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**Environmental Site Assessment
Quonset Hut Apartments
7825 Kenai Spur Highway
Soldotna, Alaska**

January, 1992

**USKH
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**ENVIRONMENTAL SITE ASSESSMENT
QUONSET HUT APARTMENTS
SOLDOTNA, ALASKA**

1.0 INTRODUCTION

This report presents the results of our environmental site assessment for the Quonset Hut Apartments located at 7825 Kenai Spur Highway, Soldotna, Alaska. This site is being considered by the Department of Transportation and Public Facilities as a right-of-way (R.O.W.) take for the proposed upgrade and realignment of the Kenai Spur Highway. The site is located within the Kenai Rural and Urban, MP 2.8 to 10.0 section of the realignment project.

The assessment was performed in two phases with Task 1 consisting of a historical research and visual inspection of the property. The purpose of the Task 1 assessment was to develop a professional opinion as to the potential presence of petroleum contaminants or hazardous substances on or near the above property that may impact the site during future construction activities. The results of the Task 1 work were used to design a Task 2 field exploration program. The purpose of the Task 2 assessment was to characterize the lateral and vertical extent of contamination that may be present at the property within the right-of-way take. Authorization to proceed with the Task 1 and Task 2 work was received on September 10, 1991 and December 10, 1991, respectively, from Mr. Ed Riggs of USKH.

2.0 SITE AND PROJECT DESCRIPTION

The project site is located in a residential/commercial area at 7825 Kenai Spur Highway in the NE1/4 of Section 34, T 6 N, R 11 W, Kenai Quadrangle (C-4). The site has two buildings on it including the Quonset Hut Apartments building with a workshop attached to the north end and a storage building. The general site features in the immediate vicinity as well as the proposed R.O.W. take area are shown in Figure 1.

Included in the Task 1 assessment is a visual evaluation of the site conducted on September 25, 1991. At that time, the site, the existing storage building and workshop interiors and the surrounding property were walked by an experienced engineer from our firm. Subsequent to the on-site visit, contacts were made with private firms and public agencies to obtain supplemental information with which to complete this report. The Task 2 assessment involved a field exploration program including drilling and sampling three soil borings and installing and sampling three groundwater monitoring wells. The Task 2 work effort also included coordinating with an analytical laboratory for the testing of selected soil and water samples and reporting the

results of the field efforts. All drilling, sampling and monitoring well installation work performed in the Task 2 work was conducted in accordance with our Quality Assurance Project Plan (QAPP), dated October 6, 1990 and our Site Specific Health and Safety Plan dated December 13, 1991.

3.0 RECORDS REVIEW

The purpose of the records review was to attempt to identify any previous activities on this property which may have constituted environmental misuse and/or contributed waste residuals at the site. The records search included visiting the Alaska Department of Environmental Conservation (ADEC's) Kenai District office to collect available information pertinent to the site, obtaining an updated list of registered underground storage tanks (USTs) in the vicinity of the site from the UST program in Juneau, reviewing two aerial photographs from 1963 and 1980, reviewing a reconnaissance level hazardous material survey report produced by Harding Lawson Associates (HLA) and reviewing the soil and groundwater information collected from the borings drilled near the site for the proposed realignment by Duane Miller & Associates.

The ADEC's Kenai District office was visited on September 26, 1991 for information pertinent to the site. Mr. Paul Horwath of the ADEC office to the best of his knowledge did not know of any information on file on the Quonset Hut apartments site. The ADEC did have a file on the property adjacent to the east and southeast boundary of the site. This property contains a junk yard area with several 55-gallon drums. The ADEC file stated that the drums contained a urethane product, Freon 11 or 12 and/or petroleum (remaining on site as of 8/16/89). In the summer of 1990, the drums were reportedly removed and disposed of by the property owner. On October 8, 1990, a representative from the ADEC verified the removal of the drums with a site visit, concluded that there were no other apparent oil or hazardous substances on the property and, therefore, deleted the property from the contaminated sites report.

The ADEC Underground Storage Tank Section (Juneau) was contacted to gather information about the presence of USTs on the site and surrounding properties. The ADEC records showed that there are no registered underground storage tanks on the site. There are several sites in the vicinity which contain registered underground tanks. The closest of these sites is about 1/3 mile from the property at the Mountain View Elementary School. A five year old, 500-gallon heating oil tank is present on this site. Summary information on each registered tank site in the vicinity is included in Table 1 and additional details of each tank are included in Appendix A.

A reconnaissance level hazardous material survey was conducted in 1989 as part of an environmental assessment by HLA for the highway realignment. The report produced from the survey was reviewed for information regarding the Quonset Hut apartments. A two page excerpt from this report containing the information on the property is included in Appendix B. Potential sources of petroleum hydrocarbons and hazardous substances identified in the HLA report include three 55-gallon drums and several abandoned vehicles located on the site and a 300-gallon heating oil UST located near the northwest corner of the property.

Two aerial photographs taken in 1963 and 1986 and enlarged to a scale of 1 inch equals 500 feet were reviewed. In the 1963 photo, the Quonset Hut property had been cleared of its vegetation but contained no structures. The property to the south of the site had been cleared and appeared to be farmed. The residential home that is currently located south of the property had been constructed. In the 1986 photo, both the Quonset Hut apartment building and the storage building were constructed. A total of six vehicles were parked around the apartment building. To the south of the apartments, in the vicinity of the leachfield, the grass was prominently green and healthy. About 50 feet further south of the very green growth, the vegetation appeared brown. To the north of the storage building along the tree line, numerous small objects were being stored. Dark patches visible in the parking area may represent wet soils or surface staining.

A total of three borings were drilled along the Kenai Spur Highway just north of the property by Duane Miller & Associates in conjunction with the highway realignment. Based on the field logs from the drilling activities, the insitu soils at the site appear to be brown to gray, clean sands. Groundwater was encountered in two of the three borings at 10 and 15.5 feet. No odors or visible signs of petroleum hydrocarbon and hazardous substances were noted on the field logs. The three boring logs have been included in Appendix B.

4.0 SITE RECONNAISSANCE

On September 25, 1991, the site, the storage building and workshop interiors and the surrounding area were visually evaluated to observe and document potential sources of petroleum hydrocarbon and hazardous substances. During the site reconnaissance an interview was conducted with Mr. Tommy Thompson, the owner of the property. A site plan showing the site and existing features of interest is illustrated in Figure 1. The following sections describe in detail the interview conducted with Mr. Tommy Thompson and observations made during the site visit.

4.1 Interview

An interview with Mr. Tommy Thompson, the owner of the Quonset Hut apartments, was conducted on September 14 and 25, 1991. According to Mr. Thompson, the quonset hut was moved onto the vacant property in 1964. For about 1-1/2 years, a restaurant was operated out of the quonset hut. The hut was also used as a snow machine sales shop for one winter prior to converting it to a three unit apartment building. In 1971 or 1972, Mr. Thompson constructed the storage building on the property. At that same time, natural gas was hooked up to the structures. Prior to natural gas, the apartments were heated with diesel fuel. A 300-gallon diesel fuel underground storage tank is located on the west side of the apartments. The tank is about 23 to 24 years old and has not been used since natural gas was brought to the site. According to Mr. Thompson, he pumped about 200 gallons of fuel out of the tank on September 24, 1991 after our initial telephone interview with him.

A small workshop is located on the north end of the quonset hut building. Mr. Thompson uses the workshop for repair work on furniture and woodworking. About 1/3 of the workshop floor is a concrete slab while the remaining 2/3 is wood. There are no sumps in the workshop. An on-site drinking water well is located within the footprint of the workshop. The well is about 20 to 25 feet deep. The property also has two septic systems connected to a leachfield located on the south end of the apartments.

The storage building located on the southwest corner of the site houses numerous items including fishing gear (nets, buoys), old carpet, furniture, building materials, and appliances. The building has a concrete floor slab and according to Mr. Thompson, it has no floor sumps.

Mr. Thompson has four 55-gallon drums stored along the west side of the apartments. These drums were used for diesel fuel storage tanks at other rental sites prior to moving the drums to this property. During the site visit, the drums were laid on their sides and were either on the ground or on a wood stand. One of the drums is 1/3 full of diesel fuel.

4.2 Site Evaluation

The site evaluation was conducted on September 25, 1991 in conjunction with a portion of the interview with Mr. Thompson. Mr. Thompson accompanied our field representative during

part of the site walk over, therefore, several of the observations made during the evaluation were discussed in the previous section.

Next to the four 55-gallon drums, a 5-gallon bucket of motor oil was located on the ground. Some surface staining was present next to the drums and bucket. Additional surface stained soils were present in the parking area located between the apartments and storage buildings. Three areas about 1 square foot in size were present in this area and appeared to be from a leaking vehicle. Two abandoned trucks were parked near the surface stains.

In addition to the furniture, fishing equipment and other supplies, several 5-gallon and about 55-gallon plastic containers of diesel were located in the storage building. The area to the north of the storage building along the tree line was being used for additional storage including wood scraps, appliances, piping, metal scraps and a water tank. This storage area was also noted in the 1986 photograph.

Six batteries were located on a piece of plywood adjacent to the location of the abandoned heating oil UST. The batteries belong to one of the tenants and were collected from junk vehicles. According to the tenant, the batteries have been stored there for "several" weeks. The tenant plans on giving the batteries to a friend.

Nov, 2015, Gator Guns

4.3 Surrounding Area Evaluation

The area surrounding the Quonset Hut apartments was visually evaluated during the site visit on September 25, 1991. The majority of the surrounding properties are developed and are used for both residential and commercial purposes. To the north of the site is the Kenai Spur Highway running east to west. On the north side of the highway is Action Marine. This facility sells and repairs boat motors and parts. To the east and southeast of the site is a large warehouse type structure and junk yard. Several 55-gallon drums, tanks, and stained surface soils were noted in this area. To the south of the property are two residential homes. The area to the west is heavily vegetated and contains no structures.

