STATE OF ALASKA

DEPT. OF ENVIRONMENTAL CONSERVATION
DIVISION OF SPILL PREVENTION AND RESPONSE
CONTAMINATED SITES PROGRAM

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File: 102.38.123
102.38.139

January 24, 2007

Robert Adamonis
Vice President
Union Bank of California
900 Fourth Avenue, Suite 1200
Seattle, WA 98164

Jerry Sadler
J & J Development, LLC
735 Friar Way
Fairbanks, AK 99709-2474

Jordan E. Jacobsen, Esq.
Alyeska Pipeline Service Company
P.O. Box 196660
Anchorage, AK 99519-6660

Re: Record of Decision for Portions of Bentley Trust North and Bentley Brothers Subdivision, Fairbanks Alaska

Dear Mr. Adamonis, Mr. Sadler, and Mr. Jacobsen:

Site name and location
This Record of Decision (ROD) establishes the site specific cleanup levels and environmental status for the following portions of the Bentley Trust North and the Bentley Brothers Subdivisions located in Fairbanks, Alaska:

1. Tract A, and Lots 3 through 6, Block 1, Bentley Trust North Subdivision, according to the official plat thereof filed in the records of the Fairbanks Recording District, Fourth Judicial District. These parcels are referenced as either the “southwestern portion of Tax Lot 203” or “onsite Tax Lot 203” in this ROD. The term “Tax Lot 203” references the entire tax lot in this ROD.

2. Tract A, and Lots 12 through 18, Bentley Brothers Subdivision, Fourth Addition, according to the official plat thereof filed in the records of the Fairbanks Recording District, Fourth Judicial District. These parcels are referenced as either the "western portion of Tax Lot 201" or "onsite Tax Lot 201" in this ROD. The term "Tax Lot 201" references the entire tax lot in this ROD.

Regulatory authority
18 AAC 75 and 18 AAC 78

CS file number
Bentley Trust Property Tax Lot 203, RECKEY number 2000310926001, file number 102.38.139

Bentley Trust Property Tax Lot 201, RECKEY number 2000310925901, file number 102.38.123.

The following documents were reviewed in preparation of this ROD:

A. SLR Alaska's risk assessment titled *Revised Final Method 4 Human Health and Screening Ecological Risk Assessment Portions of Tax Lots 201 and 203 Bentley Trust Property Fairbanks, Alaska* dated April 2006.
B. SLR Alaska's letter report titled *Investigation in Potential and Transport Mechanisms of TCE in Ground Water on Tax Lot 203*dated June 20, 2006.
C. Alyeska Pipeline Service Company letter titled *Additional Soil Gas Sampling in Support of Human Health and Screening Ecological Risk Assessment for Portions of Tax Lots 201 and 203 Fairbanks, Alaska* dated August 1, 2006 and accompanying SLR Memorandum titled *Bentley Trust Site, 2006 Soil Gas Results* dated August 1, 2006.
D. SLR Alaska's letter report titled *Tax Lot 203 Ground Water Investigation Report Bentley Trust Property, Fairbanks, Alaska Project # 005.1288.06004* dated September 2006.

1.0 Site History

The western portions of Tax Lot 201 and Tax Lot 203 were owned by the Bentley Family Charitable Trust until September, 2005. At that time, J & J Development, LLC purchased the western portion of Tax Lot 201, which at that time was known as Lot 11C-4 of Bentley Brothers Subdivision, Third Addition, according the official plat thereof filed in the records of the Fairbanks Recording District, Fourth Judicial District. That parcel has now been re-platted as Tract A, and Lots 12 through 18, Bentley Brothers Subdivision, Fourth Addition, according the official plat thereof filed in the records of the Fairbanks Recording District, Fourth Judicial District and is currently zoned General Use-1 (industrial, commercial, or residential).

Also during September, 2005, the Bentley Family Charitable Trust terminated and the Bentley Beneficiaries Trust became the legal owner of Tax Lot 203. The southwestern portion of Tax Lot 203 has been re-platted as Tract A , and Lots 1 through 6, Block 1, Bentley Trust North Subdivision, according to the official plat thereof filed in the records of the Fairbanks Recording District, Fourth Judicial District and is currently zoned General Use-1 (industrial, commercial and residential).

Most of Tax Lots 201 and 203 were essentially undeveloped lands until the early 1970s. Some limited development had occurred on the southeastern and eastern portions of Tax Lot 201 prior to 1970.

During the 1970s, a contiguous parcel of land consisting of Tax Lot 201, the southern portion of Tax Lot 203, and the Johansen Expressway right-of -way between the tax lots was used as a construction and storage yard in support of the construction of the Trans Alaska Pipeline System. The construction and storage yard was later abandoned in the early 1980s. Except for the limited areas of development previously noted, Tax Lot 201 was not used again until the late 1990s.

The Johansen Expressway was constructed during the late 1980s and early 1990s and currently separates Tax Lots 201 and 203 from each other. However, what is now the Johansen Expressway was once a part of the contiguous parcel of land that was used as the pipeline construction and storage yard.

Gravel mining was conducted periodically on the southwestern portion of Tax Lot 203 from 1990 through 2000. A noteworthy dewatering event occurred at the gravel pit areas from May 1990 through September 30, 1990 (ADEC General Waste Water Permit Number 8840-DB001). An average discharge volume of 17 million gallons per day was pumped from the pits. The extracted ground water, pursuant a permit issued by the State of Alaska, was discharged via temporary piping to Isabella Creek.

The Bentley Family Charitable Trust began preparations to sell Tax Lots 201 and 203 in the late 1990s. An environmental assessment identified several underground storage tanks (UST) requiring regulatory closure on Tax Lot 201. The USTs were associated with facilities that operated during the pipeline construction but only the building pad foundations, the tanks, and some underground piping remained on the property.

During the removal of the USTs, ground water and soil contamination was documented. A site characterization process was initiated to determine the nature and extent of the contamination. A combination of ground penetrating radar surveys, passive and active soil gas surveys, trenching, and soil and ground water sampling were used to identify areas of concern. Typically the investigation started in the vicinity of the former construction facilities and proceeded outward to delineate the extent of the contamination. Several small areas of petroleum fuel – related contamination were identified and cleaned up during the investigative process.

In the early 2000s, the eastern and central portions of Tax Lot 201 were sold and developed beginning on the eastern side the property and proceeding westward over time. Wide-spread ground water contamination was identified on the western portion of Tax Lot 201. By 2003, a major source area of chlorinated solvent contamination was identified in the vicinity of the former Double Jointing and Coating buildings on the western portion of Tax Lot 201. These buildings were used for pipe coating during the construction of the Trans Alaska Pipeline. The contamination was identified within the vadose zone (soils between the ground surface and the top of the water table) and within the upper portion of the aquifer (saturated soils beneath the water table). As a result, the ground water was contaminated to at least a depth of 30 to 40 feet below the water table.

