2005 GROUNDWATER MONITORING REPORT
PUBLIC WORKS FACILITY
CITY OF FAIRBANKS
FAIRBANKS, ALASKA

DECEMBER 30, 2005

Prepared for:

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1.0 EXECUTIVE SUMMARY

Mr. Chris Haigh of the City of Fairbanks, contracted with ***NORTECH*** to complete a groundwater sampling event at the Public Works Facility in the fall of 2005. Previous investigations included a release investigation during tank upgrades, exploratory trenching, and monitoring well installation. Groundwater sampling was performed in 2000 and 2001 the development of a long-term work plan to address the long-term soil and groundwater contamination issues at the site was recommended but not implemented due to funding constraints.

Previous investigations identified frozen ground across most of the source area and in several monitoring wells. During this sampling event, one well (MW-1) was frozen and another well (MW-2) was found to be filled with sand. The other five wells were sampled for gasoline range organics (GRO) and benzene, toluene, ethylbenzene, and xylenes (BTEX) in accordance with the previously identified contaminants of concern. Gasoline range organics (GRO) remain about three times the cleanup level and benzene levels remain about two orders of magnitude above the cleanup level in the source area. GRO was not detected in the three perimeter wells. Benzene was observed slightly above the cleanup level in one perimeter well, slightly below the cleanup level in a second well, and not detected in the third perimeter well. The hydraulic gradient was again towards the west-southwest and is expected to be significantly influenced by the frozen ground.

Based on the field observations and sample results, ***NORTECH*** concludes that site conditions and the concentrations of groundwater contaminants have not significantly changed during the last five years. GRO and benzene are the only contaminants observed over the cleanup levels on the site and the gradient remains consistent. The overall shape and concentration of the plume appear to be stable over the past five years. The dissolved contaminant plume remains slightly beyond the perimeter wells, but it is well within the property boundaries with the edges of the plume more than 700 feet from the closest boundary.

As recommended in 2001, the City of Fairbanks should develop an ADEC-approved long-term groundwater monitoring plan for the site that includes evaluation of natural attenuation as a remedial solution for the groundwater contamination. Annual groundwater monitoring is recommended and should be undertaken in the late fall when seasonal frost is lowest and historical data is available. Contaminant analyses should be limited to GRO/BTEX in all wells. New monitoring wells are not recommended, however if more wells are pursued, direct push microwells should be considered. New monitoring wells in the source area are not expected to provide usable long-term data due to the frozen subsurface conditions. If additional plume delineation is desired, new monitoring wells should be limited to perimeter wells at the south and eastern edges of the plume outside the area of frozen ground.

2.0 PROJECT LOCATION AND HISTORY

2.1 Project Location and Climate

The City of Fairbanks Public Works facility is located in south Fairbanks (see Figure 1). The property occupies the majority of the block bordered by 19th Ave and Davis Road and Wilbur and Peger Roads. The southwest corner of the block, closest to the intersection of Peger and Davis Roads, contains two other properties, the Fairbanks North Star Borough Animal Shelter and Interior Alaska Fish Processors (see Figure 2).

The terrain around the site is flat and vegetation consists mainly of black spruce. Climate data for the Site is estimated from the long-term weather observations taken at the Fairbanks International Airport (less than 2 miles west at an elevation of approximately 440 feet). Over the 65-year station record for Fairbanks, the average air temperature has been 25.9 degrees Fahrenheit. The average annual precipitation in Fairbanks is 11.2 inches water equivalent. Average monthly temperatures are generally below freezing from October through April.

2.2 Site Description

The Public Works facility consists of a large office/garage complex that serves as the headquarters of the Public Works Department. There are a number of other improvements on the site, including a large warehouse structure, the City impound lot, several smaller storage building, and the fuel islands. The surface of most of the site is gravel and used as a parking area for vehicles and equipment. The area is primarily flat, although some drainage swales are present across the parking area. Drainage is primarily to unused portions of the property, not to a surface water body.

The Public Works underground storage tank (UST) fueling system, installed in 1980, is used to fuel the City's vehicle and equipment fleet. The UST system initially consisted of three 10,000-gallon tanks with piping to two fueling islands. One of the tanks contained diesel, while the other two contained unleaded gasoline. One of the gasoline tanks has been taken out of service and closed in place.

2.3 Previous Investigations

In August 1999, the City contracted with Alaska Lining and Retrofit (ALR) to upgrade the two gasoline USTs and remove the fuel from the diesel tank in order to take it out of service. During the upgrades, a petroleum release was encountered and ALR performed environmental screening of the soils. The soils were screened using a photo ionization detector (PID) and over 130 tons of soil were removed from the area and remediated. There were indications of more soil impacts and the potential for groundwater contamination.

