BJ	
trans-1,2-Dichloroethene	"	ND	----	1.00	"	"	"	"	"	BJ	
1,2-Dichloropropane	"	ND	----	1.00	"	"	"	"	"	BJ	
cis-1,3-Dichloropropene	"	ND	----	1.00	"	"	"	"	"	BJ	
trans-1,3-Dichloropropene	"	ND	----	1.00	"	"	"	"	"	BJ	
Ethylbenzene	"	ND	----	1.00	"	"	"	"	"	BJ	
Methylene chloride	"	ND	----	5.00	"	"	"	"	"	BJ	
1,1,2,2-Tetrachloroethane	"	ND	----	1.00	"	"	"	"	"	BJ	
Tetrachloroethene	"	ND	----	1.00	"	"	"	"	"	BJ	
Toluene	"	ND	----	1.00	"	"	"	"	"	BJ	
1,1,1-Trichloroethane	"	ND	----	1.00	"	"	"	"	"	BJ	
1,1,2-Trichloroethane	"	ND	----	1.00	"	"	"	"	"	BJ	
Trichloroethene	"	ND	----	1.00	"	"	"	"	"	BJ	
Trichlorofluoromethane	"	ND	----	1.00	"	"	"	"	"	BJ	
Vinyl chloride	"	ND	----	1.00	"	"	"	"	"	BJ	
Xylenes (total)	"	ND	----	2.00	"	"	"	"	"	BJ	

Surrogate(s):	4-BFB	106%	75 - 120 %	"	"
	1,2-DCA-d4	113%	77 - 129 %	"	"
	Dibromofluoromethane	112%	80 - 121 %	"	"
	Toluene-d8	107%	80 - 120 %	"	"

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

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**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Purgeables per EPA Method 624 Modified**  
 TestAmerica Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
<b>ARJ0119-04 (08-1025-SW4)</b>		<b>Water</b>									
<b>Sampled: 10/25/08 10:06</b>											
Benzene	EPA 624	ND	----	1.00	ug/l	1x	8110172	11/06/08 09:00	11/06/08 20:15	BJ	
Bromodichloromethane	"	ND	----	1.00	"	"	"	"	"	BJ	
Bromoform	"	ND	----	1.00	"	"	"	"	"	BJ	
Bromomethane	"	ND	----	5.00	"	"	"	"	"	BJ	
Carbon tetrachloride	"	ND	----	1.00	"	"	"	"	"	BJ	
Chlorobenzene	"	ND	----	1.00	"	"	"	"	"	BJ	
Chloroethane	"	ND	----	5.00	"	"	"	"	"	BJ	
Chloroform	"	ND	----	1.00	"	"	"	"	"	BJ	
Chloromethane	"	ND	----	5.00	"	"	"	"	"	BJ	
Dibromochloromethane	"	ND	----	1.00	"	"	"	"	"	BJ	
1,2-Dichlorobenzene	"	ND	----	1.00	"	"	"	"	"	BJ	
1,3-Dichlorobenzene	"	ND	----	1.00	"	"	"	"	"	BJ	
1,4-Dichlorobenzene	"	ND	----	1.00	"	"	"	"	"	BJ	
1,1-Dichloroethane	"	ND	----	1.00	"	"	"	"	"	BJ	
1,2-Dichloroethane	"	ND	----	1.00	"	"	"	"	"	BJ	
1,1-Dichloroethene	"	ND	----	1.00	"	"	"	"	"	BJ	
trans-1,2-Dichloroethene	"	ND	----	1.00	"	"	"	"	"	BJ	
1,2-Dichloropropane	"	ND	----	1.00	"	"	"	"	"	BJ	
cis-1,3-Dichloropropene	"	ND	----	1.00	"	"	"	"	"	BJ	
trans-1,3-Dichloropropene	"	ND	----	1.00	"	"	"	"	"	BJ	
Ethylbenzene	"	ND	----	1.00	"	"	"	"	"	BJ	
Methylene chloride	"	ND	----	5.00	"	"	"	"	"	BJ	
1,1,2,2-Tetrachloroethane	"	ND	----	1.00	"	"	"	"	"	BJ	
Tetrachloroethene	"	ND	----	1.00	"	"	"	"	"	BJ	
Toluene	"	ND	----	1.00	"	"	"	"	"	BJ	
1,1,1-Trichloroethane	"	ND	----	1.00	"	"	"	"	"	BJ	
1,1,2-Trichloroethane	"	ND	----	1.00	"	"	"	"	"	BJ	
Trichloroethene	"	ND	----	1.00	"	"	"	"	"	BJ	
Trichlorofluoromethane	"	ND	----	1.00	"	"	"	"	"	BJ	
Vinyl chloride	"	ND	----	1.00	"	"	"	"	"	BJ	
Xylenes (total)	"	ND	----	2.00	"	"	"	"	"	BJ	

<i>Surrogate(s):</i>	<i>4-BFB</i>	<i>105%</i>	<i>75 - 120 %</i>	<i>"</i>	<i>"</i>
	<i>1,2-DCA-d4</i>	<i>105%</i>	<i>77 - 129 %</i>	<i>"</i>	<i>"</i>
	<i>Dibromofluoromethane</i>	<i>104%</i>	<i>80 - 121 %</i>	<i>"</i>	<i>"</i>
	<i>Toluene-d8</i>	<i>101%</i>	<i>80 - 120 %</i>	<i>"</i>	<i>"</i>

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

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**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Purgeables per EPA Method 624 Modified**  
 TestAmerica Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
<b>ARJ0119-05 (08-1025-SWB)</b>		<b>Water</b>									
		<b>Sampled: 10/25/08 09:44</b>									
Benzene	EPA 624	ND	----	1.00	ug/l	1x	8110172	11/06/08 09:00	11/06/08 20:37	BJ	
Bromodichloromethane	"	ND	----	1.00	"	"	"	"	"	BJ	
Bromoform	"	ND	----	1.00	"	"	"	"	"	BJ	
Bromomethane	"	ND	----	5.00	"	"	"	"	"	BJ	
Carbon tetrachloride	"	ND	----	1.00	"	"	"	"	"	BJ	
Chlorobenzene	"	ND	----	1.00	"	"	"	"	"	BJ	
Chloroethane	"	ND	----	5.00	"	"	"	"	"	BJ	
Chloroform	"	ND	----	1.00	"	"	"	"	"	BJ	
Chloromethane	"	ND	----	5.00	"	"	"	"	"	BJ	
Dibromochloromethane	"	ND	----	1.00	"	"	"	"	"	BJ	
1,2-Dichlorobenzene	"	ND	----	1.00	"	"	"	"	"	BJ	
1,3-Dichlorobenzene	"	ND	----	1.00	"	"	"	"	"	BJ	
1,4-Dichlorobenzene	"	ND	----	1.00	"	"	"	"	"	BJ	
1,1-Dichloroethane	"	ND	----	1.00	"	"	"	"	"	BJ	
1,2-Dichloroethane	"	ND	----	1.00	"	"	"	"	"	BJ	
1,1-Dichloroethene	"	ND	----	1.00	"	"	"	"	"	BJ	
trans-1,2-Dichloroethene	"	ND	----	1.00	"	"	"	"	"	BJ	
1,2-Dichloropropane	"	ND	----	1.00	"	"	"	"	"	BJ	
cis-1,3-Dichloropropene	"	ND	----	1.00	"	"	"	"	"	BJ	
trans-1,3-Dichloropropene	"	ND	----	1.00	"	"	"	"	"	BJ	
Ethylbenzene	"	ND	----	1.00	"	"	"	"	"	BJ	
Methylene chloride	"	ND	----	5.00	"	"	"	"	"	BJ	
1,1,2,2-Tetrachloroethane	"	ND	----	1.00	"	"	"	"	"	BJ	
Tetrachloroethene	"	ND	----	1.00	"	"	"	"	"	BJ	
Toluene	"	ND	----	1.00	"	"	"	"	"	BJ	
1,1,1-Trichloroethane	"	ND	----	1.00	"	"	"	"	"	BJ	
1,1,2-Trichloroethane	"	ND	----	1.00	"	"	"	"	"	BJ	
Trichloroethene	"	ND	----	1.00	"	"	"	"	"	BJ	
Trichlorofluoromethane	"	ND	----	1.00	"	"	"	"	"	BJ	
Vinyl chloride	"	ND	----	1.00	"	"	"	"	"	BJ	
Xylenes (total)	"	ND	----	2.00	"	"	"	"	"	BJ	
<i>Surrogate(s): 4-BFB</i>				106%		75 - 120 %	"			"	
<i>1,2-DCA-d4</i>				110%		77 - 129 %	"			"	
<i>Dibromofluoromethane</i>				109%		80 - 121 %	"			"	
<i>Toluene-d8</i>				105%		80 - 120 %	"			"	

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

**Amended Report**

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**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Purgeables per EPA Method 624 Modified**  
 TestAmerica Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
<b>ARJ0119-08 (Trip Blank)</b>		<b>Water</b>		<b>Sampled: 10/25/08 00:00</b>							
Benzene	EPA 624	ND	----	1.00	ug/l	1x	8101179	10/30/08 09:00	10/30/08 20:50	rjh	
Bromodichloromethane	"	ND	----	1.00	"	"	"	"	"	rjh	
Bromoform	"	ND	----	1.00	"	"	"	"	"	rjh	
Bromomethane	"	ND	----	5.00	"	"	"	"	"	rjh	
Carbon tetrachloride	"	ND	----	1.00	"	"	"	"	"	rjh	
Chlorobenzene	"	ND	----	1.00	"	"	"	"	"	rjh	
Chloroethane	"	ND	----	5.00	"	"	"	"	"	rjh	
Chloroform	"	ND	----	1.00	"	"	"	"	"	rjh	
Chloromethane	"	ND	----	5.00	"	"	"	"	"	rjh	
Dibromochloromethane	"	ND	----	1.00	"	"	"	"	"	rjh	
1,2-Dichlorobenzene	"	ND	----	1.00	"	"	"	"	"	rjh	
1,3-Dichlorobenzene	"	ND	----	1.00	"	"	"	"	"	rjh	
1,4-Dichlorobenzene	"	ND	----	1.00	"	"	"	"	"	rjh	
1,1-Dichloroethane	"	ND	----	1.00	"	"	"	"	"	rjh	
1,2-Dichloroethane	"	ND	----	1.00	"	"	"	"	"	rjh	
1,1-Dichloroethene	"	ND	----	1.00	"	"	"	"	"	rjh	
trans-1,2-Dichloroethene	"	ND	----	1.00	"	"	"	"	"	rjh	
1,2-Dichloropropane	"	ND	----	1.00	"	"	"	"	"	rjh	
cis-1,3-Dichloropropene	"	ND	----	1.00	"	"	"	"	"	rjh	
trans-1,3-Dichloropropene	"	ND	----	1.00	"	"	"	"	"	rjh	
Ethylbenzene	"	ND	----	1.00	"	"	"	"	"	rjh	
Methylene chloride	"	ND	----	5.00	"	"	"	"	"	rjh	
1,1,2,2-Tetrachloroethane	"	ND	----	1.00	"	"	"	"	"	rjh	
Tetrachloroethene	"	ND	----	1.00	"	"	"	"	"	rjh	
Toluene	"	ND	----	1.00	"	"	"	"	"	rjh	
1,1,1-Trichloroethane	"	ND	----	1.00	"	"	"	"	"	rjh	
1,1,2-Trichloroethane	"	ND	----	1.00	"	"	"	"	"	rjh	
Trichloroethene	"	ND	----	1.00	"	"	"	"	"	rjh	
Trichlorofluoromethane	"	ND	----	1.00	"	"	"	"	"	rjh	
Vinyl chloride	"	ND	----	1.00	"	"	"	"	"	rjh	
Xylenes (total)	"	ND	----	2.00	"	"	"	"	"	rjh	

Surrogate(s):	4-BFB	99.4%	75 - 120 %	"	"
	1,2-DCA-d4	100%	77 - 129 %	"	"
	Dibromofluoromethane	99.0%	80 - 121 %	"	"
	Toluene-d8	102%	80 - 120 %	"	"

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

**Amended Report**

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**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Acid and Base/Neutral Extractables per EPA Method 625**  
 TestAmerica Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
<b>ARJ0119-01 (08-1025-SW1)</b>		<b>Water</b>		<b>Sampled: 10/25/08 08:58</b>							
Acenaphthene	EPA 625	ND	----	4.76	ug/l	1x	8101123	10/29/08 10:10	11/03/08 21:42	lqn	
Acenaphthylene	"	ND	----	4.76	"	"	"	"	"	lqn	
Anthracene	"	ND	----	4.76	"	"	"	"	"	lqn	
Benzidine	"	ND	----	57.1	"	"	"	"	"	lqn	L6
Benzo (a) anthracene	"	ND	----	4.76	"	"	"	"	"	lqn	
Benzo (a) pyrene	"	ND	----	4.76	"	"	"	"	"	lqn	
Benzo (b) fluoranthene	"	ND	----	4.76	"	"	"	"	"	lqn	
Benzo (ghi) perylene	"	ND	----	4.76	"	"	"	"	"	lqn	
Benzo (k) fluoranthene	"	ND	----	4.76	"	"	"	"	"	lqn	
4-Bromophenyl phenyl ether	"	ND	----	4.76	"	"	"	"	"	lqn	
Butyl benzyl phthalate	"	ND	----	4.76	"	"	"	"	"	lqn	
4-Chloro-3-methylphenol	"	ND	----	4.76	"	"	"	"	"	lqn	
Bis(2-chloroethoxy)methane	"	ND	----	9.52	"	"	"	"	"	lqn	
Bis(2-chloroethyl)ether	"	ND	----	4.76	"	"	"	"	"	lqn	
Bis(2-chloroisopropyl)ether	"	ND	----	9.52	"	"	"	"	"	lqn	
2-Chloronaphthalene	"	ND	----	4.76	"	"	"	"	"	lqn	
2-Chlorophenol	"	ND	----	4.76	"	"	"	"	"	lqn	
4-Chlorophenyl phenyl ether	"	ND	----	4.76	"	"	"	"	"	lqn	
Chrysene	"	ND	----	4.76	"	"	"	"	"	lqn	
Di-n-butyl phthalate	"	ND	----	4.76	"	"	"	"	"	lqn	
Di-n-octyl phthalate	"	ND	----	4.76	"	"	"	"	"	lqn	
Dibenzo (a,h) anthracene	"	ND	----	4.76	"	"	"	"	"	lqn	
1,2-Dichlorobenzene	"	ND	----	4.76	"	"	"	"	"	lqn	
1,3-Dichlorobenzene	"	ND	----	4.76	"	"	"	"	"	lqn	
1,4-Dichlorobenzene	"	ND	----	4.76	"	"	"	"	"	lqn	
3,3'-Dichlorobenzidine	"	ND	----	4.76	"	"	"	"	"	lqn	
2,4-Dichlorophenol	"	ND	----	4.76	"	"	"	"	"	lqn	
Diethyl phthalate	"	ND	----	4.76	"	"	"	"	"	lqn	
2,4-Dimethylphenol	"	ND	----	9.52	"	"	"	"	"	lqn	
Dimethyl phthalate	"	ND	----	4.76	"	"	"	"	"	lqn	
4,6-Dinitro-2-methylphenol	"	ND	----	9.52	"	"	"	"	"	lqn	
2,4-Dinitrophenol	"	ND	----	23.8	"	"	"	"	"	lqn	
2,4-Dinitrotoluene	"	ND	----	4.76	"	"	"	"	"	lqn	
2,6-Dinitrotoluene	"	ND	----	4.76	"	"	"	"	"	lqn	
Bis(2-ethylhexyl)phthalate	"	ND	----	9.52	"	"	"	"	"	lqn	
Fluoranthene	"	ND	----	4.76	"	"	"	"	"	lqn	
Fluorene	"	ND	----	4.76	"	"	"	"	"	lqn	

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

**Amended Report**

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**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Acid and Base/Neutral Extractables per EPA Method 625**  
 TestAmerica Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
<b>ARJ0119-01 (08-1025-SW1)</b>		<b>Water</b>									
		<b>Sampled: 10/25/08 08:58</b>									
Hexachlorobenzene	EPA 625	ND	----	4.76	ug/l	1x	8101123	10/29/08 10:10	11/03/08 21:42	lqn	
Hexachlorobutadiene	"	ND	----	9.52	"	"	"	"	"	lqn	
Hexachlorocyclopentadiene	"	ND	----	9.52	"	"	"	"	"	lqn	
Hexachloroethane	"	ND	----	9.52	"	"	"	"	"	lqn	
Indeno (1,2,3-cd) pyrene	"	ND	----	4.76	"	"	"	"	"	lqn	
Isophorone	"	ND	----	4.76	"	"	"	"	"	lqn	
Naphthalene	"	ND	----	4.76	"	"	"	"	"	lqn	
Nitrobenzene	"	ND	----	4.76	"	"	"	"	"	lqn	
2-Nitrophenol	"	ND	----	4.76	"	"	"	"	"	lqn	
4-Nitrophenol	"	ND	----	23.8	"	"	"	"	"	lqn	
N-Nitrosodimethylamine	"	ND	----	4.76	"	"	"	"	"	lqn	
N-Nitrosodi-n-propylamine	"	ND	----	9.52	"	"	"	"	"	lqn	
N-Nitrosodiphenylamine	"	ND	----	4.76	"	"	"	"	"	lqn	
Pentachlorophenol	"	ND	----	9.52	"	"	"	"	"	lqn	
Phenanthrene	"	ND	----	4.76	"	"	"	"	"	lqn	
Phenol	"	ND	----	4.76	"	"	"	"	"	lqn	
Pyrene	"	ND	----	4.76	"	"	"	"	"	lqn	
1,2,4-Trichlorobenzene	"	ND	----	4.76	"	"	"	"	"	lqn	
2,4,6-Trichlorophenol	"	ND	----	4.76	"	"	"	"	"	lqn	
1,2 Diphenylhydrazine (as Azobenzene)	"	ND	----	4.76	"	"	"	"	"	lqn	

<i>Surrogate(s):</i>	<i>2-Fluorobiphenyl</i>	<i>105%</i>	<i>22 - 120 %</i>	<i>"</i>	<i>"</i>
	<i>2-Fluorophenol</i>	<i>102%</i>	<i>5 - 120 %</i>	<i>"</i>	<i>"</i>
	<i>Nitrobenzene-d5</i>	<i>102%</i>	<i>26 - 127 %</i>	<i>"</i>	<i>"</i>
	<i>Phenol-d6</i>	<i>103%</i>	<i>4 - 121 %</i>	<i>"</i>	<i>"</i>
	<i>p-Terphenyl-d14</i>	<i>113%</i>	<i>37 - 130 %</i>	<i>"</i>	<i>"</i>
	<i>2,4,6-Tribromophenol</i>	<i>101%</i>	<i>21 - 129 %</i>	<i>"</i>	<i>"</i>

<b>ARJ0119-02 (08-1025-SW2)</b>		<b>Water</b>									
		<b>Sampled: 10/25/08 09:20</b>									
Acenaphthene	EPA 625	ND	----	4.76	ug/l	1x	8101123	10/29/08 10:10	11/03/08 22:03	lqn	
Acenaphthylene	"	ND	----	4.76	"	"	"	"	"	lqn	
Anthracene	"	ND	----	4.76	"	"	"	"	"	lqn	
Benzidine	"	ND	----	57.1	"	"	"	"	"	lqn	L6
Benzo (a) anthracene	"	ND	----	4.76	"	"	"	"	"	lqn	
Benzo (a) pyrene	"	ND	----	4.76	"	"	"	"	"	lqn	
Benzo (b) fluoranthene	"	ND	----	4.76	"	"	"	"	"	lqn	
Benzo (ghi) perylene	"	ND	----	4.76	"	"	"	"	"	lqn	
Benzo (k) fluoranthene	"	ND	----	4.76	"	"	"	"	"	lqn	

TestAmerica Anchorage

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**Amended Report**



Troy J. Engstrom, Lab Director



**Amended Report**

<b>BGES, INC.</b> 750 W. 2nd Ave, Ste 104 Anchorage, AK 99501	Project Name: <b>Nichin Cove</b> Project Number: Nichin Cove Project Manager: Renee Lafata	Report Created: 11/26/08 17:34
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**Acid and Base/Neutral Extractables per EPA Method 625**  
 TestAmerica Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
<b>ARJ0119-02 (08-1025-SW2)</b>		<b>Water</b>									
		<b>Sampled: 10/25/08 09:20</b>									
4-Bromophenyl phenyl ether	"	ND	----	4.76	"	"	"	"	"	"	lqn
Butyl benzyl phthalate	"	ND	----	4.76	"	"	"	"	"	"	lqn
4-Chloro-3-methylphenol	"	ND	----	4.76	"	"	"	"	"	"	lqn
Bis(2-chloroethoxy)methane	"	ND	----	9.52	"	"	"	"	"	"	lqn
Bis(2-chloroethyl)ether	"	ND	----	4.76	"	"	"	"	"	"	lqn
Bis(2-chloroisopropyl)ether	"	ND	----	9.52	"	"	"	"	"	"	lqn
2-Chloronaphthalene	"	ND	----	4.76	"	"	"	"	"	"	lqn
2-Chlorophenol	"	ND	----	4.76	"	"	"	"	"	"	lqn
4-Chlorophenyl phenyl ether	"	ND	----	4.76	"	"	"	"	"	"	lqn
Chrysene	"	ND	----	4.76	"	"	"	"	"	"	lqn
Di-n-butyl phthalate	"	ND	----	4.76	"	"	"	"	"	"	lqn
Di-n-octyl phthalate	"	ND	----	4.76	"	"	"	"	"	"	lqn
Dibenzo (a,h) anthracene	"	ND	----	4.76	"	"	"	"	"	"	lqn
1,2-Dichlorobenzene	"	ND	----	4.76	"	"	"	"	"	"	lqn
1,3-Dichlorobenzene	"	ND	----	4.76	"	"	"	"	"	"	lqn
1,4-Dichlorobenzene	"	ND	----	4.76	"	"	"	"	"	"	lqn
3,3'-Dichlorobenzidine	"	ND	----	4.76	"	"	"	"	"	"	lqn
2,4-Dichlorophenol	"	ND	----	4.76	"	"	"	"	"	"	lqn
Diethyl phthalate	"	ND	----	4.76	"	"	"	"	"	"	lqn
2,4-Dimethylphenol	"	ND	----	9.52	"	"	"	"	"	"	lqn
Dimethyl phthalate	"	ND	----	4.76	"	"	"	"	"	"	lqn
4,6-Dinitro-2-methylphenol	"	ND	----	9.52	"	"	"	"	"	"	lqn
2,4-Dinitrophenol	"	ND	----	23.8	"	"	"	"	"	"	lqn
2,4-Dinitrotoluene	"	ND	----	4.76	"	"	"	"	"	"	lqn
2,6-Dinitrotoluene	"	ND	----	4.76	"	"	"	"	"	"	lqn
Bis(2-ethylhexyl)phthalate	"	ND	----	9.52	"	"	"	"	"	"	lqn
Fluoranthene	"	ND	----	4.76	"	"	"	"	"	"	lqn
Fluorene	"	ND	----	4.76	"	"	"	"	"	"	lqn
Hexachlorobenzene	"	ND	----	4.76	"	"	"	"	"	"	lqn
Hexachlorobutadiene	"	ND	----	9.52	"	"	"	"	"	"	lqn
Hexachlorocyclopentadiene	"	ND	----	9.52	"	"	"	"	"	"	lqn
Hexachloroethane	"	ND	----	9.52	"	"	"	"	"	"	lqn
Indeno (1,2,3-cd) pyrene	"	ND	----	4.76	"	"	"	"	"	"	lqn
Isophorone	"	ND	----	4.76	"	"	"	"	"	"	lqn
Naphthalene	"	ND	----	4.76	"	"	"	"	"	"	lqn
Nitrobenzene	"	ND	----	4.76	"	"	"	"	"	"	lqn
2-Nitrophenol	"	ND	----	4.76	"	"	"	"	"	"	lqn

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

**Amended Report**

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**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Acid and Base/Neutral Extractables per EPA Method 625**  
 TestAmerica Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
<b>ARJ0119-02 (08-1025-SW2)</b>		<b>Water</b>									
<b>Sampled: 10/25/08 09:20</b>											
4-Nitrophenol	EPA 625	ND	----	23.8	ug/l	1x	8101123	10/29/08 10:10	11/03/08 22:03	lqn	
N-Nitrosodimethylamine	"	ND	----	4.76	"	"	"	"	"	lqn	
N-Nitrosodi-n-propylamine	"	ND	----	9.52	"	"	"	"	"	lqn	
N-Nitrosodiphenylamine	"	ND	----	4.76	"	"	"	"	"	lqn	
Pentachlorophenol	"	ND	----	9.52	"	"	"	"	"	lqn	
Phenanthrene	"	ND	----	4.76	"	"	"	"	"	lqn	
Phenol	"	ND	----	4.76	"	"	"	"	"	lqn	
Pyrene	"	ND	----	4.76	"	"	"	"	"	lqn	
1,2,4-Trichlorobenzene	"	ND	----	4.76	"	"	"	"	"	lqn	
2,4,6-Trichlorophenol	"	ND	----	4.76	"	"	"	"	"	lqn	
1,2 Diphenylhydrazine (as Azobenzene)	"	ND	----	4.76	"	"	"	"	"	lqn	

<i>Surrogate(s):</i>	<i>2-Fluorobiphenyl</i>	<i>100%</i>	<i>22 - 120 %</i>	<i>"</i>	<i>"</i>	<i>"</i>
	<i>2-Fluorophenol</i>	<i>94.9%</i>	<i>5 - 120 %</i>	<i>"</i>	<i>"</i>	<i>"</i>
	<i>Nitrobenzene-d5</i>	<i>97.9%</i>	<i>26 - 127 %</i>	<i>"</i>	<i>"</i>	<i>"</i>
	<i>Phenol-d6</i>	<i>96.3%</i>	<i>4 - 121 %</i>	<i>"</i>	<i>"</i>	<i>"</i>
	<i>p-Terphenyl-d14</i>	<i>115%</i>	<i>37 - 130 %</i>	<i>"</i>	<i>"</i>	<i>"</i>
	<i>2,4,6-Tribromophenol</i>	<i>99.4%</i>	<i>21 - 129 %</i>	<i>"</i>	<i>"</i>	<i>"</i>

<b>ARJ0119-03 (08-1025-SW3)</b>		<b>Water</b>									
<b>Sampled: 10/25/08 09:32</b>											
Acenaphthene	EPA 625	ND	----	4.76	ug/l	1x	8101123	10/29/08 10:10	11/03/08 22:25	lqn	
Acenaphthylene	"	ND	----	4.76	"	"	"	"	"	lqn	
Anthracene	"	ND	----	4.76	"	"	"	"	"	lqn	
Benzidine	"	ND	----	57.1	"	"	"	"	"	lqn	L6
Benzo (a) anthracene	"	ND	----	4.76	"	"	"	"	"	lqn	
Benzo (a) pyrene	"	ND	----	4.76	"	"	"	"	"	lqn	
Benzo (b) fluoranthene	"	ND	----	4.76	"	"	"	"	"	lqn	
Benzo (ghi) perylene	"	ND	----	4.76	"	"	"	"	"	lqn	
Benzo (k) fluoranthene	"	ND	----	4.76	"	"	"	"	"	lqn	
4-Bromophenyl phenyl ether	"	ND	----	4.76	"	"	"	"	"	lqn	
Butyl benzyl phthalate	"	ND	----	4.76	"	"	"	"	"	lqn	
4-Chloro-3-methylphenol	"	ND	----	4.76	"	"	"	"	"	lqn	
Bis(2-chloroethoxy)methane	"	ND	----	9.52	"	"	"	"	"	lqn	
Bis(2-chloroethyl)ether	"	ND	----	4.76	"	"	"	"	"	lqn	
Bis(2-chloroisopropyl)ether	"	ND	----	9.52	"	"	"	"	"	lqn	
2-Chloronaphthalene	"	ND	----	4.76	"	"	"	"	"	lqn	
2-Chlorophenol	"	ND	----	4.76	"	"	"	"	"	lqn	
4-Chlorophenyl phenyl ether	"	ND	----	4.76	"	"	"	"	"	lqn	

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

**Amended Report**

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**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Acid and Base/Neutral Extractables per EPA Method 625**  
 TestAmerica Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
<b>ARJ0119-03 (08-1025-SW3)</b>		<b>Water</b>									
		<b>Sampled: 10/25/08 09:32</b>									
Chrysene	"	ND	----	4.76	"	"	"	"	"	"	lqn
Di-n-butyl phthalate	"	ND	----	4.76	"	"	"	"	"	"	lqn
Di-n-octyl phthalate	"	ND	----	4.76	"	"	"	"	"	"	lqn
Dibenzo (a,h) anthracene	"	ND	----	4.76	"	"	"	"	"	"	lqn
1,2-Dichlorobenzene	"	ND	----	4.76	"	"	"	"	"	"	lqn
1,3-Dichlorobenzene	"	ND	----	4.76	"	"	"	"	"	"	lqn
1,4-Dichlorobenzene	"	ND	----	4.76	"	"	"	"	"	"	lqn
3,3'-Dichlorobenzidine	"	ND	----	4.76	"	"	"	"	"	"	lqn
2,4-Dichlorophenol	"	ND	----	4.76	"	"	"	"	"	"	lqn
Diethyl phthalate	"	ND	----	4.76	"	"	"	"	"	"	lqn
2,4-Dimethylphenol	"	ND	----	9.52	"	"	"	"	"	"	lqn
Dimethyl phthalate	"	ND	----	4.76	"	"	"	"	"	"	lqn
4,6-Dinitro-2-methylphenol	"	ND	----	9.52	"	"	"	"	"	"	lqn
2,4-Dinitrophenol	"	ND	----	23.8	"	"	"	"	"	"	lqn
2,4-Dinitrotoluene	"	ND	----	4.76	"	"	"	"	"	"	lqn
2,6-Dinitrotoluene	"	ND	----	4.76	"	"	"	"	"	"	lqn
Bis(2-ethylhexyl)phthalate	"	ND	----	9.52	"	"	"	"	"	"	lqn
Fluoranthene	"	ND	----	4.76	"	"	"	"	"	"	lqn
Fluorene	"	ND	----	4.76	"	"	"	"	"	"	lqn
Hexachlorobenzene	"	ND	----	4.76	"	"	"	"	"	"	lqn
Hexachlorobutadiene	"	ND	----	9.52	"	"	"	"	"	"	lqn
Hexachlorocyclopentadiene	"	ND	----	9.52	"	"	"	"	"	"	lqn
Hexachloroethane	"	ND	----	9.52	"	"	"	"	"	"	lqn
Indeno (1,2,3-cd) pyrene	"	ND	----	4.76	"	"	"	"	"	"	lqn
Isophorone	"	ND	----	4.76	"	"	"	"	"	"	lqn
Naphthalene	"	ND	----	4.76	"	"	"	"	"	"	lqn
Nitrobenzene	"	ND	----	4.76	"	"	"	"	"	"	lqn
2-Nitrophenol	"	ND	----	4.76	"	"	"	"	"	"	lqn
4-Nitrophenol	"	ND	----	23.8	"	"	"	"	"	"	lqn
N-Nitrosodimethylamine	"	ND	----	4.76	"	"	"	"	"	"	lqn
N-Nitrosodi-n-propylamine	"	ND	----	9.52	"	"	"	"	"	"	lqn
N-Nitrosodiphenylamine	"	ND	----	4.76	"	"	"	"	"	"	lqn
Pentachlorophenol	"	ND	----	9.52	"	"	"	"	"	"	lqn
Phenanthrene	"	ND	----	4.76	"	"	"	"	"	"	lqn
Phenol	"	ND	----	4.76	"	"	"	"	"	"	lqn
Pyrene	"	ND	----	4.76	"	"	"	"	"	"	lqn
1,2,4-Trichlorobenzene	"	ND	----	4.76	"	"	"	"	"	"	lqn

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

**Amended Report**

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*



**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Acid and Base/Neutral Extractables per EPA Method 625**  
 TestAmerica Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
<b>ARJ0119-03 (08-1025-SW3)</b>		<b>Water</b>									
		<b>Sampled: 10/25/08 09:32</b>									
2,4,6-Trichlorophenol	EPA 625	ND	----	4.76	ug/l	1x	8101123	10/29/08 10:10	11/03/08 22:25	lqn	
1,2 Diphenylhydrazine (as Azobenzene)	"	ND	----	4.76	"	"	"	"	"	lqn	
<i>Surrogate(s):</i>				102%	22 - 120 %	"	"	"	"	"	
2-Fluorobiphenyl				92.0%	5 - 120 %	"	"	"	"	"	
Nitrobenzene-d5				99.1%	26 - 127 %	"	"	"	"	"	
Phenol-d6				94.7%	4 - 121 %	"	"	"	"	"	
p-Terphenyl-d14				115%	37 - 130 %	"	"	"	"	"	
2,4,6-Tribromophenol				99.4%	21 - 129 %	"	"	"	"	"	
<b>ARJ0119-04 (08-1025-SW4)</b>		<b>Water</b>									
		<b>Sampled: 10/25/08 10:06</b>									
Acenaphthene	EPA 625	ND	----	4.76	ug/l	1x	8101123	10/29/08 10:10	11/03/08 22:47	lqn	
Acenaphthylene	"	ND	----	4.76	"	"	"	"	"	lqn	
Anthracene	"	ND	----	4.76	"	"	"	"	"	lqn	
Benzidine	"	ND	----	57.1	"	"	"	"	"	lqn	L6
Benzo (a) anthracene	"	ND	----	4.76	"	"	"	"	"	lqn	
Benzo (a) pyrene	"	ND	----	4.76	"	"	"	"	"	lqn	
Benzo (b) fluoranthene	"	ND	----	4.76	"	"	"	"	"	lqn	
Benzo (ghi) perylene	"	ND	----	4.76	"	"	"	"	"	lqn	
Benzo (k) fluoranthene	"	ND	----	4.76	"	"	"	"	"	lqn	
4-Bromophenyl phenyl ether	"	ND	----	4.76	"	"	"	"	"	lqn	
Butyl benzyl phthalate	"	ND	----	4.76	"	"	"	"	"	lqn	
4-Chloro-3-methylphenol	"	ND	----	4.76	"	"	"	"	"	lqn	
Bis(2-chloroethoxy)methane	"	ND	----	9.52	"	"	"	"	"	lqn	
Bis(2-chloroethyl)ether	"	ND	----	4.76	"	"	"	"	"	lqn	
Bis(2-chloroisopropyl)ether	"	ND	----	9.52	"	"	"	"	"	lqn	
2-Chloronaphthalene	"	ND	----	4.76	"	"	"	"	"	lqn	
2-Chlorophenol	"	ND	----	4.76	"	"	"	"	"	lqn	
4-Chlorophenyl phenyl ether	"	ND	----	4.76	"	"	"	"	"	lqn	
Chrysene	"	ND	----	4.76	"	"	"	"	"	lqn	
Di-n-butyl phthalate	"	ND	----	4.76	"	"	"	"	"	lqn	
Di-n-octyl phthalate	"	ND	----	4.76	"	"	"	"	"	lqn	
Dibenzo (a,h) anthracene	"	ND	----	4.76	"	"	"	"	"	lqn	
1,2-Dichlorobenzene	"	ND	----	4.76	"	"	"	"	"	lqn	
1,3-Dichlorobenzene	"	ND	----	4.76	"	"	"	"	"	lqn	
1,4-Dichlorobenzene	"	ND	----	4.76	"	"	"	"	"	lqn	
3,3'-Dichlorobenzidine	"	ND	----	4.76	"	"	"	"	"	lqn	
2,4-Dichlorophenol	"	ND	----	4.76	"	"	"	"	"	lqn	

TestAmerica Anchorage

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**Amended Report**



Troy J. Engstrom, Lab Director



**Amended Report**

<b>BGES, INC.</b> 750 W. 2nd Ave, Ste 104 Anchorage, AK 99501	Project Name: <b>Nichin Cove</b> Project Number: Nichin Cove Project Manager: Renee Lafata	Report Created: 11/26/08 17:34
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**Acid and Base/Neutral Extractables per EPA Method 625**  
 TestAmerica Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
<b>ARJ0119-04 (08-1025-SW4)</b>		<b>Water</b>									
		<b>Sampled: 10/25/08 10:06</b>									
Diethyl phthalate	"	ND	----	4.76	"	"	"	"	"	"	lqn
2,4-Dimethylphenol	"	ND	----	9.52	"	"	"	"	"	"	lqn
Dimethyl phthalate	"	ND	----	4.76	"	"	"	"	"	"	lqn
4,6-Dinitro-2-methylphenol	"	ND	----	9.52	"	"	"	"	"	"	lqn
2,4-Dinitrophenol	"	ND	----	23.8	"	"	"	"	"	"	lqn
2,4-Dinitrotoluene	"	ND	----	4.76	"	"	"	"	"	"	lqn
2,6-Dinitrotoluene	"	ND	----	4.76	"	"	"	"	"	"	lqn
Bis(2-ethylhexyl)phthalate	"	ND	----	9.52	"	"	"	"	"	"	lqn
Fluoranthene	"	ND	----	4.76	"	"	"	"	"	"	lqn
Fluorene	"	ND	----	4.76	"	"	"	"	"	"	lqn
Hexachlorobenzene	"	ND	----	4.76	"	"	"	"	"	"	lqn
Hexachlorobutadiene	"	ND	----	9.52	"	"	"	"	"	"	lqn
Hexachlorocyclopentadiene	"	ND	----	9.52	"	"	"	"	"	"	lqn
Hexachloroethane	"	ND	----	9.52	"	"	"	"	"	"	lqn
Indeno (1,2,3-cd) pyrene	"	ND	----	4.76	"	"	"	"	"	"	lqn
Isophorone	"	ND	----	4.76	"	"	"	"	"	"	lqn
Naphthalene	"	ND	----	4.76	"	"	"	"	"	"	lqn
Nitrobenzene	"	ND	----	4.76	"	"	"	"	"	"	lqn
2-Nitrophenol	"	ND	----	4.76	"	"	"	"	"	"	lqn
4-Nitrophenol	"	ND	----	23.8	"	"	"	"	"	"	lqn
N-Nitrosodimethylamine	"	ND	----	4.76	"	"	"	"	"	"	lqn
N-Nitrosodi-n-propylamine	"	ND	----	9.52	"	"	"	"	"	"	lqn
N-Nitrosodiphenylamine	"	ND	----	4.76	"	"	"	"	"	"	lqn
Pentachlorophenol	"	ND	----	9.52	"	"	"	"	"	"	lqn
Phenanthrene	"	ND	----	4.76	"	"	"	"	"	"	lqn
Phenol	"	ND	----	4.76	"	"	"	"	"	"	lqn
Pyrene	"	ND	----	4.76	"	"	"	"	"	"	lqn
1,2,4-Trichlorobenzene	"	ND	----	4.76	"	"	"	"	"	"	lqn
2,4,6-Trichlorophenol	"	ND	----	4.76	"	"	"	"	"	"	lqn
1,2 Diphenylhydrazine (as Azobenzene)	"	ND	----	4.76	"	"	"	"	"	"	lqn
<i>Surrogate(s): 2-Fluorobiphenyl</i>				94.3%	22 - 120 %						"
<i>2-Fluorophenol</i>				89.7%	5 - 120 %						"
<i>Nitrobenzene-d5</i>				91.9%	26 - 127 %						"
<i>Phenol-d6</i>				89.9%	4 - 121 %						"
<i>p-Terphenyl-d14</i>				120%	37 - 130 %						"
<i>2,4,6-Tribromophenol</i>				91.0%	21 - 129 %						"

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

**Amended Report**

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**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Acid and Base/Neutral Extractables per EPA Method 625**  
 TestAmerica Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
<b>ARJ0119-05 (08-1025-SWB)</b>		<b>Water</b>		<b>Sampled: 10/25/08 09:44</b>							
Acenaphthene	EPA 625	ND	----	4.76	ug/l	1x	8101123	10/29/08 10:10	11/03/08 23:09	lqn	
Acenaphthylene	"	ND	----	4.76	"	"	"	"	"	lqn	
Anthracene	"	ND	----	4.76	"	"	"	"	"	lqn	
Benzidine	"	ND	----	57.1	"	"	"	"	"	lqn	L6
Benzo (a) anthracene	"	ND	----	4.76	"	"	"	"	"	lqn	
Benzo (a) pyrene	"	ND	----	4.76	"	"	"	"	"	lqn	
Benzo (b) fluoranthene	"	ND	----	4.76	"	"	"	"	"	lqn	
Benzo (ghi) perylene	"	ND	----	4.76	"	"	"	"	"	lqn	
Benzo (k) fluoranthene	"	ND	----	4.76	"	"	"	"	"	lqn	
4-Bromophenyl phenyl ether	"	ND	----	4.76	"	"	"	"	"	lqn	
Butyl benzyl phthalate	"	ND	----	4.76	"	"	"	"	"	lqn	
4-Chloro-3-methylphenol	"	ND	----	4.76	"	"	"	"	"	lqn	
Bis(2-chloroethoxy)methane	"	ND	----	9.52	"	"	"	"	"	lqn	
Bis(2-chloroethyl)ether	"	ND	----	4.76	"	"	"	"	"	lqn	
Bis(2-chloroisopropyl)ether	"	ND	----	9.52	"	"	"	"	"	lqn	
2-Chloronaphthalene	"	ND	----	4.76	"	"	"	"	"	lqn	
2-Chlorophenol	"	ND	----	4.76	"	"	"	"	"	lqn	
4-Chlorophenyl phenyl ether	"	ND	----	4.76	"	"	"	"	"	lqn	
Chrysene	"	ND	----	4.76	"	"	"	"	"	lqn	
Di-n-butyl phthalate	"	ND	----	4.76	"	"	"	"	"	lqn	
Di-n-octyl phthalate	"	ND	----	4.76	"	"	"	"	"	lqn	
Dibenzo (a,h) anthracene	"	ND	----	4.76	"	"	"	"	"	lqn	
1,2-Dichlorobenzene	"	ND	----	4.76	"	"	"	"	"	lqn	
1,3-Dichlorobenzene	"	ND	----	4.76	"	"	"	"	"	lqn	
1,4-Dichlorobenzene	"	ND	----	4.76	"	"	"	"	"	lqn	
3,3'-Dichlorobenzidine	"	ND	----	4.76	"	"	"	"	"	lqn	
2,4-Dichlorophenol	"	ND	----	4.76	"	"	"	"	"	lqn	
Diethyl phthalate	"	ND	----	4.76	"	"	"	"	"	lqn	
2,4-Dimethylphenol	"	ND	----	9.52	"	"	"	"	"	lqn	
Dimethyl phthalate	"	ND	----	4.76	"	"	"	"	"	lqn	
4,6-Dinitro-2-methylphenol	"	ND	----	9.52	"	"	"	"	"	lqn	
2,4-Dinitrophenol	"	ND	----	23.8	"	"	"	"	"	lqn	
2,4-Dinitrotoluene	"	ND	----	4.76	"	"	"	"	"	lqn	
2,6-Dinitrotoluene	"	ND	----	4.76	"	"	"	"	"	lqn	
Bis(2-ethylhexyl)phthalate	"	ND	----	9.52	"	"	"	"	"	lqn	
Fluoranthene	"	ND	----	4.76	"	"	"	"	"	lqn	
Fluorene	"	ND	----	4.76	"	"	"	"	"	lqn	

