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2019 ANNUAL NUNAVUT WATER BOARD

REPORT FOR FOX-M

FOR THE
North Warning System

Contract # W8485-100224/001/NX
SOW Ref: 16.F.5.d

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EXECUTIVE SUMMARY IN ENGLISH FOLLOWS

RCL ΔL ΔP (O&M) ΔP (NWS),
 FOX-M, ΔC (NWS)
 ΔC (NWS).

ΔΓ‘₆Σ₆σ₆▷₆Σ₆ FOX-M 2019-Γ‘▷▷▷₆ 938.1 Ρ<↖₆Σ₆ Γ‘ΔΔ‘, Σ₆σ₆δ₆Σ₆ 2.6 Ρ<↖₆Σ₆ Γ‘ΔΔ‘▷₆ ΔC▷₆. ΔΓ‘₆▷₆Σ₆σ₆ Ρ<↖₆▷₆ ΣΔΗ₆Γ‘₆ FOX-M Ι₆Σ₆Δ₆ ΔΓ‘₆ ΛΔ₆Σ₆σ₆ Ρ₆Δ₆▷₆Δ₆Γ‘₆ (Δ₆Γ‘₆ Ρ₆Δ₆▷₆Δ₆Γ‘₆) Δ₆Π₆Λ₆Δ₆ Ρ₆▷₆Δ₆Γ‘₆.

“**W**hat is the best way to learn English?”
This is a question that many people ask.
There are many ways to learn English,
but the most effective way is to practice
speaking and writing English as much as possible.
You can do this by talking to native speakers,
reading English books and articles,
watching English movies and TV shows,
and listening to English music.
You can also use English language learning
websites and apps to practice your grammar,
vocabulary, and pronunciation.
Remember that learning English is a process,
and it takes time and effort to become fluent.
So, don’t give up and keep practicing!

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EXECUTIVE SUMMARY

This 2019 Annual Report for the Nunavut Water Board (NWB) has been prepared by Raytheon Canada Limited (RCL) for the Department of National Defence in order to meet the requirements of Part B "General Conditions", paragraph 1 of its licence. Water licence 3BC-FOH0919 was in effect from 01 January until it was replaced with licence 8BC-FOH1929 on 01-Sep-2019. This report covers 01 January to 31 December 2019.

RCL is the Operation and Maintenance Contractor for the North Warning System (NWS), including FOX-M, the attended (manned) NWS radar site located at Hall Beach, Nunavut.

The water usage at FOX-M in 2019 was 938.1 cubic meters, which is an average of 2.6 cubic meters per day. There is no water usage limit in the licence for FOX-M because water is drawn from an artificial (man-made) reservoir and not from a natural source.

Sewage at FOX-M was processed by the tertiary wastewater treatment system. Some of the treated effluent is recycled as on site urinal/toilet flush water. The discharged treated effluent is of potable water quality. A sample of the treated effluent was sent for laboratory analysis each month in 2019.

Samples of the water contained in the berms of fuel storage facilities was tested on-site using hydrocarbon test strips and confirmed to be within effluent quality limits of the NWB licence before the water was pumped out of the berms.

Hazardous waste, including waste oil, was sent to an approved hazardous waste disposal site outside of Nunavut as required by the licence. The hazardous waste was shipped to Qikiqtaaluk Environmental, through their subcontractor Veolia, 2630, boul. Industriel, Chambly, QC J3L 4V2. The hazardous waste consisted of 155 drums of assorted waste (oil, fuel, glycol, etc.), 11 crates of waste batteries, and 18 pails of waste oil.

Non-hazardous domestic solid waste was disposed of at the local landfill through a contract with the Hamlet of Hall Beach. RCL has documented authorization from the community for receiving the waste.

Three outdoors spills occurred at FOX-M in 2019:

4. NT-NU Spill Line Report Number 19-223. A failed flexline was discovered. A portable berm was placed under the drip stopping the release to the environment. A small amount of impacted gravel was removed. The flexline was put back in place to prevent other material from entering the line while awaiting the replacement flexline.
5. NT-NU Spill Line Report Number 19-227. Staff found the flexline from spill 19-223 leaking once again. The impacted soil was removed, the piping down slope was drained, and the failed flexline was replaced with blind flanges until a new flexline could be installed
6. NT-NU Spill Line Report Number 19-287. The auto stop handle failed the shut off the flow of fuel once the vehicle was full, which resulted in a Jet A1 release of approximately 5 L. The impacted soil was collected and transferred to a drum for off site disposal.

The Spill Contingency Plan was successfully implemented.

