Starfield Resources Inc.

Fuel Storage Containment Area

Water Treatment Program

Ferguson Lake Camp

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December 22, 2009

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Executive Summary

TGCL has been retained by Starfield Resources Inc. (Starfield) to provide environmental engineering consulting services in association with the treatment of accumulated wastewater from a lined fuel storage containment area at Starfield's Ferguson Lake Camp at Ferguson Lake, Nunavut.

The purpose of the work was to assist Starfield in selecting a suitable technology to facilitate waste water treatment and effluent discharge in compliance with applicable federal regulatory criteria and to provide on-site independent verification of water quality.

TGCL provided technical assistance to Starfield regarding the selection of an appropriate pump and treat system to facilitate the dewatering and treatment of the accumulated water. The system consisted of a modular pump and physical filtration and adsorption (TM100 and Activated Carbon) treatment units. The system was recommended and supplied by Filter Innovations Inc. of Toronto, Ontario.

TGCL also provided Starfield with technical assistance regarding the preparation of work plans and schedules to INAC in response to the requirements of an Indian and Northern Affairs Canada (INAC) Inspector's Direction.

TGCL travelled to the site with Starfield staff in September 2009. TGCL collected raw water samples from the containment area for laboratory analysis to determine the quality of the raw water in relation to INAC discharge criteria. TGCL also provided assistance to Starfield with the commissioning of the pump and treat system during the initial and final phases of the project.

The pump and treat system was initially operated for a period of six hours with the treated effluent being discharged back to the containment system. Confirmatory water samples were collected from the treated effluent discharge for laboratory analysis. The results of the laboratory analysis were used by TGCL to confirm that the treated effluent met the INAC discharge criteria, calculate the actual treatment efficiency of the system and to calculate the required media replacement frequency. The results of the initial test treatment program were summarized in a interim report by TGCL while on-site and provided to INAC on September 28, 2009 in support of application to operate the pump and treat system with full scale treated effluent discharge.

INAC provided written approval to proceed with the full scale operation of the pump and treat system on September 29, 2009. The pump and treat system was operated for a period of approximately 24 hours until freezing of the interconnecting piping precluded further operation. A total of 54,500 L was estimated to have been removed from the containment area and treated prior to discharge. TGCL collected a single water sample from the treated effluent discharge line during the continuous operation for laboratory analysis.

The results of the laboratory analysis indicate that the quality of the treated effluent was in compliance with INAC discharge criteria.

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1.0 Introduction

TGCL has been retained by Starfield Resources Inc. (Starfield) to provide environmental engineering consulting services in association with the treatment of accumulated wastewater from a lined fuel storage containment area at Starfield's Ferguson Lake Camp at Ferguson Lake, Nunavut.

On September 14, 2009, Starfield was issued a written directive (Inspectors Direction) by Indian and Northern Affairs Canada (INAC) to de-water the containment area and to ensure that effluent quality was in compliance with the applicable regulatory criteria. The Inspectors Direction was issued as a result of observations made during an inspection of the site on August 11, 2009. A copy of the Inspectors Direction is included in Appendix A.

The purpose of the work was to assist Starfield in selecting a suitable technology to facilitate water treatment and effluent discharge in compliance with applicable federal regulatory criteria and to provide on-site independent water quality monitoring.

1.1 Scope of Work

The Scope of Work for the project was developed in conjunction with Ms. Allison Rippin-Armstrong, Environmental Manager with Starfield and documented in a letter proposal to Fred Mason, Vice President of Operations with Starfield dated August 28, 2009. Since the initial proposal, the Scope of Work has changed based on correspondence between Indian and Northern Affairs Canada (INAC) and Starfield. The final Scope of Work is for the project is presented below:

1.1.1 Initial Engineering and Draft Plan Submission

- Consultation with Starfield regarding the selection of appropriate treatment technologies, pumping requirements and discharge configuration.
- Provide assistance to Starfield in preparing a de-watering program, including liaison with INAC regarding appropriate discharge limits.
- Provide assistance to Starfield with the preparation of a work plan for the program for submission to INAC for review and approval prior to implementation.

1.1.2 Initial Site Work

- Travel to the site with Starfield staff.
- Completion of an initial water volume survey and preparation of a preliminary estimate of the volume of accumulated water in the containment area.
- Collect initial water samples from the containment area for laboratory analysis to determine water quality compared to INAC discharge criteria.
- Provide assistance to Starfield with the installation and commissioning of the treatment system.
- Provide assistance with the start-up of the system and monitoring of effluent during an initial treatment phase. Treated effluent to be discharged to secondary containment or back to the fuel storage containment area.

- Collection of representative water samples from the treated effluent discharge line for laboratory analysis to determine treated water quality compared to INAC discharge criteria.

- Compare laboratory analytical results from un-treated and treated water samples to determine:

    - Treatment efficiency of water treatment system.
    - Media replacement frequency to ensure adequate contaminant removal in compliance with INAC discharge criteria.

- Preparation of Interim Report outlining the results of the preliminary tasks noted above.

1.1.3 Final De-Watering, Treatment and Disposal

- Provision of technical assistance for continuous discharge operation of the treatment system including discharge piping configuration and location.

- Collection of representative water samples of the treated effluent during continuous discharge for laboratory analysis to ensure effluent meets INAC discharge criteria.

- Document treatment system configuration and discharge location with photographs.

- Preparation of a Final Report outlining the results of the confirmatory laboratory analysis, summarizing the total volume of water treated and discharged and providing recommendations for future de-watering programs.

2.0 Methodology

2.1 Initial Engineering and Draft Plan Submission

2.1.1 Pump and Treat System Selection

TGCL provided technical assistance and advice regarding the selection of an appropriate pump and treat technology to remove and treat the accumulated water in the fuel storage containment area at Ferguson Lake Camp.

The selection of treatment system components was based on assumptions of water quality in the accumulated water as there was no opportunity to obtain representative water samples for laboratory analysis prior to selecting and procuring an appropriate treatment technology for delivery to site prior to freeze up. Based on the contents of the containment area (i.e. fuel drums, fuel bladders, fuel tanks), it was assumed that impacts consisted mainly of petroleum hydrocarbon (PHC) parameters. A review of available treatment technologies was completed with a focus on the following performance parameters:

- Treatability of various PHC impacts in water at varying concentrations.
- Modularization and suitability for air transport to remote site.
- Ease of operation.
- Expandability.

Details on the treatment system are presented in Section 3.1 of this report.

2.1.2 Draft Plan Submission

TGCL also provided technical assistance to Ms. Allison Rippin-Armstrong, Environmental Manager with Starfield during the preparation of draft work plans and schedules for submission to INAC. TGCL provided assistance to Starfield regarding the selection of an appropriate methodology and work plan to complete the project. Specifically, TGCL provided assistance with water sampling plans, initial test treatment plans, and final de-watering plans.

2.2 Initial Test Treatment

The initial test treatment portion of the project involved running the treatment system for a period of 6 hours in order to facilitate the collection of treated effluent water samples for laboratory analysis. The results of the laboratory analysis for the water samples were used as a basis for the determination of actual treatment system efficiencies and the calculation of required media replacement frequency in order to meet the INAC discharge criteria during continual pumping and treating.

The specific methodology followed for the initial phase of the project is documented in the Interim Report included in Appendix B.

2.3 Final De-Watering, Treatment and Disposal

The final de-watering, treatment and disposal phase was started immediately upon receipt of approval to proceed from INAC on September 29, 2009. The pump and treat program was run for approximately 24 hours.

TGCL assisted Starfield with the monitoring of the effluent discharge visually for the duration of the de-watering program to ensure that there was no erosion and that there was no visible sheen on the effluent. In addition, a single water sample (ES1) was collected from the effluent discharge line by TGCL during the continuous discharge of treated effluent on September 30, 2009 for laboratory analysis.

The results of the laboratory analysis of the treated water were used to confirm the treatment efficiency of the system and that effluent water quality was within the regulatory discharge limits provided by INAC.

Details on the results of the final de-watering, treatment and disposal portion of the project are provided in Section 3.3 of this report.

2.4 Effluent Quality Criteria

The following effluent discharge criteria were provided by INAC in the Inspectors Direction, dated September 14, 2009. INAC did not reference any federal guidelines for these parameters.

