

# **Amaruq exploration project**

Fuel farm spill 1500 L

August 2015

Situation report on

**April, 2017** 

Prepared by:

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### **Introduction**

In August 2015, a fuel spill of 1500 litres occurred at the Amaruq camp fuel farm. This report describes the actions taken to clean up the spill and reclaim the area.

### **Cleaning actions**

#### Phase 1: 2015

The spill occurred by August 6<sup>th</sup>, 2015 and immediate actions to limit the impact were undertaken.

- The spill was stopped as soon as seen by closing the valve.
- Absorbent material was installed to remove the free fuel.
- A trench was dug and absorbent material was installed to intercept the fuel.
- Samples were taken to verify the extent of the contamination.
- The contaminated soil was removed and stored in a temporary berm built for the purpose.

#### Phase 2: 2016

Most of the fuel farm tanks were moved to the new storage area in order to remove the contaminated soil located under the tanks.

- Contaminated soil was removed progressively using sampling results to locate remaining contamination.
- Absorbent material continued to be used.
- Berm extension was built to store additional contaminated soil.
- Sampling continued to be done in the excavation to detect contamination.
- Decontamination continued until winter weather stopped works.

## Sampling data

The sampling data are compared with the GN Agricultural/Wildland remediation criteria.

**Table 1: Remediation criteria** 

	Criteria (mg/kg)					
Parameter	Agricultural/	Industrial				
	Wildland	muusmai				
Benzene	0.03	0.03				
Toluene	0.37	0.37				
Ethylbenzene	0.082	0.082				
Xylene	11	11				
PHC Fraction 1	30	320				
PHC Fraction 2	150	260				
PHC Fraction 3	300	1700				
PHC Fraction 4	2800	3300				

Table 2: 2015, September 3<sup>rd</sup> sampling results

	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Sample 6	Sample 7	Sample 8	Sample 9	Sample 10
Parameter	10/3/2015	10/3/2015	10/3/2015	10/3/2015	10/3/2015	10/3/2015	10/3/2015	10/3/2015	10/3/2015	10/3/2015
PHC Fraction 1	0.6	0.4	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
PHC Fraction 2	190	610	<10	<10	160	<10	<10	1900	390	130
PHC Fraction 3	<50	<50	<50	<50	76	<50	<50	<50	<50	<50
PHC Fraction 4	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50

Table 3: 2016, August and September sampling results

						Ethylben	Xylènes				
		Humidity	C10-C50	Benzene	Toluene	zene	totals	PHC F1	PHC F2	PHC F3	PHC F4
Sample	Date	%	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
S-1	9/7/2016	12.2	<30	<0.03	<0.06	<0.06	<0.06	<0.06	69	<50	<50
S-2	9/7/2016	11.6	<30	<0.03	<0.06	<0.06	<0.06	<0.06	18	<50	<50
S-3	9/7/2016	15.5	427	<0.03	<0.06	<0.06	0.1	0.1	600	120	<50
S-4	9/7/2016	14.7	62	<0.03	<0.06	<0.06	<0.06	<0.06	110	56	<50
S-5	9/7/2016	18.1	339	<0.03	<0.06	<0.06	0.2	0.2	650	84	<50
S-6	9/7/2016	14.6	701	<0.03	<0.06	<0.06	0.5	0.5	730	100	<50
S-11	8/27/2016	12.2	<30	<0.03	<0.06	<0.06	<0.06	<0.3	11	<50	<50
S-12	8/27/2016	14.2	<30	<0.03	<0.06	<0.06	<0.06	<0.3	99	<50	<50

## **Pictures**



Figure 1: Backhoe excavating contaminated soil



Figure 2: Temporary contaminated soil storage



Figure 3: Remaining contamination area

## **Conclusion**

Around 250 m³ of soil were excavated and stored in 2016 from the spill area for a total of 300 m³. The temporary contaminated soil storage berm was extended to store additional contaminated soil. Progress was made in 2016, but the results showed a residual contamination. Rehabilitation is planned to be finalized in 2017 and additional sampling will be done to confirm closure of this file.