Phase I Environmental Site Assessment

Former Native Store Tank Farm Grayling, Alaska



Prepared for: Anvik Tribal Council PO Box 10 Anvik, AK 99558 907/663-6323

Prepared by:



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1.0 INTRODUCTION

Chilkat Environmental authored this Phase I Environmental Site Assessment (ESA) for the Anvik Tribal Council Brownfields Tribal Response Program to investigate the former tank farm at the Native Store in Grayling, Alaska. The purpose of this ESA is to review available information and inspect the site to identify the presence or likely presence of contamination from hazardous substances or petroleum products. Site investigation was conducted October 24, 2012 with assistance from Anvik and Grayling Tribal Environmental Departments. This ESA for Contaminated Site 2416.38.001 was conducted in accordance with ASTM 1527-06 Standard practices and procedures.

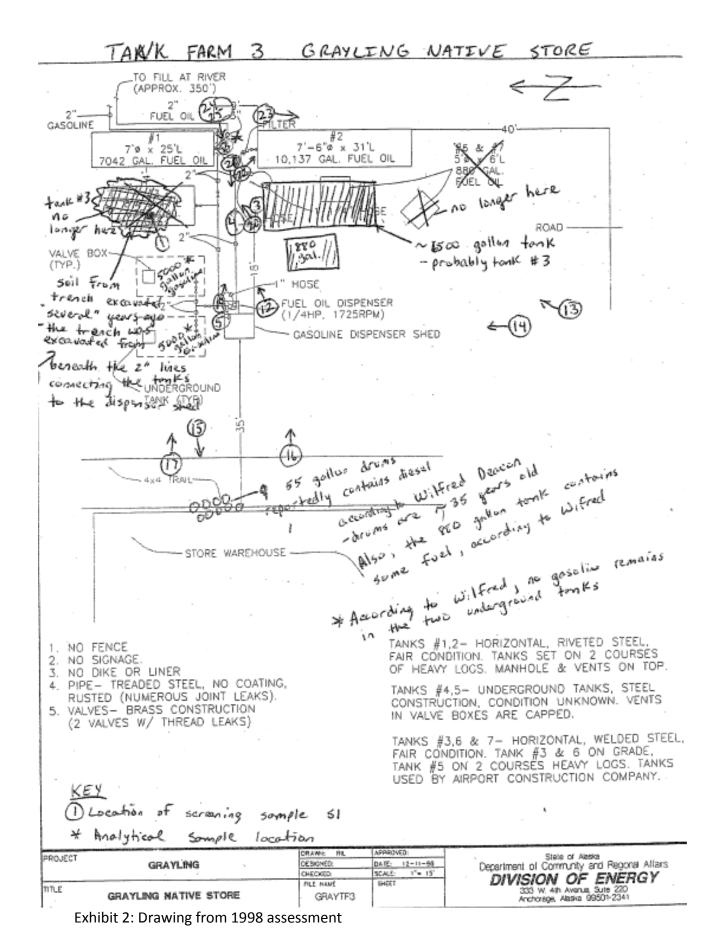
1.1 BACKGROUND

Between 1962 and 1966, 25 families moved to Grayling from Holikachuk on the Innoko River and pioneered the permanent community. Native Village of Grayling built the tank farm in the early 1980's and managed fuel sales as a non-profit community collective whereby any profit was redistributed to the fuel buyers annually.

The site was inspected July of 1998 for a Bulk Fuel Storage Assessment Report. (Attachment 1) The capacity of the tank farm was estimated at 35,329 gallons. There were seven tanks including 5 above ground and two underground. The above ground tanks featured no dike or liner. Tanks were filled from a header at the river through a pipeline that has since been removed except at the tank farm. The facility was used as a fueling station and tank lines were routed to a manifold at the pump house. In 1998 two aboveground riveted rail car tanks mounted on logs were in use while the 2 other aboveground tanks were unused. One underground tank was still in use and the other was not. The two riveted tanks were leaking and had numerous pipe joint leaks. The 1998 assessment documented that the tank farm would be decommissioned when construction of the consolidated tank farm was completed that year. Refer to Exhibit 1 for table describing the fuel tanks and Exhibit 2 for a drawing of the site from the 1998 assessment.

TANK FAR OWNER: LOCATIO		ing Native	Store				
TANK NO.	TY	ΡE	HEIGHT/LENGTH (FT-IN)	DIAMETER (FT-IN)	CAPACITY (GAL)	GASOLINE	FUEL OIL
	HORIZ.	VERT.					
1	х		25' - 0"	7' - 0"	7,042		x
2	x		31' - 0"	7' - 6"	10,177		х
3	x		17' - 0"	8' - 0"	6,390	unleaded	
4	x		unknown	unknown	unknown	unknown	
5	x		unknown	unknown	unknown	unknown	
6	х		6' - 0"	5' - 0"	880	unleaded	
TOTAL					24,449		

Exhibit 1: Description of fuel tanks present in 1998



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The Tribe received a warning letter for environmental violations from the Coast Guard in 1993 that disclosed maximum fine potential of \$40,000. (Attachment 2) In the same year ADEC provided a letter requiring registration of the underground storage tanks and assigned the Facility ID number 2935 for the registration to be filed under. (Attachment 3) As of the date of this report the tanks have still not been registered and registration is required. All forms that are required to properly register the tanks are provided as Attachment 4.

The ADEC contaminated sites database documented a 10-gallon spill in 1996 managed by the Prevention and Emergency Response Program and closed in 1997. In 2000 all tank farms in Grayling were investigated for the ADEC Aboveground Storage Tank Program. (Attachment 5) This investigation again documented pipe threads leaking, two valves that had packing leaks, and discovered a contaminated soil stockpile located on a liner within the tank farm and nine partially filled drums. Soil sampling conducted at three inches below ground surface presented diesel and gasoline contamination above maximum allowable concentrations. It is not known if the tanks had residual product in them in 2000.

In 2011 ADEC sent a Contaminated Sites notification letter to the Native Store. (Attachment 6) In May 2011 a representative of the store called ADEC and was informed of environmental concerns. January of 2012 a Potentially-Responsible-Party (PRP) letter was sent from ADEC (Attachment 7) and in February 2012 absence of response in required timeframe was documented on the contaminated sites database.

1.2 LOCATION

Grayling is on the west bank of the Yukon River 18 miles north of Anvik and 350 miles northwest of Anchorage. Legal description is Section 34, Township 033 North, Range 058 West, Seward Meridian. Coordinates are North 62.905015, and West 160.065396 at 69 feet above sea level. The former tank farm is located at Block 22, Lot 3 on the north side of C Street between 2nd and 3rd Streets about 350 feet from the Yukon River. Refer to Exhibit 3. Characterized by cold winters and warm summers temperatures range from -60° to 87° F. Snowfall averages 110 inches and rainfall 21 inches. Grayling is located in the Kuskokwim recording district. The community is reached by air and is served by barge mid summer. There are no roads to connect the 189 residents to surrounding communities so skiffs, ATV's and snow machines are used for local transportation.



Exhibit 3: Grayling Native Store Tank Farm

1.3 SUBJECT PROPERTY and OWNERSHIP HISTORY

Native Village of Grayling owns the subject property Block 22, Lot 3 by warranty deed. Adjacent properties include: Department of Education to the North, C Street to the South, Third Street to the West and the Native Village of Grayling Community Hall to the East. Refer to Exhibit 4 and 5. Prior to use as a tank farm in the 1980's the site was used as a seasonal fish camp and log yard to fuel steamships at the turn of the century.

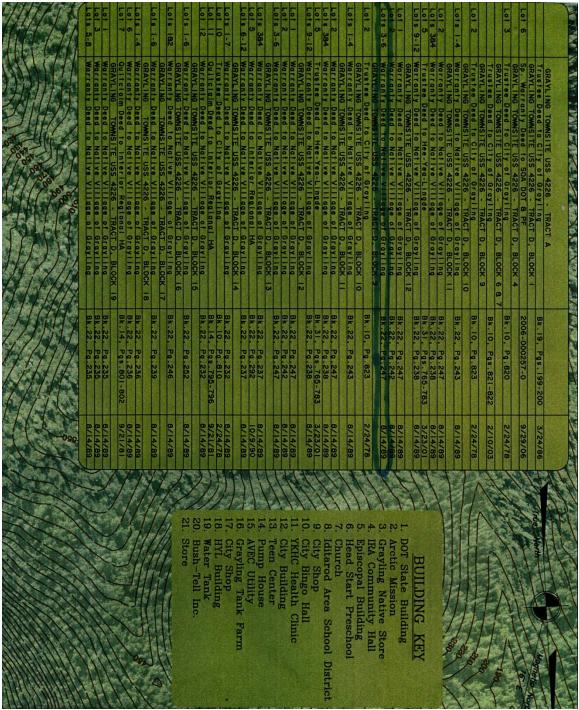


Exhibit 4: Native store tank farm located on Lot 3, Block 22

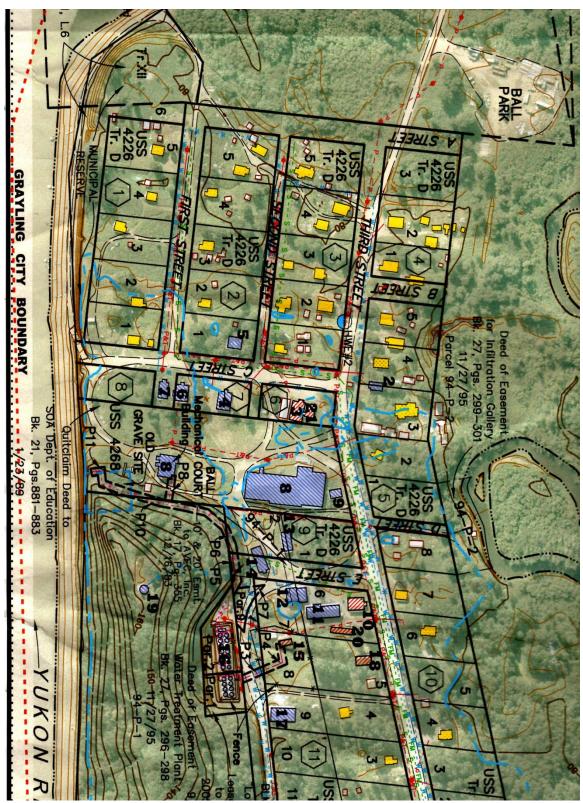


Exhibit 5: Property Ownership Map. Grayling Native Store denoted by 21.

1.4 INVESTIGATORS

Investigators present for fieldwork include: William Prisciandaro, Principal Investigator for Chilkat Environmental and Nathan Elswick, Environmental Director for the Anvik Tribal Council. Senior Scientist, Elijah Donat, coordinated fieldwork and authored this report.

Elijah Donat MS PMPSenior ScientistChilkat EnvironmentalElijah is a qualified Environmental Professional as defined in 40 CFR 312.10.Mr. Donathas a BS in Environmental Science, a BA in Federal Indian Law, an MS in EnvironmentalEngineering with PMP certification.He has authored over 200 environmentaldocuments for more than 60 clients during his 15-year consulting career in Alaska.

William Prisciandaro BSPrincipal InvestigatorChilkat EnvironmentalWilliam Prisciandaro BS was the Principal Investigator and performed the site visit. Will
has spent 14 years as a field scientist in Alaska and has performed fieldwork as the
principal investigator for over 30 Phase 1 ESA's. Will earned his degree as a Fisheries
Scientist but has primarily worked in the contaminated sites field.

Nathan Elswick	Environmental Director	Anvik
Nathan performed fieldwork	and provided support for investigation.	

Jessica WestEnvironmental DirectorGraylingJessica provided support for literature review and observed investigation.

2.0 METHODOLOGY

This Phase I ESA was conducted in compliance with ASTM 1527-05 standard practice including All Appropriate Inquiry (AAI). This type of assessment is performed as Due Diligence to identify any Recognized Environmental Condition (REC). REC is defined as

"Presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release of any hazardous substances or petroleum products on the property or into the ground, ground water, or surface water of the property."

Up to ½ mile radius is included in AAI dependent on site topography to capture potential contaminant sources from up gradient of the property or impacting site groundwater. This Phase I ESA constitutes AAI for the purpose of innocent landowner defense pursuant to the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). This assessment includes local, state and federal contaminated sites database research, interviews with individuals or governmental entities familiar with the property, site recon, site investigation, photo log, and authorship of the report.

3.0 SITE DESCRIPTION

The former Grayling Native Store Tank Farm is 60 by 60 feet in the center of the community between the store and school where a new community center is planned. Two underground storage tanks are still present on the property and are estimated at under 5000 gallons each based on standpipe and breather locations. The valve and caps to these tanks were rusted shut and not dipped however they are said to be empty and were used for gasoline. One empty 880-gallon aboveground tank is still present on site while the remaining aboveground tanks have been removed. Propane tanks are staged on the property for seasonal replacement during barge service and present no concern. Site features include seven abandoned drums and an unlined contaminated soil stockpile estimated at 16 yds^{3.}

4.0 RECORDS REVIEW

Chilkat Environmental conducted a review of databases to research any contamination on or near the subject properties. The records review was conducted on October 16, 2012. The following sources were investigated:

Federal Record Review

- U.S. EPA Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) List: No sites are listed in the EPA CERCLIS database near Grayling, Alaska. None impacting the subject properties and none within 1 mile of site.
- <u>U.S. EPA National priorities List (NPL)</u>: No sites are listed in the EPA NPL database near Grayling, Alaska. None impacting the subject properties and none within 1 mile of site.
- <u>U.S. EPA Resource, Conservation, and Recovery Act (RCRA) Corrective Action</u> <u>Sites Report:</u> The US EPA RCRA Corrective Action Report last update on 11/11/2011. No RCRA sites were identified near Grayling, Alaska.
- <u>U.S. EPA Currently Designated Non-attainment Areas for All Criteria Pollutants:</u> No non-attainment areas are located near Grayling, Alaska.
- <u>U.S. EPA Envirofacts</u>: No sites are listed in the Envirofacts database for Grayling, Alaska.

State Record Review

 <u>ADEC Underground Storage Tank (UST) Database:</u> Grayling Native Store
 This facility is listed in the UST database under Facility ID number 2935
 No tanks are registered.
 Registration of the tanks is required. Contact Bill Steele with any questions.

Bill Steele TTF/UST Section Manager Alaska Department of Environmental Conservation Division of Spill Prevention and Response (907) 269-7886 Bill.Steele@alaska.gov

Harold's Air Facility ID: 503 Installed: 5/1/1980 Capacity: 8000 gallons Status: permanently out of use and not impacted by or likely to impact subject property

ADEC Contaminated Sites Database: There are five contaminated sites listed on the database that are located in Grayling. This list includes the Grayling Native Store Tank Farm. The remaining four include:

Grayling Iditarod School former Tank Farm

File Number: 2416.38.001

Latitude: 62.905436 Longitude: -160.063319

This site is the location of the former Iditarod Area School District tank farm. The total capacity of the tank farm was 35,310 gallons. The tank farm is located approximately 150 feet west of the Yukon River. Fred Howard (453-5153) stated that there was a release of approximately 3,000 gallons of fuel that occurred from subsurface piping connecting from the tank farm to the school mechanical building. The release occurred in 1994. Fred stated that he excavated several pits at distances of approximately 15 to 30 feet from where the piping failed, but did not find any trace of fuel. The soil excavated from beneath the ruptured piping was temporarily stockpiled on a liner at the Grayling Native Store.

* In this investigation Chilkat Environmental did not observe a lined contaminated soil pile. A soil pile was observed but was un-lined and believed to be the pile documented in the 1998 Assessment as soil excavated from the on site trench. Exhibit 2 Drawing of the 1998 Assessment.

Grayling Native Corporation Tank Farm

File Number: 2416.38.002

Latitude: 62.905019 Longitude: -160.062837

This tank farm had a total capacity of 21,452 gallons. The tank farm is located approximately 75 feet west of the Yukon River. Only three of the four original tanks remain. An unlined gravel dike contained the two 5,260 gallon tanks. The railroad car tank was not surrounded by a dike or liner. A soil sample collected at 3 inches bgs at this tank farm contained 2,960 mg/kg DRO

Grayling City Former Tank Farm

File Number: 2416.38.004 Latitude: 62.906571 Longitude: -160.065216

All of the tanks that were formerly located at this tank farm have been moved to the new consolidated tank farm. The tanks were located within a 1-foot high, unlined gravel dike. The soil sample that was collected in 2000 from within the dike at this tank farm contained 21,200 ppm DRO and 311 ppm GRO.

Grayling BIA School Tank Farm

File Number: 2416.38.006 Latitude: 62.905239 Longitude: -160.064104

This was the location of the BIA school tank farm located in a grassy area to the south of the school mechanical building. The exact location of this tank farm was not ascertained due to grass and brush covering the area. It did not appear as though this tank farm was contained within a dike. According to Phil Nicolai, one of the 8,000-gallon fuel tanks at this tank farm released its entire contents when a valve was inadvertently left open. Samples were not collected from this tank farm because the site of the tank farm could not be precisely identified.

ADEC Spills Online Query

David-Louis Memorial School IASD Grayling Antifreeze 3/4/2010

5.0 SITE INVESTIGATION

Soils were investigated with a 3-inch diameter hand augur and ambient odor screening performed for petroleum contamination. A diesel contaminated soil stockpile was identified measuring 12 X 12 X 3 feet located on the ground without sign of liner estimated at 16 yds³. Based on soil type, location and historic notes it is most likely the soil originated from the subject property. However, reference to a stockpile on a liner at the subject property is made in the Iditarod School District Tank Farm Contaminated Site Database. The entry states that their contaminated soil was stockpiled on the subject property. It assumed that this soil was since moved because no unidentified soil stockpiles upon a liner were observed.

Shallow soils were screened for contamination and one contaminated area identified adjacent the stockpile that measured about 20 X 10 X 4 feet or greater and roughly estimated at 30 yds³. The sandy soil was compliant until 4 to 4.5 feet at dense gravel. Screening was performed at the middle of each hole where contamination was strongest.

Seven drums remain on the property of nine documented in 2000. These are numbered in Exhibit 6. Drums 1-3 were checked with drum thieves and found to be full of petroleum contaminated water with minimal free product. Drums 4-6 could not be opened using a steel bung wrench do to rust and the degraded condition of the drums. Further investigation was not performed on these drums because we did not have capacity to respond to release or to properly contain the drums if we couldn't get them closed. Drum 7 contained about 45 gallons of unused heavy weight oil and was on its side leaking from its missing bung. Nathan Elswick found a replacement bung and installed it. Previous investigators were informed the 9 drums present if 1998 contained waste diesel. Therefore, drums 4-6 are suspected to contain diesel. None of these drums are in satisfactory condition and each presents a potential spill source.

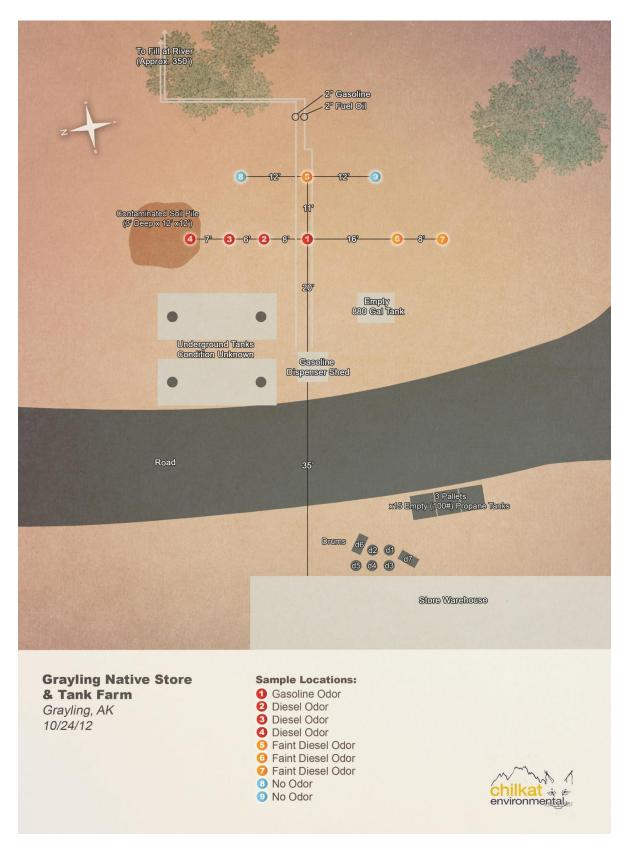


Exhibit 6: Site Drawing

6.0 CONCLUSIONS and RECOMMENDATIONS

Field investigation identified petroleum contamination. We do not suspect that petroleum contamination from other contaminated sites has influenced the site. Soil contamination appears limited to an area within Lot 3. There are seven poorly contained and failing drums on site that present a risk of release. We recommend containment of the drums to prevent spills. There are two unregistered underground storage tanks that require registration with ADEC. All forms required are provided in Attachment 4.