The City contracted with ***NORTECH*** in the summer of 2000 conduct a release investigation at the site. The investigation confirmed and defined the lateral extent of soil contamination at the site. There is soil contamination at various levels from 4' to 12' bgs (feet below ground surface) within an approximate 25-foot radius around the north dispenser island. The gravel bedding and backfill around the USTs is considered impacted. Approximately 125-150 cubic yards of contaminated material were excavated during exploratory trenching at the site. During excavation for the UST repiping, an additional 75-100 cubic yards of contaminated material from beneath the northern dispenser island were removed. Limited soil impacts were observed starting at a depth of 7' bgs around the southern dispenser island. Excavation of this area confirmed the depth of the contamination, indicating a subsurface source.

Approximately 500-1000 cubic yards of contaminated soil are estimated to exist around the UST system and excavation of the majority (70%) of this soil is not possible without undermining the structural integrity of the UST system. The portions that are accessible for excavation are the outer edges where contamination is attenuating, so further excavation was not recommended at the time.

Groundwater impacts have been confirmed 75' to 175' from the center of the UST system in all major compass directions. Non-detect or background levels have been confirmed to the west and northwest, and are estimated for the south and east. Sample results indicate that groundwater contamination does not extend across or come within 350' of existing property lines. A minimal hydraulic gradient of approximately 0.001 feet per foot towards the northwest was observed in the summer and fall months.

Irregular and intermittent seasonal and permafrost underlies the majority of the site for most or all of the year to depths exceeding 20' bgs in close proximity to the UST system. The typical frost depth is to between 8' and 12' bgs. The frozen ground variations over time and season has impacted the migration of soil and groundwater contamination from one or more continuous and/or bulk spill events, which may account for the spreading of soil contamination at depth across the site, particularly towards the south dispenser island and northwest around the north dispenser island. Additionally, the frost has produced ice in the monitoring wells closest to the UST system. Based on drilling logs, these wells were not expected to thaw until very late in the summer/fall, if at all.

The City contracted with ***NORTECH*** in 2001 to collect groundwater samples from the existing wells as an interim measure while the process of creating and implementing and groundwater monitoring plan, as well as identifying funding, was under way. ***NORTECH*** collected groundwater samples in October 2001 from perimeter four wells, while the three wells upgradient and nearest to the fueling island appeared to be frozen.

Gasoline range organics (GRO) were about three times the cleanup level in the source area and benzene levels remain about two orders of magnitude above the cleanup level in the source area. GRO was not detected in any of the perimeter wells and benzene was observed slightly above the cleanup level in one perimeter well. DRO levels in the source area are slightly below the cleanup level. These results indicated that site conditions and the level of groundwater contaminants had not changed significantly from 2000. GRO and benzene are the only contaminants observed over the cleanup levels on the site and are the primary contaminants of concern. Although not detected above the cleanup levels, DRO is a secondary contaminant of concern and sampling should be done in the source area only. Other volatile organic compounds (including chlorinated compounds), polycyclic aromatic hydrocarbons, and lead are not contaminants of concern on this site.

2.4 2005 Investigation Objectives

NORTECH was contracted to locate and assess the existing monitoring wells and collect and analyze groundwater samples from the accessible wells at the City of Fairbanks Public Works facility. The analyte list was limited to GRO and BTEX, the primary contaminants of concern from previous efforts. In addition, groundwater levels and new survey data were collected to evaluate groundwater flow direction. These activities were completed while the City had funding for a monitoring event and is attempting to identify funding for previously recommended long-term monitoring and/or alternative cleanup plans.

2.5 groundwater cleanup levels

Groundwater cleanup levels for drinking water are set out in Table C of 18AAC75. Cleanup levels for GRO, DRO, and BTEX are shown in the table below. The table for VOC cleanup levels is much longer and is therefore included in Appendix 2 with the full table of the laboratory results.

Contaminant	Groundwater Cleanup Level
Units	mg/L
Gasoline Range Organics (GRO)	1.3
Benzene (B)	0.005
Toluene (T)	1
Ethylbenzene (E)	0.7
Total Xylenes (X)	10

3.0 METHODOLOGY

Groundwater samples were collected following ADEC procedures outline in the Underground Storage Tanks Procedures Manual dated November 7, 2002. Groundwater samples were collected using low-flow methods from five of the installed wells on the site.