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

**Amended Report**

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**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Acid and Base/Neutral Extractables per EPA Method 625**  
 TestAmerica Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
<b>ARJ0119-05 (08-1025-SWB)</b>		<b>Water</b>									
		<b>Sampled: 10/25/08 09:44</b>									
Hexachlorobenzene	EPA 625	ND	----	4.76	ug/l	1x	8101123	10/29/08 10:10	11/03/08 23:09	lqn	
Hexachlorobutadiene	"	ND	----	9.52	"	"	"	"	"	lqn	
Hexachlorocyclopentadiene	"	ND	----	9.52	"	"	"	"	"	lqn	
Hexachloroethane	"	ND	----	9.52	"	"	"	"	"	lqn	
Indeno (1,2,3-cd) pyrene	"	ND	----	4.76	"	"	"	"	"	lqn	
Isophorone	"	ND	----	4.76	"	"	"	"	"	lqn	
Naphthalene	"	ND	----	4.76	"	"	"	"	"	lqn	
Nitrobenzene	"	ND	----	4.76	"	"	"	"	"	lqn	
2-Nitrophenol	"	ND	----	4.76	"	"	"	"	"	lqn	
4-Nitrophenol	"	ND	----	23.8	"	"	"	"	"	lqn	
N-Nitrosodimethylamine	"	ND	----	4.76	"	"	"	"	"	lqn	
N-Nitrosodi-n-propylamine	"	ND	----	9.52	"	"	"	"	"	lqn	
N-Nitrosodiphenylamine	"	ND	----	4.76	"	"	"	"	"	lqn	
Pentachlorophenol	"	ND	----	9.52	"	"	"	"	"	lqn	
Phenanthrene	"	ND	----	4.76	"	"	"	"	"	lqn	
Phenol	"	ND	----	4.76	"	"	"	"	"	lqn	
Pyrene	"	ND	----	4.76	"	"	"	"	"	lqn	
1,2,4-Trichlorobenzene	"	ND	----	4.76	"	"	"	"	"	lqn	
2,4,6-Trichlorophenol	"	ND	----	4.76	"	"	"	"	"	lqn	
1,2 Diphenylhydrazine (as Azobenzene)	"	ND	----	4.76	"	"	"	"	"	lqn	
<i>Surrogate(s):</i>											
2-Fluorobiphenyl				107%			22 - 120 %			"	"
2-Fluorophenol				102%			5 - 120 %			"	"
Nitrobenzene-d5				106%			26 - 127 %			"	"
Phenol-d6				101%			4 - 121 %			"	"
p-Terphenyl-d14				115%			37 - 130 %			"	"
2,4,6-Tribromophenol				89.2%			21 - 129 %			"	"

**ARJ0119-06 (08-1025-MW1)**

		<b>Water</b>									
		<b>Sampled: 10/25/08 11:55</b>									
Acenaphthene	EPA 625	ND	----	4.76	ug/l	1x	8101123	10/29/08 10:10	11/03/08 23:31	lqn	
Acenaphthylene	"	ND	----	4.76	"	"	"	"	"	lqn	
Anthracene	"	ND	----	4.76	"	"	"	"	"	lqn	
Benzidine	"	ND	----	57.1	"	"	"	"	"	lqn	L6
Benzo (a) anthracene	"	ND	----	4.76	"	"	"	"	"	lqn	
Benzo (a) pyrene	"	ND	----	4.76	"	"	"	"	"	lqn	
Benzo (b) fluoranthene	"	ND	----	4.76	"	"	"	"	"	lqn	
Benzo (ghi) perylene	"	ND	----	4.76	"	"	"	"	"	lqn	
Benzo (k) fluoranthene	"	ND	----	4.76	"	"	"	"	"	lqn	

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

**Amended Report**

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**Amended Report**

<b>BGES, INC.</b> 750 W. 2nd Ave, Ste 104 Anchorage, AK 99501	Project Name: <b>Nichin Cove</b> Project Number: Nichin Cove Project Manager: Renee Lafata	Report Created: 11/26/08 17:34
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**Acid and Base/Neutral Extractables per EPA Method 625**  
 TestAmerica Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
<b>ARJ0119-06 (08-1025-MW1)</b>		<b>Water</b>			<b>Sampled: 10/25/08 11:55</b>						
4-Bromophenyl phenyl ether	"	ND	----	4.76	"	"	"	"	"	"	lqn
Butyl benzyl phthalate	"	ND	----	4.76	"	"	"	"	"	"	lqn
4-Chloro-3-methylphenol	"	ND	----	4.76	"	"	"	"	"	"	lqn
Bis(2-chloroethoxy)methane	"	ND	----	9.52	"	"	"	"	"	"	lqn
Bis(2-chloroethyl)ether	"	ND	----	4.76	"	"	"	"	"	"	lqn
Bis(2-chloroisopropyl)ether	"	ND	----	9.52	"	"	"	"	"	"	lqn
2-Chloronaphthalene	"	ND	----	4.76	"	"	"	"	"	"	lqn
2-Chlorophenol	"	ND	----	4.76	"	"	"	"	"	"	lqn
4-Chlorophenyl phenyl ether	"	ND	----	4.76	"	"	"	"	"	"	lqn
Chrysene	"	ND	----	4.76	"	"	"	"	"	"	lqn
Di-n-butyl phthalate	"	ND	----	4.76	"	"	"	"	"	"	lqn
Di-n-octyl phthalate	"	ND	----	4.76	"	"	"	"	"	"	lqn
Dibenzo (a,h) anthracene	"	ND	----	4.76	"	"	"	"	"	"	lqn
1,2-Dichlorobenzene	"	ND	----	4.76	"	"	"	"	"	"	lqn
1,3-Dichlorobenzene	"	ND	----	4.76	"	"	"	"	"	"	lqn
1,4-Dichlorobenzene	"	ND	----	4.76	"	"	"	"	"	"	lqn
3,3'-Dichlorobenzidine	"	ND	----	4.76	"	"	"	"	"	"	lqn
2,4-Dichlorophenol	"	ND	----	4.76	"	"	"	"	"	"	lqn
Diethyl phthalate	"	ND	----	4.76	"	"	"	"	"	"	lqn
2,4-Dimethylphenol	"	ND	----	9.52	"	"	"	"	"	"	lqn
Dimethyl phthalate	"	ND	----	4.76	"	"	"	"	"	"	lqn
4,6-Dinitro-2-methylphenol	"	ND	----	9.52	"	"	"	"	"	"	lqn
2,4-Dinitrophenol	"	ND	----	23.8	"	"	"	"	"	"	lqn
2,4-Dinitrotoluene	"	ND	----	4.76	"	"	"	"	"	"	lqn
2,6-Dinitrotoluene	"	ND	----	4.76	"	"	"	"	"	"	lqn
Bis(2-ethylhexyl)phthalate	"	ND	----	9.52	"	"	"	"	"	"	lqn
Fluoranthene	"	ND	----	4.76	"	"	"	"	"	"	lqn
Fluorene	"	ND	----	4.76	"	"	"	"	"	"	lqn
Hexachlorobenzene	"	ND	----	4.76	"	"	"	"	"	"	lqn
Hexachlorobutadiene	"	ND	----	9.52	"	"	"	"	"	"	lqn
Hexachlorocyclopentadiene	"	ND	----	9.52	"	"	"	"	"	"	lqn
Hexachloroethane	"	ND	----	9.52	"	"	"	"	"	"	lqn
Indeno (1,2,3-cd) pyrene	"	ND	----	4.76	"	"	"	"	"	"	lqn
Isophorone	"	ND	----	4.76	"	"	"	"	"	"	lqn
Naphthalene	"	ND	----	4.76	"	"	"	"	"	"	lqn
Nitrobenzene	"	ND	----	4.76	"	"	"	"	"	"	lqn
2-Nitrophenol	"	ND	----	4.76	"	"	"	"	"	"	lqn

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

**Amended Report**

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*



**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Acid and Base/Neutral Extractables per EPA Method 625**  
 TestAmerica Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
<b>ARJ0119-06 (08-1025-MW1)</b>		<b>Water</b>		<b>Sampled: 10/25/08 11:55</b>							
4-Nitrophenol	EPA 625	ND	----	23.8	ug/l	1x	8101123	10/29/08 10:10	11/03/08 23:31	lqn	
N-Nitrosodimethylamine	"	ND	----	4.76	"	"	"	"	"	lqn	
N-Nitrosodi-n-propylamine	"	ND	----	9.52	"	"	"	"	"	lqn	
N-Nitrosodiphenylamine	"	ND	----	4.76	"	"	"	"	"	lqn	
Pentachlorophenol	"	ND	----	9.52	"	"	"	"	"	lqn	
Phenanthrene	"	ND	----	4.76	"	"	"	"	"	lqn	
Phenol	"	ND	----	4.76	"	"	"	"	"	lqn	
Pyrene	"	ND	----	4.76	"	"	"	"	"	lqn	
1,2,4-Trichlorobenzene	"	ND	----	4.76	"	"	"	"	"	lqn	
2,4,6-Trichlorophenol	"	ND	----	4.76	"	"	"	"	"	lqn	
1,2 Diphenylhydrazine (as Azobenzene)	"	ND	----	4.76	"	"	"	"	"	lqn	
<i>Surrogate(s):</i>											
	<i>2-Fluorobiphenyl</i>			<i>108%</i>		<i>22 - 120 %</i>	<i>"</i>			<i>"</i>	
	<i>2-Fluorophenol</i>			<i>95.9%</i>		<i>5 - 120 %</i>	<i>"</i>			<i>"</i>	
	<i>Nitrobenzene-d5</i>			<i>103%</i>		<i>26 - 127 %</i>	<i>"</i>			<i>"</i>	
	<i>Phenol-d6</i>			<i>91.8%</i>		<i>4 - 121 %</i>	<i>"</i>			<i>"</i>	
	<i>p-Terphenyl-d14</i>			<i>117%</i>		<i>37 - 130 %</i>	<i>"</i>			<i>"</i>	
	<i>2,4,6-Tribromophenol</i>			<i>104%</i>		<i>21 - 129 %</i>	<i>"</i>			<i>"</i>	

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

**Amended Report**

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**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Semivolatile Organic Compounds per EPA Method 8270C**  
 TestAmerica Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
<b>ARJ0119-06 (08-1025-MW1)</b>		<b>Water</b>		<b>Sampled: 10/25/08 11:55</b>							
Acenaphthene	EPA 8270C	ND	----	4.76	ug/l	1x	8101123	10/29/08 10:10	11/03/08 23:31	lqn	
Acenaphthylene	"	ND	----	4.76	"	"	"	"	"	lqn	
Anthracene	"	ND	----	4.76	"	"	"	"	"	lqn	
Benzo (a) anthracene	"	ND	----	4.76	"	"	"	"	"	lqn	
Benzo (a) pyrene	"	ND	----	4.76	"	"	"	"	"	lqn	
Benzo (b) fluoranthene	"	ND	----	4.76	"	"	"	"	"	lqn	
Benzo (ghi) perylene	"	ND	----	4.76	"	"	"	"	"	lqn	
Benzo (k) fluoranthene	"	ND	----	4.76	"	"	"	"	"	lqn	
Benzoic Acid	"	ND	----	47.6	"	"	"	"	"	lqn	
Benzyl alcohol	"	ND	----	9.52	"	"	"	"	"	lqn	
4-Bromophenyl phenyl ether	"	ND	----	4.76	"	"	"	"	"	lqn	
Butyl benzyl phthalate	"	ND	----	4.76	"	"	"	"	"	lqn	
4-Chloro-3-methylphenol	"	ND	----	4.76	"	"	"	"	"	lqn	
4-Chloroaniline	"	ND	----	19.0	"	"	"	"	"	lqn	
Bis(2-chloroethoxy)methane	"	ND	----	9.52	"	"	"	"	"	lqn	
Bis(2-chloroethyl)ether	"	ND	----	4.76	"	"	"	"	"	lqn	
Bis(2-chloroisopropyl)ether	"	ND	----	9.52	"	"	"	"	"	lqn	
2-Chloronaphthalene	"	ND	----	4.76	"	"	"	"	"	lqn	
2-Chlorophenol	"	ND	----	4.76	"	"	"	"	"	lqn	
4-Chlorophenyl phenyl ether	"	ND	----	4.76	"	"	"	"	"	lqn	
Chrysene	"	ND	----	4.76	"	"	"	"	"	lqn	
Di-n-butyl phthalate	"	ND	----	4.76	"	"	"	"	"	lqn	
Di-n-octyl phthalate	"	ND	----	4.76	"	"	"	"	"	lqn	
Dibenzo (a,h) anthracene	"	ND	----	4.76	"	"	"	"	"	lqn	
Dibenzofuran	"	ND	----	4.76	"	"	"	"	"	lqn	
1,2-Dichlorobenzene	"	ND	----	4.76	"	"	"	"	"	lqn	
1,3-Dichlorobenzene	"	ND	----	4.76	"	"	"	"	"	lqn	
1,4-Dichlorobenzene	"	ND	----	4.76	"	"	"	"	"	lqn	
3,3'-Dichlorobenzidine	"	ND	----	4.76	"	"	"	"	"	lqn	
2,4-Dichlorophenol	"	ND	----	4.76	"	"	"	"	"	lqn	
Diethyl phthalate	"	ND	----	4.76	"	"	"	"	"	lqn	
2,4-Dimethylphenol	"	ND	----	9.52	"	"	"	"	"	lqn	
Dimethyl phthalate	"	ND	----	4.76	"	"	"	"	"	lqn	
4,6-Dinitro-2-methylphenol	"	ND	----	9.52	"	"	"	"	"	lqn	
2,4-Dinitrophenol	"	ND	----	23.8	"	"	"	"	"	lqn	
2,4-Dinitrotoluene	"	ND	----	4.76	"	"	"	"	"	lqn	
2,6-Dinitrotoluene	"	ND	----	4.76	"	"	"	"	"	lqn	

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

**Amended Report**

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**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Semivolatile Organic Compounds per EPA Method 8270C**  
 TestAmerica Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
<b>ARJ0119-06 (08-1025-MW1)</b>		<b>Water</b>									
		<b>Sampled: 10/25/08 11:55</b>									
Bis(2-ethylhexyl)phthalate	EPA 8270C	ND	----	9.52	ug/l	1x	8101123	10/29/08 10:10	11/03/08 23:31	lqn	
Fluoranthene	"	ND	----	4.76	"	"	"	"	"	lqn	
Fluorene	"	ND	----	4.76	"	"	"	"	"	lqn	
Hexachlorobenzene	"	ND	----	4.76	"	"	"	"	"	lqn	
Hexachlorobutadiene	"	ND	----	9.52	"	"	"	"	"	lqn	
Hexachlorocyclopentadiene	"	ND	----	9.52	"	"	"	"	"	lqn	
Hexachloroethane	"	ND	----	9.52	"	"	"	"	"	lqn	
Indeno (1,2,3-cd) pyrene	"	ND	----	4.76	"	"	"	"	"	lqn	
Isophorone	"	ND	----	4.76	"	"	"	"	"	lqn	
2-Methylnaphthalene	"	ND	----	4.76	"	"	"	"	"	lqn	
2-Methylphenol	"	ND	----	9.52	"	"	"	"	"	lqn	
3-,4-Methylphenol	"	ND	----	4.76	"	"	"	"	"	lqn	
Naphthalene	"	ND	----	4.76	"	"	"	"	"	lqn	
2-Nitroaniline	"	ND	----	4.76	"	"	"	"	"	lqn	
3-Nitroaniline	"	ND	----	9.52	"	"	"	"	"	lqn	
4-Nitroaniline	"	ND	----	9.52	"	"	"	"	"	lqn	
Nitrobenzene	"	ND	----	4.76	"	"	"	"	"	lqn	
2-Nitrophenol	"	ND	----	4.76	"	"	"	"	"	lqn	
4-Nitrophenol	"	ND	----	23.8	"	"	"	"	"	lqn	
N-Nitrosodi-n-propylamine	"	ND	----	9.52	"	"	"	"	"	lqn	
N-Nitrosodiphenylamine	"	ND	----	4.76	"	"	"	"	"	lqn	
Pentachlorophenol	"	ND	----	9.52	"	"	"	"	"	lqn	
Phenanthrene	"	ND	----	4.76	"	"	"	"	"	lqn	
Phenol	"	ND	----	4.76	"	"	"	"	"	lqn	
Pyrene	"	ND	----	4.76	"	"	"	"	"	lqn	
1,2,4-Trichlorobenzene	"	ND	----	4.76	"	"	"	"	"	lqn	
2,4,5-Trichlorophenol	"	ND	----	4.76	"	"	"	"	"	lqn	
2,4,6-Trichlorophenol	"	ND	----	4.76	"	"	"	"	"	lqn	
Surrogate(s):	2-Fluorobiphenyl			108%			20 - 120 %	"		"	
	2-Fluorophenol			95.9%			10 - 120 %	"		"	
	Nitrobenzene-d5			103%			20 - 130 %	"		"	
	Phenol-d6			91.8%			10 - 125 %	"		"	
	p-Terphenyl-d14			117%			35 - 130 %	"		"	
	2,4,6-Tribromophenol			104%			20 - 130 %	"		"	

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

**Amended Report**

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**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Semivolatile Organic Compounds per EPA Method 8270C**  
 TestAmerica Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
<b>ARJ0119-09 (08-1024-TP1-1)</b>											<b>RL3</b>
			<b>Soil</b>				<b>Sampled: 10/24/08 13:02</b>				
Acenaphthene	EPA 8270C	ND	----	0.657	mg/kg wet	2x	8101203	10/30/08 18:35	11/03/08 23:52	lqn	
Acenaphthylene	"	ND	----	0.657	"	"	"	"	"	lqn	
Anthracene	"	ND	----	0.657	"	"	"	"	"	lqn	
Benzo (a) anthracene	"	ND	----	0.657	"	"	"	"	"	lqn	
Benzo (a) pyrene	"	ND	----	0.657	"	"	"	"	"	lqn	
Benzo (b) fluoranthene	"	ND	----	0.657	"	"	"	"	"	lqn	
Benzo (ghi) perylene	"	ND	----	0.657	"	"	"	"	"	lqn	
Benzo (k) fluoranthene	"	ND	----	0.657	"	"	"	"	"	lqn	
Benzoic Acid	"	ND	----	1.99	"	"	"	"	"	lqn	
Benzyl alcohol	"	ND	----	1.99	"	"	"	"	"	lqn	
4-Bromophenyl phenyl ether	"	ND	----	0.657	"	"	"	"	"	lqn	
Butyl benzyl phthalate	"	ND	----	0.657	"	"	"	"	"	lqn	
4-Chloro-3-methylphenol	"	ND	----	0.657	"	"	"	"	"	lqn	
4-Chloroaniline	"	ND	----	3.98	"	"	"	"	"	lqn	
Bis(2-chloroethoxy)methane	"	ND	----	0.657	"	"	"	"	"	lqn	
Bis(2-chloroethyl)ether	"	ND	----	0.657	"	"	"	"	"	lqn	
Bis(2-chloroisopropyl)ether	"	ND	----	0.657	"	"	"	"	"	lqn	
2-Chloronaphthalene	"	ND	----	0.657	"	"	"	"	"	lqn	
2-Chlorophenol	"	ND	----	0.657	"	"	"	"	"	lqn	
4-Chlorophenyl phenyl ether	"	ND	----	0.657	"	"	"	"	"	lqn	
Chrysene	"	ND	----	0.657	"	"	"	"	"	lqn	
Di-n-butyl phthalate	"	ND	----	1.99	"	"	"	"	"	lqn	
Di-n-octyl phthalate	"	ND	----	0.657	"	"	"	"	"	lqn	
Dibenzo (a,h) anthracene	"	ND	----	0.657	"	"	"	"	"	lqn	
Dibenzofuran	"	ND	----	0.657	"	"	"	"	"	lqn	
1,2-Dichlorobenzene	"	ND	----	1.99	"	"	"	"	"	lqn	
1,3-Dichlorobenzene	"	ND	----	1.99	"	"	"	"	"	lqn	
1,4-Dichlorobenzene	"	ND	----	1.99	"	"	"	"	"	lqn	
3,3'-Dichlorobenzidine	"	ND	----	1.99	"	"	"	"	"	lqn	
2,4-Dichlorophenol	"	ND	----	0.657	"	"	"	"	"	lqn	
Diethyl phthalate	"	ND	----	0.657	"	"	"	"	"	lqn	
2,4-Dimethylphenol	"	ND	----	1.99	"	"	"	"	"	lqn	
Dimethyl phthalate	"	ND	----	0.657	"	"	"	"	"	lqn	
4,6-Dinitro-2-methylphenol	"	ND	----	1.99	"	"	"	"	"	lqn	
2,4-Dinitrophenol	"	ND	----	3.98	"	"	"	"	"	lqn	
2,4-Dinitrotoluene	"	ND	----	0.996	"	"	"	"	"	lqn	

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

**Amended Report**

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**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Semivolatile Organic Compounds per EPA Method 8270C**  
 TestAmerica Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
<b>ARJ0119-09 (08-1024-TP1-1)</b>											<b>RL3</b>
			<b>Soil</b>				<b>Sampled: 10/24/08 13:02</b>				
2,6-Dinitrotoluene	EPA 8270C	ND	----	0.996	mg/kg wet	2x	8101203	10/30/08 18:35	11/03/08 23:52		lqn
Bis(2-ethylhexyl)phthalate	"	ND	----	3.98	"	"	"	"	"		lqn
Fluoranthene	"	ND	----	0.657	"	"	"	"	"		lqn
Fluorene	"	ND	----	0.657	"	"	"	"	"		lqn
Hexachlorobenzene	"	ND	----	0.657	"	"	"	"	"		lqn
Hexachlorobutadiene	"	ND	----	1.99	"	"	"	"	"		lqn
Hexachlorocyclopentadiene	"	ND	----	1.99	"	"	"	"	"		lqn
Hexachloroethane	"	ND	----	1.99	"	"	"	"	"		lqn
Indeno (1,2,3-cd) pyrene	"	ND	----	0.657	"	"	"	"	"		lqn
Isophorone	"	ND	----	0.657	"	"	"	"	"		lqn
2-Methylnaphthalene	"	ND	----	0.657	"	"	"	"	"		lqn
2-Methylphenol	"	ND	----	0.657	"	"	"	"	"		lqn
3-,4-Methylphenol	"	ND	----	0.657	"	"	"	"	"		lqn
Naphthalene	"	ND	----	0.657	"	"	"	"	"		lqn
2-Nitroaniline	"	ND	----	0.657	"	"	"	"	"		lqn
3-Nitroaniline	"	ND	----	1.99	"	"	"	"	"		lqn
4-Nitroaniline	"	ND	----	0.657	"	"	"	"	"		lqn
Nitrobenzene	"	ND	----	0.657	"	"	"	"	"		lqn
2-Nitrophenol	"	ND	----	0.657	"	"	"	"	"		lqn
4-Nitrophenol	"	ND	----	1.99	"	"	"	"	"		lqn
N-Nitrosodi-n-propylamine	"	ND	----	0.657	"	"	"	"	"		lqn
N-Nitrosodiphenylamine	"	ND	----	0.657	"	"	"	"	"		lqn
Pentachlorophenol	"	ND	----	1.99	"	"	"	"	"		lqn
Phenanthrene	"	ND	----	0.657	"	"	"	"	"		lqn
Phenol	"	ND	----	0.657	"	"	"	"	"		lqn
Pyrene	"	ND	----	0.657	"	"	"	"	"		lqn
1,2,4-Trichlorobenzene	"	ND	----	1.99	"	"	"	"	"		lqn
2,4,5-Trichlorophenol	"	ND	----	0.657	"	"	"	"	"		lqn
2,4,6-Trichlorophenol	"	ND	----	0.657	"	"	"	"	"		lqn

<i>Surrogate(s):</i>	<i>2-Fluorobiphenyl</i>	<i>67.4%</i>	<i>30 - 126 %</i>	<i>"</i>	<i>"</i>
	<i>2-Fluorophenol</i>	<i>61.4%</i>	<i>28 - 119 %</i>	<i>"</i>	<i>"</i>
	<i>Nitrobenzene-d5</i>	<i>55.8%</i>	<i>26 - 117 %</i>	<i>"</i>	<i>"</i>
	<i>Phenol-d6</i>	<i>72.4%</i>	<i>35 - 125 %</i>	<i>"</i>	<i>"</i>
	<i>p-Terphenyl-d14</i>	<i>77.7%</i>	<i>26 - 143 %</i>	<i>"</i>	<i>"</i>
	<i>2,4,6-Tribromophenol</i>	<i>79.4%</i>	<i>30 - 127 %</i>	<i>"</i>	<i>"</i>

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

**Amended Report**

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**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Semivolatile Organic Compounds per EPA Method 8270C**  
 TestAmerica Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
<b>ARJ0119-10 (08-1024-TP2-1)</b>		<b>Soil</b>		<b>Sampled: 10/24/08 14:09</b>							
Acenaphthene	EPA 8270C	ND	----	0.330	mg/kg wet	1x	8101203	10/30/08 18:35	11/04/08 01:41	lqn	
Acenaphthylene	"	ND	----	0.330	"	"	"	"	"	lqn	
Anthracene	"	ND	----	0.330	"	"	"	"	"	lqn	
Benzo (a) anthracene	"	ND	----	0.330	"	"	"	"	"	lqn	
Benzo (a) pyrene	"	ND	----	0.330	"	"	"	"	"	lqn	
Benzo (b) fluoranthene	"	ND	----	0.330	"	"	"	"	"	lqn	
Benzo (ghi) perylene	"	ND	----	0.330	"	"	"	"	"	lqn	
Benzo (k) fluoranthene	"	ND	----	0.330	"	"	"	"	"	lqn	
Benzoic Acid	"	ND	----	1.00	"	"	"	"	"	lqn	
Benzyl alcohol	"	ND	----	1.00	"	"	"	"	"	lqn	
4-Bromophenyl phenyl ether	"	ND	----	0.330	"	"	"	"	"	lqn	
Butyl benzyl phthalate	"	ND	----	0.330	"	"	"	"	"	lqn	
4-Chloro-3-methylphenol	"	ND	----	0.330	"	"	"	"	"	lqn	
4-Chloroaniline	"	ND	----	2.00	"	"	"	"	"	lqn	
Bis(2-chloroethoxy)methane	"	ND	----	0.330	"	"	"	"	"	lqn	
Bis(2-chloroethyl)ether	"	ND	----	0.330	"	"	"	"	"	lqn	
Bis(2-chloroisopropyl)ether	"	ND	----	0.330	"	"	"	"	"	lqn	
2-Chloronaphthalene	"	ND	----	0.330	"	"	"	"	"	lqn	
2-Chlorophenol	"	ND	----	0.330	"	"	"	"	"	lqn	
4-Chlorophenyl phenyl ether	"	ND	----	0.330	"	"	"	"	"	lqn	
Chrysene	"	ND	----	0.330	"	"	"	"	"	lqn	
Di-n-butyl phthalate	"	ND	----	1.00	"	"	"	"	"	lqn	
Di-n-octyl phthalate	"	ND	----	0.330	"	"	"	"	"	lqn	
Dibenzo (a,h) anthracene	"	ND	----	0.330	"	"	"	"	"	lqn	
Dibenzofuran	"	ND	----	0.330	"	"	"	"	"	lqn	
1,2-Dichlorobenzene	"	ND	----	1.00	"	"	"	"	"	lqn	
1,3-Dichlorobenzene	"	ND	----	1.00	"	"	"	"	"	lqn	
1,4-Dichlorobenzene	"	ND	----	1.00	"	"	"	"	"	lqn	
3,3'-Dichlorobenzidine	"	ND	----	1.00	"	"	"	"	"	lqn	
2,4-Dichlorophenol	"	ND	----	0.330	"	"	"	"	"	lqn	
Diethyl phthalate	"	ND	----	0.330	"	"	"	"	"	lqn	
2,4-Dimethylphenol	"	ND	----	1.00	"	"	"	"	"	lqn	
Dimethyl phthalate	"	ND	----	0.330	"	"	"	"	"	lqn	
4,6-Dinitro-2-methylphenol	"	ND	----	1.00	"	"	"	"	"	lqn	
2,4-Dinitrophenol	"	ND	----	2.00	"	"	"	"	"	lqn	
2,4-Dinitrotoluene	"	ND	----	0.500	"	"	"	"	"	lqn	

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

**Amended Report**

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**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Semivolatile Organic Compounds per EPA Method 8270C**  
 TestAmerica Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
<b>ARJ0119-10 (08-1024-TP2-1)</b>		<b>Soil</b>		<b>Sampled: 10/24/08 14:09</b>							
2,6-Dinitrotoluene	EPA 8270C	ND	----	0.500	mg/kg wet	1x	8101203	10/30/08 18:35	11/04/08 01:41		lqn
Bis(2-ethylhexyl)phthalate	"	ND	----	2.00	"	"	"	"	"		lqn
Fluoranthene	"	ND	----	0.330	"	"	"	"	"		lqn
Fluorene	"	ND	----	0.330	"	"	"	"	"		lqn
Hexachlorobenzene	"	ND	----	0.330	"	"	"	"	"		lqn
Hexachlorobutadiene	"	ND	----	1.00	"	"	"	"	"		lqn
Hexachlorocyclopentadiene	"	ND	----	1.00	"	"	"	"	"		lqn
Hexachloroethane	"	ND	----	1.00	"	"	"	"	"		lqn
Indeno (1,2,3-cd) pyrene	"	ND	----	0.330	"	"	"	"	"		lqn
Isophorone	"	ND	----	0.330	"	"	"	"	"		lqn
2-Methylnaphthalene	"	ND	----	0.330	"	"	"	"	"		lqn
2-Methylphenol	"	ND	----	0.330	"	"	"	"	"		lqn
3-,4-Methylphenol	"	ND	----	0.330	"	"	"	"	"		lqn
Naphthalene	"	ND	----	0.330	"	"	"	"	"		lqn
2-Nitroaniline	"	ND	----	0.330	"	"	"	"	"		lqn
3-Nitroaniline	"	ND	----	1.00	"	"	"	"	"		lqn
4-Nitroaniline	"	ND	----	0.330	"	"	"	"	"		lqn
Nitrobenzene	"	ND	----	0.330	"	"	"	"	"		lqn
2-Nitrophenol	"	ND	----	0.330	"	"	"	"	"		lqn
4-Nitrophenol	"	ND	----	1.00	"	"	"	"	"		lqn
N-Nitrosodi-n-propylamine	"	ND	----	0.330	"	"	"	"	"		lqn
N-Nitrosodiphenylamine	"	ND	----	0.330	"	"	"	"	"		lqn
Pentachlorophenol	"	ND	----	1.00	"	"	"	"	"		lqn
Phenanthrene	"	ND	----	0.330	"	"	"	"	"		lqn
Phenol	"	ND	----	0.330	"	"	"	"	"		lqn
Pyrene	"	ND	----	0.330	"	"	"	"	"		lqn
1,2,4-Trichlorobenzene	"	ND	----	1.00	"	"	"	"	"		lqn
2,4,5-Trichlorophenol	"	ND	----	0.330	"	"	"	"	"		lqn
2,4,6-Trichlorophenol	"	ND	----	0.330	"	"	"	"	"		lqn

<i>Surrogate(s):</i>	2-Fluorobiphenyl	74.8%	30 - 126 %	"	"
	2-Fluorophenol	68.2%	28 - 119 %	"	"
	Nitrobenzene-d5	64.5%	26 - 117 %	"	"
	Phenol-d6	78.0%	35 - 125 %	"	"
	p-Terphenyl-d14	104%	26 - 143 %	"	"
	2,4,6-Tribromophenol	89.7%	30 - 127 %	"	"

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

**Amended Report**

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**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Semivolatile Organic Compounds per EPA Method 8270C**  
 TestAmerica Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
<b>ARJ0119-11 (08-1024-TP3-1)</b>											<b>RL3</b>
			<b>Soil</b>				<b>Sampled: 10/24/08 16:27</b>				
Acenaphthene	EPA 8270C	ND	----	0.652	mg/kg wet	2x	8101203	10/30/08 18:35	11/06/08 20:03	dth	
Acenaphthylene	"	ND	----	0.652	"	"	"	"	"	dth	
Anthracene	"	ND	----	0.652	"	"	"	"	"	dth	
Benzo (a) anthracene	"	ND	----	0.652	"	"	"	"	"	dth	
Benzo (a) pyrene	"	ND	----	0.652	"	"	"	"	"	dth	
Benzo (b) fluoranthene	"	ND	----	0.652	"	"	"	"	"	dth	
Benzo (ghi) perylene	"	ND	----	0.652	"	"	"	"	"	dth	
Benzo (k) fluoranthene	"	ND	----	0.652	"	"	"	"	"	dth	
Benzoic Acid	"	ND	----	1.97	"	"	"	"	"	dth	
Benzyl alcohol	"	ND	----	1.97	"	"	"	"	"	dth	
4-Bromophenyl phenyl ether	"	ND	----	0.652	"	"	"	"	"	dth	
Butyl benzyl phthalate	"	ND	----	0.652	"	"	"	"	"	dth	
4-Chloro-3-methylphenol	"	ND	----	0.652	"	"	"	"	"	dth	
4-Chloroaniline	"	ND	----	3.95	"	"	"	"	"	dth	
Bis(2-chloroethoxy)methane	"	ND	----	0.652	"	"	"	"	"	dth	
Bis(2-chloroethyl)ether	"	ND	----	0.652	"	"	"	"	"	dth	
Bis(2-chloroisopropyl)ether	"	ND	----	0.652	"	"	"	"	"	dth	
2-Chloronaphthalene	"	ND	----	0.652	"	"	"	"	"	dth	
2-Chlorophenol	"	ND	----	0.652	"	"	"	"	"	dth	
4-Chlorophenyl phenyl ether	"	ND	----	0.652	"	"	"	"	"	dth	
Chrysene	"	ND	----	0.652	"	"	"	"	"	dth	
Di-n-butyl phthalate	"	ND	----	1.97	"	"	"	"	"	dth	
Di-n-octyl phthalate	"	ND	----	0.652	"	"	"	"	"	dth	
Dibenzo (a,h) anthracene	"	ND	----	0.652	"	"	"	"	"	dth	
Dibenzofuran	"	ND	----	0.652	"	"	"	"	"	dth	
1,2-Dichlorobenzene	"	ND	----	1.97	"	"	"	"	"	dth	
1,3-Dichlorobenzene	"	ND	----	1.97	"	"	"	"	"	dth	
1,4-Dichlorobenzene	"	ND	----	1.97	"	"	"	"	"	dth	
3,3'-Dichlorobenzidine	"	ND	----	1.97	"	"	"	"	"	dth	
2,4-Dichlorophenol	"	ND	----	0.652	"	"	"	"	"	dth	
Diethyl phthalate	"	ND	----	0.652	"	"	"	"	"	dth	
2,4-Dimethylphenol	"	ND	----	1.97	"	"	"	"	"	dth	
Dimethyl phthalate	"	ND	----	0.652	"	"	"	"	"	dth	
4,6-Dinitro-2-methylphenol	"	ND	----	1.97	"	"	"	"	"	dth	
2,4-Dinitrophenol	"	ND	----	3.95	"	"	"	"	"	dth	
2,4-Dinitrotoluene	"	ND	----	0.987	"	"	"	"	"	dth	

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

**Amended Report**

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**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Semivolatile Organic Compounds per EPA Method 8270C**  
 TestAmerica Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
<b>ARJ0119-11 (08-1024-TP3-1)</b>											<b>RL3</b>
		<b>Soil</b>					<b>Sampled: 10/24/08 16:27</b>				
2,6-Dinitrotoluene	EPA 8270C	ND	----	0.987	mg/kg wet	2x	8101203	10/30/08 18:35	11/06/08 20:03	dth	
Bis(2-ethylhexyl)phthalate	"	ND	----	3.95	"	"	"	"	"	dth	
Fluoranthene	"	ND	----	0.652	"	"	"	"	"	dth	
Fluorene	"	ND	----	0.652	"	"	"	"	"	dth	
Hexachlorobenzene	"	ND	----	0.652	"	"	"	"	"	dth	
Hexachlorobutadiene	"	ND	----	1.97	"	"	"	"	"	dth	
Hexachlorocyclopentadiene	"	ND	----	1.97	"	"	"	"	"	dth	
Hexachloroethane	"	ND	----	1.97	"	"	"	"	"	dth	
Indeno (1,2,3-cd) pyrene	"	ND	----	0.652	"	"	"	"	"	dth	
Isophorone	"	ND	----	0.652	"	"	"	"	"	dth	
<b>2-Methylnaphthalene</b>	"	<b>3.24</b>	----	0.652	"	"	"	"	"	dth	
2-Methylphenol	"	ND	----	0.652	"	"	"	"	"	dth	
3-,4-Methylphenol	"	ND	----	0.652	"	"	"	"	"	dth	
Naphthalene	"	ND	----	0.652	"	"	"	"	"	dth	
2-Nitroaniline	"	ND	----	0.652	"	"	"	"	"	dth	
3-Nitroaniline	"	ND	----	1.97	"	"	"	"	"	dth	
4-Nitroaniline	"	ND	----	0.652	"	"	"	"	"	dth	
Nitrobenzene	"	ND	----	0.652	"	"	"	"	"	dth	
2-Nitrophenol	"	ND	----	0.652	"	"	"	"	"	dth	
4-Nitrophenol	"	ND	----	1.97	"	"	"	"	"	dth	
N-Nitrosodi-n-propylamine	"	ND	----	0.652	"	"	"	"	"	dth	
N-Nitrosodiphenylamine	"	ND	----	0.652	"	"	"	"	"	dth	
Pentachlorophenol	"	ND	----	1.97	"	"	"	"	"	dth	
Phenanthrene	"	ND	----	0.652	"	"	"	"	"	dth	
Phenol	"	ND	----	0.652	"	"	"	"	"	dth	
Pyrene	"	ND	----	0.652	"	"	"	"	"	dth	
1,2,4-Trichlorobenzene	"	ND	----	1.97	"	"	"	"	"	dth	
2,4,5-Trichlorophenol	"	ND	----	0.652	"	"	"	"	"	dth	
2,4,6-Trichlorophenol	"	ND	----	0.652	"	"	"	"	"	dth	

<i>Surrogate(s):</i>	<i>2-Fluorobiphenyl</i>	<i>49.9%</i>	<i>30 - 126 %</i>	<i>"</i>	<i>"</i>
	<i>2-Fluorophenol</i>	<i>37.6%</i>	<i>28 - 119 %</i>	<i>"</i>	<i>"</i>
	<i>Nitrobenzene-d5</i>	<i>35.5%</i>	<i>26 - 117 %</i>	<i>"</i>	<i>"</i>
	<i>Phenol-d6</i>	<i>55.4%</i>	<i>35 - 125 %</i>	<i>"</i>	<i>"</i>
	<i>p-Terphenyl-d14</i>	<i>89.9%</i>	<i>26 - 143 %</i>	<i>"</i>	<i>"</i>
	<i>2,4,6-Tribromophenol</i>	<i>76.3%</i>	<i>30 - 127 %</i>	<i>"</i>	<i>"</i>

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

**Amended Report**

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**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Semivolatile Organic Compounds per EPA Method 8270C**  
 TestAmerica Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
<b>ARJ0119-12 (08-1025-SED1)</b>											<b>RL3</b>
			<b>Soil</b>				<b>Sampled: 10/25/08 10:27</b>				
Acenaphthene	EPA 8270C	ND	----	0.981	mg/kg wet	3x	8101203	10/30/08 18:35	11/06/08 20:47	dth	
Acenaphthylene	"	ND	----	0.981	"	"	"	"	"	dth	
Anthracene	"	ND	----	0.981	"	"	"	"	"	dth	
Benzo (a) anthracene	"	ND	----	0.981	"	"	"	"	"	dth	
Benzo (a) pyrene	"	ND	----	0.981	"	"	"	"	"	dth	
Benzo (b) fluoranthene	"	ND	----	0.981	"	"	"	"	"	dth	
Benzo (ghi) perylene	"	ND	----	0.981	"	"	"	"	"	dth	
Benzo (k) fluoranthene	"	ND	----	0.981	"	"	"	"	"	dth	
Benzoic Acid	"	ND	----	2.97	"	"	"	"	"	dth	
Benzyl alcohol	"	ND	----	2.97	"	"	"	"	"	dth	
4-Bromophenyl phenyl ether	"	ND	----	0.981	"	"	"	"	"	dth	
Butyl benzyl phthalate	"	ND	----	0.981	"	"	"	"	"	dth	
4-Chloro-3-methylphenol	"	ND	----	0.981	"	"	"	"	"	dth	
4-Chloroaniline	"	ND	----	5.95	"	"	"	"	"	dth	
Bis(2-chloroethoxy)methane	"	ND	----	0.981	"	"	"	"	"	dth	
Bis(2-chloroethyl)ether	"	ND	----	0.981	"	"	"	"	"	dth	
Bis(2-chloroisopropyl)ether	"	ND	----	0.981	"	"	"	"	"	dth	
2-Chloronaphthalene	"	ND	----	0.981	"	"	"	"	"	dth	
2-Chlorophenol	"	ND	----	0.981	"	"	"	"	"	dth	
4-Chlorophenyl phenyl ether	"	ND	----	0.981	"	"	"	"	"	dth	
Chrysene	"	ND	----	0.981	"	"	"	"	"	dth	
Di-n-butyl phthalate	"	ND	----	2.97	"	"	"	"	"	dth	
Di-n-octyl phthalate	"	ND	----	0.981	"	"	"	"	"	dth	
Dibenzo (a,h) anthracene	"	ND	----	0.981	"	"	"	"	"	dth	
Dibenzofuran	"	ND	----	0.981	"	"	"	"	"	dth	
1,2-Dichlorobenzene	"	ND	----	2.97	"	"	"	"	"	dth	
1,3-Dichlorobenzene	"	ND	----	2.97	"	"	"	"	"	dth	
1,4-Dichlorobenzene	"	ND	----	2.97	"	"	"	"	"	dth	
3,3'-Dichlorobenzidine	"	ND	----	2.97	"	"	"	"	"	dth	
2,4-Dichlorophenol	"	ND	----	0.981	"	"	"	"	"	dth	
Diethyl phthalate	"	ND	----	0.981	"	"	"	"	"	dth	
2,4-Dimethylphenol	"	ND	----	2.97	"	"	"	"	"	dth	
Dimethyl phthalate	"	ND	----	0.981	"	"	"	"	"	dth	
4,6-Dinitro-2-methylphenol	"	ND	----	2.97	"	"	"	"	"	dth	
2,4-Dinitrophenol	"	ND	----	5.95	"	"	"	"	"	dth	
2,4-Dinitrotoluene	"	ND	----	1.49	"	"	"	"	"	dth	

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

**Amended Report**

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**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Semivolatile Organic Compounds per EPA Method 8270C**  
 TestAmerica Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
<b>ARJ0119-12 (08-1025-SED1)</b>											<b>RL3</b>
		<b>Soil</b>					<b>Sampled: 10/25/08 10:27</b>				
2,6-Dinitrotoluene	EPA 8270C	ND	----	1.49	mg/kg wet	3x	8101203	10/30/08 18:35	11/06/08 20:47	dth	
Bis(2-ethylhexyl)phthalate	"	ND	----	5.95	"	"	"	"	"	dth	
Fluoranthene	"	ND	----	0.981	"	"	"	"	"	dth	
Fluorene	"	ND	----	0.981	"	"	"	"	"	dth	
Hexachlorobenzene	"	ND	----	0.981	"	"	"	"	"	dth	
Hexachlorobutadiene	"	ND	----	2.97	"	"	"	"	"	dth	
Hexachlorocyclopentadiene	"	ND	----	2.97	"	"	"	"	"	dth	
Hexachloroethane	"	ND	----	2.97	"	"	"	"	"	dth	
Indeno (1,2,3-cd) pyrene	"	ND	----	0.981	"	"	"	"	"	dth	
Isophorone	"	ND	----	0.981	"	"	"	"	"	dth	
2-Methylnaphthalene	"	ND	----	0.981	"	"	"	"	"	dth	
2-Methylphenol	"	ND	----	0.981	"	"	"	"	"	dth	
3-,4-Methylphenol	"	ND	----	0.981	"	"	"	"	"	dth	
Naphthalene	"	ND	----	0.981	"	"	"	"	"	dth	
2-Nitroaniline	"	ND	----	0.981	"	"	"	"	"	dth	
3-Nitroaniline	"	ND	----	2.97	"	"	"	"	"	dth	
4-Nitroaniline	"	ND	----	0.981	"	"	"	"	"	dth	
Nitrobenzene	"	ND	----	0.981	"	"	"	"	"	dth	
2-Nitrophenol	"	ND	----	0.981	"	"	"	"	"	dth	
4-Nitrophenol	"	ND	----	2.97	"	"	"	"	"	dth	
N-Nitrosodi-n-propylamine	"	ND	----	0.981	"	"	"	"	"	dth	
N-Nitrosodiphenylamine	"	ND	----	0.981	"	"	"	"	"	dth	
Pentachlorophenol	"	ND	----	2.97	"	"	"	"	"	dth	
Phenanthrene	"	ND	----	0.981	"	"	"	"	"	dth	
Phenol	"	ND	----	0.981	"	"	"	"	"	dth	
Pyrene	"	ND	----	0.981	"	"	"	"	"	dth	
1,2,4-Trichlorobenzene	"	ND	----	2.97	"	"	"	"	"	dth	
2,4,5-Trichlorophenol	"	ND	----	0.981	"	"	"	"	"	dth	
2,4,6-Trichlorophenol	"	ND	----	0.981	"	"	"	"	"	dth	