A ground water contaminant plume originates at the source area and extends off the western portion of Tax Lot 201 towards the west/southwest. The ground water plume has migrated to the southwestern portion of Tax Lot 203 immediately to the west/northwest and the Lemeta and Palace Court Subdivisions further to the west/southwest. These subdivisions are a mixture of residential and commercial properties. In addition, a portion of the ground water contaminant plume may intercept a small section of Noyes Slough.

Interim corrective action was initiated in 2003-2004. An air sparging/soil vapor extraction (AS/SVE) system was installed on the western portion of Tax Lot 201. The AS/SVE system targeted contamination within vadose zone and the upper portion of the aquifer with the intent of decreasing the contaminant mass within the source area. The AS/SVE operated until September 2005.

In 2004 Alyeska Pipeline Service Company (former operator of the pipeline era construction and storage yard) participated directly in evaluating and implementing assessment and remediation goals. As a result, Alyeska began preparing a human health and screening ecological risk assessment with the concurrence of the property owner (Bentley Family Charitable Trust.) The risk assessment addressed the western portion of Tax Lot 201, the southwestern portion of Tax Lot 203, and the Lemeta and Palace Court Subdivision areas including a portion of Noyes Slough.

The purpose of the risk assessment was to evaluate the possible risks posed by the contamination and demonstrate that further cleanup actions were not necessary if there were no unacceptable risks. The risk assessment needs to characterize the contaminant concentrations in the soil vapor, soil, and ground water and determine possible exposure pathways. If the concentrations do not exceed regulatory risk levels for current (and future) pathways then monitored natural attenuation of the contamination may be a viable remedy.

A preliminary analysis of the ground water data indicated the ground water plume had reached a stable condition with respect to contaminant concentrations and extent. In addition, an ecological risk assessment of Noyes Slough was conducted to determine any impacts to that water body.

In 2005 and 2006, Alyeska Pipeline Service Company collected additional soil gas and ground water data for use in the risk assessment and evaluating other potential source areas and/or transport mechanisms on the southwestern portion of Tax Lot 203.

The interim corrective action (AS/SVE) system was decommissioned and the risk assessment was drafted based on the site specific data. Alyeska Pipeline Service Company also agreed to perform long-term ground water monitoring to support the monitored natural attenuation treatment option.

All monitoring wells on western portion of Tax Lot 201 were either removed or abandoned in place to allow for construction activities. Alyeska agreed to replace monitoring wells following construction.

2.0 Site Characterization Summary

The site characterization of western portion of Tax Lot 201 and the southwestern portion of Tax Lot 203 was consistent with the requirements of 18 AAC 75.335. The purpose of the site characterization is to determine the nature and extent of soil and ground water contamination so that threats to human health and the environment can be assessed. The following describes the extent of the contamination while the nature of the contamination is described fully in the subsequent risk assessment section.

There was limited historical information available concerning the operation of the pipeline construction and storage yard. The western portion of Tax Lot 201 remained vacant after the abandonment of the construction and storage yard in the early 1980s. The site characterization started in the vicinity of known former facilities and expanded outward as necessary.

A variety of investigative techniques were utilized: ground penetrating radar surveys, trenching, active and passive soil gas surveys, a soil gas flux chamber survey, ground water sampling using temporary and permanent monitoring wells, and soil samples collected from individual soil borings, trenches, or during the installation of permanent monitoring wells. In general, multiple lines of evidence were used to locate and identify release/spill locations (source areas).

A major source area on the western portion of Tax Lot 201 was identified. The location of the source area was originally inferred from passive soil and ground water data. Subsequent soil sampling during the installation of the AS/SVE system confirmed the general release location and contaminant concentrations within the source area. A sufficient quantity of contaminant was apparently released or spilled over time to contaminate the vadose zone and the upper portion of the aquifer. Prior to interim corrective action, the vadose zone contamination was approximately 500 feet in diameter (inferred from passive soil gas data) and the ground water was contaminated to at least a depth of 30 to 40 feet below the ground surface (inferred from ground water data). The source area contamination has generated a ground water contaminant plume.

The ground water contaminant plume migrated off the western portion of Tax Lot 201 and on to the southwestern portion of Tax Lot 203 (west/northwest of Tax Lot 201), the Lemeta and Palace Court Subdivision areas, and a portion of Noyes Slough.

There is no source identified to date on southwestern portion of Tax Lot 203 that may be contributing to the ground water plume. A review of historical aerial photographs indicated that the southern portion of Tax Lot 203 was used primarily as a storage area during the 1970s and saw limited gravel mining between 1990 and 2002.

Conceptual modeling of possible ground water transport mechanisms was conducted in 2006. The modeling results suggest that the gravel pit dewatering activities on the southwestern portion of Tax Lot 203 during 1990 potentially spread the ground water contamination from the western portion of Tax Lot 201 onto the southwestern portion of Tax Lot 203. A detailed explanation follows.

Some of the ground water contamination on the southwestern portion of Tax Lot 203, specifically the ground water contamination between the source area on the western portion of Tax Lot 201 and the gravel pits on the southwestern portion of Tax Lot 203, can not be easily attributed to the major source on Tax Lot 201 while the ground water is flowing under natural conditions. Under natural flow conditions (i.e. absence of significant pumping of ground water), the ground water flow direction on both Tax Lot 201 and Tax 203 is generally from the east/northeast to the west/southwest. Dissolved contaminants are transported by advection in the direction of ground water flow and by diffusion. Since the natural ground water flow direction does not change significantly on a seasonal basis, the transport of the dissolved contaminants from the western portion of Tax Lot 201 towards the gavel pits on the southwestern portion of Tax Lot 203 is extremely limited.

Conversely, a significant withdrawal of ground water at the gravel pits could alter the natural ground water flow direction near the source area on western portion of Tax Lot 201. The extent of the influence of a significant ground water withdrawal can not be modeled confidently with the available and limited historical information. However, anecdotal evidence of similar withdrawals within the Fairbanks area strongly suggest that ground water flow directions can be significantly altered at significant distances (e.g., 100s-1000s of feet) from the withdrawal point.

It is hypothesized that the ground water contaminant plume that originates on the western portion of Tax Lot 201 was drawn northward towards the gravel pits during the intensive dewatering on the southwestern portion of Tax Lot 203 in 1990. Ground water contaminants partitioned from the ground water plume to the saturated zone soils between the Tax Lot 201 source area and the Tax Lot 203 gravel pits. With the cessation of the dewatering, the ground water contaminant plume resumed a flow direction consistent with the natural flow gradient, and the absorbed contaminants began to partition back into the ground water. Consequently the desorbing contaminants have caused a diffuse ground water plume extending north of the major source area on western portion of Tax Lot 201 onto the southwestern portion of Tax Lot 203.