SGS Environmental Services performed all laboratory analysis in accordance with the methods identified below:

- Gasoline Range Organics (GRO)/State of Alaska Method AK 101
- Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX)/ 8021B

Peter Beardsley, PE, Environmental Engineer for ***NORTECH***, had overall contractual responsibility for this project. Peter Beardsley and Ron Pratt conducted field activities; both are ADEC approved qualified personnel for collecting groundwater samples.

4.0 FIELD ACTIVITIES

October 6, 2005: ***NORTECH*** personnel visited the site and located the seven monitoring wells that had been installed in 2000. Most wells showed evidence of frost jacking and had damaged plastic caps. Groundwater elevation monitoring indicated that five of the wells were thawed, one was frozen, and inspection with a flashlight indicated that one was full of sand.

November 4, 2005: ***NORTECH*** personnel conducted groundwater sampling and monitoring well surveying. Monitoring well MW-1 was still frozen and MW-9 was full of sand, so these wells were not sampled. Monitoring wells MW-2. MW-3, MW-6, MW-7, and MW-8 were sampled successfully. In addition, groundwater levels were recorded and well elevations were surveyed. The samples were delivered to the laboratory.

5.0 LABORATORY RESULTS

5.1 Groundwater Results

Groundwater samples were collected from five of the seven wells on this site for GRO/BTEX analysis. These analytes have been compiled with the historical results from this site and the ADEC Cleanup level for each compound in Table 1, which is attached in Appendix 2. A copy of the laboratory report is included in Appendix 3.

The sample (and field duplicate) from MW-2 showed the highest contaminant concentrations with GRO (7.2 mg/L) and benzene (3.08 mg/L), above the ADEC Cleanup levels (1.3 mg/L and 0.005 mg/L respectively). Other BTEX compounds were detected at levels well below the cleanup levels. GRO and benzene were detected at slihglty lower levels in MW-3. Benzene was also detected in MW-7 at 0.0104 mg/l (above the cleanup level) and at 0.000917 mg/L (below the cleanup level) in MW-6. No other compounds were detected in either of these wells. No contaminants of concern were detected in MW-8

5.2 Quality Control Summary

Quality control analysis indicates that the groundwater and soil samples were valid as defined in the ADEC UST Manual and Standard Sampling Procedures (SSP). The relative percent difference (RPD) provides an evaluation of sampling and handling methods and laboratory precision. The RPD values of analytes in the field duplicate pairs were acceptable. This data is summarized in Table 1.

Quality control parameters are useful for estimating and evaluating the information content of analytical data. Some of the means used to evaluate this information content include precision, accuracy, detection limits, and other quantifiable indicators.

In this study, the ADEC UST quality control procedures were followed and all requirements met. Completeness is a measure of the amount of valid data obtained compared to the amount expected. The soil and groundwater samples collected and analyses performed for this project were "valid" as determined by Section 3.1 of the ADEC's SSP and the "Completeness" is calculated to be 100%.

Duplicate samples were collected at the same time from the same location during the sampling event for the GRO and BTEX analyses. One groundwater duplicate pair (MW-2 and DUP) was collected and analyzed at this site, meeting the ADEC requirement for one field duplicate sample per every ten assessment samples.

Precision, expressed as the relative percentage difference (RPD) between field duplicate sample results, is an indication of the consistency of sampling, sample handling, preservation, and laboratory analysis. The RPD has been calculated according to the method described in the SSP (the difference between the field duplicate results expressed as a percentage of the average of those results). If the analyte was detected in neither the sample nor the field duplicate, then calculation of the RPD is meaningless; however the precision is acceptable. The RPD results for the field duplicate were generally within the range specified in the SSP for the method.

No deviations from the ADEC's SSP were reported. All of the data may be used for the objectives of the evaluation.

6.0 ANALYSIS

The City of Fairbanks contracted with ***NORTECH*** to perform a groundwater sampling event during the fall of 2005 at the Public Works facility. Soil and groundwater contamination was identified in 2000 during a series of tank retrofits, excavations, and monitoring well installations. Seven monitoring wells were installed for groundwater monitoring purposes on the site and were last sampled in October 2001. The City identified funding for sampling in 2005 to identify site conditions prior to working with ADEC to implement a long-term groundwater monitoring plan for the site.