Once tanks are registered it is recommended they be decommissioned following the UST Procedure Manual requirements. Phase II Characterization of contaminated soil and stockpile should include laboratory sampling following an ADEC approved workplan to define the level of contamination. Upon completion of characterization a Conceptual Site Model should be developed for ADEC use in determining cleanup levels that will apply to the site. Informed by the level of contamination and cleanup level a Phase 3 site cleanup can be planned in coordination with ADEC to resolve human exposure concerns and close the site. Depending on the level of contamination that remains after cleanup ADEC may require institutional controls to limit uses of the property and minimize human exposure.

<u>Signature of Qualified Environmental Professional:</u> Qualified Environmental Professional Elijah Donat MS PMP prepared this report.

11.26.2012: 12:58PM Elijah Donat MS PMP Principal Investigator

References

- ADEC Contaminated Sites and Leaking Underground Storage Tank (LUST) List. October 16, 2013.<u>http://www.dec.state.ak.us/spar/ipp/ust/search/fac_results.asp</u>
- ADEC Spills Database Online Query. October 16, 2013.<u>http://www.dec.state.ak.us/SPAR/perp/search/SpillsMain.asp</u>
- EPA National Priorities List (NPL October 16, 2013.<u>http://www.epa.gov/superfund/sites/npl/ak.htm</u>
- EPA CERLIS Hazardous Waste Sites. October 16, 2013.<u>http://www.epa.gov/superfund/sites/cursites</u>
- EPARCRA Corrective Action Report. October 16,
2013.2013.http://yosemite.epa.gov/r10/cleanup.nsf/webpage/Alaska+Cleanup+Sites
- EPA Currently Designated Non-Attainment Areas for All Criteria Pollutants. October 16, 2013 .<u>http://www.epa.gov/oar/oaqps/greenbk/ancl.html</u>
- EPA Envirofacts. October 16, 2013.<u>http://www.epa.gov/emefdata/em4ef.home</u>

Photo Log



Photo 1: General setting



Photo 2: Propane tank storage area in foreground with seven drums behind



Photo 3: Seven drums remaining on subject property



Photo 4: Drum found leaking. Identified as drum 7 in Exhibit 6



Photo 5: Nathan Elswick collecting screening samples along pipeline corridor



Photo 6: Empty 880-gallon aboveground tank remains on subject property

Attachment 1:

Grayling Bulk Fuel Storage Assessment Report

7/15/98

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	Energy Progra	ams Proio	ot For	n		1944 1947		
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Community Nan	ne: Grayling			Date Last	Updated: [2/3/2000	Populatio	on:
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						~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	<u>b-</u>	Locator
Project Program	Bulk Fuel Upgrad	e				، سر		
Funding Source:	;					5 mg	/	
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1.5.1

**Community Data** 

## 1.5.1

Site Assessment: 7/15/98

Community Data	
Population: 191 Region: YK	Election District: 36
Regional Corporation:	Tanana Chiefs Conference
Village Corporation:	Hee-Yea-Lingde Corporation, P O Box 9, Grayling, AK 99590 Phone/fax: (907) 453-5133
Village Council:	Organized Village of Grayling, General Delivery, Grayling, AK 99590 Phone: (907) 453-5116
Fuel Supplier:	Yukon Fuel Company 510 L Street, Suite 310 Anchorage, AK 99501 (907) 777-5505
Consolidation Opportunities:	Consolidation of AVEC, ANCSA Village Corporation, and City of Grayling is currently under construction. Tanks farms #3 and #4 to be decommissioned at time of completion.

#### 1.1 General

1.0

The bulk fuel storage facilities at Grayling, located on the west bank of the Yukon River east of the Nulato Hills, 18 air miles north of Anvik, were inventoried on July 15, 1998. Reference was made to the "Grayling Community Profile," the current DCRA Fuel Tank Database, the Rural Alaska Bulk Fuel Assessment Program Report and other available documents.

The DCRA database lists the following tank farms at this location:

- 1. Tank Farm #1: Iditarod Area School District Capacity: 35,310
- 2. Tank Farm #2: ANCSA Village Corporation Capacity: 21,452
- 3. Tank Farm #3: Grayling Native Store Capacity: 35,329
- 4. Tank Farm #4: City of Grayling Capacity: 15.090
- 5. Tank Farm #5: AVEC Capacity: 70,080

The site visit revealed that currently there are 4 active, above-ground tank farms at Grayling.

1.	Tank Farm #1: Capacity:	AVEC, ANSCA Village Corp., and City of Grayling, consolidated. 35,400 - gasoline 139,900 - fuel oil
2.	Tank Farm #2: Capacity:	IASD Mechanical Building Day Tank 2,000 fuel oil
3.	Tank Farm #3: Capacity:	Grayling Native Store 7,270 - gasoline 17,219 - fuel oil
4.	Tank Farm #4: Capacity:	ANSCA Village Corporation 20,572 - gasoline

#### 1.2 Contacts

The following people were contacted during the course of this site visit:

Charlotte West, City Clerk (907) 453-5148 (Sent fax - see attached). Wayne Gredigan (AVEC) (907) 453-5149. IASD (sent fax - see attached) (907) 453-5135/fax=(907) 453-5165 Native Store (907) 453-5153/fax=(907) 453-5154 - sent fax (see attached).

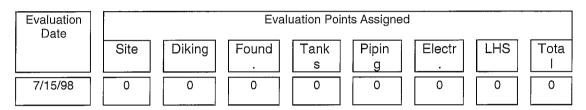
#### 1.3 U.S. Coast Guard Inspection

Coast Guard inspection information attached.

### Tank Farm #1: ANCSA, AVEC, IASD, City of Grayling

ANCSA Village Corporation, AVEC, IASD, and City of Grayling are in the process of consolidating their tank farms into one combined tank farm. The tanks will be within a 3 foot high dike with liner. All the tanks are new or recently refurbished and are in good condition. The tank farm is filled by two 3" lines from a marine header. A diesel and gasoline dispenser is used for distribution. A new underground distribution line runs to AVEC generators. At the time of this survey, work on the tank farm was incomplete. Complete drawings and details of the tank farm are available (owned) by DCRA Division of Energy.

#### Table 1: Evaluation Points



#### **Deficiencies and Recommendations:**

There are several deficiencies and/or code violations in this tank farm. These include, but are not limited to, the following:

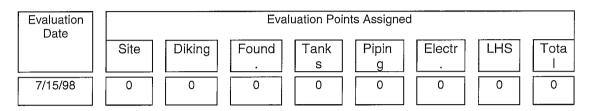
None

OCATIO					<b></b>		
TANK NO.	ΤΥI	PE	HEIGHT/LENGTH (FT-IN)	DIAMETER (FT-IN)	CAPACITY (GAL)	GASOLINE	FUEL OIL
	HORIZ.	VERT.					
1		x	13' - 8"	8' - 6"	5,800	······	x
2		x	13' - 8"	0' - 0"	6,500		х
3		х	13' - 8"	9' - 0"	6,500		х
4		х	13' - 8"	8' - 6"	5,800		х
5		х	13' - 8"	9' - 6"	7,300		х
6		Х	13' - 8"	10' - 0"	7,900		x
7 .		х	14' - 0"	10' - 0"	7,600		x
8		Х	14' - 0"	9' - 6"	6,800		x
9		х	14' - 0"	9' - 6"	6,800		x
10		Х	14' - 0"	10' - 0"	7,600		x
11		х	14' - 0"	11' - 0"	9,200	Х	
12		Х	14' - 0"	10' - 6"	8,500	Х	
13		х	14' - 0"	10' - 6"	8,500	Х	
14		х	14' - 0"	11' - 0"	9,200	Х	
15 -	X		15' - 0"	···· 6' -· 4"···	3,000 -	Χ	X -
16		х	13' -1"	9' - 6"	6,900		х
17		Х	13' - 0"	11' - 0"	9,400		х
18		x	13' - 7"	10' - 6"	8,900		х
19		х	13' - 7"	10' - 6"	8,800		х
20		Х	13' - 1"	10' - 0"	7,800		х
21		х	13' - 2"	11' - 0"	9,800		х
22		X		····· ····1·1·'··- 0."		* 2011 - 10 - 10 - 10 - 10 - 10 - 10 - 10	*** <b>X</b>
23		x	13' - 2"	10' - 0"	8,400		x

#### Tank Farm #2:IASD Mechanical Building

The tank farm consists of one double-wall, welded steel construction, tank. It is located adjacent to the school mechanical building, and is used as a diesel fuel day tank for power generation and heating. The tank has a drip dike around it. It is filled by a 2" distribution line from tank farm #1. A two inch distribution line supplies equipment inside the building. At the time of this survey, work on the tank farm was incomplete. Complete drawings and details of the tank farm are available (owned) by DCRA, Division of Energy.

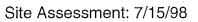
#### Table 1: Evaluation Points



#### **Deficiencies and Recommendations:**

There are several deficiencies and/or code violations in this tank farm. These include, but are not limited to, the following:

None noted.

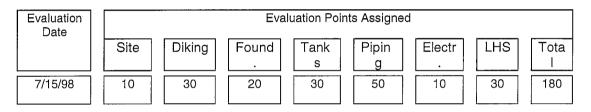


TANK FAR OWNER: LOCATIO		) Mechai	nical Building				
TANK NO.	ΤŶΙ		HEIGHT/LENGTH (FT-IN)	DIAMETER (FT-IN)	CAPACITY (GAL)	GASOLINE	FUEL OIL
	HORIZ.	VERT.					
1	х		12' - 0"	5' - 6"	2,000		х
TOTAL					2,000		

#### Tank Farm #3: Grayling Native Store:

The tank farm consists of 4 above-ground, horizontal tanks and 2 underground, horizontal tanks. The tanks are located approximately 50ft east of the Native store. The tanks are owned and operated by the Grayling Native Store. They are used for local dispensing of fuel oil and gasoline. There is no dike or liner. Tanks #1 and 2 are riveted rail car fuel tanks, mounted on 2 courses of heavy logs. Tank #3 is welded steel, mounted on 2 courses of heavy logs. Tanks #4 and 5 are underground, condition is unknown. Tanks #1 and 2 are equipped with a fuel oil pump dispenser, with hose, meter, and nozzle. Tanks #4, 5, and 6 appear to be unused. There were numerous signs of pipe joint leaks and leaking at riveted tanks. The tanks are filled by a 2" threaded steel pipe approximately 350' to the river. The tanks are supported by improper flammable materials and are located adjacent to grass and brush areas without a fire break. There are no warning signs or a fence. This tank farm was in service at time of survey. However, the Native Store has plans to demolish it when consolidated tank farm #1 is completed.

#### Table 1: Evaluation Points



#### **Deficiencies and Recommendations:**

There are several deficiencies and /or code violations in this tank farm.⁻ These include, but are not limited to, the following:

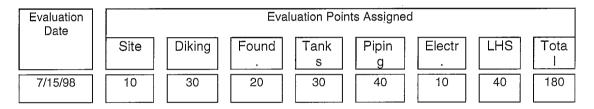
- 1. Inadequate separation between tanks and dispensers.
- 2. Tanks are located within a flood plain.
- 3. No security fence.
- 4. No warning signs.
- 5. No dike or liner.
- 6. No emergency venting of tanks.
- 7. Structural flaws tanks #1 and #2 are leaking at rivets. Tanks #4 & #5 are underground condition unknown. Tanks #2 and #6 are rusting.
- 8. Improper foundations all tanks are mounted on logs.
- 9. Improper wiring.
- 10. No operations manual, spill prevention/oil spill response plans.
- 11. Active leaks

TANK FARM NUMBER: 3										
OWNER: Grayling Native Store										
	LOCATION: Grayling									
TANK	TYI	PE	HEIGHT/LENGTH	DIAMETER	CAPACITY	GASOLINE	FUEL			
NO.			(FT-IN)	(FT-IN)	(GAL)		OIL			
	HORIZ.	VERT.								
1	x		25' - 0"	7' - 0"	7,042		х			
2	x		31' - 0"	7' - 6"	10,177		х			
3	x		17' - 0"	8' - 0"	6,390	unleaded				
4	х		unknown	unknown	unknown	unknown				
5	х		unknown	unknown	unknown	unknown				
6	х		6' - 0"	5' - 0"	880	unleaded				
TOTAL					24,449					

#### Tank Farm #4 ANCSA Village Corporation:

The tank farm consists of 2 horizontal, welded steel tanks and one horizontal riveted steel tank. The tanks are located approximately 110 ft east of the Yukon River, along the barge landing area road. The tanks are owned and operated by the Grayling Native Corporation. They are used for local dispensing of gasoline. Tanks #1 and #2 are equipped with a tank-mounted electric dispenser pump, meter, and 20 ft of hose with nozzle. Tank #3 has a locked dispenser box. Tanks #1 and 2 are mounted on log cribbing inside a gravel dike pad without a liner. The dike has eroded away. Tank #3 is mounted directly on the ground and is leaning to one side. There were numerous signs of leaks; however, none during this inspection. Tanks #1 and 2 are in fair condition. Tank #3 is a 40= year old riveted tank car and should not be in use. Both tanks are filled by hose from the river. The tanks are supported by improper flammable materials and are located adjacent to grass and brush areas. The only warning signs are on tanks #1 & 2. There is no fence or site lighting. This tank farm was in service at time of survey. However, the native corporation plans to decommission it when consolidated tank farm #1 is completed.

#### Table 1: Evaluation Points



#### **Deficiencies and Recommendations:**

There are several deficiencies and/or code violations in this tank farm. These include, but are not limited to, the following:

- 1. Inadequate separation between tanks and dispensers.
- 2. Tanks are located withing a flood plain.
- 3. No security fence.
- 4. No dike or liner.
- 5. No emergency venting.
- 6. Structural flaws- tank #3 is leaking at rivets; tanks #1 & #2 could use painting.

7. Improper foundation - tanks #1 and #2 are mounted on logs; tank #3 is in direct contact with ground and is leaning to one side.

- 8. Inadequate spacing between tanks #1 and #1.
- 9. Improper wiring exposed (hot) wiring at pump connection; no explosion proof wiring.
- 10. Inadequate number of warning signs.

11. No operations manual and/or spill prevention/oil spill response plans on site.

o

3

TANK FARM NUMBER: 4										
OWNER:	OWNER: ANCSA Village Corporation									
LOCATIO	N: Grayl	ing								
TANK	TYI	PE	HEIGHT/LENGTH	DIAMETER	CAPACITY	GASOLINE	FUEL			
NO.			(FT-IN)	(FT-IN)	(GAL)		OIL			
	HORIZ.	VERT.								
1	x		14' - 0"	8' - 0"	5,260	unleaded				
2	х		14' - 0"	8' - 0"	5,260	unleaded				
3	х		30' - 0"	7' - 6"	10,052	unleaded				
TOTAL					20,572					

Attachment 2:

# United States Coastguard Warning

4/28/93

1

U.S. Department of Transportation

United States Coast Guard



Post-It brand fax transmittal memo 7671 # of pages > 3

To	
Bannie	From Grayling IRA
	Co
Dept.	Phone # 453-5116
Fax# 5 , 8 , 1	Eav 4
Fax# 563-6032	453-5146

PhoneReturn Address(907) 271-6700Commanding OfficerFaxU. S. Coast Guard(907) 271-6751Marine Safety Office510L. St., Suite 100Anchorage, AK99501

Case No: MV92009855 Party: GRAYLING NATIVE STORE IP92023642 Subject: GRAYLING NATIVE STORE ANCH1236 Amount: WARNING

Date: NOV 3 0 1992 Re: COTP Letter of Warning

GRAYLING NATIVE STORE PO BOX 43 GRAYLING, AK 99590

Based on the results of a Coast Guard inspection/examination of your facility on O6JUN92 at GRAYLING AK., you have been found to be in violation of U.S. law (and/or regulations) in your operations. The specific violations that have been brought to my attention are:

REGULATION	NATURE OF VIOLATION	PRELIMINARY <u>Amount</u>	MAX PENALTY Auth by law
33 C.F.R. 154 (SUBPART A) 33 U.S.C. 1321 33 U.B.C. 1321	Oil pollution prevention regulations for marine oil transfer facilities - General	WARNING	10000.00
33 C.F.R. 154 (SUBPART B) 33 U.S.C. 1321 33 U.S.C. 1321	Oil poliution prevention regulations for marine oil transfer facilities - Operations manual	WARNING	10000.00
33 C.F.R. 154 (SUBPART D)	0(1 1)		

33 U.S.C. 1321 transfer facilities - Facility operations	20000,00
-------------------------------------------------------------	----------

In consideration of the nature of these violations and the absence of prior similar violations on the part of this facility, I am issuing this Letter of Warning to you as OWNER of the facility, rather than initiating civil penalty action. I do not intend to pursue this matter further. However, I urge your cooperation in preventing repetitions of such occurrences.

GRAYLING IRA TFYS ID:907-453-51	46 APR 28'93 13:04 No	.001 P.03
	CHARGE SHEET ENCLOSURE	.001 P.03
Case Number/ MV92009855 Originating		2
1. Charge/ 33 C.F.R. 154 (SUBPART A)	)	
Specific Law/Regulation	Description	Assessed Penalty
a. 33 C.F.R. 154.110	Failure to submit a letter of	WA PNILVO
FACILITY OPERATED RECEIVING FUEL WITH NO LETTER OF INTENT ON FILE WITH THE CAPTAIN OF THE PORT.		
2. Charge/ 33 C.F.R. 154 (SUBPART B)		
Specific Law/Regulation	Description	Assessed Penalty
a. 33 C.F.R. 154.300	Operating manual not readily	-
FACILITY OPERATED RECEIVING FUEL WITH NO OPERATIONS MANUAL.		
3. Charge/ 33 C.F.R. 154 (SUBPART D)		
Specific Law/Regulation	Description	Assessed Penalty
a. 33 C.F.R. 154.710	Person in charge of transfer	-
PERSON IN CHARGE NOT DESIGNATED, PIC N	operation not designated. NOT KNOWLEGDABLE OF ITEMS (d)1-8	
D. 33 C.F.R. 154.740	Required records not	WARNING

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3

Unless you contest this letter, I will assume that you do not deny the alleged violations or your responsibility for them. In this event, a record of this letter and the violations will be maintained by the Coast Guard. This record will be considered in the event future violations occur.

If you contest this letter in writing within 30 days, I will withdraw it. If, upon review of any new evidence that you may submit, I still believe that the violations occurred and that you are responsible for them, I will forward a violation report to Commander, Seventeenth Coast Guard District for appropriate action. Such action, after you have been afforded the opportunity to present further evidence, may include dismissal of charges, issuance of a Letter of Warning, or assessment of a civil penalty. If no response to this letter is received within 30 days of this date, I will assume that you do not wish to contest it.