5.0 PETROLEUM HYDROCARBON AND HAZARDOUS SUBSTANCES

Information gathered during the records research, interview and the September 25, 1991 site visit was reviewed to assess the potential for petroleum hydrocarbon and hazardous substances

on or near the property. The potential sources of petroleum hydrocarbon and hazardous substance identified on-site and off-site are described in the following sections.

5.1 On-Site Potential

From the visual observations made and the interview conducted with Mr. Thompson on September 24 and 25, 1991, there appears to be several petroleum hydrocarbon and hazardous substance sources which may be affecting the soil and groundwater at the site. Each of these sources has been identified on the site plan, Figure 1.

These sources include the four 55-gallon drums located on the west side of the apartment building, the abandoned heating oil UST, the six batteries stored adjacent to the UST and the stained surface soils on the property.

5.2 Off-Site Potential

Several off-site potential sources were identified during the surrounding area evaluation. The Action Marine facility located on the north side of the property handles petroleum products during the maintenance of boat engines. The facility, however, is about 500 feet from the north border of the subject property and a release from a source at this property would most likely not impact the apartment site soil and groundwater.

The warehouse building and junk yard are located adjacent to the east and southeast boundary of the property. Several drums, abandoned rusted tanks and surface staining were noted on this property. In addition, the junk yard is listed in the ADEC Kenai office files as discussed previously.

6.0 FIELD EXPLORATIONS

During the records review and the site evaluations, several potential on-site sources of petroleum hydrocarbon and hazardous substances were identified as discussed in Section 5.0. Based on the preliminary information, the following field exploration program was accomplished to assess the impact that these potential sources have had on the soils and groundwater within the right-of-way take area.

6.1 Exploratory Borings

Three borings with monitoring wells, designated B1MW through B3MW, were drilled on December 18, 1991. Boring B1MW was positioned adjacent to the four 55-gallon drums on the west side of the apartment building. The second boring, Boring B2MW, was also drilled on the west side of the apartment building adjacent to the abandoned heating oil UST. Boring B3MW was placed in the area of stained surface soils located between the apartment building and the storage building. The borings were drilled by Hughes Drilling of Anchorage, Alaska, using a truck-mounted CME-75 drill rig. The test holes were advanced with 4-inch hollow-stem auger to depths of about 10 to 12.5 feet. The location of the borings with monitoring wells are shown in Figure 1.

A representative from Shannon & Wilson was present to locate the borings, monitor drilling, record detailed observations on the installation of the monitoring wells, field screen and sample the subsurface materials, log the materials encountered in each test hole, and sample groundwater. All drilling equipment was steam cleaned prior to use to avoid potential cross-contamination of soil by residue from previous borings. The results of the field explorations including descriptions of materials encountered in the borings, groundwater elevations measured after drilling, and monitoring well construction details are shown on the boring logs in Figures 2 through 4.

Soil samples were recovered from the borings at 2.5-foot intervals using modified penetration resistance test methods. In this method soil samples are obtained by driving a 3-inch O.D. split spoon sampler into the bottom of the boring with a 340 lb hammer falling onto the drilling rods.

Prior to sampling, split spoon samplers were scrubbed with a dilute Alconox wash solution, followed by a sequence of tap water, methanol and deionized water rinses. After retrieving the filled sampler, analytical samples were collected by a qualified geologist. All samples were transferred from the sampler to the jars using a decontaminated stainless steel spoon. Two (2) soil samples from each of the borings were sent to the laboratory for analytical testing. Samples for analysis were selected by field screening with a Hnu HW-101 photoionization detector (PID). The near surface sample from each boring as well as the sample with the greatest PID reading or the sample that was taken closest to the water table were submitted for laboratory

analysis. The number and depth of the samples recovered from the borings are shown on the boring logs and are summarized in Table 2.

6.2 Field Screening

The split spoon samples obtained from the borings were screened for volatile organic compounds using a Hnu HW-101 photoionization detector (PID) calibrated with an isobutylene standard gas and mathematically correlated to equivalent benzene concentration. The headspace samples were collected after the analytical samples by quickly filling 8 oz. glass jars with freshly exposed soils to about 1/2 of its volume, again using a decontaminated stainless steel spoon. The headspace samples were allowed to equilibrate to ambient air temperature and agitated before screening with the PID in a still environment. Screening was accomplished by lifting the lid of the sample jar just enough to insert the sampling probe of the PID into the jar. The PID display was observed and the maximum reading was recorded for each sample. The results of the headspace screening are presented on the boring logs and are summarized in Table 3.

6.3 Monitoring Well Installation and Sampling

At the completion of each test hole, monitoring wells were placed to the bottom of the borings. All wells were constructed of 2-inch nominal I.D. schedule 40 PVC pipe with threaded connections. The lower portion of each well was made up of PVC well screen with 0.020 inch slots. The screen extends from the bottom of the holes to about 3 to 4 feet below the site surface. A continuous sand pack consisting of filter sand was used to backfill around the well screen in the saturated zone and to about 1 to 2 feet above the screened portion of the well. A bentonite chip seal was placed from 2.5 feet to 1.0 feet below grade. Flush-mounted protective casings, used around the monitoring wells, were embedded in a portland cement/pea gravel grout. The monitoring well construction details are shown on the boring logs, presented in Figures 2 through 4.

Water samples from the monitoring wells were recovered to assess the quality of the groundwater beneath the site. Before sampling of the wells, water level measurements were obtained by using an electrical water level indicator device, measuring down from the rim of the PVC well casings. Next, the wells were developed using a Brainard-Kilman hand pump until most of the fines and sands were removed. Approximately 10 to 20 well volumes were removed from each monitoring well. The water produced from the well installation is being stored on-site in 55 gallon steel barrels. After developing was completed, a water sample was obtained from each

monitor well using a VOSS disposable bailer. Temperature ($^{\circ}\text{C}$), pH and conductivity (μmhos) values of the water samples were measured in the field at the time of sampling. Each sample was placed in laboratory supplied bottles and then in a chilled cooler for delivery to the laboratory.

The pump, bailer and other sampling equipment were cleaned prior to developing, purging and sampling with a dilute Alconox wash solution and rinsed with tap water followed by methanol and deionized water. The results of the developing, purging, water level, pH, conductivity and temperature measurements for the monitoring wells are presented on the Water Sampling Log in Table 3.

The vertical positions of the wells were determined by a Registered Land Surveyor, Mr. Roy Whitford of Soldotna, Alaska, on December 21, 1991. An arbitrary vertical elevation of 100.00 feet was assigned to the temporary bench mark (TBM) located on top of the spike in a utility pole, as shown on Figure 1. The monitoring well measuring point elevations, the rim of the PVC pipe, are referenced to the TBM and are summarized in Table 4. The groundwater elevation is also referenced to the TBM.

7.0 LABORATORY ANALYSES

Soil samples collected during drilling and water samples collected from the monitoring wells were sent under chain-of-custody procedures to Northern Testing Laboratories of Alaska for analysis. The results of the analyses have been summarized in Table 3. Individual laboratory reports are included in Appendix C.

Six (6) soil samples obtained from the exploratory borings were analyzed for total petroleum hydrocarbons (EPA 418.1), volatile aromatic organics, BTEX, (EPA 8020), halogenated volatile organics, HVO, (EPA 8010), polychlorinated biphenyls, PCBs, (EPA 8080), and leachable metals by the Toxic Characteristic Leaching Potential (TCLP) procedure including arsenic, barium, cadmium, chromium, lead, mercury, selenium and silver by EPA 6000/7000 Series.

Three (3) water samples taken from the monitoring wells and were analyzed for total petroleum hydrocarbons (EPA 418.1), volatile aromatic organics (EPA 602), diesel range organics, DRO, (EPA 3550/8100) halogenated volatile organics, HVO, (EPA 601) polychlorinated biphenyls, PCBs (EPA 608), and total dissolved metals arsenic, barium, cadmium, chromium,

lead, mercury, selenium and silver. A duplicate of the water sample B3MWW1, designated B3MWW1D, was also analyzed for total petroleum hydrocarbons, TPH, by (EPA Method 418.1).

8.0 SUBSURFACE CONDITIONS

8.1 Soils

The soils encountered during the surface and subsurface explorations in the east portion of the property adjacent to the structure were generally consistent. In Boring B-1, B-2 and B-3, a moist, brown, slightly silty to silty sand to slightly gravelly sand was observed to the depth explored (up to 12.5 feet).

8.2 Groundwater

Three monitoring wells were installed at the 7825 Kenai Spur Highway site to facilitate sampling of groundwater for analytical testing and to monitor the depth of groundwater beneath the site. The static groundwater level was measured in the monitoring wells at a depth of about 5 feet below the surface. These static water level readings were used in the water level (potentiometric surface) contour map shown on Figure 1. The gradient of the potentiometric surface is relatively flat at approximately 1.2 %, and the dip of the gradient is generally toward the southeast.

9.0 DISCUSSION OF ANALYTICAL RESULTS

9.1 Soils

As shown in Figure 1, our exploratory test holes are situated near potential sources of site contamination. Sample B1S1 had a TPH concentration of 162 ppm, 0.629 ppm of barium, 0.051 ppm of lead, 0.0007 ppm of mercury and non-detectable levels of BTEX, DRO, HVO, PCBs, arsenic, cadmium, chromium, selenium and silver. Sample B1S3 had 26 ppm of TPH. Sample B2S1 had 29 ppm of TPH, 15.2 ppm of PCBs (Aroclor 1254), 0.945 ppm of barium, 0.147 ppm of lead, 0.0003 ppm of mercury and non-detectable levels of BTEX, HVO, arsenic, cadmium and chromium. Sample B2S2 had non-detectable levels of TPH. Sample B3S1 had non-detectable levels of DRO and BTEX. Sample B3S2 had non-detectable levels of DRO.

These results show that background levels of TPH are present adjacent to the 55-gallon drums and in the parking area, that slightly elevated levels of PCBs are present in the surficial soils

in the parking area, and that several metals are leachable from the soils at the 55-gallon drums and in the parking area. The quantities of TPH detected are below or very near the most stringent ADEC cleanup levels of 100 ppm (when not characterized as diesel or gasoline). The leachable metals are also less than the ADEC cleanup guidelines. The 15.2 ppm concentration of PCBs found in Sample B2S1 is greater than the ADEC cleanup guideline of 1 ppm PCBs.