Parameter Maximum Average	Concentration	Maximum Allowable Grab
pH	6.0 to 9.5	6.0 to 9.5
TSS	25 mg/L	50 mg/L
Oil and Grease	15 mg/L and no visible sheen	15 mg/L and no visible sheen
Benzene	370 µg/L	370 µg/L
Toluene	2 µg/L	2 µg/L
Ethylbenzene	90 µg/L	90 µg/L
Lead	1 µg/L	1 µg/L
Al	1.5 µg/L	1.5 µg/L

2.5 Additional Parameters

The discharge criteria provided by INAC do not encompass the typical overall range of PHC parameters used in other jurisdictions for water quality compliance. By utilizing the above parameters only, it is possible that discharged water may contain some levels of PHC parameters (such as Xylenes or PHC Fractions F1 to F4) that would be considered detrimental to the environment in other jurisdictions. Typically, discharge criteria for PHC's in water include the following parameters:

- Volatiles: Benzene, Ethylbenzene, Toluene and Xylenes
- PHC Fractions: PHC Fractions F1, F2, F3 and F4

This project was initiated by Starfield as a pilot project in support of the development of a long term fuel management plan in addition to complying with INAC directions for the de-watering program. As such, and in consideration of the overall protection of the environment and mitigation of potentially adverse

environmental effects over the long term, Starfield elected to expand the number of discharge parameters voluntarily.

The following additional parameters were therefore added by Starfield in consultation with TGCL:

- PHC Fractions F1 and F2: Maximum combined concentration 1000 µg/L. While no known federal or territorial guideline exists for these parameters, the Ontario Ministry of Environment imposes these concentrations for groundwater on sites with potable groundwater users in the vicinity. Using these discharge parameters is anticipated to be sufficient to protect groundwater and surface water resources at the site.

- PHC Fractions F3 and F4: Maximum combined concentration 1000 µg/L. While no known federal or territorial guideline exists for these parameters, the Ontario Ministry of Environment imposes these concentrations for groundwater on sites with potable groundwater users in the vicinity. Using these discharge parameters is anticipated to be sufficient to protect groundwater and surface water resources at the site.

- Xylenes: Maximum concentration 72 µg/L. While no known federal or territorial guideline exists for these parameters, the Ontario Ministry of Environment imposes this concentration on surface water through the Public Water Quality Objectives (PWQO). Using this discharge parameter is anticipated to be sufficient to protect groundwater and surface water resources at the site.

3.0 Results

3.1 Initial Engineering and Draft Plan Submission

3.1.1 Treatment System

The initial engineering completed as part of this project involved the selection if an appropriate pump and treat technology for the project based on assumed water quality characteristics. Based on the remote location of the Ferguson Lake Camp, some assumptions regarding the water quality were required (i.e. impacts limited to PHCs) in order to provide alternative treatment technology options to Starfield. In addition, assumptions were made regarding the quantity of water to be removed from the containment area based on correspondence from INAC as well as information provided by Starfield. The volume of water was estimated to be between 350,000 liters and 500,000 liters based on these preliminary data sources prior to visiting the site.

The treatment system selected by Starfield consisted of the following components, listed in order of flow path direction , as supplied by Filter Innovations Inc., of Toronto, Ontario.

- 50 mm diameter reinforced polyethylene intake line fitted with a backflow prevention valve.
- Grundfos multi-staged end suction transfer pump.
- Effluent from the pump is split to two parallel treatment chains. Each treatment chain contains the following:
    - One Filter Innovations Model FSEB112-2P-SW Bag Filter Housing. The bag filter contains Filter Innovations Model FOS P2P 1 micron filter bags. Filter bags are fitted with hydrocarbon absorbing media to increase hydrocarbon removal efficiency in addition to suspended solids removal.
    - One Filter Innovations Model FII55WAT-CSI-TM100 Modified Organo-Clay contactor vessel. The vessel contains TM-100 treatment media designed to removed larger chain dissolved PHCs (PHC fractions F3 and F4).
    - Two Filter Innovations Model FII55WAT-CSI-1240S Activated Carbon contactor vessels in series. The vessel contains coconut shell activated carbon treatment media designed to remove smaller chain dissolved petroleum hydrocarbons (Benzene, Toluene, Ethylbenzene, Xylene and PHC fractions F1 and F2). The first vessel removes the majority of the PHCs while the second acts as a polishing unit.
- A single 50 mm diameter reinforced polyethylene effluent disposal line.
- Approximately 25 m of 100 mm diameter perforated effluent diffusion header to distribute the treated effluent and reduce the potential for erosion.

The treatment system configuration is illustrated on Drawing C001, attached. Photo 1 (attached) shows a general overview of the treatment system configuration at the site.

3.1.2 Draft Plan Submission

TGCL provided technical assistance to Starfield during the preparation of a Draft Work Plan to INAC in response to the September 14, 2009 INAC Inspectors Order. The Draft Work Plan was submitted to INAC by Starfield on September 17, 2009.

3.2 Initial Test Treatment

The results of the initial test treatment phase of the project are presented in the Interim Report (Appendix B).

The Interim Report for the initial test treatment phase was prepared on site and provided to Starfield. Starfield submitted the report to INAC and along with a formal request for approval to commence de-watering, treatment and discharge on September 28, 2009. Starfield received written (email) correspondence from INAC approving the de-watering, treatment and discharge of water from the containment system on September 29, 2009.

3.2.1 Raw Water Quality

The results of the laboratory analysis of the water samples are provided in Table 1 (attached). Laboratory Analytical Certificates are attached. The results indicate that the raw water quality exceeded the discharge criteria for toluene and PHC fractions F3 and F4 only, based on average concentrations. The average concentrations of remaining parameters were below the criteria.

The average concentrations of all parameters in the treated effluent were below the discharge criteria.

3.2.2 Media Saturation Time

Using the media saturation values provided by the system manufacturer, un-treated water parameter concentrations, calculated removal efficiencies and volumetric flow rate, the following media consumption rates and lifespans were calculated.

Parameter	Average Inlet Concentration (mg/L)	Volumetric Flow Rate (L/day)	Daily Mass Loading (kg/day)	Removal Efficiency (%)	Total Available Capacity (kg)	Media Lifespan (days)
Oil and Grease	2.9	54,509	0.158	55	68	783
Benzene, Toluene, Ethylbenzene and Xylenes	0.00456	54,509	0.000249	99.9	51	204,819
Petroleum Hydrocarbon Fractions F1-F4	1.989	54,509	0.108	99.4	68	630

3.3 Final De-Watering Treatment and Disposal

Following receipt of INAC approval to discharge treated water directly to the environment, the final de-watering, treatment and disposal portion of the project was commenced on September 29, 2009 and completed on October 30, 2009. The following sections provide detailed specific information regarding the results this stage of the project.

3.3.1 Effluent Disposal

The final treated effluent disposal configuration consisted of a 50 mm diameter effluent disposal line fed into approximately 25 m of 100 mm diameter perforated effluent diffusion header to reduce effluent velocity and prevent scour and erosion of the local surface vegetation and soils (tundra).

The effluent disposal system was located outside the bermed area approximately 15 m to the northeast. Effluent disposal was monitored throughout the pumping and treatment process. The location of the effluent disposal system as well as the treatment system are shown on Drawing C001 (attached). Photo 2 and Photo 3 (attached) show the effluent disposal piping and header during discharge.

Discharged water was noted to flow evenly over the tundra and eventually percolate into the surface soils in the area. No erosion or scour was noted during the discharge operations.

3.3.2 Duration

The final de-watering, treatment and disposal portion of the project was completed for a total duration of approximately 24 hours. Pumping was commenced on September 29, 2009 and was stopped on September 30, 2009 due to below 0 ^{O} Celsius temperatures. Water in the 25 mm diameter transfer piping between treatment unit components was noted to be freezing. Therefore, the treatment system was shut down and moved to the on-site shop building for storage.

3.3.3 Volume

Based on a pump flow rate of 10 USGPM, and a total operating time of 24 hours, the total volume of water discharged was approximately 54,500 liters.

The initial estimate of the total volume of water contained in the facility was 350,000 liters to 500,000 liters. During the initial phase of the project, a depth survey was conducted resulting in a lower estimate of 200,000 liters (Interim Report, Appendix B). Following the completion of the final de-watering, treatment and disposal portion of the project, the volume of water remaining in the containment area appeared to be substantially less than what would be expected with 200,000 liters being retained before de-watering began (Photo 4). Therefore, it is assumed that less than 200,000 liters of water was actually in the containment area at the start of the project. The difference in water quantity is attributed to displacement from fuel bladders, above ground storage tanks and drums.