<i>Surrogate(s):</i>	<i>2-Fluorobiphenyl</i>	<i>68.2%</i>	<i>30 - 126 %</i>	<i>"</i>	<i>"</i>
	<i>2-Fluorophenol</i>	<i>54.5%</i>	<i>28 - 119 %</i>	<i>"</i>	<i>"</i>
	<i>Nitrobenzene-d5</i>	<i>50.8%</i>	<i>26 - 117 %</i>	<i>"</i>	<i>"</i>
	<i>Phenol-d6</i>	<i>71.8%</i>	<i>35 - 125 %</i>	<i>"</i>	<i>"</i>
	<i>p-Terphenyl-d14</i>	<i>91.5%</i>	<i>26 - 143 %</i>	<i>"</i>	<i>"</i>
	<i>2,4,6-Tribromophenol</i>	<i>78.5%</i>	<i>30 - 127 %</i>	<i>"</i>	<i>"</i>

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

**Amended Report**

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**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Semivolatile Organic Compounds per EPA Method 8270C**  
 TestAmerica Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
<b>ARJ0119-13 (08-1025-SED2)</b>											<b>RL3</b>
			<b>Soil</b>				<b>Sampled: 10/25/08 10:53</b>				
Acenaphthene	EPA 8270C	ND	----	0.656	mg/kg wet	2x	8101203	10/30/08 18:35	11/06/08 21:31	dth	
Acenaphthylene	"	ND	----	0.656	"	"	"	"	"	dth	
Anthracene	"	ND	----	0.656	"	"	"	"	"	dth	
Benzo (a) anthracene	"	ND	----	0.656	"	"	"	"	"	dth	
Benzo (a) pyrene	"	ND	----	0.656	"	"	"	"	"	dth	
Benzo (b) fluoranthene	"	ND	----	0.656	"	"	"	"	"	dth	
Benzo (ghi) perylene	"	ND	----	0.656	"	"	"	"	"	dth	
Benzo (k) fluoranthene	"	ND	----	0.656	"	"	"	"	"	dth	
Benzoic Acid	"	ND	----	1.99	"	"	"	"	"	dth	
Benzyl alcohol	"	ND	----	1.99	"	"	"	"	"	dth	
4-Bromophenyl phenyl ether	"	ND	----	0.656	"	"	"	"	"	dth	
Butyl benzyl phthalate	"	ND	----	0.656	"	"	"	"	"	dth	
4-Chloro-3-methylphenol	"	ND	----	0.656	"	"	"	"	"	dth	
4-Chloroaniline	"	ND	----	3.97	"	"	"	"	"	dth	
Bis(2-chloroethoxy)methane	"	ND	----	0.656	"	"	"	"	"	dth	
Bis(2-chloroethyl)ether	"	ND	----	0.656	"	"	"	"	"	dth	
Bis(2-chloroisopropyl)ether	"	ND	----	0.656	"	"	"	"	"	dth	
2-Chloronaphthalene	"	ND	----	0.656	"	"	"	"	"	dth	
2-Chlorophenol	"	ND	----	0.656	"	"	"	"	"	dth	
4-Chlorophenyl phenyl ether	"	ND	----	0.656	"	"	"	"	"	dth	
Chrysene	"	ND	----	0.656	"	"	"	"	"	dth	
Di-n-butyl phthalate	"	ND	----	1.99	"	"	"	"	"	dth	
Di-n-octyl phthalate	"	ND	----	0.656	"	"	"	"	"	dth	
Dibenzo (a,h) anthracene	"	ND	----	0.656	"	"	"	"	"	dth	
Dibenzofuran	"	ND	----	0.656	"	"	"	"	"	dth	
1,2-Dichlorobenzene	"	ND	----	1.99	"	"	"	"	"	dth	
1,3-Dichlorobenzene	"	ND	----	1.99	"	"	"	"	"	dth	
1,4-Dichlorobenzene	"	ND	----	1.99	"	"	"	"	"	dth	
3,3'-Dichlorobenzidine	"	ND	----	1.99	"	"	"	"	"	dth	
2,4-Dichlorophenol	"	ND	----	0.656	"	"	"	"	"	dth	
Diethyl phthalate	"	ND	----	0.656	"	"	"	"	"	dth	
2,4-Dimethylphenol	"	ND	----	1.99	"	"	"	"	"	dth	
Dimethyl phthalate	"	ND	----	0.656	"	"	"	"	"	dth	
4,6-Dinitro-2-methylphenol	"	ND	----	1.99	"	"	"	"	"	dth	
2,4-Dinitrophenol	"	ND	----	3.97	"	"	"	"	"	dth	
2,4-Dinitrotoluene	"	ND	----	0.993	"	"	"	"	"	dth	

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

**Amended Report**

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Amended Report

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Semivolatile Organic Compounds per EPA Method 8270C**  
 TestAmerica Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes	
<b>ARJ0119-13 (08-1025-SED2)</b>		<b>Soil</b>		<b>Sampled: 10/25/08 10:53</b>								<b>RL3</b>
2,6-Dinitrotoluene	EPA 8270C	ND	----	0.993	mg/kg wet	2x	8101203	10/30/08 18:35	11/06/08 21:31	dth		
Bis(2-ethylhexyl)phthalate	"	ND	----	3.97	"	"	"	"	"	dth		
Fluoranthene	"	ND	----	0.656	"	"	"	"	"	dth		
Fluorene	"	ND	----	0.656	"	"	"	"	"	dth		
Hexachlorobenzene	"	ND	----	0.656	"	"	"	"	"	dth		
Hexachlorobutadiene	"	ND	----	1.99	"	"	"	"	"	dth		
Hexachlorocyclopentadiene	"	ND	----	1.99	"	"	"	"	"	dth		
Hexachloroethane	"	ND	----	1.99	"	"	"	"	"	dth		
Indeno (1,2,3-cd) pyrene	"	ND	----	0.656	"	"	"	"	"	dth		
Isophorone	"	ND	----	0.656	"	"	"	"	"	dth		
2-Methylnaphthalene	"	ND	----	0.656	"	"	"	"	"	dth		
2-Methylphenol	"	ND	----	0.656	"	"	"	"	"	dth		
3-,4-Methylphenol	"	ND	----	0.656	"	"	"	"	"	dth		
Naphthalene	"	ND	----	0.656	"	"	"	"	"	dth		
2-Nitroaniline	"	ND	----	0.656	"	"	"	"	"	dth		
3-Nitroaniline	"	ND	----	1.99	"	"	"	"	"	dth		
4-Nitroaniline	"	ND	----	0.656	"	"	"	"	"	dth		
Nitrobenzene	"	ND	----	0.656	"	"	"	"	"	dth		
2-Nitrophenol	"	ND	----	0.656	"	"	"	"	"	dth		
4-Nitrophenol	"	ND	----	1.99	"	"	"	"	"	dth		
N-Nitrosodi-n-propylamine	"	ND	----	0.656	"	"	"	"	"	dth		
N-Nitrosodiphenylamine	"	ND	----	0.656	"	"	"	"	"	dth		
Pentachlorophenol	"	ND	----	1.99	"	"	"	"	"	dth		
Phenanthrene	"	ND	----	0.656	"	"	"	"	"	dth		
Phenol	"	ND	----	0.656	"	"	"	"	"	dth		
Pyrene	"	ND	----	0.656	"	"	"	"	"	dth		
1,2,4-Trichlorobenzene	"	ND	----	1.99	"	"	"	"	"	dth		
2,4,5-Trichlorophenol	"	ND	----	0.656	"	"	"	"	"	dth		
2,4,6-Trichlorophenol	"	ND	----	0.656	"	"	"	"	"	dth		

<i>Surrogate(s):</i>	2-Fluorobiphenyl	63.5%	30 - 126 %	"	"
	2-Fluorophenol	52.6%	28 - 119 %	"	"
	Nitrobenzene-d5	50.5%	26 - 117 %	"	"
	Phenol-d6	68.5%	35 - 125 %	"	"
	p-Terphenyl-d14	106%	26 - 143 %	"	"
	2,4,6-Tribromophenol	80.4%	30 - 127 %	"	"

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

Amended Report

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**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Semivolatile Organic Compounds per EPA Method 8270C**  
 TestAmerica Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
<b>ARJ0119-14 (08-1025-SED3)</b>											<b>RL3</b>
			<b>Soil</b>				<b>Sampled: 10/25/08 11:10</b>				
Acenaphthene	EPA 8270C	ND	----	0.657	mg/kg wet	2x	8101203	10/30/08 18:35	11/06/08 22:16	dth	
Acenaphthylene	"	ND	----	0.657	"	"	"	"	"	dth	
Anthracene	"	ND	----	0.657	"	"	"	"	"	dth	
Benzo (a) anthracene	"	ND	----	0.657	"	"	"	"	"	dth	
Benzo (a) pyrene	"	ND	----	0.657	"	"	"	"	"	dth	
Benzo (b) fluoranthene	"	ND	----	0.657	"	"	"	"	"	dth	
Benzo (ghi) perylene	"	ND	----	0.657	"	"	"	"	"	dth	
Benzo (k) fluoranthene	"	ND	----	0.657	"	"	"	"	"	dth	
Benzoic Acid	"	ND	----	1.99	"	"	"	"	"	dth	
Benzyl alcohol	"	ND	----	1.99	"	"	"	"	"	dth	
4-Bromophenyl phenyl ether	"	ND	----	0.657	"	"	"	"	"	dth	
Butyl benzyl phthalate	"	ND	----	0.657	"	"	"	"	"	dth	
4-Chloro-3-methylphenol	"	ND	----	0.657	"	"	"	"	"	dth	
4-Chloroaniline	"	ND	----	3.98	"	"	"	"	"	dth	
Bis(2-chloroethoxy)methane	"	ND	----	0.657	"	"	"	"	"	dth	
Bis(2-chloroethyl)ether	"	ND	----	0.657	"	"	"	"	"	dth	
Bis(2-chloroisopropyl)ether	"	ND	----	0.657	"	"	"	"	"	dth	
2-Chloronaphthalene	"	ND	----	0.657	"	"	"	"	"	dth	
2-Chlorophenol	"	ND	----	0.657	"	"	"	"	"	dth	
4-Chlorophenyl phenyl ether	"	ND	----	0.657	"	"	"	"	"	dth	
Chrysene	"	ND	----	0.657	"	"	"	"	"	dth	
Di-n-butyl phthalate	"	ND	----	1.99	"	"	"	"	"	dth	
Di-n-octyl phthalate	"	ND	----	0.657	"	"	"	"	"	dth	
Dibenzo (a,h) anthracene	"	ND	----	0.657	"	"	"	"	"	dth	
Dibenzofuran	"	ND	----	0.657	"	"	"	"	"	dth	
1,2-Dichlorobenzene	"	ND	----	1.99	"	"	"	"	"	dth	
1,3-Dichlorobenzene	"	ND	----	1.99	"	"	"	"	"	dth	
1,4-Dichlorobenzene	"	ND	----	1.99	"	"	"	"	"	dth	
3,3'-Dichlorobenzidine	"	ND	----	1.99	"	"	"	"	"	dth	
2,4-Dichlorophenol	"	ND	----	0.657	"	"	"	"	"	dth	
Diethyl phthalate	"	ND	----	0.657	"	"	"	"	"	dth	
2,4-Dimethylphenol	"	ND	----	1.99	"	"	"	"	"	dth	
Dimethyl phthalate	"	ND	----	0.657	"	"	"	"	"	dth	
4,6-Dinitro-2-methylphenol	"	ND	----	1.99	"	"	"	"	"	dth	
2,4-Dinitrophenol	"	ND	----	3.98	"	"	"	"	"	dth	
2,4-Dinitrotoluene	"	ND	----	0.995	"	"	"	"	"	dth	

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

**Amended Report**

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**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Semivolatile Organic Compounds per EPA Method 8270C**  
 TestAmerica Portland

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes	
<b>ARJ0119-14 (08-1025-SED3)</b>		<b>Soil</b>		<b>Sampled: 10/25/08 11:10</b>								<b>RL3</b>
2,6-Dinitrotoluene	EPA 8270C	ND	----	0.995	mg/kg wet	2x	8101203	10/30/08 18:35	11/06/08 22:16	dth		
Bis(2-ethylhexyl)phthalate	"	ND	----	3.98	"	"	"	"	"	dth		
Fluoranthene	"	ND	----	0.657	"	"	"	"	"	dth		
Fluorene	"	ND	----	0.657	"	"	"	"	"	dth		
Hexachlorobenzene	"	ND	----	0.657	"	"	"	"	"	dth		
Hexachlorobutadiene	"	ND	----	1.99	"	"	"	"	"	dth		
Hexachlorocyclopentadiene	"	ND	----	1.99	"	"	"	"	"	dth		
Hexachloroethane	"	ND	----	1.99	"	"	"	"	"	dth		
Indeno (1,2,3-cd) pyrene	"	ND	----	0.657	"	"	"	"	"	dth		
Isophorone	"	ND	----	0.657	"	"	"	"	"	dth		
2-Methylnaphthalene	"	ND	----	0.657	"	"	"	"	"	dth		
2-Methylphenol	"	ND	----	0.657	"	"	"	"	"	dth		
3-,4-Methylphenol	"	ND	----	0.657	"	"	"	"	"	dth		
Naphthalene	"	ND	----	0.657	"	"	"	"	"	dth		
2-Nitroaniline	"	ND	----	0.657	"	"	"	"	"	dth		
3-Nitroaniline	"	ND	----	1.99	"	"	"	"	"	dth		
4-Nitroaniline	"	ND	----	0.657	"	"	"	"	"	dth		
Nitrobenzene	"	ND	----	0.657	"	"	"	"	"	dth		
2-Nitrophenol	"	ND	----	0.657	"	"	"	"	"	dth		
4-Nitrophenol	"	ND	----	1.99	"	"	"	"	"	dth		
N-Nitrosodi-n-propylamine	"	ND	----	0.657	"	"	"	"	"	dth		
N-Nitrosodiphenylamine	"	ND	----	0.657	"	"	"	"	"	dth		
Pentachlorophenol	"	ND	----	1.99	"	"	"	"	"	dth		
Phenanthrene	"	ND	----	0.657	"	"	"	"	"	dth		
Phenol	"	ND	----	0.657	"	"	"	"	"	dth		
Pyrene	"	ND	----	0.657	"	"	"	"	"	dth		
1,2,4-Trichlorobenzene	"	ND	----	1.99	"	"	"	"	"	dth		
2,4,5-Trichlorophenol	"	ND	----	0.657	"	"	"	"	"	dth		
2,4,6-Trichlorophenol	"	ND	----	0.657	"	"	"	"	"	dth		

<i>Surrogate(s):</i>	2-Fluorobiphenyl	49.2%	30 - 126 %	"	"
	2-Fluorophenol	38.2%	28 - 119 %	"	"
	Nitrobenzene-d5	32.3%	26 - 117 %	"	"
	Phenol-d6	60.5%	35 - 125 %	"	"
	p-Terphenyl-d14	97.1%	26 - 143 %	"	"
	2,4,6-Tribromophenol	75.4%	30 - 127 %	"	"

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

**Amended Report**

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**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Mercury (CVAA)**  
 TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
<b>ARJ0119-09 (08-1024-TP1-1)</b>		<b>Soil</b>		<b>Sampled: 10/24/08 13:02</b>							
Mercury	7471A Dry	0.066	----	0.048	mg/Kg dry	1x	37735	11/04/08 09:44	11/04/08 19:12	FCW	
<b>ARJ0119-10 (08-1024-TP2-1)</b>		<b>Soil</b>		<b>Sampled: 10/24/08 14:09</b>							
Mercury	7471A Dry	0.082	----	0.024	mg/Kg dry	1x	37735	11/04/08 09:44	11/04/08 19:16	FCW	
<b>ARJ0119-11 (08-1024-TP3-1)</b>		<b>Soil</b>		<b>Sampled: 10/24/08 16:27</b>							
Mercury	7471A Dry	0.046	----	0.043	mg/Kg dry	1x	37735	11/04/08 09:44	11/04/08 19:19	FCW	
<b>ARJ0119-12 (08-1025-SED1)</b>		<b>Soil</b>		<b>Sampled: 10/25/08 10:27</b>							
Mercury	7471A Dry	0.072	----	0.050	mg/Kg dry	1x	37735	11/04/08 09:44	11/04/08 19:30	FCW	
<b>ARJ0119-13 (08-1025-SED2)</b>		<b>Soil</b>		<b>Sampled: 10/25/08 10:53</b>							
Mercury	7471A Dry	ND	----	0.036	mg/Kg dry	1x	37735	11/04/08 09:44	11/04/08 19:34	FCW	
<b>ARJ0119-14 (08-1025-SED3)</b>		<b>Soil</b>		<b>Sampled: 10/25/08 11:10</b>							
Mercury	7471A Dry	0.045	----	0.040	mg/Kg dry	1x	37735	11/04/08 09:44	11/04/08 19:37	FCW	
<b>ARJ0119-15 (08-1025-BRSED01)</b>		<b>Soil</b>		<b>Sampled: 10/25/08 10:40</b>							
Mercury	7471A Dry	0.23	----	0.12	mg/Kg dry	1x	38404	11/21/08 08:57	11/21/08 12:10	FCW	
<b>ARJ0119-18 (08-1025-BRSoil2)</b>		<b>Soil</b>		<b>Sampled: 10/25/08 12:29</b>							
Mercury	7471A Dry	0.11	----	0.030	mg/Kg dry	1x	38404	11/21/08 08:57	11/21/08 12:14	FCW	

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

**Amended Report**

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**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Metals (ICP/MS)**  
 TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
<b>ARJ0119-09 (08-1024-TP1-1)</b>		<b>Soil</b>		<b>Sampled: 10/24/08 13:02</b>							
Arsenic	6020 TMP Dry	4.4	----	0.46	mg/Kg dry	10x	38198	11/17/08 11:05	11/17/08 17:16	FCW	
Selenium	"	ND	----	1.2	"	"	"	"	"	FCW	
<b>ARJ0119-10 (08-1024-TP2-1)</b>		<b>Soil</b>		<b>Sampled: 10/24/08 14:09</b>							
Arsenic	6020 TMP Dry	23	----	0.24	mg/Kg dry	10x	38198	11/17/08 11:05	11/17/08 17:21	FCW	
Selenium	"	ND	----	0.59	"	"	"	"	"	FCW	
<b>ARJ0119-11 (08-1024-TP3-1)</b>		<b>Soil</b>		<b>Sampled: 10/24/08 16:27</b>							
Arsenic	6020 TMP Dry	13	----	0.47	mg/Kg dry	10x	38198	11/17/08 11:05	11/17/08 17:25	FCW	
Selenium	"	ND	----	1.2	"	"	"	"	"	FCW	
<b>ARJ0119-12 (08-1025-SED1)</b>		<b>Soil</b>		<b>Sampled: 10/25/08 10:27</b>							
Arsenic	6020 TMP Dry	2.9	----	0.49	mg/Kg dry	10x	38198	11/17/08 11:05	11/17/08 17:30	FCW	
Selenium	"	ND	----	1.2	"	"	"	"	"	FCW	
<b>ARJ0119-13 (08-1025-SED2)</b>		<b>Soil</b>		<b>Sampled: 10/25/08 10:53</b>							
Arsenic	6020 TMP Dry	7.2	----	0.36	mg/Kg dry	10x	38198	11/17/08 11:05	11/17/08 17:34	FCW	
Selenium	"	ND	----	0.91	"	"	"	"	"	FCW	
<b>ARJ0119-14 (08-1025-SED3)</b>		<b>Soil</b>		<b>Sampled: 10/25/08 11:10</b>							
Arsenic	6020 TMP Dry	5.6	----	0.39	mg/Kg dry	10x	38198	11/17/08 11:05	11/17/08 17:39	FCW	
Selenium	"	ND	----	0.96	"	"	"	"	"	FCW	
<b>ARJ0119-15 (08-1025-BRSED01)</b>		<b>Soil</b>		<b>Sampled: 10/25/08 10:40</b>							
Arsenic	6020 TMP Dry	6.5	----	1.3	mg/Kg dry	10x	38484	11/24/08 12:09	11/24/08 18:09	FCW	
Barium	"	10	----	1.3	"	"	"	"	"	FCW	
Cadmium	"	ND	----	1.3	"	"	"	"	"	FCW	
Chromium	"	10	----	1.3	"	"	"	"	"	FCW	
Lead	"	15	----	1.3	"	"	"	"	"	FCW	
Selenium	"	ND	----	3.1	"	"	"	"	"	FCW	
Silver	"	ND	----	1.3	"	"	"	"	"	FCW	

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

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**Amended Report**



**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Metals (ICP/MS)**  
 TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
<b>ARJ0119-18</b>	<b>(08-1025-BRSoil2)</b>	<b>Soil</b>		<b>Sampled: 10/25/08 12:29</b>							
Arsenic	6020 TMP Dry	<b>10</b>	----	0.30	mg/Kg dry	10x	38484	11/24/08 12:09	11/24/08 18:13		FCW
Barium	"	<b>25</b>	----	0.30	"	"	"	"	"		FCW
Cadmium	"	<b>0.39</b>	----	0.30	"	"	"	"	"		FCW
Chromium	"	<b>8.1</b>	----	0.30	"	"	"	"	"		FCW
Lead	"	<b>45</b>	----	0.30	"	"	"	"	"		FCW
Selenium	"	ND	----	0.76	"	"	"	"	"		FCW
Silver	"	ND	----	0.30	"	"	"	"	"		FCW

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

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**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Percent Moisture**  
 TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
<b>ARJ0119-09 (08-1024-TP1-1)</b>		<b>Soil</b>			<b>Sampled: 10/24/08 13:02</b>						
Percent Solids	PercentMoisture	40	----	0.10	%	1x	38217	11/17/08 13:57	11/17/08 13:57	DD	
Percent Moisture	"	60	----	0.10	"	"	"	"	"	DD	
<b>ARJ0119-10 (08-1024-TP2-1)</b>		<b>Soil</b>			<b>Sampled: 10/24/08 14:09</b>						
Percent Solids	PercentMoisture	81	----	0.10	%	1x	38217	11/17/08 13:57	11/17/08 13:57	DD	
Percent Moisture	"	19	----	0.10	"	"	"	"	"	DD	
<b>ARJ0119-11 (08-1024-TP3-1)</b>		<b>Soil</b>			<b>Sampled: 10/24/08 16:27</b>						
Percent Solids	PercentMoisture	43	----	0.10	%	1x	38217	11/17/08 13:57	11/17/08 13:57	DD	
Percent Moisture	"	57	----	0.10	"	"	"	"	"	DD	
<b>ARJ0119-12 (08-1025-SED1)</b>		<b>Soil</b>			<b>Sampled: 10/25/08 10:27</b>						
Percent Solids	PercentMoisture	39	----	0.10	%	1x	38217	11/17/08 13:57	11/17/08 13:57	DD	
Percent Moisture	"	61	----	0.10	"	"	"	"	"	DD	
<b>ARJ0119-13 (08-1025-SED2)</b>		<b>Soil</b>			<b>Sampled: 10/25/08 10:53</b>						
Percent Solids	PercentMoisture	52	----	0.10	%	1x	38217	11/17/08 13:57	11/17/08 13:57	DD	
Percent Moisture	"	48	----	0.10	"	"	"	"	"	DD	
<b>ARJ0119-14 (08-1025-SED3)</b>		<b>Soil</b>			<b>Sampled: 10/25/08 11:10</b>						
Percent Solids	PercentMoisture	50	----	0.10	%	1x	38217	11/17/08 13:57	11/17/08 13:57	DD	
Percent Moisture	"	50	----	0.10	"	"	"	"	"	DD	
<b>ARJ0119-15 (08-1025-BRSED01)</b>		<b>Soil</b>			<b>Sampled: 10/25/08 10:40</b>						
Percent Solids	PercentMoisture	15	----	0.10	%	1x	38402	11/21/08 10:19	11/21/08 10:19	DD	
Percent Moisture	"	85	----	0.10	"	"	"	"	"	DD	
<b>ARJ0119-18 (08-1025-BRSoil2)</b>		<b>Soil</b>			<b>Sampled: 10/25/08 12:29</b>						
Percent Solids	PercentMoisture	64	----	0.10	%	1x	38402	11/21/08 10:19	11/21/08 10:19	DD	
Percent Moisture	"	36	----	0.10	"	"	"	"	"	DD	

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**Amended Report**



**Amended Report**

<b>BGES, INC.</b> 750 W. 2nd Ave, Ste 104 Anchorage, AK 99501	Project Name: <b>Nichin Cove</b> Project Number: Nichin Cove Project Manager: Renee Lafata	Report Created: 11/26/08 17:34
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**Metals (ICP/MS) TCLP**  
 TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
<b>ARJ0119-10 (08-1024-TP2-1)</b>		<b>Soil</b>									
		<b>Sampled: 10/24/08 14:09</b>									
Arsenic	6020 TCLP	0.0056	----	0.0040	mg/L	10x	38240	11/18/08 09:07	11/18/08 14:51	FCW	H

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Troy J. Engstrom, Lab Director

**Amended Report**

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**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Alaska - Gasoline Range Organics (GC)**  
 TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
<b>ARJ0119-19 (Trip Blank)</b>		<b>Soil</b>									
<b>Sampled: 10/25/08 12:29</b>											
Gasoline Range Organics (GRO) -C6-C10	AK101	ND	----	4.0	mg/Kg	1x	37656	10/31/08 11:11	11/03/08 16:04	JMB	
<i>Surrogate(s):</i>											
	<i>Trifluorotoluene (Surr)</i>			79%		60 - 120 %	"				"
	<i>4-Bromofluorobenzene (Surr)</i>			105%		60 - 120 %	"				"
	<i>Ethylbenzene-d10</i>			113%		60 - 120 %	"				"
	<i>Fluorobenzene (Surr)</i>			93%		60 - 120 %	"				"
	<i>Toluene-d8 (Surr)</i>			110%		60 - 120 %	"				"

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**Amended Report**

<b>BGES, INC.</b> 750 W. 2nd Ave, Ste 104 Anchorage, AK 99501	Project Name: <b>Nichin Cove</b> Project Number: Nichin Cove Project Manager: Renee Lafata	Report Created: 11/26/08 17:34
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**Mercury (CVAA)**  
 TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
<b>ARJ0119-01 (08-1025-SW1)</b>		<b>Water</b>		<b>Sampled: 10/25/08 08:58</b>							
Mercury	7470A	ND	----	0.00020	mg/L	1x	37731	11/04/08 09:19	11/04/08 20:43	FCW	
<b>ARJ0119-02 (08-1025-SW2)</b>		<b>Water</b>		<b>Sampled: 10/25/08 09:20</b>							
Mercury	7470A	ND	----	0.00020	mg/L	1x	37731	11/04/08 09:19	11/04/08 20:46	FCW	
<b>ARJ0119-03 (08-1025-SW3)</b>		<b>Water</b>		<b>Sampled: 10/25/08 09:32</b>							
Mercury	7470A	ND	----	0.00020	mg/L	1x	37731	11/04/08 09:19	11/04/08 20:50	FCW	
<b>ARJ0119-04 (08-1025-SW4)</b>		<b>Water</b>		<b>Sampled: 10/25/08 10:06</b>							
Mercury	7470A	ND	----	0.00020	mg/L	1x	37731	11/04/08 09:19	11/04/08 20:53	FCW	
<b>ARJ0119-05 (08-1025-SWB)</b>		<b>Water</b>		<b>Sampled: 10/25/08 09:44</b>							
Mercury	7470A	ND	----	0.00020	mg/L	1x	37731	11/04/08 09:19	11/04/08 20:57	FCW	
<b>ARJ0119-06 (08-1025-MW1)</b>		<b>Water</b>		<b>Sampled: 10/25/08 11:55</b>							
Mercury	7470A	<b>0.00032</b>	----	0.00020	mg/L	1x	37731	11/04/08 09:19	11/04/08 21:00	FCW	

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**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Metals (ICP)**  
 TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
<b>ARJ0119-09 (08-1024-TP1-1)</b>		<b>Soil</b>		<b>Sampled: 10/24/08 13:02</b>							
<b>Chromium</b>	6010B TMP Dry	<b>7.6</b>	----	3.0	mg/Kg dry	1x	37692	11/03/08 10:11	11/03/08 18:15	PAB	
Hexavalent chromium	6010B HEX Dry	ND	----	0.61	"	"	37719	11/03/08 16:19	11/04/08 16:12	PAB	
<b>Lead</b>	6010B TMP Dry	<b>61</b>	----	3.4	"	"	37692	11/03/08 10:11	11/03/08 18:15	PAB	
Cadmium	"	ND	----	1.1	"	"	"	"	"	PAB	
<b>Barium</b>	"	<b>18</b>	----	1.1	"	"	"	"	"	PAB	
Selenium	"	ND	----	11	"	"	"	"	"	PAB	
Silver	"	ND	----	2.3	"	"	"	"	"	PAB	
Arsenic	"	ND	----	6.9	"	"	"	"	"	PAB	
<b>ARJ0119-10 (08-1024-TP2-1)</b>		<b>Soil</b>		<b>Sampled: 10/24/08 14:09</b>							
<b>Chromium</b>	6010B TMP Dry	<b>7.2</b>	----	1.2	mg/Kg dry	1x	37692	11/03/08 10:11	11/03/08 18:20	PAB	
<b>Lead</b>	"	<b>16</b>	----	1.4	"	"	"	"	"	PAB	
Cadmium	"	ND	----	0.46	"	"	"	"	"	PAB	
<b>Barium</b>	"	<b>7.0</b>	----	0.46	"	"	"	"	"	PAB	
Selenium	"	ND	----	4.6	"	"	"	"	"	PAB	
Silver	"	ND	----	0.93	"	"	"	"	"	PAB	
<b>Arsenic</b>	"	<b>22</b>	----	2.8	"	"	"	"	"	PAB	
<b>ARJ0119-11 (08-1024-TP3-1)</b>		<b>Soil</b>		<b>Sampled: 10/24/08 16:27</b>							
<b>Chromium</b>	6010B TMP Dry	<b>6.9</b>	----	2.0	mg/Kg dry	1x	37692	11/03/08 10:11	11/03/08 18:25	PAB	
<b>Lead</b>	"	<b>8.0</b>	----	2.3	"	"	"	"	"	PAB	
Cadmium	"	ND	----	0.78	"	"	"	"	"	PAB	
<b>Barium</b>	"	<b>21</b>	----	0.78	"	"	"	"	"	PAB	
Selenium	"	ND	----	7.8	"	"	"	"	"	PAB	
Silver	"	ND	----	1.6	"	"	"	"	"	PAB	
<b>Arsenic</b>	"	<b>7.0</b>	----	4.7	"	"	"	"	"	PAB	
<b>ARJ0119-12 (08-1025-SED1)</b>		<b>Soil</b>		<b>Sampled: 10/25/08 10:27</b>							
<b>Chromium</b>	6010B TMP Dry	<b>6.0</b>	----	2.5	mg/Kg dry	1x	37692	11/03/08 10:11	11/03/08 18:30	PAB	
Lead	"	ND	----	2.9	"	"	"	"	"	PAB	
Cadmium	"	ND	----	0.95	"	"	"	"	"	PAB	
<b>Barium</b>	"	<b>5.1</b>	----	0.95	"	"	"	"	"	PAB	
Selenium	"	ND	----	9.5	"	"	"	"	"	PAB	
Silver	"	ND	----	1.9	"	"	"	"	"	PAB	
Arsenic	"	ND	----	5.7	"	"	"	"	"	PAB	

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

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**Amended Report**



**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Metals (ICP)**  
 TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
<b>ARJ0119-13 (08-1025-SED2)</b>		<b>Soil</b>		<b>Sampled: 10/25/08 10:53</b>							
<b>Chromium</b>	6010B TMP Dry	<b>11</b>	----	1.7	mg/Kg dry	1x	37692	11/03/08 10:11	11/03/08 18:35	PAB	
Hexavalent chromium	6010B HEX Dry	ND	----	0.47	"	"	37719	11/03/08 16:19	11/04/08 16:31	PAB	H
<b>Lead</b>	6010B TMP Dry	<b>3.6</b>	----	2.0	"	"	37692	11/03/08 10:11	11/03/08 18:35	PAB	
Cadmium	"	ND	----	0.67	"	"	"	"	"	PAB	
<b>Barium</b>	"	<b>5.4</b>	----	0.67	"	"	"	"	"	PAB	
Selenium	"	ND	----	6.7	"	"	"	"	"	PAB	
Silver	"	ND	----	1.3	"	"	"	"	"	PAB	
<b>Arsenic</b>	"	<b>6.7</b>	----	4.0	"	"	"	"	"	PAB	
<b>ARJ0119-14 (08-1025-SED3)</b>		<b>Soil</b>		<b>Sampled: 10/25/08 11:10</b>							
<b>Chromium</b>	6010B TMP Dry	<b>14</b>	----	1.9	mg/Kg dry	1x	37692	11/03/08 10:11	11/03/08 18:40	PAB	
<b>Lead</b>	"	<b>2.5</b>	----	2.2	"	"	"	"	"	PAB	
Cadmium	"	ND	----	0.73	"	"	"	"	"	PAB	
<b>Barium</b>	"	<b>8.2</b>	----	0.73	"	"	"	"	"	PAB	
Selenium	"	ND	----	7.3	"	"	"	"	"	PAB	
Silver	"	ND	----	1.5	"	"	"	"	"	PAB	
<b>Arsenic</b>	"	<b>6.0</b>	----	4.4	"	"	"	"	"	PAB	

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

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**Amended Report**



**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Metals (ICP/MS) Total Recoverable**  
 TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
<b>ARJ0119-01 (08-1025-SW1)</b>		<b>Water</b>			<b>Sampled: 10/25/08 08:58</b>						
<b>Lead</b>	6020 Total Recoverable	<b>0.00050</b>	----	0.00040	mg/L	1x	37718	11/03/08 15:45	11/04/08 16:53		FCW
<b>Arsenic</b>	"	<b>0.0012</b>	----	0.00040	"	"	"	"	"		FCW
Cadmium	"	ND	----	0.00040	"	"	"	"	"		FCW
<b>Barium</b>	"	<b>0.0051</b>	----	0.0012	"	"	"	"	"		FCW
Selenium	"	ND	----	0.00040	"	"	"	"	"		FCW
Chromium	"	ND	----	0.00040	"	"	"	"	"		FCW
Silver	"	ND	----	0.00040	"	"	"	"	"		FCW
<b>ARJ0119-02 (08-1025-SW2)</b>		<b>Water</b>			<b>Sampled: 10/25/08 09:20</b>						
<b>Lead</b>	6020 Total Recoverable	<b>0.00060</b>	----	0.00040	mg/L	1x	37718	11/03/08 15:45	11/04/08 16:58		FCW
<b>Arsenic</b>	"	<b>0.0015</b>	----	0.00040	"	"	"	"	"		FCW
Cadmium	"	ND	----	0.00040	"	"	"	"	"		FCW
<b>Barium</b>	"	<b>0.0047</b>	----	0.0012	"	"	"	"	"		FCW
Selenium	"	ND	----	0.00040	"	"	"	"	"		FCW
Chromium	"	ND	----	0.00040	"	"	"	"	"		FCW
Silver	"	ND	----	0.00040	"	"	"	"	"		FCW
<b>ARJ0119-03 (08-1025-SW3)</b>		<b>Water</b>			<b>Sampled: 10/25/08 09:32</b>						
<b>Lead</b>	6020 Total Recoverable	<b>0.00071</b>	----	0.00040	mg/L	1x	37718	11/03/08 15:45	11/04/08 17:03		FCW
<b>Arsenic</b>	"	<b>0.0015</b>	----	0.00040	"	"	"	"	"		FCW
Cadmium	"	ND	----	0.00040	"	"	"	"	"		FCW
<b>Barium</b>	"	<b>0.0043</b>	----	0.0012	"	"	"	"	"		FCW
Selenium	"	ND	----	0.00040	"	"	"	"	"		FCW
Chromium	"	ND	----	0.00040	"	"	"	"	"		FCW
Silver	"	ND	----	0.00040	"	"	"	"	"		FCW
<b>ARJ0119-04 (08-1025-SW4)</b>		<b>Water</b>			<b>Sampled: 10/25/08 10:06</b>						
<b>Lead</b>	6020 Total Recoverable	ND	----	0.00040	mg/L	1x	37718	11/03/08 15:45	11/04/08 17:08		FCW
<b>Arsenic</b>	"	<b>0.00057</b>	----	0.00040	"	"	"	"	"		FCW
Cadmium	"	ND	----	0.00040	"	"	"	"	"		FCW
<b>Barium</b>	"	<b>0.0078</b>	----	0.0012	"	"	"	"	"		FCW
Selenium	"	ND	----	0.00040	"	"	"	"	"		FCW
Chromium	"	ND	----	0.00040	"	"	"	"	"		FCW
Silver	"	ND	----	0.00040	"	"	"	"	"		FCW

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

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**Amended Report**



Amended Report

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Metals (ICP/MS) Total Recoverable**  
 TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
<b>ARJ0119-05 (08-1025-SWB)</b>		<b>Water</b>			<b>Sampled: 10/25/08 09:44</b>						
Lead	6020 Total Recoverable	ND	----	0.00040	mg/L	1x	37718	11/03/08 15:45	11/04/08 17:14		FCW
Arsenic	"	<b>0.00048</b>	----	0.00040	"	"	"	"	"		FCW
Cadmium	"	ND	----	0.00040	"	"	"	"	"		FCW
Barium	"	<b>0.0073</b>	----	0.0012	"	"	"	"	"		FCW
Selenium	"	ND	----	0.00040	"	"	"	"	"		FCW
Chromium	"	ND	----	0.00040	"	"	"	"	"		FCW
Silver	"	ND	----	0.00040	"	"	"	"	"		FCW
<b>ARJ0119-06 (08-1025-MW1)</b>		<b>Water</b>			<b>Sampled: 10/25/08 11:55</b>						
Lead	6020 Total Recoverable	<b>0.90</b>	----	0.00040	mg/L	1x	37718	11/03/08 15:45	11/04/08 17:19		FCW
Arsenic	"	<b>0.031</b>	----	0.00040	"	"	"	"	"		FCW
Cadmium	"	<b>0.0018</b>	----	0.00040	"	"	"	"	"		FCW
Barium	"	<b>0.14</b>	----	0.0012	"	"	"	"	"		FCW
Selenium	"	<b>0.00088</b>	----	0.00040	"	"	"	"	"		FCW
Chromium	"	<b>0.024</b>	----	0.00040	"	"	"	"	"		FCW
Silver	"	ND	----	0.00040	"	"	"	"	"		FCW

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

Amended Report

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**Amended Report**

<b>BGES, INC.</b> 750 W. 2nd Ave, Ste 104 Anchorage, AK 99501	Project Name: <b>Nichin Cove</b> Project Number: Nichin Cove Project Manager: Renee Lafata	Report Created: 11/26/08 17:34
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**Organic Carbon, Total (TOC)**  
 TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
<b>ARJ0119-15 (08-1025-BRSED01)</b>		<b>Soil</b>		<b>Sampled: 10/25/08 10:40</b>							
Total Organic Carbon	9060 STD	<b>200000</b>	----	2000	mg/Kg	1x	37831	11/04/08 14:06	11/04/08 14:06	AM	
<b>ARJ0119-16 (08-1025-BRSED2)</b>		<b>Soil</b>		<b>Sampled: 10/25/08 11:20</b>							
Total Organic Carbon	9060 STD	<b>40000</b>	----	2000	mg/Kg	1x	37831	11/04/08 14:06	11/04/08 14:06	AM	
<b>ARJ0119-17 (08-1025-BRSoil1)</b>		<b>Soil</b>		<b>Sampled: 10/25/08 12:24</b>							
Total Organic Carbon	9060 STD	<b>330000</b>	----	2000	mg/Kg	1x	37831	11/04/08 14:06	11/04/08 14:06	AM	
<b>ARJ0119-18 (08-1025-BRSoil2)</b>		<b>Soil</b>		<b>Sampled: 10/25/08 12:29</b>							
Total Organic Carbon	9060 STD	<b>130000</b>	----	2000	mg/Kg	1x	37831	11/04/08 14:06	11/04/08 14:06	AM	

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

**Amended Report**

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**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Volatile Organic Compounds (GC/MS)**  
 TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
<b>ARJ0119-06 (08-1025-MW1)</b>		<b>Water</b>		<b>Sampled: 10/25/08 11:55</b>							
Dichlorodifluoromethane	8260B STD	ND	----	1.0	ug/L	1x	37654	10/30/08 18:38	10/30/08 18:38	SK	
Chloromethane	"	ND	----	1.0	"	"	"	"	"	SK	
Vinyl chloride	"	ND	----	1.0	"	"	"	"	"	SK	
Bromomethane	"	ND	----	1.0	"	"	"	"	"	SK	
Chloroethane	"	ND	----	1.0	"	"	"	"	"	SK	
Trichlorofluoromethane	"	ND	----	1.0	"	"	"	"	"	SK	
1,1-Dichloroethene	"	ND	----	1.0	"	"	"	"	"	SK	
Methylene Chloride	"	ND	----	1.0	"	"	"	"	"	SK	
trans-1,2-Dichloroethene	"	ND	----	1.0	"	"	"	"	"	SK	
1,1-Dichloroethane	"	ND	----	1.0	"	"	"	"	"	SK	
2,2-Dichloropropane	"	ND	----	1.0	"	"	"	"	"	SK	
cis-1,2-Dichloroethene	"	ND	----	1.0	"	"	"	"	"	SK	
Chlorobromomethane	"	ND	----	1.0	"	"	"	"	"	SK	
Chloroform	"	ND	----	1.0	"	"	"	"	"	SK	
1,1,1-Trichloroethane	"	ND	----	1.0	"	"	"	"	"	SK	
Carbon tetrachloride	"	ND	----	1.0	"	"	"	"	"	SK	
1,1-Dichloropropene	"	ND	----	1.0	"	"	"	"	"	SK	
Benzene	"	ND	----	1.0	"	"	"	"	"	SK	
1,2-Dichloroethane	"	ND	----	1.0	"	"	"	"	"	SK	
Trichloroethene	"	ND	----	1.0	"	"	"	"	"	SK	
1,2-Dichloropropane	"	ND	----	1.0	"	"	"	"	"	SK	
Dibromomethane	"	ND	----	1.0	"	"	"	"	"	SK	
Dichlorobromomethane	"	ND	----	1.0	"	"	"	"	"	SK	
cis-1,3-Dichloropropene	"	ND	----	1.0	"	"	"	"	"	SK	
Toluene	"	ND	----	1.0	"	"	"	"	"	SK	
trans-1,3-Dichloropropene	"	ND	----	1.0	"	"	"	"	"	SK	
1,1,2-Trichloroethane	"	ND	----	1.0	"	"	"	"	"	SK	
Tetrachloroethene	"	ND	----	1.0	"	"	"	"	"	SK	
1,3-Dichloropropane	"	ND	----	1.0	"	"	"	"	"	SK	
Chlorodibromomethane	"	ND	----	1.0	"	"	"	"	"	SK	
Ethylene Dibromide	"	ND	----	1.0	"	"	"	"	"	SK	
Chlorobenzene	"	ND	----	1.0	"	"	"	"	"	SK	
Ethylbenzene	"	ND	----	1.0	"	"	"	"	"	SK	
1,1,1,2-Tetrachloroethane	"	ND	----	1.0	"	"	"	"	"	SK	
1,1,2,2-Tetrachloroethane	"	ND	----	1.0	"	"	"	"	"	SK	
m-Xylene & p-Xylene	"	ND	----	2.0	"	"	"	"	"	SK	
o-Xylene	"	ND	----	1.0	"	"	"	"	"	SK	