Sincerely,

M. R. MILLER JR.

Captain, U. S. Coast Guard Commanding Officer Marine Safety Office Anchorage, Alaska

Copy: CCGD17 (m)

Attachment 3:

# ADEC Letter

4/29/93

WALTER J. HICKEL, GOVERNOR

# DEPT. OF ENVIRONMENTAL CONSERVATION

STATE OF ALASKA /

UNDERGROUND STORAGE TANKS FINANCIAL ASSISTANCE PROGRAM 3601 "C" STREET, SUITE 398 ANCHORAGE, ALASKA 99503

PHONE: (907) 273-4340 FAX: (907) 563-6032

CERTIFIED MAIL RETURN RECEIPT REQUESTED

April 29, 1993

Rebecca Sokoloff Grayling Native Store P.O. Box 43 Grayling, AK 99590

Subject: Notification of Underground Storage Tank Requirements Location: Grayling Native Store

Dear Ms. Sokoloff:

It has come to the Department's attention that regulated Underground Storage Tanks (USTs) exist at the above property which have not been registered. This letter is intended to help you understand registration and other requirements that apply if USTs do exist at the property. I have also enclosed some materials which may help you understand these requirements. These regulations may be difficult to understand so please feel free to call.

Federal law required registration of USTs beginning in 1986, while State law required registration beginning in 1991. Registering the USTs with the enclosed State form will also satisfy Federal registration requirements. Note that if USTs were in use after September 5, 1990, State registration fees are due for each year they have been in use. The table below may help you determine registration fees which may be required; note the registration fees for 1991 are lower because State registration was not required until March 5 of that year:

#### 1991 Registration Fees:

Size of tankRegistration feeLess than 1,000 gallons\$112.501,000 - 5,000 gallons\$225.00Over 5,000 gallons\$375.00If Tank is Upgraded<br/>(regardless of size)\$37.50°

#### 1992 & 1993 Registration Fees:

Size of tank	<b>Registration fee (per year)</b>
Less than 1,000 gallons	\$150.00
1,000 - 5,000 gallons	\$300.00
over 5,000 gallons	\$500.00
If Tank is Upgraded (regardless of size)	\$50.00

If these USTs are removed from the ground, they must be permanently closed. "Closure" refers to removal and proper disposal of the UST and its contents. Closure must be performed by a certified tank worker. As part of closure, a site assessment is needed. This site assessment must be conducted by a qualified person under an approved quality assurance program plan (QAPP). Also note that any USTs in use after September 5, 1990, were required to have a site assessment or tank tightness test performed on them by March 5, 1992. The site assessment at closure would satisfy this requirement.

Please complete the enclosed registration form and return it with the appropriate fees within 30 days to the UST registration office at the address on the form.

Financial assistance is available for regulated underground storage tanks through the Underground Storage Tank Financial Assistance Program. The Tank Upgrade and Closure Program provides 60% of the eligible costs up to a maximum of \$60,000 for the removal and installation of tank systems. The Tank Cleanup Grant and Loan Program pays 90% of the costs of risk assessment, containment, corrective action and cleanup. While a project may be funded for up to \$1 million per occurrence, the owner/operator is responsible for 10% of the total cleanup costs, not to exceed \$25,000. A no-interest loan is made available to cover this portion of the costs.

As you requested, I am enclosing an application form for the Tank Upgrade and Closure. Applications are ranked on an annual basis and will be accepted until December 31, 1993. Financial assistance for these applications will not be available until July, 1994.

If you have any questions about this letter or the UST regulations, please feel free to contact me at 273-4340; or you can contact our toll free UST hotline at 800-478-4974.

Sincerely,

Linda Nucetterler

Linda Nuechterlein

cc: Bonnie Friedman John Halverson Kent Patrick-Riley Jackie Rossberg, EPA Eileen Olson, WDO

Enclosures:

- <u>x</u> UST Registration form
- <u>x</u> Closure Notice
- x Other Regulation summary
- x Tank Upgrades Closure Applications

Page Two

TO: Kent Patrick-Riley

DATE: 10/19/93 TIME: 12:16 PM

CC: SUBJECT: Grayling native store. PRIORITY: ATTACHMENTS:

I checked the database and it doesn't look like they returned a registration form. I assigned them no. 2935 for a facility ID no.

REPLY FROM: Linda Nuechterlein FROM: Kent Patrick-Riley

TO: Linda Nuechterlein

DATE: 10/18/93 TIME: 1:00 PM

CC: SUBJECT: Grayling native store. PRIORITY: R ATTACHMENTS;

.

Linda,

In April you sent a letter to the above place telling them to register their tanks. Have they? If not, then I'll add them to the compliance database and will need to assign them a dummy facility number. Kent

_____

Attachment 4:

Under Ground Storage Tank Registration Forms



#### UNDERGROUND STORAGE TANK ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION

#### **REGISTRATION** For Installation, Repair, Upgrade or Reconfiguration



#### This form must be filled out if you installed a new UST system, or if you repaired, upgraded, or reconfigured an existing UST.

- Please fill out all sections. Sections 1-8 (Pages 1-2) must be filled out and signed by the **Owner** or **Operator** of the UST. Sections 9-12 (Pages 3-4) must be filled out and signed by the **Certified Installer** who performed the work. All four pages must be submitted together.
- □ You must submit this completed form, along with all applicable registration fees, to ADEC within **30 days** after purchasing, installing or placing into service.
- Prior to completing this form, you must have already submitted to ADEC a signed "Intent to Install or Reconfiguration" Form 18-0507, between 15 and 60 days prior to beginning of tank work.

#### **Registration Fee Information**

- □ Annual Registration Fee is required for each tank at this facility, except for State and Federal USTs are exempt.
- □ **Tank fee is \$50.00 per tank per year for upgraded tanks.** Fees are due 30 days after installation or December 31 of the year proceeding registration, which ever is sooner.
- □ If a new or existing UST is not upgraded spill and overfill prevention and corrosion protection, additional statutory fees apply. Call ADEC for more information at (907) 269-7886 or (907) 269-7679
- □ A late fee penalty of **\$10.00 per day** will be assessed for each day the registration fee is over due.

#### **Facility Information:**

Is facility already registered with ADEC? (Circle one) YES NO If yes, ADEC Facility ID#: _____ Make sure you use ADEC Tank ID numbering system. **Not sure?** Please contact ADEC at 907-269-7679 or 907-269-7886.

# SECTIONS 1-8 TO BE FILLED OUT BY OWNER OR OPERATOR

1. OWNERSHIP OF TANKS         Name         Mailing Address	2. LOCATION OF FACILITY       (No PO Boxes please)         Name          Physical Address
CityStateZIP       Owner PhoneFax	CityStateZIP         Facility PhoneFax

#### <u>2A. INVOICE MAILING ADDRESS</u> (if different from Ownership Address)

Name	
Mailing Address	

Phone _____

<u>____</u>

City_____ State ___Zip_____

Fax _____

#### **Return Completed and Signed Form to:**

ADEC, Storage Tank Prog 555 Cordova Street Anchorage, AK 99501 Fax 907-269-7687 If you have questions, please contact ADEC at: 907-269-7679 or 907 269-7886, or visit our web page at http://www.dec.state.ak.us/spar/ipp/tanks.htm

SECTIONS 1-8 T	O BE FILLED O	UT BY OWNER OR OPERATOR
3. TYPE OF OWNER (Check one)         Federal Gov't       Commercial         State Gov't       Private         Local Gov't       Private		<b>S</b> Tribe or Nation: d on land within an Indian Reservation or other trust lands. l by Native American Nation, Tribe, or Individual.
5. TYPE OF FACILITY (Check one)         Gas Station       Aircraft Ow         Petroleum Distributor       Auto Dealer         Air Taxi       Railroad         Residential       Farm/Hatch	ner Federa r Federa Industr nery Other	l Non-Military Contractor l Military Trucking/Transport rial Utilities (explain)
6. CONTACT PERSON IN CHARGE (         Name:	DF TANKS ss: State, ZIP:	Phone Number: Fax Number:
7. FINANCIAL RESPONSIBILITY		
<b>A</b> . I am required to have financial requirem accordance with 40 CFR 280 Subpart H. (3 Federal Owners and Operators are exempt (Please Circle One) YES	State and	<ul> <li>B. I have met the financial requirements in accordance with 40 CFR 280 Subpart H.</li> <li>(Please Circle One) YES NO</li> </ul>
If answer is Yes, Proceed to 7B and 7C. If No, are you a State/Federal Owner/Ope	rator?	
C. I ha	ve the following cove	rage (Check all that apply)
FOR ALL OWNERS & OPER	RATORS	FOR LOCAL GOVERNMENT'S ONLY
Insurance Su Guarantee Le Risk Retention Group Tr Self Insurance (\$10 Otmillion net worth)	ust Fund	<ul> <li>Local Government Financial Test</li> <li>Local Government Guarantee</li> <li>Local Government Funds</li> </ul>
		perations Inspector within three years of the date of Il remind the UST Owner or Operator 60-90 days
	personally examined a inquiry of these indiv	and am familiar with the information submitted in this and all iduals immediately responsible for obtaining the information, I plete.
(Name and Title)		(Signature) (Date)
		N 30 DAYS AFTER INSTALLATION OR RETURN ER ACQUISITION (18 AAC 78.015)
Form 18-0500 (11/99)	Page 2 of 4	

#### **SECTIONS 9-12 TO BE FILLED OUT BY CERTIFIED WORKER**

Certified persons who perform or supervise the installation, reconfiguration, repair, or upgrade of USTs shall fill out and submit the following checklist to ADEC and the owner/operator of a UST system. (18 AAC 78.455 (a)(8))

9. TYPE OF WORK PERFORMED (Please circle one)

Installation

Reconfiguration

Upgrade

Amended

Repair

#### **<u>10. DESCRIPTION OF UNDERGROUND STORAGE TANKS</u> (complete for each tank. Use the ADEC Tank ID #)**

	Tank #	Tank #	Tank #	Tank #
a. Date of Installation (Month/Day/Year)				
b. Estimated Total Capacity (Gallons)				
c. Special Considerations (Check all that apply)				
Compartmentalized Tank				
Manifolded Tank				
Emergency Power Generation				
d. Substance currently or last stored (Check one)				
Gasoline				
Diesel				
Kerosene				
Heating Oil	•			
Used Oil				
Other (Describe)				
Hazardous Substance				
e. Tank Materials (Check only one)			F	
Cathodically Protected Steel				
Composite/Clad (Steel with Fiberglass Coating)				
Fiberglass Reinforced Plastic				
Steel with Polyethylene Jacket				
Bare Steel or Asphalt Coated				
Epoxy Coated Steel				
Other (Specify)				
f. Tank Construction (Check only one)			F	
Double Wall				
Lined Interior				
Unknown				
Other (Specify)				
g. Piping Materials - primary pipe (Check only one)				
Galvanized or Bare Steel (Specify)				
Fiberglass Reinforced Plastic				
Flexible Plastic				
Copper				
No Underground Piping				

A UST System must be inspected by a certified UST Operations Inspector within three years of the date of installation and every three years thereafter. ADEC will remind the UST Owner or Operator 60-90 days prior to the inspection due date.

#### THIS FORM MUST BE FILED WITH ADEC WITHIN 30 DAYS AFTER INSTALLATION OR RETURN TO OPERATION; OR 30 DAYS AFTER ACQUISITION (18 AAC 78.015)

Form 18-0500 (11/99)

#### 10. DESCRIPTION OF UNDERGROUND STORAGE TANKS Continued (complete for each tank. Use the ADEC Tank ID #)

	Tank #	Tank #	Tank #	Tank #
h. Piping Construction (Check only one)				
Cathodically Protected				
Double-Walled				
Secondary Containment (Specify construction)				
None (Single wall or specify)				
i. Piping Type (Check one)				
Safe Suction				
US Suction				
Pressurized				

#### **<u>11. CERTIFICATE OF COMPLIANCE</u>**

	Tank #	Tank #	Tank #	Tank #
a. Date of New Installation or Upgrade (month/day/yr)				
b. Release Detection for Tank (Check all that apply				
Automatic Tank Gauge (1)				
Statistical Inventory Reconciliation (SIR) (2)				
Interstitial Monitoring (Double Wall)				
Inventory Control and Tank Tightness Test (TTT) (3)				
Manual Tank Gauging (4)				
Manual Tank Gauging and TTT (5)				
Other method (Specify) (6)				
(1) Must use equipment approved by third party.	L			
(2) Must do inventory control and used approved third party	y SIR vendor.			
(3) Certain restrictions apply. See 18 AAC 78.065 (b) and (	d).			
<ul><li>(3) Certain restrictions apply. See 18 AAC 78.065 (b) and (</li><li>(4) Only for tanks 1000 gallons or less.</li></ul>	d).			
<ul><li>(4) Only for tanks 1000 gallons or less.</li><li>(5) Only for tanks 1001-2000 gallons plus certified tank tig.</li></ul>	htness test an			
(4) Only for tanks 1000 gallons or less.	htness test an		oproval letter from	n ADEC.
<ul> <li>(4) Only for tanks 1000 gallons or less.</li> <li>(5) Only for tanks 1001-2000 gallons plus certified tank tigi</li> <li>(6) Soil/groundwater monitoring only allowed with prior ap</li> <li>c. Release Detection for Piping (Check all that apply)</li> </ul>	htness test an		oproval letter from <b>Tank</b> #	n ADEC. Tank #
<ul><li>(4) Only for tanks 1000 gallons or less.</li><li>(5) Only for tanks 1001-2000 gallons plus certified tank tight</li><li>(6) Soil/groundwater monitoring only allowed with prior approximation of the second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second</li></ul>	htness test an proval from	ADEC. Attach ag		
<ul> <li>(4) Only for tanks 1000 gallons or less.</li> <li>(5) Only for tanks 1001-2000 gallons plus certified tank tigi</li> <li>(6) Soil/groundwater monitoring only allowed with prior ap</li> <li>c. Release Detection for Piping (Check all that apply)</li> </ul>	htness test an proval from	ADEC. Attach ag		
<ul> <li>(4) Only for tanks 1000 gallons or less.</li> <li>(5) Only for tanks 1001-2000 gallons plus certified tank tigit</li> <li>(6) Soil/groundwater monitoring only allowed with prior and c. Release Detection for Piping (Check all that apply)         Interstitial Monitoring (Double wall)         Automatic Line Leak Detector         Line Tightness Testing     </li> </ul>	htness test an proval from	ADEC. Attach ag		
<ul> <li>(4) Only for tanks 1000 gallons or less.</li> <li>(5) Only for tanks 1001-2000 gallons plus certified tank tigl.</li> <li>(6) Soil/groundwater monitoring only allowed with prior an c. Release Detection for Piping (Check all that apply) Interstitial Monitoring (Double wall) Automatic Line Leak Detector</li></ul>	htness test an proval from	ADEC. Attach ag		
<ul> <li>(4) Only for tanks 1000 gallons or less.</li> <li>(5) Only for tanks 1001-2000 gallons plus certified tank tigit</li> <li>(6) Soil/groundwater monitoring only allowed with prior and c. Release Detection for Piping (Check all that apply)         Interstitial Monitoring (Double wall)         Automatic Line Leak Detector         Line Tightness Testing     </li> </ul>	htness test an proval from	ADEC. Attach ag		
<ul> <li>(4) Only for tanks 1000 gallons or less.</li> <li>(5) Only for tanks 1001-2000 gallons plus certified tank tigi</li> <li>(6) Soil/groundwater monitoring only allowed with prior an</li> <li><b>c. Release Detection for Piping (Check all that apply)</b> Interstitial Monitoring (Double wall) Automatic Line Leak Detector Line Tightness Testing Statistical Inventory Reconciliation (SIR)</li></ul>	htness test an proval from	ADEC. Attach ag		
<ul> <li>(4) Only for tanks 1000 gallons or less.</li> <li>(5) Only for tanks 1001-2000 gallons plus certified tank tig</li> <li>(6) Soil/groundwater monitoring only allowed with prior an</li> <li><b>c. Release Detection for Piping (Check all that apply)</b> Interstitial Monitoring (Double wall) Automatic Line Leak Detector Line Tightness Testing Statistical Inventory Reconciliation (SIR) Other (Specify)</li></ul>	htness test an proval from	ADEC. Attach ag		
<ul> <li>(4) Only for tanks 1000 gallons or less.</li> <li>(5) Only for tanks 1001-2000 gallons plus certified tank tig</li> <li>(6) Soil/groundwater monitoring only allowed with prior an</li> <li><b>c. Release Detection for Piping (Check all that apply)</b> Interstitial Monitoring (Double wall) Automatic Line Leak Detector Line Tightness Testing Statistical Inventory Reconciliation (SIR) Other (Specify) </li> <li><b>d. Spill and Overfill Protection (Check all that apply)</b></li> </ul>	htness test an proval from	ADEC. Attach ag		

#### **12. CERTIFICATION BY TANK WORKER**

I certify under penalty of law that I have personally examined and am familiar with the information in this and all attached Documents, and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

(Name)	(Signature)		(Date)	(UST Certification #)	(Expiration Date)
Company Name: Phone:		Address:			
Fax:		City:		State: Z	ip:

Form	18-0500	(11/99)
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## INSTRUCTIONS FOR FILING AN "EMPTY TANK" AFFIDAVIT





This form is used to verify that your underground storage tank (UST) is empty and meet the definition of "taken out of service". A UST is considered "taken out of service" when it materials are removed so that no more than 2.5 centimeters or 1.0 inch of residue, or 0.3 percent by weight of the total capacity of the UST, remains in the system. See 18 AAC 78.020 and 18 AAC 78.995 (110).

Please fill out the enclosed affidavit. Fill out every blank space. If a question does not apply to you, please cross out the appropriate blank and initial the cross out. If you do not know the answer to a question, write "unknown" in the space provided.

**Caution:** If you discover that your tank does not meet the definition of "Taken Out of Service", your tank is not empty and this form does not apply. You must then immediately contact the Alaska Department of Environmental Conservation at 1-800-478-4974 to find out what is required of you to legally operate the tank.

The following paragraphs explain exactly what information you must provide on the form.

#### JUDICIAL DISTRICT:

Specify the Judicial District from which you are signing this document. There are four judicial districts in Alaska. Juneau and Southeast Alaska are in the first district. Nome, Kotzebue, Barrow and other northern communities are in the second district. Anchorage, the Mat-Su Valley and the Kenai Peninsula are in the third district. Fairbanks, Bethel and other Interior Areas are in the fourth district. If you have any question about which district you are in, call the clerk of the nearest court or any attorney.

#### STATEMENT 1:

You are assigned a Facility Identification Number. Enter this number in the space provided. (Example: 0000123). You must also specify the name of the facility and the physical address. Do not use a post office box number. You must list the number of regulated tanks at the facility.

#### STATEMENT 2:

Specify the day, month and year the tanks were formally taken out of service. Explain why use was discontinued.

#### STATEMENT 3:

Specify the day, month and year that the tanks were pumped of their contents. State the name of the person who determined that the tanks were empty and the method or reason for making this determination.

#### STATEMENT 4.

In order to fill in Statement 4, you must manually measure the depth of product in each tank. Specify the day, month and year that you measured the tanks to verify that the tanks meet the definition of "taken out of service". <u>YOU MUST PERFORM THE MEASUREMENT NO MORE THAN 7</u> <u>DAYS PRIOR TO THE SIGNING OF THE AFFIDAVIT</u>. You must use a standard UST measuring stick that is capable of measuring the level of substance to the nearest one eighth (1/8) of an inch. You must circle the appropriate tank identification number(s) for tanks that are empty. If any tanks exceed the definition of "empty", circle the appropriate tank identification number(s).

#### STATEMENT 5:

Specify the day, month and year that product was placed into the tanks for the last time.

#### STATEMENT 6:

Explain what measures have been taken to prevent any additional product from being added to the tanks after they have been verified as "empty".