Conceptual modeling demonstrated that if there was sufficient flow in the direction of the gravel pits, it is possible that dissolved contaminants could have partitioned from the ground water to the soil. Some of the dissolved contaminants would absorb to the natural organic carbon in the local soil while the contaminated ground water was flowing toward the gravel pits. When the ground water flow resumed its normal direction, the newly absorbed contaminants would begin to slowly desorb. This slow desorption would generate a “diffuse” ground water plume.

Temporary ground water monitoring wells were installed and sampled in September 2006 and confirmed the extent of the diffuse ground water plume in the vicinity of the gravel pits.

3.0 Risk Assessment Summary

A Human Health Risk Assessment (HHRA) and an Ecological Screening Risk Assessment were performed consistent with ADEC and EPA guidelines. A summary of the human health risk assessment process and results are presented first in the following section followed by the ecological screening risk assessment.

Human Health Risk Assessment

Figure 1 from the HHRA depicts the risk assessment study boundaries with respect to onsite Tax Lot 201, onsite Tax Lot 203, and offsite locations. Onsite Tax Lot 201 is the same area as the western portion of Tax Lot 201. Likewise, onsite Tax Lot 203 is the same area as the southwestern portion of Tax Lot 203:

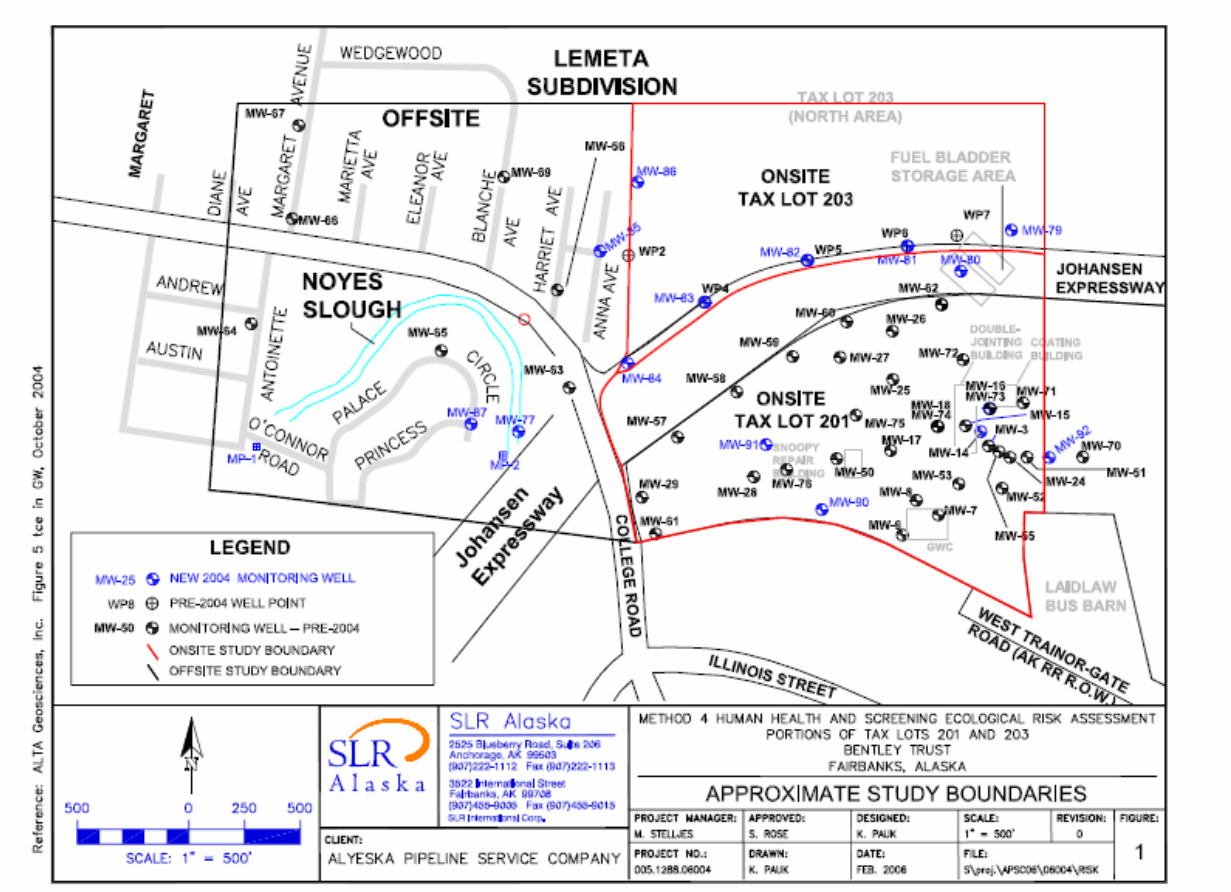
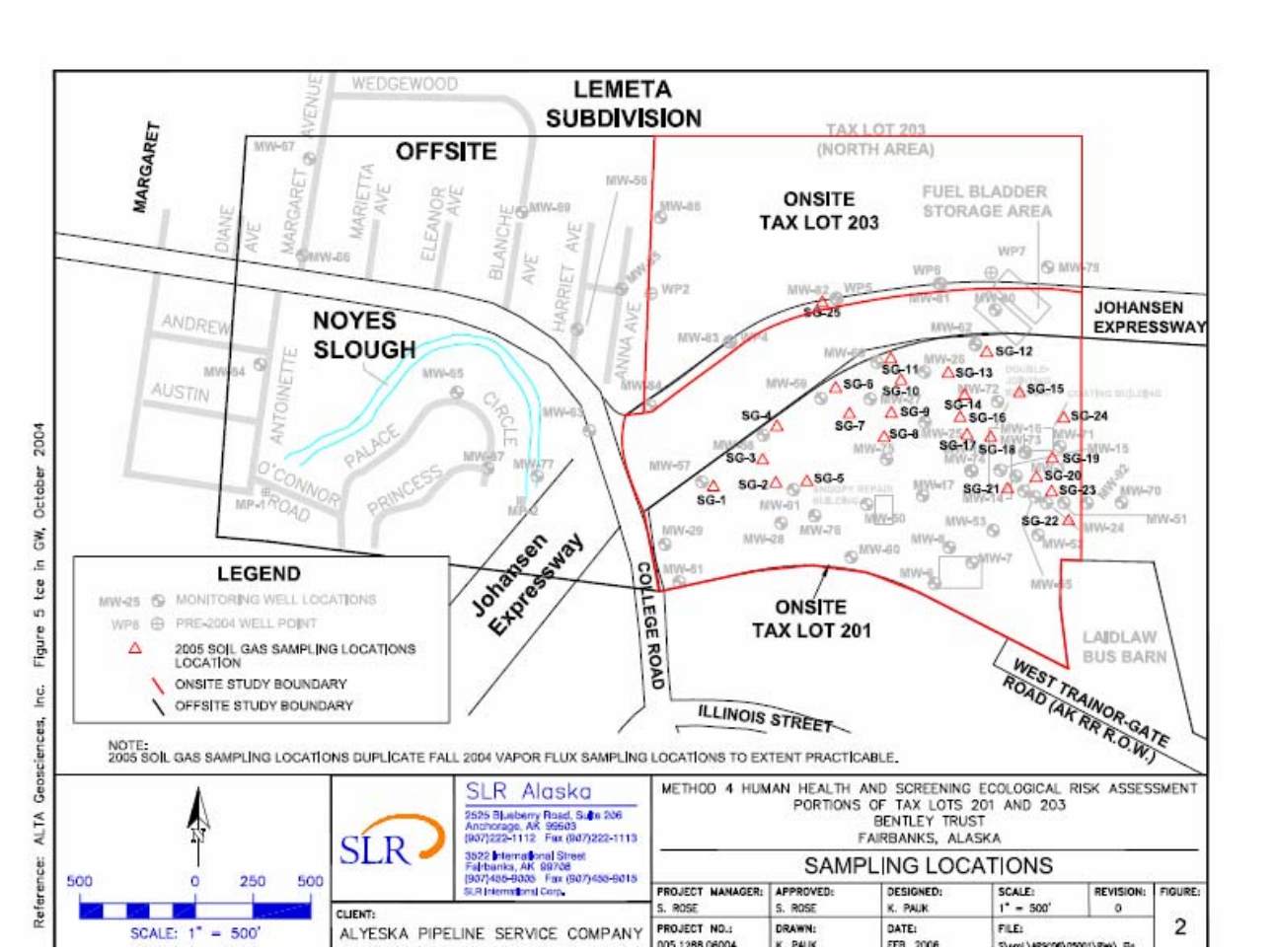