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1.0 INTRODUCTION

This 2019 Annual Report for the Nunavut Water Board (NWB) has been prepared by Raytheon Canada Limited (RCL) for the Department of National Defence in order to meet the requirements of Part B "General Conditions", paragraph 1 of its licence. Water licence 3BC-FOH0919 was in effect from 01 January until it was replaced with licence 8BC-FOH1929 on 01-Sep-2019. This report covers 01 January to 31 December 2019.

RCL is the Operation and Maintenance Contractor for the North Warning System (NWS), including FOX-M. FOX-M is an attended (manned) North Warning System radar site located at Hall Beach, Nunavut.

1.1 Report Details

Licensee: Department of National Defence, Government of Canada
Licence: 3BC-FOH0919 – Type "B" from 01-Jan-2019 until it was replaced on 01-Sep-2019 with 8BC-FOH1929 – Type "B"
Location: FOX-M North Warning System Site, Hall Beach, Qikiqtani Region, Nunavut
Report Prepared by: Raytheon Canada Limited, 18-Mar-2020
Time period covered: 01 January to 31 December 2019

2.0 WATER USE

The water usage at FOX-M in 2019 was 938.1 cubic meters, which is an average of 2.6 cubic meters per day. See Table 2-1 for the volume of water drawn at FOX-M each month in 2019.

There is no water usage limit in the licence for FOX-M because water is drawn from an artificial (man-made) reservoir and not from a natural source.

Table 2-1: Monthly Raw Water Usage at FOX-M in 2019

Month	Raw water usage (m ³)
January	82.5
February	89
March	73
April	68.5
May	71
June	79
July	90.5
August	93
September	89.5
October	86.1
November	53.5
December	62.5
TOTAL	938.1

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3.0 TREATED SEWAGE DISCHARGE

At FOX-M, the sewage and grey water were both processed through a Cycle-let® advanced tertiary wastewater treatment system. Some of the treated water is recycled as urinal/toilet flush water; the remainder is discharged at the designated outfall and is potable water quality. See Table 3-1, for the volume of sewage and grey water treated by the Cycle-let® system. See **Section 6.0 – Monitoring Program** for details on sewage effluent monitoring.

Table 3-1: Monthly and Annual Volume of Sewage and Grey Water Treated at FOX-M in 2019

Month	Volume of sewage and greywater treated then discharged or recycled (m ³)
January	81.3
February	89.0
March	73.0
April	68.5
May	71.0
June	79.0
July	85.5
August	93.0
September	89.5
October	86.1
November	53.5
December	62.5
TOTAL	931.9

4.0 HAZARDOUS WASTE AND WASTE OIL DISPOSAL

Hazardous waste, including waste oil, was sent to an approved hazardous waste disposal site outside of Nunavut as required by the licence. The hazardous waste was shipped to Qikiqtaaluk Environmental, through their subcontractor Veolia, 2630, boul. Industriel, Chambly, QC J3L 4V2. The hazardous waste consisted of 155 drums of assorted waste (oil, fuel, glycol, etc.), 11 crates of waste batteries, and 18 pails of waste oil.

See Table 4-1 for the list of items sent for disposal.

See **Annex A: Hazardous Waste and Waste Oil Disposal in 2019** for the shipping documents including the completed movement documents for waste regulated under the Transportation of Dangerous Goods Regulations (TDGR) and NWS Manifests for non-regulated waste.

Table 4-1: Hazardous Waste and Waste Oil Sent for Disposal from FOX-M in 2019

Description, TDG shipping name	Quantity	Movement Document or Manifest #
Waste Jet A1 fuel and water mixture		
Waste fuel, aviation, turbine engine mixture	48 Drums	Movement Document 2464178-9
Waste aerosols (flammable)	1 Drum	Movement Document 2464178-9
Waste paint, flammable	4 Drums	Movement Document 2464178-9
Waste paint		

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Description, TDG shipping name	Quantity	Movement Document or Manifest #
Waste Jet A1 fuel	24 Drums	Movement Document 2464179-7
Waste fuel, aviation, turbine engine		
Waste Jet A1 fuel fuel filters	4 Drums	Movement Document 2464179-7
Waste solids containing flammable liquids, n.o.s (fuel, aviation, turbine engine)		
Waste fuel contaminated soil	14 Drums	Movement Document 2464179-7
Waste solids containing flammable liquids, n.o.s (fuel, aviation, turbine engine)		
Waste POL soaked absorbent	2 Drums	Movement Document 2464179-7
Waste solids containing flammable liquids, n.o.s (fuel, aviation, turbine engine)		
Waste oily rags	7 Drums	Movement Document 2464179-7
Waste solids containing flammable liquids, n.o.s (fuel, aviation, turbine engine)		
Waste Jet A1 fuel soaked sorbent	4 Drums	Movement Document 2464179-7
Waste solids containing flammable liquids, n.o.s (fuel, aviation, turbine engine)		
Waste batteries, wet, filled with acid	6 Crates	Movement Document 2581507-7
Waste batteries, wet, non-spillable	5 Crates	Movement Document 2581507-7
Waste petroleum distillates n.o.s.	1 Drum	Movement Document 2581507-7
Waste oil	39 Drums	NWS Manifest TCN40035, TCN40036, TCN40037, TCN40038, TCN40039, TCN40040, TCN40041, TCN40042, TCN40138, TCN40145, TCN40147
Not TDG regulated		
Waste oil	18 Pails	NWS Manifest TCN40173
Not TDG regulated		
Waste Activated Carbon Filter	7 Drums	NWS Manifest TCN40071, TCN40078, TCN40139
Not TDG Regulated		