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

**Amended Report**

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**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Volatile Organic Compounds (GC/MS)**  
 TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
<b>ARJ0119-06 (08-1025-MW1)</b>		<b>Water</b>		<b>Sampled: 10/25/08 11:55</b>							
Styrene	8260B STD	ND	----	1.0	ug/L	1x	37654	10/30/08 18:38	10/30/08 18:38		SK
Bromoform	"	ND	----	1.0	"	"	"	"	"		SK
Isopropylbenzene	"	ND	----	1.0	"	"	"	"	"		SK
Bromobenzene	"	ND	----	1.0	"	"	"	"	"		SK
N-Propylbenzene	"	ND	----	1.0	"	"	"	"	"		SK
1,2,3-Trichloropropane	"	ND	----	1.0	"	"	"	"	"		SK
2-Chlorotoluene	"	ND	----	1.0	"	"	"	"	"		SK
1,3,5-Trimethylbenzene	"	ND	----	1.0	"	"	"	"	"		SK
4-Chlorotoluene	"	ND	----	1.0	"	"	"	"	"		SK
tert-Butylbenzene	"	ND	----	1.0	"	"	"	"	"		SK
1,2,4-Trimethylbenzene	"	ND	----	1.0	"	"	"	"	"		SK
sec-Butylbenzene	"	ND	----	1.0	"	"	"	"	"		SK
1,3-Dichlorobenzene	"	ND	----	1.0	"	"	"	"	"		SK
4-Isopropyltoluene	"	ND	----	1.0	"	"	"	"	"		SK
1,4-Dichlorobenzene	"	ND	----	1.0	"	"	"	"	"		SK
n-Butylbenzene	"	ND	----	1.0	"	"	"	"	"		SK
1,2-Dichlorobenzene	"	ND	----	1.0	"	"	"	"	"		SK
1,2-Dibromo-3-Chloropropane	"	ND	----	2.0	"	"	"	"	"		SK
1,2,4-Trichlorobenzene	"	ND	----	1.0	"	"	"	"	"		SK
1,2,3-Trichlorobenzene	"	ND	----	1.0	"	"	"	"	"		SK
Hexachlorobutadiene	"	ND	----	1.0	"	"	"	"	"		SK
Naphthalene	"	ND	----	1.0	"	"	"	"	"		SK

<i>Surrogate(s):</i>	<i>Fluorobenzene (Surr)</i>	<i>114%</i>	<i>80 - 120 %</i>	<i>"</i>	<i>"</i>
	<i>Toluene-d8 (Surr)</i>	<i>87%</i>	<i>85 - 120 %</i>	<i>"</i>	<i>"</i>
	<i>Ethylbenzene-d10</i>	<i>96%</i>	<i>80 - 120 %</i>	<i>"</i>	<i>"</i>
	<i>4-Bromofluorobenzene (Surr)</i>	<i>94%</i>	<i>75 - 120 %</i>	<i>"</i>	<i>"</i>
	<i>Trifluorotoluene (Surr)</i>	<i>111%</i>	<i>80 - 120 %</i>	<i>"</i>	<i>"</i>

<b>ARJ0119-08 (Trip Blank)</b>		<b>Water</b>		<b>Sampled: 10/25/08 00:00</b>							
Dichlorodifluoromethane	8260B STD	ND	----	1.0	ug/L	1x	37654	10/30/08 18:16	10/30/08 18:16		SK
Chloromethane	"	ND	----	1.0	"	"	"	"	"		SK
Vinyl chloride	"	ND	----	1.0	"	"	"	"	"		SK
Bromomethane	"	ND	----	1.0	"	"	"	"	"		SK
Chloroethane	"	ND	----	1.0	"	"	"	"	"		SK
Trichlorofluoromethane	"	ND	----	1.0	"	"	"	"	"		SK
1,1-Dichloroethene	"	ND	----	1.0	"	"	"	"	"		SK
Methylene Chloride	"	ND	----	1.0	"	"	"	"	"		SK

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

**Amended Report**

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**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Volatile Organic Compounds (GC/MS)**  
 TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
<b>ARJ0119-08 (Trip Blank)</b>		<b>Water</b>									
		<b>Sampled: 10/25/08 00:00</b>									
trans-1,2-Dichloroethene	8260B STD	ND	----	1.0	ug/L	1x	37654	10/30/08 18:16	10/30/08 18:16	SK	
1,1-Dichloroethane	"	ND	----	1.0	"	"	"	"	"	SK	
2,2-Dichloropropane	"	ND	----	1.0	"	"	"	"	"	SK	
cis-1,2-Dichloroethene	"	ND	----	1.0	"	"	"	"	"	SK	
Chlorobromomethane	"	ND	----	1.0	"	"	"	"	"	SK	
Chloroform	"	ND	----	1.0	"	"	"	"	"	SK	
1,1,1-Trichloroethane	"	ND	----	1.0	"	"	"	"	"	SK	
Carbon tetrachloride	"	ND	----	1.0	"	"	"	"	"	SK	
1,1-Dichloropropene	"	ND	----	1.0	"	"	"	"	"	SK	
Benzene	"	ND	----	1.0	"	"	"	"	"	SK	
1,2-Dichloroethane	"	ND	----	1.0	"	"	"	"	"	SK	
Trichloroethene	"	ND	----	1.0	"	"	"	"	"	SK	
1,2-Dichloropropane	"	ND	----	1.0	"	"	"	"	"	SK	
Dibromomethane	"	ND	----	1.0	"	"	"	"	"	SK	
Dichlorobromomethane	"	ND	----	1.0	"	"	"	"	"	SK	
cis-1,3-Dichloropropene	"	ND	----	1.0	"	"	"	"	"	SK	
Toluene	"	ND	----	1.0	"	"	"	"	"	SK	
trans-1,3-Dichloropropene	"	ND	----	1.0	"	"	"	"	"	SK	
1,1,2-Trichloroethane	"	ND	----	1.0	"	"	"	"	"	SK	
Tetrachloroethene	"	ND	----	1.0	"	"	"	"	"	SK	
1,3-Dichloropropane	"	ND	----	1.0	"	"	"	"	"	SK	
Chlorodibromomethane	"	ND	----	1.0	"	"	"	"	"	SK	
Ethylene Dibromide	"	ND	----	1.0	"	"	"	"	"	SK	
Chlorobenzene	"	ND	----	1.0	"	"	"	"	"	SK	
Ethylbenzene	"	ND	----	1.0	"	"	"	"	"	SK	
1,1,1,2-Tetrachloroethane	"	ND	----	1.0	"	"	"	"	"	SK	
1,1,2,2-Tetrachloroethane	"	ND	----	1.0	"	"	"	"	"	SK	
m-Xylene & p-Xylene	"	ND	----	2.0	"	"	"	"	"	SK	
o-Xylene	"	ND	----	1.0	"	"	"	"	"	SK	
Styrene	"	ND	----	1.0	"	"	"	"	"	SK	
Bromoform	"	ND	----	1.0	"	"	"	"	"	SK	
Isopropylbenzene	"	ND	----	1.0	"	"	"	"	"	SK	
Bromobenzene	"	ND	----	1.0	"	"	"	"	"	SK	
N-Propylbenzene	"	ND	----	1.0	"	"	"	"	"	SK	
1,2,3-Trichloropropane	"	ND	----	1.0	"	"	"	"	"	SK	
2-Chlorotoluene	"	ND	----	1.0	"	"	"	"	"	SK	
1,3,5-Trimethylbenzene	"	ND	----	1.0	"	"	"	"	"	SK	

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

**Amended Report**

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**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Volatile Organic Compounds (GC/MS)**  
 TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
---------	--------	--------	------	-----	-------	-----	-------	----------	----------	---------	-------

**ARJ0119-08 (Trip Blank)**

**Water**

**Sampled: 10/25/08 00:00**

4-Chlorotoluene	8260B STD	ND	----	1.0	ug/L	1x	37654	10/30/08 18:16	10/30/08 18:16	SK	
tert-Butylbenzene	"	ND	----	1.0	"	"	"	"	"	SK	
1,2,4-Trimethylbenzene	"	ND	----	1.0	"	"	"	"	"	SK	
sec-Butylbenzene	"	ND	----	1.0	"	"	"	"	"	SK	
1,3-Dichlorobenzene	"	ND	----	1.0	"	"	"	"	"	SK	
4-Isopropyltoluene	"	ND	----	1.0	"	"	"	"	"	SK	
1,4-Dichlorobenzene	"	ND	----	1.0	"	"	"	"	"	SK	
n-Butylbenzene	"	ND	----	1.0	"	"	"	"	"	SK	
1,2-Dichlorobenzene	"	ND	----	1.0	"	"	"	"	"	SK	
1,2-Dibromo-3-Chloropropane	"	ND	----	2.0	"	"	"	"	"	SK	
1,2,4-Trichlorobenzene	"	ND	----	1.0	"	"	"	"	"	SK	
1,2,3-Trichlorobenzene	"	ND	----	1.0	"	"	"	"	"	SK	
Hexachlorobutadiene	"	ND	----	1.0	"	"	"	"	"	SK	
Naphthalene	"	ND	----	1.0	"	"	"	"	"	SK	

Surrogate(s):	Fluorobenzene (Surr)	114%		80 - 120 %	"	"	"	"	"	"	
	Toluene-d8 (Surr)	85%		85 - 120 %	"	"	"	"	"	"	
	Ethylbenzene-d10	89%		80 - 120 %	"	"	"	"	"	"	
	4-Bromofluorobenzene (Surr)	93%		75 - 120 %	"	"	"	"	"	"	
	Trifluorotoluene (Surr)	115%		80 - 120 %	"	"	"	"	"	"	

**ARJ0119-09 (08-1024-TP1-1)**

**Soil**

**Sampled: 10/24/08 13:02**

2,2-Dichloropropane	8260B STD Dry	ND	----	100	ug/Kg dry	1x	37656	10/31/08 11:11	10/31/08 18:29	SLC	
Dichlorodifluoromethane	"	ND	----	100	"	"	"	"	"	SLC	
Chloromethane	"	ND	----	100	"	"	"	"	"	SLC	
cis-1,2-Dichloroethene	"	ND	----	100	"	"	"	"	"	SLC	
Chlorobromomethane	"	ND	----	100	"	"	"	"	"	SLC	
Vinyl chloride	"	ND	----	42	"	"	"	"	"	SLC	
Bromomethane	"	ND	----	520	"	"	"	"	"	SLC	
Chloroform	"	ND	----	100	"	"	"	"	"	SLC	
1,1,1-Trichloroethane	"	ND	----	42	"	"	"	"	"	SLC	
Chloroethane	"	ND	----	520	"	"	"	"	"	SLC	
Carbon tetrachloride	"	ND	----	42	"	"	"	"	"	SLC	
Trichlorofluoromethane	"	ND	----	100	"	"	"	"	"	SLC	
1,1-Dichloroethene	"	ND	----	42	"	"	"	"	"	SLC	
1,1-Dichloropropene	"	ND	----	100	"	"	"	"	"	SLC	
Benzene	"	ND	----	21	"	"	"	"	"	SLC	
Methylene Chloride	"	ND	----	100	"	"	"	"	"	SLC	

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

**Amended Report**

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**Amended Report**

<b>BGES, INC.</b> 750 W. 2nd Ave, Ste 104 Anchorage, AK 99501	Project Name: <b>Nichin Cove</b> Project Number: Nichin Cove Project Manager: Renee Lafata	Report Created: 11/26/08 17:34
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**Volatile Organic Compounds (GC/MS)**  
 TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
<b>ARJ0119-09 (08-1024-TP1-1)</b>		<b>Soil</b>		<b>Sampled: 10/24/08 13:02</b>							
1,1,2-Trichloroethane	"	ND	----	100	"	"	"	"	"	"	SLC
trans-1,2-Dichloroethene	"	ND	----	100	"	"	"	"	"	"	SLC
1,1-Dichloroethane	"	ND	----	100	"	"	"	"	"	"	SLC
Tetrachloroethene	"	ND	----	65	"	"	"	"	"	"	SLC
1,2-Dichloroethane	"	ND	----	100	"	"	"	"	"	"	SLC
1,3-Dichloropropane	"	ND	----	42	"	"	"	"	"	"	SLC
Chlorodibromomethane	"	ND	----	100	"	"	"	"	"	"	SLC
Trichloroethene	"	ND	----	42	"	"	"	"	"	"	SLC
1,2-Dichloropropane	"	ND	----	21	"	"	"	"	"	"	SLC
Ethylene Dibromide	"	ND	----	100	"	"	"	"	"	"	SLC
Chlorobenzene	"	ND	----	100	"	"	"	"	"	"	SLC
Dibromomethane	"	ND	----	100	"	"	"	"	"	"	SLC
Dichlorobromomethane	"	ND	----	100	"	"	"	"	"	"	SLC
Ethylbenzene	"	ND	----	100	"	"	"	"	"	"	SLC
1,1,1,2-Tetrachloroethane	"	ND	----	100	"	"	"	"	"	"	SLC
cis-1,3-Dichloropropene	"	ND	----	100	"	"	"	"	"	"	SLC
1,2,3-Trichloropropane	"	ND	----	100	"	"	"	"	"	"	SLC
Toluene	"	ND	----	100	"	"	"	"	"	"	SLC
2-Chlorotoluene	"	ND	----	100	"	"	"	"	"	"	SLC
trans-1,3-Dichloropropene	"	ND	----	100	"	"	"	"	"	"	SLC
1,1,2,2-Tetrachloroethane	"	ND	----	21	"	"	"	"	"	"	SLC
1,3,5-Trimethylbenzene	"	ND	----	100	"	"	"	"	"	"	SLC
4-Chlorotoluene	"	ND	----	100	"	"	"	"	"	"	SLC
m-Xylene & p-Xylene	"	ND	----	100	"	"	"	"	"	"	SLC
o-Xylene	"	ND	----	100	"	"	"	"	"	"	SLC
tert-Butylbenzene	"	ND	----	100	"	"	"	"	"	"	SLC
1,2,4-Trimethylbenzene	"	ND	----	100	"	"	"	"	"	"	SLC
Styrene	"	ND	----	100	"	"	"	"	"	"	SLC
Bromoform	"	ND	----	100	"	"	"	"	"	"	SLC
sec-Butylbenzene	"	ND	----	100	"	"	"	"	"	"	SLC
1,3-Dichlorobenzene	"	ND	----	100	"	"	"	"	"	"	SLC
Isopropylbenzene	"	ND	----	100	"	"	"	"	"	"	SLC
Bromobenzene	"	ND	----	100	"	"	"	"	"	"	SLC
Naphthalene	"	ND	----	100	"	"	"	"	"	"	SLC
N-Propylbenzene	"	ND	----	100	"	"	"	"	"	"	SLC
4-Isopropyltoluene	"	ND	----	100	"	"	"	"	"	"	SLC
1,4-Dichlorobenzene	"	ND	----	100	"	"	"	"	"	"	SLC

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

**Amended Report**

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**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Volatile Organic Compounds (GC/MS)**  
 TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
---------	--------	--------	------	-----	-------	-----	-------	----------	----------	---------	-------

ARJ0119-09 (08-1024-TP1-1)		Soil		Sampled: 10/24/08 13:02								
n-Butylbenzene	8260B STD Dry	ND	----	100	ug/Kg dry	1x	37656	10/31/08 11:11	10/31/08 18:29	SLC		
1,2-Dichlorobenzene	"	ND	----	100	"	"	"	"	"	SLC		
1,2-Dibromo-3-Chloropropane	"	ND	----	520	"	"	"	"	"	SLC		
1,2,4-Trichlorobenzene	"	ND	----	100	"	"	"	"	"	SLC		
1,2,3-Trichlorobenzene	"	ND	----	100	"	"	"	"	"	SLC		
Hexachlorobutadiene	"	ND	----	100	"	"	"	"	"	SLC		
<i>Surrogate(s): Fluorobenzene (Surr)</i>				96%		75 - 125 %	"			"		
<i>Toluene-d8 (Surr)</i>				98%		85 - 115 %	"			"		
<i>Ethylbenzene-d10</i>				101%		75 - 125 %	"			"		
<i>4-Bromofluorobenzene (Surr)</i>				106%		85 - 120 %	"			"		
<i>Trifluorotoluene (Surr)</i>				34%		75 - 125 %	"			"	X, I	

ARJ0119-10 (08-1024-TP2-1)		Soil		Sampled: 10/24/08 14:09								
2,2-Dichloropropane	8260B STD Dry	ND	----	24	ug/Kg dry	1x	37656	10/31/08 11:11	10/31/08 18:51	SLC		
Dichlorodifluoromethane	"	ND	----	24	"	"	"	"	"	SLC		
Chloromethane	"	ND	----	24	"	"	"	"	"	SLC		
cis-1,2-Dichloroethene	"	ND	----	24	"	"	"	"	"	SLC		
Chlorobromomethane	"	ND	----	24	"	"	"	"	"	SLC		
Vinyl chloride	"	ND	----	9.5	"	"	"	"	"	SLC		
Bromomethane	"	ND	----	120	"	"	"	"	"	SLC		
Chloroform	"	ND	----	24	"	"	"	"	"	SLC		
1,1,1-Trichloroethane	"	ND	----	9.5	"	"	"	"	"	SLC		
Chloroethane	"	ND	----	120	"	"	"	"	"	SLC		
Carbon tetrachloride	"	ND	----	9.5	"	"	"	"	"	SLC		
Trichlorofluoromethane	"	ND	----	24	"	"	"	"	"	SLC		
1,1-Dichloroethene	"	ND	----	9.5	"	"	"	"	"	SLC		
1,1-Dichloropropene	"	ND	----	24	"	"	"	"	"	SLC		
Benzene	"	ND	----	4.7	"	"	"	"	"	SLC		
Methylene Chloride	"	ND	----	24	"	"	"	"	"	SLC		
1,1,2-Trichloroethane	"	ND	----	24	"	"	"	"	"	SLC		
trans-1,2-Dichloroethene	"	ND	----	24	"	"	"	"	"	SLC		
1,1-Dichloroethane	"	ND	----	24	"	"	"	"	"	SLC		
Tetrachloroethene	"	ND	----	15	"	"	"	"	"	SLC		
1,2-Dichloroethane	"	ND	----	24	"	"	"	"	"	SLC		
1,3-Dichloropropane	"	ND	----	9.5	"	"	"	"	"	SLC		
Chlorodibromomethane	"	ND	----	24	"	"	"	"	"	SLC		

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

**Amended Report**

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**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Volatile Organic Compounds (GC/MS)**  
 TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
<b>ARJ0119-10 (08-1024-TP2-1)</b>		<b>Soil</b>		<b>Sampled: 10/24/08 14:09</b>							
Trichloroethene	8260B STD Dry	ND	----	9.5	ug/Kg dry	1x	37656	10/31/08 11:11	10/31/08 18:51	SLC	
1,2-Dichloropropane	"	ND	----	4.7	"	"	"	"	"	SLC	
Ethylene Dibromide	"	ND	----	24	"	"	"	"	"	SLC	
Chlorobenzene	"	ND	----	24	"	"	"	"	"	SLC	
Dibromomethane	"	ND	----	24	"	"	"	"	"	SLC	
Dichlorobromomethane	"	ND	----	24	"	"	"	"	"	SLC	
Ethylbenzene	"	ND	----	24	"	"	"	"	"	SLC	
1,1,1,2-Tetrachloroethane	"	ND	----	24	"	"	"	"	"	SLC	
cis-1,3-Dichloropropene	"	ND	----	24	"	"	"	"	"	SLC	
1,2,3-Trichloropropane	"	ND	----	24	"	"	"	"	"	SLC	
Toluene	"	ND	----	24	"	"	"	"	"	SLC	
2-Chlorotoluene	"	ND	----	24	"	"	"	"	"	SLC	
trans-1,3-Dichloropropene	"	ND	----	24	"	"	"	"	"	SLC	
1,1,2,2-Tetrachloroethane	"	ND	----	4.7	"	"	"	"	"	SLC	
1,3,5-Trimethylbenzene	"	ND	----	24	"	"	"	"	"	SLC	
4-Chlorotoluene	"	ND	----	24	"	"	"	"	"	SLC	
m-Xylene & p-Xylene	"	ND	----	24	"	"	"	"	"	SLC	
o-Xylene	"	ND	----	24	"	"	"	"	"	SLC	
tert-Butylbenzene	"	ND	----	24	"	"	"	"	"	SLC	
1,2,4-Trimethylbenzene	"	ND	----	24	"	"	"	"	"	SLC	
Styrene	"	ND	----	24	"	"	"	"	"	SLC	
Bromoform	"	ND	----	24	"	"	"	"	"	SLC	
sec-Butylbenzene	"	ND	----	24	"	"	"	"	"	SLC	
1,3-Dichlorobenzene	"	ND	----	24	"	"	"	"	"	SLC	
Isopropylbenzene	"	ND	----	24	"	"	"	"	"	SLC	
Bromobenzene	"	ND	----	24	"	"	"	"	"	SLC	
Naphthalene	"	ND	----	24	"	"	"	"	"	SLC	
N-Propylbenzene	"	ND	----	24	"	"	"	"	"	SLC	
4-Isopropyltoluene	"	ND	----	24	"	"	"	"	"	SLC	
1,4-Dichlorobenzene	"	ND	----	24	"	"	"	"	"	SLC	
n-Butylbenzene	"	ND	----	24	"	"	"	"	"	SLC	
1,2-Dichlorobenzene	"	ND	----	24	"	"	"	"	"	SLC	
1,2-Dibromo-3-Chloropropane	"	ND	----	120	"	"	"	"	"	SLC	
1,2,4-Trichlorobenzene	"	ND	----	24	"	"	"	"	"	SLC	
1,2,3-Trichlorobenzene	"	ND	----	24	"	"	"	"	"	SLC	
Hexachlorobutadiene	"	ND	----	24	"	"	"	"	"	SLC	

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

**Amended Report**

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Amended Report

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Volatile Organic Compounds (GC/MS)**  
 TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
---------	--------	--------	------	-----	-------	-----	-------	----------	----------	---------	-------

**ARJ0119-10 (08-1024-TP2-1) Soil Sampled: 10/24/08 14:09**

Surrogate(s):	Fluorobenzene (Surr)	99%			75 - 125 %	1x			10/31/08 18:51		
	Toluene-d8 (Surr)	96%			85 - 115 %	"			"		
	Ethylbenzene-d10	105%			75 - 125 %	"			"		
	4-Bromofluorobenzene (Surr)	106%			85 - 120 %	"			"		
	Trifluorotoluene (Surr)	61%			75 - 125 %	"			"		X, I

**ARJ0119-11 (08-1024-TP3-1) Soil Sampled: 10/24/08 16:27**

2,2-Dichloropropane	8260B STD Dry	ND	----	85	ug/Kg dry	1x	37656	10/31/08 11:11	10/31/08 19:14		SLC
Dichlorodifluoromethane	"	ND	----	85	"	"	"	"	"		SLC
Chloromethane	"	ND	----	85	"	"	"	"	"		SLC
cis-1,2-Dichloroethene	"	ND	----	85	"	"	"	"	"		SLC
Chlorobromomethane	"	ND	----	85	"	"	"	"	"		SLC
Vinyl chloride	"	ND	----	34	"	"	"	"	"		SLC
Bromomethane	"	ND	----	420	"	"	"	"	"		SLC
Chloroform	"	ND	----	85	"	"	"	"	"		SLC
1,1,1-Trichloroethane	"	ND	----	34	"	"	"	"	"		SLC
Chloroethane	"	ND	----	420	"	"	"	"	"		SLC
Carbon tetrachloride	"	ND	----	34	"	"	"	"	"		SLC
Trichlorofluoromethane	"	ND	----	85	"	"	"	"	"		SLC
1,1-Dichloroethene	"	ND	----	34	"	"	"	"	"		SLC
1,1-Dichloropropene	"	ND	----	85	"	"	"	"	"		SLC
Benzene	"	ND	----	17	"	"	"	"	"		SLC
Methylene Chloride	"	ND	----	85	"	"	"	"	"		SLC
1,1,2-Trichloroethane	"	ND	----	85	"	"	"	"	"		SLC
trans-1,2-Dichloroethene	"	ND	----	85	"	"	"	"	"		SLC
1,1-Dichloroethane	"	ND	----	85	"	"	"	"	"		SLC
Tetrachloroethene	"	ND	----	53	"	"	"	"	"		SLC
1,2-Dichloroethane	"	ND	----	85	"	"	"	"	"		SLC
1,3-Dichloropropane	"	ND	----	34	"	"	"	"	"		SLC
Chlorodibromomethane	"	ND	----	85	"	"	"	"	"		SLC
Trichloroethene	"	ND	----	34	"	"	"	"	"		SLC
1,2-Dichloropropane	"	ND	----	17	"	"	"	"	"		SLC
Ethylene Dibromide	"	ND	----	85	"	"	"	"	"		SLC
Chlorobenzene	"	ND	----	85	"	"	"	"	"		SLC
Dibromomethane	"	ND	----	85	"	"	"	"	"		SLC
Dichlorobromomethane	"	ND	----	85	"	"	"	"	"		SLC
Ethylbenzene	"	ND	----	85	"	"	"	"	"		SLC

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

Amended Report

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**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Volatile Organic Compounds (GC/MS)**  
 TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
<b>ARJ0119-11 (08-1024-TP3-1)</b>		<b>Soil</b>									
		<b>Sampled: 10/24/08 16:27</b>									
1,1,1,2-Tetrachloroethane	8260B STD Dry	ND	----	85	ug/Kg dry	1x	37656	10/31/08 11:11	10/31/08 19:14	SLC	
cis-1,3-Dichloropropene	"	ND	----	85	"	"	"	"	"	SLC	
1,2,3-Trichloropropane	"	ND	----	85	"	"	"	"	"	SLC	
Toluene	"	ND	----	85	"	"	"	"	"	SLC	
2-Chlorotoluene	"	ND	----	85	"	"	"	"	"	SLC	
trans-1,3-Dichloropropene	"	ND	----	85	"	"	"	"	"	SLC	
1,1,2,2-Tetrachloroethane	"	ND	----	17	"	"	"	"	"	SLC	
1,3,5-Trimethylbenzene	"	ND	----	85	"	"	"	"	"	SLC	
4-Chlorotoluene	"	ND	----	85	"	"	"	"	"	SLC	
m-Xylene & p-Xylene	"	ND	----	85	"	"	"	"	"	SLC	
o-Xylene	"	ND	----	85	"	"	"	"	"	SLC	
tert-Butylbenzene	"	ND	----	85	"	"	"	"	"	SLC	
<b>1,2,4-Trimethylbenzene</b>	"	<b>220</b>	----	85	"	"	"	"	"	SLC	
Styrene	"	ND	----	85	"	"	"	"	"	SLC	
Bromoform	"	ND	----	85	"	"	"	"	"	SLC	
sec-Butylbenzene	"	ND	----	85	"	"	"	"	"	SLC	
1,3-Dichlorobenzene	"	ND	----	85	"	"	"	"	"	SLC	
Isopropylbenzene	"	ND	----	85	"	"	"	"	"	SLC	
Bromobenzene	"	ND	----	85	"	"	"	"	"	SLC	
<b>Naphthalene</b>	"	<b>360</b>	----	85	"	"	"	"	"	SLC	
N-Propylbenzene	"	ND	----	85	"	"	"	"	"	SLC	
4-Isopropyltoluene	"	ND	----	85	"	"	"	"	"	SLC	
1,4-Dichlorobenzene	"	ND	----	85	"	"	"	"	"	SLC	
n-Butylbenzene	"	ND	----	85	"	"	"	"	"	SLC	
1,2-Dichlorobenzene	"	ND	----	85	"	"	"	"	"	SLC	
1,2-Dibromo-3-Chloropropane	"	ND	----	420	"	"	"	"	"	SLC	
1,2,4-Trichlorobenzene	"	ND	----	85	"	"	"	"	"	SLC	
1,2,3-Trichlorobenzene	"	ND	----	85	"	"	"	"	"	SLC	
Hexachlorobutadiene	"	ND	----	85	"	"	"	"	"	SLC	
<i>Surrogate(s): Fluorobenzene (Surr)</i>				100%		75 - 125 %	"			"	
<i>Toluene-d8 (Surr)</i>				99%		85 - 115 %	"			"	
<i>Ethylbenzene-d10</i>				102%		75 - 125 %	"			"	
<i>4-Bromofluorobenzene (Surr)</i>				105%		85 - 120 %	"			"	
<i>Trifluorotoluene (Surr)</i>				64%		75 - 125 %	"			"	X, I

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

**Amended Report**

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**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Volatile Organic Compounds (GC/MS)**  
 TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
<b>ARJ0119-12 (08-1025-SED1)</b>											
			<b>Soil</b>				<b>Sampled: 10/25/08 10:27</b>				
2,2-Dichloropropane	8260B STD Dry	ND	----	110	ug/Kg dry	1x	37656	10/31/08 11:11	10/31/08 19:36		SLC
Dichlorodifluoromethane	"	ND	----	110	"	"	"	"	"		SLC
Chloromethane	"	ND	----	110	"	"	"	"	"		SLC
cis-1,2-Dichloroethene	"	ND	----	110	"	"	"	"	"		SLC
Chlorobromomethane	"	ND	----	110	"	"	"	"	"		SLC
Vinyl chloride	"	ND	----	43	"	"	"	"	"		SLC
Bromomethane	"	ND	----	540	"	"	"	"	"		SLC
Chloroform	"	ND	----	110	"	"	"	"	"		SLC
1,1,1-Trichloroethane	"	ND	----	43	"	"	"	"	"		SLC
Chloroethane	"	ND	----	540	"	"	"	"	"		SLC
Carbon tetrachloride	"	ND	----	43	"	"	"	"	"		SLC
Trichlorofluoromethane	"	ND	----	110	"	"	"	"	"		SLC
1,1-Dichloroethene	"	ND	----	43	"	"	"	"	"		SLC
1,1-Dichloropropene	"	ND	----	110	"	"	"	"	"		SLC
Benzene	"	ND	----	22	"	"	"	"	"		SLC
Methylene Chloride	"	ND	----	110	"	"	"	"	"		SLC
1,1,2-Trichloroethane	"	ND	----	110	"	"	"	"	"		SLC
trans-1,2-Dichloroethene	"	ND	----	110	"	"	"	"	"		SLC
1,1-Dichloroethane	"	ND	----	110	"	"	"	"	"		SLC
Tetrachloroethene	"	ND	----	68	"	"	"	"	"		SLC
1,2-Dichloroethane	"	ND	----	110	"	"	"	"	"		SLC
1,3-Dichloropropane	"	ND	----	43	"	"	"	"	"		SLC
Chlorodibromomethane	"	ND	----	110	"	"	"	"	"		SLC
Trichloroethene	"	ND	----	43	"	"	"	"	"		SLC
1,2-Dichloropropane	"	ND	----	22	"	"	"	"	"		SLC
Ethylene Dibromide	"	ND	----	110	"	"	"	"	"		SLC
Chlorobenzene	"	ND	----	110	"	"	"	"	"		SLC
Dibromomethane	"	ND	----	110	"	"	"	"	"		SLC
Dichlorobromomethane	"	ND	----	110	"	"	"	"	"		SLC
Ethylbenzene	"	ND	----	110	"	"	"	"	"		SLC
1,1,1,2-Tetrachloroethane	"	ND	----	110	"	"	"	"	"		SLC
cis-1,3-Dichloropropene	"	ND	----	110	"	"	"	"	"		SLC
1,2,3-Trichloropropane	"	ND	----	110	"	"	"	"	"		SLC
Toluene	"	ND	----	110	"	"	"	"	"		SLC
2-Chlorotoluene	"	ND	----	110	"	"	"	"	"		SLC
trans-1,3-Dichloropropene	"	ND	----	110	"	"	"	"	"		SLC

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

**Amended Report**

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**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Volatile Organic Compounds (GC/MS)**  
 TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
<b>ARJ0119-12 (08-1025-SED1)</b>		<b>Soil</b>		<b>Sampled: 10/25/08 10:27</b>							
1,1,2,2-Tetrachloroethane	8260B STD Dry	ND	----	22	ug/Kg dry	1x	37656	10/31/08 11:11	10/31/08 19:36	SLC	
1,3,5-Trimethylbenzene	"	ND	----	110	"	"	"	"	"	SLC	
4-Chlorotoluene	"	ND	----	110	"	"	"	"	"	SLC	
m-Xylene & p-Xylene	"	ND	----	110	"	"	"	"	"	SLC	
o-Xylene	"	ND	----	110	"	"	"	"	"	SLC	
tert-Butylbenzene	"	ND	----	110	"	"	"	"	"	SLC	
1,2,4-Trimethylbenzene	"	ND	----	110	"	"	"	"	"	SLC	
Styrene	"	ND	----	110	"	"	"	"	"	SLC	
Bromoform	"	ND	----	110	"	"	"	"	"	SLC	
sec-Butylbenzene	"	ND	----	110	"	"	"	"	"	SLC	
1,3-Dichlorobenzene	"	ND	----	110	"	"	"	"	"	SLC	
Isopropylbenzene	"	ND	----	110	"	"	"	"	"	SLC	
Bromobenzene	"	ND	----	110	"	"	"	"	"	SLC	
Naphthalene	"	ND	----	110	"	"	"	"	"	SLC	
N-Propylbenzene	"	ND	----	110	"	"	"	"	"	SLC	
4-Isopropyltoluene	"	ND	----	110	"	"	"	"	"	SLC	
1,4-Dichlorobenzene	"	ND	----	110	"	"	"	"	"	SLC	
n-Butylbenzene	"	ND	----	110	"	"	"	"	"	SLC	
1,2-Dichlorobenzene	"	ND	----	110	"	"	"	"	"	SLC	
1,2-Dibromo-3-Chloropropane	"	ND	----	540	"	"	"	"	"	SLC	
1,2,4-Trichlorobenzene	"	ND	----	110	"	"	"	"	"	SLC	
1,2,3-Trichlorobenzene	"	ND	----	110	"	"	"	"	"	SLC	
Hexachlorobutadiene	"	ND	----	110	"	"	"	"	"	SLC	
<i>Surrogate(s): Fluorobenzene (Surr)</i>				97%	75 - 125 %	"				"	
<i>Toluene-d8 (Surr)</i>				99%	85 - 115 %	"				"	
<i>Ethylbenzene-d10</i>				107%	75 - 125 %	"				"	
<i>4-Bromofluorobenzene (Surr)</i>				104%	85 - 120 %	"				"	
<i>Trifluorotoluene (Surr)</i>				47%	75 - 125 %	"				"	X, I

**ARJ0119-13 (08-1025-SED2)**

		<b>Soil</b>	<b>Sampled: 10/25/08 10:53</b>								
2,2-Dichloropropane	8260B STD Dry	ND	----	60	ug/Kg dry	1x	37656	10/31/08 11:11	10/31/08 19:58	SLC	
Dichlorodifluoromethane	"	ND	----	60	"	"	"	"	"	SLC	
Chloromethane	"	ND	----	60	"	"	"	"	"	SLC	
cis-1,2-Dichloroethene	"	ND	----	60	"	"	"	"	"	SLC	
Chlorobromomethane	"	ND	----	60	"	"	"	"	"	SLC	
Vinyl chloride	"	ND	----	24	"	"	"	"	"	SLC	

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

**Amended Report**

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**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Volatile Organic Compounds (GC/MS)**  
 TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
<b>ARJ0119-13 (08-1025-SED2)</b>		<b>Soil</b>		<b>Sampled: 10/25/08 10:53</b>							
Bromomethane	8260B STD Dry	ND	----	300	ug/Kg dry	1x	37656	10/31/08 11:11	10/31/08 19:58		SLC
Chloroform	"	ND	----	60	"	"	"	"	"		SLC
1,1,1-Trichloroethane	"	ND	----	24	"	"	"	"	"		SLC
Chloroethane	"	ND	----	300	"	"	"	"	"		SLC
Carbon tetrachloride	"	ND	----	24	"	"	"	"	"		SLC
Trichlorofluoromethane	"	ND	----	60	"	"	"	"	"		SLC
1,1-Dichloroethene	"	ND	----	24	"	"	"	"	"		SLC
1,1-Dichloropropene	"	ND	----	60	"	"	"	"	"		SLC
Benzene	"	ND	----	12	"	"	"	"	"		SLC
Methylene Chloride	"	ND	----	60	"	"	"	"	"		SLC
1,1,2-Trichloroethane	"	ND	----	60	"	"	"	"	"		SLC
trans-1,2-Dichloroethene	"	ND	----	60	"	"	"	"	"		SLC
1,1-Dichloroethane	"	ND	----	60	"	"	"	"	"		SLC
Tetrachloroethene	"	ND	----	38	"	"	"	"	"		SLC
1,2-Dichloroethane	"	ND	----	60	"	"	"	"	"		SLC
1,3-Dichloropropane	"	ND	----	24	"	"	"	"	"		SLC
Chlorodibromomethane	"	ND	----	60	"	"	"	"	"		SLC
Trichloroethene	"	ND	----	24	"	"	"	"	"		SLC
1,2-Dichloropropane	"	ND	----	12	"	"	"	"	"		SLC
Ethylene Dibromide	"	ND	----	60	"	"	"	"	"		SLC
Chlorobenzene	"	ND	----	60	"	"	"	"	"		SLC
Dibromomethane	"	ND	----	60	"	"	"	"	"		SLC
Dichlorobromomethane	"	ND	----	60	"	"	"	"	"		SLC
Ethylbenzene	"	ND	----	60	"	"	"	"	"		SLC
1,1,1,2-Tetrachloroethane	"	ND	----	60	"	"	"	"	"		SLC
cis-1,3-Dichloropropene	"	ND	----	60	"	"	"	"	"		SLC
1,2,3-Trichloropropane	"	ND	----	60	"	"	"	"	"		SLC
Toluene	"	ND	----	60	"	"	"	"	"		SLC
2-Chlorotoluene	"	ND	----	60	"	"	"	"	"		SLC
trans-1,3-Dichloropropene	"	ND	----	60	"	"	"	"	"		SLC
1,1,2,2-Tetrachloroethane	"	ND	----	12	"	"	"	"	"		SLC
1,3,5-Trimethylbenzene	"	ND	----	60	"	"	"	"	"		SLC
4-Chlorotoluene	"	ND	----	60	"	"	"	"	"		SLC
m-Xylene & p-Xylene	"	ND	----	60	"	"	"	"	"		SLC
o-Xylene	"	ND	----	60	"	"	"	"	"		SLC
tert-Butylbenzene	"	ND	----	60	"	"	"	"	"		SLC

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

**Amended Report**

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**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Volatile Organic Compounds (GC/MS)**  
 TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
<b>ARJ0119-13 (08-1025-SED2)</b>		<b>Soil</b>		<b>Sampled: 10/25/08 10:53</b>							
1,2,4-Trimethylbenzene	8260B STD Dry	ND	----	60	ug/Kg dry	1x	37656	10/31/08 11:11	10/31/08 19:58		SLC
Styrene	"	ND	----	60	"	"	"	"	"		SLC
Bromoform	"	ND	----	60	"	"	"	"	"		SLC
sec-Butylbenzene	"	ND	----	60	"	"	"	"	"		SLC
1,3-Dichlorobenzene	"	ND	----	60	"	"	"	"	"		SLC
Isopropylbenzene	"	ND	----	60	"	"	"	"	"		SLC
Bromobenzene	"	ND	----	60	"	"	"	"	"		SLC
Naphthalene	"	ND	----	60	"	"	"	"	"		SLC
N-Propylbenzene	"	ND	----	60	"	"	"	"	"		SLC
4-Isopropyltoluene	"	ND	----	60	"	"	"	"	"		SLC
1,4-Dichlorobenzene	"	ND	----	60	"	"	"	"	"		SLC
n-Butylbenzene	"	ND	----	60	"	"	"	"	"		SLC
1,2-Dichlorobenzene	"	ND	----	60	"	"	"	"	"		SLC
1,2-Dibromo-3-Chloropropane	"	ND	----	300	"	"	"	"	"		SLC
1,2,4-Trichlorobenzene	"	ND	----	60	"	"	"	"	"		SLC
1,2,3-Trichlorobenzene	"	ND	----	60	"	"	"	"	"		SLC
Hexachlorobutadiene	"	ND	----	60	"	"	"	"	"		SLC
<i>Surrogate(s): Fluorobenzene (Surr)</i>				97%	75 - 125 %	"					"
<i>Toluene-d8 (Surr)</i>				99%	85 - 115 %	"					"
<i>Ethylbenzene-d10</i>				104%	75 - 125 %	"					"
<i>4-Bromofluorobenzene (Surr)</i>				102%	85 - 120 %	"					"
<i>Trifluorotoluene (Surr)</i>				65%	75 - 125 %	"					X, I

**ARJ0119-14 (08-1025-SED3)**

**Soil**

**Sampled: 10/25/08 11:10**

2,2-Dichloropropane	8260B STD Dry	ND	----	65	ug/Kg dry	1x	37656	10/31/08 11:11	10/31/08 20:20		SLC
Dichlorodifluoromethane	"	ND	----	65	"	"	"	"	"		SLC
Chloromethane	"	ND	----	65	"	"	"	"	"		SLC
cis-1,2-Dichloroethene	"	ND	----	65	"	"	"	"	"		SLC
Chlorobromomethane	"	ND	----	65	"	"	"	"	"		SLC
Vinyl chloride	"	ND	----	26	"	"	"	"	"		SLC
Bromomethane	"	ND	----	320	"	"	"	"	"		SLC
Chloroform	"	ND	----	65	"	"	"	"	"		SLC
1,1,1-Trichloroethane	"	ND	----	26	"	"	"	"	"		SLC
Chloroethane	"	ND	----	320	"	"	"	"	"		SLC
Carbon tetrachloride	"	ND	----	26	"	"	"	"	"		SLC
Trichlorofluoromethane	"	ND	----	65	"	"	"	"	"		SLC

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

**Amended Report**

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**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Volatile Organic Compounds (GC/MS)**  
 TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
<b>ARJ0119-14 (08-1025-SED3)</b>		<b>Soil</b>		<b>Sampled: 10/25/08 11:10</b>							
1,1-Dichloroethene	8260B STD Dry	ND	----	26	ug/Kg dry	1x	37656	10/31/08 11:11	10/31/08 20:20		SLC
1,1-Dichloropropene	"	ND	----	65	"	"	"	"	"		SLC
Benzene	"	ND	----	13	"	"	"	"	"		SLC
Methylene Chloride	"	ND	----	65	"	"	"	"	"		SLC
1,1,2-Trichloroethane	"	ND	----	65	"	"	"	"	"		SLC
trans-1,2-Dichloroethene	"	ND	----	65	"	"	"	"	"		SLC
1,1-Dichloroethane	"	ND	----	65	"	"	"	"	"		SLC
Tetrachloroethene	"	ND	----	41	"	"	"	"	"		SLC
1,2-Dichloroethane	"	ND	----	65	"	"	"	"	"		SLC
1,3-Dichloropropane	"	ND	----	26	"	"	"	"	"		SLC
Chlorodibromomethane	"	ND	----	65	"	"	"	"	"		SLC
Trichloroethene	"	ND	----	26	"	"	"	"	"		SLC
1,2-Dichloropropane	"	ND	----	13	"	"	"	"	"		SLC
Ethylene Dibromide	"	ND	----	65	"	"	"	"	"		SLC
Chlorobenzene	"	ND	----	65	"	"	"	"	"		SLC
Dibromomethane	"	ND	----	65	"	"	"	"	"		SLC
Dichlorobromomethane	"	ND	----	65	"	"	"	"	"		SLC
Ethylbenzene	"	ND	----	65	"	"	"	"	"		SLC
1,1,1,2-Tetrachloroethane	"	ND	----	65	"	"	"	"	"		SLC
cis-1,3-Dichloropropene	"	ND	----	65	"	"	"	"	"		SLC
1,2,3-Trichloropropane	"	ND	----	65	"	"	"	"	"		SLC
Toluene	"	ND	----	65	"	"	"	"	"		SLC
2-Chlorotoluene	"	ND	----	65	"	"	"	"	"		SLC
trans-1,3-Dichloropropene	"	ND	----	65	"	"	"	"	"		SLC
1,1,1,2,2-Tetrachloroethane	"	ND	----	13	"	"	"	"	"		SLC
1,3,5-Trimethylbenzene	"	ND	----	65	"	"	"	"	"		SLC
4-Chlorotoluene	"	ND	----	65	"	"	"	"	"		SLC
m-Xylene & p-Xylene	"	ND	----	65	"	"	"	"	"		SLC
o-Xylene	"	ND	----	65	"	"	"	"	"		SLC
tert-Butylbenzene	"	ND	----	65	"	"	"	"	"		SLC
1,2,4-Trimethylbenzene	"	ND	----	65	"	"	"	"	"		SLC
Styrene	"	ND	----	65	"	"	"	"	"		SLC
Bromoform	"	ND	----	65	"	"	"	"	"		SLC
sec-Butylbenzene	"	ND	----	65	"	"	"	"	"		SLC
1,3-Dichlorobenzene	"	ND	----	65	"	"	"	"	"		SLC
Isopropylbenzene	"	ND	----	65	"	"	"	"	"		SLC