Figure 2 from the HHRA depicts the soil gas sampling locations:



Soil gas concentrations were measured at 5 feet below the ground surface at the above locations for onsite Tax Lot 201. The maximum soil gas concentrations for the specific chemicals of concern were used as input to the Environmental Protection Agency (EPA) Johnson & Ettinger Soil Gas Vapor Intrusion model to determine indoor air exposure point concentrations. The exposure point concentrations were used to estimate risk values.

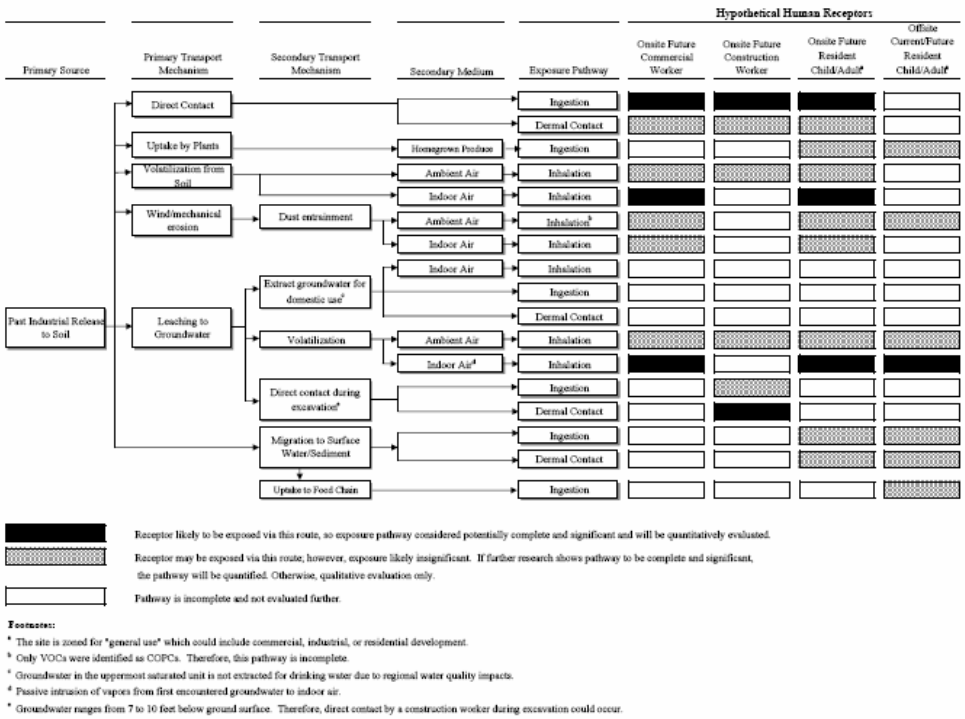
Several conservative assumptions were used in the EPA Johnson & Ettinger Soil Gas Vapor Intrusion model. An air exchange rate of 0.1 hr^{-1} was used instead of the default value of 0.25 hr^{-1}, and a pressure differential of 100 g/cm-sec^2 was used instead of the default value of 40 g/cm-sec^2.

Both of these assumptions would tend to predict higher indoor air concentrations.

In addition, the draft EPA cancer slope factor for TCE was used in calculating risk estimates. The draft cancer slope factor is 55 times higher than the previous value.

Figure 3 from the HHRA depicts the conceptual site model diagram which defines the pathways evaluated in the risk assessment:

Figure 3
Human Conceptual Site Model (CSM) Diagram
Bentley Trust Site
Fairbanks, Alaska



The ground water ingestion pathway was not evaluated as an exposure pathway because offsite residences and businesses are required to use Golden Heart Utilities for domestic drinking water. The platting requirements require mandatory hookup to Golden Heart Utilities for Tax Lot 201 and Tax Lot 203. Furthermore, ADEC shall prohibit the use of ground water and/or surface water as a condition of this ROD.

The following pathways were evaluated:

Future Onsite construction/utility worker
- Incidental soil ingestion
- Dermal exposure to shallow ground water

Future Onsite resident receptor (adult and child)
- Incidental soil ingestion
- Indoor Vapor inhalation from the subsurface (passive vapor intrusion)

Future Onsite commercial worker receptor

- Indoor vapor inhalation from subsurface (passive vapor intrusion)

Current/future Offsite resident receptor

Indoor vapor inhalation from subsurface (passive vapor intrusion)

Table 7 from the HHRA depicts the chemicals of potential concern for on-site soil evaluation:

Table 7
Identification of Chemicals of Potential Concern in Onsite Soil
Risk Assessment
Portions of Bentley Trust Tax Lots 201 and 203 and Offsite Area
Fairbanks, Alaska