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5.0 NON-HAZARDOUS SOLID WASTE DISPOSAL

Non-hazardous domestic solid waste was disposed of at the local landfill through a contract with the Municipality of Hall Beach. RCL has documented authorization from the community for receiving the waste. See Table 5-1 for the quantity of non-hazardous waste generated.

Table 5-1: Non-hazardous Domestic Solid Waste Sent for Disposal from FOX-M in 2019

Month	Waste Generated (kg)
January	1222
February	1184
March	1184
April	864
May	1095
June	864
July	5393
August	1291
September	1238
October	1145
November	860
December	1064
TOTAL	17,404

6.0 MONITORING PROGRAM

In 2019, a monitoring program was implemented at FOX-M as required by the water licence. The monitoring program included the following:

1. Volume of raw water drawn from the reservoir (FOH-1). The raw water monitoring information is shown in **Section 2.0 Water Use**.
2. Quality of sewage discharged from the final discharge point of the sewage treatment facility (FOH-2). The location of the sewage effluent outfall is shown in **Annex B: Treated Sewage Effluent Outfall (CDL-2) Location with Coordinates**, including coordinates. The treated sewage was sampled monthly. The results of the analyses are shown in **Annex C: Analysis of Treated Sewage Effluent**.
3. Quality of the water contained in the berms of fuel storage facilities prior to discharge (FOH-3) was analyzed using hydrocarbon test strips and confirmed within the effluent quality limits listed in the water licence, Part D. The coordinates and the results of the analysis are shown in **Annex D: Location of Bermed Fuel Storage Facilities and Analysis of Berm Water**. All samples met the effluent requirements of the water licence, Part D.
4. Final Discharge Point from the Landfarm (FOH-4). No landfarm has been established at FOX-M, so this monitoring station remains inactive.

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7.0 SPILLS (UNAUTHORIZED DISCHARGES)

Table 7-1: Unauthorized Discharges at FOX-M in 2019

Date, NT-NU Spill #	Product	Quantity	Cause and follow-up action	On-site location
29-May-2019, Spill # 19-223	Jet A1	10 L	<p>On 29-May-2019, a technician completing preventive maintenance discovered fuel dripping from a flexline. There was no obvious damage to the flexline. A portable berm was placed under the drip stopping the release to the environment. The piping to the flexline was isolated, drained, and temporarily withdrawn from service.</p> <p>Approximately 0.5 m³ of impacted gravel was removed.</p> <p>The flexline was put back in place to prevent other material from entering the line while awaiting the replacement flexline.</p>	Beach Pumphouse (68°46'23.55"N, 81°12'47.52"W)
03-Jun-2019, Spill # 19-227	Jet A1	10 L	<p>Following the leak found on 29-May-2019 (19-223), the failed flexline was removed, but had to be put back into place or else the system would have been left open. On 02-Jun-2019, the flexline was inspected with no sign of leak. On 03-Jun-2019 the flexline was inspected and was found leaking. It was determined that fuel down slope of the flexline expanded into the failed flexline. Impacted gravel was removed and catch containment placed under flex line at this time.</p> <p>The piping down slope of the flexline was drained and the failed flexline was replaced with blind flanges.</p> <p>On 22Jun2018, a new flexline was installed.</p>	Beach Pumphouse (68°46'23.55"N, 81°12'47.52"W)
11-Jul-2019, Spill # 19-278	Jet A1	3 L	<p>On 11Aug2019 site personnel were refuelling one of the site pickup trucks at vehicle refueller tank W21E. The auto stop handle failed the shut off the flow of fuel once the vehicle was full, which resulted in a Jet A1 release of approximately 5 L. The impacted soil was collected and transferred to a drum for off site disposal.</p>	Vehicle Refueller Tank W21E (68°45'41"N, 81°13'31"W)

The Spill Contingency Plan was successfully implemented.