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

**Amended Report**

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**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Volatile Organic Compounds (GC/MS)**  
 TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
<b>ARJ0119-14 (08-1025-SED3)</b>		<b>Soil</b>		<b>Sampled: 10/25/08 11:10</b>							
Bromobenzene	8260B STD Dry	ND	----	65	ug/Kg dry	1x	37656	10/31/08 11:11	10/31/08 20:20	SLC	
Naphthalene	"	ND	----	65	"	"	"	"	"	SLC	
N-Propylbenzene	"	ND	----	65	"	"	"	"	"	SLC	
4-Isopropyltoluene	"	ND	----	65	"	"	"	"	"	SLC	
1,4-Dichlorobenzene	"	ND	----	65	"	"	"	"	"	SLC	
n-Butylbenzene	"	ND	----	65	"	"	"	"	"	SLC	
1,2-Dichlorobenzene	"	ND	----	65	"	"	"	"	"	SLC	
1,2-Dibromo-3-Chloropropane	"	ND	----	320	"	"	"	"	"	SLC	
1,2,4-Trichlorobenzene	"	ND	----	65	"	"	"	"	"	SLC	
1,2,3-Trichlorobenzene	"	ND	----	65	"	"	"	"	"	SLC	
Hexachlorobutadiene	"	ND	----	65	"	"	"	"	"	SLC	
<i>Surrogate(s):</i>											
<i>Fluorobenzene (Surr)</i>				100%	75 - 125 %	"				"	
<i>Toluene-d8 (Surr)</i>				96%	85 - 115 %	"				"	
<i>Ethylbenzene-d10</i>				100%	75 - 125 %	"				"	
<i>4-Bromofluorobenzene (Surr)</i>				104%	85 - 120 %	"				"	
<i>Trifluorotoluene (Surr)</i>				70%	75 - 125 %	"				"	X, I
<b>ARJ0119-19 (Trip Blank)</b>		<b>Soil</b>		<b>Sampled: 10/25/08 12:29</b>							
Dichlorodifluoromethane	8260B STD	ND	----	40	ug/Kg	1x	37656	10/31/08 11:11	10/31/08 18:07	SLC	
Vinyl chloride	"	ND	----	16	"	"	"	"	"	SLC	
Bromomethane	"	ND	----	200	"	"	"	"	"	SLC	
Chloromethane	"	ND	----	40	"	"	"	"	"	SLC	
2,2-Dichloropropane	"	ND	----	40	"	"	"	"	"	SLC	
Chloroethane	"	ND	----	200	"	"	"	"	"	SLC	
cis-1,2-Dichloroethene	"	ND	----	40	"	"	"	"	"	SLC	
Trichlorofluoromethane	"	ND	----	40	"	"	"	"	"	SLC	
1,1-Dichloroethene	"	ND	----	16	"	"	"	"	"	SLC	
Chlorobromomethane	"	ND	----	40	"	"	"	"	"	SLC	
Chloroform	"	ND	----	40	"	"	"	"	"	SLC	
Methylene Chloride	"	ND	----	40	"	"	"	"	"	SLC	
1,1,1-Trichloroethane	"	ND	----	16	"	"	"	"	"	SLC	
trans-1,2-Dichloroethene	"	ND	----	40	"	"	"	"	"	SLC	
1,1-Dichloroethane	"	ND	----	40	"	"	"	"	"	SLC	
Carbon tetrachloride	"	ND	----	16	"	"	"	"	"	SLC	
1,1-Dichloropropene	"	ND	----	40	"	"	"	"	"	SLC	
1,2-Dichloroethane	"	ND	----	40	"	"	"	"	"	SLC	
Benzene	"	ND	----	8.0	"	"	"	"	"	SLC	

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

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**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Volatile Organic Compounds (GC/MS)**  
 TestAmerica Tacoma

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Analyst	Notes
<b>ARJ0119-19 (Trip Blank)</b>		<b>Soil</b>									
<b>Sampled: 10/25/08 12:29</b>											
1,2,4-Trichlorobenzene	8260B STD	ND	----	40	ug/Kg	1x	37656	10/31/08 11:11	10/31/08 18:07	SLC	
1,2,3-Trichlorobenzene	"	ND	----	40	"	"	"	"	"	SLC	
Hexachlorobutadiene	"	ND	----	40	"	"	"	"	"	SLC	
<i>Surrogate(s):</i>											
<i>Fluorobenzene (Surr)</i>				96%		75 - 125 %	"				"
<i>Toluene-d8 (Surr)</i>				104%		85 - 115 %	"				"
<i>Ethylbenzene-d10</i>				98%		75 - 125 %	"				"
<i>4-Bromofluorobenzene (Surr)</i>				104%		85 - 120 %	"				"
<i>Trifluorotoluene (Surr)</i>				102%		75 - 125 %	"				"

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

**Amended Report**

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**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Diesel Range Organics (C10-C25) and Residual Range Organics (C25-C36) per AK102/RRO - Laboratory Quality Control Results**  
 TestAmerica Anchorage

**QC Batch: 8100084 Soil Preparation Method: EPA 3545**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes		
<b>Blank (8100084-BLK1)</b>													Extracted: 10/29/08 15:43			
Diesel Range Organics	AK102/103	ND	---	20.0	mg/kg wet	1x	--	--	--	--	--	--	10/31/08 17:54			
Residual Range Organics	"	ND	---	50.0	"	"	--	--	--	--	--	--	"			
Surrogate(s): 1-Chlorooctadecane		Recovery: 104%		Limits: 50-150%		"						10/31/08 17:54				
Triacontane		93.0%		50-150%		"						"				
<b>LCS (8100084-BS1)</b>													Extracted: 10/29/08 15:43			
Diesel Range Organics	AK102/103	146	---	20.0	mg/kg wet	1x	--	129	113%	(75-125)	--	--	10/31/08 18:25			
Residual Range Organics	"	136	---	50.0	"	"	--	"	106%	(60-120)	--	--	"			
Surrogate(s): 1-Chlorooctadecane		Recovery: 104%		Limits: 60-120%		"						10/31/08 18:25				
Triacontane		89.9%		60-120%		"						"				
<b>LCS Dup (8100084-BSD1)</b>													Extracted: 10/29/08 15:43			
Diesel Range Organics	AK102/103	154	---	20.0	mg/kg wet	1x	--	129	119%	(75-125)	5.19%	(20)	10/31/08 18:56			
Residual Range Organics	"	142	---	50.0	"	"	--	"	110%	(60-120)	4.10%	"	"			
Surrogate(s): 1-Chlorooctadecane		Recovery: 109%		Limits: 60-120%		"						10/31/08 18:56				
Triacontane		94.0%		60-120%		"						"				
<b>Duplicate (8100084-DUP1)</b>													QC Source: ARJ0120-09		Extracted: 10/29/08 15:43	
Diesel Range Organics	AK102/103	ND	---	21.3	mg/kg dry	1x	ND	--	--	--	NR	(20)	10/31/08 17:23			
Residual Range Organics	"	ND	---	53.1	"	"	ND	--	--	--	NR	"	"			
Surrogate(s): 1-Chlorooctadecane		Recovery: 105%		Limits: 50-150%		"						10/31/08 17:23				
Triacontane		97.0%		50-150%		"						"				
<b>Matrix Spike (8100084-MS1)</b>													QC Source: ARJ0120-09		Extracted: 10/29/08 15:43	
Diesel Range Organics	AK102/103	152	---	21.2	mg/kg dry	1x	ND	137	111%	(75-125)	--	--	10/31/08 18:25			
Residual Range Organics	"	136	---	53.0	"	"	ND	"	99.3%	(60-150)	--	--	"			
Surrogate(s): 1-Chlorooctadecane		Recovery: 105%		Limits: 50-150%		"						10/31/08 18:25				
Triacontane		92.2%		50-150%		"						"				
<b>Matrix Spike Dup (8100084-MSD1)</b>													QC Source: ARJ0120-09		Extracted: 10/29/08 15:43	
Diesel Range Organics	AK102/103	151	---	20.7	mg/kg dry	1x	ND	133	113%	(75-125)	0.870%	(25)	10/31/08 18:56			
Residual Range Organics	"	132	---	51.6	"	"	ND	"	99.5%	(60-150)	2.40%	"	"			
Surrogate(s): 1-Chlorooctadecane		Recovery: 107%		Limits: 50-150%		"						10/31/08 18:56				
Triacontane		93.1%		50-150%		"						"				

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

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**Amended Report**



**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Diesel Range Organics (C10-C25) and Residual Range Organics (C25-C36) per AK102/RRO - Laboratory Quality Control Results**  
 TestAmerica Anchorage

QC Batch: 8100088 Water Preparation Method: EPA 3510

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
<b>Blank (8100088-BLK1)</b>										Extracted: 10/31/08 09:53				
Diesel Range Organics	AK102/103	ND	---	0.500	mg/l	1x	--	--	--	--	--	--	10/31/08 16:20	
Residual Range Organics	"	ND	---	0.700	"	"	--	--	--	--	--	--	"	
Surrogate(s): 1-Chlorooctadecane		Recovery: 104%		Limits: 50-150%		"						10/31/08 16:20		
Triacontane		90.4%		50-150%		"						"		
<b>LCS (8100088-BS1)</b>										Extracted: 10/31/08 09:53				
Diesel Range Organics	AK102/103	11.9	---	0.500	mg/l	1x	--	10.3	115%	(75-125)	--	--	10/31/08 16:51	
Residual Range Organics	"	10.5	---	0.700	"	"	--	"	102%	(60-120)	--	--	"	
Surrogate(s): 1-Chlorooctadecane		Recovery: 108%		Limits: 60-120%		"						10/31/08 16:51		
Triacontane		89.4%		60-120%		"						"		
<b>LCS Dup (8100088-BSD1)</b>										Extracted: 10/31/08 09:53				
Diesel Range Organics	AK102/103	12.0	---	0.500	mg/l	1x	--	10.3	116%	(75-125)	0.516% (20)	--	10/31/08 17:23	
Residual Range Organics	"	10.8	---	0.700	"	"	--	"	105%	(60-120)	2.88%	"	"	
Surrogate(s): 1-Chlorooctadecane		Recovery: 107%		Limits: 60-120%		"						10/31/08 17:23		
Triacontane		89.3%		60-120%		"						"		
<b>Duplicate (8100088-DUP1)</b>										QC Source: ARJ0119-06			Extracted: 10/31/08 09:53	
Diesel Range Organics	AK102/103	ND	---	0.391	mg/l	1x	ND	--	--	--	41.4% (20)	--	10/31/08 16:20	R4
Residual Range Organics	"	ND	---	0.547	"	"	ND	--	--	--	20.0%	"	"	
Surrogate(s): 1-Chlorooctadecane		Recovery: 112%		Limits: 50-150%		"						10/31/08 16:20		
Triacontane		102%		50-150%		"						"		

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

**Amended Report**

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**Amended Report**

<b>BGES, INC.</b> 750 W. 2nd Ave, Ste 104 Anchorage, AK 99501	Project Name: <b>Nichin Cove</b> Project Number: Nichin Cove Project Manager: Renee Lafata	Report Created: 11/26/08 17:34
---	--	-----------------------------------

**Physical Parameters by APHA/ASTM/EPA Methods - Laboratory Quality Control Results**  
 TestAmerica Anchorage

**QC Batch: 8100089      Soil Preparation Method: \*\*\* DEFAULT PREP**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
<b>Duplicate (8100089-DUP1)</b>			QC Source: ARJ0120-01				Extracted: 10/31/08 14:10							
Dry Weight	TA-SOP	91.9	---	1.00	%	1x	91.6	--	--	--	0.348% (25)		11/03/08 09:00	

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

**Amended Report**

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**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Gasoline Range Organics (C6-C10) per AK101-MS - Laboratory Quality Control Results**  
 TestAmerica Anchorage

**QC Batch: 8110005 Soil Preparation Method: AK101 Field Prep**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes	
<b>Duplicate (8110005-DUP1)</b>			QC Source: ARJ0120-19					Extracted: 11/03/08 15:43							
Gasoline Range Organics	AK101 - MS	ND	---	3.11	mg/kg dry	1.5x	ND	--	--	--	4.06% (35.8)	--	11/04/08 15:27		
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 100%</i>		<i>Limits: 80-120%</i>								<i>11/04/08 15:27</i>			
<i>Dibromofluoromethane</i>		<i>110%</i>		<i>80-120%</i>								<i>"</i>			
<i>a,a,a-TFT</i>		<i>89.1%</i>		<i>50-150%</i>								<i>"</i>			
<i>Toluene-d8</i>		<i>102%</i>		<i>80-120%</i>								<i>"</i>			

**QC Batch: 8110008 Water Preparation Method: EPA 5030B**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes	
<b>Blank (8110008-BLK1)</b>			QC Source: ARJ0120-19					Extracted: 11/04/08 17:42							
Gasoline Range Organics	AK101 - MS	ND	---	50.0	ug/l	1x	--	--	--	--	--	--	11/04/08 23:59		
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 101%</i>		<i>Limits: 80-120%</i>								<i>11/04/08 23:59</i>			
<i>Dibromofluoromethane</i>		<i>106%</i>		<i>80-120%</i>								<i>"</i>			
<i>Toluene-d8</i>		<i>101%</i>		<i>80-120%</i>								<i>"</i>			

**LCS (8110008-BS1)**

<b>LCS (8110008-BS1)</b>			QC Source: ARJ0120-19					Extracted: 11/04/08 17:42							
Gasoline Range Organics	AK101 - MS	538	---	50.0	ug/l	1x	--	550	97.9%	(60-120)	--	--	11/04/08 22:51		
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 100%</i>		<i>Limits: 80-120%</i>								<i>11/04/08 22:51</i>			
<i>Dibromofluoromethane</i>		<i>106%</i>		<i>80-120%</i>								<i>"</i>			
<i>Toluene-d8</i>		<i>101%</i>		<i>80-120%</i>								<i>"</i>			

**LCS Dup (8110008-BSD1)**

<b>LCS Dup (8110008-BSD1)</b>			QC Source: ARJ0119-06					Extracted: 11/04/08 17:42							
Gasoline Range Organics	AK101 - MS	553	---	50.0	ug/l	1x	--	550	101%	(60-120)	2.74% (20)	--	11/04/08 23:25		
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 102%</i>		<i>Limits: 80-120%</i>								<i>11/04/08 23:25</i>			
<i>Dibromofluoromethane</i>		<i>106%</i>		<i>80-120%</i>								<i>"</i>			
<i>Toluene-d8</i>		<i>101%</i>		<i>80-120%</i>								<i>"</i>			

**Duplicate (8110008-DUP1)**

<b>Duplicate (8110008-DUP1)</b>			QC Source: ARJ0119-06					Extracted: 11/04/08 17:42							
Gasoline Range Organics	AK101 - MS	ND	---	50.0	ug/l	1x	ND	--	--	--	11.4% (12)	--	11/05/08 06:17		
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 101%</i>		<i>Limits: 80-120%</i>								<i>11/05/08 06:17</i>			
<i>Dibromofluoromethane</i>		<i>107%</i>		<i>80-120%</i>								<i>"</i>			
<i>Toluene-d8</i>		<i>101%</i>		<i>80-120%</i>								<i>"</i>			

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

**Amended Report**

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**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Purgeables per EPA Method 624 Modified - Laboratory Quality Control Results**

TestAmerica Portland

QC Batch: 8101179

Water Preparation Method: EPA 5030B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
<b>Blank (8101179-BLK1)</b>													Extracted: 10/30/08 09:00	
Benzene	EPA 624	ND	---	1.00	ug/l	1x	--	--	--	--	--	--	10/30/08 12:18	
Bromodichloromethane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Bromoform	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Bromomethane	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Carbon tetrachloride	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Chlorobenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Chloroethane	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Chloroform	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Chloromethane	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Dibromochloromethane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
1,2-Dichlorobenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
1,3-Dichlorobenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
1,4-Dichlorobenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
1,1-Dichloroethane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
1,2-Dichloroethane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
1,1-Dichloroethene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
trans-1,2-Dichloroethene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
1,2-Dichloropropane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
cis-1,3-Dichloropropene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
trans-1,3-Dichloropropene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Methylene chloride	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
1,1,2,2-Tetrachloroethane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Tetrachloroethene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Toluene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
1,1,1-Trichloroethane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
1,1,2-Trichloroethane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Trichloroethene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Trichlorofluoromethane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Vinyl chloride	"	ND	---	1.00	"	"	--	--	--	--	--	--	"	
Xylenes (total)	"	ND	---	2.00	"	"	--	--	--	--	--	--	"	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery:</i>	<i>96.9%</i>	<i>Limits: 75-120%</i>		<i>"</i>							<i>10/30/08 12:18</i>	
<i>1,2-DCA-d4</i>			<i>107%</i>	<i>77-129%</i>		<i>"</i>							<i>"</i>	
<i>Dibromofluoromethane</i>			<i>107%</i>	<i>80-121%</i>		<i>"</i>							<i>"</i>	
<i>Toluene-d8</i>			<i>104%</i>	<i>80-120%</i>		<i>"</i>							<i>"</i>	

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

**Amended Report**

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**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Purgeables per EPA Method 624 Modified - Laboratory Quality Control Results**

TestAmerica Portland

QC Batch: 8101179

Water Preparation Method: EPA 5030B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes		
<b>LCS (8101179-BS1)</b>													<b>Extracted: 10/30/08 09:00</b>			
Benzene	EPA 624	19.8	---	1.00	ug/l	1x	--	20.0	99.0%	(80-120)	--	--	10/30/08 10:47			
Bromodichloromethane	"	20.4	---	1.00	"	"	--	"	102%	(84-127)	--	--	"			
Bromoform	"	16.3	---	1.00	"	"	--	"	81.3%	(55-134)	--	--	"			
Bromomethane	"	16.7	---	5.00	"	"	--	"	83.7%	(38-150)	--	--	"			
Carbon tetrachloride	"	16.8	---	1.00	"	"	--	"	83.8%	(73-134)	--	--	"			
Chlorobenzene	"	20.4	---	1.00	"	"	--	"	102%	(80-124)	--	--	"			
Chloroethane	"	19.3	---	5.00	"	"	--	"	96.7%	(79-124)	--	--	"			
Chloroform	"	20.2	---	1.00	"	"	--	"	101%	(80-120)	--	--	"			
Chloromethane	"	16.1	---	5.00	"	"	--	"	80.6%	(47-146)	--	--	"			
Dibromochloromethane	"	18.1	---	1.00	"	"	--	"	90.3%	(69-138)	--	--	"			
1,2-Dichlorobenzene	"	18.4	---	1.00	"	"	--	"	92.1%	(80-120)	--	--	"			
1,3-Dichlorobenzene	"	19.4	---	1.00	"	"	--	"	97.2%	(76-123)	--	--	"			
1,4-Dichlorobenzene	"	18.3	---	1.00	"	"	--	"	91.4%	(73-120)	--	--	"			
1,1-Dichloroethane	"	19.9	---	1.00	"	"	--	"	99.6%	(80-120)	--	--	"			
1,2-Dichloroethane	"	20.7	---	1.00	"	"	--	"	104%	(75-135)	--	--	"			
1,1-Dichloroethene	"	19.6	---	1.00	"	"	--	"	98.2%	(78-120)	--	--	"			
trans-1,2-Dichloroethene	"	19.7	---	1.00	"	"	--	"	98.6%	(80-120)	--	--	"			
1,2-Dichloropropane	"	20.8	---	1.00	"	"	--	"	104%	(80-126)	--	--	"			
cis-1,3-Dichloropropene	"	18.3	---	1.00	"	"	--	"	91.6%	(80-125)	--	--	"			
trans-1,3-Dichloropropene	"	17.3	---	1.00	"	"	--	"	86.4%	(80-130)	--	--	"			
Ethylbenzene	"	19.1	---	1.00	"	"	--	"	95.6%	"	--	--	"			
Methylene chloride	"	19.4	---	5.00	"	"	--	"	97.2%	(80-120)	--	--	"			
1,1,2,2-Tetrachloroethane	"	20.3	---	1.00	"	"	--	"	102%	(77-128)	--	--	"			
Tetrachloroethene	"	19.2	---	1.00	"	"	--	"	96.2%	(80-124)	--	--	"			
Toluene	"	20.1	---	1.00	"	"	--	"	100%	(80-125)	--	--	"			
1,1,1-Trichloroethane	"	19.7	---	1.00	"	"	--	"	98.7%	(76-132)	--	--	"			
1,1,2-Trichloroethane	"	20.6	---	1.00	"	"	--	"	103%	(80-123)	--	--	"			
Trichloroethene	"	19.7	---	1.00	"	"	--	"	98.6%	(80-132)	--	--	"			
Trichlorofluoromethane	"	21.2	---	1.00	"	"	--	"	106%	(77-137)	--	--	"			
Vinyl chloride	"	18.6	---	1.00	"	"	--	"	93.2%	(76-133)	--	--	"			
Xylenes (total)	"	58.2	---	2.00	"	"	--	60.0	97.0%	(80-130)	--	--	"			
<i>Surrogate(s): 4-BFB</i>													<i>Recovery: 103%</i>	<i>Limits: 75-120%</i>	"	<i>10/30/08 10:47</i>
<i>1,2-DCA-d4</i>													<i>105%</i>	<i>77-129%</i>	"	<i>"</i>
<i>Dibromofluoromethane</i>													<i>105%</i>	<i>80-121%</i>	"	<i>"</i>
<i>Toluene-d8</i>													<i>104%</i>	<i>80-120%</i>	"	<i>"</i>

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

**Amended Report**

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**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Purgeables per EPA Method 624 Modified - Laboratory Quality Control Results**

TestAmerica Portland

QC Batch: 8101179

Water Preparation Method: EPA 5030B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
<b>LCS Dup (8101179-BSD1)</b>													<b>Extracted: 10/30/08 09:00</b>	
Benzene	EPA 624	20.0	---	1.00	ug/l	1x	--	20.0	99.9%	(80-120)	0.854% (25)	10/30/08 11:20		
Bromodichloromethane	"	21.6	---	1.00	"	"	--	"	108%	(84-127)	5.86%	"	"	
Bromoform	"	17.1	---	1.00	"	"	--	"	85.4%	(55-134)	4.98%	"	"	
Bromomethane	"	18.9	---	5.00	"	"	--	"	94.6%	(38-150)	12.2%	"	"	
Carbon tetrachloride	"	18.2	---	1.00	"	"	--	"	91.0%	(73-134)	8.35%	"	"	
Chlorobenzene	"	20.7	---	1.00	"	"	--	"	103%	(80-124)	1.31%	"	"	
Chloroethane	"	19.4	---	5.00	"	"	--	"	97.1%	(79-124)	0.413%	"	"	
Chloroform	"	20.2	---	1.00	"	"	--	"	101%	(80-120)	0.247%	"	"	
Chloromethane	"	16.1	---	5.00	"	"	--	"	80.6%	(47-146)	0.0621%	"	"	
Dibromochloromethane	"	19.2	---	1.00	"	"	--	"	95.8%	(69-138)	5.91%	"	"	
1,2-Dichlorobenzene	"	18.6	---	1.00	"	"	--	"	92.8%	(80-120)	0.811%	"	"	
1,3-Dichlorobenzene	"	19.1	---	1.00	"	"	--	"	95.7%	(76-123)	1.56%	"	"	
1,4-Dichlorobenzene	"	18.5	---	1.00	"	"	--	"	92.4%	(73-120)	1.09%	"	"	
1,1-Dichloroethane	"	20.0	---	1.00	"	"	--	"	100%	(80-120)	0.501%	"	"	
1,2-Dichloroethane	"	20.9	---	1.00	"	"	--	"	104%	(75-135)	0.770%	"	"	
1,1-Dichloroethene	"	20.0	---	1.00	"	"	--	"	100%	(78-120)	1.92%	"	"	
trans-1,2-Dichloroethene	"	20.0	---	1.00	"	"	--	"	99.9%	(80-120)	1.31%	"	"	
1,2-Dichloropropane	"	21.3	---	1.00	"	"	--	"	107%	(80-126)	2.23%	"	"	
cis-1,3-Dichloropropene	"	19.4	---	1.00	"	"	--	"	96.8%	(80-125)	5.47%	"	"	
trans-1,3-Dichloropropene	"	18.5	---	1.00	"	"	--	"	92.6%	(80-130)	7.04%	"	"	
Ethylbenzene	"	18.9	---	1.00	"	"	--	"	94.7%	"	0.998%	"	"	
Methylene chloride	"	19.8	---	5.00	"	"	--	"	98.8%	(80-120)	1.63%	"	"	
1,1,2,2-Tetrachloroethane	"	20.1	---	1.00	"	"	--	"	101%	(77-128)	0.841%	"	"	
Tetrachloroethene	"	19.4	---	1.00	"	"	--	"	97.0%	(80-124)	0.828%	"	"	
Toluene	"	20.4	---	1.00	"	"	--	"	102%	(80-125)	1.83%	"	"	
1,1,1-Trichloroethane	"	20.5	---	1.00	"	"	--	"	102%	(76-132)	3.63%	"	"	
1,1,2-Trichloroethane	"	21.0	---	1.00	"	"	--	"	105%	(80-123)	2.02%	"	"	
Trichloroethene	"	20.1	---	1.00	"	"	--	"	100%	(80-132)	1.71%	"	"	
Trichlorofluoromethane	"	20.8	---	1.00	"	"	--	"	104%	(77-137)	2.05%	"	"	
Vinyl chloride	"	19.0	---	1.00	"	"	--	"	94.9%	(76-133)	1.86%	"	"	
Xylenes (total)	"	58.4	---	2.00	"	"	--	60.0	97.4%	(80-130)	0.394%	"	"	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 102%</i>		<i>Limits: 75-120%</i>								<i>10/30/08 11:20</i>		
<i>1,2-DCA-d4</i>		<i>106%</i>		<i>77-129%</i>								<i>"</i>		
<i>Dibromofluoromethane</i>		<i>106%</i>		<i>80-121%</i>								<i>"</i>		
<i>Toluene-d8</i>		<i>106%</i>		<i>80-120%</i>								<i>"</i>		

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

**Amended Report**

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Purgeables per EPA Method 624 Modified - Laboratory Quality Control Results**

TestAmerica Portland

QC Batch: 8110172

Water Preparation Method: EPA 5030B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes		
<b>Blank (8110172-BLK1)</b>													Extracted: 11/06/08 09:00			
Benzene	EPA 624	ND	---	1.00	ug/l	1x	--	--	--	--	--	--	11/06/08 12:27			
Bromodichloromethane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"			
Bromoform	"	ND	---	1.00	"	"	--	--	--	--	--	--	"			
Bromomethane	"	ND	---	5.00	"	"	--	--	--	--	--	--	"			
Carbon tetrachloride	"	ND	---	1.00	"	"	--	--	--	--	--	--	"			
Chlorobenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"			
Chloroethane	"	ND	---	5.00	"	"	--	--	--	--	--	--	"			
Chloroform	"	ND	---	1.00	"	"	--	--	--	--	--	--	"			
Chloromethane	"	ND	---	5.00	"	"	--	--	--	--	--	--	"			
Dibromochloromethane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"			
1,2-Dichlorobenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"			
1,3-Dichlorobenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"			
1,4-Dichlorobenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"			
1,1-Dichloroethane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"			
1,2-Dichloroethane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"			
1,1-Dichloroethene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"			
trans-1,2-Dichloroethene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"			
1,2-Dichloropropane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"			
cis-1,3-Dichloropropene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"			
trans-1,3-Dichloropropene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"			
Ethylbenzene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"			
Methylene chloride	"	ND	---	5.00	"	"	--	--	--	--	--	--	"			
1,1,2,2-Tetrachloroethane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"			
Tetrachloroethene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"			
Toluene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"			
1,1,1-Trichloroethane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"			
1,1,2-Trichloroethane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"			
Trichloroethene	"	ND	---	1.00	"	"	--	--	--	--	--	--	"			
Trichlorofluoromethane	"	ND	---	1.00	"	"	--	--	--	--	--	--	"			
Vinyl chloride	"	ND	---	1.00	"	"	--	--	--	--	--	--	"			
Xylenes (total)	"	ND	---	2.00	"	"	--	--	--	--	--	--	"			
<i>Surrogate(s): 4-BFB</i>													<i>Recovery: 101%</i>	<i>Limits: 75-120%</i>	"	11/06/08 12:27
<i>1,2-DCA-d4</i>													<i>106%</i>	<i>77-129%</i>	"	"
<i>Dibromofluoromethane</i>													<i>106%</i>	<i>80-121%</i>	"	"
<i>Toluene-d8</i>													<i>103%</i>	<i>80-120%</i>	"	"

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

**Amended Report**

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**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Purgeables per EPA Method 624 Modified - Laboratory Quality Control Results**

TestAmerica Portland

QC Batch: 8110172

Water Preparation Method: EPA 5030B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
										Extracted: 11/06/08 09:00				
LCS (8110172-BS1)	EPA 624	20.2	---	1.00	ug/l	1x	--	20.0	101%	(80-120)	--	--	11/06/08 11:12	
Benzene	"	21.6	---	1.00	"	"	--	"	108%	(84-127)	--	--	"	
Bromodichloromethane	"	22.1	---	1.00	"	"	--	"	110%	(55-134)	--	--	"	
Bromoform	"	20.7	---	5.00	"	"	--	"	104%	(38-150)	--	--	"	
Bromomethane	"	23.0	---	1.00	"	"	--	"	115%	(73-134)	--	--	"	
Carbon tetrachloride	"	21.4	---	1.00	"	"	--	"	107%	(80-124)	--	--	"	
Chlorobenzene	"	21.2	---	5.00	"	"	--	"	106%	(79-124)	--	--	"	
Chloroethane	"	20.9	---	1.00	"	"	--	"	105%	(80-120)	--	--	"	
Chloroform	"	20.9	---	5.00	"	"	--	"	105%	(47-146)	--	--	"	
Chloromethane	"	23.8	---	1.00	"	"	--	"	119%	(69-138)	--	--	"	
Dibromochloromethane	"	20.7	---	1.00	"	"	--	"	103%	(80-120)	--	--	"	
1,2-Dichlorobenzene	"	20.9	---	1.00	"	"	--	"	104%	(76-123)	--	--	"	
1,3-Dichlorobenzene	"	20.6	---	1.00	"	"	--	"	103%	(73-120)	--	--	"	
1,4-Dichlorobenzene	"	21.3	---	1.00	"	"	--	"	106%	(80-120)	--	--	"	
1,1-Dichloroethane	"	22.1	---	1.00	"	"	--	"	110%	(75-135)	--	--	"	
1,2-Dichloroethane	"	21.1	---	1.00	"	"	--	"	105%	(78-120)	--	--	"	
1,1-Dichloroethene	"	21.3	---	1.00	"	"	--	"	107%	(80-120)	--	--	"	
trans-1,2-Dichloroethene	"	20.6	---	1.00	"	"	--	"	103%	(80-126)	--	--	"	
1,2-Dichloropropane	"	20.2	---	1.00	"	"	--	"	101%	(80-125)	--	--	"	
cis-1,3-Dichloropropene	"	19.2	---	1.00	"	"	--	"	96.2%	(80-130)	--	--	"	
trans-1,3-Dichloropropene	"	20.4	---	1.00	"	"	--	"	102%	"	--	--	"	
Ethylbenzene	"	22.3	---	5.00	"	"	--	"	111%	(80-120)	--	--	"	
Methylene chloride	"	21.7	---	1.00	"	"	--	"	108%	(77-128)	--	--	"	
1,1,2,2-Tetrachloroethane	"	19.8	---	1.00	"	"	--	"	99.2%	(80-124)	--	--	"	
Tetrachloroethene	"	20.6	---	1.00	"	"	--	"	103%	(80-125)	--	--	"	
Toluene	"	21.8	---	1.00	"	"	--	"	109%	(76-132)	--	--	"	
1,1,1-Trichloroethane	"	21.1	---	1.00	"	"	--	"	106%	(80-123)	--	--	"	
1,1,2-Trichloroethane	"	20.0	---	1.00	"	"	--	"	100%	(80-132)	--	--	"	
Trichloroethene	"	22.0	---	1.00	"	"	--	"	110%	(77-137)	--	--	"	
Trichlorofluoromethane	"	22.9	---	1.00	"	"	--	"	114%	(76-133)	--	--	"	
Vinyl chloride	"	61.8	---	2.00	"	"	--	60.0	103%	(80-130)	--	--	"	
Xylenes (total)														
Surrogate(s):	4-BFB	Recovery:	111%	Limits:	75-120%	"							11/06/08 11:12	
	1,2-DCA-d4		111%		77-129%	"							"	
	Dibromofluoromethane		110%		80-121%	"							"	
	Toluene-d8		108%		80-120%	"							"	

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

**Amended Report**

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**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Purgeables per EPA Method 624 Modified - Laboratory Quality Control Results**

TestAmerica Portland

QC Batch: 8110172

Water Preparation Method: EPA 5030B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
<b>LCS Dup (8110172-BSD1)</b>										Extracted: 11/06/08 09:00				
Benzene	EPA 624	21.8	---	1.00	ug/l	1x	--	20.0	109%	(80-120)	7.33% (25)	11/06/08 11:44		
Bromodichloromethane	"	22.1	---	1.00	"	"	--	"	111%	(84-127)	2.28%	"	"	
Bromoform	"	24.2	---	1.00	"	"	--	"	121%	(55-134)	9.37%	"	"	
Bromomethane	"	22.5	---	5.00	"	"	--	"	112%	(38-150)	8.20%	"	"	
Carbon tetrachloride	"	25.4	---	1.00	"	"	--	"	127%	(73-134)	10.2%	"	"	
Chlorobenzene	"	22.8	---	1.00	"	"	--	"	114%	(80-124)	6.43%	"	"	
Chloroethane	"	22.4	---	5.00	"	"	--	"	112%	(79-124)	5.18%	"	"	
Chloroform	"	22.5	---	1.00	"	"	--	"	112%	(80-120)	7.28%	"	"	
Chloromethane	"	22.3	---	5.00	"	"	--	"	112%	(47-146)	6.42%	"	"	
Dibromochloromethane	"	23.6	---	1.00	"	"	--	"	118%	(69-138)	0.548%	"	"	
1,2-Dichlorobenzene	"	21.7	---	1.00	"	"	--	"	108%	(80-120)	4.63%	"	"	
1,3-Dichlorobenzene	"	21.6	---	1.00	"	"	--	"	108%	(76-123)	3.57%	"	"	
1,4-Dichlorobenzene	"	21.6	---	1.00	"	"	--	"	108%	(73-120)	4.78%	"	"	
1,1-Dichloroethane	"	22.2	---	1.00	"	"	--	"	111%	(80-120)	4.10%	"	"	
1,2-Dichloroethane	"	23.0	---	1.00	"	"	--	"	115%	(75-135)	4.13%	"	"	
1,1-Dichloroethene	"	22.1	---	1.00	"	"	--	"	110%	(78-120)	4.68%	"	"	
trans-1,2-Dichloroethene	"	22.6	---	1.00	"	"	--	"	113%	(80-120)	5.92%	"	"	
1,2-Dichloropropane	"	22.0	---	1.00	"	"	--	"	110%	(80-126)	6.25%	"	"	
cis-1,3-Dichloropropene	"	21.3	---	1.00	"	"	--	"	106%	(80-125)	5.55%	"	"	
trans-1,3-Dichloropropene	"	20.1	---	1.00	"	"	--	"	101%	(80-130)	4.37%	"	"	
Ethylbenzene	"	21.5	---	1.00	"	"	--	"	108%	"	5.63%	"	"	
Methylene chloride	"	23.3	---	5.00	"	"	--	"	116%	(80-120)	4.52%	"	"	
1,1,2,2-Tetrachloroethane	"	21.3	---	1.00	"	"	--	"	107%	(77-128)	1.63%	"	"	
Tetrachloroethene	"	21.8	---	1.00	"	"	--	"	109%	(80-124)	9.36%	"	"	
Toluene	"	21.8	---	1.00	"	"	--	"	109%	(80-125)	5.72%	"	"	
1,1,1-Trichloroethane	"	24.7	---	1.00	"	"	--	"	123%	(76-132)	12.6%	"	"	
1,1,2-Trichloroethane	"	22.1	---	1.00	"	"	--	"	111%	(80-123)	4.72%	"	"	
Trichloroethene	"	21.8	---	1.00	"	"	--	"	109%	(80-132)	8.56%	"	"	
Trichlorofluoromethane	"	24.6	---	1.00	"	"	--	"	123%	(77-137)	11.3%	"	"	
Vinyl chloride	"	22.2	---	1.00	"	"	--	"	111%	(76-133)	3.11%	"	"	
Xylenes (total)	"	65.6	---	2.00	"	"	--	60.0	109%	(80-130)	6.02%	"	"	
<i>Surrogate(s): 4-BFB</i>		<i>Recovery: 112%</i>		<i>Limits: 75-120%</i>		<i>"</i>				<i>11/06/08 11:44</i>				
<i>1,2-DCA-d4</i>		<i>111%</i>		<i>77-129%</i>		<i>"</i>				<i>"</i>				
<i>Dibromofluoromethane</i>		<i>110%</i>		<i>80-121%</i>		<i>"</i>				<i>"</i>				
<i>Toluene-d8</i>		<i>110%</i>		<i>80-120%</i>		<i>"</i>				<i>"</i>				

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

**Amended Report**

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**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Acid and Base/Neutral Extractables per EPA Method 625 - Laboratory Quality Control Results**  
 TestAmerica Portland

QC Batch: 8101123 Water Preparation Method: 3520B Liq-Liq

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
<b>Blank (8101123-BLK1)</b>													Extracted: 10/29/08 10:10	
3-,4-Methylphenol	EPA 625	ND	---	5.00	ug/l	1x	--	--	--	--	--	--	11/03/08 16:57	
2-Methylphenol	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
Acenaphthene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Acenaphthylene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Anthracene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Benzidine	"	ND	---	60.0	"	"	--	--	--	--	--	--	"	L6
Benzo (a) anthracene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Benzo (a) pyrene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Benzo (b) fluoranthene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Benzo (ghi) perylene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Benzo (k) fluoranthene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
4-Bromophenyl phenyl ether	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Butyl benzyl phthalate	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
4-Chloro-3-methylphenol	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Bis(2-chloroethoxy)methane	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
Bis(2-chloroethyl)ether	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Bis(2-chloroisopropyl)ether	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
2-Chloronaphthalene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
2-Chlorophenol	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
4-Chlorophenyl phenyl ether	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Chrysene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Di-n-butyl phthalate	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Di-n-octyl phthalate	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Dibenzo (a,h) anthracene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
1,2-Dichlorobenzene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
1,3-Dichlorobenzene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
1,4-Dichlorobenzene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
3,3'-Dichlorobenzidine	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
2,4-Dichlorophenol	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Diethyl phthalate	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
2,4-Dimethylphenol	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
Dimethyl phthalate	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
4,6-Dinitro-2-methylphenol	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
2,4-Dinitrophenol	"	ND	---	25.0	"	"	--	--	--	--	--	--	"	
2,4-Dinitrotoluene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
2,6-Dinitrotoluene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Bis(2-ethylhexyl)phthalate	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
Fluoranthene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Fluorene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

**Amended Report**

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**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Acid and Base/Neutral Extractables per EPA Method 625 - Laboratory Quality Control Results**  
 TestAmerica Portland

QC Batch: 8101123 Water Preparation Method: 3520B Liq-Liq

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
---------	--------	--------	------	-----	-------	-----	---------------	-----------	-------	----------	-------	----------	----------	-------

**Blank (8101123-BLK1)**

Extracted: 10/29/08 10:10

Hexachlorobenzene	EPA 625	ND	---	5.00	ug/l	1x	--	--	--	--	--	--	11/03/08 16:57	
Hexachlorobutadiene	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
Hexachlorocyclopentadiene	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
Hexachloroethane	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
Indeno (1,2,3-cd) pyrene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Isophorone	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Naphthalene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Nitrobenzene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
2-Nitrophenol	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
4-Nitrophenol	"	ND	---	25.0	"	"	--	--	--	--	--	--	"	
N-Nitrosodimethylamine	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
N-Nitrosodi-n-propylamine	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
N-Nitrosodiphenylamine	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Pentachlorophenol	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
Phenanthrene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Phenol	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Pyrene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
1,2,4-Trichlorobenzene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
2,4,6-Trichlorophenol	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
1,2 Diphenylhydrazine (as Azobenzene)	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	

Surrogate(s):	2-Fluorobiphenyl	Recovery:	86.8%	Limits:	22-120%	"							11/03/08 16:57	
	2-Fluorophenol		79.5%		5-120%	"							"	
	Nitrobenzene-d5		89.7%		26-127%	"							"	
	Phenol-d6		88.7%		4-121%	"							"	
	p-Terphenyl-d14		109%		37-130%	"							"	
	2,4,6-Tribromophenol		89.5%		21-129%	"							"	

**LCS (8101123-BS1)**

Extracted: 10/29/08 10:10

Acenaphthene	EPA 625	36.4	---	5.00	ug/l	1x	--	50.0	72.7%	(45-145)	--	--	11/03/08 17:19	
Acenaphthylene	"	31.7	---	5.00	"	"	--	"	63.5%	(30-145)	--	--	"	
Anthracene	"	39.4	---	5.00	"	"	--	"	78.8%	(25-135)	--	--	"	
Benzidine	"	88.1	---	60.0	"	"	--	40.0	220%	(0-169)	--	--	"	L, L6
Benzo (a) anthracene	"	39.2	---	5.00	"	"	--	50.0	78.4%	(30-145)	--	--	"	
Benzo (a) pyrene	"	49.1	---	5.00	"	"	--	"	98.2%	(15-150)	--	--	"	
Benzo (b) fluoranthene	"	47.1	---	5.00	"	"	--	"	94.2%	(20-150)	--	--	"	
Benzo (ghi) perylene	"	38.0	---	5.00	"	"	--	"	76.0%	(10-150)	--	--	"	
Benzo (k) fluoranthene	"	54.0	---	5.00	"	"	--	"	108%	"	--	--	"	
4-Bromophenyl phenyl ether	"	37.6	---	5.00	"	"	--	"	75.2%	(50-130)	--	--	"	
Butyl benzyl phthalate	"	40.9	---	5.00	"	"	--	"	81.8%	(10-150)	--	--	"	
4-Chloro-3-methylphenol	"	36.8	---	5.00	"	"	--	"	73.5%	(20-150)	--	--	"	

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

**Amended Report**

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Acid and Base/Neutral Extractables per EPA Method 625 - Laboratory Quality Control Results**  
 TestAmerica Portland