The presence of ice precluded the completion of a second water quantity survey, however, based on a visual analysis, the volume of water remaining in the facility after the pump and treat project is estimated to be less than 100,000 liters.

3.3.4 Water Quality

A single water sample was collected on September 30, 2009 from the treated effluent discharge pipe and submitted to ALS Laboratories for analysis.

The results of laboratory analysis indicate that concentrations of all applicable discharge parameters were below the applicable INAC discharge criteria. Concentrations of lead and aluminum were noted to increase in the treated effluent, however, as compared to concentrations in the raw untreated water samples. The results of laboratory analysis are presented in Table 1 (attached) and laboratory analytical certificates are attached (Appendix C).

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4.0 Discussion

4.1 Volume

Based on cold temperatures, and the freezing of interconnecting piping of the treatment system, the entire volume of accumulated water could not be removed and treated. A total of 54,500 L of water was pumped and treated for discharge. Therefore, additional water removal should be completed after spring melt.

4.2 System Suitability

With respect to treatment efficiency for PHC parameters, the treatment system performed well. However, metal concentrations (lead and aluminum) were noted to increase in the treated effluent as compared to the concentrations in the raw, untreated water. While the concentrations were below the applicable INAC discharge criteria, the reason for the increase in concentrations should be further investigated and, if required, additional treatment components (such as activated alumina for metals removal) should be considered.

Additionally, the observed operational problems (i.e. freezing) of the treatment system piping during relatively mild cold temperatures (i.e. slightly below 0 degrees Celsius) is a notable operational concern. The site location (i.e. Canadian Arctic) is often subject to extreme temperature and weather conditions and such issues should be addressed to prevent freezing of the system during regular operation. This could include heating and/or insulating critical components.

4.3 Regular Dewatering

The fuel storage containment area will be subject to accumulated water on a regular basis during the operation of the exploration site at Ferguson Lake. Therefore, there will be a requirement for regular dewatering of the facility.

4.4 Water Quality Monitoring

A similar water quality monitoring program to that implemented during this project should be maintained during the spring and subsequent regular de-watering programs. Initial water samples should be collected from accumulated water and submitted for laboratory analysis to determine if the water quality is in compliance with the INAC discharge criteria.

If initial water quality results indicate that the accumulated water does not exceed the INAC discharge criteria, Starfield will be able to discharge directly (with INAC approval). If the water quality does not meet the INAC discharge criteria, Starfield should implement a similar pump and treat program with effluent samples being collected every 24 hours for laboratory analysis to demonstrate that treated effluent continually meets the discharge criteria.

5.0 Closure

The information and data contained in this report, including without limitation, the results of any sampling and analyses conducted by TGCL pursuant to its Agreement with the client, have been developed or obtained through the exercise of TGCL's professional judgment and are set forth to the best of TGCL's knowledge, information and belief. Although every effort has been made to confirm that this information is factual, complete and accurate, TGCL makes no guarantees or warranties whatsoever, whether express or implied, with respect to such information or data.

The information and data presented in this report are based on the purpose and scope of the project and form the basis for any conclusions and recommendations presented herein. Any conclusions and recommendations presented herein do not preclude the existence of environmental concerns other than those that may have been identified.

Work performed by TGCL personnel employed sound environmental assessment principles. TGCL cannot guarantee the accuracy and reliability of information provided by others or third parties. Therefore, TGCL does not claim responsibility for undisclosed environmental concerns or conditions that may result in costs for environmental cleanup and/or remediation. This report is intended for information purposes only.

Respectfully submitted by:

True Grit Consulting Ltd.

REGISTERED PROFESSIONAL ENGINEER
A.R. HUNT
LICENSEE
NWT/NU

PERMIT TO PRACTICE
TRUE GRIT CONSULTING LIMITED
Signature
Date December 22, 2009
PERMIT NUMBER: P 678
NWT/NU Association of Professional Engineers and Geoscientists

Gus Hunt, P.Eng.
Senior Environmental Engineer
ghunt@tgcl.ca

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Tables

Table 1
Summary of Water Analytical Results
Starfield Resources, Fuel Containment Area Dewatering and Treatment
Ferguson Lake Exploration Camp, Ferguson Lake, Nunavut

Sample ID	Sample Date	pH	TSS	Oil and Grease	Lead	Allmunium	Benzene	Toluene	Ethylbenzene	Xylenes	Petroleum Hydrocarbon Fractions			
											F1 (C6-C10)	F2 (>C10-C16)	F3 (>C16-C34)	F4 (>C34)
Units		pH Units	mg/L	mg/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
BT1	21-Sep-09	8.42	<3	2.3	0.40	0.040	<0.50	1.31	<0.50	5.10	<100	<250	320	<250
BT2	21-Sep-09	8.38	<3	2.3	0.44	0.041	<0.50	1.58	<0.50	5.20	<100	<250	280	<250
BT3	21-Sep-09	8.37	3.0	3.0	0.44	0.039	<0.50	1.36	<0.50	0.52	<100	<250	400	<250
BT4	21-Sep-09	8.39	9.0	6.1	0.61	0.085	<0.50	1.22	<0.50	0.71	<100	2080	4290	840
BT5	21-Sep-09	7.95	<3	1.8	0.42	0.044	<0.50	0.72	<0.50	<0.50	<100	<250	270	<250
BT6	21-Sep-09	8.37	<3	2.1	0.38	0.040	<0.50	1.90	<0.50	1.25	<100	<250	300	300
Average		*8.31*	*4.0*	*2.9*	*0.45*	*0.048*	*<0.50*	*1.35*	*<0.50*	*2.56*	*<100*	*555*	*977*	*357*
AT1	23-Sep-09	8.78	<3	1.8	0.72	0.084	<0.50	<0.50	<0.50	<0.50	<250	<250	<250	<250
AT2	23-Sep-09	8.45	<3	<1	1.08	0.040	<0.50	<0.50	<0.50	<0.50	<250	<250	<250	<250
AT3	23-Sep-09	8.67	<3	1.2	0.69	0.083	<0.50	<0.50	<0.50	<0.50	<250	<250	<250	<250
AT4	23-Sep-09	8.53	<3	<1	0.67	0.078	<0.50	<0.50	<0.50	<0.50	<250	<250	<250	<250
Average		*8.61*	*<3*	*1.3*	*0.79*	*0.071*	*<0.50*	*<0.50*	*<0.50*	*<0.50*	*<250*	*<250*	*<250*	*<250*
ES1	30-Sep-09	8.45	<3	<2.0	1.00	0.223	<0.50	<0.50	<0.50	<0.50	<250	<250	<250	<250
Discharge Criteria		**6.0 - 9.5**	**25**	**15**	**1**	**1.5**	**370**	**2.0**	**90**	**72**	**1000**		**1000**	

Notes:
Table to be read in conjunction with accompanying report.
Exceedances Highlighted