9.2 Groundwater

Sample B1MWW1, obtained from the monitoring well located near the 55-gallon storage drums, had 0.0003 ppm of tetrachloroethylene, 0.030 ppm of barium, 0.0005 ppm of mercury and non-detectable levels of TPH, all other HVOs, arsenic, cadmium, chromium, lead, selenium and silver. Sample B2MWW1 had 0.44 ppm of TPH, 0.009 ppm of barium, 0.0002 ppm of mercury and non-detectable levels of BTEX, HVO, PCBs, arsenic, cadmium, chromium, lead, selenium and silver. Sample B3MWW1, collected from the monitoring well near the underground storage tank, had 0.0003 ppm of 1,1,1-trichloroethane and non-detectable concentrations of TPH, BTEX and PCBs. Sample B3MWW1D, a duplicate sample of B3MWW1, had non-detectable TPH.

The levels of tetrachloroethylene, 1,1,1-trichloroethane, barium and mercury detected in the water samples were all below the most stringent ADEC cleanup levels (0.005 ppm tetrachloroethylene, 0.2 ppm 1,1,1-trichloroethane, 2 ppm barium and 0.002 ppm mercury). The 0.44 ppm concentration of TPH found in Monitoring Well B2MW is above the ADEC cleanup level of non-detectable TPH.

9.3 Quality Control Samples

The soil and groundwater sample results for this project were presented by the laboratory in a Data Deliverables report. This data package includes the analytical method used, uncorrected quantitative results, date and times of analyses, chromatograms of the gas chromatograph analysis, calibration documents for instruments used, surrogate compound recovery data, narrative statements explaining any corrective action taken on reported data and laboratory quality control sample recovery data to document the precision and accuracy of the results. The information included in this Data Deliverables package was used to calculate whether the precision, accuracy and completeness of the analysis were performed within the boundaries of the data quality objectives. The data quality objectives for this project, are shown in our April 20, 1991 Quality Assurance Project Plan (QAPP) for UST Site Assessments which has been approved by the ADEC.

The precision, accuracy and completeness for the total petroleum hydrocarbons (TPH), gasoline range organics (GRO), diesel range organics (DRO), aromatic volatile organics (BTEX), halogenated volatile organics (HVO), polychlorinated biphenyls (PCBs), arsenic, barium, cadmium, chromium, copper, lead, mercury, selenium, silver and zinc and the data quality objectives (DQO) for this project are as follows:

<u>Parameter</u>	<u>Precision (DQO)%</u>	<u>Accuracy (DQO)%</u>	<u>Completeness (DQO)%</u>
TPH	+/-7.4 (+/-40)	77-91 (60-130)	100 (95)
GRO	+/-NA (+/-40)	NA (60-130)	NA (95)
DRO	+/-13 (+/-40)	87-99 (60-130)	100 (95)
BTEX-Soil	+/-8.7 (+/-40)	77-137 (60-130)	86 (95)
BTEX-Water	+/-12 (+/-30)	95-116 (60-140)	100 (95)
HVO-Soil	+/-31 (+/-40)	63-134 (60-130)	89 (95)
HVO-Water	+/-23 (+/-30)	81-119 (60-140)	100 (95)
PCBs	+/-5 (+/-40)	99-116 (60-130)	100 (95)
Arsenic	+/-20 (+/-20)	63-92 (80-120)	100 (95)
Barium	+/-5.1 (+/-20)	76-78 (80-120)	50 (95)
Cadmium	+/-0 (+/-20)	79-97 (80-120)	75 (95)
Chromium	+/-0 (+/-20)	80-98 (80-120)	100 (95)
Lead	+/-0 (+/-20)	80-95 (80-120)	100 (95)
Mercury	+/-86 (+/-20)	95-108 (80-120)	50 (95)
Selenium	+/-0 (+/-20)	79-97 (80-120)	75 (95)
Silver	+/-0 (+/-20)	79-97 (80-120)	75 (95)

As shown above, the majority of the data quality objectives for this project have been met. The data quality objectives were not met, however, for GRO, BTEX-soil, HVO-soil, barium, cadmium, mercury, selenium and silver. A complete discussion of the deviations from the data quality objectives is discussed in Section III of Northern Testing Laboratories' data deliverables package which is presented in Appendix C. The accuracy and precision data used to show that the GRO analysis were within the data quality objectives for this project were obtained from the HVO and BTEX quality control data. Northern Testing Laboratories feels confident that none of the deviations from completion goals represent any concern for the quality of the associated results.

9.4 Drill Cuttings and Purged Groundwater Disposal

Three (3) 55-gallon drums of drill cuttings and three (3) drums of purged groundwater were generated during this assessment. The soil cuttings and the purged groundwater are being stored in 55-gallon drums on-site near each of the monitoring well locations. The storage drums are marked with the appropriate boring/monitoring well number.

Analytical soil samples from Boring B-3 were clean, therefore, the disposal of the drill cuttings from this boring can be performed by spreading onto the ground surface. Disposal of the drill cuttings from Boring B-1 and B-2 will be accomplished at Alaska Pollution Control in Anchorage due to the presence of TPH and PCBs concentrations above the ADEC cleanup guidelines.

The analytical groundwater samples from Monitoring Wells B1MW, B2MW and B3MW had levels of contaminants above ADEC guidelines or above background concentrations for the HVOs. Disposal of the groundwater purged from these wells will be accomplished at Alaska Pollution Control in Anchorage.

10.0 CONCLUSIONS AND RECOMMENDATIONS

The soil samples collected from Borings B1MW and B2MW had background to slightly elevated levels of total petroleum hydrocarbons. With the exception of the concentration of 162 ppm TPH in Sample B1S1, all detectable levels of TPH are below the most stringent ADEC cleanup guideline of 100 ppm TPH. In our opinion, the ADEC will most likely not require any further action at the location of Boring B-1, adjacent to the 55-gallon drums, since the elevated TPH concentrations appear to be confined to the upper 18 inches of the surface soils.

Soil sample B2S1, collected from 0 to 1.5 feet in Boring B-2, had 15.2 ppm PCBs (Aroclor 1254). The cleanup level set by ADEC is 1 ppm PCBs. In our opinion, ADEC will require that the surficial soils impacted by PCBs be removed from the site. Boring B2MW was positioned in the general area of the stained soils observed between the Quonset Hut Apartments and the storage building. Higher levels of PCBs may be present in visibly stained areas with higher TPH concentrations. We recommend that the PCB impacted surficial soils be excavated and disposed of at an approved facility.

The water sample collected from Monitoring Well B1MW contained 0.0003 ppm tetrachloroethylene. This level is below the most stringent cleanup level set by ADEC of 0.005 ppm. The water sample B2MWW1 collected from Monitoring Well B2MW had 0.44 ppm of TPH. This level is close to the method detection limit of 0.4 ppm and, therefore, is just above the cleanup level of non-detectable set by ADEC. Based on our observations of visually stained soils in this area and the fact that PCBs were detected in the soil sample from Boring B2MW, the TPH contamination in the groundwater is most likely a result of a release from mishandling of waste oil at the site. We recommend that the stained soils in the vicinity of Boring B2MW be removed to the depth of visible penetration and disposed of at an approved facility.

Although the level of TPH in Monitoring Well B2MW is very low, it is our experience that when detectable TPH concentrations are found in the groundwater the ADEC will require additional assessment work. We recommend that the monitoring wells be sampled during March and June, 1992, to demonstrate to the ADEC that the levels of TPH are decreasing. We also recommend that the water samples be tested for polynuclear aromatics (PNAs) to demonstrate that no other toxic or carcinogenic compounds are present. If the TPH levels do not decrease by June or if PNAs are present, it is our opinion that long term monitoring or potential remediation may be necessary.

After the PCB contaminated and visibly stained soils are removed from the site and the TPH concentrations in the groundwater are shown to be decreasing a "no further action required" letter should be requested from the ADEC. *requesting site closure.*

11.0 CLOSURE/LIMITATIONS

Three groundwater monitoring wells were installed as part of this project. When you no longer need the monitoring wells we recommend that the wells be abandoned according to Alaska Statute 18ACC80.020c.

This report was prepared for the exclusive use of our client and their representatives, in the study of this site. The findings we have presented within this report are based on limited research and on the sampling analysis that we conducted at this site. They should not be construed as a definite conclusion regarding the soils and groundwater quality at this site. It is possible that our subsurface tests may have missed some higher levels of petroleum hydrocarbon or hazardous substance constituents, although our intention was to sample areas likely to be impacted. As a result, the analysis and sampling performed can only provide you with our best judgement as to the

environmental characteristics of this site, and in no way guarantees that an agency or its staff will reach the same conclusions as Shannon & Wilson, Inc. The data presented in this report should be considered representative of the time of our site assessment. Changes in the conditions of this site can occur with passage of time, whether they be due to natural processes or the works of man on this site. In addition, changes in Government Codes, regulations, or laws may occur. Due to such changes, our observations and recommendations applicable to this site may need to be revised wholly or in part, due to changes beyond our control.

The results of our surface and subsurface soil and groundwater evaluation indicate that soils and groundwater impacted by low levels of petroleum hydrocarbon and hazardous substance constituents remain at the Quonsct Hut site. You are therefore advised that various state and federal agencies (ADEC, EPA, etc.) may require the reporting of this information. Shannon & Wilson does not assume the responsibility for reporting these findings and therefore, has not, and will not, disclose the results of this study.

We appreciate this opportunity to be of service. Please call the undersigned with any questions or comments concerning the contents of this report.

Sincerely,

SHANNON & WILSON, INC.