QC Batch: 8101123 Water Preparation Method: 3520B Liq-Liq

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
<b>LCS (8101123-BS1)</b>													<b>Extracted: 10/29/08 10:10</b>	
Bis(2-chloroethoxy)methane	EPA 625	38.8	---	10.0	ug/l	1x	--	50.0	77.7%	(30-150)	--	--	11/03/08 17:19	
Bis(2-chloroethyl)ether	"	36.2	---	5.00	"	"	--	"	72.4%	(10-150)	--	--	"	
Bis(2-chloroisopropyl)ether	"	35.6	---	10.0	"	"	--	"	71.3%	(35-150)	--	--	"	
2-Chloronaphthalene	"	35.1	---	5.00	"	"	--	"	70.3%	(60-120)	--	--	"	
2-Chlorophenol	"	34.6	---	5.00	"	"	--	"	69.3%	(20-135)	--	--	"	
4-Chlorophenyl phenyl ether	"	39.3	---	5.00	"	"	--	"	78.6%	(25-150)	--	--	"	
Chrysene	"	38.6	---	5.00	"	"	--	"	77.1%	(15-150)	--	--	"	
Di-n-butyl phthalate	"	42.4	---	5.00	"	"	--	"	84.8%	(10-120)	--	--	"	
Di-n-octyl phthalate	"	58.9	---	5.00	"	"	--	"	118%	(10-150)	--	--	"	
Dibenzo (a,h) anthracene	"	40.7	---	5.00	"	"	--	"	81.4%	"	--	--	"	
1,2-Dichlorobenzene	"	31.2	---	5.00	"	"	--	"	62.5%	(10-130)	--	--	"	
1,3-Dichlorobenzene	"	29.2	---	5.00	"	"	--	"	58.5%	(10-150)	--	--	"	
1,4-Dichlorobenzene	"	30.1	---	5.00	"	"	--	"	60.2%	(10-125)	--	--	"	
3,3'-Dichlorobenzidine	"	40.4	---	5.00	"	"	--	40.0	101%	(10-150)	--	--	"	
2,4-Dichlorophenol	"	34.4	---	5.00	"	"	--	50.0	68.8%	(35-135)	--	--	"	
Diethyl phthalate	"	40.8	---	5.00	"	"	--	"	81.7%	(10-115)	--	--	"	
2,4-Dimethylphenol	"	25.9	---	10.0	"	"	--	"	51.7%	(30-120)	--	--	"	
Dimethyl phthalate	"	39.1	---	5.00	"	"	--	"	78.3%	(10-115)	--	--	"	
4,6-Dinitro-2-methylphenol	"	33.2	---	10.0	"	"	--	"	66.3%	(10-150)	--	--	"	
2,4-Dinitrophenol	"	17.2	---	25.0	"	"	--	"	34.4%	"	--	--	"	
2,4-Dinitrotoluene	"	40.4	---	5.00	"	"	--	"	80.9%	(35-140)	--	--	"	
2,6-Dinitrotoluene	"	39.3	---	5.00	"	"	--	"	78.6%	(50-150)	--	--	"	
Bis(2-ethylhexyl)phthalate	"	41.2	---	10.0	"	"	--	"	82.4%	(10-150)	--	--	"	
Fluoranthene	"	41.4	---	5.00	"	"	--	"	82.9%	(25-140)	--	--	"	
Fluorene	"	39.6	---	5.00	"	"	--	"	79.2%	(55-125)	--	--	"	
Hexachlorobenzene	"	37.8	---	5.00	"	"	--	"	75.6%	(10-150)	--	--	"	
Hexachlorobutadiene	"	33.4	---	10.0	"	"	--	"	66.7%	(10-120)	--	--	"	
Hexachlorocyclopentadiene	"	21.0	---	10.0	"	"	--	"	41.9%	(10-150)	--	--	"	
Hexachloroethane	"	30.9	---	10.0	"	"	--	"	61.8%	(10-115)	--	--	"	
Indeno (1,2,3-cd) pyrene	"	39.5	---	5.00	"	"	--	"	79.0%	(10-150)	--	--	"	
Isophorone	"	38.0	---	5.00	"	"	--	"	76.1%	(20-150)	--	--	"	
Naphthalene	"	35.5	---	5.00	"	"	--	"	70.9%	(20-135)	--	--	"	
Nitrobenzene	"	35.6	---	5.00	"	"	--	"	71.3%	(35-150)	--	--	"	
2-Nitrophenol	"	34.2	---	5.00	"	"	--	"	68.3%	(25-150)	--	--	"	
4-Nitrophenol	"	39.0	---	25.0	"	"	--	"	78.1%	(10-135)	--	--	"	
N-Nitrosodimethylamine	"	33.4	---	5.00	"	"	--	"	66.7%	(10-150)	--	--	"	
N-Nitrosodi-n-propylamine	"	38.3	---	10.0	"	"	--	"	76.6%	"	--	--	"	
N-Nitrosodiphenylamine	"	38.3	---	5.00	"	"	--	"	76.6%	"	--	--	"	
Pentachlorophenol	"	36.9	---	10.0	"	"	--	"	73.7%	"	--	--	"	

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

**Amended Report**

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**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Acid and Base/Neutral Extractables per EPA Method 625 - Laboratory Quality Control Results**  
 TestAmerica Portland

**QC Batch: 8101123 Water Preparation Method: 3520B Liq-Liq**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
<b>LCS (8101123-BS1)</b>													<b>Extracted: 10/29/08 10:10</b>	
Phenanthrene	EPA 625	39.2	---	5.00	ug/l	1x	--	50.0	78.5%	(50-120)	--	--	11/03/08 17:19	
Phenol	"	35.1	---	5.00	"	"	--	"	70.3%	(10-115)	--	--	"	
Pyrene	"	39.3	---	5.00	"	"	--	"	78.5%	(50-125)	--	--	"	
1,2,4-Trichlorobenzene	"	33.4	---	5.00	"	"	--	"	66.9%	(10-145)	--	--	"	
2,4,6-Trichlorophenol	"	33.6	---	5.00	"	"	--	"	67.2%	(35-145)	--	--	"	
1,2 Diphenylhydrazine (as Azobenzene)	"	40.2	---	5.00	"	"	--	"	80.5%	(10-150)	--	--	"	
<i>Surrogate(s):</i>	<i>2-Fluorobiphenyl</i>	<i>Recovery:</i>	<i>64.9%</i>	<i>Limits:</i>	<i>22-120%</i>	<i>"</i>							<i>11/03/08 17:19</i>	
	<i>2-Fluorophenol</i>	<i>69.5%</i>		<i>5-120%</i>	<i>"</i>								<i>"</i>	
	<i>Nitrobenzene-d5</i>	<i>73.7%</i>		<i>26-127%</i>	<i>"</i>								<i>"</i>	
	<i>Phenol-d6</i>	<i>75.7%</i>		<i>4-121%</i>	<i>"</i>								<i>"</i>	
	<i>p-Terphenyl-d14</i>	<i>83.0%</i>		<i>37-130%</i>	<i>"</i>								<i>"</i>	
	<i>2,4,6-Tribromophenol</i>	<i>79.8%</i>		<i>21-129%</i>	<i>"</i>								<i>"</i>	
<b>LCS Dup (8101123-BSD1)</b>													<b>Extracted: 10/29/08 10:10</b>	
Acenaphthene	EPA 625	50.2	---	5.00	ug/l	1x	--	50.0	100%	(45-145)	31.9%	(50)	11/03/08 17:41	
Acenaphthylene	"	43.6	---	5.00	"	"	--	"	87.2%	(30-145)	31.5%	"	"	
Anthracene	"	52.6	---	5.00	"	"	--	"	105%	(25-135)	28.7%	"	"	
Benzidine	"	138	---	60.0	"	"	--	40.0	345%	(0-169)	44.1%	"	"	L, L6
Benzo (a) anthracene	"	54.7	---	5.00	"	"	--	50.0	109%	(30-145)	33.0%	"	"	
Benzo (a) pyrene	"	66.5	---	5.00	"	"	--	"	133%	(15-150)	30.2%	"	"	
Benzo (b) fluoranthene	"	65.4	---	5.00	"	"	--	"	131%	(20-150)	32.6%	"	"	
Benzo (ghi) perylene	"	51.8	---	5.00	"	"	--	"	104%	(10-150)	30.6%	"	"	
Benzo (k) fluoranthene	"	71.6	---	5.00	"	"	--	"	143%	"	27.9%	"	"	
4-Bromophenyl phenyl ether	"	52.8	---	5.00	"	"	--	"	106%	(50-130)	33.7%	"	"	
Butyl benzyl phthalate	"	55.0	---	5.00	"	"	--	"	110%	(10-150)	29.5%	"	"	
4-Chloro-3-methylphenol	"	48.6	---	5.00	"	"	--	"	97.3%	(20-150)	27.8%	"	"	
Bis(2-chloroethoxy)methane	"	51.2	---	10.0	"	"	--	"	102%	(30-150)	27.5%	"	"	
Bis(2-chloroethyl)ether	"	49.0	---	5.00	"	"	--	"	98.0%	(10-150)	30.1%	"	"	
Bis(2-chloroisopropyl)ether	"	50.2	---	10.0	"	"	--	"	100%	(35-150)	33.9%	"	"	
2-Chloronaphthalene	"	48.3	---	5.00	"	"	--	"	96.6%	(60-120)	31.5%	"	"	
2-Chlorophenol	"	47.5	---	5.00	"	"	--	"	95.0%	(20-135)	31.4%	"	"	
4-Chlorophenyl phenyl ether	"	54.4	---	5.00	"	"	--	"	109%	(25-150)	32.2%	"	"	
Chrysene	"	53.6	---	5.00	"	"	--	"	107%	(15-150)	32.6%	"	"	
Di-n-butyl phthalate	"	54.1	---	5.00	"	"	--	"	108%	(10-120)	24.3%	"	"	
Di-n-octyl phthalate	"	79.4	---	5.00	"	"	--	"	159%	(10-150)	29.7%	"	"	L
Dibenzo (a,h) anthracene	"	53.3	---	5.00	"	"	--	"	107%	"	26.9%	"	"	
1,2-Dichlorobenzene	"	46.1	---	5.00	"	"	--	"	92.1%	(10-130)	38.4%	"	"	
1,3-Dichlorobenzene	"	44.4	---	5.00	"	"	--	"	88.8%	(10-150)	41.1%	"	"	
1,4-Dichlorobenzene	"	44.7	---	5.00	"	"	--	"	89.3%	(10-125)	39.0%	"	"	
3,3'-Dichlorobenzidine	"	56.3	---	5.00	"	"	--	40.0	141%	(10-150)	33.0%	"	"	

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

**Amended Report**

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**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Acid and Base/Neutral Extractables per EPA Method 625 - Laboratory Quality Control Results**  
 TestAmerica Portland

QC Batch: 8101123 Water Preparation Method: 3520B Liq-Liq

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
<b>LCS Dup (8101123-BSD1)</b>										Extracted: 10/29/08 10:10				
2,4-Dichlorophenol	EPA 625	46.1	---	5.00	ug/l	1x	--	50.0	92.2%	(35-135)	29.1%	(50)	11/03/08 17:41	
Diethyl phthalate	"	54.9	---	5.00	"	"	--	"	110%	(10-115)	29.3%	"	"	
2,4-Dimethylphenol	"	34.2	---	10.0	"	"	--	"	68.3%	(30-120)	27.6%	"	"	
Dimethyl phthalate	"	53.1	---	5.00	"	"	--	"	106%	(10-115)	30.3%	"	"	
4,6-Dinitro-2-methylphenol	"	9.90	---	10.0	"	"	--	"	19.8%	(10-150)	108%	"	"	R7
2,4-Dinitrophenol	"	1.71	---	25.0	"	"	--	"	3.42%	"	164%	"	"	L5
2,4-Dinitrotoluene	"	53.3	---	5.00	"	"	--	"	107%	(35-140)	27.5%	"	"	
2,6-Dinitrotoluene	"	53.9	---	5.00	"	"	--	"	108%	(50-150)	31.3%	"	"	
Bis(2-ethylhexyl)phthalate	"	56.0	---	10.0	"	"	--	"	112%	(10-150)	30.5%	"	"	
Fluoranthene	"	54.4	---	5.00	"	"	--	"	109%	(25-140)	27.0%	"	"	
Fluorene	"	54.4	---	5.00	"	"	--	"	109%	(55-125)	31.5%	"	"	
Hexachlorobenzene	"	52.2	---	5.00	"	"	--	"	104%	(10-150)	32.0%	"	"	
Hexachlorobutadiene	"	48.3	---	10.0	"	"	--	"	96.6%	(10-120)	36.6%	"	"	
Hexachlorocyclopentadiene	"	30.4	---	10.0	"	"	--	"	60.8%	(10-150)	36.7%	"	"	
Hexachloroethane	"	46.1	---	10.0	"	"	--	"	92.2%	(10-115)	39.4%	"	"	
Indeno (1,2,3-cd) pyrene	"	55.1	---	5.00	"	"	--	"	110%	(10-150)	33.0%	"	"	
Isophorone	"	49.3	---	5.00	"	"	--	"	98.7%	(20-150)	25.9%	"	"	
Naphthalene	"	49.1	---	5.00	"	"	--	"	98.1%	(20-135)	32.2%	"	"	
Nitrobenzene	"	47.9	---	5.00	"	"	--	"	95.7%	(35-150)	29.3%	"	"	
2-Nitrophenol	"	45.7	---	5.00	"	"	--	"	91.3%	(25-150)	28.8%	"	"	
4-Nitrophenol	"	13.5	---	25.0	"	"	--	"	27.0%	(10-135)	97.3%	"	"	R7
N-Nitrosodimethylamine	"	45.2	---	5.00	"	"	--	"	90.4%	(10-150)	30.2%	"	"	
N-Nitrosodi-n-propylamine	"	51.0	---	10.0	"	"	--	"	102%	"	28.4%	"	"	
N-Nitrosodiphenylamine	"	52.7	---	5.00	"	"	--	"	105%	"	31.6%	"	"	
Pentachlorophenol	"	19.4	---	10.0	"	"	--	"	38.8%	"	62.0%	"	"	R7
Phenanthrene	"	53.3	---	5.00	"	"	--	"	107%	(50-120)	30.4%	"	"	
Phenol	"	47.6	---	5.00	"	"	--	"	95.3%	(10-115)	30.2%	"	"	
Pyrene	"	54.6	---	5.00	"	"	--	"	109%	(50-125)	32.7%	"	"	
1,2,4-Trichlorobenzene	"	47.4	---	5.00	"	"	--	"	94.8%	(10-145)	34.5%	"	"	
2,4,6-Trichlorophenol	"	34.3	---	5.00	"	"	--	"	68.6%	(35-145)	2.09%	"	"	
1,2 Diphenylhydrazine (as Azobenzene)	"	53.2	---	5.00	"	"	--	"	106%	(10-150)	27.8%	"	"	

<i>Surrogate(s):</i>	<i>2-Fluorobiphenyl</i>	<i>Recovery:</i>	<i>96.7%</i>	<i>Limits:</i>	<i>22-120%</i>	<i>"</i>	<i>11/03/08 17:41</i>
	<i>2-Fluorophenol</i>		<i>93.0%</i>		<i>5-120%</i>	<i>"</i>	<i>"</i>
	<i>Nitrobenzene-d5</i>		<i>98.3%</i>		<i>26-127%</i>	<i>"</i>	<i>"</i>
	<i>Phenol-d6</i>		<i>104%</i>		<i>4-121%</i>	<i>"</i>	<i>"</i>
	<i>p-Terphenyl-d14</i>		<i>116%</i>		<i>37-130%</i>	<i>"</i>	<i>"</i>
	<i>2,4,6-Tribromophenol</i>		<i>104%</i>		<i>21-129%</i>	<i>"</i>	<i>"</i>

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

**Amended Report**

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*



**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Semivolatile Organic Compounds per EPA Method 8270C - Laboratory Quality Control Results**  
 TestAmerica Portland

QC Batch: 8101123 Water Preparation Method: 3520B Liq-Liq

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
<b>Blank (8101123-BLK1)</b>													Extracted: 10/29/08 10:10	
Acenaphthene	EPA 8270C	ND	---	5.00	ug/l	1x	--	--	--	--	--	--	11/03/08 16:57	
Acenaphthylene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Anthracene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Benzo (a) anthracene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Benzo (a) pyrene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Benzo (b) fluoranthene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Benzo (ghi) perylene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Benzo (k) fluoranthene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Benzoic Acid	"	ND	---	50.0	"	"	--	--	--	--	--	--	"	
Benzyl alcohol	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
4-Bromophenyl phenyl ether	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Butyl benzyl phthalate	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
4-Chloro-3-methylphenol	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
4-Chloroaniline	"	ND	---	20.0	"	"	--	--	--	--	--	--	"	
Bis(2-chloroethoxy)methane	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
Bis(2-chloroethyl)ether	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Bis(2-chloroisopropyl)ether	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
2-Chloronaphthalene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
2-Chlorophenol	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
4-Chlorophenyl phenyl ether	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Chrysene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Di-n-butyl phthalate	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Di-n-octyl phthalate	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Dibenzo (a,h) anthracene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Dibenzofuran	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
1,2-Dichlorobenzene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
1,3-Dichlorobenzene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
1,4-Dichlorobenzene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
3,3'-Dichlorobenzidine	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
2,4-Dichlorophenol	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Diethyl phthalate	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
2,4-Dimethylphenol	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
Dimethyl phthalate	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
4,6-Dinitro-2-methylphenol	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
2,4-Dinitrophenol	"	ND	---	25.0	"	"	--	--	--	--	--	--	"	
2,4-Dinitrotoluene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
2,6-Dinitrotoluene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Bis(2-ethylhexyl)phthalate	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
Fluoranthene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

**Amended Report**

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**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Semivolatile Organic Compounds per EPA Method 8270C - Laboratory Quality Control Results**  
 TestAmerica Portland

QC Batch: 8101123 Water Preparation Method: 3520B Liq-Liq

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
<b>Blank (8101123-BLK1)</b>													Extracted: 10/29/08 10:10	
Fluorene	EPA 8270C	ND	---	5.00	ug/l	1x	--	--	--	--	--	--	11/03/08 16:57	
Hexachlorobenzene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Hexachlorobutadiene	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
Hexachlorocyclopentadiene	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
Hexachloroethane	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
Indeno (1,2,3-cd) pyrene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Isophorone	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
2-Methylnaphthalene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
2-Methylphenol	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
3-,4-Methylphenol	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Naphthalene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
2-Nitroaniline	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
3-Nitroaniline	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
4-Nitroaniline	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
Nitrobenzene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
2-Nitrophenol	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
4-Nitrophenol	"	ND	---	25.0	"	"	--	--	--	--	--	--	"	
N-Nitrosodi-n-propylamine	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
N-Nitrosodiphenylamine	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Pentachlorophenol	"	ND	---	10.0	"	"	--	--	--	--	--	--	"	
Phenanthrene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Phenol	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
Pyrene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
1,2,4-Trichlorobenzene	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
2,4,5-Trichlorophenol	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
2,4,6-Trichlorophenol	"	ND	---	5.00	"	"	--	--	--	--	--	--	"	
<i>Surrogate(s):</i>	<i>2-Fluorobiphenyl</i>	<i>Recovery:</i>	<i>86.8%</i>	<i>Limits:</i>	<i>20-120%</i>	<i>"</i>							<i>11/03/08 16:57</i>	
	<i>2-Fluorophenol</i>		<i>79.5%</i>		<i>10-120%</i>	<i>"</i>							<i>"</i>	
	<i>Nitrobenzene-d5</i>		<i>89.7%</i>		<i>20-130%</i>	<i>"</i>							<i>"</i>	
	<i>Phenol-d6</i>		<i>88.7%</i>		<i>10-125%</i>	<i>"</i>							<i>"</i>	
	<i>p-Terphenyl-d14</i>		<i>109%</i>		<i>35-130%</i>	<i>"</i>							<i>"</i>	
	<i>2,4,6-Tribromophenol</i>		<i>89.5%</i>		<i>20-130%</i>	<i>"</i>							<i>"</i>	

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

**Amended Report**

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**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Semivolatile Organic Compounds per EPA Method 8270C - Laboratory Quality Control Results**  
 TestAmerica Portland

**QC Batch: 8101123 Water Preparation Method: 3520B Liq-Liq**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
---------	--------	--------	------	-----	-------	-----	---------------	-----------	-------	----------	-------	----------	----------	-------

**LCS (8101123-BS1)**

Extracted: 10/29/08 10:10

Acenaphthene	EPA 8270C	36.4	---	5.00	ug/l	1x	--	50.0	72.7%	(55-120)	--	--	11/03/08 17:19	
4-Chloro-3-methylphenol	"	36.8	---	5.00	"	"	--	"	73.5%	(35-135)	--	--	"	
2-Chlorophenol	"	34.6	---	5.00	"	"	--	"	69.3%	(30-130)	--	--	"	
1,4-Dichlorobenzene	"	30.1	---	5.00	"	"	--	"	60.2%	(10-125)	--	--	"	
2,4-Dinitrotoluene	"	40.4	---	5.00	"	"	--	"	80.9%	(50-130)	--	--	"	
4-Nitrophenol	"	39.0	---	25.0	"	"	--	"	78.1%	(10-150)	--	--	"	
N-Nitrosodi-n-propylamine	"	38.3	---	10.0	"	"	--	"	76.6%	(40-130)	--	--	"	
Pentachlorophenol	"	36.9	---	10.0	"	"	--	"	73.7%	(20-150)	--	--	"	
Phenol	"	35.1	---	5.00	"	"	--	"	70.3%	(10-145)	--	--	"	
Pyrene	"	39.3	---	5.00	"	"	--	"	78.5%	(55-125)	--	--	"	
1,2,4-Trichlorobenzene	"	33.4	---	5.00	"	"	--	"	66.9%	(30-120)	--	--	"	
<i>Surrogate(s):</i>														
2-Fluorobiphenyl		Recovery: 64.9%		Limits: 20-120%		"							11/03/08 17:19	
2-Fluorophenol		69.5%		10-120%		"							"	
Nitrobenzene-d5		73.7%		20-130%		"							"	
Phenol-d6		75.7%		10-125%		"							"	
p-Terphenyl-d14		83.0%		35-130%		"							"	
2,4,6-Tribromophenol		79.8%		20-130%		"							"	

**LCS Dup (8101123-BSD1)**

Extracted: 10/29/08 10:10

Acenaphthene	EPA 8270C	50.2	---	5.00	ug/l	1x	--	50.0	100%	(55-120)	31.9% (50)		11/03/08 17:41	
4-Chloro-3-methylphenol	"	48.6	---	5.00	"	"	--	"	97.3%	(35-135)	27.8%	"	"	
2-Chlorophenol	"	47.5	---	5.00	"	"	--	"	95.0%	(30-130)	31.4%	"	"	
1,4-Dichlorobenzene	"	44.7	---	5.00	"	"	--	"	89.3%	(10-125)	39.0%	"	"	
2,4-Dinitrotoluene	"	53.3	---	5.00	"	"	--	"	107%	(50-130)	27.5%	"	"	
4-Nitrophenol	"	13.5	---	25.0	"	"	--	"	27.0%	(10-150)	97.3%	"	"	R7
N-Nitrosodi-n-propylamine	"	51.0	---	10.0	"	"	--	"	102%	(40-130)	28.4%	"	"	
Pentachlorophenol	"	19.4	---	10.0	"	"	--	"	38.8%	(20-150)	62.0%	"	"	R7
Phenol	"	47.6	---	5.00	"	"	--	"	95.3%	(10-145)	30.2%	"	"	
Pyrene	"	54.6	---	5.00	"	"	--	"	109%	(55-125)	32.7%	"	"	
1,2,4-Trichlorobenzene	"	47.4	---	5.00	"	"	--	"	94.8%	(30-120)	34.5%	"	"	
<i>Surrogate(s):</i>														
2-Fluorobiphenyl		Recovery: 96.7%		Limits: 20-120%		"							11/03/08 17:41	
2-Fluorophenol		93.0%		10-120%		"							"	
Nitrobenzene-d5		98.3%		20-130%		"							"	
Phenol-d6		104%		10-125%		"							"	
p-Terphenyl-d14		116%		35-130%		"							"	
2,4,6-Tribromophenol		104%		20-130%		"							"	

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

**Amended Report**

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**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Semivolatile Organic Compounds per EPA Method 8270C - Laboratory Quality Control Results**  
 TestAmerica Portland

QC Batch: 8101203

Soil Preparation Method: EPA 3550

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
<b>Blank (8101203-BLK1)</b>										Extracted: 10/30/08 18:35				
Acenaphthene	EPA 8270C	ND	---	0.325	mg/kg wet	1x	--	--	--	--	--	--	11/04/08 01:19	
Acenaphthylene	"	ND	---	0.325	"	"	--	--	--	--	--	--	"	
Anthracene	"	ND	---	0.325	"	"	--	--	--	--	--	--	"	
Benzo (a) anthracene	"	ND	---	0.325	"	"	--	--	--	--	--	--	"	
Benzo (a) pyrene	"	ND	---	0.325	"	"	--	--	--	--	--	--	"	
Benzo (b) fluoranthene	"	ND	---	0.325	"	"	--	--	--	--	--	--	"	
Benzo (ghi) perylene	"	ND	---	0.325	"	"	--	--	--	--	--	--	"	
Benzo (k) fluoranthene	"	ND	---	0.325	"	"	--	--	--	--	--	--	"	
Benzoic Acid	"	ND	---	0.985	"	"	--	--	--	--	--	--	"	
Benzyl alcohol	"	ND	---	0.985	"	"	--	--	--	--	--	--	"	
4-Bromophenyl phenyl ether	"	ND	---	0.325	"	"	--	--	--	--	--	--	"	
Butyl benzyl phthalate	"	ND	---	0.325	"	"	--	--	--	--	--	--	"	
4-Chloro-3-methylphenol	"	ND	---	0.325	"	"	--	--	--	--	--	--	"	
4-Chloroaniline	"	ND	---	1.97	"	"	--	--	--	--	--	--	"	
Bis(2-chloroethoxy)methane	"	ND	---	0.325	"	"	--	--	--	--	--	--	"	
Bis(2-chloroethyl)ether	"	ND	---	0.325	"	"	--	--	--	--	--	--	"	
Bis(2-chloroisopropyl)ether	"	ND	---	0.325	"	"	--	--	--	--	--	--	"	
2-Chloronaphthalene	"	ND	---	0.325	"	"	--	--	--	--	--	--	"	
2-Chlorophenol	"	ND	---	0.325	"	"	--	--	--	--	--	--	"	
4-Chlorophenyl phenyl ether	"	ND	---	0.325	"	"	--	--	--	--	--	--	"	
Chrysene	"	ND	---	0.325	"	"	--	--	--	--	--	--	"	
Di-n-butyl phthalate	"	ND	---	0.985	"	"	--	--	--	--	--	--	"	
Di-n-octyl phthalate	"	ND	---	0.325	"	"	--	--	--	--	--	--	"	
Dibenzo (a,h) anthracene	"	ND	---	0.325	"	"	--	--	--	--	--	--	"	
Dibenzofuran	"	ND	---	0.325	"	"	--	--	--	--	--	--	"	
1,2-Dichlorobenzene	"	ND	---	0.985	"	"	--	--	--	--	--	--	"	
1,3-Dichlorobenzene	"	ND	---	0.985	"	"	--	--	--	--	--	--	"	
1,4-Dichlorobenzene	"	ND	---	0.985	"	"	--	--	--	--	--	--	"	
3,3'-Dichlorobenzidine	"	ND	---	0.985	"	"	--	--	--	--	--	--	"	
2,4-Dichlorophenol	"	ND	---	0.325	"	"	--	--	--	--	--	--	"	
Diethyl phthalate	"	ND	---	0.325	"	"	--	--	--	--	--	--	"	
2,4-Dimethylphenol	"	ND	---	0.985	"	"	--	--	--	--	--	--	"	
Dimethyl phthalate	"	ND	---	0.325	"	"	--	--	--	--	--	--	"	
4,6-Dinitro-2-methylphenol	"	ND	---	0.985	"	"	--	--	--	--	--	--	"	
2,4-Dinitrophenol	"	ND	---	1.97	"	"	--	--	--	--	--	--	"	
2,4-Dinitrotoluene	"	ND	---	0.492	"	"	--	--	--	--	--	--	"	
2,6-Dinitrotoluene	"	ND	---	0.492	"	"	--	--	--	--	--	--	"	
Bis(2-ethylhexyl)phthalate	"	ND	---	1.97	"	"	--	--	--	--	--	--	"	
Fluoranthene	"	ND	---	0.325	"	"	--	--	--	--	--	--	"	

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

**Amended Report**

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**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Semivolatile Organic Compounds per EPA Method 8270C - Laboratory Quality Control Results**  
 TestAmerica Portland

QC Batch: 8101203 Soil Preparation Method: EPA 3550

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
<b>Blank (8101203-BLK1)</b>										Extracted: 10/30/08 18:35				
Fluorene	EPA 8270C	ND	---	0.325	mg/kg wet	1x	--	--	--	--	--	--	11/04/08 01:19	
Hexachlorobenzene	"	ND	---	0.325	"	"	--	--	--	--	--	--	"	
Hexachlorobutadiene	"	ND	---	0.985	"	"	--	--	--	--	--	--	"	
Hexachlorocyclopentadiene	"	ND	---	0.985	"	"	--	--	--	--	--	--	"	
Hexachloroethane	"	ND	---	0.985	"	"	--	--	--	--	--	--	"	
Indeno (1,2,3-cd) pyrene	"	ND	---	0.325	"	"	--	--	--	--	--	--	"	
Isophorone	"	ND	---	0.325	"	"	--	--	--	--	--	--	"	
2-Methylnaphthalene	"	ND	---	0.325	"	"	--	--	--	--	--	--	"	
2-Methylphenol	"	ND	---	0.325	"	"	--	--	--	--	--	--	"	
3-,4-Methylphenol	"	ND	---	0.325	"	"	--	--	--	--	--	--	"	
Naphthalene	"	ND	---	0.325	"	"	--	--	--	--	--	--	"	
2-Nitroaniline	"	ND	---	0.325	"	"	--	--	--	--	--	--	"	
3-Nitroaniline	"	ND	---	0.985	"	"	--	--	--	--	--	--	"	
4-Nitroaniline	"	ND	---	0.325	"	"	--	--	--	--	--	--	"	
Nitrobenzene	"	ND	---	0.325	"	"	--	--	--	--	--	--	"	
2-Nitrophenol	"	ND	---	0.325	"	"	--	--	--	--	--	--	"	
4-Nitrophenol	"	ND	---	0.985	"	"	--	--	--	--	--	--	"	
N-Nitrosodi-n-propylamine	"	ND	---	0.325	"	"	--	--	--	--	--	--	"	
N-Nitrosodiphenylamine	"	ND	---	0.325	"	"	--	--	--	--	--	--	"	
Pentachlorophenol	"	ND	---	0.985	"	"	--	--	--	--	--	--	"	
Phenanthrene	"	ND	---	0.325	"	"	--	--	--	--	--	--	"	
Phenol	"	ND	---	0.325	"	"	--	--	--	--	--	--	"	
Pyrene	"	ND	---	0.325	"	"	--	--	--	--	--	--	"	
1,2,4-Trichlorobenzene	"	ND	---	0.985	"	"	--	--	--	--	--	--	"	
2,4,5-Trichlorophenol	"	ND	---	0.325	"	"	--	--	--	--	--	--	"	
2,4,6-Trichlorophenol	"	ND	---	0.325	"	"	--	--	--	--	--	--	"	
<i>Surrogate(s):</i>	<i>2-Fluorobiphenyl</i>	<i>Recovery:</i>	<i>59.0%</i>	<i>Limits:</i>	<i>30-126%</i>	<i>"</i>							<i>11/04/08 01:19</i>	
	<i>2-Fluorophenol</i>		<i>44.2%</i>		<i>28-119%</i>	<i>"</i>							<i>"</i>	
	<i>Nitrobenzene-d5</i>		<i>44.1%</i>		<i>26-117%</i>	<i>"</i>							<i>"</i>	
	<i>Phenol-d6</i>		<i>58.7%</i>		<i>35-125%</i>	<i>"</i>							<i>"</i>	
	<i>p-Terphenyl-d14</i>		<i>101%</i>		<i>26-143%</i>	<i>"</i>							<i>"</i>	
	<i>2,4,6-Tribromophenol</i>		<i>58.4%</i>		<i>30-127%</i>	<i>"</i>							<i>"</i>	

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

**Amended Report**

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**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Semivolatile Organic Compounds per EPA Method 8270C - Laboratory Quality Control Results**

TestAmerica Portland

QC Batch: 8101203

Soil Preparation Method: EPA 3550

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
---------	--------	--------	------	-----	-------	-----	---------------	-----------	-------	----------	-------	----------	----------	-------

**LCS (8101203-BS1)**

Extracted: 10/30/08 18:35

Acenaphthene	EPA 8270C	2.12	---	0.328	mg/kg wet	1x	--	2.49	85.3%	(46-120)	--	--	11/04/08 00:58	
4-Chloro-3-methylphenol	"	2.10	---	0.328	"	"	--	"	84.2%	(36-138)	--	--	"	
2-Chlorophenol	"	1.84	---	0.328	"	"	--	"	73.8%	(18-137)	--	--	"	
1,4-Dichlorobenzene	"	1.83	---	0.995	"	"	--	"	73.5%	(7-135)	--	--	"	
2,4-Dinitrotoluene	"	2.25	---	0.498	"	"	--	"	90.4%	(49-125)	--	--	"	
4-Nitrophenol	"	1.90	---	0.995	"	"	--	"	76.3%	(40-148)	--	--	"	
N-Nitrosodi-n-propylamine	"	2.08	---	0.328	"	"	--	"	83.6%	(20-138)	--	--	"	
Pentachlorophenol	"	1.64	---	0.995	"	"	--	"	66.1%	(22-129)	--	--	"	
Phenol	"	1.87	---	0.328	"	"	--	"	75.3%	(37-122)	--	--	"	
Pyrene	"	2.31	---	0.328	"	"	--	"	92.8%	(26-143)	--	--	"	
1,2,4-Trichlorobenzene	"	1.89	---	0.995	"	"	--	"	76.0%	(25-129)	--	--	"	

<i>Surrogate(s):</i>	<i>2-Fluorobiphenyl</i>	<i>Recovery:</i>	<i>77.5%</i>	<i>Limits:</i>	<i>30-126%</i>	<i>"</i>							<i>11/04/08 00:58</i>	
	<i>2-Fluorophenol</i>		<i>59.6%</i>		<i>28-119%</i>	<i>"</i>							<i>"</i>	
	<i>Nitrobenzene-d5</i>		<i>56.8%</i>		<i>26-117%</i>	<i>"</i>							<i>"</i>	
	<i>Phenol-d6</i>		<i>73.0%</i>		<i>35-125%</i>	<i>"</i>							<i>"</i>	
	<i>p-Terphenyl-d14</i>		<i>108%</i>		<i>26-143%</i>	<i>"</i>							<i>"</i>	
	<i>2,4,6-Tribromophenol</i>		<i>86.1%</i>		<i>30-127%</i>	<i>"</i>							<i>"</i>	

**Matrix Spike (8101203-MS1)**

QC Source: ARJ0119-09

Extracted: 10/30/08 18:35

RL3

Acenaphthene	EPA 8270C	2.35	---	1.32	mg/kg wet	4x	ND	2.49	94.4%	(26-150)	--	--	11/04/08 00:14	
4-Chloro-3-methylphenol	"	2.32	---	1.32	"	"	ND	"	93.1%	"	--	--	"	
2-Chlorophenol	"	2.15	---	1.32	"	"	ND	"	86.3%	(8-150)	--	--	"	
1,4-Dichlorobenzene	"	1.93	---	3.99	"	"	ND	"	77.4%	(4-150)	--	--	"	
2,4-Dinitrotoluene	"	2.26	---	1.99	"	"	ND	"	90.8%	(32-150)	--	--	"	
4-Nitrophenol	"	1.89	---	3.99	"	"	ND	"	76.0%	(20-175)	--	--	"	
N-Nitrosodi-n-propylamine	"	2.25	---	1.32	"	"	ND	"	90.4%	(10-150)	--	--	"	
Pentachlorophenol	"	1.58	---	3.99	"	"	ND	"	63.3%	(12-150)	--	--	"	
Phenol	"	2.20	---	1.32	"	"	ND	"	88.1%	(17-150)	--	--	"	
Pyrene	"	2.33	---	1.32	"	"	ND	"	93.4%	(16-175)	--	--	"	
1,2,4-Trichlorobenzene	"	2.06	---	3.99	"	"	ND	"	82.6%	(18-150)	--	--	"	

<i>Surrogate(s):</i>	<i>2-Fluorobiphenyl</i>	<i>Recovery:</i>	<i>79.7%</i>	<i>Limits:</i>	<i>30-126%</i>	<i>"</i>							<i>11/04/08 00:14</i>	
	<i>2-Fluorophenol</i>		<i>78.2%</i>		<i>28-119%</i>	<i>"</i>							<i>"</i>	
	<i>Nitrobenzene-d5</i>		<i>77.4%</i>		<i>26-117%</i>	<i>"</i>							<i>"</i>	
	<i>Phenol-d6</i>		<i>87.0%</i>		<i>35-125%</i>	<i>"</i>							<i>"</i>	
	<i>p-Terphenyl-d14</i>		<i>98.0%</i>		<i>26-143%</i>	<i>"</i>							<i>"</i>	
	<i>2,4,6-Tribromophenol</i>		<i>91.3%</i>		<i>30-127%</i>	<i>"</i>							<i>"</i>	

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

**Amended Report**

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**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Semivolatile Organic Compounds per EPA Method 8270C - Laboratory Quality Control Results**

TestAmerica Portland

QC Batch: 8101203

Soil Preparation Method: EPA 3550

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
<b>Matrix Spike Dup (8101203-MSD1)</b>			QC Source: ARJ0119-09					Extracted: 10/30/08 18:35					RL3	
Acenaphthene	EPA 8270C	2.04	---	1.31	mg/kg wet	4x	ND	2.48	82.1%	(26-150)	14.5% (60)		11/04/08 00:36	
4-Chloro-3-methylphenol	"	1.95	---	1.31	"	"	ND	"	78.6%	"	17.4%	"	"	
2-Chlorophenol	"	1.79	---	1.31	"	"	ND	"	72.1%	(8-150)	18.5%	"	"	
1,4-Dichlorobenzene	"	1.42	---	3.97	"	"	ND	"	57.1%	(4-150)	30.7%	"	"	
2,4-Dinitrotoluene	"	1.95	---	1.98	"	"	ND	"	78.5%	(32-150)	15.1%	"	"	
4-Nitrophenol	"	1.51	---	3.97	"	"	ND	"	61.0%	(20-175)	22.4%	"	"	
N-Nitrosodi-n-propylamine	"	1.95	---	1.31	"	"	ND	"	78.6%	(10-150)	14.6%	"	"	
Pentachlorophenol	"	1.34	---	3.97	"	"	ND	"	53.9%	(12-150)	16.5%	"	"	
Phenol	"	1.87	---	1.31	"	"	ND	"	75.3%	(17-150)	16.2%	"	"	
Pyrene	"	1.92	---	1.31	"	"	ND	"	77.4%	(16-175)	19.2%	"	"	
1,2,4-Trichlorobenzene	"	1.64	---	3.97	"	"	ND	"	66.3%	(18-150)	22.4%	"	"	
<i>Surrogate(s):</i>	<i>2-Fluorobiphenyl</i>	<i>Recovery:</i>	<i>81.2%</i>	<i>Limits:</i>	<i>30-126%</i>	<i>"</i>							<i>11/04/08 00:36</i>	
	<i>2-Fluorophenol</i>		<i>79.2%</i>		<i>28-119%</i>	<i>"</i>							<i>"</i>	
	<i>Nitrobenzene-d5</i>		<i>77.0%</i>		<i>26-117%</i>	<i>"</i>							<i>"</i>	
	<i>Phenol-d6</i>		<i>85.2%</i>		<i>35-125%</i>	<i>"</i>							<i>"</i>	
	<i>p-Terphenyl-d14</i>		<i>85.3%</i>		<i>26-143%</i>	<i>"</i>							<i>"</i>	
	<i>2,4,6-Tribromophenol</i>		<i>83.3%</i>		<i>30-127%</i>	<i>"</i>							<i>"</i>	

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

**Amended Report**

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**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Mercury (CVAA) - Laboratory Quality Control Results**

TestAmerica Tacoma

QC Batch: 37735

Soil Preparation Method: 7471A

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
<b>Blank (580-37782-1)</b>			QC Source:					Extracted: 11/04/08 09:44						
Mercury	7471A Dry	ND	---	0.020	mg/Kg dry	1x	--	--	--	--	--	--	11/04/08 18:04	
<b>LCS (580-37782-3)</b>			QC Source:					Extracted: 11/04/08 09:44						
Mercury	7471A Dry	0.207	---	0.020	mg/Kg dry	1x	--	0.200	104%	(75-125)	--	--	11/04/08 18:11	
<b>LCS Dup (580-37782-4)</b>			QC Source:					Extracted: 11/04/08 09:44						
Mercury	7471A Dry	0.195	---	0.020	mg/Kg dry	1x	--	0.200	98%	(75-125)	6% (25)		11/04/08 18:15	
<b>LCS (580-37782-5)</b>			QC Source:					Extracted: 11/04/08 09:44						
Mercury	7471A Dry	4.46	---	0.10	mg/Kg dry	1x	--	4.47	100%	(80-120)	--	--	11/04/08 18:18	

QC Batch: 38404

Soil Preparation Method: 7471A

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
<b>Blank (580-38428-16)</b>			QC Source:					Extracted: 11/21/08 08:57						
Mercury	7471A Dry	ND	---	0.020	mg/Kg dry	1x	--	--	--	--	--	--	11/21/08 11:08	
<b>LCS (580-38428-17)</b>			QC Source:					Extracted: 11/21/08 08:57						
Mercury	7471A Dry	0.208	---	0.020	mg/Kg dry	1x	--	0.200	104%	(75-125)	--	--	11/21/08 11:12	
<b>LCS Dup (580-38428-18)</b>			QC Source:					Extracted: 11/21/08 08:57						
Mercury	7471A Dry	0.210	---	0.020	mg/Kg dry	1x	--	0.200	105%	(75-125)	1% (25)		11/21/08 11:16	

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

**Amended Report**

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Amended Report

<b>BGES, INC.</b> 750 W. 2nd Ave, Ste 104 Anchorage, AK 99501	Project Name: <b>Nichin Cove</b> Project Number: Nichin Cove Project Manager: Renee Lafata	Report Created: 11/26/08 17:34
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**Metals (ICP/MS) - Laboratory Quality Control Results**  
 TestAmerica Tacoma

<b>QC Batch: 38198</b>	<b>Soil Preparation Method: 3050B</b>
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Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
<b>Blank (580-38231-1)</b>			QC Source:					Extracted: 11/17/08 11:05						
Arsenic	6020 TMP Dry	ND	---	0.20	mg/Kg dry	10x	--	--	--	--	--	--	11/17/08 15:15	
Selenium	"	ND	---	0.50	"	"	--	--	--	--	--	--	"	
<b>LCS (580-38231-27)</b>			QC Source:					Extracted: 11/17/08 11:05						
Arsenic	6020 TMP Dry	83.8	---	2.0	mg/Kg dry	50x	--	95.5	88%	(79.2-121.	--	--	11/17/08 17:43	
Selenium	"	156	---	5.1	"	"	--	161	97%	(76.7-123.	--	--	"	
<b>LCS (580-38231-6)</b>			QC Source:					Extracted: 11/17/08 11:05						
Arsenic	6020 TMP Dry	203	---	2.0	mg/Kg dry	100x	--	200	101%	(80-120)	--	--	11/17/08 15:51	
Selenium	"	200	---	5.0	"	"	--	"	100%	"	--	--	"	
<b>LCS Dup (580-38231-7)</b>			QC Source:					Extracted: 11/17/08 11:05						
Arsenic	6020 TMP Dry	202	---	2.0	mg/Kg dry	100x	--	200	101%	(80-120)	1%	(35)	11/17/08 15:55	
Selenium	"	203	---	5.0	"	"	--	"	102%	"	2%	"	"	