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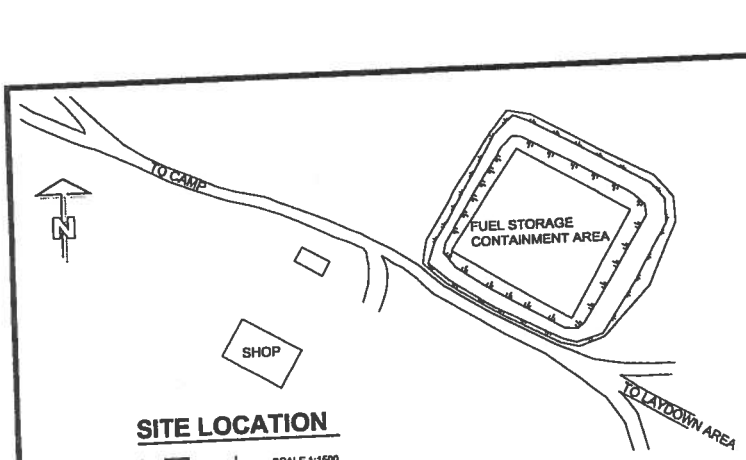
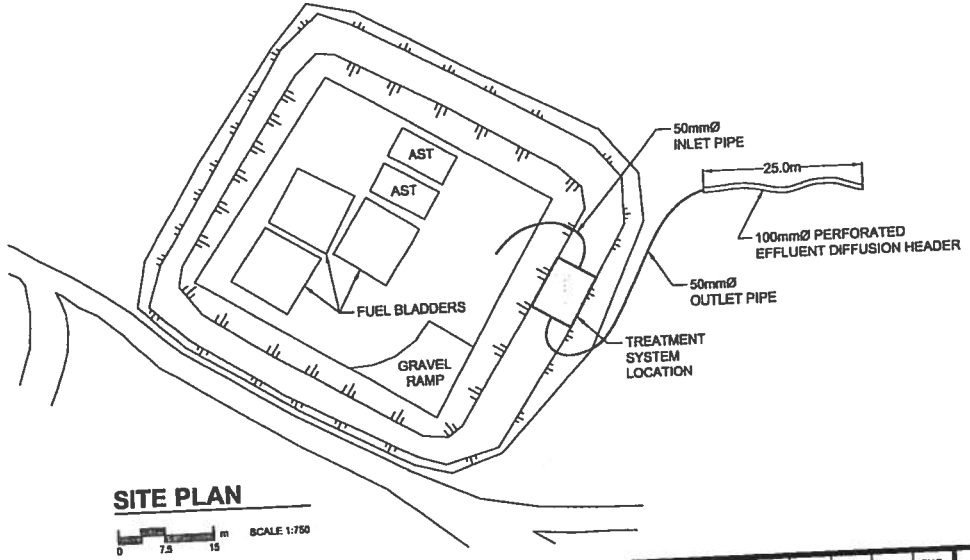
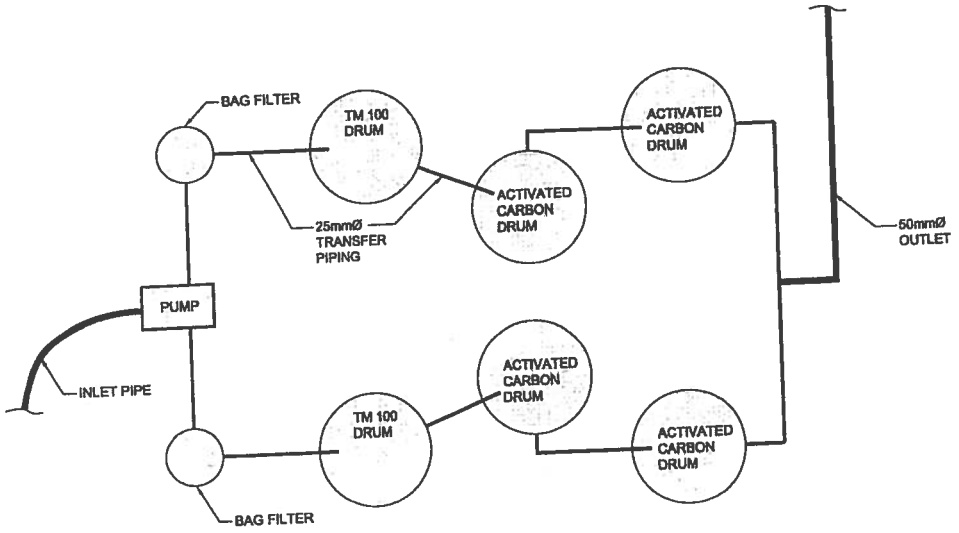
Drawing



SITE LOCATION



SITE PLAN



TREATMENT SYSTEM CONFIGURATION

NTS

File No. 09-067-04E

YY/MM/DD	ISSUE/REVISION DESCRIPTION	DRN	CHK	DES	ENG
		CL	GH	CL	GH

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STARFIELD RESOURCES INC.
FUEL CONTAINMENT AREA
DE-WATERING, TREATMENT AND DISPOSAL
SITE PLAN
FERGUSON LAKE CAMP, NUNAVUT

PROJECT NUMBER	DRAWING NUMBER	ISSUE/REVISION
09-067-04E	C001	A

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Appendix A

INAC Inspector's Direction

Indian and Northern Affairs Canada | Affaires indiennes et du Nord Canada

INSPECTOR'S DIRECTION
Pursuant to Section 87(1) of the Nunavut Waters And Nunavut Surface Rights Tribunal Act

To:
André Douchane
President
Starfield Resources Inc.
130Adelaide Street West,
Suite 2210, Toronto, ON
MSH 3PS

September 14, 2009

- Inspector's Direction -

I, Andrew Keim, a duly designated Inspector pursuant to subsection 85(1) *Nunavut Waters and Nunavut Surface Rights Tribunal Act*, conducted a scheduled water license inspection on August 11th, 2009 on the Starfield Resources Inc Camp on Ferguson Lake, Nunavut.

Upon arrival at the Ferguson Lake Camp on August 11th 2009 the Inspector found a large earthen bermed fuel storage area (constructed in 2008 by Starfield Resources Inc) containing an estimated 1 million litres of water and a mixture of both oil and fuel. Additionally, the Inspector also noted the following;

- A large burn pile inside the perimeter of the quarry.
- A pile of drums some of which were leaking (outside the large bermed area).
- A stack of drums in the large bermed area marked "waste oil" leaking into the water and then overtopping the containment and into the environment.

On September 4th, 2009 the Inspector with the Nunavut Regional Office of the Department of Indian and Northern Affairs Canada (INAC) issued a Record of Inspection Form to Mr. André Douchane, President of Starfield Resources. This report noted the Inspector's observations referred to above.

As stipulated in subsection 12(1)(b) of the Act : Except in accordance with the conditions of a License, no person shall deposit or permit the deposit of waste in any other place in Nunavut under conditions in which the waste, or any waste that results from the deposit of that waste, may enter waters in Nunavut.

Having a reasonable belief that the above occurrences, in whole or in part, have resulted, or may result, in:

(i) ***waste being deposited in contravention of the Act or the Water Licence;***

Pursuant to Section 87(1) of the Act, I hereby direct Starfield Resources Inc. to take the following reasonable measures;

1. To by September 30th 2009 to have designed and implemented a treatment system for the collection and post treatment disposal of contaminated contact water collected within the large bermed area such that the results of testing prior to discharge into the environment meet the following criteria;

Parameter Maximum Average	Concentration	Maximum Allowable Grab
pH	6.0 to 9.5	6.0 to 9.5
TSS	25 mg/L	50 mg/L
Oil and Grease	15 mg/L and no visible sheen	15 mg/L and no visible sheen
Benzene	370 µg/L	370 µg/L
Toluene	2 µg/L	2 µg/L
Ethylbenzene	90 µg/L	90 µg/L
Lead	1 µg/L	1 µg/L
Al	1.5 mg/L	1.5 mg/L

2. Such treatment work is to be completed no later than October 30th, 2009. In the event that such treatment work is not successful in achieving the required sampling results prior to discharge, such contaminated contact water will be stored over winter and on site until such time as treatment can be redone or modified to achieve the required results prior to discharge to the environment.

3. To by October 15th, 2009 contain and collect all contaminated soils on site outside of the large bermed area for disposal at a site approved for the collection and treatment of contaminated waste outside the Nunavut Territory.

4. To by October 15th, 2009 collect and dispose of all garbage and debris on site, and take such measures as are required to prevent the further deposit and distribution of debris.

Failure to comply fully or in part with an **Inspector's Direction** constitutes a offence under subsection 90 (1) of the *Nunavut Waters and Nunavut Surface Rights Tribunal Act.*

Further pursuant to subsection 90 (4) of the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*, each day on which the **Inspector's Direction** is not complied with shall be considered a separate offence.

If you have any questions or concerns, please do not hesitate to contact me at (867) 975-4289 or Andrew.Keim@inac.gc.ca

Andrew Keim — (Original signed and mailed this date)

Inspector — Inspector's Signature

TRUE GRIT
CONSULTING LTD

Appendix B

Interim Report

True Grit Consulting Ltd.
1127 Barton Street
Thunder Bay, ON P7B 5N3
T 807.626.5640 F 807.623.5690 www.tgcl.ca

TRUE GRIT CONSULTING LTD

September 28, 2009

Project No. 09-067-04E

VIA EMAIL (fmason@starfieldres.com)

Ms. Allison Rippin Armstrong
Director of Environment and Permitting
Starfield Resources Inc.
130 Adelaide Street West, Suite 2210
Toronto, ON M5H 3P5

Dear Ms. Rippin Armstrong:

Re: Interim Report for the Treatment and Discharge of Accumulated Storm and Melt Water from the Fuel Storage Containment Area, Starfield Resources Ferguson Lake Camp.