Prepared By:

LeeAnne Osgood
LeeAnne Osgood
Geotechnical Engineer

Approved By:

Fred R. Brown
Fred R. Brown, P.E.
Vice President



Table 1 - Registered Underground Storage Tanks

Location	No. of Tanks	Tank Contents	Use Status	Capacity in Gallons	Age in Years
315 Swires Road	1	Heating Oil	Currently in Use	500	5
9583 Spur Highway	3	Heating Oil	Removed from Ground	2500	27
		Heating Oil	Removed from Ground	500	21
		Heating Oil	Removed from Ground	500	??
5455 Kenai Spur Highway	2	Gasoline	Currently in Use	10000	4
		Gasoline	Currently in Use	10000	4
5327 Kenai Spur Highway	2	No Info. Given	No Info. Given	No Info. Given	No Info. Given
		No Info. Given	No Info. Given	No Info. Given	No Info. Given

TABLE 2 - SOIL AND WATER SAMPLE LOCATIONS AND DESCRIPTIONS

SOIL SAMPLES

Sample Number	Date	Sample Location (See Figure 1 and Table 2)	Depth (ft.)	Sample Classification
B1S1	12/18/91	Boring No. B-1, Sample No. 1	0.0-1.5	Brown, slightly gravelly, silty SAND
B1S2	12/18/91	Boring No. B-1, Sample No. 2	2.5-4.0	Brown, slightly silty SAND
B1S3	12/18/91	Boring No. B-1, Sample No. 3	5.0-6.5	Brown, slightly silty SAND
B1S4	12/18/91	Boring No. B-1, Sample No. 4	10.5-12.0	Brown, slightly silty SAND
B2S1	12/18/91	Boring No. B-2, Sample No. 1	0.0-1.5	Brown, slightly gravelly, silty SAND
B2S2	12/18/91	Boring No. B-2, Sample No. 2	2.5-4.0	Brown, slightly gravelly, silty SAND
B2S3	12/18/91	Boring No. B-2, Sample No. 3	5.0-6.5	Brown, slightly silty SAND
B2S4	12/18/91	Boring No. B-2, Sample No. 4	8.5-10.0	Brown, slightly silty SAND
B3S1	12/18/91	Boring No. B-3, Sample No. 1	0.0-1.5	Brown, slightly silty SAND
B3S2	12/18/91	Boring No. B-3, Sample No. 2	2.5-4.0	Brown, slightly silty SAND
B3S3	12/18/91	Boring No. B-3, Sample No. 3	5.0-6.5	Brown, slightly silty SAND
B3S4	12/18/91	Boring No. B-3, Sample No. 4	10.5-12.0	Brown, slightly silty SAND

WATER SAMPLES

Sample Number	Date	Sample Location (See Figure 1 and Table 2)	Depth (ft.)	Sample Classification
B1MWW1	12/20/91	Monitoring Well No. B1MW, Water Sample No. 1	7	Groundwater
B2MWW1	12/20/91	Monitoring Well No. B2MW, Water Sample No. 1	7	Groundwater
B3MWW1	12/21/91	Monitoring Well No. B3MW, Water Sample No. 1	7	Groundwater
B3MWW1D	12/21/91	Monitoring Well No. B3MW, Water Sample No. 1 (duplicate)	7	Groundwater

TABLE 3 - SUMMARY OF HEADSPACE SCREENING AND ANALYTICAL RESULTS

Parameter Tested	Headspace Sample Number (See Table 2 and Figure 1)					
	B1S2	B1S4	B2S3	B2S4	B3S3	B3S4
PID Headspace Reading - ppm	1.0	NA	1.0	NA	1.0	NA
Method	Photovac TIP II					

Parameter Tested	Analytical Sample Number (See Table 2 and Appendix C)									
	Soil Sample Number					Water Sample Number				
Method*	B1S1	B1S3	B2S1	B2S2	B3S1	B3S2	B1MWW1	B2MWW1	B3MWW1	B3MWWID
PID Headspace Reading - ppm	4.0	1.0	1.0	1.0	2.0	1.0	NA	NA	NA	NA
Petroleum Hydrocarbons - ppm	162	26	29	ND	NA	NA	ND	0.44	ND	ND
Diesel Range Organics - ppm	ND	NA	NA	NA	ND	ND	NA	NA	NA	NA
Aromatic Volatile Organics										
Benzene - ppm	ND	NA	ND	NA	ND	NA	ND	ND	ND	NA
Toluene - ppm	ND	NA	ND	NA	ND	NA	ND	ND	ND	NA
Ethylbenzene - ppm	ND	NA	ND	NA	ND	NA	ND	ND	ND	NA
Xylenes - ppm	ND	NA	ND	NA	ND	NA	ND	ND	ND	NA
Halogenated Volatile Organics										
Tetrachloroethylene - ppm	ND	NA	ND	NA	NA	NA	0.0003	ND	ND	NA
1,1,1- Trichloroethane - ppm	ND	NA	ND	NA	NA	NA	ND	ND	0.0003	NA
All others	ND	NA	ND	NA	NA	NA	ND	ND	ND	NA
Polychlorinated Biphenyls										
Aroclor 1254 - ppm	ND	NA	15.2	NA	NA	NA	ND	ND	NA	NA
All others	ND	NA	ND	NA	NA	NA	ND	ND	NA	NA
TCLP Extraction Procedure										
Leachable/Dissolved Metals										
Arsenic - ppm	ND	NA	ND	NA	NA	NA	ND	ND	NA	NA
Barium - ppm	0.629	NA	0.945	NA	NA	NA	0.03	0.009	NA	NA
Cadmium - ppm	ND	NA	ND	NA	NA	NA	ND	ND	NA	NA
Chromium - ppm	ND	NA	ND	NA	NA	NA	ND	ND	NA	NA
Lead - ppm	0.051	NA	0.147	NA	NA	NA	ND	ND	NA	NA
Mercury - ppm	0.0007	NA	ND	NA	NA	NA	0.0005	0.0002	NA	NA
Selenium - ppm	ND	NA	ND	NA	NA	NA	ND	ND	NA	NA
Silver - ppm	ND	NA	0.0003	NA	NA	NA	ND	ND	NA	NA

KEY DESCRIPTION
 NA SAMPLE NOT ANALYZED FOR THIS PARAMETER
 ND NOT DETECTED
 * SEE APPENDIX C FOR COMPOUNDS TESTED AND LIMITS OF DETECTION

TABLE 4 - WATER SAMPLING LOG

POTENTIOMETRIC SURFACE DETERMINATION

WELL NUMBER	B1MW	B2MW	B3MW
DATE WATER LEVEL MEASURED	12/20/91	12/20/91	12/20/91
TIME WATER LEVEL MEASURED	2:17	2:13	2:15
MP ELEVATION, FT	97.78	96.95	97.80
DEPTH TO WATER BELOW MP, FT	5.62	4.87	5.76
WATER LEVEL ELEVATION, FT	92.16	92.08	92.04

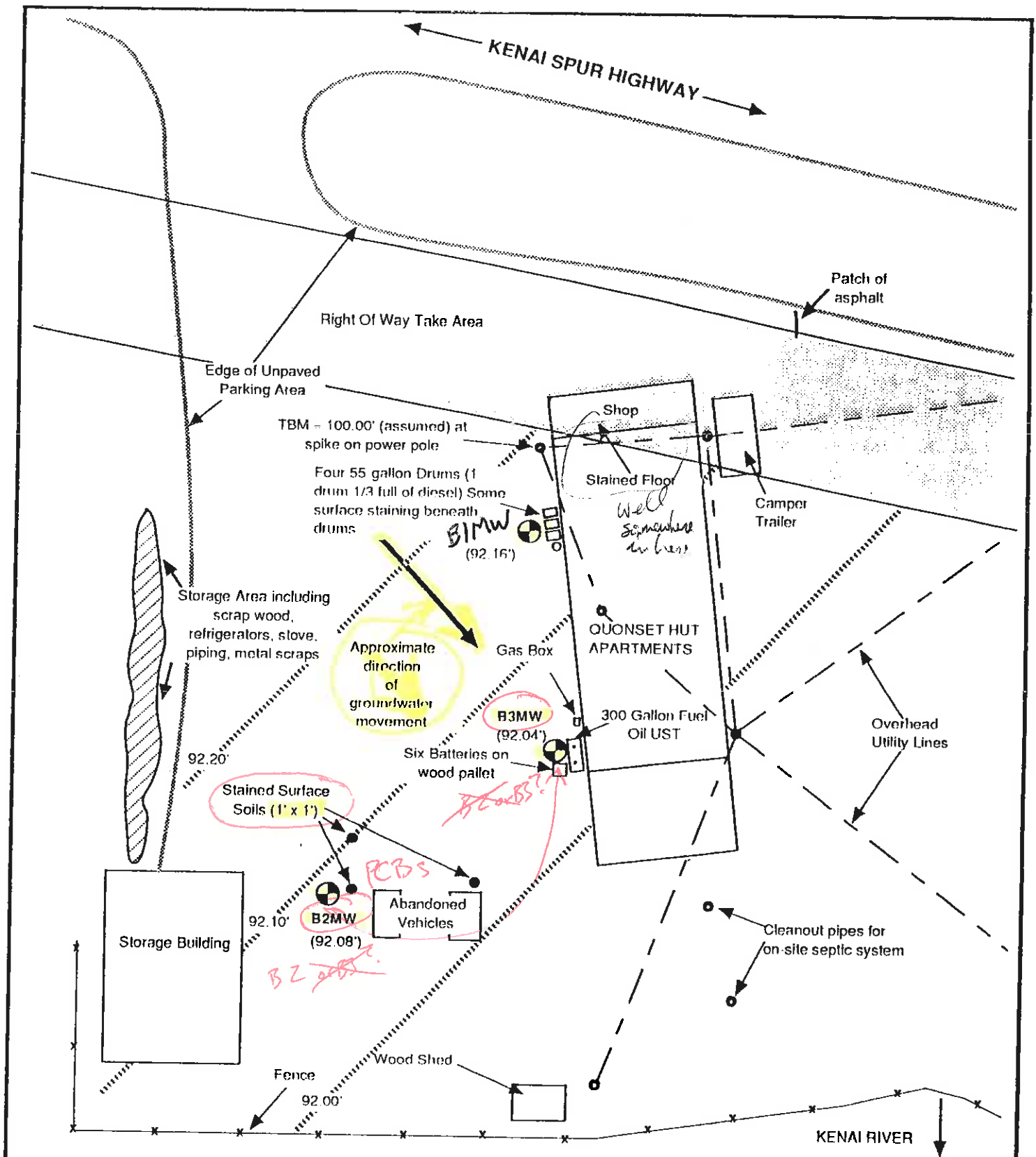
SAMPLING/DEVELOPING DATA

WELL NUMBER	B1MW	B2MW	B3MW
DATE SAMPLED	12/20/91	12/20/91	12/21/91
TIME SAMPLED	5:15	3:30	10:30
DEPTH TO WATER BELOW MP, FT	5.62	4.87	5.76
TOTAL DEPTH OF WELL BELOW MP, FT	11.96	9.32	11.68
WATER COLUMN IN WELL, FT	6.34	4.45	5.92
GALLONS PER FOOT	0.16	0.16	0.16
GALLONS IN WELL	1	0.72	0.95
TOTAL GALLONS PUMPED/BAILED	15	15	15
TEMPERATURE, C	1.8	2	2.6
SPECIFIC CONDUCTANCE, UMHOS/CM	142	65	66
pH	6.23	5.82	6.08
REMARKS			