6.1 Frozen Ground and Hydraulic Gradient

Investigations in 2000 and 2001 identified frozen ground in the vicinity of the dispenser island based on drilling logs and attempted groundwater sampling. The three monitoring wells in high traffic areas around the dispenser island (MW-1, MW-2, and MW-9) were frozen or frozen groundwater was encountered during drilling. This is probably the result of soil compaction related to the increased equipment traffic and the removal of snow (insulation) during the winter months creating year-round frozen ground conditions in these areas. During the 2005 sampling event, MW-1 was frozen, MW-2 was not frozen, and MW-9 appeared to be filled with sand. The past few years have been warmer than average which may be resulting in less frost penetration in this area. However, the frozen wells and previously observed frozen ground conditions are expected to be creating complex groundwater flow paths in and around the contaminant source area.

The five wells that were sampled are located west, northwest and north of the tanks and dispenser system. Hydraulic gradient data gathered during 2000 and2001 indicated that the groundwater flow is generally to the west-northwest with the potential for deviation to the west-southwest. The current survey and elevation results indicate the gradient is to the west with an overall magnitude of approximately 0.001 feet/foot (see Figure 3). Overall, the hydraulic gradient seems to vary between northwest and southwest with the potential for localized effects due to frozen ground.

The City of Fairbanks was previously considering the possibility of installing new monitoring wells as a component of the future groundwater monitoring work plan development with ADEC. If desired, new monitoring wells should be located away from vehicle traffic routes as much as possible. In addition, the City should consider direct push monitoring wells as a more cost-effective way to reduce monitoring well installation in frozen ground. These wells are less expensive to install and provide similar data to conventional monitoring wells, but cannot be installed in frozen ground and therefore reduce the potential for future freezing of the wells.

6.2 Contaminants of Concern

The refueling system at the City Public Works facility includes both gasoline and diesel tanks and dispensers. The facility had used both leaded and unleaded gasoline at various times since installation. Previous soil and groundwater testing at the site indicated that the contaminants observed on this site are consistent with a gasoline release. Only GRO and benzene are above the ADEC cleanup levels and the 2001 report recommended that laboratory analysis be limited to GRO and BTEX. As described in the 2001 report, DRO, PAHs, MTBE, EDB, chlorinated solvents, benzene derivatives, other VOCs, and freons are no longer considered contaminants of concern for the site.

6.3 Groundwater Contamination

MW-3 is closest well that is west-northwest of the source area. The GRO concentration remains at about three times the cleanup level and the benzene concentration remains about three orders of magnitude above the cleanup levels, similar to the concentrations observed in 2000 and 2001. Toluene, ethylbenzene, and xylenes may have increased slightly, but are still at least an order of magnitude below the cleanup level. These results confirm the previous results and suggest that the source area of the plume has been fairly stable for the past five years.

A trace amount of benzene was detected in MW-6, about 240 feet northwest of the source area. The benzene concentration is about the same as was previously detected in 2001. Benzene was not detected in this well during the original sampling event in 2000 and the data indicates that MW-6 is probably on the northwest edge of the plume. The property boundary is more than 700 feet from this well and more than 900 feet from the source area, so offsite migration is not suspected or considered likely at this time. The benzene concentration in this well appears stable at this time.

MW-2 is located due north of the source area was originally sampled in 2000. MW-2 was frozen in 2001, but was not frozen in 2005 and was sampled again. The GRO and benzene concentrations are slightly lower than in 2000, but remain well above the cleanup levels. The other BTEX compounds have higher concentrations, but remain well below the cleanup levels. These concentrations are considered fairly stable over the five year period.

MW-8 is located north of MW-2. No contaminants of concern have been detected in this well during sampling events in 2000, 2001, and 2005. MW-8 continues to act as a sentry well for contaminant migration north of the source area and MW-2.

MW-7 is located west of the source area. The benzene concentration in this well remains slightly above the cleanup level, as it was in 2000 and 2001. These results also suggest that the plume is stable in this direction as well.

6.4 Summary

Four groundwater sampling efforts have been undertaken at the Public Work facility since the monitoring wells were installed in June 2000. Three monitoring wells (MW-1, MW-2, and MW-3) were sampled in July 2000 and revealed groundwater contamination around the tanks and dispenser islands. Four more wells were installed around the perimeter of the site (MW-6, MW-7, MW-8, and MW-9) and a total of five monitoring wells were sampled (MW-1 and MW-2 were frozen) in October 2000. The perimeter wells were near or beyond the edge of the plume and indicated that most, if not all, of the contamination near the fuel system area was related to the fuel system.

The third round of groundwater sampling was conducted in October 2001. Four wells west, northwest, and north of the dispenser island (MW-3, MW-6, MW-7, and MW-8) were sampled. Three wells (MW-1, MW-2, and MW-9) were not sampled because of ice in the wells. The hydraulic gradient appears to fluctuate from southwest to northwest in the wells that have been monitored (these wells are all north and west of the source area). GRO and benzene were identified as the primary contaminants of concern and a full analysis of other potential contaminants of concern is contained in the report from the 2001 sampling event.