As requested, True Grit Consulting Ltd. (TGCL) is pleased to provide this Interim Report for the above noted project.

Background Information

TGCL has been retained by Starfield Resources Inc. (Starfield) to provide environmental consulting services involving the treatment of accumulated stormwater and meltwater from a lined earthen bermed fuel storage containment area at the Ferguson Lake Camp. TGCL provided initial consultations regarding the specification of appropriate treatment technologies as well as on-site services involving the commissioning of the system, collection and analysis of before treatment and after treatment water samples and determination of removal efficiencies of the system based on the water quality results in order to determine the required media replacement frequency.

This Interim Report is intended to serve as a basis for regulatory review and subsequent approval for the continuous discharge of treated effluent as outlined in correspondence to Starfield from Indian and Northern Affairs Canada (INAC).

Methodology

A total of six (6) representative water samples (BT1 to BT6) were collected at different locations from the accumulated stormwater within the containment area upon arrival at Ferguson Lake and prior to commissioning the treatment system for laboratory analysis.

A depth survey of the accumulated water was then completed using a graduated depth measuring device in order to facilitate an estimate of the total accumulated stormwater volume.

The treatment system was then assembled and located on the berm of the containment area on a sloped and lined gravel pad to ensure that any leakage would be directed back to the containment area. The system was commissioned and accumulated water was treated and discharged back to the containment area for a total period of six (6) hours in order to facilitate the collection of confirmatory effluent samples for laboratory analysis.

A total of four (4) representative water samples (AT1 to AT4) were collected from the discharge pipe of the treatment system during the six (6) hour test treatment period.

The results of the laboratory analysis of the un-treated and treated water were used to confirm the treatment efficiency of the system and to calculate the required media replacement frequency to ensure that treated water continuously meets discharge criteria provided by INAC.

Results

Analytical Results

The results of the laboratory analysis of the water samples are provided in Table 1 (attached). Laboratory Analytical Certificates are attached. The results indicate that the un-treated water exceeded the discharge criteria for toluene and F3-F4 hydrocarbons only, based on average concentrations. The average concentrations of remaining discharge criteria parameters were below the discharge limits.

The average concentrations of all discharge parameters in the treated effluent were below the discharge criteria.

Volume

Depth survey results indicate that the estimated volume of accumulated water, ignoring displacement, is approximately 200,000 liters. Based on a pumping rate of 10 USGPM (54,509 liters/day), the total estimated volume of water can be pumped out in approximately 3.7 days. Actual pumping times are anticipated to be lower as displacement from existing storage tanks and drums will result in a lower volume of water than estimated.

Removal Efficiency

Theoretical

Based on Case Studies provided by the system manufacturer, the following petroleum hydrocarbon removal efficiencies can be anticipated from the system.

Parameter	Removal Efficiency
Oil and Grease	98.6 %
Benzene, Toluene, Ethylbenzene and Xylenes	99.9 %
Petroleum Hydrocarbon Fractions F1-F4	99.4 %

Actual

Actual removal efficiencies are calculated from analytical results for pre-treatment and post-treatment water samples. As the results for most parameters are below laboratory detection limits for treated samples, actual removal efficiencies are difficult to calculate and therefore theoretical removal efficiencies are considered to be accurate. The exception, Oil and Grease, has a calculated actual removal efficiency of 55%.

Media Saturation Time

Based on information provided by the system supplier, the TM100 and Activated Carbon Media have the following saturation values for Petroleum Hydrocarbon parameters.

TRUE GRIT CONSULTING LTD

Parameter	Media Type	Saturation Value (% by Mass)	Total Mass of Media (kg)	Total Available Capacity (kg)
Oil and Grease	TM100	0.25	272	68
Benzene, Toluene, Ethylbenzene and Xylenes	Activated Carbon	0.171	300	51
Petroleum Hydrocarbon Fractions F1-F4	TM100	0.25	272	68

Using the above presented media saturation values, un-treated water parameter concentrations and volumetric flow rate, the following media consumption rates and lifespans are calculated.

Parameter	Average Inlet Concentration (mg/L)	Volumetric Flow Rate (L/day)	Daily Mass Loading (kg/day)	Removal Efficiency (%)	Total Available Capacity (kg)	Media Lifespan (days)
Oil and Grease	2.9	54,509	0.158	55	68	783
Benzene, Toluene, Ethylbenzene and Xylenes	0.00456	54,509	0.000249	99.9	51	204,819
Petroleum Hydrocarbon Fractions F1-F4	1.989	54,509	0.108	99.4	68	630

Non-detect concentrations were included in the calculations based on the laboratory detection limit.

Discussion

The results of the laboratory analysis, removal efficiency and media lifespan calculations indicate that there is sufficient media absorptive capacity in the existing treatment system to support a total continuous pumping time of 630 days. It is important to note that although the calculated media lifespan for activated carbon is approximately 204,819 days, this media should be replaced on the same frequency as the TM100 media. Activated carbon can be anticipated to lose absorptive capacity over time as the available pore spaces may be filled with compounds other than the petroleum hydrocarbon parameters of interest. In addition, should the inlet water quality change, a re-evaluation of the media removal rates should be completed in order to ensure discharge concentrations are within the regulatory limits.

Recommendations

Based on the laboratory analysis and above calculations, media replacement is not required during the anticipated pumping period to dewater the existing volume of contained water within the fuel storage containment area. In order to ensure adequate media absorptive capacity in the future, media removal is recommended after this year's pumping program. Subsequent pumping and treating operations should be completed after initial water quality data is collected and the above analysis is completed to ensure adequate media capacity and effective media replacement frequencies.

As per direction from INAC, once continuous discharge is approved, additional confirmatory water samples should be collected from the treated effluent should be collected on a daily basis (i.e. once every 24 hours) and submitted for laboratory analysis.

Closure

Ms Allison Rippin Armstrong
Starfield Resources Inc.
Proposal No. 09-067-04E
September 28, 2008

TRUE GRIT CONSULTING LTD

Thank you for the opportunity to be of service to Starfield Resources. Should you have any questions or require further information, please do not hesitate to contact the undersigned at 807.626.5640, Ext. 228.

Sincerely,

TRUE GRIT CONSULTING LTD.

Gus Hunt
ghunt@tgcl.ca

Attachment: Table 1: Summary of Water Analytical Results
Laboratory Analytical Certificates

CC: Mr. Fred Mason, Starfield Resources Inc.

TRUE GRIT CONSULTING LTD

Tables

Table 1
Summary of Water Analytical Results
Starfield Resources, Fuel Containment Area Dewatering and Treatment
Ferguson Lake Exploration Camp, Ferguson Lake, Nunavut

Sample ID	Sample Date	pH	TSS	Oil and Grease	Lead	Allmunium	Benzene	Toluene	Ethylbenzene	Xylenes	Petroleum Hydrocarbon Fractions			
											F1 (C6-C10)	F2 (>C10-C16)	F3 (>C16-C34)	F4 (>C34)
Units		pH Units	mg/L	mg/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
BT1	21-Sep-09	8.42	<3	2.3	0.40	0.040	<0.50	1.31	<0.50	5.10	<100	<250	320	<250
BT2	21-Sep-09	8.38	<3	2.3	0.44	0.041	<0.50	1.58	<0.50	5.20	<100	<250	280	<250
BT3	21-Sep-09	8.37	3.0	3.0	0.44	0.039	<0.50	1.36	<0.50	0.52	<100	<250	400	<250
BT4	21-Sep-09	8.39	9.0	6.1	0.61	0.085	<0.50	1.22	<0.50	0.71	<100	2080	4290	840
BT5	21-Sep-09	7.95	<3	1.8	0.42	0.044	<0.50	0.72	<0.50	<0.50	<100	<250	270	<250
BT6	21-Sep-09	8.37	<3	2.1	0.38	0.040	<0.50	1.90	<0.50	1.25	<100	<250	300	300
Average		*8.31*	*4.0*	*2.9*	*0.45*	*0.048*	*<0.50*	*1.35*	*<0.50*	*2.56*	*<100*	*555*	*977*	*357*
AT1	23-Sep-09	8.78	<3	1.8	0.72	0.084	<0.50	<0.50	<0.50	<0.50	<250	<250	<250	<250
AT2	23-Sep-09	8.45	<3	<1	1.08	0.040	<0.50	<0.50	<0.50	<0.50	<250	<250	<250	<250
AT3	23-Sep-09	8.67	<3	1.2	0.69	0.083	<0.50	<0.50	<0.50	<0.50	<250	<250	<250	<250
AT4	23-Sep-09	8.53	<3	<1	0.67	0.078	<0.50	<0.50	<0.50	<0.50	<250	<250	<250	<250
Average		*8.61*	*<3*	*1.3*	*0.79*	*0.071*	*<0.50*	*<0.50*	*<0.50*	*<0.50*	*<250*	*<250*	*<250*	*<250*
Discharge Criteria		6.0 - 9.5	25	15	1	1.5	370	2.0	90	72	1000		1000	

Notes:
Table to be read in conjunction with accompanying report.
Exceedances Highlighted

TRUE GRIT CONSULTING LTD

Laboratory Analytical Certificates

STARFIELD RESOURCES INC.