Diameter of Casing: 2 inch
 Development Method: Brainard-Kilman Pump
 Purging & Sampling Method: Voss Disposable Bailor
 Sampling Personnel: Curt Conner

KEY

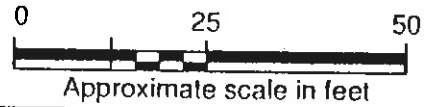
MP=Measuring Point
 NM=Not Measured



LEGEND:

Number and approximate location of Monitoring Well by Shannon & Wilson December, 1991; 92.16 = water level elevation in well
B1MW (92.16)

Generalized water level contours
 92.00'



Quonset Hut Apartments
 Kenai, Alaska

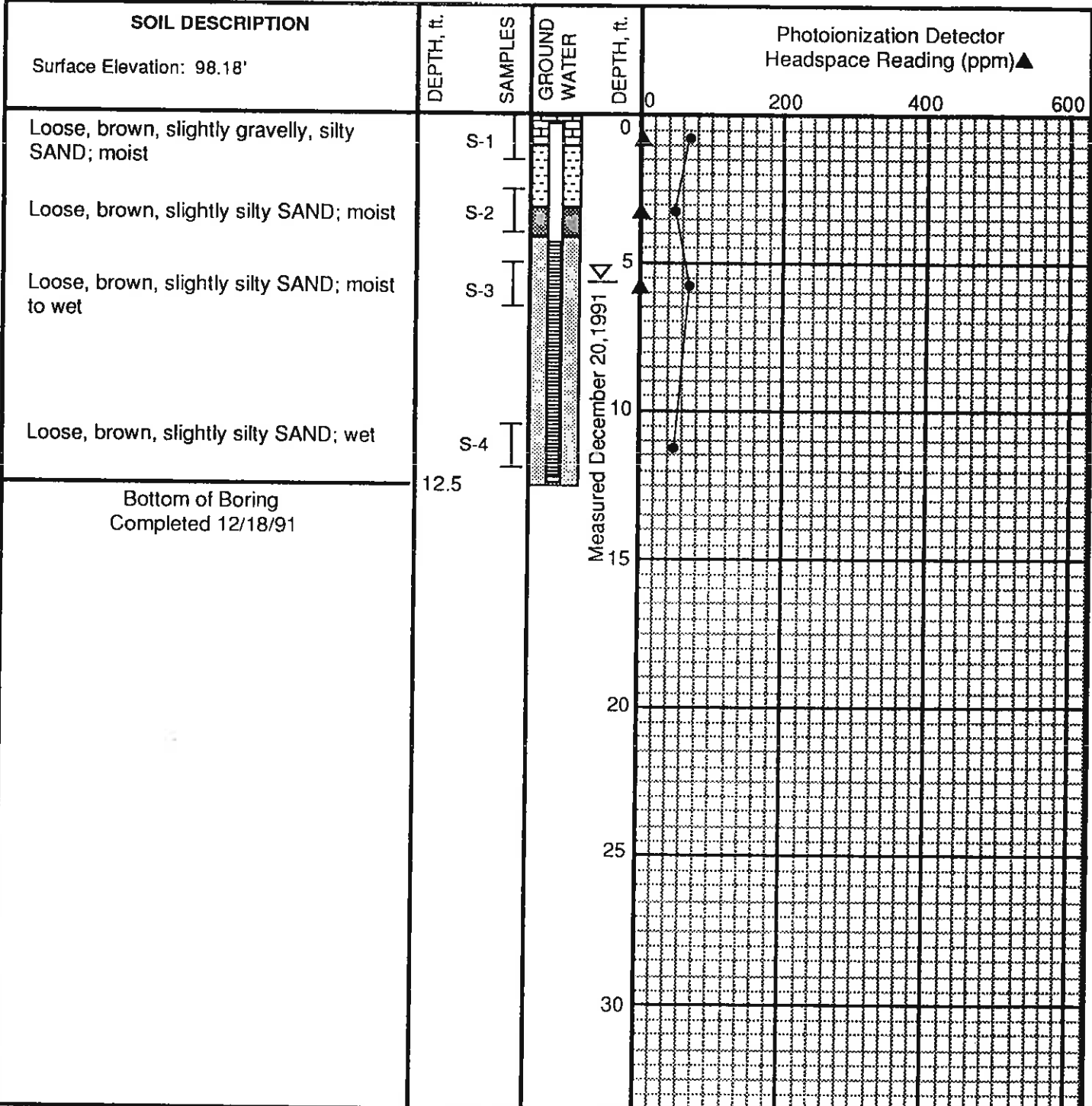
SITE PLAN

January, 1992

X-5069-2

SHANNON & WILSON, INC.
 Geotechnical Consultants

Fig. 1



LEGEND

- Bulk sample
- 3" O.D. split spoon sample
- 3" O.D. thin-wall sample
- * Sample not recovered
- Frozen
- Impervious seal
- Water level
- Slotted pipe

MONITORING WELL DETAILS

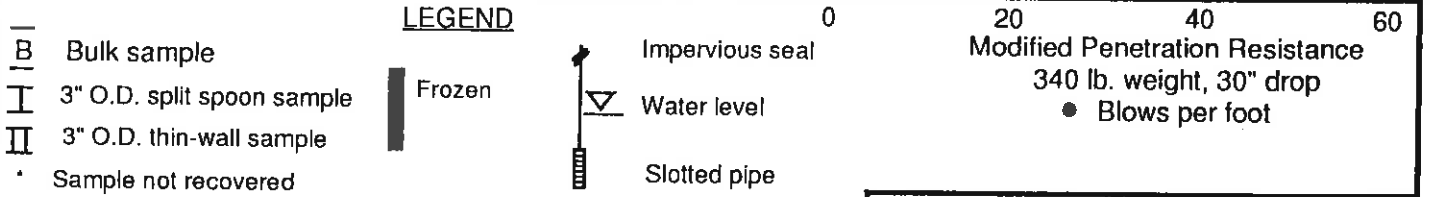
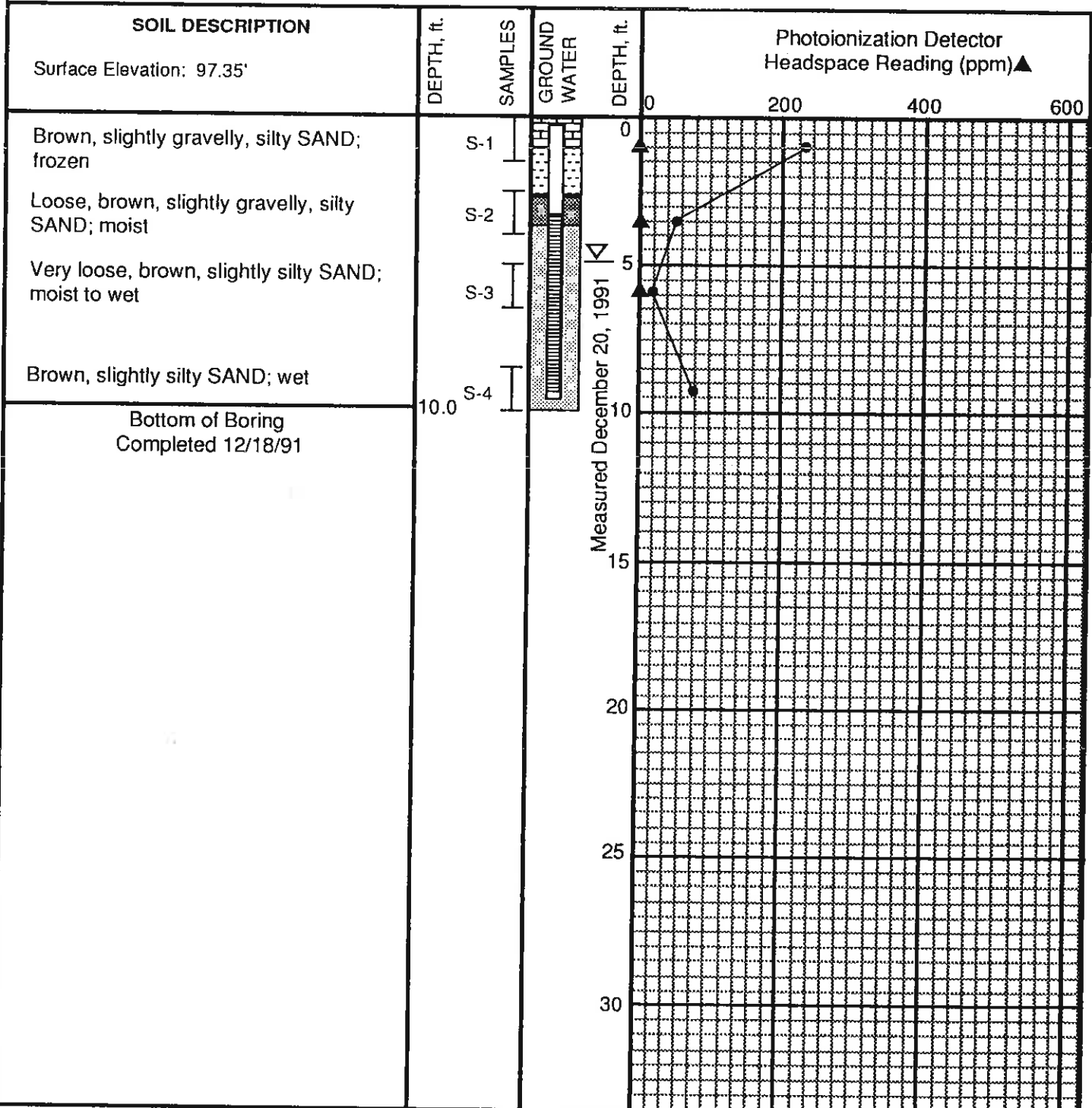
2-INCH PVC PIPE IN ALUMINUM CASING; TOTAL LENGTH: 12.16';
 STICKUP: -0.4'; MACHINE CUT, 0.020" SLOTTED PIPE: 11.7' to 4.3';
 #8-12 SAND: 12.5' to 4.5'; #20-40 SAND: 4.5' to 3.5'; BENTONITE: 3.5' to 1.0'; CEMENT GROUT: 1.0' to 0.0'; PADLOCK: #2001
 NOTE: The stratification lines represent the approximate boundaries between soil types and the transition may be gradual.