#### STATEMENT 7:

You acknowledge that you have received, read and understand the "Instructions" sheet.

#### AFFIANT SIGNATURE:

The affiant is the person who filled out the affidavit. Sign and date on the lines provided.

#### NOTARY PUBLIC:

This affidavit is sworn testimony. It must be signed in the presence of a notary public and stamped by the notary. Many lawyers, bankers, librarians, court clerks and other persons are authorized as notaries. If you do not know any notaries, call the clerk of the nearest court, your local bank or the Alaska Lieutenant Governor's office for the name of the notary nearest you.

IN THE MATTER OF UNDERGROUND STORAGE TANK USAGE STATE OF ALASKA ) JUDICIAL DISTRICT ) SWORN AFFIDAVIT OF _____ I, _____, upon my sworn oath, do state as follows: 1. I am the owner/operator (circle the appropriate title(s)) of Facility # _____, located at (facility name) _____,(physical street address)_____, (city) _____. The facility currently has _____ (number) of regulated tanks. 2. On _____ (day, month, year), use of all tanks were permanently discontinued because (explain) 3. On _____ (day, month, year), all tanks were pumped of their contents and determined to be empty by (name of person making determination)_____ who based this determination upon (basis of determination) 4. On _____ (day, month, year), I measured the contents of all tanks and verified that tanks: #1 #2 #3 #4 #5 #6 #7 #8 (circle appropriate tank identification number(s)) contained less than one inch of product or less than (state number of gallons) _____. Tanks #1 #2 #3 #4 #5 #6 #7 #8

(circle appropriate tank identification number(s)) contained MORE than one inch of product or MORE than (state number of gallons) _____.

5. To the best of my knowledge and belief, no product has been placed into any tank since the date referenced in paragraph 4, above. The last time any product was placed into the tank was on or about (day, month, year)______.

6. I have taken the following measures to secure the tanks so that no person may use it without authorization:(describe security measures taken) _____

7. I have read and understand the "Instructions" sheet attached to this affidavit.

Further Affiant sayeth naught.

(Date)____(Signature of Affiant)_____

On _____(date), _____ (name of affiant), who is known to me (or proved his or her identity to me on the basis of satisfactory evidence), personally appeared before me and executed the foregoing document in my presence.

WITNESS my hand and official seal.

My Commission Expires: _____



#### ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION U·N·D·E·R·G·R·O·U·N·D S·T·O·R·A·G·E T·A·N·K·S Notice of Change of Ownership



An Owner of an underground storage tank (UST) system is required to notify the Alaska Department of Environmental Conservation (ADEC) when the facility is sold or transferred, within 30 days after acquisition by the new owner, in accordance with Title 18 Alaska Administrative Code (AAC) *Underground Storage Tanks*.

ADEC FACILITY #			ן ך	DATE OF ACQUISITION OR TRANSFER			
FACILITY NAME				NEW OWNER			
PHYSICAL LOCATION	(Do Not Use PO Box)			OWNER'S POINT O	OF CONTACT		
Сіту	State	Zip	-1	Title			
UST OPERATOR				CONTACT PHONE	:#	FAX#	
CONTACT PHONE #		F AX #		Email			
EMAIL					SS FOR: (CIRCLE O CONTACT OR AI	NE) NNUAL <b>R</b> EGISTRATIO	N FEE INVOICE
MAILING ADDRESS F	OR INSPECTION COM	APLIANCE TAGS		Address			
Сіту	State	Zip		СІТҮ	Stat	e Zif	•
PREVIOUS OWNER			] [	ADEC Tank #	UST Volume	Currently in Use?	Product
PREVIOUS OWNER'S	POINT OF CONTACT						
CONTACT PHONE #	FAX#						
Address							
Сіту	STATE	Zip					

#### I CERTIFY THAT THE FOLLOWING IS TRUE AND ACCURATE:

- **D** THE UST SYSTEMS MEET CORROSION PROTECTION STANDARDS.
- $\square$  The UST Systems Meet Release Detection Standards.
- $\square$  The UST Systems Meet Release Prevention Standards.
- □ THE UST SYSTEMS HAVE PROOF OF FINANCIAL RESPONSIBILITY LIABILITY INSURANCE WITH ADEC.
- □ I HAVE NOTIFIED THE NEW OWNER THAT A UST *Operations Inspection* is Required Every Third Year.
- □ I HAVE NOTIFIED THE NEW OWNER OF TITLE 18 AAC 78 UNDERGROUND STORAGE TANKS REGULATIONS.

<b>CERTIFIED BY:</b>	OWNER	OPERATOR	OTHER:		
(Print name)			(Title)	(Phone)	
(Signature)			(Date)	(Fax)	

RETURN COMPLETED F	FORMS TO: ADEC UST OF	FICE 555	CORDOVA STREET	ANCHORAGE, ALASKA 99501-2617
QUESTIONS?	Call: 907-269-7679	OR	907-269-7886	Fax: 907-269-7687
OR C	GO TO OUR WEB PAGE AT:	HTTP	://WWW.DEC.STATE.A	K.US/SPAR/IPP/TANKS.HTM

ADEC Form 18-0501, revised February 2008



#### UNDERGROUND STORAGE TANKS ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION



### TAKEN OUT OF SERVICE OR TEMPORARY CLOSURE

Notification is required for a UST system installed or in service after January 1, 1974, and taken out of service or temporarily closed after that date (18 AAC 78.020). "*Taken out of service*" means a tank is empty, vented and locked. "*Temporary Closure*" means a tank contains product but is not being used. Both are subject to a UST Operations Inspection every three years by a certified UST Inspector.

Facility - Location (Do Not Use P.O. Box)	Tank Owner	<b>Facility</b>
Name	Name	ID #
Address	Address	
City	City	
State/Zip	State/Zip	
Phone/Fax	Phone/Fax	

Fill out information for each tank that is taken out of service or temporarily closed at this facility.					
ADEC Tank ID #	<b>Owner Tank ID #</b>	Tank Size	Product Stored	Date Last Used	Status (circle one)
	(if different)				
					Taken out of service / Temp. closed
					Taken out of service / Temp. closed
					Taken out of service / Temp. closed
					Taken out of service / Temp. closed

Please circle A or B and check all that apply			
A. Tank is Taken Out of Service	B. Tank is Temporarily Closed		
□ Tank is empty, containing less than 1" of product.	□ Tank and piping meets release detection standards.		
□ Tank is vented, and fill pipe and dispenser are locked.	□ Tank and piping meets corrosion protection standards.		
□ An Empty Tank Affidavit is attached.	□ If temporarily closed for more than 3 months, tank vent lines		
□ Tank and piping meets corrosion protection standards.	open, and all other lines, pumps, manways, and ancillary		
□ If taken out of service for more than 3 months, tank vent	equipment are secured.		
lines are open, and all other lines, pumps, manways, and	□ Proof of Financial Responsibility provided to ADEC.		
ancillary equipment are secured.			
Proof of Financial Responsibility provided to ADEC.			

I certify that the following is true and correct. 1. I have filled out, signed, notarized and submitted an Empty Tank Affidavit with ADEC for all tanks that are temporarily out of service (ie: empty). 2. There is no known or suspected release of petroleum from the tank or tanks listed in this form, or, if there is a known or suspected release, ADEC has been notified. And 3. I understand that an operations inspection is required under 18 AAC 78.017 for tanks listed on this form unless the tanks are permanently closed by the date of inspection.

Notice Submitted By:	[] Owner	[ ]Operator	[ ]Other		
(Please print name)		(Title)		(Phone)	
(Signature)		(Date)		(Fax)	
Detum Completed For		Questions?			

<u>Return Completed Forms to:</u>	Questions?
ADEC, Storage Tank Program	
555 Cordova Street	Call ADEC at 907-269-767 or 907-269-7886.
Anchorage, AK 99501	Or go to our web page at
Fax 907-269-7687	http://www.dec.state.ak.us/spar/ipp/tanks.htm

False statements made on this form are punishable under AS 11.56.210

Attachment 5:

# Site Reconnaissance, Abandoned Bulk Fuel Storage Facilities, Village of Grayling, Alaska

11/17/00

2416.38.001



November 17, 2000

Alaska Department of Environmental Conservation Aboveground Storage Tank Program 410 Willoughby Avenue, Suite 105 Juneau, AK 99801-1795

Attn: Mr. Daniel Benfield

Fax: (907) 465-5218

#### RE: SITE RECONNAISSANCE, ABANDONED BULK FUEL STORAGE FACILITIES, VILLAGE OF GRAYLING, ALASKA

NON&WII SO

GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS

This report documents field reconnaissance activities conducted in Grayling, Alaska on October 18 through October 20, 2000 by Shannon & Wilson representatives Michael Soltis and Stafford Glashan. The purpose of the reconnaissance was to gather preliminary site information in order to develop and implement a comprehensive site assessment at identified bulk fuel storage sites that are no longer in use in Grayling. We understand the results of the site assessment will be used by others to conduct corrective actions in the village to cleanup identified impacted tank farm sites.

#### **Site and Project Description**

The village of Grayling is located on the west side of the Yukon River, approximately 18 miles north of Anvik, Alaska and 350 miles northwest of Anchorage, Alaska. Grayling is home to 195 residents and encompasses approximately 11 square miles of land. Grayling is heavily dependent on subsistence activities, and employment is found primarily in seasonal work during the summer. Local water is derived from an infiltration gallery at Grayling Creek, is treated, stored, and piped throughout the community. Over 90 percent of the homes are plumbed for water and sewer. The climate of Grayling is continental, with long cold winters and relatively warm summers. Temperatures range from -60 to 87 degrees Fahrenheit. Snowfall averages 110 inches, with 21 inches of total precipitation per year. In summer, access to Grayling is by air, riverboat, or barge. The state owns and operates a 2,315-foot gravel airstrip. No roads connect Grayling with other communities. The Yukon River is ice-free from June through October. A vicinity map showing indicating the location of Grayling is included as Figure 1.

In accordance with our October 9, 2000 proposal, the following activities were performed:

• Prior to mobilization in Grayling, available data relevant to the bulk fuel storage farms provided by the Alaska Department of Environmental Conservation (ADEC) were reviewed,

5430 FAIRBANKS STREET • SUITE 3 ANCHORAGE, ALASKA 99518 907-561-2120 FAX 907-561-4483

and the ADEC Contaminated Sites database was queried for information regarding historical fuel spills that may have been documented.

- Local authorities in Grayling were identified and points of contact were established. Several informal interviews were conducted with the acting mayor of Grayling, Shirley Clark, to discuss the assessment program and gain firsthand information on past spills and tank locations. Informal interviews were also conducted with several local citizens.
- After arriving in Grayling, the former tank farms were identified and a preliminary survey was performed noting areas of staining and the condition of the tanks. Both screening and analytical sampling were conducted at four of the five tank farms identified in the proposal.
- The locally available equipment was evaluated to determine suitability for use in the assessment and remediation projects, and terms of its use were discussed with the local authorities. Two test pits were excavated to evaluate subsurface soil conditions as well as the operation of the backhoe.
- Site maps of the individual tank farms were drawn or edited from previously prepared plans, and pictures of the potential cleanup sites were taken. Tank farm locations have been documented on a site plan of the village included as Figure 2.
- Subsurface conditions in the vicinity of the village were observed and discussed with the local citizens.
- The Bureau of Indian Affairs (BIA) operated a tank farm for the school that was located near Tank Farm 1, the former Iditarod Area School District tank farm. According to Phil Nicoli, a local heavy equipment operator and longtime Grayling resident, an 8,000-gallon vertical fuel tank located at the previous school tank farm location released its entire contents when a valve was inadvertently left open. The exact location of the previous school tank farm location was not determined, but the general area where it was located is designated as Tank Farm 8 on Figure 2 for future evaluation.
- According to Fred Howard, the school maintenance supervisor, the fuel line connecting Tank Farm 1 to the school mechanical building released approximately 3,000 gallons of diesel fuel around 1994. The approximate location of the break in the pipe was identified and is shown of Figure 2 for future evaluation.

#### Research

Prior to mobilization in Grayling, available information regarding the existing tank farms was collected. The following documents and resources were reviewed:

• An Grayling Bulk Fuel Storage Assessment Report dated July 15, 1998, presumably prepared by the Department of Community and Regional Affairs (DCRA) Division of Energy

- Site plans of the individual tank farms, prepared by the Department of Community and Regional Affairs (DCRA) Division of Energy in December 1996.
- An aerial photograph taken in September 1999, depicting the village of Grayling, was obtained from Aeromap U.S. of Anchorage, Alaska.
- ADEC databases were queried for information regarding historical fuel spills that may have been documented. No releases pertaining to the village of Grayling were found in the ADEC's Contaminated Sites or Leaking Underground Storage Tanks electronic databases.

#### Village Contacts and Authorities/ Interviews

• Mayor: Shirley Clark (phone: 453-5145)

Shirley Clark operates a bed and breakfast out of her home and provided accommodations during our stay in Grayling. The following was discussed during conversations with Shirley Clark:

- The purpose of the site reconnaissance activities conducted by Shannon & Wilson in Grayling
- Shirley Clark is the acting mayor of Grayling, but apparently may only be holding a temporary position.
- <u>Numerous spills occurred at Tank Farm 5</u>, the location of the former AVEC tank farm. The locations of these spills were covered with soil from the berms of the dike that surrounded the old tank farm.
- Contacts within Grayling who could help with assessment and cleanup activities were identified.
- Available City Council members were contacted to discuss the assessment. Most of the members were in Anchorage for an annual meeting. Shirley agreed to pass on the purpose and scope of the assessment when they return.
- 40 hour Hazardous Waste Operations and Emergency Response trained personnel:
  - Ambrose Solomon (ph: 453-5214)
    - Ambrose stated that he has completed a 3-week training course for oil cleanup/response
  - Fred Howard (ph: 453-5153)
    - Fred is the maintenance supervisor for the school.
    - Fred indicated the location where a release of approximately 3000 gallons of fuel occurred from subsurface piping connecting Tank Farm 1 to the school mechanical building. This release occurred "about 6 years ago" or 1994. Fred stated that he excavated several pits at distances of approximately 15 to 30 feet from where the piping failed, but did not find any trace of diesel fuel. Fred

remembered the Yukon River, located approximately 175 feet away, to be running high at that time.

- The soil excavated from beneath the ruptured piping is stockpiled on a liner at Tank Farm 3.
- Fred indicated the approximate location of Tank Farm 8, which is the location of the school tank farm before it was moved to its current location.
- Hee-Yea-Lingde Village Corporation (ph: 453-5133, fax: 453-5146)
  - Rebecca Shellikof
  - Henry Deacon (ph: 229-0741, Anchorage)
- AVEC Anchorage
  - Randy Valke (ph: 1-800-478-1818, or 561-1818)
    - Randy would like to be appraised beforehand of any planned activities at the AVEC tank farm.
- AVEC Grayling
  - Wayne Gredigan (ph: 453-5149)
  - Ambrose Solomon (ph: 453-5214)
- Organized Village of Grayling (ph: 453-5133)
  - Henry Deacon (ph: 229-0741)
- City Clerk
  - Charlotte West (ph: 453-5148)

The City Office should be contacted to arrange for the use of locally available heavy equipment.

- Iditarod Area School District (IASD) (ph: 453-5135)
  - Harlon, principal
  - Fred Howard, maintenance supervisor
- Heavy Equipment Operator
  - Phil Nicoli (ph: 453-5125)
  - Phil operated the John Deere 450 excavator that was used to excavate two exploratory test pits.
  - Phil remembered a release of 8,000 gallons from a tank located at Tank Farm 8, the location of the former BIA school tank farm. Apparently, a valve on one of the vertical, BIA style tanks at this farm was left open and the entire contents of the tank were released.
  - A drinking water well that was located near the new water treatment plant was shut down when diesel fuel was detected in the water.
- Miscellaneous Interviews Wilfred Deacon

Wilfred has lived in Grayling since 1962 and has worked at the Grayling Native Store for 30 years.

- Wilfred recalled several "small" spills at Tank Farm 3 near the pumphouse.
- The nine partially to completely full drums located on the east side of the Grayling Native Store contain 20+ years old diesel fuel.
- The 880-gallon tank located at Tank Farm 3 may contain some diesel fuel. The other tanks at Tank Farm 3 are empty.

#### Soil Screening and Sampling Activities

The soil at the tank farm locations was evaluated or "screened" for volatile organic compounds using an OVM 580B photoionization detector (PID). The PID was used to sample the total volatiles released from the soil using headspace sampling methods. Headspace samples were collected in zip lock plastic bags by filling them with freshly exposed soil to one-half of their volumes and then sealing the top. Headspace samples were allowed to warm to a common temperature prior to field headspace screening. Screening was accomplished by inserting the PID sampling probe into the air space above the soil in the bag. The field PID readings were obtained within one hour of the time of sample collection. The maximum reading on the PID display was observed and recorded for each sample. A summary of the headspace screening results is provided in the tables prepared for each of the tank farm locations in Attachment B, and sample locations are shown on the individual site drawings in Attachment C.

The soil samples analyzed for diesel range organics (DRO) were collected in accordance with the ADEC sampling procedure for Alaska Method 102 (AK 102). The soil samples analyzed for gasoline range organics (GRO) and aromatic volatile organics including benzene, toluene, ethylbenzene, and xylenes (BTEX) were collected using the ADEC sampling procedure for Alaska Method 101 (AK 101). In accordance with AK 101, at least 25 grams of soil were quickly placed into a laboratory supplied 4-oz. jar that had been pre-weighed. Afterward, 25 milliliters (ml) of reagent grade methanol were added to submerge the soil. The methanol extracted the volatile constituents from the soil sample at the time of sampling, thereby reducing the possible loss of volatile constituents prior to sample analysis. In accordance with the method, samples were transferred to the jars using a decontaminated stainless steel spoon, and transferred to the laboratory in coolers with ice packs using chain-of-custody procedures. The number, depth, classification, and approximate location of each sample collected for the project are summarized in the attached tables in Attachment B and figures in Attachment C. The sampler's name, the date, and time of sample collection are listed on the chain-of-custody forms included in Attachment D.

#### SHANNON & WILSON, INC.

#### **Tank Farms and Marine Headers**

<u>Six inactive</u> tank farm locations and two<u>active</u> tank farms were identified during reconnaissance activities conducted in Grayling. Analytical samples were collected at four of the sites. Sample results that exceed applicable ADEC cleanup criteria are discussed below. The sites identified include:

• Tank Farm 1

Iditarod Area School District Tank Farm Status: Inactive (35,310-gallon capacity) Photographs included on Figure A-1 in Appendix A Future Investigation is Recommended

This tank farm is located approximately 150 feet west of the Yukon River, as shown on Figure 2. The tanks are situated within a lined dike. At the time of our site visit, two of the six tanks observed in the July 1998 assessment were located at this site. The four BIA type, vertical steel tanks, which were located on the western half of the tank farm, were removed and placed at Tank Farm 6, the new Grayling consolidated tank farm. The remaining tanks located at Tank Farm 1 consist of a 10,000-gallon railroad tank car with the wheels removed and an 880-gallon horizontal steel tank. Signs of overfilling were not observed on the two remaining tanks at this tank farm. A soil sample was collected for laboratory analysis from a location near the former location of the four tanks. The sample contained 24,500 ppm DRO. This site is recommended as a location for future investigation.

Tank Farm 2

Grayling Native Corporation Tank Farm Status: Inactive (21,452-gallon capacity) Photographs included on Figure A-2 in Appendix A Future Investigation is Recommended

This tank farm is located approximately 75 feet west of the Yukon River, as shown on Figure 2. At the time of our site visit, only three tanks of the four tanks observed in the July 1998 site visit were situated at this location. Signs of overfilling were not observed on the remaining tanks at this tank farm. An unlined gravel dike contained the two 5,260 gallon tanks, but the railroad car tank was not surrounded by a dike or liner. The three tanks were in fair to poor condition, with rust visible where the paint

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had peeled. The valves on the tanks were closed but not locked. The tanks appeared to be empty, but the bungs on top of the two 5,260-gallon tanks had been removed and they may contain water. A soil sample collected at this tank farm contained 2,960 ppm DRO. This site is recommended as a location for future investigation.

