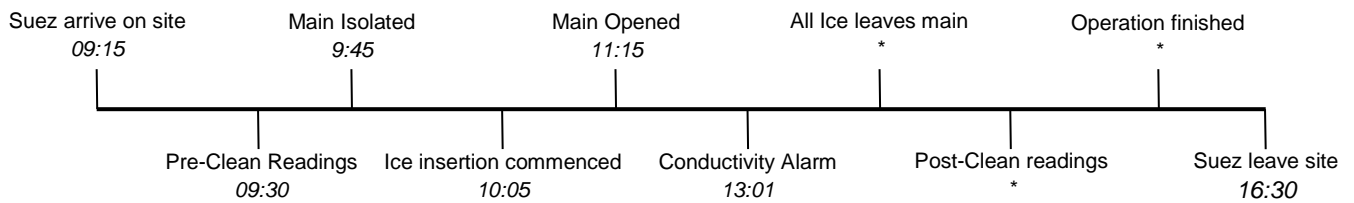


## Operational Report

### Run Details

<b>Client:</b>		<b>Pipe Length:</b>	2500m
<b>Date:</b>	22/11/2016	<b>Pipe Diameter:</b>	150mm
<b>Location:</b>	Lanškroun	<b>Material:</b>	CI (2000m) + PVC (500m)
<b>Insertion Point:</b>	Albrechtice	<b>Volume of ice:</b>	10,1 m3
<b>Discharge Point:</b>	Lanškroun	<b>Ice fraction:</b>	75%
<b>Usage:</b>	Potable Supply	<b>Total water used:</b>	*80m3

### Site Procedure



### Results Summary

<i>Pre and post clean</i>		
Parameter:	Pre-Clean	Post-Clean
<b>Turbidity (NTU)</b>	200 (max displayed)	21.1*
<b>Temperature (°C)</b>	8.4	7*
<b>Pressure (BAR)</b>	4.3	4.3
<b>Conductivity (mS/cm)</b>	0.35	0.7

<b>Ambient Temp (°C)</b>	8	<b>Lowest Temperature Reached (°C)</b>	5.1	<b>Maximum Flow Rate (l/sec)</b>	5.4
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### Sample Photograph

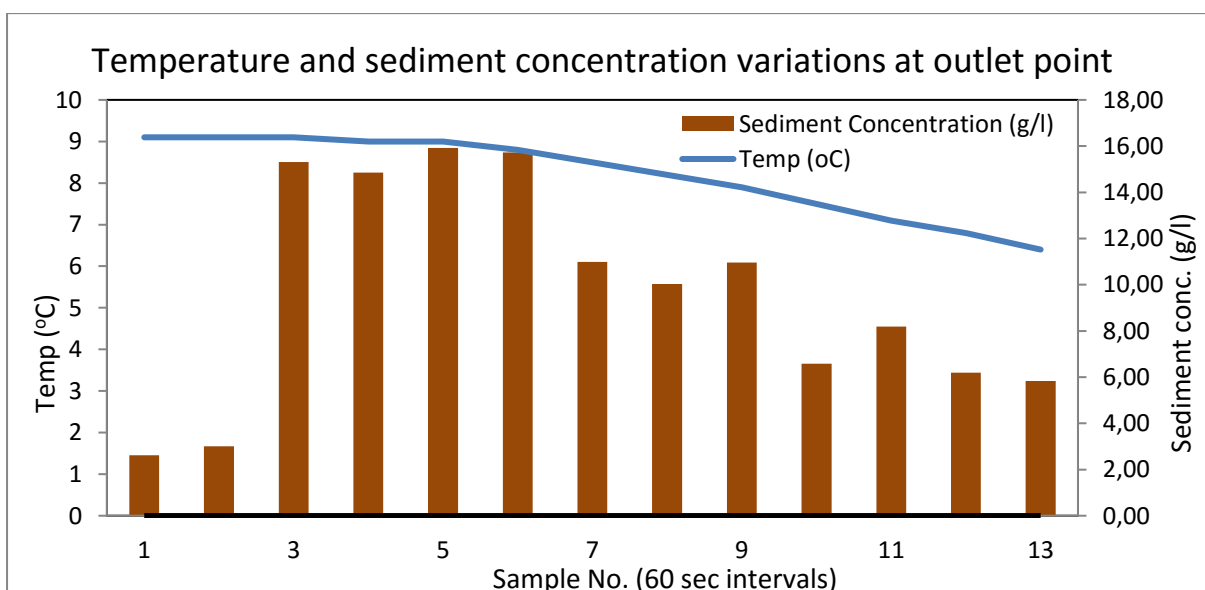


*Samples collected from outlet (earliest on left)*

### Temperature and Sediment Data

Sample #	Time (s)	Flow Rate (l/s)	Temp (°C)	Conductivity (mS/cm)	Sample Mass (g)	Sediment Mass (g)	Sediment Concentration (g/l)			
1	0	5.17	9.1	4.26	364.57	0.9	2.62			
2	180	5.22	9.1	39.42	364.02	1.03	3.00			
3	360	5.08	9.1	51.06	372.39	5.38	15.31			
4	540	5.27	9	64.64	375.84	5.27	14.86			
5	720	5.29	9	65.76	378.61	5.69	15.92			
6	900	5.27	8.8	68.34	378.28	5.66	15.73			
7	1080	5.25	8.5	67.57	368.39	3.84	10.98			
8	1260	5.29	8.2	61.04	367.13	3.47	10.03			
9	1440	5.29	7.9	45.82	382.57	3.96	10.96			
10	1620	5.29	7.5	43.89	376.92	2.34	6.58			
11	1800	5.48	7.1	41.64	378.98	2.93	8.19			
12	1980	5.62	6.8	35.27	363.78	3.19	6.19			
13	2160	5.37	6.4	29.51	370.71	2.83	5.83			
<b>Sediment Removed (kg):</b>					<b>120.02</b>			<b>Sediment Removed per km (kg)</b>		<b>48.01</b>

The above values are calculated from samples collected on site. For each sample the flow rate and the sediment concentrations are assumed to remain constant for the duration of the sampling period. The total sediment mass is estimated by multiplying the sediment concentration and the volume of water in each sampling period.



## Ice Pigging Summary

Operation Time



\*

Volume of Sediment Removed



**\*120.02kg**

Water Used



**2X Pipe Volume**

## Notes

- \*It is calculated that 120.02 Kg of sediment was removed from this section of main during the sampling period. The sediment concentration was very high during the post flushing so it is estimated that a very large amount of sediment was removed from this water main.  
\*Je kalkulováno, že 120,02 kg sedimentu bylo odstraněno z této sekce potrubí jen během času vzorkování. Koncentrace sediment byla velmi vysoká i během následného proplachu, takže je předpokládáno odstranění většího celkového množství sedimentu.
- No ice was received at the outlet due to the low flow rate in the main. The ice stayed in the main for 3 hours after the insertion. This was a long period of time, especially for this type of pipe, so all the ice was melted and the lowest temperature achieved was 5.1 °C.  
Na výstupu nevyšel led díky nízkému průtoku v potrubí. Led zůstal v potrubí 3 hodiny po vtlačení. To je dlouhá doba, speciálně pro tento typ potrubí, takže všechen led se rozpustil a nejnižší dosažená teplota byla 5,1 °C.

**SUEZ**

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