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8.0 REVISIONS TO THE SPILL CONTINGENCY PLAN

The Spill Contingency Plan was updated on 29-Mar-2019. An updated copy of the Spill Contingency Plan has been submitted to the NWB with this annual report.

9.0 PROGRESSIVE RECLAMATION WORK UNDERTAKEN

No progressive reclamation work was undertaken in 2019.

10.0 ACRONYMS

Table 10-1: Acronyms

Acronym	Definition
n.o.s	Not Otherwise Specified
NWB	Nunavut Water Board
NWS	North Warning System
PCB	Polychlorinated Biphenyl
RCL	Raytheon Canada Limited
TDGR	Transportation of Dangerous Goods Regulations

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ANNEX A: HAZARDOUS WASTE AND WASTE OIL DISPOSAL IN 2019

The 2019 Movement Document for TDG Regulated waste and NWS Manifests for non-TDG Regulated waste described in Table 4-1 are below.

MOVEMENT DOCUMENT / MANIFEST DOCUMENT DE MOUVEMENT / MANIFESTE

This Movement document/manifeste conforms to all federal and provincial transport and environmental legislation.
Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport.

2464178-9

<p>A Generator / consignor Producteur / expéditeur</p> <p>Registration No. / Provincial ID No. N° d'immatriculation - état/provincial NUG 100003</p> <p>Company name / Nom de l'entreprise DEFENCE OF NATIONAL DEFENCE C/O RCL</p> <p>Mailing address / Adresse postale City / Ville Province Postal code / Code postal 22 WING BLDG 101 HORNEAU HEIGHTS ON N0H 1P3</p> <p>E-mail / Courrier électronique Tel. No. / N° de tél. 705 494-2011 EXT 17861</p> <p>Shipping site address / Adresse du lieu de l'expédition City / Ville Province Postal code / Code postal NUS LSS HALL BEACH PO BOX 46</p> <p>Intended Receiver / consignee Récipientinaire / destinataire prévu OKIGIAALUK ENVIRONMENTAL C/O RCL</p> <p>Mailing address / Adresse postale City / Ville Province Postal code / Code postal 9935 DEC HATEAUVE ENTRANCE 1 SUITE 200</p> <p>E-mail / Courrier électronique Tel. No. / N° de tél. BROSSARD QC J4Z 3V4 1-866-634-6367</p> <p>Receiving site address / Adresse du lieu de réception City / Ville Province Postal code / Code postal VEOLIA 2630 BOUL INDUSTRIAL</p> <p>City / Ville Province Postal code / Code postal CHAMBLEY QC J3L 4V2</p> <p>Prev. code Code prov. (i) *WASTE, PAINT</p> <p>Shipping name Appellation réglementaire (ii) *WASTE, AEROSOLS</p> <p>(iii) WASTE, FUEL, AVIATION</p> <p>(iv) ** TURBINE, ENGINE</p> <p>(v) WASTE, FUEL, AVIATION</p> <p>(vi) ** TURBINE ENGINE, MIXTURE</p> <p>Notice No. N° de notification (i) *FLASH POINT 40°C</p> <p>(ii) ** FLASH POINT 21°C</p> <p>(iii) *** FLASH POINT 38°C</p> <p>Notice Line