<b>QC Batch: 38484</b>	<b>Soil Preparation Method: 3050B</b>
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Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
<b>Blank (580-38512-11)</b>			QC Source:					Extracted: 11/24/08 12:09						
Arsenic	6020 TMP Dry	ND	---	0.20	mg/Kg dry	10x	--	--	--	--	--	--	11/24/08 16:12	
Barium	"	ND	---	0.20	"	"	--	--	--	--	--	--	"	
Cadmium	"	ND	---	0.20	"	"	--	--	--	--	--	--	"	
Chromium	"	ND	---	0.20	"	"	--	--	--	--	--	--	"	
Lead	"	ND	---	0.20	"	"	--	--	--	--	--	--	"	
Selenium	"	ND	---	0.50	"	"	--	--	--	--	--	--	"	
Silver	"	ND	---	0.20	"	"	--	--	--	--	--	--	"	
<b>LCS (580-38512-16)</b>			QC Source:					Extracted: 11/24/08 12:09						
Arsenic	6020 TMP Dry	202	---	2.0	mg/Kg dry	100x	--	200	101%	(80-120)	--	--	11/24/08 16:45	
Barium	"	200	---	2.0	"	"	--	"	100%	"	--	--	"	
Cadmium	"	4.70	---	2.0	"	"	--	5.00	94%	"	--	--	"	
Chromium	"	20.0	---	2.0	"	"	--	20.0	100%	"	--	--	"	
Lead	"	48.0	---	2.0	"	"	--	50.0	96%	"	--	--	"	
Selenium	"	198	---	5.0	"	"	--	200	99%	"	--	--	"	
Silver	"	31.0	---	2.0	"	"	--	30.0	103%	"	--	--	"	

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

Amended Report

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**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Metals (ICP/MS) - Laboratory Quality Control Results**

TestAmerica Tacoma

**QC Batch: 38484**

**Soil Preparation Method: 3050B**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes	
<b>LCS Dup (580-38512-17)</b>			QC Source:					Extracted: 11/24/08 12:09							
Arsenic	6020 TMP Dry	201	---	2.0	mg/Kg dry	100x	--	200	100%	(80-120)	0%	(35)	11/24/08 16:50		
Barium	"	201	---	2.0	"	"	--	"	101%	"	0%	"	"		
Cadmium	"	4.93	---	2.0	"	"	--	5.00	99%	"	5%	"	"		
Chromium	"	20.1	---	2.0	"	"	--	20.0	100%	"	0%	"	"		
Lead	"	48.8	---	2.0	"	"	--	50.0	98%	"	2%	"	"		
Selenium	"	197	---	5.0	"	"	--	200	99%	"	0%	"	"		
Silver	"	31.1	---	2.0	"	"	--	30.0	104%	"	0%	"	"		
<b>LCS (580-38512-35)</b>			QC Source:					Extracted: 11/24/08 12:09							
Arsenic	6020 TMP Dry	84.7	---	2.0	mg/Kg dry	50x	--	95.5	89%	(79.2-121.0)	--	--	11/24/08 18:22		
Barium	"	412	---	2.0	"	"	--	426	97%	(81.5-118.0)	--	--	"		
Cadmium	"	61.2	---	2.0	"	"	--	63.0	97%	(81.2-118.0)	--	--	"		
Chromium	"	94.2	---	2.0	"	"	--	99.0	95%	(80.1-119.0)	--	--	"		
Lead	"	97.2	---	2.0	"	"	--	92.4	105%	(81.5-118.0)	--	--	"		
Selenium	"	158	---	5.1	"	"	--	161	98%	(76.7-123.0)	--	--	"		
Silver	"	80.8	---	2.0	"	"	--	83.8	96%	(46.6-153.0)	--	--	"		

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

**Amended Report**

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**Amended Report**

<b>BGES, INC.</b> 750 W. 2nd Ave, Ste 104 Anchorage, AK 99501	Project Name: <b>Nichin Cove</b> Project Number: Nichin Cove Project Manager: Renee Lafata	Report Created: 11/26/08 17:34
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**Metals (ICP/MS) TCLP - Laboratory Quality Control Results**  
 TestAmerica Tacoma

**QC Batch: 38240      Soil Preparation Method: 3010A**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes	
<b>Matrix Spike Dup (117679D)</b>			QC Source: ARJ0119-10					Extracted: 11/18/08 09:07							
Arsenic	6020 TCLP	5.36	---	0.040	mg/L	100x	0.0056	5.00	107%	(50-150)	1%	(20)	11/18/08 15:04	H	
<b>Matrix Spike (117679S)</b>			QC Source: ARJ0119-10					Extracted: 11/18/08 09:07							
Arsenic	6020 TCLP	5.43	---	0.040	mg/L	100x	0.0056	5.00	109%	(50-150)	--	--	11/18/08 15:00	H	
<b>Duplicate (117679X)</b>			QC Source: ARJ0119-10					Extracted: 11/18/08 09:07							
Arsenic	6020 TCLP	0.00604	---	0.0040	mg/L	10x	0.0056	--	--	--	7%	(20)	11/18/08 14:56	H	

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

**Amended Report**

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**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Alaska - Gasoline Range Organics (GC) - Laboratory Quality Control Results**  
 TestAmerica Tacoma

**QC Batch: 37656**

**Soil Preparation Method: 5035**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
---------	--------	--------	------	-----	-------	-----	---------------	-----------	-------	----------	-------	----------	----------	-------

**Blank (580-37724-1)**

QC Source:

Extracted: 10/31/08 11:11

Gasoline Range Organics (GRO)-C6-C10	AK101	ND	---	4.0	mg/Kg	1x	--	--	--	--	--	--	11/03/08 13:11	
<i>Surrogate(s):</i>														
	Trifluorotoluene (Surr)	Recovery:	82%	Limits:	60-120%	"							11/03/08 13:11	
	4-Bromofluorobenzene (Surr)		104%		60-120%	"							"	
	Ethylbenzene-d10		112%		60-120%	"							"	
	Fluorobenzene (Surr)		93%		60-120%	"							"	
	Toluene-d8 (Surr)		110%		60-120%	"							"	

**LCS (580-37724-2)**

QC Source:

Extracted: 10/31/08 11:16

Gasoline Range Organics (GRO)-C6-C10	AK101	45.4	---	4.0	mg/Kg	1x	--	44.0	103%	(60-120)	--	--	11/03/08 13:54	
<i>Surrogate(s):</i>														
	Trifluorotoluene (Surr)	Recovery:	85%	Limits:	60-120%	"							11/03/08 13:54	
	4-Bromofluorobenzene (Surr)		108%		60-120%	"							"	
	Ethylbenzene-d10		111%		60-120%	"							"	
	Fluorobenzene (Surr)		95%		60-120%	"							"	
	Toluene-d8 (Surr)		104%		60-120%	"							"	

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

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**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Mercury (CVAA) - Laboratory Quality Control Results**  
 TestAmerica Tacoma

**QC Batch: 37731      Water Preparation Method: 7470A**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
<b>Blank (580-37782-24)</b>			QC Source:					Extracted: 11/04/08 09:19						
Mercury	7470A	ND	---	0.00020	mg/L	1x	--	--	--	--	--	--	11/04/08 19:51	
<b>LCS (580-37782-25)</b>			QC Source:					Extracted: 11/04/08 09:19						
Mercury	7470A	0.00210	---	0.00020	mg/L	1x	--	0.00200	105%	(75-125)	--	--	11/04/08 19:55	
<b>LCS Dup (580-37782-26)</b>			QC Source:					Extracted: 11/04/08 09:19						
Mercury	7470A	0.00224	---	0.00020	mg/L	1x	--	0.00200	112%	(75-125)	6%	(20)	11/04/08 19:59	

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Troy J. Engstrom, Lab Director

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**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Metals (ICP) - Laboratory Quality Control Results**  
 TestAmerica Tacoma

QC Batch: 37692 Soil Preparation Method: 3050B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes	
<b>Blank (580-37734-1)</b>			QC Source:					Extracted: 11/03/08 10:11							
Chromium	6010B TMP Dry	ND	---	1.3	mg/Kg dry	1x	--	--	--	--	--	--	11/03/08 16:12		
Lead	"	ND	---	1.5	"	"	--	--	--	--	--	--	"		
Cadmium	"	ND	---	0.50	"	"	--	--	--	--	--	--	"		
Selenium	"	ND	---	5.0	"	"	--	--	--	--	--	--	"		
Barium	"	ND	---	0.50	"	"	--	--	--	--	--	--	"		
Silver	"	ND	---	1.0	"	"	--	--	--	--	--	--	"		
Arsenic	"	ND	---	3.0	"	"	--	--	--	--	--	--	"		
<b>LCS (580-37734-6)</b>			QC Source:					Extracted: 11/03/08 10:11							
Chromium	6010B TMP Dry	19.3	---	1.3	mg/Kg dry	1x	--	20.0	96%	(80-120)	--	--	11/03/08 16:49		
Lead	"	48.1	---	1.5	"	"	--	50.0	96%	"	--	--	"		
Cadmium	"	4.38	---	0.50	"	"	--	5.00	88%	"	--	--	"		
Barium	"	194	---	0.50	"	"	--	200	97%	"	--	--	"		
Selenium	"	182	---	5.0	"	"	--	"	91%	"	--	--	"		
Silver	"	31.0	---	1.0	"	"	--	30.0	103%	"	--	--	"		
Arsenic	"	193	---	3.0	"	"	--	200	96%	"	--	--	"		
<b>LCS Dup (580-37734-7)</b>			QC Source:					Extracted: 11/03/08 10:11							
Lead	6010B TMP Dry	49.2	---	1.5	mg/Kg dry	1x	--	50.0	98%	(80-120)	2%	(35)	11/03/08 16:54		
Chromium	"	19.6	---	1.3	"	"	--	20.0	98%	"	2%	"	"		
Cadmium	"	4.46	---	0.50	"	"	--	5.00	89%	"	2%	"	"		
Barium	"	193	---	0.50	"	"	--	200	97%	"	0%	"	"		
Selenium	"	186	---	5.0	"	"	--	"	93%	"	2%	"	"		
Silver	"	31.5	---	1.0	"	"	--	30.0	105%	"	2%	"	"		
Arsenic	"	197	---	3.0	"	"	--	200	98%	"	2%	"	"		

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

**Amended Report**

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**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Metals (ICP) - Laboratory Quality Control Results**  
 TestAmerica Tacoma

QC Batch: 37719

Soil Preparation Method: 7195

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes	
<b>Matrix Spike Dup (117678D)</b>			QC Source: ARJ0119-09					Extracted: 11/03/08 16:19							
Hexavalent chromium	6010B HEX Dry	50.3	---	0.60	mg/Kg dry	1x	ND	45.9	109%	(75-125)	1%	(35)	11/04/08 16:21		
<b>Matrix Spike (117678S)</b>			QC Source: ARJ0119-09					Extracted: 11/03/08 16:19							
Hexavalent chromium	6010B HEX Dry	51.0	---	0.60	mg/Kg dry	1x	ND	45.9	111%	(75-125)	--	--	11/04/08 16:18		
<b>Duplicate (117678X)</b>			QC Source: ARJ0119-09					Extracted: 11/03/08 16:19							
Hexavalent chromium	6010B HEX Dry	ND	---	0.61	mg/Kg dry	1x	ND	--	--	--	22%	(35)	11/04/08 16:14		
<b>Blank (580-37777-1)</b>			QC Source:					Extracted: 11/03/08 16:19							
Hexavalent chromium	6010B HEX Dry	ND	---	0.26	mg/Kg dry	1x	--	--	--	--	--	--	11/04/08 16:02		
<b>LCS (580-37777-2)</b>			QC Source:					Extracted: 11/03/08 16:19							
Hexavalent chromium	6010B HEX Dry	18.3	---	0.26	mg/Kg dry	1x	--	20.0	91%	(80-120)	--	--	11/04/08 16:03		
<b>LCS Dup (580-37777-3)</b>			QC Source:					Extracted: 11/03/08 16:19							
Hexavalent chromium	6010B HEX Dry	17.3	---	0.26	mg/Kg dry	1x	--	20.0	86%	(80-120)	5%	(35)	11/04/08 16:06		

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

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Amended Report

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Metals (ICP/MS) Total Recoverable - Laboratory Quality Control Results**

TestAmerica Tacoma

QC Batch: 37718

Water Preparation Method: 3005A

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
<b>Blank (580-37787-1)</b>			QC Source:				Extracted: 11/03/08 15:45							
Lead	6020 Total Recoverable	ND	---	0.00040	mg/L	1x	--	--	--	--	--	--	11/04/08 14:38	
Cadmium	"	ND	---	0.00040	"	"	--	--	--	--	--	--	"	
Arsenic	"	ND	---	0.00040	"	"	--	--	--	--	--	--	"	
Barium	"	ND	---	0.0012	"	"	--	--	--	--	--	--	"	
Selenium	"	ND	---	0.00040	"	"	--	--	--	--	--	--	"	
Silver	"	ND	---	0.00040	"	"	--	--	--	--	--	--	"	
Chromium	"	ND	---	0.00040	"	"	--	--	--	--	--	--	"	
<b>LCS (580-37787-6)</b>			QC Source:				Extracted: 11/03/08 15:45							
Lead	6020 Total Recoverable	1.00	---	0.020	mg/L	50x	--	1.00	100%	(80-120)	--	--	11/04/08 15:14	
Arsenic	"	4.27	---	0.020	"	"	--	4.00	107%	"	--	--	"	
Cadmium	"	0.106	---	0.020	"	"	--	0.100	106%	"	--	--	"	
Barium	"	4.22	---	0.060	"	"	--	4.00	105%	"	--	--	"	
Selenium	"	4.38	---	0.020	"	"	--	"	109%	"	--	--	"	
Silver	"	0.666	---	0.020	"	"	--	0.600	111%	"	--	--	"	
Chromium	"	0.429	---	0.020	"	"	--	0.400	107%	"	--	--	"	
<b>LCS Dup (580-37787-7)</b>			QC Source:				Extracted: 11/03/08 15:45							
Lead	6020 Total Recoverable	0.991	---	0.020	mg/L	50x	--	1.00	99%	(80-120)	1%	(20)	11/04/08 15:19	
Arsenic	"	4.24	---	0.020	"	"	--	4.00	106%	"	1%	"	"	
Cadmium	"	0.109	---	0.020	"	"	--	0.100	109%	"	3%	"	"	
Selenium	"	4.36	---	0.020	"	"	--	4.00	109%	"	0%	"	"	
Barium	"	4.16	---	0.060	"	"	--	"	104%	"	1%	"	"	
Chromium	"	0.423	---	0.020	"	"	--	0.400	106%	"	1%	"	"	
Silver	"	0.650	---	0.020	"	"	--	0.600	108%	"	2%	"	"	
<b>LCS (580-37787-8)</b>			QC Source:				Extracted: 11/03/08 15:45							
Lead	6020 Total Recoverable	0.979	---	0.020	mg/L	50x	--	1.00	98%	(80-120)	--	--	11/04/08 15:24	
Cadmium	"	0.103	---	0.020	"	"	--	0.100	103%	"	--	--	"	
Arsenic	"	4.26	---	0.020	"	"	--	4.00	106%	"	--	--	"	
Selenium	"	4.42	---	0.020	"	"	--	"	110%	"	--	--	"	
Barium	"	4.17	---	0.060	"	"	--	"	104%	"	--	--	"	
Silver	"	0.652	---	0.020	"	"	--	0.600	109%	"	--	--	"	
Chromium	"	0.424	---	0.020	"	"	--	0.400	106%	"	--	--	"	

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

Amended Report

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**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Organic Carbon, Total (TOC) - Laboratory Quality Control Results**

TestAmerica Tacoma

**QC Batch: 37831**

**Soil Preparation Method: NA**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes	
<b>Matrix Spike (1176714S)</b>			QC Source: ARJ0119-15					Extracted: 11/04/08 14:06							
Total Organic Carbon	9060 STD	236000	---	2000	mg/Kg	1x	200000	51800	76%	(76-128)	--	--	11/04/08 14:06		
<b>Duplicate (1176714X)</b>			QC Source: ARJ0119-15					Extracted: 11/04/08 14:06							
Total Organic Carbon	9060 STD	190000	---	2000	mg/Kg	1x	200000	--	--	--	4%	(20)	11/04/08 14:06		
<b>Blank (580-37831-1)</b>			QC Source:					Extracted: 11/04/08 14:06							
Total Organic Carbon	9060 STD	ND	---	2000	mg/Kg	1x	--	--	--	--	--	--	11/04/08 14:06		
<b>LCS (580-37831-2)</b>			QC Source:					Extracted: 11/04/08 14:06							
Total Organic Carbon	9060 STD	4800	---	2000	mg/Kg	1x	--	3400	141%	(13-187)	--	--	11/04/08 14:06		

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

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**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Volatile Organic Compounds (GC/MS) - Laboratory Quality Control Results**  
 TestAmerica Tacoma

QC Batch: 37654

Water Preparation Method: 5030B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes	
<b>Blank (580-37654-1)</b>			<b>QC Source:</b>					<b>Extracted: 10/30/08 17:32</b>							
Dichlorodifluoromethane	8260B STD	ND	---	1.0	ug/L	1x	--	--	--	--	--	--	10/30/08 17:32		
Chloromethane	"	ND	---	1.0	"	"	--	--	--	--	--	--	"		
Vinyl chloride	"	ND	---	1.0	"	"	--	--	--	--	--	--	"		
Bromomethane	"	ND	---	1.0	"	"	--	--	--	--	--	--	"		
Chloroethane	"	ND	---	1.0	"	"	--	--	--	--	--	--	"		
Trichlorofluoromethane	"	ND	---	1.0	"	"	--	--	--	--	--	--	"		
1,1-Dichloroethene	"	ND	---	1.0	"	"	--	--	--	--	--	--	"		
Methylene Chloride	"	ND	---	1.0	"	"	--	--	--	--	--	--	"		
trans-1,2-Dichloroethene	"	ND	---	1.0	"	"	--	--	--	--	--	--	"		
1,1-Dichloroethane	"	ND	---	1.0	"	"	--	--	--	--	--	--	"		
2,2-Dichloropropane	"	ND	---	1.0	"	"	--	--	--	--	--	--	"		
cis-1,2-Dichloroethene	"	ND	---	1.0	"	"	--	--	--	--	--	--	"		
Chlorobromomethane	"	ND	---	1.0	"	"	--	--	--	--	--	--	"		
Chloroform	"	ND	---	1.0	"	"	--	--	--	--	--	--	"		
1,1,1-Trichloroethane	"	ND	---	1.0	"	"	--	--	--	--	--	--	"		
Carbon tetrachloride	"	ND	---	1.0	"	"	--	--	--	--	--	--	"		
1,1-Dichloropropene	"	ND	---	1.0	"	"	--	--	--	--	--	--	"		
Benzene	"	ND	---	1.0	"	"	--	--	--	--	--	--	"		
1,2-Dichloroethane	"	ND	---	1.0	"	"	--	--	--	--	--	--	"		
Trichloroethene	"	ND	---	1.0	"	"	--	--	--	--	--	--	"		
1,2-Dichloropropane	"	ND	---	1.0	"	"	--	--	--	--	--	--	"		
Dibromomethane	"	ND	---	1.0	"	"	--	--	--	--	--	--	"		
Dichlorobromomethane	"	ND	---	1.0	"	"	--	--	--	--	--	--	"		
cis-1,3-Dichloropropene	"	ND	---	1.0	"	"	--	--	--	--	--	--	"		
Toluene	"	ND	---	1.0	"	"	--	--	--	--	--	--	"		
trans-1,3-Dichloropropene	"	ND	---	1.0	"	"	--	--	--	--	--	--	"		
1,1,2-Trichloroethane	"	ND	---	1.0	"	"	--	--	--	--	--	--	"		
Tetrachloroethene	"	ND	---	1.0	"	"	--	--	--	--	--	--	"		
1,3-Dichloropropane	"	ND	---	1.0	"	"	--	--	--	--	--	--	"		
Chlorodibromomethane	"	ND	---	1.0	"	"	--	--	--	--	--	--	"		
Ethylene Dibromide	"	ND	---	1.0	"	"	--	--	--	--	--	--	"		
Chlorobenzene	"	ND	---	1.0	"	"	--	--	--	--	--	--	"		
Ethylbenzene	"	ND	---	1.0	"	"	--	--	--	--	--	--	"		
1,1,1,2-Tetrachloroethane	"	ND	---	1.0	"	"	--	--	--	--	--	--	"		
1,1,2,2-Tetrachloroethane	"	ND	---	1.0	"	"	--	--	--	--	--	--	"		
m-Xylene & p-Xylene	"	ND	---	2.0	"	"	--	--	--	--	--	--	"		
o-Xylene	"	ND	---	1.0	"	"	--	--	--	--	--	--	"		
Styrene	"	ND	---	1.0	"	"	--	--	--	--	--	--	"		
Bromoform	"	ND	---	1.0	"	"	--	--	--	--	--	--	"		

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

**Amended Report**

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**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Volatile Organic Compounds (GC/MS) - Laboratory Quality Control Results**  
 TestAmerica Tacoma

QC Batch: 37654 Water Preparation Method: 5030B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes	
<b>Blank (580-37654-1)</b>			QC Source:					Extracted: 10/30/08 17:32							
Isopropylbenzene	8260B STD	ND	---	1.0	ug/L	1x	--	--	--	--	--	--	10/30/08 17:32		
Bromobenzene	"	ND	---	1.0	"	"	--	--	--	--	--	--	"		
N-Propylbenzene	"	ND	---	1.0	"	"	--	--	--	--	--	--	"		
1,2,3-Trichloropropane	"	ND	---	1.0	"	"	--	--	--	--	--	--	"		
2-Chlorotoluene	"	ND	---	1.0	"	"	--	--	--	--	--	--	"		
1,3,5-Trimethylbenzene	"	ND	---	1.0	"	"	--	--	--	--	--	--	"		
4-Chlorotoluene	"	ND	---	1.0	"	"	--	--	--	--	--	--	"		
tert-Butylbenzene	"	ND	---	1.0	"	"	--	--	--	--	--	--	"		
1,2,4-Trimethylbenzene	"	ND	---	1.0	"	"	--	--	--	--	--	--	"		
sec-Butylbenzene	"	ND	---	1.0	"	"	--	--	--	--	--	--	"		
1,3-Dichlorobenzene	"	ND	---	1.0	"	"	--	--	--	--	--	--	"		
4-Isopropyltoluene	"	ND	---	1.0	"	"	--	--	--	--	--	--	"		
1,4-Dichlorobenzene	"	ND	---	1.0	"	"	--	--	--	--	--	--	"		
n-Butylbenzene	"	ND	---	1.0	"	"	--	--	--	--	--	--	"		
1,2-Dichlorobenzene	"	ND	---	1.0	"	"	--	--	--	--	--	--	"		
1,2-Dibromo-3-Chloropropane	"	ND	---	2.0	"	"	--	--	--	--	--	--	"		
1,2,4-Trichlorobenzene	"	ND	---	1.0	"	"	--	--	--	--	--	--	"		
1,2,3-Trichlorobenzene	"	ND	---	1.0	"	"	--	--	--	--	--	--	"		
Hexachlorobutadiene	"	ND	---	1.0	"	"	--	--	--	--	--	--	"		
Naphthalene	"	ND	---	1.0	"	"	--	--	--	--	--	--	"		

Surrogate(s):	Fluorobenzene (Surr)	Recovery:	115%	Limits:	80-120%	"							10/30/08 17:32	
	Toluene-d8 (Surr)		85%		85-120%	"							"	
	Ethylbenzene-d10		95%		80-120%	"							"	
	4-Bromofluorobenzene (Surr)		93%		75-120%	"							"	
	Trifluorotoluene (Surr)		1%		80-120%	"							"	X

<b>LCS (580-37654-2)</b>			QC Source:					Extracted: 10/30/08 17:54							
1,1-Dichloroethene	8260B STD	23.7	---	1.0	ug/L	1x	--	20.0	119%	(70-130)	--	--	10/30/08 17:54		
Benzene	"	23.4	---	1.0	"	"	--	"	117%	(80-120)	--	--	"		
Trichloroethene	"	19.4	---	1.0	"	"	--	"	97%	(70-125)	--	--	"		
Toluene	"	20.1	---	1.0	"	"	--	"	100%	(75-120)	--	--	"		
Chlorobenzene	"	19.6	---	1.0	"	"	--	"	98%	(80-120)	--	--	"		

Surrogate(s):	Fluorobenzene (Surr)	Recovery:	123%	Limits:	80-120%	"							10/30/08 17:54	X
	Toluene-d8 (Surr)		86%		85-120%	"							"	
	Ethylbenzene-d10		132%		80-120%	"							"	X
	4-Bromofluorobenzene (Surr)		96%		75-120%	"							"	
	Trifluorotoluene (Surr)		108%		80-120%	"							"	

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

**Amended Report**

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Amended Report

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Volatile Organic Compounds (GC/MS) - Laboratory Quality Control Results**  
 TestAmerica Tacoma

**QC Batch: 37656      Soil Preparation Method: 5035**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes	
<b>Matrix Spike Dup (117679D)</b>			QC Source: ARJ0119-10					Extracted: 10/31/08 11:11							
1,1-Dichloroethene	8260B STD	360	---	7.7	ug/Kg	1x	ND	385	93%	(65-135)	7%	(30)	10/31/08 16:41		
Trichloroethene	"	334	---	7.7	"	"	ND	"	87%	(75-125)	8%	"	"		
Benzene	"	324	---	3.8	"	"	ND	"	83%	"	9%	"	"		
Toluene	"	339	---	19	"	"	ND	"	87%	(70-125)	9%	"	"		
Chlorobenzene	"	385	---	19	"	"	ND	"	100%	(75-125)	6%	"	"		
<i>Surrogate(s): Fluorobenzene (Surr)</i>		<i>Recovery: 96%</i>		<i>Limits: 75-125%</i>		<i>"</i>						<i>10/31/08 16:41</i>			
<i>Toluene-d8 (Surr)</i>		<i>97%</i>		<i>85-115%</i>		<i>"</i>						<i>"</i>			
<i>Ethylbenzene-d10</i>		<i>102%</i>		<i>75-125%</i>		<i>"</i>						<i>"</i>			
<i>4-Bromofluorobenzene (Surr)</i>		<i>103%</i>		<i>85-120%</i>		<i>"</i>						<i>"</i>			
<i>Trifluorotoluene (Surr)</i>		<i>46%</i>		<i>75-125%</i>		<i>"</i>						<i>"</i>		<i>X, I</i>	
<b>Matrix Spike (117679S)</b>			QC Source: ARJ0119-10					Extracted: 10/31/08 11:11							
1,1-Dichloroethene	8260B STD	387	---	7.7	ug/Kg	1x	ND	385	100%	(65-135)	--	--	10/31/08 16:19		
Trichloroethene	"	361	---	7.7	"	"	ND	"	94%	(75-125)	--	--	"		
Benzene	"	356	---	3.8	"	"	ND	"	92%	"	--	--	"		
Toluene	"	369	---	19	"	"	ND	"	94%	(70-125)	--	--	"		
Chlorobenzene	"	409	---	19	"	"	ND	"	106%	(75-125)	--	--	"		
<i>Surrogate(s): Fluorobenzene (Surr)</i>		<i>Recovery: 97%</i>		<i>Limits: 75-125%</i>		<i>"</i>						<i>10/31/08 16:19</i>			
<i>Toluene-d8 (Surr)</i>		<i>99%</i>		<i>85-115%</i>		<i>"</i>						<i>"</i>			
<i>Ethylbenzene-d10</i>		<i>101%</i>		<i>75-125%</i>		<i>"</i>						<i>"</i>			
<i>4-Bromofluorobenzene (Surr)</i>		<i>102%</i>		<i>85-120%</i>		<i>"</i>						<i>"</i>			
<i>Trifluorotoluene (Surr)</i>		<i>56%</i>		<i>75-125%</i>		<i>"</i>						<i>"</i>		<i>X, I</i>	
<b>LCS (580-37661-10)</b>			QC Source:					Extracted: 10/31/08 11:11							
1,1-Dichloroethene	8260B STD	730	---	16	ug/Kg	1x	--	800	91%	(65-135)	--	--	10/31/08 15:56		
Trichloroethene	"	725	---	16	"	"	--	"	91%	(75-125)	--	--	"		
Benzene	"	677	---	8.0	"	"	--	"	85%	"	--	--	"		
Toluene	"	725	---	40	"	"	--	"	91%	(70-125)	--	--	"		
Chlorobenzene	"	767	---	40	"	"	--	"	96%	(75-125)	--	--	"		
<i>Surrogate(s): Fluorobenzene (Surr)</i>		<i>Recovery: 96%</i>		<i>Limits: 75-125%</i>		<i>"</i>						<i>10/31/08 15:56</i>			
<i>Toluene-d8 (Surr)</i>		<i>101%</i>		<i>85-115%</i>		<i>"</i>						<i>"</i>			
<i>Ethylbenzene-d10</i>		<i>97%</i>		<i>75-125%</i>		<i>"</i>						<i>"</i>			
<i>4-Bromofluorobenzene (Surr)</i>		<i>103%</i>		<i>85-120%</i>		<i>"</i>						<i>"</i>			
<i>Trifluorotoluene (Surr)</i>		<i>100%</i>		<i>75-125%</i>		<i>"</i>						<i>"</i>			

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

Amended Report

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**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Volatile Organic Compounds (GC/MS) - Laboratory Quality Control Results**  
 TestAmerica Tacoma

QC Batch: 37656

Soil Preparation Method: 5035

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
<b>Blank (580-37661-4)</b>			<b>QC Source:</b>				<b>Extracted: 10/31/08 11:11</b>							
Vinyl chloride	8260B STD	ND	---	16	ug/Kg	1x	--	--	--	--	--	--	10/31/08 13:43	
Dichlorodifluoromethane	"	ND	---	40	"	"	--	--	--	--	--	--	"	
Chloromethane	"	ND	---	40	"	"	--	--	--	--	--	--	"	
Bromomethane	"	ND	---	200	"	"	--	--	--	--	--	--	"	
Chloroethane	"	ND	---	200	"	"	--	--	--	--	--	--	"	
2,2-Dichloropropane	"	ND	---	40	"	"	--	--	--	--	--	--	"	
cis-1,2-Dichloroethene	"	ND	---	40	"	"	--	--	--	--	--	--	"	
Trichlorofluoromethane	"	ND	---	40	"	"	--	--	--	--	--	--	"	
Chlorobromomethane	"	ND	---	40	"	"	--	--	--	--	--	--	"	
1,1-Dichloroethene	"	ND	---	16	"	"	--	--	--	--	--	--	"	
Chloroform	"	ND	---	40	"	"	--	--	--	--	--	--	"	
Methylene Chloride	"	ND	---	40	"	"	--	--	--	--	--	--	"	
1,1,1-Trichloroethane	"	ND	---	16	"	"	--	--	--	--	--	--	"	
trans-1,2-Dichloroethene	"	ND	---	40	"	"	--	--	--	--	--	--	"	
1,1-Dichloroethane	"	ND	---	40	"	"	--	--	--	--	--	--	"	
Carbon tetrachloride	"	ND	---	16	"	"	--	--	--	--	--	--	"	
1,2-Dichloroethane	"	ND	---	40	"	"	--	--	--	--	--	--	"	
1,1-Dichloropropene	"	ND	---	40	"	"	--	--	--	--	--	--	"	
Benzene	"	ND	---	8.0	"	"	--	--	--	--	--	--	"	
Trichloroethene	"	ND	---	16	"	"	--	--	--	--	--	--	"	
1,2-Dichloropropane	"	ND	---	8.0	"	"	--	--	--	--	--	--	"	
1,1,2-Trichloroethane	"	ND	---	40	"	"	--	--	--	--	--	--	"	
Tetrachloroethene	"	ND	---	25	"	"	--	--	--	--	--	--	"	
Dibromomethane	"	ND	---	40	"	"	--	--	--	--	--	--	"	
1,3-Dichloropropane	"	ND	---	16	"	"	--	--	--	--	--	--	"	
Dichlorobromomethane	"	ND	---	40	"	"	--	--	--	--	--	--	"	
cis-1,3-Dichloropropene	"	ND	---	40	"	"	--	--	--	--	--	--	"	
Chlorodibromomethane	"	ND	---	40	"	"	--	--	--	--	--	--	"	
Toluene	"	ND	---	40	"	"	--	--	--	--	--	--	"	
Ethylene Dibromide	"	ND	---	40	"	"	--	--	--	--	--	--	"	
trans-1,3-Dichloropropene	"	ND	---	40	"	"	--	--	--	--	--	--	"	
Chlorobenzene	"	ND	---	40	"	"	--	--	--	--	--	--	"	
1,1,2,2-Tetrachloroethane	"	ND	---	8.0	"	"	--	--	--	--	--	--	"	
Ethylbenzene	"	ND	---	40	"	"	--	--	--	--	--	--	"	
1,1,1,2-Tetrachloroethane	"	ND	---	40	"	"	--	--	--	--	--	--	"	
m-Xylene & p-Xylene	"	ND	---	40	"	"	--	--	--	--	--	--	"	
o-Xylene	"	ND	---	40	"	"	--	--	--	--	--	--	"	
1,2,3-Trichloropropane	"	ND	---	40	"	"	--	--	--	--	--	--	"	
Styrene	"	ND	---	40	"	"	--	--	--	--	--	--	"	

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

**Amended Report**

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**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Volatile Organic Compounds (GC/MS) - Laboratory Quality Control Results**  
 TestAmerica Tacoma

QC Batch: 37656

Soil Preparation Method: 5035

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
<b>Blank (580-37661-4)</b>			<b>QC Source:</b>				<b>Extracted: 10/31/08 11:11</b>							
2-Chlorotoluene	8260B STD	ND	---	40	ug/Kg	1x	--	--	--	--	--	--	10/31/08 13:43	
Bromoform	"	ND	---	40	"	"	--	--	--	--	--	--	"	
1,3,5-Trimethylbenzene	"	ND	---	40	"	"	--	--	--	--	--	--	"	
4-Chlorotoluene	"	ND	---	40	"	"	--	--	--	--	--	--	"	
Isopropylbenzene	"	ND	---	40	"	"	--	--	--	--	--	--	"	
Bromobenzene	"	ND	---	40	"	"	--	--	--	--	--	--	"	
tert-Butylbenzene	"	ND	---	40	"	"	--	--	--	--	--	--	"	
N-Propylbenzene	"	ND	---	40	"	"	--	--	--	--	--	--	"	
1,2,4-Trimethylbenzene	"	ND	---	40	"	"	--	--	--	--	--	--	"	
sec-Butylbenzene	"	ND	---	40	"	"	--	--	--	--	--	--	"	
4-Isopropyltoluene	"	ND	---	40	"	"	--	--	--	--	--	--	"	
1,3-Dichlorobenzene	"	ND	---	40	"	"	--	--	--	--	--	--	"	
1,4-Dichlorobenzene	"	ND	---	40	"	"	--	--	--	--	--	--	"	
Naphthalene	"	ND	---	40	"	"	--	--	--	--	--	--	"	
n-Butylbenzene	"	ND	---	40	"	"	--	--	--	--	--	--	"	
1,2-Dichlorobenzene	"	ND	---	40	"	"	--	--	--	--	--	--	"	
1,2-Dibromo-3-Chloropropane	"	ND	---	200	"	"	--	--	--	--	--	--	"	
1,2,4-Trichlorobenzene	"	ND	---	40	"	"	--	--	--	--	--	--	"	
1,2,3-Trichlorobenzene	"	ND	---	40	"	"	--	--	--	--	--	--	"	
Hexachlorobutadiene	"	ND	---	40	"	"	--	--	--	--	--	--	"	
<i>Surrogate(s): Fluorobenzene (Surr)</i>		<i>Recovery: 94%</i>		<i>Limits: 75-125%</i>								<i>10/31/08 13:43</i>		
<i>Toluene-d8 (Surr)</i>		<i>100%</i>		<i>85-115%</i>								<i>"</i>		
<i>Ethylbenzene-d10</i>		<i>98%</i>		<i>75-125%</i>								<i>"</i>		
<i>4-Bromofluorobenzene (Surr)</i>		<i>100%</i>		<i>85-120%</i>								<i>"</i>		
<i>Trifluorotoluene (Surr)</i>		<i>101%</i>		<i>75-125%</i>								<i>"</i>		

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

**Amended Report**

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**Amended Report**

**BGES, INC.**

750 W. 2nd Ave, Ste 104  
 Anchorage, AK 99501

Project Name: **Nichin Cove**  
 Project Number: Nichin Cove  
 Project Manager: Renee Lafata

Report Created:  
 11/26/08 17:34

**Notes and Definitions**

Report Specific Notes:

- H - Sample was prepped or analyzed beyond the specified holding time
- I - Indicates the presence of an interference, recovery is not calculated.
- L - Laboratory Control Sample and/or Laboratory Control Sample Duplicate recovery was above the acceptance limits. Analyte not detected, data not impacted.
- L5 - Analyte recovery outside of specified criteria. Individual analyte criteria exceedences allowed for multi-component analyses without disqualification of data per NELAC Standard, DOD QSM and/or AFCEE QAPP.
- L6 - Per the EPA methods, benzidine is known to be subject to oxidative losses during solvent concentration.
- R4 - Due to the low levels of analyte in the sample, the duplicate RPD calculation does not provide useful information.
- R7 - LFB/LFBD RPD exceeded the acceptance limit. Recovery met acceptance criteria.
- RL3 - Reporting limit raised due to high concentrations of non-target analytes.
- X - Surrogate exceeds the control limits
- Z6 - Surrogate recovery was below acceptance limits.

Laboratory Reporting Conventions:

- DET - Analyte DETECTED at or above the Reporting Limit. Qualitative Analyses only.
- ND - Analyte NOT DETECTED at or above the reporting limit (MDL or MRL, as appropriate).
- NR/NA - Not Reported / Not Available
- dry - Sample results reported on a Dry Weight Basis. Results and Reporting Limits have been corrected for Percent Dry Weight.
- wet - Sample results and reporting limits reported on a Wet Weight Basis (as received). Results with neither 'wet' nor 'dry' are reported on a Wet Weight Basis.
- RPD - RELATIVE PERCENT DIFFERENCE (RPDs calculated using Results, not Percent Recoveries).
- MRL - METHOD REPORTING LIMIT. Reporting Level at, or above, the lowest level standard of the Calibration Table.
- MDL\* - METHOD DETECTION LIMIT. Reporting Level at, or above, the statistically derived limit based on 40CFR, Part 136, Appendix B. \*MDLs are listed on the report only if the data has been evaluated below the MRL. Results between the MDL and MRL are reported as Estimated Results.
- Dil - Dilutions are calculated based on deviations from the standard dilution performed for an analysis, and may not represent the dilution found on the analytical raw data.
- Reporting Limits - Reporting limits (MDLs and MRLs) are adjusted based on variations in sample preparation amounts, analytical dilutions and percent solids, where applicable.
- Electronic Signature - Electronic Signature added in accordance with TestAmerica's *Electronic Reporting and Electronic Signatures Policy*. Application of electronic signature indicates that the report has been reviewed and approved for release by the laboratory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

TestAmerica Anchorage



Troy J. Engstrom, Lab Director

**Amended Report**

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# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

11720 North Creek Pkwy N Suite 400, Bothell, WA 98011-8244  
11922 E. First Ave, Spokane, WA 99206-5302  
9405 SW Nimbus Ave, Beaverton, OR 97008-7145  
2000 W International Airport Rd Ste A10, Anchorage, AK 99502-1119

425-420-9200 FAX 420-9210  
509-924-9200 FAX 924-9290  
503-906-9200 FAX 906-9210  
907-563-9200 FAX 563-9210

## CHAIN OF CUSTODY REPORT

Work Order #: **ART0119**

CLIENT: <b>BGES</b>		INVOICE TO: <b>BGES</b>		TURNAROUND REQUEST	
REPORT TO: <b>BGES</b>		ADDRESS: <b>750 W. 2nd Ave #104 Anchorage AK</b>		<input type="checkbox"/> 10 <input type="checkbox"/> 7 <input type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 <input type="checkbox"/> <1 Organic & Inorganic Analyses Petroleum Hydrocarbon Analyses	
PHONE: <b>907-644-2900</b>		FAX: <b>907-644-2901</b>		<input checked="" type="checkbox"/> 5 <input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 <input type="checkbox"/> <1 OTHER Specify:	
PROJECT NAME: <b>N 104 IN</b>		P.O. NUMBER:		* Turnaround Requests less than standard may incur Rush Charges.	
PROJECT NUMBER:		PRESERVATIVE		MATRIX (W. S. O) # OF CONT. LOCATION/ COMMENTS TA WO ID	
SAMPLED BY: <b>LAFATA</b>		REQUESTED ANALYSES		W 2 ( ) 2 ( ) 2 ( ) 2 ( ) 2	
CLIENT SAMPLE IDENTIFICATION		SAMPLING DATE/TIME			
1	<b>08-1025-SW1</b>	<b>10/25/08 - 0858</b>	X		1
2	<b>08-1025-SW2</b>	<b>10/25/08 - 0920</b>	X		2
3	<b>08-1025-SW3</b>	<b>10/25/08 - 0932</b>	X		3
4	<b>08-1025-SW4</b>	<b>10/25/08 - 1006</b>	X		4
5	<b>08-1025-SW5</b>	<b>10/25/08 - 0944</b>	X		5
6					
7					
8					
9					
10					
RELEASED BY: <b>Nick Da Santos</b>		DATE: <b>10/28/08</b>		RECEIVED BY: <b>Kelly Cobbs</b>	
PRINT NAME: <b>Nick Da Santos</b>		TIME: <b>3:35</b>		FIRM: <b>Anchorage</b>	
DATE: <b>10/28/08</b>		TIME: <b>3:35</b>		DATE: <b>10/28/08</b>	
FIRM: <b>BGES</b>		FIRM: <b>BGES</b>		FIRM: <b>Anchorage</b>	
RECEIVED BY:		DATE:		DATE:	
PRINT NAME:		TIME:		TIME:	
FIRM:		FIRM:		FIRM:	
ADDITIONAL REMARKS:				TEMP: <b>3.2</b>	
				PAGE <b>1</b> OF <b>1</b>	



# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

11720 North Creek Pkwy N Suite 400, Bothell, WA 98011-8244  
 11922 E. First Ave, Spokane, WA 99206-5302  
 9405 SW Nimbus Ave, Beaverton, OR 97008-7145  
 2000 W International Airport Rd Ste A10, Anchorage, AK 99502-1119

425-420-9200 FAX 420-9210  
 509-924-9200 FAX 924-9290  
 503-906-9200 FAX 906-9210  
 907-563-9200 FAX 563-9210

## CHAIN OF CUSTODY REPORT

Work Order #: **AR2019**

CLIENT: <b>BGES, INC.</b>	REPORT TO: <b>BGES</b>	ADDRESS: <b>750 West 2nd Ave #104 Anchorage</b>	PHONE: <b>644-2900</b> FAX: <b>644-2901</b>	PROJECT NAME: <b>NICHTN</b>	PROJECT NUMBER:	PRESERVATIVE										INVOICE TO: <b>BGES</b>	TURNAROUND REQUEST in Business Days *	
						Meat	Meat	AK101	GRD	B260	VCS	AK102/103	DRO/PRO	B270	PAH			6020 PCRA METALS
SAMPLED BY: <b>LAFETA</b>	CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME														OTHER	Specify:	
1	08-1024-TP1-1	10/24/08 - 13:02	X	X	X	X	X	X	X	X	X	X	X	X	X	X	10	Organic & Inorganic Analyses
2	08-1024-TP2-1	10/24/08 - 14:09	X	X	X	X	X	X	X	X	X	X	X	X	X	X	5	Petroleum Hydrocarbon Analyses
3	08-1024-TP3-1	10/24/08 - 16:27	X	X	X	X	X	X	X	X	X	X	X	X	X	X	5	
4	08-1025-SED1	10/25/08 - 10:27	X	X	X	X	X	X	X	X	X	X	X	X	X	X	5	
5	08-1025-SED2	10/25/08 - 10:53	X	X	X	X	X	X	X	X	X	X	X	X	X	X	5	
6	08-1025-SED3	10/25/08 - 11:10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	5	
7	08-1025-BASED1	10/25/08 - 10:40															1	
8	08-1025-BASED2	10/25/08 - 11:20															1	
9	08-1025-BASO1-1	10/25/08 - 12:24															1	
10	08-1025-BASO2-2	10/25/08 - 12:29															1	

RECEIVED BY: **Kelly Cobbs** DATE: **10/28/08**  
 PRINT NAME: **Kelly Cobbs** TIME: **3:40**  
 RECEIVED BY: DATE: TIME:  
 PRINT NAME: FIRM: **BGES** DATE: TIME:  
 RECEIVED BY: DATE: TIME:  
 PRINT NAME: FIRM: **BGES** DATE: TIME:

ADDITIONAL REMARKS: **PAH = Long List, Hold hex chr & triv chr pending PCRA metals analysis**



# Test America Anchorage Cooler Receipt Form

(Army Corps. Compliant)

WORK ORDER # ARJ0119 CLIENT: BGES PROJECT: NICHIN

Date / Time Cooler Arrived 10/28/08 15:34 Cooler signed for by: Kelly Cobbs  
(Print name)

## Preliminary Examination Phase:

Date cooler opened:  same as date received or      /      /     

Cooler opened by (print) Kelly Cobbs (sign) [Signature]

1. Delivered by  ALASKA AIRLINES  Fed-Ex  UPS  NAC  LYNDEN  CLIENT  Other:     

Shipment Tracking # if applicable N/A (include copy of shipping papers in file)

2. Number of Custody Seals 2 Signed by N/A Date      /      /     

Were custody seals unbroken and intact on arrival?  Yes  No

3. Were custody papers sealed in a plastic bag?  Yes  No

4. Were custody papers filled out properly (ink, signed, etc.)?  Yes  No

5. Did you sign the custody papers in the appropriate place?  Yes  No

6. Was ice used?  Yes  No Type of ice:  blue ice  gel ice  real ice  dry ice Condition of Ice: Solid

Temperature by Digi-Thermo Probe 3.2 °C Thermometer # 3  
Acceptance Criteria: 0 - 6°C

7. Packing in Cooler:  bubble wrap  styrofoam  cardboard  Other:     

8. Did samples arrive in plastic bags?  Yes  No

9. Did all bottles arrive unbroken, and with labels in good condition?  Yes  No

10. Are all bottle labels complete (ID, date, time, etc.)?  Yes  No

11. Do bottle labels and Chain of Custody agree?  Yes  No

*KC*  Yes  No # of TB on COC is incorrect. Samples are the same for Cool KC02

12. Are the containers and preservatives correct for the tests indicated?  Yes  No

13. Conoco Phillips, Alyeska, BP H2O samples only: pH < 2?  Yes  No  N/A

14. Is there adequate volume for the tests requested?  Yes  No

15. Were VOA vials free of bubbles?  N/A  Yes  No

If "NO" which containers contained "head space" or bubbles?     