Quonset Hut Apartments
 7825 Kenai Spur Road, Kenai, Alaska

LOG OF BORING NO. B1MW


January, 1992 X-5069-2

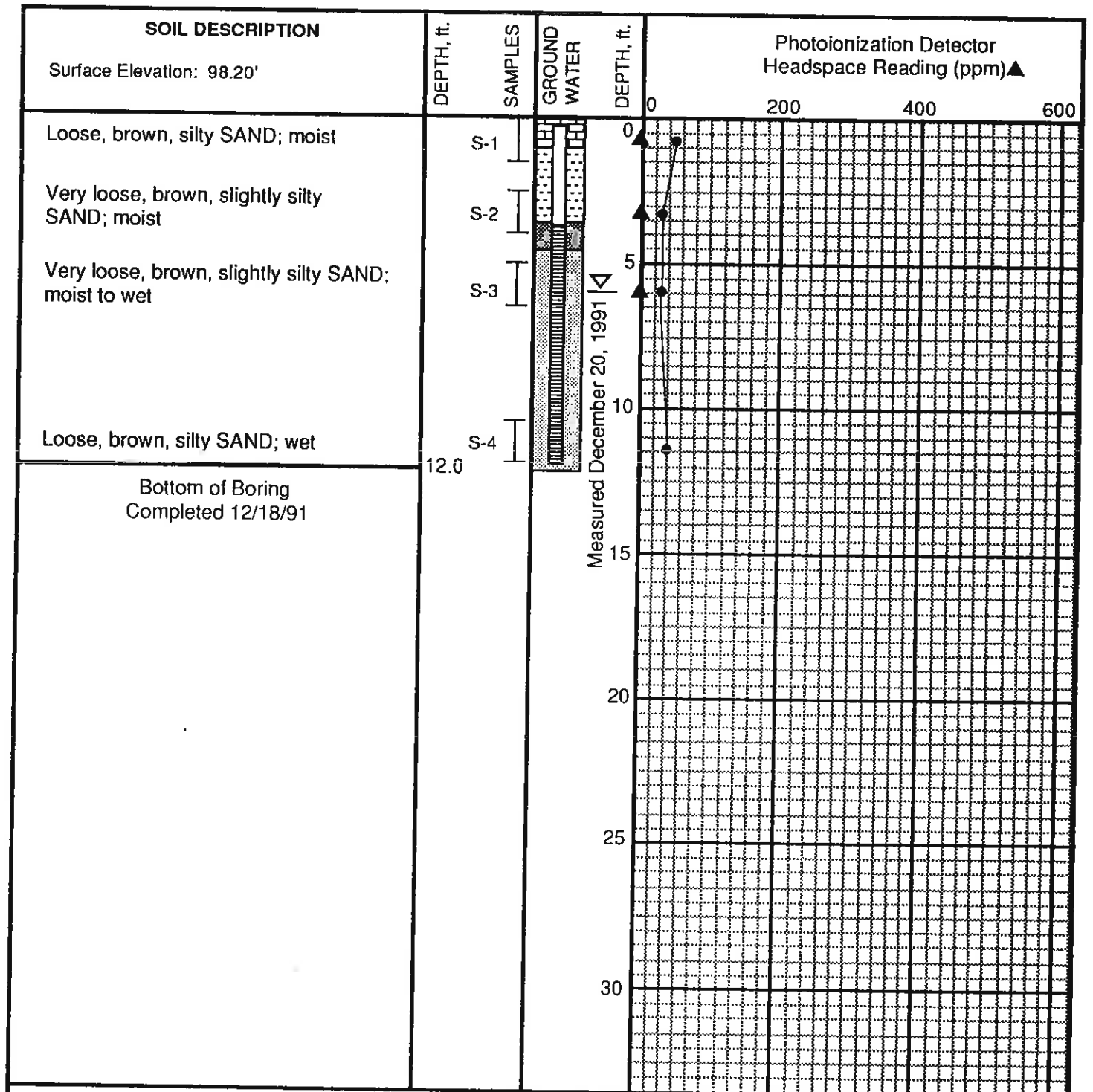
SHANNON & WILSON, INC.
 Geotechnical Consultants FIG. 2



MONITORING WELL DETAILS

2-INCH PVC PIPE IN ALUMINUM CASING; TOTAL LENGTH: 9.32';
 STICKUP: -0.4'; MACHINE CUT, 0.020" SLOTTED PIPE: 9.3' to 3.3';
 #8-12 SAND: 10.0' to 3.5'; #20-40 SAND: 3.5' to 2.5'; BENTONITE: 2.5' to
 1.0'; CEMENT GROUT: 1.0' to 0.0'; PADLOCK: #2001
 NOTE: The stratification lines represent the approximate boundaries
 between soil types and the transition may be gradual.

Quonset Hut Apartments 7825 Kenai Spur Road, Kenai, Alaska	
LOG OF BORING NO. B2MW	
January, 1992	X-5069-2
 SHANNON & WILSON, INC. Geotechnical Consultants	FIG. 3



LEGEND

	Bulk sample		Impervious seal
	3" O.D. split spoon sample		Water level
	3" O.D. thin-wall sample		Frozen
*	Sample not recovered		Slotted pipe

MONITORING WELL DETAILS
 2-INCH PVC PIPE IN ALUMINUM CASING; TOTAL LENGTH: 11.80';
 STICKUP: -0.4'; MACHINE CUT, 0.020" SLOTTED PIPE: 11.80' to 4.1';
 #8-12 SAND: 12.0' to 4.5'; #20-40 SAND: 4.5' to 3.5'; BENTONITE: 3.5' to 1.0'; CEMENT GROUT: 1.0' to 0.0'; PADLOCK: #2001
 NOTE: The stratification lines represent the approximate boundaries between soil types and the transition may be gradual.

Quonset Hut Apartments
 7825 Kenal Spur Road, Kenai, Alaska

LOG OF BORING NO. B3MW

January, 1992 X-5069-2

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FIG. 4

APPENDIX A
REGISTERED UNDERGROUND STORAGE TANK INFORMATION

NOTIFICATION DATA FOR UNDERGROUND STORAGE TANKS

FACILITY DATA

FACILITY ID NUMBER: 0-001865

OWNER'S ID : 662

DATE RECEIVED : 05-07-90

NOTIFICATION TYPE : Amended

NUMBER OF TANKS : 1

OWNERSHIP OF TANK(S):

Name : KENAI PENINSULA BOROUGH
Mailing Address: 144 NORTH BINKLEY
City : SOLDOTNA State : AK Zip Code: 99669
Phone: (907) 262-9657 County: NOT MARKED

LOCATION OF TANK(S):

Name : MOUNTAIN VIEW ELEMENTARY
Street Address: 315 SWIRES RD
City : KENAI State : AK Zip Code : 99611
County: NOT MARKED Latitude: NOT MARKED Longitude: NOT MARKED

OWNER TYPE : Local

INDIAN LANDS :

Reservation/Trust Lands: NOT MARKED
Owned by Tribe : NOT MARKED
Name of Tribe/Nation : NOT MARKED

FACILITY TYPE(S):

ELEM SCHOOL

CONTACT PERSON IN CHARGE OF TANKS:

Name : LANIE HUGHES Title: ENV FIELD TECH
Address: 144 NORTH BINKLEY
City : SOLDOTNA State: AK Zip Code: 99669
Phone : (907) 262-9657

CERTIFICATION:

Name : LANIE HUGHES
Title: ENV FIELD TECH
Date : 04-30-90

FINANCIAL RESPONSIBILITY:

I have met the financial requirements: NOT MARKED
Method(s):
NOT MARKED

Tank Data

FACILITY ID 0-001865
TANK ID 018

Status of Tank

Currently In Use X
Temp. Out of Use
Perm. Out of Use
Amendment

Date of Installation 01-01-86
Age 5
Est. Total Capacity (Gals) 500

Material of Construction

Asphalt or Bare Steel X
Cath. Protected Steel X
Epoxy Coated Steel
Composite
Fiberglass Reinf. Plas.
Lined Interior
Double Walled
Poly. Tank Jacket
Concrete
Excavation Liner
Unknown
Other, explanation
Tank been repaired?

Piping Material

Bare Steel
Galvanized Steel
Fiberglass
Copper
Cathodically Protected
Double Walled
Secondary Containment
Unknown X
Other, explanation

Piping Type

Suction: No Valve X
Suction: Valve
Pressure
Gravity Fed
Piping been repaired?