The fourth round of groundwater sampling was completed in October 2005. Five wells were sampled (MW-2, MW-3, MW-6, MW-7, and MW-8). MW-1 was frozen and MW-9 was inspected and appeared to be filled with sand. Based on the observations, this well was probably filled with sand (instead of frozen) in 2001. Laboratory analysis were limited to the contaminants of concern (GRO and BTEX) identified in 2001. The 2005 contaminant concentrations are similar to the 2001 results and generally indicate that the plume is probably stable. The 2005 hydraulic gradient measurements are also similar to the 2001 results.

The groundwater contamination plume is relatively well documented north and west of the site and has remained stable for about five years. Natural attenuation may be a reasonable remedial solution for the groundwater contamination and evaluation of appropriate geochemical parameters is recommended for future sampling events. However, the monitoring well within the plume to the east and south (MW-1) is frozen and expected to remain that way. Although it may be possible to thaw this well for sampling, this is not expected to provide an accurate representation of the groundwater contamination in that area. The well farther south (MW-9) is currently filled with sand and it may be possible to remove the sand from this well and use it again in the future.

The ground in the source area appears to remain frozen most of the year as found during characterization efforts. This generally acts to limit the migration of contaminants, as well as the potential for characterization wells and active remediation strategies. Previous project documents have discussed the potential for additional monitoring wells at the site. Additional wells are not considered necessary at this time as the hydraulic gradient and contaminant concentrations appear stable to the north and west. Additional wells located south and or east of the source area should be considered as sentry wells and the locations that are outside the area of frozen ground should be selected to the extent possible. Additional wells located north and west of the site are not considered necessary due to the low concentrations currently found in the perimeter wells and the relatively long distances from these wells to property edges (>700 feet) compared to these wells and the source area (<300 feet). If additional wells are pursued, direct-push technology should be used and wells should be placed in low-traffic areas fairly far from the source area.

7.0 CONCLUSIONS AND RECOMMENDATIONS

The City of Fairbanks identified funding for another groundwater sampling event in 2005. This event was intended to determine current site conditions and provide an update to the previous results prior to working with the State of Alaska DEC to identify long-term monitoring and/or alternative cleanup plans. Based on the field observations, sample results ***NORTECH*** concludes:

- MW-1 (east and south of the source area) remains frozen and will probably stay frozen permanently
- MW-9 (south of the source area) is filled with sand and may be usable in the future if the sand can be removed
- MW-2 (north of the source area) was not frozen, but is anticipated to be frozen most of the year due to constant snow removal and heavy equipment traffic in the area
- Frozen ground conditions and deep seasonal frost penetration in and around the source area are complicating the groundwater flow regime
- GRO and benzene are the primary contaminants of concern
- Groundwater contaminant concentrations have not changed significantly since 2000 and 2001 and the contaminant plume is stable
- The perimeter wells (MW-6, MW-7, and MW-8) are less than 250 feet from the source area and are located at or beyond the northern and western edges of the plume

- The property boundary is more than 700 feet from the closest perimeter well

Based on these conclusions, ***NORTECH*** has the following recommendations:

- Develop a long-term groundwater monitoring plan for the site
- Annual groundwater monitoring is recommended and should be undertaken in the late fall when seasonal frost is lowest and historical data is available.
- Contaminant analyses should be limited to GRO/BTEX in all wells
- Geochemical parameters should be collected to determine if natural attenuation is a viable option for remediation
- New monitoring wells are not recommended, however if more wells are pursued, direct push microwells should be considered
- New monitoring wells in the source area will not provide usable long-term data due to the frozen subsurface conditions
- New monitoring wells outside the frozen ground area should be limited to perimeter wells at the south and eastern edges of the plume

8.0 LIMITATIONS AND NOTIFICATIONS

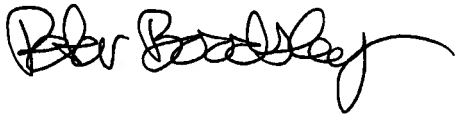
NORTECH provides a level of service that is performed within the standards of care and competence of the environmental engineering profession. However, it must be recognized that limitations exist within any site investigation. This report provides results based on a restricted work scope and from the analysis and observation of a limited number of samples. Therefore, while it is our opinion that these limitations are reasonable and adequate for the purposes of this report, actual site conditions may differ. Specifically, the unknown nature of exact subsurface physical conditions, sampling locations, the analytical procedures' inherent limitations, as well as financial and time constraints are limiting factors.