No. N° de ligne de la notification Shipment Envoyé Off. De D or R code Code E or R C code C C code C Bassel Annex VIII or OECD Code Annexe VIII de l'OCDE ou Code OCDE H code Code H Y code Code Y Export Expédition Import Importation Customs code(s) Code(s) des douanes</p> <p>Class / Classe⁵ Sub. classe(s) Chambre(s) 3 UN 1263 III 370 KG 2 01 L</p> <p>6 Packing / réfr. gr. Gr. d'emballage à risque 7 Quantité expédiée Quantité expédiée Ltr ou Kg Unité 8 Unité de Unité de Pkg. cont. Codes I4-Etc. Phys. stat. Etat phys. 9</p> <p>10</p> <p>11</p> <p>12</p> <p>13</p> <p>14</p> <p>15</p> <p>16</p> <p>17</p> <p>18</p> <p>19</p> <p>20</p> <p>21</p> <p>22</p> <p>23</p> <p>24</p> <p>25</p> <p>26</p> <p>27</p> <p>28</p> <p>29</p> <p>30</p> <p>31</p> <p>32</p> <p>33</p> <p>34</p> <p>35</p> <p>36</p> <p>37</p> <p>38</p> <p>39</p> <p>40</p> <p>41</p> <p>42</p> <p>43</p> <p>44</p> <p>45</p> <p>46</p> <p>47</p> <p>48</p> <p>49</p> <p>50</p> <p>51</p> <p>52</p> <p>53</p> <p>54</p> <p>55</p> <p>56</p> <p>57</p> <p>58</p> <p>59</p> <p>60</p> <p>61</p> <p>62</p> <p>63</p> <p>64</p> <p>65</p> <p>66</p> <p>67</p> <p>68</p> <p>69</p> <p>70</p> <p>71</p> <p>72</p> <p>73</p> <p>74</p> <p>75</p> <p>76</p> <p>77</p> <p>78</p> <p>79</p> <p>80</p> <p>81</p> <p>82</p> <p>83</p> <p>84</p> <p>85</p> <p>86</p> <p>87</p> <p>88</p> <p>89</p> <p>90</p> <p>91</p> <p>92</p> <p>93</p> <p>94</p> <p>95</p> <p>96</p> <p>97</p> <p>98</p> <p>99</p> <p>100</p> <p>101</p> <p>102</p> <p>103</p> <p>104</p> <p>105</p> <p>106</p> <p>107</p> <p>108</p> <p>109</p> <p>110</p> <p>111</p> <p>112</p> <p>113</p> <p>114</p> <p>115</p> <p>116</p> <p>117</p> <p>118</p> <p>119</p> <p>120</p> <p>121</p> <p>122</p> <p>123</p> <p>124</p> <p>125</p> <p>126</p> <p>127</p> <p>128</p> <p>129</p> <p>130</p> <p>131</p> <p>132</p> <p>133</p> <p>134</p> <p>135</p> <p>136</p> <p>137</p> <p>138</p> <p>139</p> <p>140</p> <p>141</p> <p>142</p> <p>143</p> <p>144</p> <p>145</p> <p>146</p> <p>147</p> <p>148</p> <p>149</p> <p>150</p> <p>151</p> <p>152</p> <p>153</p> <p>154</p> <p>155</p> <p>156</p> <p>157</p> <p>158</p> <p>159</p> <p>160</p> <p>161</p> <p>162</p> <p>163</p> <p>164</p> <p>165</p> <p>166</p> <p>167</p> <p>168</p> <p>169</p> <p>170</p> <p>171</p> <p>172</p> <p>173</p> <p>174</p> <p>175</p> <p>176</p> <p>177</p> <p>178</p> <p>179</p> <p>180</p> <p>181</p> <p>182</p> <p>183</p> <p>184</p> <p>185</p> <p>186</p> <p>187</p> <p>188</p> <p>189</p> <p>190</p> <p>191</p> <p>192</p> <p>193</p> <p>194</p> <p>195</p> <p>196</p> <p>197</p> 