Substance Stored in Tank

Gasoline
Diesel
Gasohol
Kerosene
Heating Oil X
Used Oil
Other, explanation

Tank Data

FACILITY ID 0-001865
TANK ID 018

Substance Stored in Tank

Hazardous Substance
CERCLA Name
CAS Number
Mixture
Mixture, Specification

Tanks Out of Use/Chg. Ser.

Est. Date Last Used
Est. Date Tank Closed
Removed from Ground
Closed in Ground
Filled with Inert Mat.
Inert Mat. Description
Change in Service
Site Assessment Completed
Leak Detected

Installation

Certified by Manufac.
Certified by Imple. Agn.
Inspected by Engineer
Inspected by Imple. Agn
Checklists Completed
Another Allowed Method
Method Description

Release Detection Tank Piping

Manual Tank Gauging
Tank Tightness Testing
Inventory Controls
Automatic Tank Gauging
Vapor Monitoring
Groundwater Monitoring
Inter. Mon./Double Wall
Inter. Mon./Sec. Cont.
Auto. Line Leak Detect.
Line Tightness Testing
Other Method
Other Description

Spill and Overfill

Overfill Device Inst.
Spill Device Installed

Installation

Name
Position
Company
Date

NOTIFICATION DATA FOR UNDERGROUND STORAGE TANKS

FACILITY DATA

FACILITY ID NUMBER: 0-001863

OWNER'S ID : 662

DATE RECEIVED : 05-07-90

NOTIFICATION TYPE : Closure

NUMBER OF TANKS : 3

OWNERSHIP OF TANK(S):

Name : KENAI PENINSULA BOROUGH

Mailing Address: 144 NORTH BINKLEY

City : SOLDOTNA

State : AK

Zip Code: 99669

Phone: (907) 262-9657

County: NOT MARKED

LOCATION OF TANK(S):

Name : KENAI CENTRAL HIGH SCHOOL

Street Address: 9583 SPUR HWY

City : KENAI

State : AK

Zip Code : 99611

County: NOT MARKED

Latitude: NOT MARKED

Longitude: NOT MARKED

OWNER TYPE : Local

INDIAN LANDS :

Reservation/Trust Lands: NOT MARKED

Owned by Tribe : NOT MARKED

Name of Tribe/Nation : NOT MARKED

FACILITY TYPE(S):

HIGH SCHOOL

CONTACT PERSON IN CHARGE OF TANKS:

Name : LANIE HUGHES

Title: ENV FIELD TECH

Address: 144 NORTH BINKLEY

City : SOLDOTNA

State: AK

Zip Code: 99669

Phone : (907) 262-9657

CERTIFICATION:

Name : LANIE HUGHES

Title: ENV FIELD TECH

Date : 04-30-90

FINANCIAL RESPONSIBILITY:

I have met the financial requirements: NOT MARKED

Method(s):

NOT MARKED

Tank Data

FACILITY ID	0-001863	0-001863	0-001863
TANK ID	013	014	014A

Status of Tank

Currently In Use			
Temp. Out of Use			
Perm. Out of Use	X	X	X
Amendment			

Date of Installation	01-21-64	01-21-70	UNK
Age	27	21	???
Est. Total Capacity (Gals)	2,500	500	500

Material of Construction

Asphalt or Bare Steel	X	X	X
Cath. Protected Steel			
Epoxy Coated Steel			
Composite			
Fiberglass Reinf. Plas.			
Lined Interior			
Double Walled			
Poly. Tank Jacket			
Concrete			
Excavation Liner			
Unknown			
Other, explanation			
Tank been repaired?			

Piping Material

Bare Steel	X	X	X
Galvanized Steel			
Fiberglass			
Copper			
Cathodically Protected			
Double Walled			
Secondary Containment			
Unknown			
Other, explanation			

Piping Type

Suction: No Valve			
Suction: Valve			
Pressure			
Gravity Fed			
Piping been repaired?			

Substance Stored in Tank

Gasoline			
Diesel			
Gasohol			
Kerosene			
Heating Oil	X	X	X
Used Oil			
Other, explanation			

Tank Data

FACILITY ID	0-001863	0-001863	0-001863
TANK ID	013	014	014A

Substance Stored in Tank

Hazardous Substance
 CERCLA Name
 CAS Number
 Mixture
 Mixture, Specification

Tanks Out of Use/Chg. Ser.

Est. Date Last Used	07-01-75	07-01-75	07-01-75
Est. Date Tank Closed	06-26-89	06-26-89	06-26-89
Removed from Ground	X	X	X
Closed in Ground			
Filled with Inert Mat.			
Inert Mat. Description			
Change in Service			
Site Assessment Completed	X	X	X
Leak Detected			

Installation

Certified by Manufac.
 Certified by Imple. Agn.
 Inspected by Engineer
 Inspected by Imple. Agn
 Checklists Completed
 Another Allowed Method
 Method Description

Release Detection Tank Piping Tank Piping Tank Piping

Manual Tank Gauging
 Tank Tightness Testing
 Inventory Controls
 Automatic Tank Gauging
 Vapor Monitoring
 Groundwater Monitoring
 Inter. Mon./Double Wall
 Inter. Mon./Sec. Cont.
 Auto. Line Leak Detect.
 Line Tightness Testing
 Other Method
 Other Description

Spill and Overfill

Overfill Device Inst.
 Spill Device Installed

Installation

Name
 Position
 Company
 Date

NOTIFICATION DATA FOR UNDERGROUND STORAGE TANKS

FACILITY DATA

FACILITY ID NUMBER: 0-002266

OWNER'S ID : 1429

DATE RECEIVED : 11-05-90

NOTIFICATION TYPE : Amended

NUMBER OF TANKS : 2

OWNERSHIP OF TANK(S):

Name : ROGER BOYD
Mailing Address: HC2 - BOX 754
City : SOLDOTNA State : AK Zip Code: 99669
Phone: (907) 283-9113 County: NOT MARKED

LOCATION OF TANK(S):

Name : ONE STOP GROCERY
Street Address: 5455 KENAI SPUR HWY
City : KENAI State : AK Zip Code : 99611
County: NOT MARKED Latitude: NOT MARKED Longitude: NOT MARKED

OWNER TYPE : Commercial

INDIAN LANDS :

Reservation/Trust Lands: NOT MARKED
Owned by Tribe : NOT MARKED
Name of Tribe/Nation : NOT MARKED

FACILITY TYPE(S):

Commercial

CONTACT PERSON IN CHARGE OF TANKS:

Name : ROGER BOYD Title: OWNER
Address: HC2 - BOX 754
City : SOLDOTNA State: AK Zip Code: 99669
Phone : (907) 283-9113

CERTIFICATION:

Name : ROGER BOYD
Title: OWNER
Date : 10-28-90

FINANCIAL RESPONSIBILITY:

I have met the financial requirements: NOT MARKED
Method(s):
NOT MARKED

Tank Data

	FACILITY ID TANK ID	0-002266 1	0-002266 2
Status of Tank			
Currently In Use		X	X
Temp. Out of Use			
Perm. Out of Use			
Amendment			
Date of Installation			
		01-01-87	01-01-87
Age		4	4
Est. Total Capacity (Gals)		10,000	10,000
Material of Construction			
Asphalt or Bare Steel		X	X
Cath. Protected Steel		X	X
Epoxy Coated Steel			
Composite			
Fiberglass Reinf. Plas.			
Lined Interior			
Double Walled			
Poly. Tank Jacket			
Concrete			
Excavation Liner			
Unknown			
Other, explanation			
Tank been repaired?			
Piping Material			
Bare Steel			
Galvanized Steel		X	X
Fiberglass			
Copper			
Cathodically Protected		X	X
Double Walled			
Secondary Containment			
Unknown			
Other, explanation			
Piping Type			
Suction: No Valve			
Suction: Valve			
Pressure			
Gravity Fed			
Piping been repaired?			
Substance Stored in Tank			
Gasoline		X	X
Diesel			
Gasohol			
Kerosene			
Heating Oil			
Used Oil			
Other, explanation			

Tank Data

FACILITY ID	0-002266	0-002266
TANK ID	1	2

Substance Stored in Tank

Hazardous Substance
 CERCLA Name
 CAS Number
 Mixture
 Mixture, Specification

Tanks Out of Use/Chg. Ser.

Est. Date Last Used
 Est. Date Tank Closed
 Removed from Ground
 Closed in Ground
 Filled with Inert Mat.
 Inert Mat. Description
 Change in Service
 Site Assessment Completed
 Leak Detected

Installation

Certified by Manufac.
 Certified by Imple. Agn.
 Inspected by Engineer
 Inspected by Imple. Agn
 Checklists Completed
 Another Allowed Method
 Method Description

Release Detection	Tank	Piping	Tank	Piping
Manual Tank Gauging	X		X	
Tank Tightness Testing				
Inventory Controls				
Automatic Tank Gauging				
Vapor Monitoring				
Groundwater Monitoring				
Inter. Mon./Double Wall				
Inter. Mon./Sec. Cont.				
Auto. Line Leak Detect.				
Line Tightness Testing				
Other Method				
Other Description				

Spill and Overfill

Overfill Device Inst.
 Spill Device Installed

Installation

Name
 Position
 Company
 Date

NOTIFICATION DATA FOR UNDERGROUND STORAGE TANKS

FACILITY DATA

FACILITY ID NUMBER: 0-002494

OWNER'S ID : 1662

DATE RECEIVED : 03-06-91

NOTIFICATION TYPE : Amended

NUMBER OF TANKS : 2

OWNERSHIP OF TANK(S):

Name : JOHN WHITE'S PLUMBING & HEATING
Mailing Address: 5327 KENAI SPUR HWY
City : KENAI State : AK Zip Code: 99611
Phone: NOT MARKED County: NOT MARKED

LOCATION OF TANK(S):

Name : JOHN WHITE'S PLUMBING & HEATING
Street Address: 5327 KENAI SPUR HWY
City : KENAI State : AK Zip Code : 99611
County: NOT MARKED Latitude: NOT MARKED Longitude: NOT MARKED

OWNER TYPE : Private

INDIAN LANDS :

Reservation/Trust Lands: NOT MARKED
Owned by Tribe : NOT MARKED
Name of Tribe/Nation : NOT MARKED

FACILITY TYPE(S):

NOT MARKED

CONTACT PERSON IN CHARGE OF TANKS:

Name : NOT MARKED Title: NOT MARKED
Address: NOT MARKED
City : NOT MARKED State: NOT MARKED Zip Code: NOT MARKED
Phone : NOT MARKED

CERTIFICATION:

Name : NOT MARKED
Title: NOT MARKED
Date : NOT MARKED

FINANCIAL RESPONSIBILITY:

I have met the financial requirements: NOT MARKED
Method(s):
NOT MARKED

APPENDIX B
MISCELLANEOUS INFORMATION

During the site reconnaissance, a house and two maintenance buildings were observed on the site. There are two diked 10,000-gallon fuel tanks at the southeast corner of the site at Candlelight Drive. There were also several tank trucks and 55-gallon drums located on-site.