The report is a record of observations and measurements made on the subject site as described. The data should be considered representative only of the time the site investigation was completed. No other warranty or presentation, either expressed or implied, is included or intended. This report is prepared for the exclusive use of the City of Fairbanks. If it is made available to others, it should be for information on factual data only, and not as a warranty of conditions, such as those interpreted from the results presented or discussed in the report. We certify that except as specifically

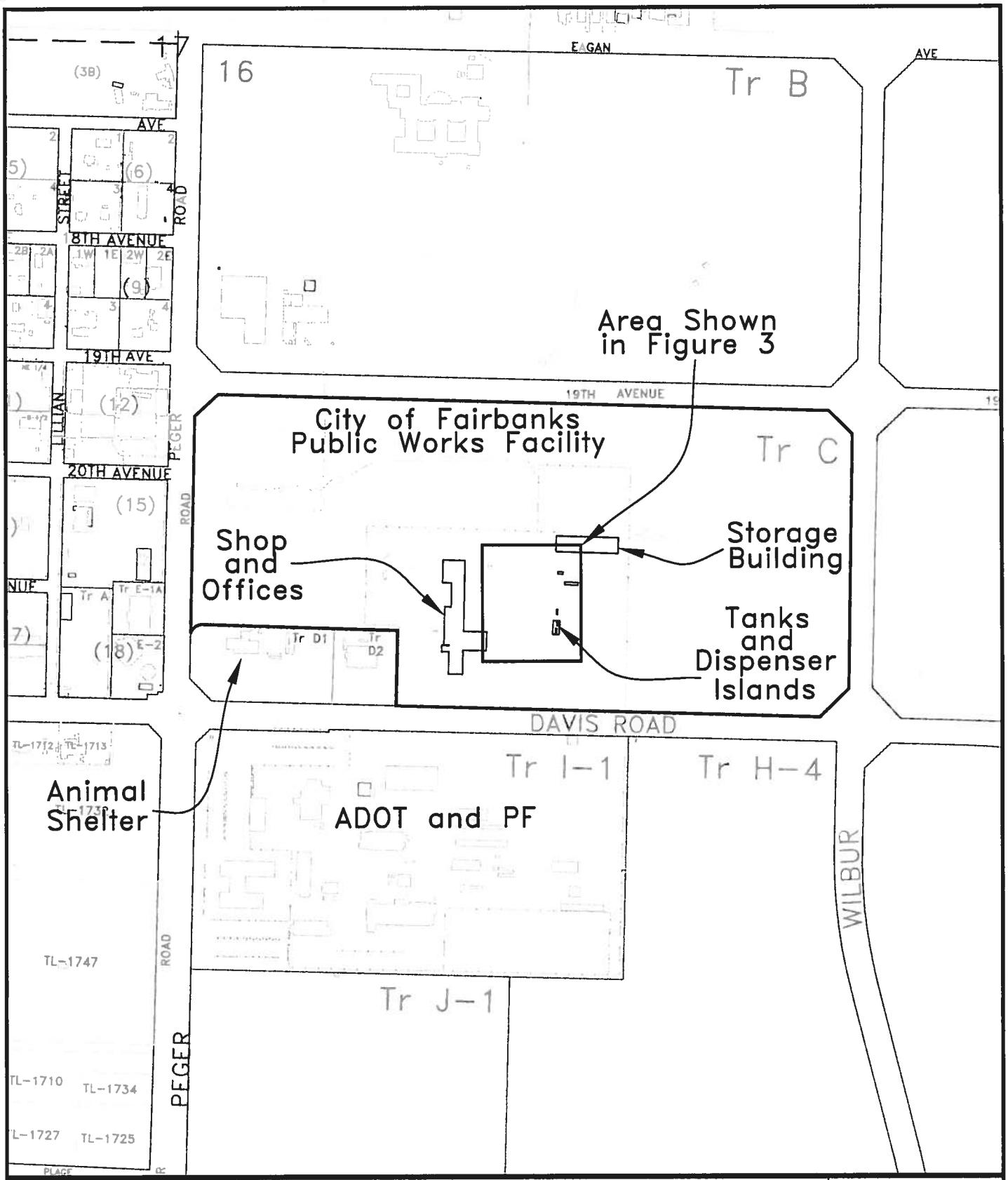
noted in this report, all statements and data appearing in this report are in conformance with ADEC's Standard Sampling Procedures. ***NORTECH*** has performed the work, made the findings, and proposed the recommendations described in this report in accordance with generally accepted environmental engineering practices.