## Log-in Phase:

Date of sample log-in 10/29/08

Samples logged in by (print) Kelly Cobbs (sign) [Signature]

1. Was project identifiable from custody papers?  Yes  No

2. Do Turn Around Times and Due Dates agree?  Yes  No

3. Was the Project Manager notified of status?  Yes  No

4. Was the Lab notified of status?  Yes  No

5. Was the COC scanned and copied?  Yes  No

# Test America Anchorage Cooler Receipt Form

(Army Corps. Compliant)

WORK ORDER # AR50119 CLIENT: BGES PROJECT: Nichin  
Date /Time Cooler Arrived 10/28/08 15:34 Cooler signed for by: Kelly Cobbs  
(Print name)

## Preliminary Examination Phase:

Date cooler opened:  same as date received or      /      /     

Cooler opened by (print) Kelly Cobbs (sign) [Signature]

1. Delivered by  ALASKA AIRLINES  Fed-Ex  UPS  NAC  LYNDEN  CLIENT  Other:     

Shipment Tracking # if applicable N/A (include copy of shipping papers in file)

2. Number of Custody Seals 0 Signed by N/A Date      /      /     

Were custody seals unbroken and intact on arrival?  Yes  No

3. Were custody papers sealed in a plastic bag?  Yes  No

4. Were custody papers filled out properly (ink, signed, etc.)?  Yes  No

5. Did you sign the custody papers in the appropriate place?  Yes  No

6. Was ice used?  Yes  No Type of ice:  blue ice  gel ice  real ice  dry ice Condition of Ice: solid

Temperature by Digi-Thermo Probe 2.9 °C Thermometer # 3  
Acceptance Criteria: 0 - 6°C

7. Packing in Cooler:  bubble wrap  styrofoam  cardboard  Other:     

8. Did samples arrive in plastic bags?  Yes  No

9. Did all bottles arrive unbroken, and with labels in good condition?  Yes  No

10. Are all bottle labels complete (ID, date, time, etc.)?  Yes  No

11. Do bottle labels and Chain of Custody agree?  Yes  No # of TBare wrong + Cocl + Z  
Are the "same samples"

12. Are the containers and preservatives correct for the tests indicated?  Yes  No

13. Conoco Phillips, Alyeska, BP H2O samples only: pH < 2?  Yes  No  N/A

14. Is there adequate volume for the tests requested?  Yes  No

15. Were VOA vials free of bubbles?  N/A  Yes  No

If "NO" which containers contained "head space" or bubbles?     

## Log-in Phase:

Date of sample log-in 10/29/08

Samples logged in by (print) Kelly Cobbs (sign) [Signature]

1. Was project identifiable from custody papers?  Yes  No

2. Do Turn Around Times and Due Dates agree?  Yes  No

3. Was the Project Manager notified of status?  Yes  No

4. Was the Lab notified of status?  Yes  No

5. Was the COC scanned and copied?  Yes  No

**Test America Anchorage Cooler Receipt Form**

(Army Corps. Compliant)

WORK ORDER # ARJ0119 CLIENT: BGES PROJECT: NICHTIN

Date /Time Cooler Arrived 10 / 28 / 08 15 : 34 Cooler signed for by: Kelly Cobbs  
(Print name)

**Preliminary Examination Phase:**

Date cooler opened:  same as date received or      /      /     

Cooler opened by (print) Kelly Cobbs (sign) [Signature]

1. Delivered by  ALASKA AIRLINES  Fed-Ex  UPS  NAC  LYNDEN  CLIENT  Other:     

Shipment Tracking # if applicable N/A (include copy of shipping papers in file)

2. Number of Custody Seals 2 Signed by N/A Date      /      /     

Were custody seals unbroken and intact on arrival?  Yes  No

3. Were custody papers sealed in a plastic bag?  Yes  No

4. Were custody papers filled out properly (ink, signed, etc.)?  Yes  No

5. Did you sign the custody papers in the appropriate place?  Yes  No

6. Was ice used?  Yes  No Type of ice:  blue ice  gel ice  real ice  dry ice Condition of Ice:     

Temperature by Digi-Thermo Probe 3.2 °C Thermometer # 3  
Acceptance Criteria: 0 - 6°C

7. Packing in Cooler:  bubble wrap  styrofoam  cardboard  Other:     

8. Did samples arrive in plastic bags?  Yes  No

9. Did all bottles arrive unbroken, and with labels in good condition?  Yes  No

10. Are all bottle labels complete (ID, date, time, etc.)?  Yes  No

11. Do bottle labels and Chain of Custody agree?  Yes  No

12. Are the containers and preservatives correct for the tests indicated?  Yes  No

13. Conoco Phillips, Alyeska, BP H2O samples only: pH < 2?  Yes  No  N/A

14. Is there adequate volume for the tests requested?  Yes  No

15. Were VOA vials free of bubbles?  N/A  Yes  No

If "NO" which containers contained "head space" or bubbles?     

**Log-in Phase:**

Date of sample log-in 10 / 29 / 08

Samples logged in by (print) Kelly Cobbs (sign) [Signature]

1. Was project identifiable from custody papers?  Yes  No

2. Do Turn Around Times and Due Dates agree?  Yes  No

3. Was the Project Manager notified of status?  Yes  No

4. Was the Lab notified of status?  Yes  No

5. Was the COC scanned and copied?  Yes  No

**APPENDIX C**  
**LABORATORY DATA REVIEW CHECKLIST**



## Laboratory Data Review Checklist

Completed by:

Title:

Date:

CS Report Name:

Report Date:

Consultant Firm:

Laboratory Name:

Laboratory Report Number:

ADEC File Number:

ADEC RecKey Number:

### 1. Laboratory

- a. Did an ADEC CS approved laboratory receive and perform all of the submitted sample analyses?

Yes     No                      Comments:

- b. If the samples were transferred to another “network” laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses ADEC CS approved?

Yes     No                      Comments:

### 2. Chain of Custody (COC)

- a. COC information completed, signed, and dated (including released/received by)?

Yes     No                      Comments:

b. Correct analyses requested?

Yes  No

Comments:

3. Laboratory Sample Receipt Documentation

a. Sample/cooler temperature documented and within range at receipt ( $4^{\circ} \pm 2^{\circ} \text{C}$ )?

Yes  No

Comments:

Sample coolers had temperatures of 3.2, 2.9, and 3.2 degrees Celcius; respectively.

b. Sample preservation acceptable – acidified waters, Methanol preserved VOC soil (GRO, BTEX, Volatile Chlorinated Solvents, etc.)?

Yes  No

Comments:

c. Sample condition documented – broken, leaking (Methanol), zero headspace (VOC vials)?

Yes  No

Comments:

No irregularities or abnormalities with respect to sample submission or containers were reported.

d. If there were any discrepancies, were they documented? For example, incorrect sample containers/preservation, sample temperature outside of acceptable range, insufficient or missing samples, etc.?

Yes  No

Comments:

The same trip blank samples were listed on two different COC's, so the laboratory reported that the total number of trip blank samples were incorrect.

e. Data quality or usability affected? Explain.

Comments:

Data quality is not affected by this transcriptional error.

4. Case Narrative

a. Present and understandable?

Yes  No

Comments:

b. Discrepancies, errors or QC failures identified by the lab?

Yes    No

Comments:

The reported concentrations for benzidine (also known as diphenylamine) within the surface water samples and related LCS and LCSD samples were qualified "L6" by the laboratory, because as described in the EPA analytic method, benzidine is known to be subject to oxidative losses during solvent concentration. This potential for loss indicates that there is a potential for the reported concentrations of this analyte to be biased low. However, because the concentrations were not detected within the samples above the MRLs (0.570 mg/L), and because no ADEC cleanup criteria for this analyte in surface water could be identified; it is our opinion that this potential for bias does not affect the acceptability of the data for their intended use.

The method reporting limits for PAH analytes as measured in associations with the Soil Samples TP1-1 and TP3-1, and Sediment Samples SED1, SED2, and SED3; as well as a matrix spike (MS) sample and a matrix spike duplicate (MSD) sample (associated with Soil Sample TP1-1); were raised, due to the presence of high concentrations of non-target analytes. With the exception of 2-methylnaphthalene in Soil Sample TP3-1 (3.24 mg/Kg), all of these analytes were not detected above the MRLs in these samples. For this reason, and because the reported concentration of 2-methylnaphthalene (as described above) was well below the applicable ADEC cleanup criterion for this analyte; it is our opinion that the elevated reporting limits do not affect the acceptability of the data for their intended use.

Additional discrepancies identified by the laboratory are discussed in the applicable sections below.

c. Were all corrective actions documented?

Yes    No

Comments:

N/A

d. What is the effect on data quality/usability according to the case narrative?

Comments:

For the above described reasons, it is our opinion that data are acceptable for their intended use.

## 5. Samples Results

a. Correct analyses performed/reported as requested on COC?

Yes    No

Comments:

TAqH analyses were inadvertently performed by the laboratory on Groundwater Sample MW1. None of the analytes were detected at concentrations that exceeded the method reporting limits for the analyses in the sample. For this reason, it is our opinion that this inadvertant analysis does not affect the acceptability of the data for their intended use.

b. All applicable holding times met?

Yes  No

Comments:

The TCLP analysis performed for arsenic on Sample TP2-1, as well as the analyses performed on a matrix spike (MS), a matrix spike duplicate (MSD), and a laboratory-prepared duplicate sample; were prepared or conducted beyond the specified holding time. Because the concentration of arsenic within the field sample (23 mg/Kg) was not greater than 20 times the threshold at which the material would be classified as a RCRA regulated waste based on TCLP analysis (5.0 mg/L), and because the reported concentration that was the result of the analysis was three orders of magnitude below the RCRA threshold; it is our opinion that the performance of these analyses beyond the prescribed holding time does not affect the acceptability of the data for their intended use.

The analysis of hexavalent chromium associated with Sediment Sample SED2 was prepared or conducted beyond the specified holding time. Because the concentration of total chromium within the sample (11 mg/Kg) did not exceed the ADEC cleanup criterion for hexavalent chromium, and because this analysis was conducted within the required holding time; it is our opinion that the performance of this analysis beyond the prescribed holding time does not affect the acceptability of the data for their intended use.

c. All soils reported on a dry weight basis?

Yes  No

Comments:

The PAH analyses associated with the soil and sediment samples were reported on a wet weight basis. However, because none of the analytes were detected at concentrations that exceeded the MRLs (with the exception of 2-methylnaphthalene as detected within Soil Sample TP3-1, which was reported at a concentration that was only slightly greater than half of the ADEC cleanup criterion for this analyte); it is our opinion that this discrepancy does not affect the acceptability of the data for their intended use. BGES has requested receipt of amended analytical results that report the results of these analyses on a dry weight basis; however, at the time of preparation of this report, the results had not been received. The amended results (if received prior to the preparation of a final report) will be incorporated into the report at a later time.

- d. Are the reported PQLs less than the Cleanup Level or the minimum required detection level for the project?

The reported MRLs for silver as measured in Soil Samples TP1-1, TP2-1, and TP3-1 were greater than three times the MRL for silver as reported in Background Soil Sample BRSOIL2. However, because silver was not detected in any of the above-mentioned samples at concentrations that exceeded the MRLs; and because the MRLs were well below the applicable ADEC cleanup criterion for silver; it is our opinion that these elevated MRLs do not affect the acceptability of the data for their intended use, and they do not indicate in and of themselves that a release has occurred.

The original results received for arsenic and selenium (as analyzed using EPA Method 6010) for the project soil and sediment samples had MRLs that exceeded the ADEC cleanup criteria for these analytes. The samples were then reanalyzed using EPA Method 6020; and MRLs that were below the ADEC cleanup criteria were achieved (although there were detections of arsenic in the samples, some of which exceeded the ADEC cleanup criterion for arsenic). For this reason, it is our opinion that the data are acceptable for their intended use.

The MRLs for cadmium in the sediment samples (including the background samples) exceeded the NOAA SQuiRT for Freshwater Sediments TEL of 0.583 mg/Kg. However, because cadmium was not detected above the MRLs in any of the samples, and the MRLs for cadmium in the field samples were not greater than three times the MRL for the background sediment sample (the threshold for this project at which a release is considered to have occurred); it is our opinion that these elevated MRLs do not affect the acceptability of the data for their intended use. At the time of preparation of this report, laboratory data including estimated concentrations for this analyte (above the method detection limits but below the MRLs) that was requested from the laboratory had not yet been received. If the data are received prior to the completion of the final report, they will be included, as applicable.

The MRLs for cadmium in the surface water samples (including the background samples) exceeded the Alaska Water Quality Criteria Manual for Toxic and other Deleterious Organic and Inorganic Substances criteria for chronic exposure to freshwater aquatic life of 0.000094 mg/L. The MRLs for silver within the samples exceeded the Alaska Water Quality Criteria Manual for Toxic and other Deleterious Organic and Inorganic Substances criteria for acute exposure to freshwater aquatic life of 0.00032 mg/L. However, because these analytes were not detected above the MRLs in any of the samples, and the MRLs for cadmium and silver in the field samples were not greater than three times the MRLs for the background surface water sample (the threshold for this project at which a release is considered to have occurred); it is our opinion that these elevated MRLs do not affect the acceptability of the data for their intended use. At the time of preparation of this report, laboratory data including estimated concentrations for this analyte (above the method detection limits but below the MRLs) that was requested from the laboratory had not yet been received. If the data are received prior to the completion of the final report, they will be included, as applicable.

The MRLs for mercury in the surface water samples (including the background samples) exceeded the Alaska Water Quality Criteria Manual for Toxic and other Deleterious Organic and Inorganic Substances criteria protective of human health via consumption of water and aquatic organisms of 0.000050 mg/L and 0.000051 mg/L. However, because these analytes were not detected above the MRLs in any of the samples, and the MRLs for cadmium and silver in the field samples were not greater than three times the MRLs for the background surface water sample (the threshold for this project at which a release is considered to have occurred); it is our opinion that these elevated MRLs do not affect the acceptability of the data for their intended use.

Yes  No

Comments:

e. Data quality or usability affected? Explain.

Comments:

See above.

## 6. QC Samples

a. Method Blank

i. One method blank reported per matrix, analysis and 20 samples?

Yes  No

Comments:

ii. All method blank results less than PQL?

Yes  No

Comments:

iii. If above PQL, what samples are affected?

Comments:

N/A

iv. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes  No

Comments:

N/A

v. Data quality or usability affected? Explain.

Comments:

N/A

b. Laboratory Control Sample/Duplicate (LCS/LCSD)

i. Organics – One LCS/LCSD reported per matrix, analysis and 20 samples? (LCS/LCSD required per AK methods, LCS required per SW846)

Yes  No

Comments:

ii. Metals/Inorganics – one LCS and one sample duplicate reported per matrix, analysis and 20 samples?

Yes  No

Comments:

- iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages)

Yes  No

Comments:

The recoveries of benzidine in a laboratory control sample (LCS) and an LCS duplicate (LCSD) sample, as well as the recovery of di-m-octyl phthalate in an LCSD were reported to exceed the laboratory quality control acceptance range; indicating the potential for the reported concentration of these analytes within the field samples to be biased high. However, because these analytes were not detected above the MRLs for the analyses; it is our opinion that these exceedances do not affect the acceptability of the data for their intended use.

The recovery of 2,4-dinitrophenol in an LCSD was reported to exceed the laboratory quality control acceptance range; indicating the potential for the reported concentrations of this analyte within the field samples to be biased high. However, because this analyte was not detected above the MRLs for the analyses of the field samples; it is our opinion that this exceedance does not affect the acceptability of the data for their intended use.

- iv. Precision – All relative percent differences (RPD) reported and less than method or laboratory limits? And project specified DQOs, if applicable. RPD reported from LCS/LCSD, MS/MSD, and or sample/sample duplicate. (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)

Yes  No

Comments:

The laboratory reported an inability to calculate the relative percent difference (RPD) between the concentrations of DRO within Groundwater Sample MW1 and a laboratory-prepared duplicate sample, because DRO was not detected above the MRL for either the original sample or the duplicate sample. Because this analyte was not detected within the sample, and because the MRL for DRO was well below the ADEC cleanup criterion for this analyte; it is our opinion that this inability to calculate the RPD between the original and laboratory duplicate samples does not affect the acceptability of the data for their intended use.

The relative percent differences (RPDs) between the recoveries of 4,6-dinitro-2-methylphenol, 4-nitrophenol, and pentachlorophenol in an LCS and an LCSD [described as a laboratory fortified blank (LFB) and an LFB duplicate (LFBD) in the case narrative] exceeded the laboratory acceptance ranges for these analytes. Because the percent recoveries of each of these analytes within the LCS and the LCSD, respectively were within the acceptance ranges, and because these analytes were not detected within the field samples above the respective MRLs; it is our opinion that these QC failures do not affect the acceptability of the data for their intended use.

- v. If %R or RPD is outside of acceptable limits, what samples are affected?

See response above.

Comments:

vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

Yes    No

Comments:

vii. Data quality or usability affected? Explain.

Comments:

See response above.

c. Surrogates – Organics Only

i. Are surrogate recoveries reported for organic analyses – field, QC and laboratory samples?

Yes    No

Comments:

ii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods 50-150 %R; all other analyses see the laboratory report pages)

Yes    No

Comments:

The recoveries of the surrogate trifluorotoluene associated with the VOCs analyses for the soil and sediment samples, as well as a laboratory blank sample and a matrix spike and a matrix spike duplicate sample were below the laboratory acceptance range. Because the recoveries of four other surrogates within the samples were within the acceptance range, and because the reported concentrations of the VOCs in the field samples were not detected above the MRLs (with the exceptions of 1,2,4-trimethylbenzene and naphthalene in Soil Sample TP3-1, which were roughly two orders of magnitude below the ADEC cleanup criteria for these analytes); it is our opinion that this QC failure does not affect the acceptability of the data for their intended use.

The recoveries of the surrogates fluorobenzene and ethylbenzene-d10 (123 percent and 132 percent, respectively) within an LCS associated with the VOCs analyses of the groundwater sample slightly exceeded the laboratory acceptance range (80-120 percent) for these surrogates; indicating the potential for the reported concentrations of VOCs within the project sample to be biased high. However, because the concentrations of these analytes did not exceed the MRLs for the analyses, it is our opinion that these QC failures do not affect the acceptability of the data for their intended use.

iii. Do the sample results with failed surrogate recoveries have data flags? If so, are the data flags clearly defined?



Yes  No

Comments:

iv. Data quality or usability affected? Explain.

Comments:

See 6cii above.

d. Trip blank – Volatile analyses only (GRO, BTEX, Volatile Chlorinated Solvents, etc.): Water and Soil

i. One trip blank reported per matrix, analysis and cooler?

Yes  No

Comments:

ii. All results less than PQL?

Yes  No

Comments:

iii. If above PQL, what samples are affected?

Comments:

N/A

iv. Data quality or usability affected? Explain.

Comments:

N/A

e. Field Duplicate

i. One field duplicate submitted per matrix, analysis and 10 project samples?

Yes  No

Comments:

A duplicate surface water sample was collected, however collection of sediment and soil duplicate samples was mistakenly unperformed.

ii. Submitted blind to lab?

Yes  No

Comments:

The duplicate surface water sample was submitted "blindly" to the lab.

iii. Precision – All relative percent differences (RPD) less than specified DQOs?  
(Recommended: 30% water, 50% soil)

$$\text{RPD (\%)} = \text{Absolute value of: } \frac{(R_1 - R_2)}{((R_1 + R_2)/2)} \times 100$$

Where  $R_1$  = Sample Concentration  
 $R_2$  = Field Duplicate Concentration

Yes    No   Comments:

The only analytes that were detected in both Surface Water Sample SW2 and its duplicate SW3 were arsenic, barium, and lead. The RPDs between these analytes were 0 percent, 5.84 percent, and 11.52 percent; respectively.

iv. Data quality or usability affected? Explain.

Comments:

f. Decontamination or Equipment Blank (if applicable)

Yes    No    Not Applicable

i. All results less than PQL?

Yes    No   Comments:

N/A

ii. If above PQL, what samples are affected?

Comments:

N/A

iii. Data quality or usability affected? Explain.

Comments:

N/A

7. Other Data Flags/Qualifiers (ACOE, AFC EE, Lab Specific, etc.)

a. Defined and appropriate?

Yes    No   Comments:

N/A

**APPENDIX D**  
**CONCEPTUAL SITE MODEL**

# HUMAN HEALTH CONCEPTUAL SITE MODEL

Site: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**Follow the directions below. Do not consider engineering or land use controls when describing pathways.**

Completed By: \_\_\_\_\_  
 Date Completed: \_\_\_\_\_

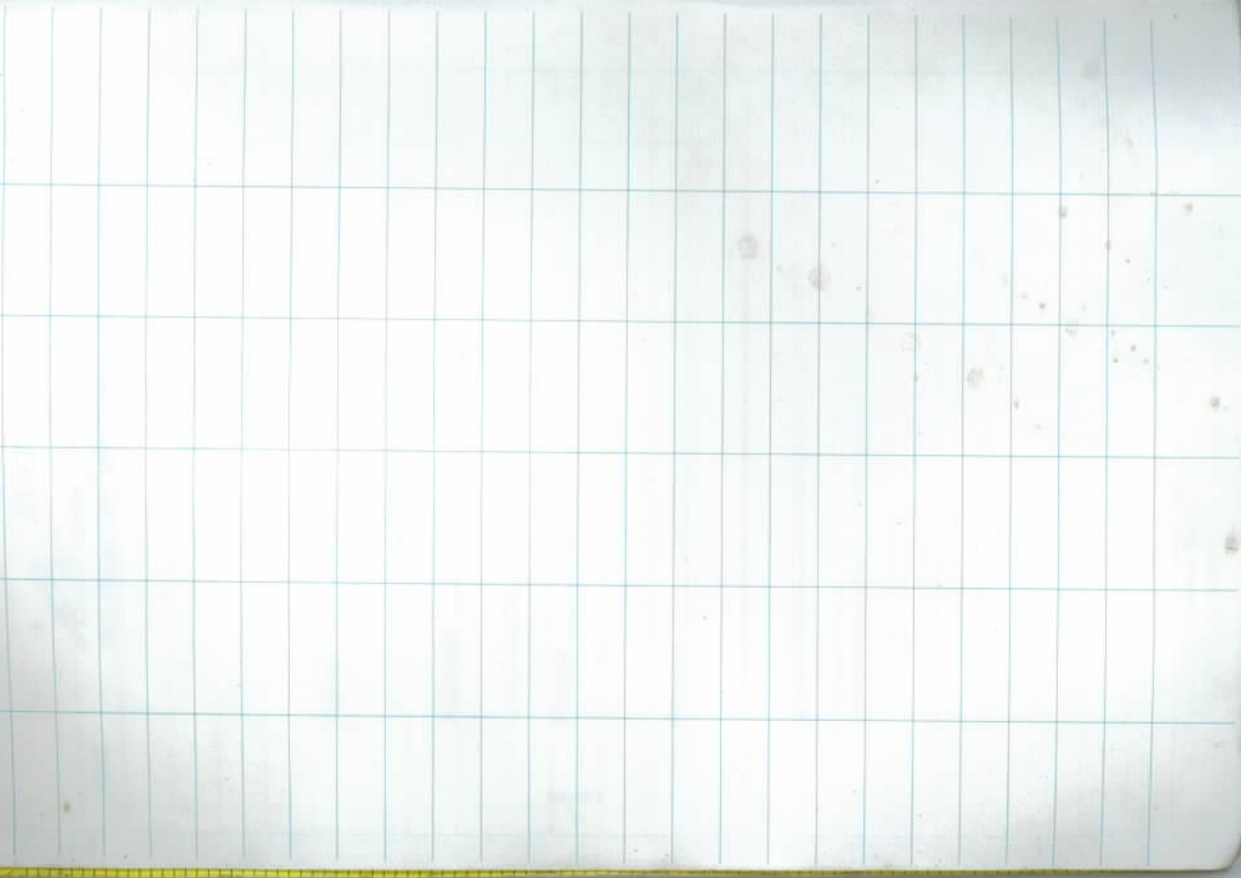
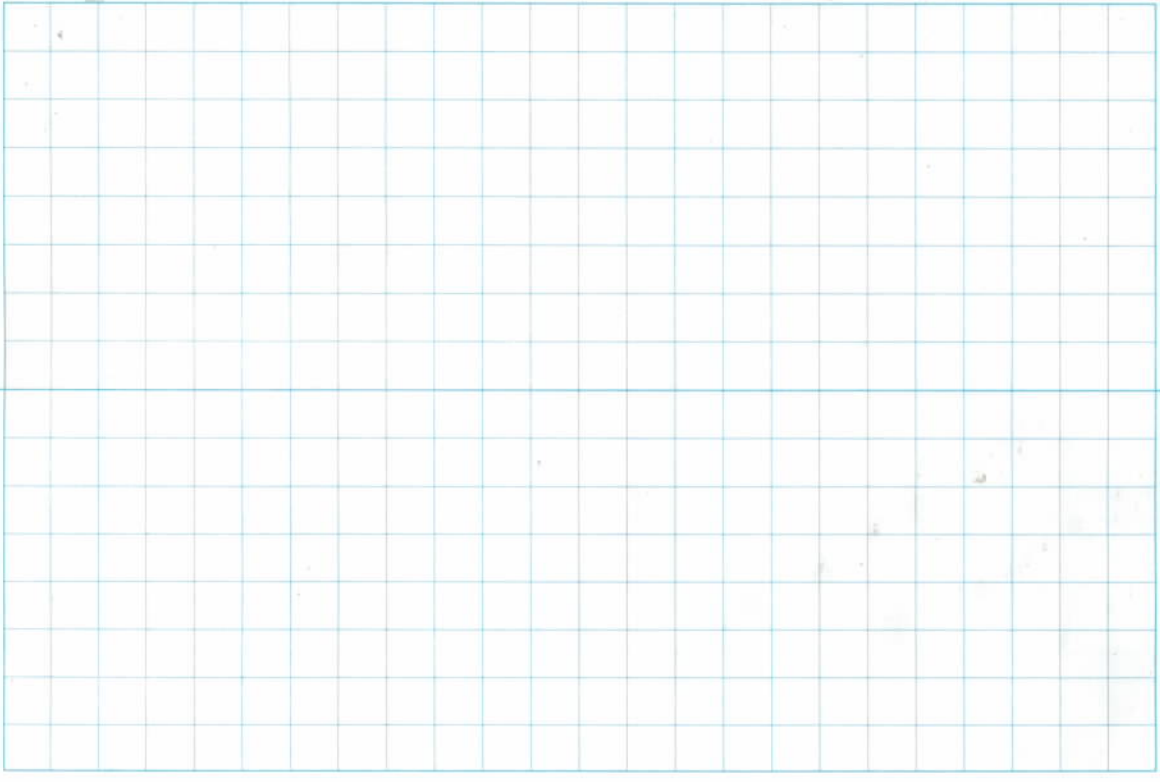
**(1)** Check the media that could be directly affected by the release.  
**(2)** For each medium identified in (1), follow the top arrow and check possible transport mechanisms. Briefly list other mechanisms or reference the report for details.

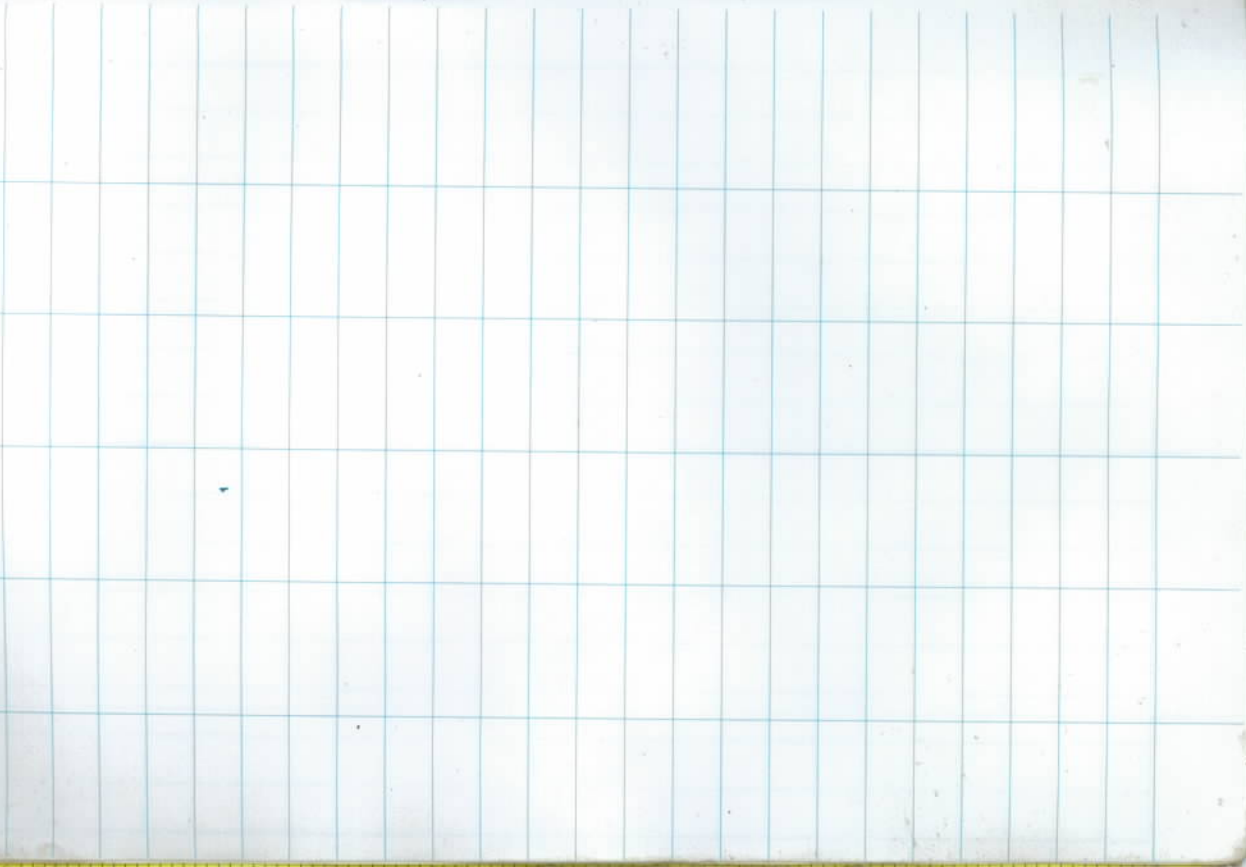
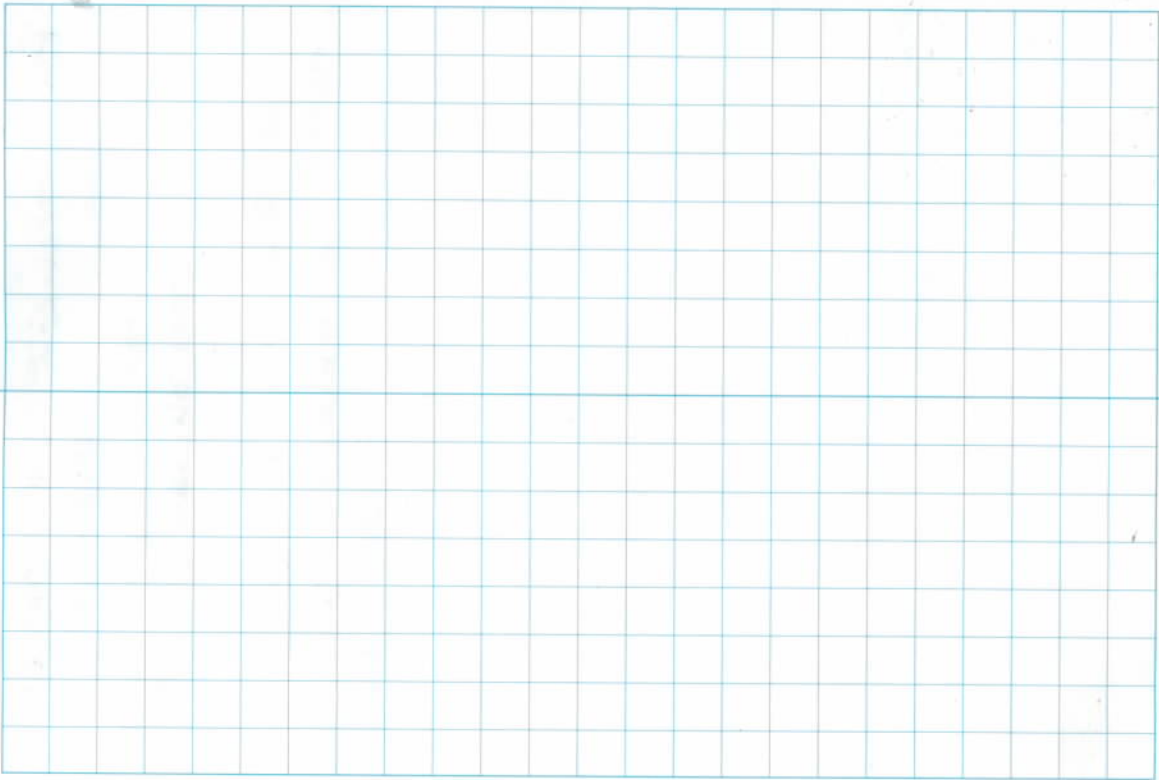
**(3)** Check exposure media identified in (2).  
**(4)** Check exposure pathways that are complete or need further evaluation. The pathways identified must agree with Sections 2 and 3 of the CSM Scoping Form.

**(5)** Identify the receptors potentially affected by each exposure pathway: Enter "C" for current receptors, "F" for future receptors, or "C/F" for both current and future receptors.

Media	Transport Mechanisms	Exposure Media	Exposure Pathways	Current & Future Receptors												
				Residents (adults or children)	Commercial or industrial workers	Site visitors, trespassers, or recreational users	Construction workers	Farmers or subsistence harvesters	Subsistence consumers	Other						
<input type="checkbox"/> Surface Soil (0-2 ft bgs)	<input type="checkbox"/> Direct release to surface soil <i>check soil</i>	<input type="checkbox"/> soil	<input type="checkbox"/> Incidental Soil Ingestion <input type="checkbox"/> Dermal Absorption of Contaminants from Soil													
	<input type="checkbox"/> Migration or leaching to subsurface <i>check soil</i>															
	<input type="checkbox"/> Migration or leaching to groundwater <i>check groundwater</i>		<input type="checkbox"/> groundwater	<input type="checkbox"/> Ingestion of Groundwater <input type="checkbox"/> Dermal Absorption of Contaminants in Groundwater <input type="checkbox"/> Inhalation of Volatile Compounds in Tap Water												
	<input type="checkbox"/> Volatilization <i>check air</i>				<input type="checkbox"/> air	<input type="checkbox"/> Inhalation of Outdoor Air <input type="checkbox"/> Inhalation of Indoor Air <input type="checkbox"/> Inhalation of Fugitive Dust										
	<input type="checkbox"/> Runoff or erosion <i>check surface water</i>						<input type="checkbox"/> surface water	<input type="checkbox"/> Ingestion of Surface Water <input type="checkbox"/> Dermal Absorption of Contaminants in Surface Water <input type="checkbox"/> Inhalation of Volatile Compounds in Tap Water								
	<input type="checkbox"/> Uptake by plants or animals <i>check biota</i>			<input type="checkbox"/> sediment					<input type="checkbox"/> Direct Contact with Sediment							
<input type="checkbox"/> Other (list): _____	<input type="checkbox"/> biota	<input type="checkbox"/> Ingestion of Wild Foods														
<input type="checkbox"/> Subsurface Soil (2-15 ft bgs)	<input type="checkbox"/> Direct release to subsurface soil <i>check soil</i>															
	<input type="checkbox"/> Migration to groundwater <i>check groundwater</i>															
	<input type="checkbox"/> Volatilization <i>check air</i>															
<input type="checkbox"/> Ground-water	<input type="checkbox"/> Direct release to groundwater <i>check groundwater</i>															
	<input type="checkbox"/> Volatilization <i>check air</i>															
	<input type="checkbox"/> Flow to surface water body <i>check surface water</i>															
	<input type="checkbox"/> Flow to sediment <i>check sediment</i>															
	<input type="checkbox"/> Uptake by plants or animals <i>check biota</i>															
<input type="checkbox"/> Surface Water	<input type="checkbox"/> Direct release to surface water <i>check surface water</i>															
	<input type="checkbox"/> Volatilization <i>check air</i>															
	<input type="checkbox"/> Sedimentation <i>check sediment</i>															
	<input type="checkbox"/> Uptake by plants or animals <i>check biota</i>															
	<input type="checkbox"/> Other (list): _____															
<input type="checkbox"/> Sediment	<input type="checkbox"/> Direct release to sediment <i>check sediment</i>															
	<input type="checkbox"/> Resuspension, runoff, or erosion <i>check surface water</i>															
	<input type="checkbox"/> Uptake by plants or animals <i>check biota</i>															
	<input type="checkbox"/> Other (list): _____															

**APPENDIX E**  
**FIELD LOG BOOK**





10/23/08

Fly to Berkeley

6:45 - OFFICE -

19:30

10/24/08

6:45 - GAIS TO PROMEAT -

Fly to CRAIG -

08:30 - RENTAL VEHICLE

08:45 - AK MARINE LINES

at the store/contractor @ 11:20

at Skuff - decided to use contractor  
fruch - add 1K





TP3 screen @ 7.3' bg from staple = 12ppm

TP3 screen @ ~8.4' bg from staple  
very oily - = 8ppm  
water coming out from under  
concrete next to street

SAMPLE TP3-S1

left site @ ~~17:50~~ 17:10

At shore @ 17:40

At cabin @ 18:30 - call to biologist

19:30 - 20:15 LABEL SAMPLES, FREEZE ICE

\* Need Duplicate

	VOC wt	JAR WTS	EMPTY
TP1-1	125.420	640 wt	125.830
2-1	125.490g		124.288g
3-1	125.366g		123.931g

10/26/08 -

? - duplicate sediment sample -

kid's

SURFACE WATER

TAH/TAQH + PCRA METALS + DUP

SW1 - E edge 2' from metal  
SW2 - W of SW1 (18') - 11'

from metal k

SW3 is dup of SW2

SWB = background

~ 80' from SW2

~ 80' W  
Stream

SW4 between SW2 + S of SWB

~ 60' from SW1 West

(in line with MW 1 - 40' N  
OF MBS)

SED 1 collected on  
W side of SW1 10:27

SED 2 collected  
on W side of SW2

OFFSITE @ 12:30 - SKIFF ⇒ 13:00

PAUL / ART + CRAIG @

NAUKATI CABINS ⇒ OFF R

CRAIG AT 13:50

2. TOL COLLECTORS

- 1. ACROSS ROAD(S)  
OF E EDGE OF MBS.

- 1 South - on N. side of  
road - from W. stream  
57' W. OF W. EDGE OF  
MBS.

Hollis - ket check @ 4:15.

10/26/08

Reservations - 10:30 - 11:15 AM

Label Samples

~~10:30~~ 18:30 - 18:45, 19:00 - 19:15  
20:30 - 13:00 (1:00)

WATER - SAMPLE

TIME

① Coover # 08-1025 - SW1 ✓ 0858 ✓

① SW2 ✓ 0920 ✓

① duplicated SW3 ✓ 0932 ✓

① SW4 ✓ 10:06 \*

① SWB ✓ 0944 ✓

③ SW-1 ✓

SW-2 ✓ TAP

SW-3 ✓ 602/624

SW-4 ✓ + LEAD

SW-B ✓

MW1 - GRO ✓ 11:55

MW1 - VOC ✓ 12:02 \*

VOC + GRO TRIP BLANKS ✓ 11:55

MW1 PALS ✓ 11:55

MW1 DEPTRO ✓

MW1 PCPLA ✓

MW-2 DEPTRO ✓

MW-2 PCPLA ✓

MW-2 DEPTRO ✓

MW-2 PCPLA ✓

MW-2 DEPTRO ✓

MW-2 PCPLA ✓

MW-2 DEPTRO ✓

12:15 = only sample

TRIP - 6255 SIM 17. AMBER

COOLER 2

- SOILS

TP	Time	COOLER #
TP1-1	13:02	✓ GRO ✓ VOC ✓ PAH ✓ DRO/RRO ✓ BBO
08-1024-TP1-1		✓ TDC ✓ RCRA
TP2-1	14:09	✓ GRO ✓ VOC ✓ PAH ✓ DRO/MRO ✓ TOC ✓ RCRA
08-1024-TP2-1		
TP3-1	16:27	✓ GRO ✓ VOC ✓ PAH ✓ DRO/RRO ✓ TOC ✓ RCRA
08-1024-TP3-1		

- DIRT  
DIRT-COOLERS-METALS

SEDIMENT

SEDIMENT	Time	COOLER #
SED 1	10:27	✓ GRO ✓ VOC ✓ DRO/RRO ✓ PAH ✓ RCRA
08-1025-SED1		
SED 2	10:53	✓ GRO ✓ VOC ✓ DRO/RRO ✓ PAH ✓ RCRA
08-1025-SED2		
SED 3	11:10	✓ GRO ✓ VOC ✓ DRO/RRO ✓ PAH ✓ RCRA
08-1025-SED3		
✓ TOC (30' East of SED 1)	10:40	BR SED 1 08-1025-FUGBARI
✓ TOC (by SWB)	11:20	BR SED 2
✓ TOC - upgradient, 100' W OF SED 1	12:24	08-1025- BR SOIL 1
✓ TOC - upgradient, EAST EDGE OF MSB	12:29	08-1025- BR SOIL 2

10/27/08

0615 - drive to Halls to catch Ferry.

check in @ 07:00

board @ 08:00

finish Chair of custody's

arrive Anch. - 10:30 PM