Tank Farm 3

#### Grayling Native Store

Status: Inactive (35,329-gallon capacity) Photographs included on Figure A-3 in Appendix A Future Investigation is Recommended

This tank farm is situated approximately 350 feet west of the Yukon River. At the time of our site visit, six of the seven tanks observed in the July 1998 site visit were situated at this location. One of the 880-gallon horizontal steel tanks observed in July 1998 has been removed from this tank farm. The valves on the tanks were closed but not locked. Signs of overfilling were not observed on the tanks. Nine, partially to completely full 55-gallon drums were observed approximately 30 feet to the west of the tanks, along the east side of the Grayling Native Store, as shown on Figure 2. According to Wilfred Deacon, these drums are approximately 20 years old and contain diesel fuel. An uncovered soil stockpile is situated on a liner at this tank farm. The soil was reportedly excavated from under the centrally located piping connecting the tanks to the dispenser and fill lines. According to Fred Howard, this soil was excavated following a "spill." The soil sample collected from this tank farm contained 8,870 ppm DRO and 15,700 ppm GRO. This site is recommended for future investigation.

Tank Farm 4

City of Grayling

Status: Inactive (15,090-gallon capacity) Photographs included on Figure A-4 in Appendix A Future Investigation is Recommended

This tank farm is located approximately 150 feet southwest of Tank Farm 6, the new consolidated tank farm. The tanks formerly located at this farm have been moved to Tank Farm 6. The tanks were situated within a 1-foot high, unlined gravel dike. The underground piping that previously served the city offices was partially visible on the west side of the dike. A soil

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sample collected from within the dike at this tank farm contained 21,200 ppm DRO and 311 ppm GRO. This site is recommended for future investigation.

Tank Farm 5

#### AVEC Powerhouse

Status: Inactive (70,080-gallon capacity) Photographs included on Figure A-5 in Appendix A Future Investigation is Recommended

This tank farm is located approximately 50 feet west of Tank Farm 6; the new consolidated tank farm. No tanks are currently located at this site. The eight tanks that were located at this tank farm have been moved to Tank Farm 6. According to local sources, this tank farm has been the site of numerous releases. When the tanks were removed, gravel from the dike that had encompassed the tanks was spread over the site. Phil Nicoli estimated that up to one-foot of gravel from the former dike currently covers the location where the eight fuel tanks were located. An analytical sample was not collected from this tank farm. Future investigation is recommended at this site.

Tank Farm 6

Consolidated Tank Farm

Status: Active (175,300-gallon capacity) Photographs included on Figure A-6 in Appendix A Future Investigation is Not Recommended

Tank Farm 6 is situated at the base of a hill approximately 450 feet from the Yukon River. A fence has been placed around the perimeter of the tank farm, which is contained within two separate lined dikes. The eight AVEC tanks are situated to the north side of the tank farm within their own dike, and this area is separated from the remainder of the tank farm with a fence. The City of Grayling and ANSCA Village Corporation own the remaining tanks. A marine header from the Yukon River is used to fill the tanks. Fuel is supplied via aboveground piping to the school, and underground piping to the city buildings. Gasoline and diesel are sold from a dispenser pump located at the south end of the tank farm. Evidence of small overfilling events were evident on approximately half of the tanks at this farm. A sample was not collected from this tank farm. This site is not recommended for future evaluation because it is currently in use.

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Tank Farm 7

Iditarod Area School District Mechanical Building Day Tank Status: Active (2,000-gallon capacity) Photographs included on Figure A-7 in Appendix A Future Investigation is Not Recommended

This tank farm is located approximately 300 feet from the Yukon River, adjacent to the west side of the school mechanical building. The double wall tank at this location was contained within a six-inch lined dike. A fence surrounded the tank, but the door was not locked. The tank is filled via a pipeline from Tank Farm 6, the new consolidated tank farm. A sample was not collected from this tank farm. This tank farm is not recommended for future investigation because it is currently in use.

Tank Farm 8

Former location of the BIA school tank farm Status: Inactive Photographs included on Figure A-8 in Appendix A Future Investigation is Recommended

This tank farm was located in a grassy area to the south of the school mechanical building. The exact location of this tank farm was not ascertained due to grass and brush covering the area. It did not appear as though this tank farm was contained within a dike. According to Phil Nicoli, one of the 8,000-gallon fuel tanks at this tank farm released its entire contents when a valve was inadvertently left open. Samples were not collected from this tank farm because the site of the tank farm could not be precisely identified. Further investigation is recommended at this site.

Header #1

Consolidated Tank Farm Header Status: Active Future Investigation is Not Recommended

This header runs from the Yukon River to Tank Farm 6, the consolidated tank farm. It is comprised of two 3-inch steel pipes with welded joints that are supported by wood timbers every 10 to 15 feet. The 2-inch pipeline that is used to fill Tank Farm 7, the school day tank, runs along this header

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for part of its length, and shares the same supports. This header is not recommended for future investigation.

Header #2

Former header serving Tank Farm 1, Tank Farm 4, and Tank Farm 5 Status: Inactive, removed

Future Investigation is Recommended

This header served the aforementioned tank farms and was removed in 1995 when Header #1 was installed. According to site plans prepared by the State of Alaska Division of Energy, this header was replaced because it was "leaking and/or defective." This header is recommended for future investigation.

Header #3

Former header believed to have served Tank Farm 8 Status: Inactive, removed Future Investigation is Recommended

This header has been removed, and a trench is partially visible where the header was previously set. Remaining piping from this header was not observed. This header is believed to have served Tank Farm 8, but this assertion was not confirmed. This header is recommended for future investigation.

• Header #4

Tank Farm 3 header Status: Inactive, partially removed Future Investigation is Recommended

This header ran from the Yukon River to Tank Farm 3 and was comprised of two 2-inch lines, which were used to transfer diesel fuel and gasoline. The piping has been partially removed. This header is recommended for future investigation.

The capacities listed for the aforementioned tank farms are the maximum capacity of fuel each tank farm could have contained when last active, based upon available historical tank information. Current tank farm capacities may differ from the above stated capacities.

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#### Locally Available Heavy Equipment

The following equipment was identified during the site reconnaissance and visually inspected:

John Deere 450 backhoe:

This is a dozer with a backhoe attachment. The backhoe has a 10 to 12-foot reach. Fair to good condition

Photo: See Figure A-9, photo 17

Dump truck

This dump truck was not inspected, but was reported to be in fair working condition by Phil Nicoli.

The City of Grayling also has a loader that was not working at the time of the site visit. This loader was not inspected. The city has a second dump truck that was located at a local gravel pit and broken down at the time of the site visit. According to Phil Nicoli, this dump truck can be repaired, but there has not been any need to do so. Arrangements to use the locally available equipment should be made with the city clerk. Fill is available from the local gravel pit for \$10 per cubic yard.

#### **Subsurface** Conditions

Two test pits were excavated with the local backhoe to depths of 10 feet. The approximate test pit locations are shown on Figure 2. The following was observed in these test pits:

Test Pit 1: 0 to 4-inches Brown, gravelly, sandy silt; numerous organics 4-inches to 3 feet Tan, sandy silt; moist 3 feet to 10 feet

Tan, gravelly sandy silt; moist

Test Pit 2: (Photo: see Figure A-9, photo 18)

0 to 4-inches Brown, gravelly, sandy silt; numerous organics 4-inches to 10 feet Brown/tan, slightly gravelly, sandy silt; moist

Groundwater was not encountered in either of the test pits.

Conversations conducted with Phil Nicoli, the city heavy equipment operator, yielded the following:

- Groundwater is usually encountered at a depth of 35 feet below the ground surface (bgs). Depth to groundwater is dependent on the level of the Yukon River.
- Silty soils extend to approximately 16 feet, where the soil transitions to a gravel. The silty layer is thinnest in areas close to nearby hills and extends to greater depths further from the hills.

#### **Conclusions and Recommendations**

Petroleum impacted soil was documented af four of the seven tank farm sites that were identified in our proposal. Although impacted soil was not documented at Tank Farm 5, conversations and interviews with local citizens indicate that fuel has been released on multiple occasions at this location. Tank Farm 8 is the reported location of an 8,000-gallon release of diesel fuel. Several marine headers were identified that are no longer in use, some of which have been partially or completely removed. These headers were not installed to current standards, and may have released fuel in areas not identified during this site reconnaissance. Marine Headers #2, #3, #4, Tank Farms 1 through 5, and Tank Farm 8 are recommended for further investigation. Further investigation is not recommended at Tank Farm 6, Tank Farm 7, and Marine Header #1, which are currently in use.

#### **Closure/Limitations**

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 definite conclusions regarding the soil quality at this site. It is possible that our tests may have missed some higher levels of petroleum hydrocarbon constituents, although our intention was to thoroughly sample the sites. As a result, the analysis and sampling performed can only provide you with our professional judgment 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 site conditions can occur with time, because of natural forces or human activity. In addition, changes in Government codes, regulations, or laws may occur. Because of such changes beyond our control, our observations and interpretations may need to be revised.

Shannon & Wilson has prepared the attachments in Appendix E "Important Information About Your Geotechnical/Environmental Report" to assist you and others in understanding the use and limitations of our reports.

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You are 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, except with your permission or as required by law.

We appreciate the opportunity to perform these services. Please call the undersigned if you have any questions regarding the contents of this report.

#### SHANNON & WILSON, INC.

Prepared By:

Michael Jotty

Michael Soltis Environmental Engineer

Vicinity Map

Site Map

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Encl:

Figure 1 Figure 2 Attachment A Attachment B Attachment C Attachment D

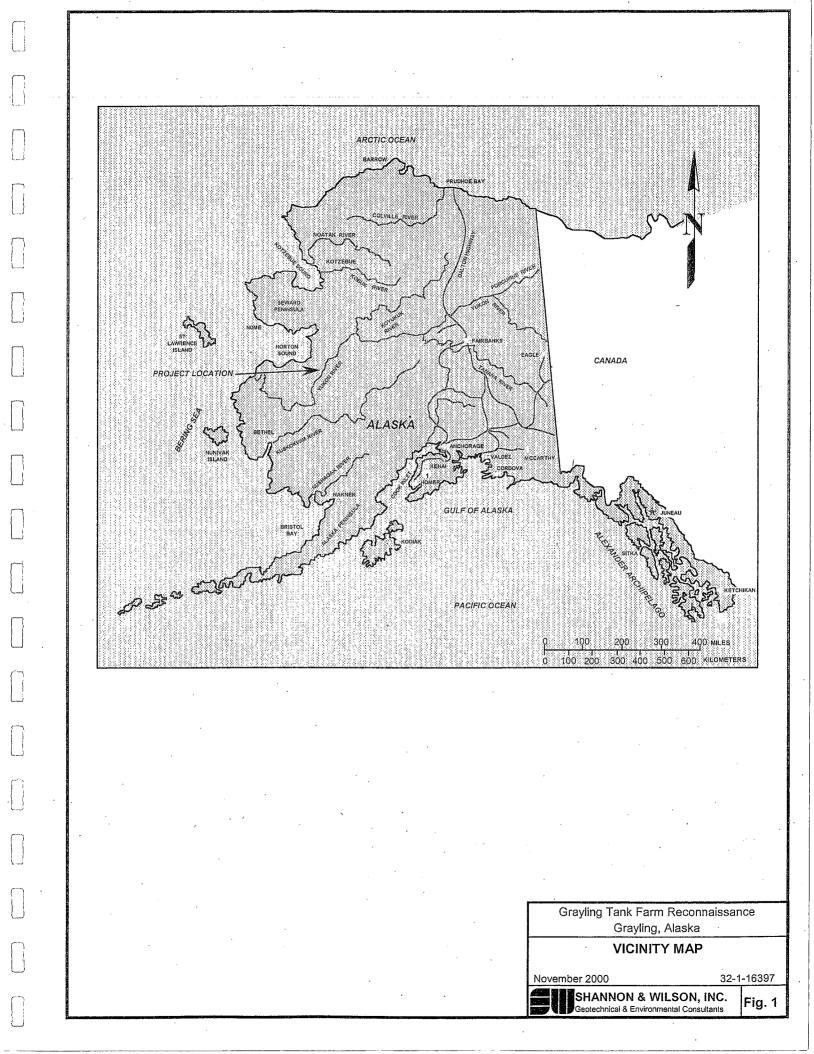
Site Photographs Sample Screening and Analytical Results Tank Farm Site Sketches and Sample Locations Results of Analytical Testing by CT&E Environmental Services Inc., of Anchorage, Alaska Important Information About Your Environmental/Geotechnical Report

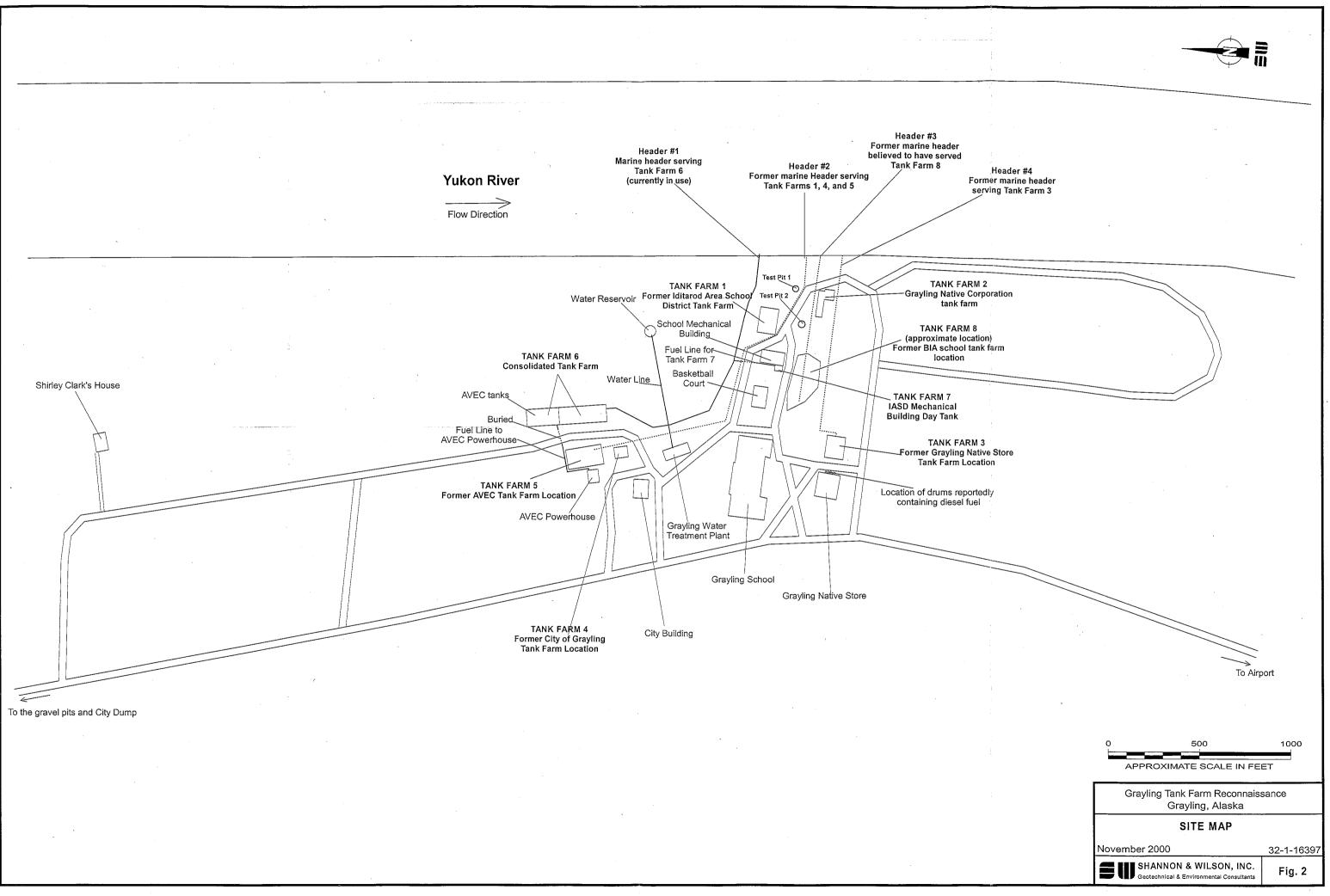
Attachment E

Reviewed By:

Stafford Glashan Senior Engineer

32-1-16397-001





# ATTACHMENT A

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# SITE PHOTOGRAPHS



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Photo 1: Tank Farm 1; This photo was taken from next to the school mechanical building. The railroad car and the red 800-gallon AST are the only tanks currently located at this tank farm.

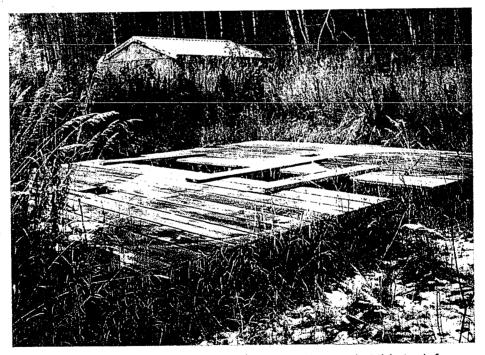


Photo 2: Tank Farm 1; The four vertical tanks used at this tank farm were situated on the wood platforms shown above. Slight staining is visible on the wood.

Grayling Tank Farm Reconnaissance Grayling, Alaska		
PHOTOGRAPHS 1 AND 2		
November 2000	32-1-16397	
<b>SHANNON &amp; WILSON, INC.</b> Geolechnical & Environmental Consultants	Fig. A-1	



Photo 3: Tank Farm 2; Tank Farm 2 is located next to the white shed on the left. Tank farm 2 is comprised of the two red tanks behind the shed and the black railroad car tank to the right. Tank Farm 1 is partially visible at the bottom of this picture.

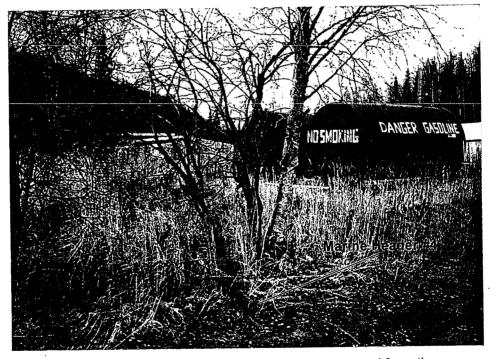


Photo 4: Tank Farm 2; The bungs have been removed from the tops of these tanks, and they may contain water. Both tanks are rusted and in poor condition.

Grayling Tank Farm Reconnaissance Grayling, Alaska		
PHOTOGRAPHS 3 AND 4		
November 2000	32-1-16397	
Geotechnical & Environmental Consultants	Fig. A-2	



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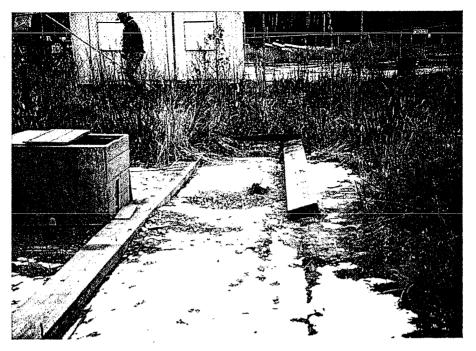
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Photo 5: Tank Farm 3; The tanks shown comprise Tank Farm 3. The small tank closest to the white shed reportedly still contains fuel. The other tanks at this tank farm are reportedly empty. A small soil stockpile is visible to the left.



Photo 6: Tank Farm 3; These nine drums are situated against the east side of the Grayling Native Store, which is approximately 40 feet to the right of the tanks shown above.