SITE NAME: FRENCHY'S RADIATOR REPAIR SITE NUMBER: 1688

LOCATION: 8015 Kenai Spur Highway

ROW TAKE: No

STATUS: This site, owned by John Holliman, is used to repair radiators. According to the owner, waste materials generated during vehicle repair are disposed off-site. Numerous junked vehicles were observed behind the repair shop, approximately 100 yards from the highway. Mr. Holliman stated that he planned to remove the vehicles this spring.

*SITE NAME: MILE 8, KENAI SPUR HIGHWAY SITE NUMBER: 169/169E

LOCATION: 7900 Kenai Spur Highway

ROW TAKE: Yes

STATUS: This site is on the ADEC Site Inventory (88-23-282-01). The property is owned by Robert Moody of Chugiak, Alaska. It is reported to have contained waste and junk for several years, with no clean-up effort. Some of the materials are reported to be toxic or hazardous wastes. Approximately 25 drums of unknown substances are present. The owner reports that the drums are empty and have been placed on-site by neighbors. The site is reported to be an eyesore and a nuisance attraction to neighborhood children. According to one area resident, messy site maintenance has caused surficial problems. A shop building is located on the north side of the site, adjacent to the highway. The building has been reportedly leased to various operators including Peninsula Diesel, a boat repair shop, an insulation installation company, and a vehicle repair shop.

According to an area resident, some of the debris and several drums have been removed from the site during the past year. ADEC personnel have reportedly inspected the property. During the HLA site reconnaissance, several drums were observed in the debris pile and near the shop building.

SITE NAME: QUONSET HUT APARTMENTS SITE NUMBER: 1690

LOCATION: 7825 Kenai Spur Highway, Kenai, Alaska

ROW TAKE: Yes

STATUS: The site involves an old Quonset hut that has been converted to an apartment building with three units. A large storage building, several abandoned vehicles, three 55-gallon drums, and miscellaneous debris are also located on-site.

Tommy Thompson has owned the property since 1964. Mr. Thompson improved the previously vacant site with the Quonset hut and storage building that exist today. The Quonset hut was originally used as a drive-through restaurant but later was converted to apartments with a small shop in front. There is an on-site water well in front of the Quonset hut and two septic tanks connected to leachfields behind the Quonset hut. There is an abandoned

300-gallon fuel oil UST located near the northwest corner of the property approximately 50 feet from the highway. The tank has not been used for approximately 15 years. According to current project plans the Quonset hut may be taken as part of the right-of-way acquisition.

SITE NAME: STATE OF ALASKA DNR STORAGE YARD SITE NUMBER: 170

LOCATION: Mile 7.8 Kenai Spur Highway

ROW TAKE: No

STATUS: The site, owned by the Department of Natural Resources, appears to be used as a materials storage yard. During the site reconnaissance, there was a chain across the drive to restrict access. It appeared as though sewer equipment and utility poles were being stored at the site. During a brief reconnaissance survey on November 2, 1989, Soldotna ADOT & PF maintenance personnel indicated the City, ADOT & PF, and others have dumped miscellaneous debris at the site. Pipes with asbestos insulation were on-site at that time.

SITE NAME: MILE 7, KENAI SPUR HIGHWAY SITE NUMBER: 173

LOCATION: Mile 7 Kenai Spur Highway

ROW TAKE: No

STATUS: The site is on the ADEC Site Inventory (Appendix B, Site B-27). The site is owned by the State of Alaska and is operated as a junkyard by the Quant family; the family residence is also located at the site. Calvin Quant, also known as Bill, began leasing the property during the mid-1960s. According to his wife Dorothy, the house and some of the junk were on-site prior to that time. Calvin Quant operated the site as a junkyard that contained vehicle bodies and parts, batteries, and miscellaneous debris until his death in 1988. The junk is still on-site, Mrs. Quant plans to conduct an auction to clear the site in the spring and to terminate the lease agreement. There is an on-site well and septic system and there reportedly are no USTs on the property.

SITE NAME: PENINSULA MEMORIAL FUNERAL CHAPEL AND CREMATION SERVICE SITE NUMBER: 180

LOCATION: 5839 Kenai Spur Highway

ROW TAKE: No

STATUS: The site is owned by Tim Wisniewski and operated as a funeral parlor. According to the owner, the on-site septic system has been approved by the ADEC to accept embalming fluids that include human blood and small amounts of formaldehyde. The septic system is located behind the funeral parlor building approximately 50 yards from the highway. There is a 500-gallon above-ground gasoline tank located behind the building and an on-site water well is in front of the building.

Boring Location:

Sta 419+00
Rt shoulder

Project:

Kenal Spur Road

Boring No.

35

Job No. 4005.40 a b

Logged By: R. R. Ross

Drilling Contractor: Denali Drilling

Drill Type:

Driller:

Sampling Methods: 1.4" I.D. s.s.; Shelby; Grab

Hammer Wt.

Drop:

Start Time: 0910

Date: 8-27-91

Finish Time: 0940

Date: ✓

Backfilled: ✓

Date: ✓

By:

Surface Elev.

Datum:

Conditions: 6' Fill

Sample Depth	Sample Type	Blows/6"	Inches Driven	Inches Recovered	Sample Condition	Depth (feet)	Sample Location	Graphic Log	Frost
0'	Grab								
						1			
2'		8	18	6		2			
		10				3			
		11				4			
5'		4	18	4		5			
		7				6			
		8				7			
						8			
						9			
10'		1	18	12		10			
10 1/2'		3				11			
		3				12			
15'		5	18	12		13			
		9				14			
						15			
						16			

2" A.C.
Grey SA Gvl (GP)
m. dense, moist FILL

lt. Brn Ss (ML)
loose, wet

DK Brn (peat) (PT) w/ tree roots

Brwn Si Sn (SM) m. dense, sat (12'-16 1/2')
▽ water level during drilling
Bot @ 16'

Boring Location:

Sta 423+00
Rt Shoulder

Project:

Kenai Spur Road

Boring No.

36

Job No. 4005.40 a b

Logged By: R. R. Ross

Drilling Contractor: Denali Drilling

Drill Type:

Driller:

Sampling Methods: 1.4" I.D. s.s.; Shelby; Grab

Hammer Wt.

Drop:

Start Time: 1055

Date: 8-27-91

Finish Time: 1120

Date:

Backfilled:

Date:

By:

Surface Elev.

Datum:

Conditions: ~~#~~ no fill/cut

Sample Depth	Sample Type	Blows/6"	Inches Driven	Inches Recovered	Sample Condition	Depth (feet)	Sample Location	Graphic Log
0'	Grab					0		
						1		
						2		
						3		
						4		
5'		6	18	14		5		
		17				6		
		19				7		
		5				8		
						9		
10'		4	18	12		10		
		7				11		
		4				12		
						13		

1" A.C.
Gray Sa Gvl (GP)

Brn Sa (SP)
dense, moist, med graded

Saturated

Depth	Type	Blows	Driven	Rec'd	Cond.	Depth	Sample	Log	Frost
						14			
5		1 3	10	10		15			
		21				16			
						17			
						18			
						19			
						20			
						21			
						22			
						23			
						24			
						25			
						26			
						27			
						28			
						29			
						30			
						31			
						32			

Project: Kenal Spur Road
 Job No. 4005.40 a b

Boring No. 34

Sampler full, heaving sand

Bolt @ 20'
 Heaving sand, can't float sampler down.

Boring Location:

Sta 421+00
Left shoulder

Project:	Kenal Spur Road	Boring No.	39
Job No. 4005.40	<input type="checkbox"/> a <input checked="" type="checkbox"/> b	Logged By:	R. R. Ross
Drilling Contractor: Denali Drilling			
Drill Type:		Driller:	
Sampling Methods: 1.4" I.D. s.s.; Shelby; Grab			
Hammer Wt.		Drop:	
Start Time: 1415		Date: 8-26-91	
Finish Time: 1440		Date: ✓	
Backfilled: ✓		Date: ✓	By:
Surface Elev.		Datum:	
Conditions: 1" A-C. 3' Fill			

Sample Depth	Sample Type	Blows/6"	Inches Driven	Inches Recovered	Sample Condition	Depth (feet)	Sample Location	Graphic Log	Frost
0'	Grab					0	✓		
						1			
2'		11	18	10		2	✓		
		15				3			
		13				4			
5'		9	18	16		5	✓		
		8				6			
		7				7			
						8			
						9			
10'		4	18	12		10	✓		
		7				11			
		5				12			
						13			

3' Fill
Grey Sa Gvl (GP) FILL

m. dense, damp

Brown Sa (SP)
w. dense, wet

Water level during drilling

Project: Kenal Spur Road
Job No. 4005.40 □a □b

Boring No. 39

Type	Blows	Driven	Rec Y'd	Cond.	Depth	Sample	Log	Frost
					14			
	3	18	10		15		Grey Sand (SP) 1/2" S. S. S.	
	10				16			
	27				17			
					18		A' leave	
					19			
					20		no sample attempt	
					21			
					22			
					23			
					24			
					25			
					26			
					27			
					28			
					29			
					30			
					31			
					32			