130 Adelaide Street West
Suite 2210
P.O. Box 8
Toronto, ON M5H 3P5
T: 416.860.0400
F: 416.860.0822
Toll Free: 1.877.233.2244

September 27, 2009

Mr. Andrew Keim
Inspector
Department of Indian and Northern Affairs Canada
Nunavut Regional Office
Building 553
PO Box 100
Iqaluit, Nunavut X0A 0H0

Telephone: 867 975 4289
Fax: 867 975 4560

Dear Mr. Keim:

RE: Analytical Results of Water Samples

Further to the update submitted to you on September 24th, 2009 please find enclosed the analytical results of the water samples collected within the fuel storage area prior to any treatment and those collected following treatment. In addition, this letter provides the information referred to in the Technical Review Memorandum which you sent on September 24th.

We are pleased to report that the treatment system is functioning as predicted which is indicated by the analytical results reported herein. In response to the query regarding the filter bag being used, Model FOS P2P is a nominal sub-micron triple layer filter bag, with an inner bag of 5 micron polyester felt, middle layer polypropylene melt blown and an outer layer mesh.

In your Inspector's Direction, you provided the following discharge criteria:

Parameter Maximum Average	Concentration	Maximum Allowable Grab
pH	6.0 to 9.5	6.0 to 9.5
TSS	25 mg/L	50 mg/L
Oil and Grease	15 mg/L and no visible sheen	15 mg/L and no visible sheen

Parameter Maximum Average	Concentration	Maximum Allowable Grab
Benzene	370 µg/L	370 µg/L
Toluene	2 µg/L	2 µg/L
Ethylbenzene	90 µg/L	90 µg/L
Lead	1 µg/L	1 µg/L
Al	1.5 mg/L	1.5 mg/L

Additionally, Starfield, in consultation with True Grit, recommended the following be added to ensure adequate protection of the environment:

a. Petroleum Hydrocarbon Fractions F1 and F2: Maximum combined concentration 1000 µg/L.
b. Petroleum Hydrocarbon Fractions F3 and F4: Maximum combined concentration 1000 µg/L.
c. Xylenes: Maximum concentration 72 µg/L.

A description of the sampling program thus far and a summary of the analytical results can be found in the appended document provided by Gus Hunt of True Grit Consulting. In summary, six representative water samples were collected from within the fuel storage area to determine the water quality (which has been used in calculating the mass balance equation, see appended document). The treatment system was constructed, mounted and positioned on the upper side of the fuel storage area within a lined, bermed containment. Water was pumped through the system for a total of seven (7) hours with the water being pumped back in to the fuel storage containment area except while pumped to additional secondary containment for the purposes of collecting four (4) samples of the treated water. In total, ten (10) samples were sent to ALS Environmental Laboratory for analyses, six (6) 'before treatment' (BT) and four (4) 'after treatment' (AT).

The analytical results (see appended document) indicate that for each petroleum hydrocarbon parameter, with the exception of Oil and Grease, the water was treated to below detection limits. However, for the purposes of calculating the mass balance to determine the removal efficiency of the media within the system, detection limits were used thus providing an additional safety factor in calculating media saturation time. The calculation (see appended document), given the current water quality within the fuel storage area, indicates a media saturation time of 630 days based on continuous pumping, however, as an additional safety factor the media will be changed upon completion of this dewatering program.

As previously stated in earlier correspondence, we estimate that there is approximately 200,000L of water within the fuel storage area. The drums that were scattered within the fuel storage area are being collected and re-stacked in neat rows within the fuel storage area. The two enviro-tanks that are within the fuel storage area will be removed and will sit on the upper edge of the fuel storage area (which has liner and geotextile fabric and slopes back in to the fuel storage area).

Starfield, in consultation with True Grit, recommend sampling the discharge water at 24 hour intervals during dewatering and collecting a final sample prior to shutting the system down. Given the estimate of 200,000L and a pumping/treating rate of 10 gallons/minute, treatment and dewatering of the fuel storage area would take eighty-eight (88) hours. However, since the estimate of 200,000L excludes allowances for the displacement of the storage tanks, fuel bladders and barrels contained within the fuel storage area, we anticipate that the actual time required to treat and dewater will be significantly reduced.

If the plan submitted by Starfield is not approved, the water will remain within the fuel storage area over winter. Starfield will return to site in the spring, remove snow prior to melt and will incorporate a batch treatment system once the ice has melted and the water can be treated. The total volume of water that the

fuel storage area could hold without concern for the integrity of the berm is approximately 2,400,000L. If we assume that the accumulated snow melts (with no sublimation rate factored) and knowing the water content of snow to be 10 percent, we can estimate that if no snow is removed prior to melt an additional 317,000L could potentially accumulate within the fuel storage area. If we add this volume to the estimated 200,000L already contained within the fuel storage area, there could be a total volume of 517,000L next spring. Therefore, there is ample capacity to contain the predicted volume of water without jeopardizing the integrity of the berm should the need for a batch treatment system arise.

If the treatment and dewatering plan is approved, a final report will be submitted with information on the total volume of water treated and discharged, the discharge location (coordinates will be provided), all water sample analytical results, the amount of treatment media used, a summary of any operational problems encountered and how they were resolved. Photographs will be included in the final report. A separate report will be submitted which addresses the other issues outlined in the Inspector's Direction, including how waste, generated from clean up activities, has been stored and/or disposed of, disposal locations where applicable, a summary of the activities conducted on site and a description of work that will be ongoing. Photographs will also be included in the report.

If you have any additional questions, please do not hesitate to contact me via email at fmason@starfieldres.com.

Yours truly,

Fred Mason
VP Operations

Cc Phyllis Beaulieau, Nunavut Water Board
Bernie MacIsaac, INAC
Peter Kusugak, INAC
Kevin Buck, INAC
Tanya Trenholm, INAC
Dave Abernathy, INAC
Luis Manzo, Kivalliq Inuit Association
Stephen Hartman, Kivalliq Inuit Association
Gus Hunt, P.Eng., True Grit Consulting Ltd.
Andre Douchane, Starfield Resources
Sylvia Sawers, Starfield Resources
Allison Rippin Armstrong, Starfield Resources

Attachment: True Grit Consulting Interim Report for the Treatment and Discharge of Accumulated Storm and Melt Water From the Fuel Storage Containment Area, Starfield Resources Ferguson Lake Camp.

TRUE GRIT CONSULTING LTD

Appendix C

Laboratory Certificate

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

Certificate of Analysis

TRUE GRIT CONSULTING LTD.
ATTN: GUS HUNT
1127 BARTON STREET
THUNDER BAY ON P7B 5N3

Report Date: 09-OCT-09 15:08 (MT)
Version: FINAL

Lab Work Order #: L826051 **Date Received:** 02-OCT-09

Project P.O. #:
Job Reference: 09-067-04E
Legal Site Desc: FERGUSON LAKE
CofC Numbers: 08-061430

Other Information:

Comments:

Karen Rutledge
Account Manager

THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL WITHOUT THE WRITTEN AUTHORITY OF THE LABORATORY.
ALL SAMPLES WILL BE DISPOSED OF AFTER 30 DAYS FOLLOWING ANALYSIS. PLEASE CONTACT THE LAB IF YOU REQUIRE ADDITIONAL SAMPLE STORAGE TIME.