Analyte	Maximum Concentration (mg/kg)[a]	ADEC Cleanup Levels (mg/kg)			Is Chemical a COPC? [d]
		Ingestion [b]	Inhalation [b]	GW Protection [c]	
VOCs					
1,1,1-Trichloroethane	0.18	NA	46	1	No
1,2,4-Trimethylbenzene[e]	0.0106	5,070	92.2	95.2	No
2-Butanone (Methyl ethyl ketone)[e]	0.083	60,800	28,100	60	No
2-Methylnaphthalene[e]	5.81	2,030	NA	60.9	No
Chloroform	0.0682	100	0.34	0.34	No
cis-1,2-Dichloroethene	0.0712	100	NA	0.20	No
Ethylbenzene	0.0101	1,000	8.9	5.5	No
Methylene chloride [f]	**0.99**	**110**	**18**	**0.015**	**Yes**
Naphthalene	2.12	200	12	21	No
o-Xylene	0.00874	20,300	8.1	78	No
p&m-Xylene	0.042	20,300	8.1	78	No
Tetrachloroethene [f]	**0.315**	**16**	**8**	**0.03**	**Yes**
Toluene	0.0175	2,030	18	5.40	No
trans-1,2-Dichloroethene	0.0254	200	NA	0.40	No
Trichloroethene	**5.79**	75	**4.3**	**0.027**	**Yes**
Trichlorofluoromethane (Freon 11)	0.0441	390	--	1,300	No

Notes:
mg/kg = Milligrams per kilogram.
NA = Not available/applicable.
GW = Groundwater.
CL = Cleanup Level.

Footnotes:
[a] Data from Table 3.
[b] CLs for ingestion and inhalation correspond to 1/10th the values for the under-40 inch rainfall zone (Table B1; ADEC, 2005).
[c] CLs for migration to groundwater were not divided by 10 as the onsite shallow groundwater is nonpotable (ADEC, 2005).
[d] If a maximum exceeds any value, it was identified as a COPC. COPCs are shown in bold.
[e] CL from ADEC (2003).
[f] Only the groundwater-protection CL is exceeded. Risk-based CLs were not exceeded.

References:
Alaska Department of Environmental Conservation. 2003. Additional Cleanup Values. Technical Memorandum - 01 - 007 Contaminated Sites Remediation Program, November 24.
Alaska Department of Environmental Conservation. 18 AAC 75. Oil and Other Hazardous Substances Pollution Control. As amended through October, 2005.

Table 8 from the HHRA depicts the chemicals of potential concern in groundwater:

Table 8
Identification of Chemicals of Potential Concern in Groundwater
Risk Assessment
Portions of Bentley Trust Tax Lots 201 and 203 and Offsite Area
Fairbanks, Alaska

Analyte	Maximum Concentration (ug/L)[a]			ADEC Cleanup Level (ug/L)[b]		Is Chemical a COPC? [c]		
	Tax Lot 201	Tax Lot 203	Lemeta	Onsite	Offsite	Tax Lot 201	Tax Lot 203	Lemeta
VOCs								
Bromodichloromethane	2.1	0.5	1	100	10	No	No	No
Chloroform	24.3	2.65	25.9	100	**10**	No	No	Yes
1,1-Dichloroethane	1.4	ND	0.37	3,650	365	No	NA	No
1,1-Dichloroethene	**29**	**40**	**5.9**	7	**0.7**	Yes	Yes	Yes
cis-1,2-Dichloroethene	**259**	**44**	**22**	70	7	Yes	Yes	Yes
trans-1,2-Dichloroethene	42	40	6	100	10	No	No	No
Tetrachloroethene	**5.26**	1	**32.4**	5	**0.5**	Yes	No	Yes
1,1,1-Trichloroethane	2.56	1	ND	200	20	No	No	No
Trichloroethene	**2,380**	**140**	**231**	5	**0.5**	Yes	Yes	Yes

Bold entries represent CLs exceeded by maximum concentration.

Notes:
All results are listed in micrograms per liter (ug/L).
ND = Not detected in this area.
NA = Not applicable.

Footnotes:

[a] From Tables 4a, 4b, and 5.

[b] Cleanup Levels (CLs) from Table C ADEC (2005).
For onsite CLs, the table C values were not divided by 10 as the shallow onsite groundwater is nonpotable.
For offsite (Lemeta) CLs, the table C values were divided by 10 assuming shallow offsite groundwater is potable.

[c] If a maximum exceeds the criteria, it is identified as a COPC. COPCs are shown in bold

References:
Alaska Department of Environmental Conservation. 18 AAC 75. Oil and Other Hazardous Substances Pollution Control. As amended through October, 2005.

Table 22 from the HHRA summarizes the risk characterization results:

Table 22
Summary of Human Health Risk Characterization Results
Risk Assessment
Portions of Bentley Trust Tax Lots 201 and 203 and Offsite Area
Fairbanks, Alaska

Exposure Pathway	Pathway-Specific Risks for Hypothetical Potential Receptors [a]									
	Future Onsite Construction Worker		Future Onsite Commercial Worker		Future Onsite Child Resident		Future Onsite Adult Resident		Future Onsite Child/Adult Resident	
	HI	LECR	HI	LECR	HI	LECR	HI	LECR	HI	LECR
Soil Pathways										
Incidental Ingestion	2 E-02	4 E-08	NA	NA	2 E-01	2 E-06	2 E-02	9 E-07	NA	3 E-06
Groundwater Pathways										
Dermal Exposure	3 E-01	4 E-07	NA	NA	NA	NA	NA	NA	NA	NA
Subsurface Pathways										
Inhalation of Vapors Indoors	NA	NA	4 E-06	3 E-10	6 E-05	1 E-09	2 E-05	2 E-09	NA	3 E-09
Inhalation of Vapors Outdoors	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Multi-Pathways Totals: Tax Lot 201 [b]	**0.28**	**5 E-07**	**4 E-06**	**3 E-10**	**0.19**	**--**	**0.02**	**--**	**--**	**3 E-06**
Multi-Pathways Totals: Tax Lot 203 [c]	**0.02**	**3.6E-08**	**4 E-06**	**3 E-10**	**6.0E-05**	**--**	**2.1E-05**	**--**	**--**	**3 E-09**
Multi-Pathways Totals: Offsite [c]	**NA**	**NA**	**4 E-06**	**3 E-10**	**6.0E-05**	**--**	**2.1E-05**	**--**	**--**	**3 E-09**

Abbreviations:
"- -" = not available or applicable.
HI = Pathway-Specific Hazard Index.
LECR = Pathway-Specific Lifetime Excess Cancer Risk.
NA= Not applicable; pathway is either incomplete or complete but insignificant.

Footnotes:
[a] Pathway specific estimates are summarized from Tables through .
[b] Multi-pathway HI for each receptor is the sum of pathway-specific HIs.
Multi-pathway LECR is the sum of pathway-specific LECRs.
[c] Calculated using ratios of groundwater EPC in Tax Lot 203 to Tax Lot 201 (Table 13) for dermal contact for a construction worker and excluding soil pathways.
No chemicals were detected in soil at Tax Lot 203 or the Lemeta Subdivision.