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<p>1015</p> <p>1016</p> <p>1017</p> <p>1018</p> <p>1019</p> <p>1020</p> <p>1021</p> <p>1022</p> <p>1023</p> <p>1024</p> <p>1025</p> <p>1026</p> <p>1027</p> <p>1028</p> <p>1029</p> <p>1030</p> <p>1031</p> <p>1032</p> <p>1033</p> <p>1034</p> <p>1035</p> <p>1036</p> <p>1037</p> <p>1038</p> <p>1039</p> <p>1040</p> <p>1041</p> <p>1042</p> <p>1043</p> <p>1044</p> <p>1045</p> <p>1046</p> <p>1047</p> <p>1048</p> <p>1049</p> <p>1050</p> <p>1051</p> <p>1052</p> <p>1053</p> <p>1054</p> <p>1055</p> <p>1056</p> <p>1057</p> <p>1058</p> <p>1059</p> <p>1060</p> <p>1061</p> <p>1062</p> <p>1063</p> <p>1064</p> <p>1065</p> <p>1066</p> <p>1067</p> <p>1068</p> <p>1069</p> <p>1070</p> <p>1071</p> <p>1072</p> <p>1073</p> <p>1074</p> <p>1075</p> <p>1076</p> <p>1077</p> <p>1078</p> <p>1079</p> <p>1080</p> <p>1081</p> <p>1082</p> <p>1083</p> <p>1084</p> <p>1085</p> <p>1086</p> <p>1087</p> <p>1088</p> <p>1089</p> <p>1090</p> <p>1091</p> <p>1092</p> <p>1093</p> <p>1094</p> <p>1095</p> <p>1096</p> <p>1097</p> <p>1098</p> <p>1099</p> <p>1100</p> <p>1101</p> <p>1102</p> <p>1103</p> <p>1104</p> <p>1105</p> <p>1106</p> <p>1107</p> <p>1108</p> <p>1109</p> <p>1110</p> <p>1111</p> <p>1112</p> <p>1113</p> <p>1114</p> <p>1115</p> <p>1116</p> <p>1117</p> <p>1118</p> <p>1119</p> <p>1120</p> <p>1121</p> <p>1122</p> <p>1123</p> <p>1124</p> <p>1125</p> <p>1126</p> <p>1127</p> <p>1128</p> <p>1129</p> <p>1130</p> <p>1131</p> <p>1132</p> <p>1133</p> <p>1134</p> <p>1135</p> <p>1136</p> <p>1137</p> <p>1138</p> <p>1139</p> <p>1140</p> <p>1141</p> <p>1142</p> <p>1143</p> <p>1144</p> <p>1145</p> <p>1146</p> <p>1147</p> <p>1148</p> <p>1149</p> <p>1150</p> <p>1151</p> <p>1152</p> <p>1153</p> <p>1154</p> <p>1155</p> <p>1156</p> <p>1157</p> <p>1158</p> <p>1159</p> <p>1160</p> <p>1161</p> <p>1162</p> <p>1163</p> <p>1164</p> <p>1165</p> <p>1166</p> <p>1167</p> <p>1168</p> <p>1169</p> <p>1170</p> <p>1171</p> <p>1172</p> <p>1173</p> <p>1174</p> <p>1175</p> <p>1176</p> <p>1177</p> <p>1178</p> <p>1179</p> <p>1180</p> <p>1181</p> <p>1182</p> <p>1183</p> <p>1184</p> <p>1185</p> <p>1186</p> <p>1187</p> <p>1188</p> <p>1189</p> <p>1190</p> <p>1191</p> <p>1192</p> <p>1193</p> <p>1194</p> <p>1195</p> <p>1196</p> <p>1197</p> <p>1198</p> <p>1199</p> <p>1200</p> <p>1201</p> <p>1202</p> <p>1203</p> <p>1204</p> <p>1205</p> <p>1206</p> <p>1207</p> <p>1208</p> <p>1209</p> <p>1210</p> <p>1211</p> <p>1212</p> <p>1213</p> <p>1214</p> <p>1215</p> <p>1216</p> <p>1217</p> <p>1218</p> <p>1219</p> <p>1220</p> <p>1221</p> <p>1222</p> <p>1223</p> <p>1224</p> <p>1225</p> <p>1226</p> <p>1227</p> <p>1228</p> <p>1229</p> <p>123</p>											
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UNCLASSIFIED