ALS LABORATORY GROUP ANALYTICAL REPORT

	Sample ID	L826051-1
	Description	SURFACE WATE
	Sampled Date	30-SEP-09
	Sampled Time	12:00
	Client ID	ES1

Grouping	Analyte	
WATER		
Physical Tests	Total Suspended Solids (mg/L)	5.6
Total Metals	Aluminum (Al) (mg/L)	0.233
	Lead (Pb) (mg/L)	0.0010
Aggregate Organics	Oil and Grease, Total (mg/L)	<2.0
Volatile Organic Compounds	Benzene (ug/L)	<0.50
	Ethyl Benzene (ug/L)	<0.50
	Toluene (ug/L)	<0.50
	o-Xylene (ug/L)	<0.50
	m+p-Xylenes (ug/L)	<1.0
	Xylene, (total) (ug/L)	<1.5
	Surrogate: 2,5-Dibromotoluene (%)	120
Hydrocarbons	F1 (C6-C10) (ug/L)	<100
	F1-BTEX (ug/L)	<100
	F2 (C10-C16) (ug/L)	<100
	F3 (C16-C34) (ug/L)	<250
	F4 (C34-C50) (ug/L)	<250
	Total Hydrocarbons (C6-C50) (ug/L)	<250
	Chromatogram to baseline at nC50	YES
	Surrogate: Octacosane (%)	85

Reference Information

Additional Comments for Sample Listed:

Samplenum	Matrix	Report Remarks	Sample Comments

Methods Listed (If applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)
L-ONT-PWQO-WT	Water	Aluminum (Al) - Total	EPA 200.8
TX-R153-WT	Water	BTEX (O.Reg.153/04)	MOE DECPH-E3421/CCME Tier 1
TL-TVH,TEH-CCME-WT	Water	CCME Total Hydrocarbons	CCME CWS-PHC DEC-2000 - PUB# 1310-L

Analytical methods used for analysis of CCME Petroleum Hydrocarbons have been validated and comply with the Reference Method for the CWS PHC.

In cases where results for both F4 and F4G are reported, the greater of the two results must be used in any application of the CWS PHC guidelines and the gravimetric heavy hydrocarbons cannot be added to the C6 to C50 hydrocarbons.
In samples where BTEX and F1 were analyzed , F1-BTEX represents a value where the sum of Benzene, Toluene, Ethylbenzene and total Xylenes has been subtracted from F1.

In samples where PAHs, F2 and F3 were analyzed, F2-Naphth represents the result where Naphthalene has been subtracted from F2. F3-PAH represents a result where the sum of Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Dibenzo(a,h)anthracene, Fluoranthene, Indeno(1,2,3-cd)pyrene, Phenanthrene, and Pyrene has been subtracted from F3.

Unless otherwise qualified, the following quality control criteria have been met for the F1 hydrocarbon range:
. All extraction and analysis holding times were met.
2. Instrument performance showing response factors for C6 and C10 within 30% of the response factor for toluene.
3. Linearity of gasoline response within 15% throughout the calibration range.

Unless otherwise qualified, the following quality control criteria have been met for the F2-F4 hydrocarbon ranges:
. All extraction and analysis holding times were met.
2. Instrument performance showing C10, C16 and C34 response factors within 10% of their average.
3. Instrument performance showing the C50 response factor within 30% of the average of the C10, C16 and C34 response factors.
4. Linearity of diesel or motor oil response within 15% throughout the calibration range.

1-WT	Water	F1 (O.Reg.153/04)	MOE DECPH-E3421/CCME Tier 1
2-F4-WT	Water	F2-F4 (O.Reg.153/04)	MOE DECPH-E3421/CCME Tier 1
GG-TOT-WT	Water	Oil and Grease, Total	APHA 5520 B-Hexane Gravimetric

Sample is extracted with hexane, extract is then evaporated and the residue is weighed to determine total oil and grease.

B-ONT-PWQO-WT	Water	Lead (Pb) - Total	EPA 200.8
OLIDS-TOTSUS-TB	Water	Total Suspended Solids	APHA 2540 D-Gravimetric

* Laboratory Methods employed follow in-house procedures, which are generally based on nationally or internationally accepted methodologies.
The last two letters of the above ALS Test Code column indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location	Laboratory Definition Code	Laboratory Location
WT	ALS LABORATORY GROUP - WATERLOO, ONTARIO, CANADA	TB	ALS LABORATORY GROUP - THUNDER BAY, ONTARIO, CANADA

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Analytical Method Reference(Based On)

LOSSARY OF REPORT TERMS
Jrr - A surrogate is an organic compound that is similar to the target analyte(s) in chemical composition and behavior but not normally detected in ıviromental samples. Prior to sample processing, samples are fortified with one or more surrogate compounds.
ıe reported surrogate recovery value provides a measure of method efficiency.
g/kg (units) - unit of concentration based on mass, parts per million
g/L (units) - unit of concentration based on volume, parts per million
'A - Result not available. Refer to qualifier code and definition for explanation

ɜst results reported relate only to the samples as received by the laboratory.
ILESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.
'though test results are generated under strict QA/QC protocols, any unsigned test reports, faxes, or emails are considered preliminary.

LS Laboratory Group has an extensive QA/QC program where all analytical data reported is analyzed using approved referenced procedures followed by ıecks and reviews by senior managers and quality assurance personnel. However, since the results are obtained from chemical measurements and thus ınnot be guaranteed, ALS Laboratory Group assumes no liability for the use or interpretation of the results.

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

Chain of Custody / Analytical Request Form
Canada Toll Free: 1 800 668 9878
www.alsglobal.com

COC # **08-061430**

Page 1 of 1

Report to:	**Report Format / Distribution**
Company: TRUE GRIT	Standard: X Other:
Contact: Gus Hunt	Select: PDF X Excel X Digital
Address: 1127 Balmoral St. P7B 5N3 Thunder Bay, ON	Email 1: Gus Tom
	Email 2:
Phone: (807) 626 5640 Fax: (807) 623 5690	
Invoice To: Same as Report ? Yes / No ?	**Client / Project Information:**
Company:	Job #: 04-067-04E
Contact:	PO / AFE:
Address:	Legal Site Description: Ferguson Lake
Phone: Fax:	Quote #:
Lab Work Order # (lab use only):	ALS Contact: Sampler:

Service Requested: (rush - subject to availability)

- X Regular (Default)
- Priority (2-3 Business Days) - 50% Surcharge
- Emergency (1 Business Day) - 100% Surcharge
- For Emergency < 1 Day, ASAP or Weekend - Contact ALS

Analysis Request L826051

(Indicate Filtered or Preserved, F/P)

Sample #	Sample Identification (This description will appear on the report)	Date	Time	Sample Type	BTEX	PHC F1-F4	Total O.I.: Grave	Aluminum : Lead	TSS	Number of Containers
1	ES1	Sept 30		SW	X	X	X	X	X	7

Special Instructions / Regulations / Hazardous Details

Lowest Detection Limit

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY.

By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

SHIPMENT RELEASE (client use only)		RECEPTION (lab use only)				VERIFICATION (lab use only)		
Released by: Tom Bignell	Date & Time: Oct 2. 2009	Received by: CP	Date: 02-Oct-09	Time: 3:50	Temperature: 12.3	Verified by: RFD	Date & Time: Oct 2/09 16:14	Observations: Yes / No ? If Yes attach SIF