Geolechnical & Environmental Consultants	Fig. A-3	
November 2000	32-1-16397	
PHOTOGRAPHS 5 AND 6		
Grayling Tank Farm Reconnaissance Grayling, Alaska		



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Photo 7: Tank Farm 4; The tanks from this tank farm have been moved to Tank Farm 6. The wood timbers that supported the tanks are shown above. The unlined gravel dike that encompassed the tanks is partially visible.



Photo 8: Tank Farm 4; The red one-inch flex hose indicated above is connected to a buried steel pipe that runs to the city building.

Grayling Tank Farm Reconnaissance Grayling, Alaska			
PHOTOGRAPHS 7 AND 8			
November 2000 32-1-16397			
<b>SHANNON &amp; WILSON, INC.</b> Geolechnical & Environmental Consultants	Fig. A-4		



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Photo 9: Tank Farm 5; The tanks from this tank farm have been moved to Tank Farm 6. The open area shown above is where the eight AVEC tanks were formerly located. The original pad has been covered with the gravel that comprised the former tank farm dike.



Photo 10: Tank Farm 5; The fuel line shown above runs from the AVEC tanks located at Tank Farm 6 (shown in the background) to the AVEC powerhouse.

Grayling Tank Farm Reconnaissance Grayling, Alaska		
PHOTOGRAPHS 9 AND 10		
November 2000	32-1-16397	
Geotechnical & Environmental Consultants	Fig. A-5	



Photo 11: Tank Farm 6; Header #1 and the fuel line to Tank Farm 7 are shown in the foreground to the right. The single pipe branching to the left serves the city building and the water treatment plant. Tank Farm 6 is encompassed by a locked fence. A dispenser for local fuel consumption is located in the white shed shown above.

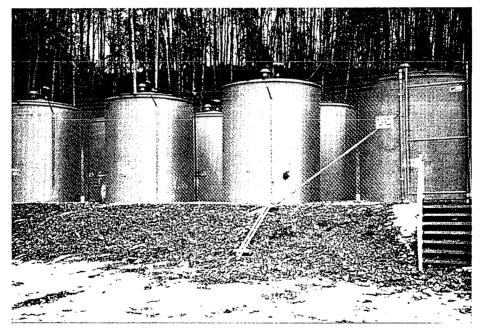


Photo 12: Tank Farm 6; The tanks shown are owned by AVEC and are located within their own dike. These tanks are separated from the rest of Tank Farm 6 by an internal fence and have a separate entrance gate, which is shown to the right.

Grayling Tank Farm Reconnaissance Grayling, Alaska

PHOTOGRAPHS 11 AND 12

November 2000 32-1-16397

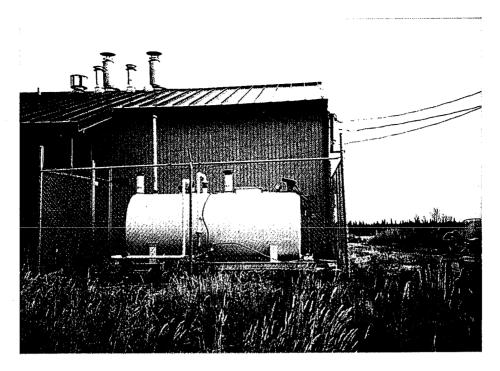


Photo 13: Tank Farm 7; The school mechanical building is shown directly behind the tank. This tank is filled from Tank Farm 6 via a 2-inch steel pipe.



Photo 14: Tank Farm 7; Staining is visible on the timber comprising one side of the containment dike. This tank is supported by timbers spanning the dike. This tank farm was fenced but not locked.

> Grayling Tank Farm Reconnaissance Grayling, Alaska

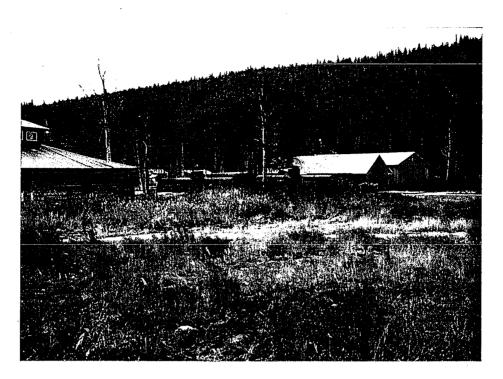
PHOTOGRAPHS 13 AND 14

32-1-16397

Fig. A-7

November 2000

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Photo 15: Tank Farm 8; The grassy area shown above is the reported location of Tank Farm 8. Tank Farm 3 is visible in the background.



Photo 16: Tank Farm 8; The trench shown above is believed to be the former location of Header #3.

Grayling Tank Farm Reconnaissance Grayling, Alaska				
PHOTOGRAPHS 15 AND 16				
lovember 2000 32-1-16397				
SHANNON & WILSON, INC. Geotechnical & Environmental Consultants	Fig. A-8			

## ATTACHMENT B

#### SAMPLE SCREENING AND ANALYTICAL RESULTS

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#### SHANNON & WILSON, INC.

#### TANK FARM 1 FORMER SCHOOL TANK FARM SOIL SAMPLE SCREENING AND ANALYTICAL RESULTS

**Screening Sample Results** 

Sample No.		Sample Location (See Figure 2)	Depth (inches)	Headspace Result (ppm) ^	Sample Classification
<u>S1*</u>		Tank Farm 1 (See site drawing for sample locations)		68	Brown, slightly sandy SILT; trace organics; HCO
S2 ·		Tank Farm 1 (See site drawing for sample locations)		3.4	Brown, slightly sandy SILT; trace organics; HCO
S3		Tank Farm 1 (See site drawing for sample locations)		16	Brown, slightly sandy SILT; trace organics; slight HCO
S4		Tank Farm 1 (See site drawing for sample locations)		3.5	Brown, slightly sandy SILT; trace organics; HCO
S5		Tank Farm 1 (See site drawing for sample locations)		3 ·	Brown, slightly sandy SILT; trace organics; HCO
S6***	10/18/2000	Tank Farm 1 (See site drawing for sample locations)	5	3.3	Light Brown, slightly sandy, gravelly SILT; faint HCO

#### Analytical results for soil sample Y6397-TF1, collected from the location of screening sample S1

Parameter Tested	Method ~	Cleanup Level**	Sample Results
Total Solids - percent	SM18 2540G	NA	57.5
Diesel Range Organics (DRO) - ppm	AK 102	250	24,500
Gasoline Range Organics (GRO) - ppm	AK 101	300	13
Aromatic Volatile Organics (BTEX)			
Benzene - ppm	EPA 8021B	0.02	< 0.0336
Toluene - ppm	EPA 8021B	5.4	< 0.135
Ethylbenzene - ppm	EPA 8021B	5.5	< 0.135
Xylenes - ppm	EPA 8021B	78	<0.270

KEY DESCRIPTION

S1* Sample analyzed by the laboratory

HCO Hydrocarbon Odor detected in the screening sample

Highlighted values exceed applicable cleanup criteria

Field screening instrument was a 580B OVM PID

- Sample Not Analyzed for This Parameter

~ See Attachment D for Method Detection Limit

** Cleanup Criteria determined using 18 AAC 75 Method 2

<0.0010 Less Than the Method Detection Limit

ppm Parts Per Million

NA · Not Applicable

***

This screening sample was collected from beneath the liner at this tank farm

November 2000

#### TANK FARM 2 GRAYLING NATIVE CORPORATION TANK FARM SOIL SAMPLE SCREENING AND ANALYTICAL RESULTS

SHANNON & WILSON, INC.

#### Screening Sample Results

Sample No.	Date	Sample Location (See Figure 2)	Depth (inches)	Headspace Result (ppm) ^	Sample Classification
S1	10/18/2000	Tank Farm 2 (See site drawing for sample locations)	6	0.6	Brown, slightly silty, sandy GRAVEL
S2	10/18/2000	Tank Farm 2 (See site drawing for sample locations)	8	0.8	Brown, slightly sandy SILT; trace organics
S3 .	10/18/2000	Tank Farm 2 (See site drawing for sample locations)	3	1.5	Brown, slightly sandy SILT; trace organics
S4	10/18/2000	Tank Farm 2 (See site drawing for sample locations)	3	1	Brown, slightly silty, gravelly SAND
S5*		Tank Farm 2 (See site drawing for sample locations)	3	19	Brown, slightly silty, gravelly SAND; faint HCO
S6		Tank Farm 2 (See site drawing for sample locations)	3	1.1	Brown, slightly silty, gravelly SAND
S7	10/18/2000	Tank Farm 2 (See site drawing for sample locations)	3	0.8	Brown, slightly silty, gravelly SAND

#### Analytical results for soil sample Y6397-TF2, collected from the location of screening sample S5

Parameter Tested	Method ~	Cleanup Level**	Sample Results
Total Solids - percent	SM18 2540G	<u>NA</u> ·	78.3
Diesel Range Organics (DRO) - ppm	AK 102	250	2,960
Gasoline Range Organics (GRO) - ppm	AK 101	300	9.36
Aromatic Volatile Organics (BTEX)	****		
Benzene - ppm	EPA 8021B	0.02	<0.0161
Toluene - ppm	EPA 8021B	5.4	0.0663
Ethylbenzene - ppm	EPA 8021B	5.5	0.0998
Xylenes - ppm	EPA 8021B	78	0.519

KEY	DESCRIPTION
S5*	Sample analyzed by the laboratory
HCO	Hydrocarbon Odor detected in the screening sample
	Highlighted values exceed applicable cleanup criteria
^	Field screening instrument was a 580B OVM PID
· _	Sample Not Analyzed for This Parameter
~	See Attachment D for Method Detection Limit
**	Cleanup Criteria determined using 18 AAC 75 Method 2
<0.0010	Less Than the Method Detection Limit
ppm	Parts Per Million
NA	Not Applicable

November 2000

#### TANK FARM 3 SHAN GRAYLING NATIVE STORE TANK FARM SOIL SAMPLE SCREENING AND ANALYTICAL RESULTS

**Screening Sample Results** 

Sample No.		Sample Location (See Figure 2)	Depth (inches)	Headspace Result (ppm) ^	Sample Classification
S1	10/19/2000	Tank Farm 3 (See site drawing for sample locations)	3	19	Brown, slightly silty, gravelly SAND; slight HCO
S2*	10/19/2000	Tank Farm 3 (See site drawing for sample locations)	3	419	Brown, slightly sandy SILT; gas/diesel odor
S3	10/19/2000	Tank Farm 3 (See site drawing for sample locations)	3		Brown, slightly silty, gravelly SAND; gasoline odor
S4		Tank Farm 3 (See site drawing for sample locations)	• 3		Brown, slightly silty, gravelly SAND; diesel odor
S5	10/19/2000	Tank Farm 3 (See site drawing for sample locations)	3	417	Brown, slightly silty, gravelly SAND; gas/diesel odor

#### Analytical results for soil sample Y6397-TF3, collected from the location of screening sample S2

Parameter Tested	Method ~	Cleanup Level**	' Sample Results	
Total Solids - percent	SM18 2540G	NA	73	
Diesel Range Organics (DRO) - ppm	AK 102	250	7,320	
Gasoline Range Organics (GRO) - ppm	AK 101		22,000	
Aromatic Volatile Organics (BTEX)				
Benzene - ppm	EPA 8021B	0.02	6.9	
Toluene - ppm	EPA 8021B	5.4	620	
Ethylbenzene - ppm	EPA 8021B	5.5	130	
Xylenes - ppm	EPA 8021B	78	2157	

KEY	DESCRIPTION

S2* Sample analyzed by the laboratory

HCO Hydrocarbon Odor detected in the screening sample

Highlighted values exceed applicable cleanup criteria

Field screening instrument was a 580B OVM PID

- Sample Not Analyzed for This Parameter

~ See Attachment D for Method Detection Limit

** Cleanup Criteria determined using 18 AAC 75 Method 2

<0.0010 Less Than the Method Detection Limit

ppm Parts Per Million

NA Not Applicable

November 2000

#### TANK FARM 4 FORMER CITY TANK FARM LOCATION SOIL SAMPLE SCREENING AND ANALYTICAL RESULTS

#### **Screening Sample Results**

			Depth	Headspace Result	
Sample No.		Sample Location (See Figure 2)	(inches)	(ppm) ^	Sample Classification
S1*		Tank Farm 4 (See site drawing for sample locations)	8	285	Dark Brown, slightly sandy SILT; trace organics; HCO
S2		Tank Farm 4 (See site drawing for sample locations)	3		Light brown, slightly silty, gravelly SAND; slight HCO
S3		Tank Farm 4 (See site drawing for sample locations)	3		Light brown, slightly silty, gravelly SAND; slight HCO
S4	10/16/2000	Tank Farm 4 (See site drawing for sample locations)	5		Light brown, slightly silty, gravelly SAND; slight HCO
S5	10/16/2000	Tank Farm 4 (See site drawing for sample locations)	3	0.9	Light brown, slightly silty, gravelly SAND; slight HCO

#### Analytical results for soil sample Y6397-TF4, collected from the location of screening sample S1

Parameter Tested	Method ~	Cleanup Level**	Sample Results
Total Solids - percent	SM18 2540G	NA	57
Diesel Range Organics (DRO) - ppm	AK 102	250	21,200
· · · · · · · · · · · · · · · · · · ·			
Gasoline Range Organics (GRO) - ppm	AK 101	300	311
Aromatic Volatile Organics (BTEX)			
Benzene - ppm	EPA 8021B	0.02	<0.0733
Toluene - ppm	EPA 8021B	5.4	<0.293
Ethylbenzene - ppm	EPA 8021B	5.5	0.949
Xylenes - ppm	EPA 8021B	78	3.843

KEY DESCRIPTION S1* Sample analyzed by the laboratory HCO Hydrocarbon Odor detected in the screening sample Highlighted values exceed applicable cleanup criteria ^ Field screening instrument was a 580B OVM PID -Sample Not Analyzed for This Parameter ~ See Attachment D for Method Detection Limit ** Cleanup Criteria determined using 18 AAC 75 Method 2 < 0.0010 Less Than the Method Detection Limit Parts Per Million ppm NA Not Applicable

November 2000

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# ATTACHMENT C

i.

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#### TANK FARM SITE SKETCHES AND SAMPLE LOCATIONS

photo C D location of screaning somple 51 * analytical sample location REFER the Reason

# 1.1 TANK FARM NUMBER ONE - IDITAROD AREA SCHOOL DISTRICT

The Iditarod Area School District operates a tank farm for the school (K through 12). This tank farm consist of four vertical tanks and two horizontal tanks. All tanks are set on a heavy timber foundation inside a 3' high gravel dike with liner. All of the vertical tanks are BIA type, single wall, welded steel construction, removable roof, and are in fair condition. Tank #5 is a steel, riveted construction, single wall tank in poor condition; this tank is abandoned due to numerous leaks. Tank #6 is a steel, welded construction, single wall tank in good condition; this gasoline tank is not used anymore due to continuous theft of the fuel. Each tank also has a manhole and vent on top; tank #6 has a vent only. There is no fence around this facility. A 3" grooved fitted (Victaulic) steel header connects the fuel oil tanks. The tank farm is filled through the header system with the fill located at the river approximately 150 ft. away. A 1-1/2" threaded steel supply line feeds the school's generator and boiler building, approximately 45 ft. away. During the time of the survey there were Victaulic fitting leaks (3 total) and each tank has a gate valve with a stem packing leak.

TANK FARM GRAYLING		ONE	999.900 - 900 - 900 - 900 - 900 - 900 - 900 - 900 - 900 - 900 - 900 - 900 - 900 - 900 - 900 - 900 - 900 - 900 -		
TANK NO.	HEIGHT/ LENGTH	DIAMETER	CAPACITY (gal)	GASOLINE	FUEL OIL
TIL I	14:-0"	9°-0"	6420		X
2	14'-0"	8'-6"	5730		X
3	14'-0"	9'-0"	6420		X
4	14"-0"	8'-6"	5730		X
5	32'-0"	7°-3*	10130		X
6	6°-0≈	5'-0"	880	X	
TOTAL(gal)			35,310	(880)	(34,430)

There are several deficiencies and/or code violations in this tank farm. These include, but are not limited to, the following:

1. Active fuel leaks

2. No fence

- 3. No emergency venting
- 4. No warning or identification signs

5. No dike area drain

6. Improper clearance from tank farm to road and building

R. JERNSTROM Grayling. TF#1 School (aditared Area School District) School Equip. Storage · 3/4 " 15 Ŷ~Ţ 10'(TYP) 10' (3) (4) 13" TO MECH. BLDG (BURIED) 长" 5 40 45 vertical G -30 30 (2) $\square$ 15' (G)ROAD 文ろ 3 -tad つ" NOTES : -1/2" to River 1. No fence To 3" Fill @ River (Abandoned 2. Dike of gravel & dirt w/ liner, 3' high. with standing water inside dike. Many weeds," (Approx 150') No values at the river) 3. 3° pipe - steel w/ grooved fittings, NO 3" Globe Value coatings, rusted (Thread Jacks 3 Total) 4. 1/2" pipe - threaded & grooved steel, partially painted x=3" KAM. LOK W/ CAP 5. Values - brass construction w/ value packing leak -At River Bank w/ Warning Signs. TANKS # 1, 2, 3, 4 = BIA type, vertical, steel, welded, w/ removable top. Tanks m Fair condition w/ some minor rust where paint has peeled. A wood foundation is used w/ 4 courses (2x12 on 4x12 on 2x12 on 2x12). Each tank in/ mit & vents on top. A 3" & 12" brass GV is a each of the tanks; Virtually every value packing is lecking. Tank # 1,3 9'\$ × 14'H 64209. Fuel Oil Tank # 2,4 8'6" \$ × 14'H 5730 g. Fuel 0 A 70+ year old Army railroad tanker, steel, riveted, horiz. TANK #5 : set on a heavy log foundation on top of 2 courses of 4x12 lumber. This tank is not used anymore due to leaks - they don't "trust" it. Capacity of 10,130 gel., 7'3" \$ x 32'L. MH & Vent on top Fuer o'a TANK "6 : Horiz, steel, welded tank. Good condution with little rust. Tank set on stundy wood frame, bot of tank 5'6" above grade. This tank was for gasoline, but no longer used because of theft by Kids. Tank now sits empty School now buys from the store. Cap. of \$80 gal., 5'0" \$ x 6'L. Vent on to Gasolance

Old School tenk form, 10/18/00 Wednesde, Tonk Form #1, Photos > Grayling School Area lined embern Kmint 3' EQ pipe uppears 3 to Ô VIL PIP 0005 (13) 2/1 6 17 pipe ist (3)here At From Benedth the lines 3  $\left( l_{\mu} \right)$  $\hat{}$ 10,129 gullon railroad car tomk (E) à de la (20) E) (g) Wood Plat form Teode of * 45 Ĩ (2.2 -'50'-> Key Decotron of Y 1 Ţ ł Ś ٢ screening sample SI Maintanonce Blog Hadi * analytical sample location

#### 1.2 TANK FARM NUMBER TWO - GRAYLING NATIVE CORPORATION

The Grayling Native Corporation (HeeYea Lingde Corp.) operates a tank farm that serves the retail fuel sales function for the village corporation store. This tank farm consist of four horizontal tanks. All tanks are set on a heavy log foundation; tank #3 is set on light log cribbing. There is a 1' high dike without liner around tanks #1 & 2. There is no fence around this facility. Tanks #1,2 &4 are single wall, welded steel construction, and are in fair condition. Tank #3 is a steel, riveted construction, single wall tank in poor condition. Each tank has a vent on top and tank #3 also has a manhole. A 2" threaded galvanized steel pipe system connects tanks #1 & 2. The tank farm is filled through hoses from the fuel barge at the river. Tanks #1 & 3 are set-up to dispense fuel with dispenser pumps. Exposed romex wire connects these dispensers. During the time of the survey, there were three pipe threads leaking, and tank #3 has five rivet leaks.