Bentley RA Tables final_r1.xls\ Risk Summary SLR International Corp

During the evaluation of the HHRA, ADEC determined that there was not a statistically significant correlation between ground water concentrations and soil vapor concentrations at 5 feet below the ground surface. Without a correlation, ADEC did not believe it was appropriate to extrapolate soil gas data taken onsite Tax Lot 201 (Figure 2 above) to either onsite Tax Lot 203 or off site for the purpose of evaluating vapor intrusion.

As a result, ADEC required that additional soil gas measurements be taken onsite Tax Lot 203 and offsite. The additional sampling locations are identified in SLR's August 1, 2006 Report, Figure 1 (page 13) and the associated soil gas concentrations are listed in Table 1 (page 14); both are presented below.

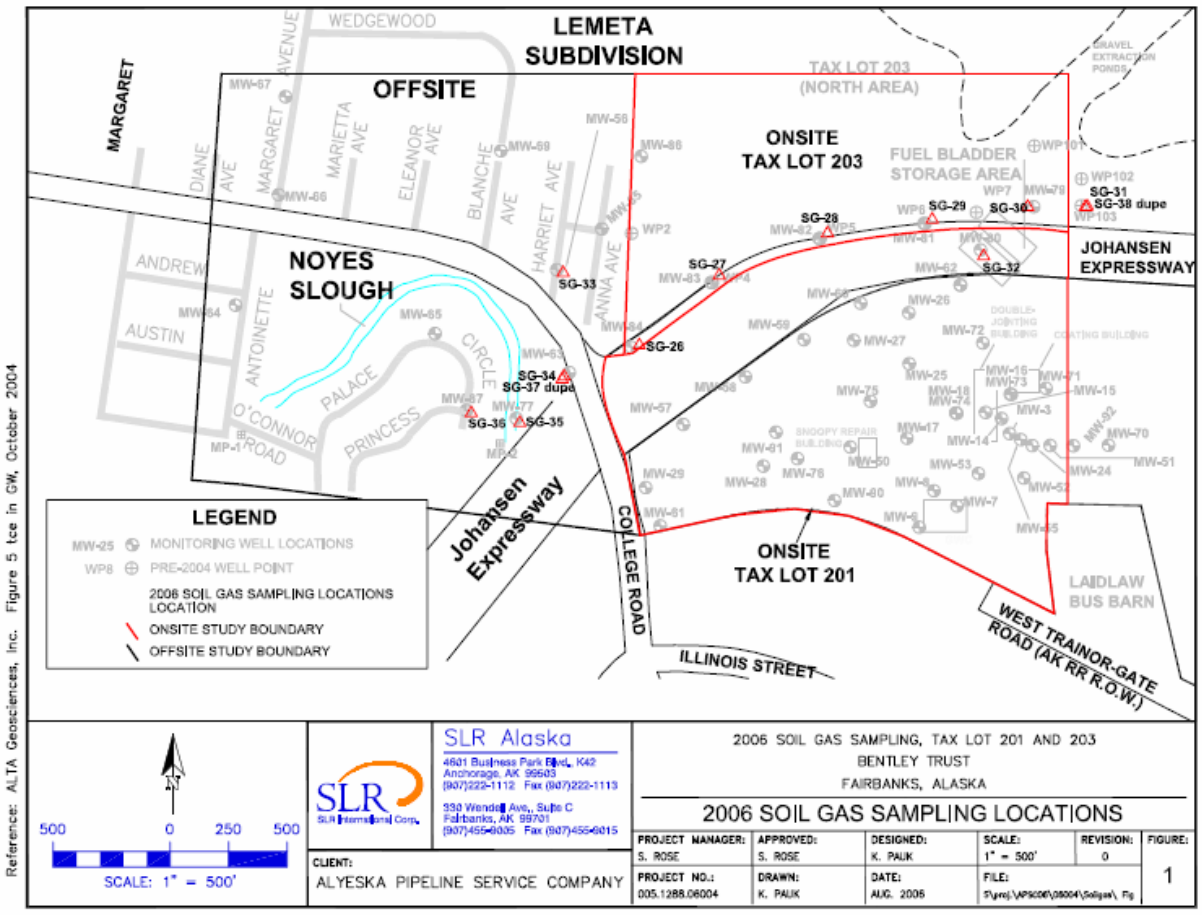

LEMETA SUBDIVISION
OFFSITE
ONSITE TAX LOT 203
TAX LOT 203 (NORTH AREA)
FUEL BLADDER STORAGE AREA
NOYES SLOUGH
JOHANSEN EXPRESSWAY
ONSITE TAX LOT 201
LAIDLAW BUS BARN
WEST TRAINOR-GATE ROAD (AK RR R.O.W.)
ILLINOIS STREET
COLLEGE ROAD
Johansen Expressway
WEDGEWOOD
MARGARET
DIANE AVE
MARGARET AVENUE
MARIETTA AVE
ELEANOR AVE
BLANCHE AVE
HARRIET AVE
ANNA AVE
ANDREW
AUSTIN
ANTOINETTE
CIRCLE
PALACE
PRINCESS
O'CONNOR
MP-1 ROAD
SG-26
SG-27
SG-28
SG-29
SG-30
SG-31
SG-38 dupe
SG-32
SG-33
SG-34
SG-37 dupe
SG-36
SG-35
LEGEND
MW-25 MONITORING WELL LOCATIONS
WP8 PRE-2004 WELL POINT
2006 SOIL GAS SAMPLING LOCATIONS LOCATION
ONSITE STUDY BOUNDARY
OFFSITE STUDY BOUNDARY
500 0 250 500
SCALE: 1" = 500'
SLR Alaska
4601 Business Park Blvd., K42
Anchorage, AK 99503
(907)222-1112 Fax (907)222-1113
330 Wendell Ave., Suite C
Fairbanks, AK 99701
(907)455-9005 Fax (907)455-9015
CLIENT:
ALYESKA PIPELINE SERVICE COMPANY
2006 SOIL GAS SAMPLING, TAX LOT 201 AND 203
BENTLEY TRUST
FAIRBANKS, ALASKA
2006 SOIL GAS SAMPLING LOCATIONS
PROJECT MANAGER: S. ROSE
APPROVED: S. ROSE
DESIGNED: K. PAUK
SCALE: 1" = 500'
REVISION: 0
FIGURE: 1
PROJECT NO.: 005.1288.06004
DRAWN: K. PAUK
DATE: AUG. 2006
Reference: ALTA Geosciences, Inc. Figure 5 Ice in GW, October 2004