9.0 SIGNATURES OF ENVIRONMENTAL PROFESSIONALS

Peter Beardsley, PE, Environmental Engineer for ***NORTECH*** has a B.S. degree in Environmental Engineering. He has extensive field experience as a consulting environmental engineer. He has worked on all aspects of environmental investigations and cleanup efforts and is well versed in applicable regulatory requirements.



Peter Beardsley, PE
Environmental Engineer



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Vicinity Map
City of Fairbanks Public Works Facility
Fairbanks, Alaska

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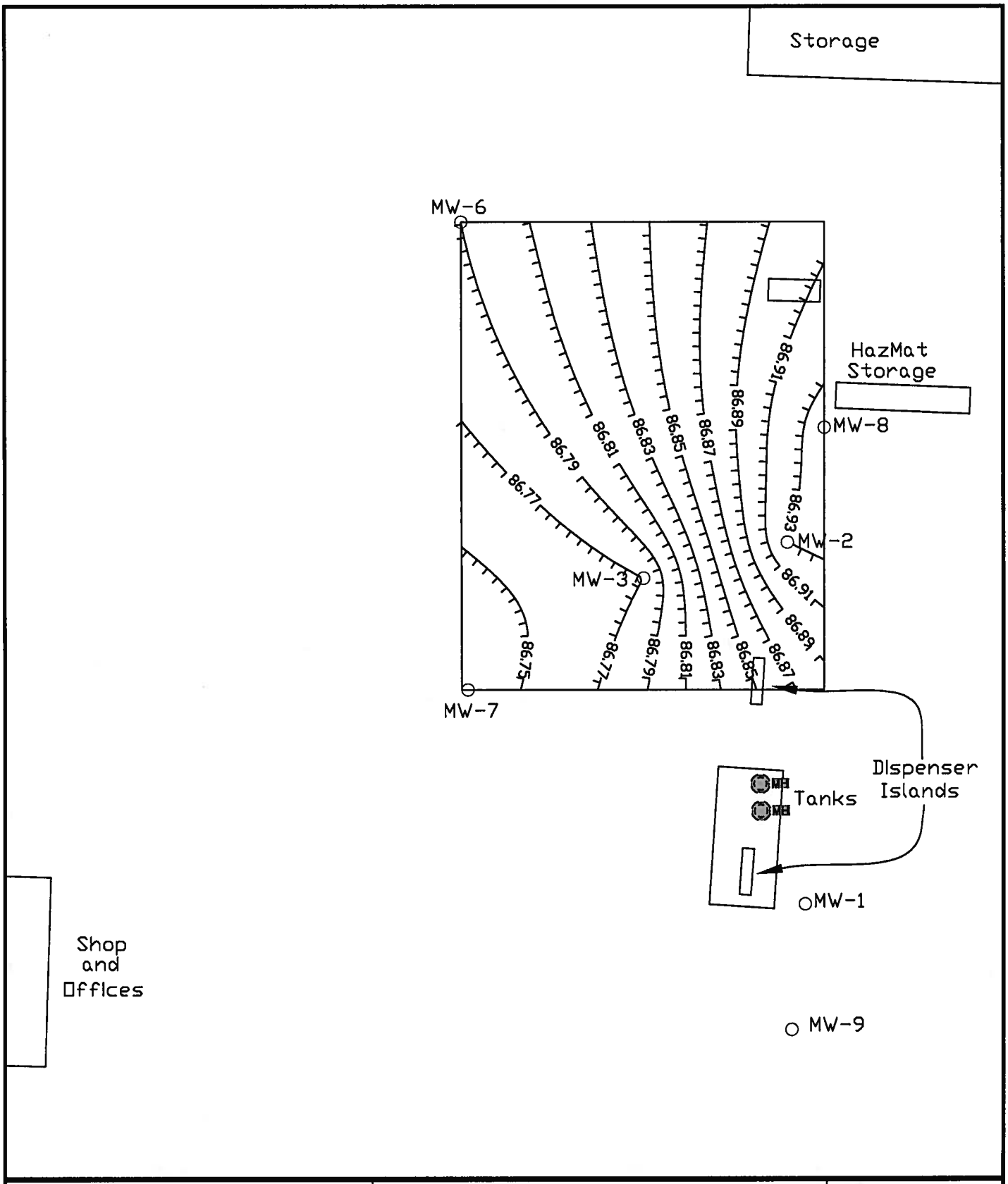
FIGURE 2