TANK FARI GRAYLING		OWT			
TANK NO.	HEIGHT/ LENGTH	DIAMETER	CAPACITY (gal)	GASOLINE	FUEL OIL
1	• ()a	8,-0	5260		X
7	14'-0"	8°-0"	5260	-	X)
3	30°-0"	7°-6"	10052	X	
4	6°-0"	5°-0°	380	X	
TOTAL(gal)		an an an an an an an an an an an an an a	21,452	(10,932)	(10,520)

There are several deficiencies and/or code violations in this tank farm. These include, but are not limited to, the following:

1. Active fuel leaks

2. No liner (tanks #1,2)

3. No dike or liner (tanks #3,4)

4. No fence

5. No emergency venting

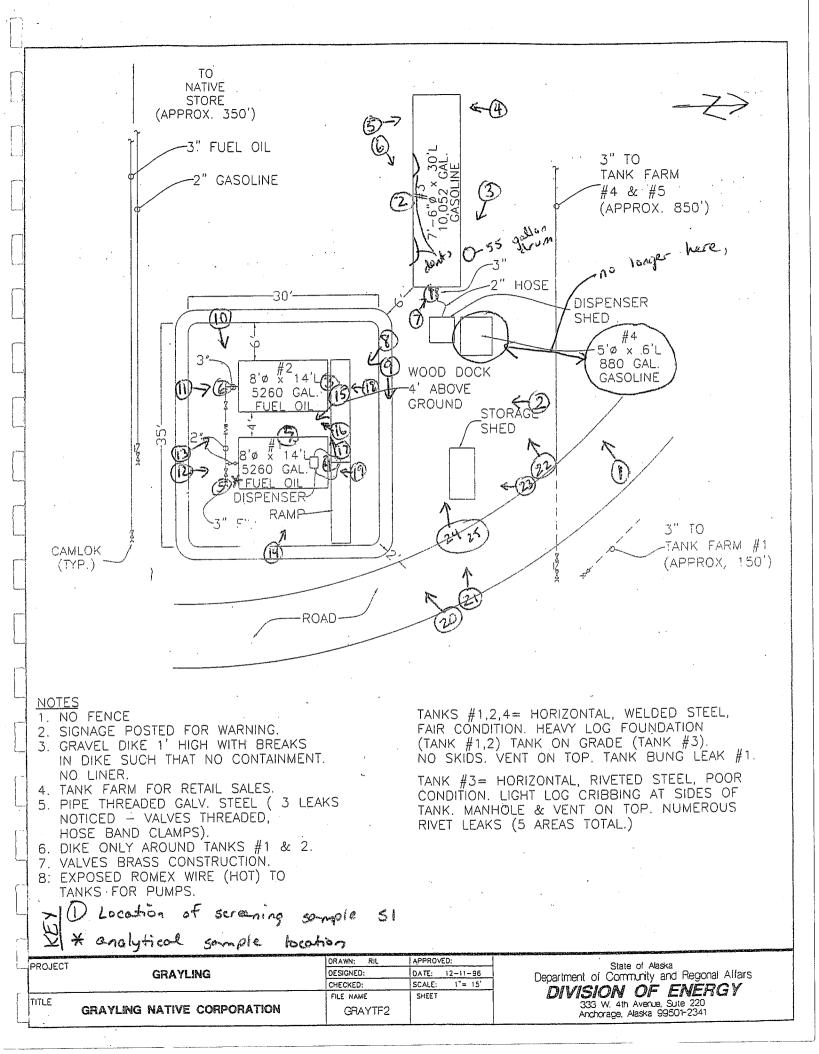
6. Small dimension timber tank foundation (tank #3)

7. No warning or identification signs

8. No means of secondary containment

9. Improper clearance from tank farm to road

10. Exposed electrical wiring



#### 1.3 TANK FARM NUMBER THREE - GRAYLING NATIVE STORE

The privately owned Grayling Native Store operates a tank farm that serves the retail fuel sales function for its village store. This tank farm consist of seven horizontal tanks; five above ground and two underground. Tanks #1,2 &5 are set on a heavy log foundation; tank #3 & 6 are set on grade. There is no dike, liner or fence around this tank farm. Tanks #1 & 2 are single wall, riveted steel construction, and are in fair condition. Tanks #3,6 & 7 are single wall, welded steel construction, and in fair condition. Tanks #4 & 5 have steel construction as visible through the valve box. Each tank has a vent on top and tank #1 & 2 also have a manhole. Tanks #4 & 5 have their vents capped. A 3" threaded steel pipe header connects tanks #1 & 2; the tanks are filled through the header system with the fuel oil fill located at the river, approximately 350 ft. away. A 2" threaded steel pipe system connects tanks #3,4, &5. These tanks are filled through the header system with the gasoline fill located at the same river location. Two 2" threaded steel supply lines feed the dispensers (fuel oil and gasoline), located within the tank farm. During the time of the survey, there were numerous pipe threads leaking, and two valves have stem packing leaks.

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TANK FARI GRAYLING		THREE		)	· · ·
TANK NO.	HEIGHT/ LENGTH	DIAMETER	CAPACITY (gal)	GASOLINE	FUELOIL
1	25°-0"	7°-0"	7042	·	X
2	31'-0"	7'-6"	10137		X
3 :	17'-0"	8'-0"	6390	X	
· 4	教祥	**	5000**	X	
5	**	**	5000**	X	
б	6'-0"	5'-0"	880		.X
7	6°-0"	5'-0"	880		X
TOTAL(gal)	- <u> </u>		35,329	(16,390)	(18,939)

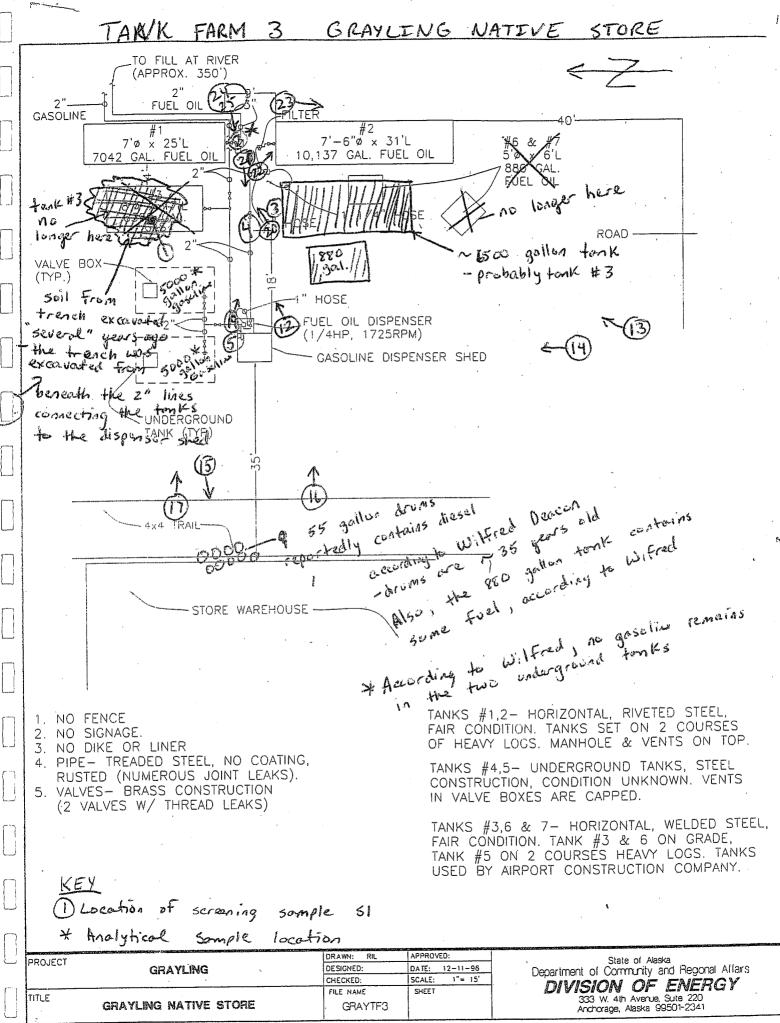
** Underground tank dimensions not available; capacity per owner.

(continued)

## GRAYLING BULK FUEL STORAGE ASSESSMENT REPORT TANK FARM NUMBER THREE Page 2

There are several deficiencies and/or code violations in this tank farm. These include, but are not limited to, the following:

- 1. Active fuel leaks
- 2. No dike or liner
- 3. No fence
- 4. No emergency venting
- 5. No tank foundation (tanks #3,6)
- 6. Tanks not properly vented (tanks #4,5)
- 7. No warning or identification signs
- 8. No means of secondary containment
- 9. Use of rubber hose in distributing fuel
- 10. Improper clearance from tank farm to building'



## 1.4 TANK FARM NUMBER FOUR - CITY OF GRAYLING

The City of Grayling operates a tank farm for the water treatment plant and city offices. This tank farm consist of two vertical tanks. Both tanks are set inside a 1' high gravel dike without a liner or fence. The tanks are set on a heavy timber foundation. Both of the tanks are BIA type, single wall, welded steel construction, removable roof, and in fair condition. Each tank has a manhole and vent on top. A 3" threaded steel header connects the tanks. The tank farm is filled through the header system with the fill located at the river, approximately 850 ft. away. This same pipeline also serves TF#5. A 1" buried pipe feeds the city office day tank, approximately 60 ft. away. A hose connected to tank #2 is used to manually fill a truck for transfer to the water treatment plant day tank. During the time of the survey there were numerous pipe thread leaks within the tank farm, each tank has a bung leak, and one valve has a stem packing leak.

TANK FARI GRAYLING		FOUR			
TANK NO.	HEIGHT/ LENGTH	DIAMETER	CAPACITY (gal)	GASOLINE	FUEL OIL
1	14°-0"	10°-0"	7930		X
2	14'-0"	9'-6"	7160		X
TOTAL(gal)	ال المراجع المراجع المراجع المراجع المراجع المراجع المراجع المراجع المراجع المراجع المراجع المراجع المراجع الم المراجع المراجع المراجع المراجع المراجع المراجع المراجع المراجع المراجع المراجع المراجع المراجع المراجع المراجع	a a a fair ann a fhair anns a fair an Arainn a fair an ann ann ann ann ann ann ann ann ann	15,090		(15,090)

There are several deficiencies and/or code violations in this tank farm. These include, but are not limited to, the following:

1. Active fuel leaks

2. No liner

3. No fence

4. No emergency venting

5. No warning or identification signs

6. Limited means of secondary containment

7. Use of rubber hose in distributing fuel

8. No dike area drain

9. Improper clearance from tank farm to road

R. Jernstrom Grayling TF #4 City of Grayling × 10/19/00 - tanks have been moved to the new tonk farm  $\langle 2$ 3" TO FILL AT RIVER (APPROX. 85 1 ROAD 3" TO TE #4 (Approx 15') FENCE AT TF=4-3"~ 4 - 55 Braided Flex 15' 3/4" Drain -7 O'(TYP)-ÐŶ 對 (2)12' **M** TIME 文1" 7' 56"ι. λM -1" HOSE FOR MANUAL FILL THRU DIKE NOTES : BURIED TO CITY OFFICES 1. No Fence (Approx 60') 2. No signage 3. Dike - 1' HIGH gravel dike without liner 4. Pipe - threaded steel, painted w/ some rust. Leaks @ threads e unions (4. TOTAL) 5. Values - Brass construction. One value by packing leak 6. TF serves city offices & washeteria. TANKS : Both tanks vertical, welded steel, BIA type w/ removable roof, and in fair condition. Some rust where paint has peeled. Timber foundation with 2×8 on 4×12. MH = vents on top. Both tanks w/ bung leaks. Tank #1 10' \$ x 14' H 7930 g. Fuel Oil 2 9'6" \$ X 14' H 7160 g. Key (D location of screening sample 51 * analytical sample location

#### 1.5 TANK FARM NUMBER FIVE - AVEC POWERHOUSE

The Alaska Village Electric Cooperative (AVEC), operates a tank farm that serves the village powerhouse. This tank farm consist of eight vertical tanks. All tanks are contained within a 3' high gravel dike system. There is no liner in the dike area except under tanks #1 & 5. There is 7' high fence around this facility still under construction at the time of the survey. All of the tanks are BIA type, single wall, welded steel construction, removable roof, and are in fair condition. A manhole and vent are located on the top of all tanks. The tanks all have a heavy timber foundation. A 3" threaded steel header connects the tanks. The tank farm is filled through the header system with the fill located at the river, approximately 875 ft. away. This same pipeline also fills TF#4. A 1-1/4" threaded steel supply line with solenoid valve feeds the powerhouse, approximately 6 ft. away. At the time of the survey there was one valve stem packing leak, four pipe thread leaks, and bung leaks at tanks #1,2,3,6 & 8.

TANK FARM NUMBER FIVE GRAYLING, ALASKA							
TANK NO.	HEIGHT/ LENGTH	DIAMETER	CAPACITY (gal)	GASOLINE	FUEL OIL		
1	14'-0"	10°-6"	8740		X		
2	14'-0"	10°-6"	3740		X		
3	14?-0"	10'-6"	8740	27.7.962 March (1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997	X		
Ą	14°-0" ·	10'-0"	7930		X		
5	14°-0"	11'-0"	9590	and a second and a second second second second second second second second second second second second second s	X		
6	14'-0"	11'-0"	9590	· · · · · · · · · · · · · · · · · · ·	X		
7	14'-0"	11'-0"	9590		Х		
8	14'-0"	9'-6"	7160		Х		
TOTAL(gal)	· · · · · · · · · · · · · · · · · · ·		70,080		(70,080)		

There are several deficiencies and/or code violations in this tank farm. These include, but are not limited to, the following:

- 1. Active fuel leaks
- 2. No liner (except under tanks #1,5)
- 3. No emergency venting
- 4. No warning or identification signs
- 5. Limited means of secondary containment
- 6. No dike area drain
- 7. Improper clearance from tank farm to road

R. Jernstrom Grayling TF # 5 AVEC POWERHOUSE form XXX tanks have been relocated to the new tank 1' (TYP) 10' 4'(TYP) 70 ¥ Ø 3 Ð (4) 3"GV(TYP) To 3' FI. (5'(TYP) - 3" РЦЈС VAL. (2 ТУР) AT RIVE ₹≁ (~ 875 3" 55 Braided 3 5'(TYP) FLEX(TYP) 40 1/2"-GV # ·burst FLEX drum VERTI G 6 3 6 (A GZ, 1" NON () 12 -1" SOL. VALVE (n)文 Freeze Drain (Typ) X7107 14". 10'(TYP) 653 most Levi 7'H CYCLONE FENCE -- POWERHOUSE NOTES : 1. No signage . 2. Fence around entire facility, Not complete that still under construction 3. Pipe - threaded steel, painted. Thread leaks apparent (4 total). [Fill pipe unp 4. Values - GV brass construction. One value up packing leak L Vic + three Plug Values - steel construction 5. 3' H gravel dike with me liner. Liner under tanks #1,5 only No dike drain TANKS = vertical, welded steel, BIA type up removable roof, All tanks and ... in fair conduction. Some rust where paint was paeled. Heavy timber foundation of 2x12 on 12x12 on 4x12. MH & vents on top. Bung leaks at Tanks #1,2,3,6 + 8. 10 6" \$ × 14' H Tank #1, 2, 3 8740 g. Fuel O'd 10'\$ x 7930 g. 4 14'H 5,6,7 11'\$ × 14' H 9590 9. 8 9'6'0 x 14'4 7160 5. 11 n

Vz Tonk Farm #5, AVEC POWERHOUSE, 10/19/00, Thursday, GRAYLIENG Soleman - has 3-week training for oil damop/response Ambrose 453-5214 Gradde person we red Gradde person we red Gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gradde gr 50' 1000 BUIL To new toni Form qί St wire gate 7 25 Red -Fuel piping GRAVEL PAO 1 to new tonk 回图图 Form IN + mhars ETr. + rons formul <u>B</u>W Shed Ã. -@ Creesete 0 4 E E C. 90 AVEC POWERHOUSE <del>(</del>) (in) (E ERE, Red conve gate E GRAVEL PAD Green Building + conching Deer BUND 717111 4× V At in the lain

2/2 Tank Form #5; 10/19/00, Thursday, Grayling - According to Phil Nickoli, the original tank pad was covered with soil from the for dike which had surrounded it when the tonks were moved to the new tonk form, - Phil recalls the soil beneath the current gravel pad to be impacted with diesel fuel. - Phil estimates approximately \$12" of gravel from the dike walls currently cover the eld tank pad - This site was not sampled - The gravel pad is comprised of a Rusty-Brawn, slightly sitty, sendy GRAVEL that was frozen at the time of our site visit, ------Bet in the lain

TANK FARM 6 . And the second second second second second second second second second second second second second second second . हर्षे स्ट्रि . Anga Ъ فن e R S 6 5 0 0 õ 5000 ing Ca P Ĩ ß 2 Ō. æ 50 H 5 96 44 Popen Ra Ŋ . 2 Dicie 10/19/00 STG ú Ţ

Tank Farm #7, 2000 gallon mechanical building day tenk 10/19/00 , Grayling Jole X Page Jort-K. Jold Trine fill time NO Stag dispenser pomp ** control THUL HULLIN Ronal Top to mechanical bidg. to fill line bung to tonk form fump. steet rails ## the wires for the dispensor pump are exposed (2) on the outside of th * the central panel is mounted building within the Fenced area Central Ponel green "on" fuel system on/off lignt school transfer pump green off Switch on whitch light school tonk Full Pump rest G-switch red - E light -Bran the land

Tank Farm #7, IASD mechanical Building Day trank, 10-119/00, Yukon River GRAYLING Photos 1-11 601 A. Roof covering stairs to double door bock entrances Blue, Grayling School Mechanical Building - Ken 36' fuel transfer control ponel i power pole roof, entrance to this side of building is boorded over ante Bellands 3 DAY fan Kil -10' Fence 6 8 w/ bardred wire ĥ line to new tonk Farm, accompanied & with 6" dike with liner electrical conduit - tank is double wall construction - there is not any lighting to deter vondalism - gate is not locked - no identified emergency short-off switch 2 Basketball Court Altonia Boly Harris

TANK FARM 8 GRAYLING, 10/18/00 WEDNESDAY [ ed Howerel = works @ school, used to work with old school tonk form Grayling School Tonk FORM #3 Baskelhill Court KAPK A B Trank From Eschool day tank (দ)ল ocated in this 13 School Maintennie - Approximite Location Building B ANTER STREET, STREET, STREET, STREET, STREET, STREET, STREET, STREET, STREET, STREET, STREET, STREET, STREET, S of 3000 gallon Fuel leak due to in the second 4 broken subsurface piping apprenimetely pine tree 6 years age, according to Fred Howard Approximate location of fiel line from tonk Tonk Facm Farm G. Jonk 78 Korm 2 Str. all them?