SOW Ref: 16.F.5.d

MOVEMENT DOCUMENT / MANIFEST
DOCUMENT DE MOUVEMENT / MANIFESTE

This Movement document/manfest conforms to all federal and provincial transport and environmental legislation.

Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport.

A Generator / consignor Producteur / expéditeur		Registration No. / Provincial ID No. N° d'immatriculation - d'id. provincial NUG 10003		B Carrier / Transporteur		Registration No. / Provincial ID No. N° d'immatriculation - d'id. provincial		23 Reference No. of other movement document(s)/manifest(s) used / N° de référence des autres documents de mouvement/manifestes utilisés				
Company name / Nom de l'entreprise DEPARTMENT OF NATIONAL DEFENCE c/o RCL		Mailing address / Adresse postale City / Ville Province Postal code / Code postal 22 WING BLDG 109 HORNEIL HEIGHTS ON P0H 1P3		NEAS INC		Mailing address / Adresse postale City / Ville Province Postal code / Code postal 2105 PIERRE BURRY SUITE 2300 MTL QC H3C 3R5		24 Registration No. / Provincial ID No. N° d'immatriculation - d'id. provincial				
E-mail / Courrier électronique 705 494-2011 EXT 2864		Tel. No. / N° de tél. NOS LSS HALLBACH PO Box 46		Email / Courrier électronique 705 494-2011 EXT 2864		Tel. No. / N° de tél. 705 494-2011 EXT 2864		25 Receiver / consignee Récipientne / destinataire				
Shipping site address / Adresse du lieu de expédition HALL BEACH NU X0A 0K0		City / Ville Province Postal code / Code postal		Vehicle / Véhicule Trailer - Rail car No. 1 (remorque - wagon)		Registration No. / N° d'immatriculation Trailer - Rail car No. 2 (remorque - wagon)		26 Registration No. / Provincial ID No. N° d'immatriculation - d'id. provincial				
Intended Receiver / consignee Récipientne / destinataire prévu QIKIGTAA LUK ENVIRONMENTAL 401 674 006		27 Registration No. / Provincial ID No. N° d'immatriculation - d'id. provincial 1610-16-01-348168		Port of entry Point d'entrée		International use only Point de sortie		27 Reference No. of other movement document(s)/manifest(s) used / N° de référence des autres documents de mouvement/manifestes utilisés				
Mailing address / Adresse postale 9835 DE CHATEAUMONT ENTRANCE 1 SUITE 200		28 Mailing address / Adresse postale 9835 DE CHATEAUMONT ENTRANCE 1 SUITE 200		29 Receiver / consignee information same as in Part A. Les renseignements du récipiendaire / destinataire sont les mêmes qu'à la Partie A. <input type="checkbox"/> Yes / Oui <input type="checkbox"/> No, complete the box below / Non, remplir la case ci-dessous								
City / Ville Province Postal code / Code postal RODOSSE QC J4Z 3N4		30 E-mail / Courrier électronique 1-866-634-6367		31 Receiving site address / Adresse du lieu de destination VEOLIA 2630 BOUL INDUSTRIAL		32 Date received / Date de réception Year / Année Month / Mois Day / Jour		32 Date received / Date de réception Year / Année Month / Mois Day / Jour				
City / Ville Province Postal code / Code postal CHAMBLY QC J3L 4V2		33 Time / Heure 1 9 0 8 27		33 Time / Heure 1 9 0 8 27		34 Registration No./Provincial ID No. N° d'immatriculation/d'id. provincial If waste or recyclable material to be transferred, specify intended company name/ Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire						
Prov. code Code prov.	3 Shipping name Appellation réglementaire	4 Class / Classe Sub. classe(s) Classe(s) sub.	5 UN No. N° UN	6 Packing / risk gr. Gr. d'emballage/ de risque	7 Quantity shipped Quantité expédiée	8 Units L. or/ou Kg Unité(s)	9 No. / N° Codes Int. ext.	10 Phys. state Etat phys.	11			
(i)	WASTE, BATTERIES, WET/FILLED WITH ACID	8	UN 2794	5621	KG 6 07	S						
(ii)	WASTE, BATTERIES WET NON SPILLABLE	8	UN 2800	2682	KG 5 07	S						
(iii)	* WASTE, PETROLEUM DISTILLATES N.O.S RA	3	UN 1268	III 200	L 1 01	L						
(iv)	WASTE, PETROLEUM DISTILLATES N.O.S RA	3	UN 1268	III 200	L 1 01	L						
International use only												
Notice No. N° de notification	Notice Line No N° de ligne de la notification	Shipment Env. Env.	Of / De	D or R code Code D ou R	C code Code C	Basel Annex VIII or OECD Code Annexe VIII de l'Aléa ou Code OECD	H code Code H	Y code Code Y	15 National code in country of / Code du pays Export Exportation	16 Import Importation	17 Customs code(s) Code(s) de douanes	18
(i)	* FLASH POINT 43°C										19	
(ii)											20	
(iii)											21	
(iv)											22	
EMERGENCY CONTACT #24-HOUR CANUTEC 1 (613) 996-6666										23		
Name of authorized person (print) Nom de l'agent autorisé (caractère d'imprimé) RON DUBUAI 705-494-2011 EXT 2861										24		
Signature Ron D. D. Dubuai										25		
Instructions on reverse Instructions au verso										26		
										27		
Copy / Copie 1 (white / blanche)										28		

Figure 3: Movement Document 2581507-7

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SOW Ref: 16.F.5.d

		SHIPPING MANIFEST					
Suite 3000, 400 Cooper Street, Ottawa, ON K2P 2H8		NON NEGOTIABLE					
Filled By: JPIALLAQ		Date: Aug 5, 2019, 2:44 PM		TCN-40071			
Ship To: QIKIQTAAULK ENVIRONMENTAL (QE) C/O VEOLIA 2630, BOUL. INDUSTRIEL CHAMBLY, QC, J3L 4V2 1-866-634-6367		From: LSS-F/FOX-M, HALL BEACH, DND Storeroom Raytheon Canada Limited, LSS Hall Beach: P.O. Box 46 Hall Beach, NU, X0A 0K0 867-928-8987		Priority 12			
Attention:		Attention:					
Carrier: NEAS		Routing:		Waybill #: L 48" X W 48" X H 41"	Total Pcs. 1	Total Weight: 1400 LBS	
QTY Order	Type	Line Weight	Item	Description	WO or PO	B/Code or S/N	Remarks
4			2002351	WASTE - ACTIVATED CARBON FILTE	XL-2019-001		ASSET # 359601, 352359, 359361, 352501
NOTE: All claims related to this shipment have to be filled with Raytheon within 45 hours of receipt.				Received By:		Date	
				Received By:		Date	