Table 1
Soil Gas Analytical Results - July 2006

Sample ID	Associated Monitoring Well ID	Date	Halogenated Volatile Organic Compounds USEPA Method TO-15 SIM								
			Trichloroethene (TCE)	Tetrachloroethene (PCE)	cis-1,2-Dichloroethene (cis-DCE)	trans-1,2-Dichloroethene (trans-DCE)	1,1-Dichloroethane	1,2-Dichloroethane	Vinyl Chloride	Methylene Chloride	Chloromethane
USEPA Vapor Intrusion Screening Values			0.22	8.1	350	700	5000	0.94	2.8	24	--
SG-35	MW-77	7/19/2006	ND (0.31)	ND (0.39)	ND (0.23)	ND (1.1)	ND (0.23)	ND (0.23)	ND (0.073)	ND (2.0)	0.91
SG-33	MW-56	7/19/2006	89	16.0	0.26	ND (1.1)	ND (0.22)	ND (0.22)	ND (0.068)	ND (1.9)	0.35
SG-27	MW-83	7/19/2006	4.5	3.6	ND (0.11)	ND (0.56)	ND (0.11)	ND (0.11)	ND (0.036)	ND (0.98)	1.0
SG-28	MW-82	7/19/2006	0.52	2.7	ND (0.15)	ND (0.75)	ND (0.15)	ND (0.15)	ND (0.048)	5.4	ND (0.20)
SG-29	MW-81	7/19/2006	52	3.4	ND (0.12)	ND (0.60)	0.13	ND (0.12)	ND (0.039)	1.6	1.2
SG-30	MW-79	7/19/2006	530	1.2	1.7	ND (2.2)	1.1	ND (0.46)	ND (0.14)	ND (3.9)	57.0
SG-30 duplicate	MW-79	7/19/2006	430	ND (1.9)	1.4	ND (5.6)	ND (1.1)	ND (1.1)	ND (0.36)	ND (9.8)	50.0
SG-31	200' E of MW-79	7/20/2006	220	0.87	0.33	ND (1.6)	ND (0.32)	ND (0.32)	ND (0.10)	ND (2.7)	43.0
SG-38 (dupe of SG-31)	200' E of MW-79	7/20/2006	360	1.2	0.52	ND (1.4)	0.30	ND (0.28)	ND (0.089)	ND (2.4)	68.0
SG-32	MW-80	7/20/2006	0.32	ND (0.19)	ND (0.11)	ND (0.55)	ND (0.11)	ND (0.11)	ND (0.036)	ND (0.96)	0.82
SG-36	MW-87	7/20/2006	27	11.0	ND (0.85)	ND (4.2)	ND (0.87)	ND (0.87)	ND (0.27)	ND (7.4)	ND (1.1)
SG-34	MW-63	7/19/2006	61	4.7	ND (0.42)	ND (2.1)	ND (0.43)	ND (0.43)	ND (0.14)	ND (3.7)	ND (0.55)
SG-37 (dupe of SG-34)	MW-63	7/20/2006	31	3.1	ND (1.6)	ND (8.0)	ND (1.6)	ND (1.6)	ND (0.51)	ND (14)	ND (2.1)
SG-26	MW-84	7/20/2006	320	2.1	6.3	4.7	0.65	ND (0.29)	ND (0.092)	ND (2.5)	ND (0.37)
SG-26 duplicate		7/20/2006	330	2.0	6.4	4.9	0.67	ND (0.29)	ND (0.092)	ND (2.5)	ND (0.37)

Notes:
[ND ####] Indicates analyte(s) not detected above the practical quantitation limit (PQL) shown in brackets
µg/m³ - micrograms per cubic meter (equivalent parts per billion volume)

1 *SLR International Corp*

The maximum soil gas concentration detected onsite Tax Lot 201 in September 2005 was 70 micrograms per cubic meter (µg/m³). The additional soil gas sampling conducted in July 2006 detected a maximum soil gas concentration of 530 µg/m³ onsite Tax Lot 203.

The estimated risk for a potential resident is $6x10^{-6}$ using the new maximum soil gas concentration of 530 µg/m³. The new maximum soil gas concentration was used as input to the EPA Johnson & Ettinger Soil Gas Vapor Intrusion model to determine an exposure point concentration.

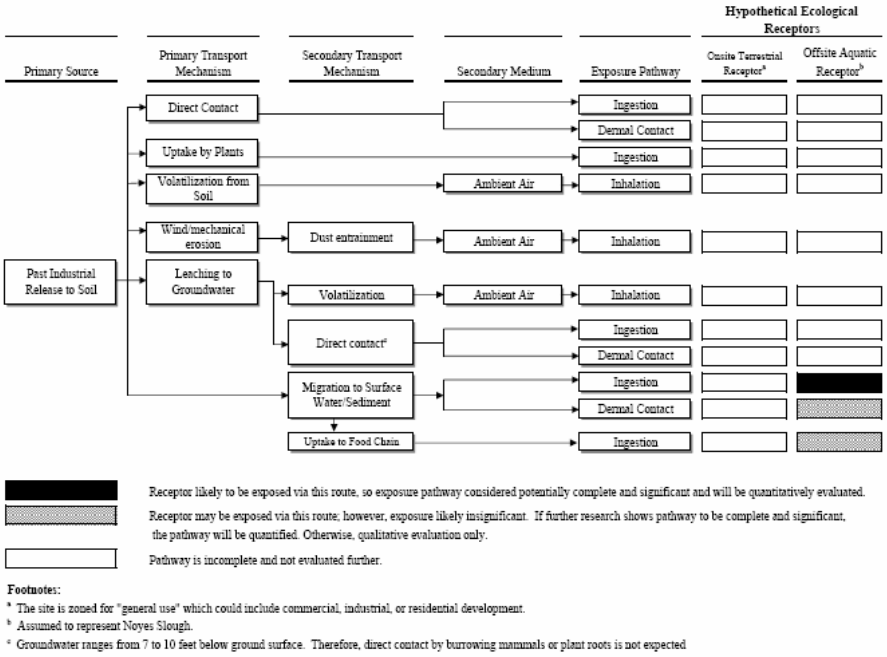
The estimated risk for a commercial worker is $4x10^{-6}$ using the same new maximum soil gas concentration.

Both of these estimated risk values are greater than the corresponding values listed in Table 22 (page 12); however the new risk estimates are still less than ADEC's acceptable risk criterion of $1x10^{-5}$

Screening Ecological Risk Assessment

A screening ecological risk assessment was performed evaluating the pathways listed in Figure 4:

Figure 4
Ecological Conceptual Site Model (CSM) Diagram
Bentley Trust Site
Fairbanks, Alaska



Footnotes:
[a] The site is zoned for "general use" which could include commercial, industrial, or residential development.
[b] Assumed to represent Noyes Slough.
[c] Groundwater ranges from 7 to 10 feet below ground surface. Therefore, direct contact by burrowing mammals or plant roots is not expected

Specifically, the exposure pathways evaluated were direct contact with chemicals of potential concern in sediment and/or pore water by benthic organisms and/or fish in Noyes Slough and the gravel pits onsite Tax Lot 203.

As a conservative assessment, it was assumed that ground water discharges directly into Noyes Slough and the gravel pits onsite Tax Lot 203. It was also assumed that the maximum detected ground water concentrations onsite Tax Lot 201, onsite Tax Lot 203, and offsite discharged to the surface water with no attenuation in ground water or dilution in surface water.