# ATTACHMENT D

# RESULTS OF ANALYTICAL TESTING BY CT&E ENVIRONMENTAL SERVICES INC.

OF ANCHORAGE, ALASKA

		aboratory Ana		- 7311011	V. Potter Drive prage, AK 99518-160	15
· · ·				Fax: (	907) 562-2343 907) 561-5301 http://www.cteesi.com	m
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a. cc. 1 Clashan			· · ·			
Stafford Glashan Shannon & Wilson Ind 5430 Fairbanks St. Ste	: 3					
Anchorage, AK 99518	)					·
Work Ord		1006589 Y-16397 Grayling T	ank Farms			
		Shannon & Wilson				
Client: Report D		October 27, 2000				
As required by the state CT&E. A copy of our ( Except as specifically n	of Alaska and the U Quality Control Mar oted, all statements	wai that outlines uns p	ty Assurance/Qualit rogram is available	1		
As required by the state CT&E. A copy of our of Except as specifically n Quality Assurance Prog If you have any questio Manager at (907) 562-2	of Alaska and the U Quality Control Mar oted, all statements gram Plan. ns regarding this rep 2343.	JSEPA, a formal Quali uual that outlines this p and data in this report port or if we can be of a	ty Assurance/Qualit rogram is available are in conformance any other assistance,	to the provision please call yo	ons set forth in our	
As required by the state CT&E. A copy of our of Except as specifically n Quality Assurance Prog If you have any questio Manager at (907) 562-2	of Alaska and the U Quality Control Mar oted, all statements gram Plan. ns regarding this rep 2343.	JSEPA, a formal Quali uual that outlines this p and data in this report port or if we can be of a	ty Assurance/Qualit rogram is available are in conformance any other assistance,	to the provision please call yo	ons set forth in our	
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As required by the state CT&E. A copy of our of Except as specifically n Quality Assurance Prog If you have any questio Manager at (907) 562-2 The following descripto U Indi J Indi B Indi * The GT Gre D Sec LT Les	of Alaska and the U Quality Control Mar oted, all statements fram Plan. Ins regarding this rep 2343. Fors may be found on cates the analyte wa cates an estimated v cates the analyte is f analyte has exceeded ater Than ondary Dilution s Than	USEPA, a formal Quali uual that outlines this p and data in this report oort or if we can be of a your report which wil s analyzed for but not o alue that falls below P ound in the blank asso	ty Assurance/Qualit rogram is available are in conformance my other assistance, serve to further qua- letected. QL, but is greater the	to the provision please call you alify the data. an the MDL.	ons set forth in our	

CT&E Environmental Services Inc.

Clack Rel.#FoodstatePrinted Date/Time10/2//200015:56Cient NameShannon & Wilson Inc.Collected Date/Time10/18/200016:15joject Name/#Y-16397 Grayling Tank FarmsReceived Date/Time10/20/200017:02Client Sample IDY-16397-TF1Technical DirectorStephen C. EdeMatrixSoil/SolidReleased ByFeleased ByFeleased By	oject Name/# Client Sample ID Matrix	Y-16397 Grayling Tank Farms Y-16397-TF1		Received Date/Time Technical Director	10/20/2000 17:02 Stephen C. Ede
------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------	--------------------------------------------	--	------------------------------------------	------------------------------------

#### mple Remarks:

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DRO/RRO - Pattern consistent with weathered middle distillate.

DRO/RRO - Surrogate recoveries outside controls due to matrix interference and/or sample dilution.

DRO/RRO - Surrogaie rec	Results	PQL	Units	Method	Allowable Limits	Prep Date	Analysis Date	Init
Jids Total Solids	57.5		%	SM20 2540G			10/24/00	JCO
volatile Fuels Depa soline Range Organics nzene Toluene hylbenzene & M -Xylene o-Xylene 	13.0 0.0336 U 0.135 U 0.135 U 0.135 U 0.135 U 0.135 U	6.73 0.0336 0.135 0.135 0.135 0.135	mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg %	AK101/8021B AK101/8021B AK101/8021B AK101/8021B AK101/8021B AK101/8021B AK101/8021B AK101/8021B	60-120 50-150	10/18/00 10/18/00 10/18/00 10/18/00 10/18/00 10/18/00 10/18/00	10/25/00 10/25/00 10/25/00 10/25/00 10/25/00 10/25/00 10/25/00	MAH MAH MAH MAH MAH MAH MAH
	nic Fuels Department 24500 212	807	mg/Kg %	AK102 DRO AK102 DRO	50-150	10/22/00 10/22/00	10/24/00 10/24/00	



## CT&E Environmental Services Inc.

CT&E Ref.# Client Name roject Name/# Client Sample ID Matrix rdered By	1006589002 Shannon & Wilson Inc. Y-16397 Grayling Tank Farms Y-16397-TF2 Soil/Solid	Client PO# Printed Date/Time Collected Date/Time Received Date/Time Technical Director Released By	10/27/2000 15:56 10/18/2000 17:05 10/20/2000 17:02 Stephen C. Ede
ample Remarks:	consistent with weathered middle distillate.		

DRO - Surrogate does not meet QC goals due to matrix interference. Results are not affected. Prep Analysis Allowable Init Limits Date Date Units Method PQL Results arameter olids 10/24/00 JCO % SM20 2540G 78.3 Total Solids volatile Fuels Department 10/25/00 MAH 10/18/00 AK101/8021B mg/Kg 3.23 9.36 asoline Range Organics MAH 10/25/00 10/18/00 mg/Kg AK101/8021B 0.0161 0.0161 U MAH enzene 10/25/00 10/18/00 AK101/8021B 0.0646 mg/Kg · 0.0663 MAH Toluene 10/18/00 10/25/00 AK101/8021B mg/Kg 0.0646 0.0998 MAH thylbenzene 10/25/00 10/18/00 AK101/8021B mg/Kg 0.0646 0.322 & M -Xylene 10/25/00 MAH 10/18/00 AK101/8021B mg/Kg 0.0646 0.197 o-Xylene urrogates 10/18/00 10/25/00 MAH 60-120 AK101/8021B % 87.2 1,4-Difluorobenzene <Surr> 10/25/00 MAH 10/18/00 50-150 AK101/8021B % 81.8 Bromofluorobenzene <Surr> Semivolatile Organic Fuels Department ELB 10/22/00 10/23/00 AK102 DRO mg/Kg 22.8 2960 biesel Range Organics

 urrogates

 Sa Androstane <surr>
 984

 'Sa Androstane <surr>

# CT&E Environmental Services Inc.

CT&E Ref.# Client Name roject Name/# Client Sample ID	1006589003 Shannon & Wilson Inc. Y-16397 Grayling Tank Farms Y-16397-TF3 Soil/Solid	Collected Received	O#Date/Time10/27/200015:56d Date/Time10/19/200012:20d Date/Time10/20/200017:02al DirectorStephen C. Ede
Matrix rdered By	Soll/Solid	Released	d By Shannen Parton

ample Remarks:

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DRO - Pattern consistent with weathered gasoline.

DRO/RRO - Pattern consistent with weathered middle distillate.

DRO/RRO - Surrogate recoveries outside controls due to matrix interference and/or sample dilution.

GRO/BTEX - Surrogate recovery does not meet QC goals due to sample dilution. Results are not affected.

	Results	PQL	Uni	ts	Method	Allowable Limits	Prep Date	Analysis Date	Init
Solids otal Solids	73.0		9	%	SM20 2540G	2. 2.		10/24/00	1CO
Olatile Fuels Departme Gasoline Range Organics Penzene Joluene Ethylbenzene & M -Xylene -Xylene	7320 6.90 620 130 1480 677	}	1.82 mg 7.28 mg 7.28 mg 7.28 mg	y/Kg g/Kg g/Kg g/Kg g/Kg g/Kg	AK101/8021B AK101/8021B AK101/8021B AK101/8021B AK101/8021B AK101/8021B	· · · · · · · · · · · · · · · · · · ·	10/19/00 10/19/00 10/19/00 10/19/00 10/19/00 10/19/00	10/26/00 10/26/00 10/26/00 10/26/00 10/26/00 10/26/00	MAH MAH MAH MAH MAH MAH
urrogates ,4-Difluorobenzene <surr> 4-Bromofluorobenzene <surr></surr></surr>	0 4450	! 1		% %	AK101/8021B AK101/8021B	60-120 50-150	10/19/00 10/19/00	10/26/00 10/26/00	MAH MAH
Semivolatile Organic E Diesel Range Organics	uels Depar 22000	rtment	741 m	ng/Kg	AK102 DRO		10/22/00	10/24/00	MCM
Surrogates	1920	.!	•	.%	AK102 DRO	50-150	10/22/00	10/24/00	MCM

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CT&E Environmental Services Inc.

CT&E Ref.# Client Name roject Name/# Client Sample ID Matrix rdered By	1006589004 Shannon & Wils Y-16397 Grayli Y-16397-TF4 Soil/Solid				Client PO# Printed Date/7 Collected Date Received Date Technical Dir Released By	e/Time e/Time ector	10/27/200 10/19/200 10/20/200 Stephen C	0 10:55 0 17:02	S. Star Proceedings
(	ttern consistent with rrogate recoveries of urrogate recovery i	utaida controle (	the to matrix $\mathbf{u}$	nterference erference. I	and/or sample dilution Results not affected.	on.			
Parameter		Results	PQL	Units	Method	Allowable Limits	Prep Date	Analysis Date	Init
olids									
_Total Solids		57.0		%	SM20 2540G			10/24/00	JCO

#### Volatile Fuels Department

101

asoline Range Organics Benzene Toluene thylbenzene P & M -Xylene	311 0.0733 U 0.293 U 0.949 3.55 0.980	-	14.7 ).0733 0.293 0.293 0.293 0.293	mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg	AK101/8021B AK101/8021B AK101/8021B AK101/8021B AK101/8021B AK101/8021B		10/19/00 10/19/00 10/19/00 10/19/00 10/19/00 10/19/00	10/26/00 10/26/00 10/26/00 10/26/00 10/26/00 10/26/00	MAH MAH MAH MAH MAH MAH
surrogates 4-Difluorobenzene <surr> -Bromofluorobenzene <surr></surr></surr>	96.8 510	ľ,		%	AK101/8021B AK101/8021B	60-120 50-150	10/19/00 10/19/00	10/26/00 10/26/00	MAH MAH

Diesel Range Organics	els Department 21200	340 mg/K	g AK102 DRO		10/22/00	10/24/00	MCM
5a Androstane <surr></surr>	140	%	AK102 DRO	50-150	10/22/00	10/24/00	MCM

IJ			
1006584	In Show 2.		Relinquished By:     3.       Aure:     Time:       d Name:     Date:       d Name:     Date:       d Name:     Date:
	¥ S		Relind Signature: Printed Name: Company: Signature: Printed Name: Company:
	uple Container De ervative if used)		Relinquished By: 2.       Rule:       Aire:       Aire:       Saltrip       Saltrip       Pary:       Pary:       Received By:       Pary:       Rule:       Time:       Date:       Pary:       Saltrip
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	CHAIN 1354 N. Grandridge Blvd. Kennewick, WA 99336 (509) 735-1280 2412 N. 30th St., Suite 201 Tacoma, WA 98407 (206) 759-0156 Time Date Time Sampled	16:15 iche/oo 17:05 lolig/oo 12:20 lolig/oo 10:55 lolig/oo	Information     Sample: Receipt       at: 16.397     Total Number of Containers       at: 16.397     Total Number of Containers       Creaning Texk Farm     COC Seals/Intract? Y/N/NA       Greaning Texk Farm     COC Seals/Intract? Y/N/NA       Creaning Texk Farm     COC Seals/Intract? Y/N/NA       Creaning Texk Farm     COC Seals/Intract? Y/N/NA       Creaning Texk Farm     COC Seals/Intract? Y/N/NA       Creaning Texk Farm     COC Seals/Intract? Y/N/NA       Creaning Texk Farm     COC Seals/Intract? Y/N/NA       Creaning Texk Farm     COC Seals/Intract? Y/N/NA       Creaning Texk Farm     COC Seals/Intract? Y/N/NA       Creaning Texk Farm     Received Good Cond./Cold       Creaning Texk Farm     Received Good Cond./Cold       Creaning Texk     Received Good Cond./Cold       Instructions     Intact shipping bill. if any)       Inn Around Time:     Intact shipping bill. if any)       Inn Around Time:     Intact shipping bill. if any)       Inn Around Time:     Intact shipping bill. if any)       Inn Around Time:     Intact shipping bill. if any)       Inn Around Time:     Intact shipping bill. if any)       Inn Around Time:     Intact shipping bill with shipping bill with shipping bill with shipping bill with shipping bill with shipping bill with shipping bill with shipping bill with shipping bill with shipping bill with shipping bill with shipping
	e e		n Total Number of Contain Total Number of Contain K Fars COC Seals/Intact? Y/N/N Received Good Cond./C No Delivery Method: No Delivery Method: Instructions Instructions In - for consignee files ant - for consignee files
	SHANNON & WILSON, INC. Geotechnical and Environmental Consultants Geotechnical and Environmental Consultants Inter, Suite 100 11500 Olive Blvd., Suite 276 B 103 114, Br2-B170 314, B72-B170 314, B72-		ormation 6.397 6.397 6.397 6.397 6.397 6.397 7.00 7.53 6.37 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0
	Annual SHANNON Geotechnical and Geotechnical and Aoo N. 34th Street, Suila 100 1 Seattle, WA 98 103 (2005 Hill Road Fairbanks. AK 99709 5 (307) 479-0600 (307) (307) 479-0600 (307)		Project Information Project Number: 16.397 Project Number: 16.397 Project Name: Grayling Tonk Contact: Starfford Contact: Starfford Contact: Starfford Dispersion Instructions: Special Instructions: Distribution: White - Wshipment

F-19-91/UR

	Due Date: Received Date/Time: Cooler Temperature: Sample Condition: Matry of each Sample: Matry of each Sample:	Trip Blank       MS/MSD         MS/MSD       MS/MSD         Additional Sample Remarks:       8260s field pres'd?         Field-filtered for dissolved       ?         Lab-filter for dissolved       ?         Ref Lab required?       ?         Notes:	# of each Container Received: 950 ml amber unpres'd 950 ml amber w/ HCl 500 ml amber w/ HCl 11 cubies w/ HNO3 11 cubies w/ HNO3 11 cubies w/ NaOH + ZnAc 11 cubies w/ NaOH + ZnAc	Izo mi con 60 mlNalg 60 ml $60 \text{ ml}$ Nalg $8 \text{ oz amber}$ unpres'd $4 \text{ oz amber}$ unpres'd $4 \text{ oz w/ septa}$ w/ MeOH $40 \text{ ml vials}$ w/ HCIOther (specify)Other (specify) $0 \text{ other (specify)}$ $10^{-2} \text{ or } - W$ $1/\log \ln \operatorname{Proofed by:}$ $10^{-2} \text{ or } - W$
tal Services Inc. SAMPLE RECEIPT FORM	Are samples <b>RUSH</b> , priority, or <i>within</i> 72 <i>hrs</i> of <b>hold time</b> ? If yes, have you done <i>e-mail notification</i> ? Are samples <i>within</i> 24 <i>hrs</i> of <b>hold time</b> or <b>due date</b> ? If yes, have you spoken <i>with</i> Supervisor? Are there any <b>problems</b> (e.g., ids, analyses)? Were samples preserved correctly and pH verified?		*** The following must be completed for all ACOE & AFCEE projects:         Ss       No         Is cooler temperature 4 ± C?         thermometer used:         was there an airbill, etc? note #:         was cooler sealed with custody seals?         were seals intact upon arrival?         was there a COC with cooler?         was there a COC with cooler?         was there a COC with cooler?         was there a COC with cooler?         was there a COC with cooler?         was there a COC with cooler?         was there a COC with cooler?         was there a COC with cooler?         was there a COC with cooler?         was there a COC with cooler?         was there a COC with cooler?         was there a COC with cooler?         was the COC filled out properly?         Did the COC indicate ACOE/AFCEE project?	Were samples screened with Geiger counter? Were all samples packed to prevent breakage? Were all samples unbroken and clearly labelled? Were all samples unbroken and clearly labelled? Were all samples sealed in separate plastic bags? Were correct container/sample sizes submitted? Was client notified of problems? (specify below) Phone/Fax #:
CT&E Environmental Services Inc.	Yes	Completed by (sign):	***         The following <i>n</i> Yes         No	Individual contacted:       Date & Time:

Attachment 6:

# ADEC Letter

4/28/11

# STATE OF ALASKA

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

SEAN PARNELL, GOVERNOR

555 Cordova Street Anchorage, AK 99501 PHONE: (907) 269-8685 FAX: (907) 269-7507 www.dec.state.ak.us

File: 2416.38.003 Return Receipt Requested Article No: 7009 2820 0001 7169 6958

April 28, 2011

Grayling Native Store P.O. Box 30 Grayling, AK 99590

Re: Contaminated Site Notification; Grayling Native Store Tank Farm

Dear: Grayling Native Store

The Alaska Department of Environmental Conservation (ADEC), Contaminated Sites Program, has determined that there is contaminated soil and/or water associated with the Grayling Native Store Tank Farm located at 1 Main Street. The Grayling Native Store Tank Farm is one of five active contaminated sites identified by the ADEC in the village of Grayling (see Attachment A). This site has been listed in the ADEC database of contaminated sites and information contained in the file is now part of the public record. Our databases are accessible on the Internet at www.dec.state.ak.us/spar/csp/search/default.asp.

ADEC's primary concern is that this contamination may pose a risk to human health or the environment, therefore any current or future use or development of this property must account for this contamination. If you are interested in discussing the evaluation and/or cleanup of this contamination or if there are any proposed changes in land use or ownership, please contact your ADEC project manager for this site Grant Lidren at (907) 269-8685 or via email at grant.lidren@alaska.gov.

Sincerely,

Draw Sid

Grant Lidren Environmental Specialist

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💦 Printed on Recycled Paper

## Attachment A:



G:\SPAR\SPAR-CS\38 Case Files (Contaminated Sites)\2416 Grayling\2416.38.003 Grayling Native Store Tank Farm\2416 38 003 Grayling Native Store TF.docx Attachment 7:

# ADEC Letter

1/13/12

# STATE OF ALASKA

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

555 Cordova Street Anchorage, AK 99501 PHONE: (907) 269-8685 FAX (907) 269-7649

File No: 2416.38.003 Return Receipt Requested Article No: 7010 2780 0000 2089 6392

January 13, 2012

Grayling Native Store P.O. Box 30 Grayling, AK 99590

Re: Grayling Native Store Tank Farm Hazard ID: 3373 Ledger Code: 14227860

Dear: Grayling Native Store

As a follow up to a previous letter sent April 28, 2011, The Alaska Department of Environmental Conservation (ADEC), Contaminated Sites Program, has determined that there is contaminated soil and/or water associated with the Grayling Native Store Tank Farm. Since you are identified as a current or past owner and/or operator of this site, please be advised you may be financially responsible or liable for the investigation and /or cleanup of any hazardous substance contamination that might be present.

Alaska Statute Title 46 authorizes the State to respond to this pollution incident and to take appropriate action to minimize damages to human health, safety or welfare or to the environment. Under Title 46, the owner or operator may be held financially responsible for any actions taken by the State. If you undertake response actions approved by the Department under 18 AAC 75.300-.396, the adequacy of those actions will be evaluated by Grant Lidren (907) 269-8685 the Project Manager for this pollution incident. Response actions are adequate if they accord with state and federal law, including 18 AAC 75.

If you are taking adequate actions, State action will be limited to approving cleanup plans, monitoring the progress of cleanup activities and providing guidance as necessary. Alaska Statutes 46.04.010 and 46.08.070 require that recovery be sought for certain costs, including oversight activities, incurred by the State in responding to pollution incidents. If you are determined to be a responsible party, the State will bill you at a later date for State expenditures associated with the pollution incident. Billable State expenditures include the direct cost of State staff time and indirect State overhead costs, as well as

#### SEAN PARNELL, GOVERNOR

contractual and material costs. Billable State staff time includes all time spent on activities related to the incident, including site visits, response and report reviews, telephone conversations, meetings, legal services and interest.

Please respond in writing within thirty (30) days from the date of this letter addressing your intended actions with respect to this pollution incident. If you believe someone else is responsible for this pollution incident or if you have any questions concerning this matter, please contact me at **555 Cordova Street**, **Anchorage, Alaska 99501; 907-269-8685; or grant.lidren@alaska.gov**.

Sincerely,

Drent S

Grant Lidren Environmental Specialist

cc: Bill Janes, Section Manager, CS/ Juneau via email Cassidy Kearney, Operations Manager, SPAR/Juneau via email Kamie Willis, Dept. of Law/ Anchorage via email