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - REPORT COPY, PINK - FILE COPY, YELLOW - CLIENT COPY

GENF 18.00 Front

TRUE GRIT
CONSULTING LTD

Appendix D

Project Photographs

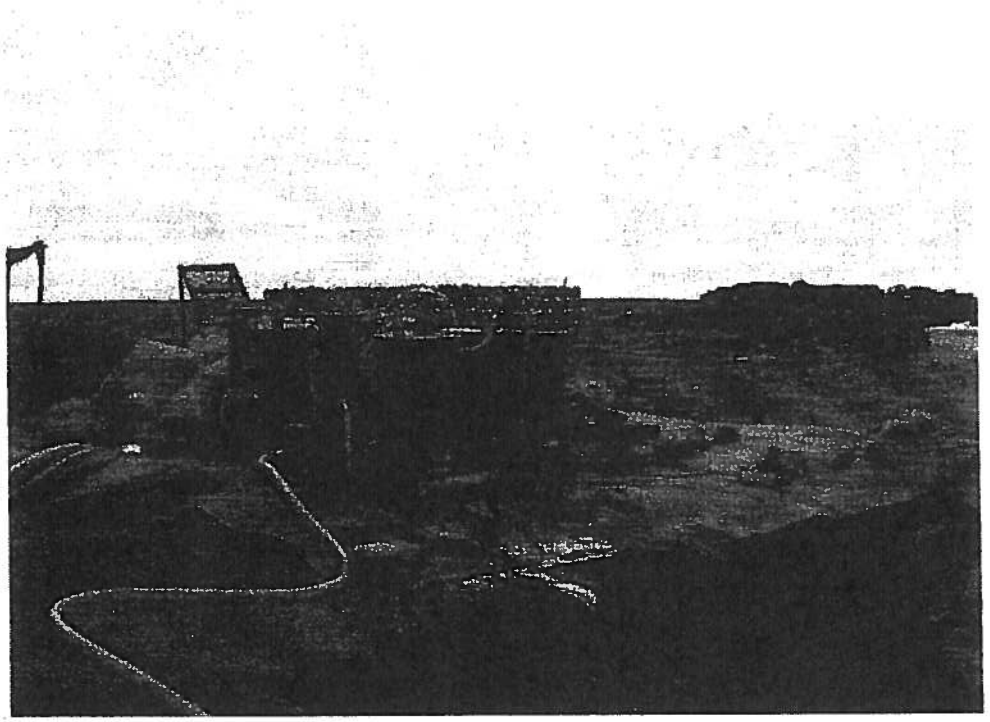

Photo 1 – Pump and Treat System Overview

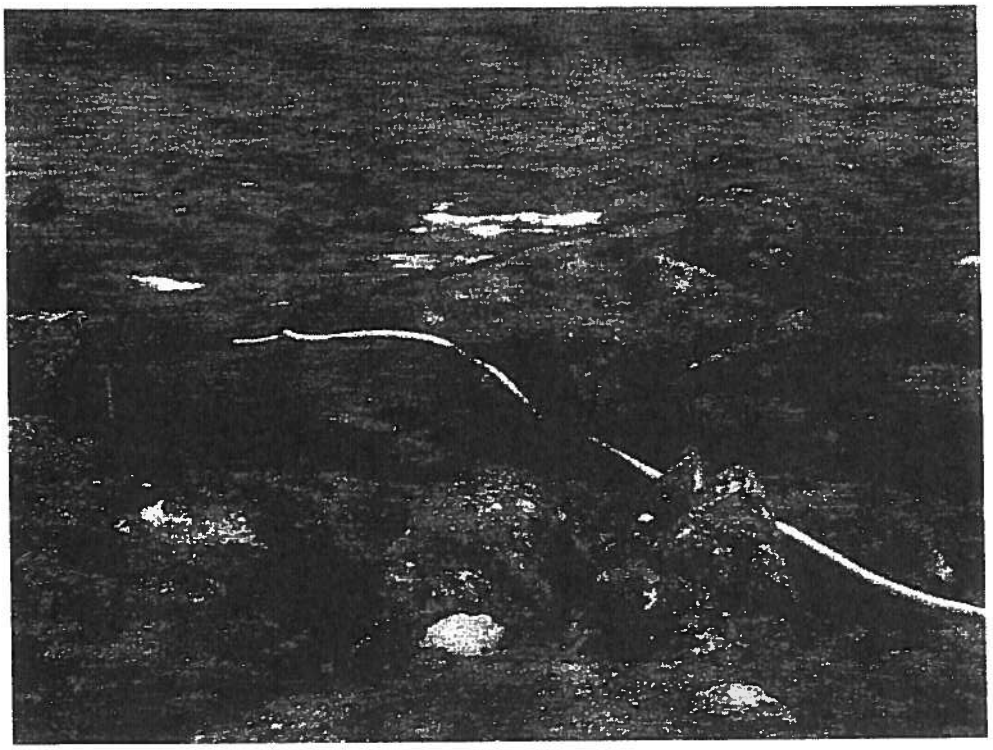

Photo 2 - View of effluent disposal pipe and header

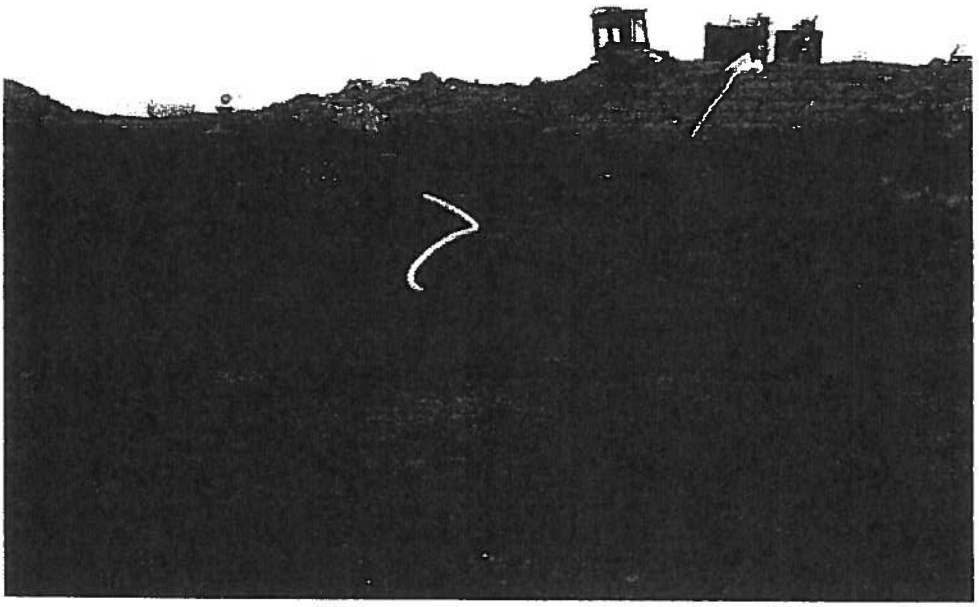

Photo 3 – View of effluent disposal pipe, header and treatment system.

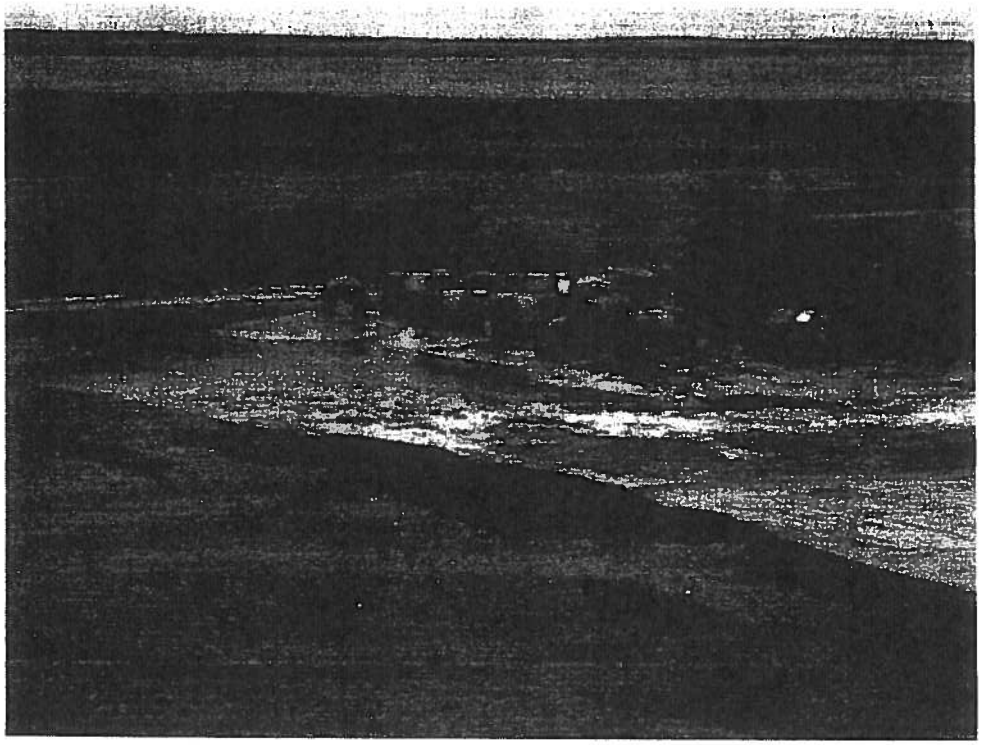

Photo 4 – View of containment area after de-watering showing low water level.