The maximum concentrations were compared to screening values available from the National Oceanic and Atmospheric Administration screening quick reference tables (SQuiRTs). The reference tables include national ambient water quality criteria and screening toxicity values for chemicals in both surface water and sediment. Chronic values for freshwater were used.

A comparison of the maximum ground water concentrations with the SQuiRTs values are presented in the following table (page 16). No maximum ground water concentrations exceeded the screening criteria. Therefore further quantitative assessment of the pathway is not required.

Portions of Bentley Trust Tax Lots 201 and 203 and Offsite Area
Fairbanks, Alaska

Analyte	Maximum Concentration (ug/L)[a]			NOAA Screening Level (ug/L)[b]	Is Chemical a COPC?[d]		
	Tax Lot 201	Tax Lot 203	Lemeta		Tax Lot 201	Tax Lot 203	Lemeta
VOCs							
Bromodichloromethane	2.1	0.5	1	NA	No	No	No
Chloroform	24.3	2.65	25.9	1,240	No	No	No
1,1-Dichloroethane	1.4	ND	0.37	NA	No	No	No
1,1-Dichloroethene	29	40	5.9	NA	No	No	No
cis-1,2-Dichloroethene[c]	259	44	22	11,600	No	No	No
trans-1,2-Dichloroethene[c]	42	40	6	11,600	No	No	No
Tetrachloroethene	5.26	1	32.4	840	No	No	No
1,1,1-Trichloroethane[c]	2.56	1	ND	18,000	No	No	No
Trichloroethene	2,380	140	231	21,900	No	No	No

Notes:
ug/L = Micrograms per liter.
NA = Not available/applicable.
ND = Not detected.

Footnotes:
[a] Maximum concentration from Tables 4a, 4b, and 5.
[b] Screening levels are freshwater-based chronic continuous concentration (CCC) values from NOAA (1999).
[c] No CCC available; value represents the chronic maximum concentration (CMC) for freshwater (NOAA, 1999).
[d] If a maximum exceeds any value, it was identified as a COPC.

References:
National Oceanic and Atmospheric Administration (NOAA). Screening Quick Reference Tables. NOAA Hazmat Report 99-1. Coastal Protection and Restoration Division, Seattle, Washington.

Bentley RA Tables final_r1.xlsGW_Screen_Eco SLR International Corp

4.0 Soil and Groundwater Cleanup Levels

The soil cleanup levels established for chemicals of potential concern listed in Table 7 (page 10) of the HHRA for onsite Tax Lot 201 (western portion of Tax Lot 201) and onsite Tax Lot 203 (southwestern portion of Tax Lot 203) are the 18 AAC 75.341 Tables B1 and B2 levels. However, this decision recognizes that the maximum concentrations listed in Table 7 do not pose an unacceptable health risk and active cleanup (i.e. a cleanup method other than monitored natural attenuation) will not be required unless these levels are exceeded.

The ground water cleanup levels established for the chemicals of potential concern listed in Table 8 (page 11) of the HHRA for onsite Tax Lot 201 (western portion of Tax Lot 201), onsite Tax Lot 203 (southwestern portion of Tax Lot 203), and offsite are the applicable levels in 18 AAC 75.345 Table C. This decision recognizes that the Table C levels are exceeded but there is no unacceptable risk posed by them provided the site specific conditions are complied with. This decision recognizes that monitored natural attenuation will treat (or reduce) the contamination over time to levels that ultimately will meet the Table C levels.

The cleanup levels established for this site are those that will allow site closure without conditions. However, the risk assessment has allowed contaminant levels (above the established cleanup levels) to remain on site without requiring further active cleanup actions. This allows closure (with conditions) until such time that the most stringent cleanup levels are achieved.

5.0 ADEC Decision

ADEC has determined the subject properties have been adequately characterized and, based on information provided to date; the hazardous substance contamination remaining on site poses no unacceptable risks to human health or the environment. In accordance with this determination and subject to site specific conditions presented below, it is ADEC's decision that further active remediation is not required and monitored natural attenuation is approved to treat the remaining contamination over time.

This decision is subject to the following conditions:

1. Land use restrictions for onsite Tax Lot 201 prohibit use of ground water and off site transport of contaminated soils and groundwater (without ADEC approval).
2. Land use restrictions for onsite Tax Lot 203 prohibit use of ground and surface waters, unless ADEC reviews and approves of the request prior to any proposed use on a case by case basis.
3. The monitored natural attenuation shall apply to onsite and offsite ground water based on a determination consistent with ADEC guidance *The Selection of Natural Attenuation as a Cleanup Alternative for the Restoration of Soil and Ground Water at Contaminated Sites* dated January 2000.
4. Alyeska Pipeline Service Company shall submit and implement a long-term ground water monitoring plan consistent with ADEC guidance *The Selection of Natural Attenuation as a Cleanup Alternative for the Restoration of Soil and Ground Water at Contaminated Sites* dated January 2000.

Site closure (without conditions) can be achieved when soil sampling confirms that all soil on Tax Lot 201 meets the 18 AAC 75.341 'migration to groundwater' cleanup levels for the Under 40 inch zone and all ground water onsite Tax Lot 201 (western portion of Tax Lot 201), onsite Tax Lot 203 (southwestern portion of Tax Lot 201), and offsite meets 18 AAC 75.345 Table C cleanup levels.

Under 18 AAC 75.380(d)(1), ADEC may require additional cleanup action if new information is discovered which leads ADEC to make a determination that the cleanup described in this ROD is not protective of human health, safety, and welfare or the environment.

In accordance with 18 AAC 15.185, any person who disagrees with this decision may request an informal agency review by the director of the department's division of Spill Prevention and Response. A request for informal review must be made within 15 days after receiving the department's decision reviewable under this section, and should be addressed to Larry Dietrick, Department of Environmental Conservation, P.O. Box 111800, 410 Willoughby Avenue, Suite 303, Juneau, Alaska 99811-1800. In addition, any person who is aggrieved by this decision may request an adjudicatory hearing under 18 AAC 15.195 – 18 AAC 15.920. If any person wishes to request an adjudicatory hearing, the request should be submitted to the Commissioner, Department of Environmental Conservation, P.O. Box 111800, 410 Willoughby Avenue, Suite 303, Juneau, Alaska 99811-1800, within 30 days after the date of issuance of this letter, or within 30 days after the department issues a final decision under 18 AAC 15.185. If a review is not requested within 15

days, or if a hearing is not requested within 30 days, the right to appeal is waived, and the decision becomes final.

Recommended by:

Douglas Bauer
Environmental Engineer Associate

Approved by:

Jim Frechione
Program Manager

cc: Jan Shifflet, Alyeska Pipeline Service Company
Cynthia Wagner, Union Bank of California Environmental Risk Management