DATE:	12/24/05
DESIGN:	PLB
DRAWN:	PLB
PROJECT NO:	05-1074
DWG:	051074(02)
SCALE:	1" = 500'



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Hydrualic Gradient – 11/04/05
City of Fairbanks Public Works Facility
Fairbanks, Alaska

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FIGURE 3

DATE:	12/24/05
DESIGN:	PLB
DRAWN:	PLB
PROJECT NO:	05-1074
DWG:	051074(03)
SCALE:	1" = 75'

Table 1
Groundwater Laboratory Results
November 4, 2005

Sample ID	GRO	B	T	E	X	Lab
Units	mg/L	mg/L	mg/L	mg/L	mg/L	Comments
Reg Limit	1.3	0.005	1.0	0.7	10	
MW-2	**6.58**	**2.38**	0.0719	0.0869	0.4636	
DUP	**7.2**	**3.08**	0.1350	0.0996	0.5725	
MW-3	**5.21**	**2.16**	0.00200U	0.0624	0.157	
MW-6	0.090U	0.000917	0.00200U	0.00200U	0.00200U	
MW-7	0.090U	**0.0104**	0.00200U	0.00200U	0.00200U	
MW-8	0.090U	0.00050U	0.00200U	0.00200U	0.00200U	

U	Compound was not detected
shade	Result is above detection limit, but below ADEC regulatory limit
bold	Result is above ADEC regulatory limit

Quality Control Summary

Sample ID	MW-2	DUP	Average	Difference	RPD
Analyte	mg/L	mg/L	mg/L	mg/L	%
GRO	6.58	7.2	6.89	0.620	**9%**
B	2.38000	3.08000	2.73	0.70000	**26%**
T	0.0719	0.1350	0.10345	0.063	**61%**
E	0.0869	0.0996	0.09325	0.013	**14%**
X	0.4636	0.5725	0.518	0.109	**21%**

Table 2
Historical Groundwater Results

Well ID	Date	GRO	Benzene	Toluene	Ethyl-benzene	Total Xylenes
Units		mg/L	mg/L	mg/L	mg/L	mg/L
ADEC Limit		1.3	0.005	1.0	0.7	10
MW-1	07/27/00	**8.68**	**3.35**	0.0020U	0.0901	0.253
	10/24/00	Well Frozen				
	10/26/01	Well Frozen				
	11/04/05	Well Frozen				
MW-2	07/27/00	**11.4**	**4.83**	0.0020U	0.0020U	0.0020U
	07/27/00	**12.1**	**5.46**	0.0020U	0.0020U	0.211
	10/24/00	Well Frozen				
	10/26/01	Well Frozen				
	11/04/05	**6.58**	**2.38**	0.0719	0.0869	0.4636
	11/04/05	**7.2**	**3.08**	0.135	0.0996	0.5725
MW-3	07/27/00	**5.33**	**2.44**	0.0020U	0.0020U	0.0831
	10/24/00	**3.01**	**1.42**	0.00200U	0.00200U	0.026
	10/26/01	**4.45**	**2.1**	0.00382	0.0258	0.0674
	10/26/01	**3.65**	**2.35**	0.00200U	0.0231	0.058
	11/04/05	**5.21**	**2.16**	0.00200U	0.0624	0.157
MW-6	10/24/00	0.0900U	0.00050U	0.0020U	0.0020U	0.0020U
	10/26/01	0.0900U	0.000817	0.0020U	0.0020U	0.0020U
	11/04/05	0.090U	0.000917	0.00200U	0.00200U	0.00200U
MW-7	10/24/00	0.0900U	**0.00713**	0.0020U	0.0020U	0.0020U
	10/24/00	0.0900U	**0.00778**	0.0020U	0.0020U	0.0020U
	10/26/01	0.0900U	**0.007**	0.0020U	0.0020U	0.0020U
	11/04/05	0.090U	**0.0104**	0.00200U	0.00200U	0.00200U
MW-8	10/24/00	0.0900U	0.00050U	0.0020U	0.0020U	0.0020U
	10/26/01	0.0900U	0.00050U	0.0020U	0.0020U	0.0020U
	11/04/05	0.090U	0.00050U	0.00200U	0.00200U	0.00200U
MW-9	10/24/00	0.0900U	**0.02**	0.010U	0.0020U	0.0020U
	10/26/01	Well casing blocked (assumed frozen)				
	11/04/05	Well filled with sand				

Notes:

U	Compound was not detected
shade	Result is below ADEC Regulatory Limit, but above detection limit
bold	Results is above ADEC Regulatory Limit