Figure 4: NWS Shipping Manifest TCN- 40071

		SHIPPING MANIFEST					
Suite 3000, 400 Cooper Street, Ottawa, ON K2P 2H8		NON NEGOTIABLE					
Filled By: BGRANDY		Date: Aug 6, 2019, 4:25 PM		TCN-40078			
Ship To: QIKIQTAAULK ENVIRONMENTAL (QE) C/O VEOLIA 2630, BOUL. INDUSTRIEL CHAMBLY, QC, J3L 4V2 1-866-634-6367		From: LSS-F/FOX-M, HALL BEACH, DND Storeroom Raytheon Canada Limited, LSS Hall Beach: P.O. Box 46 Hall Beach, NU, X0A 0K0 867-928-8987		Priority 12			
Attention:		Attention:					
Carrier: NEAS		Routing:		Waybill #: 1	Total Pcs. 1	Total Weight: 1050 LBS	
QTY Order	Type	Line Weight	Item	Description	WO or PO	B/Code or S/N	Remarks
1	1050	2002351	LBS	WASTE - ACTIVATED CARBON FILTE			ASSET 352505
NOTE: All claims related to this shipment have to be filled with Raytheon within 45 hours of receipt.				Received By:		Date	
				Received By:		Date	

Figure 5: NWS Shipping Manifest TCN- 40078

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SOW Ref: 16.F.5.d



SHIPPING MANIFEST

Suite 3000, 400 Cooper Street, Ottawa, ON K2P 2H8

NON NEGOTIABLE

Filled By: BGRANDY	Date: Aug 17, 2019, 11:23 AM	TCN-40139			
Ship To: QIKIQTAAULK ENVIRONMENTAL (QE) C/O VEOLIA 2630, BOUL. INDUSTRIEL CHAMBLY, QC, J3L 4V2 1-866-634-6367	From: LSS-F/FOX-M, HALL BEACH, DND Storeroom Raytheon Canada Limited, LSS Hall Beach: P.O. Box 46 Hall Beach, NU, X0A 0K0 867-928-8987	Priority 12			
Attention:	Attention:				
Carrier: NEAS	Routing:	Waybill #: L48"XW40"XH42"	Total Pcs. 1	Total Weight: 500 LBS	
QTY Order	Type	Line Weight	Description	WO or PO B/Code or S/N	Remarks
2	500	2002351	WASTE - ACTIVATED CARBON FILTE LBS	XL-2019-041	ASSETS 352867, 352868
NOTE: All claims related to this shipment have to be filled with Raytheon within 45 hours of receipt.				Received By:	Date
				Received By:	Date

Figure 6: NWS Shipping Manifest TCN- 40139



SHIPPING MANIFEST

Suite 3000, 400 Cooper Street, Ottawa, ON K2P 2H8

NON NEGOTIABLE

Filled By: JPIALLAQ	Date: Aug 2, 2019, 4:09 PM	TCN-40035			
Ship To: QIKIQTAAULK ENVIRONMENTAL (QE) C/O VEOLIA 2630, BOUL. INDUSTRIEL CHAMBLY, QC, J3L 4V2 1-866-634-6367	From: LSS-F/FOX-M, HALL BEACH, DND Storeroom Raytheon Canada Limited, LSS Hall Beach: P.O. Box 46 Hall Beach, NU, X0A 0K0 867-928-8987	Priority 12			
Attention:	Attention:				
Carrier: NEAS	Routing:	Waybill #: L 48" W 48" X 41"	Total Pcs. 1	Total Weight: 1700 LBS	
QTY Order	Type	Line Weight	Description	WO or PO B/Code or S/N	Remarks
4	2.81	2002406	WASTE - OIL, 45 GAL M3	XL-2019-006	ASSET # 350549, 351996, 351997, 351998
NOTE: All claims related to this shipment have to be filled with Raytheon within 45 hours of receipt.				Received By:	Date
				Received By:	Date

Figure 7: NWS Shipping Manifest TCN- 40035

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SOW Ref: 16.F.5.d

		SHIPPING MANIFEST					
Suite 3000, 400 Cooper Street, Ottawa, ON K2P 2H8						NON NEGOTIABLE	
Filled By: JPIALLAQ			Date: Aug 5, 2019, 9:03 AM				TCN-40036
Ship To: QIKIQTAAULK ENVIRONMENTAL (QE) C/O VEOLIA 2630, BOUL. INDUSTRIEL CHAMBLY, QC, J3L 4V2 1-866-634-6367			From: LSS-F/FOX-M, HALL BEACH, DND Storeroom Raytheon Canada Limited, LSS Hall Beach: P.O. Box 46 Hall Beach, NU, X0A 0K0 867-928-8987			Priority 12	
Attention:		Attention:					
Carrier:		Routing:		Waybill #:	Total Pcs.	Total Weight:	
NEAS				L 48" W 48" X H 41"	1	1650 LBS	
QTY Order	Type	Line Weight	Item	Description	WO or PO	B/Code or S/N	Remarks
4	2.81	2002406 M3	WASTE - OIL, 45 GAL		XL-2019-007		ASSET # 352388, 352387, 352389, 382391
NOTE: All claims related to this shipment have to be filled with Raytheon within 45 hours of receipt.				Received By:		Date	
				Received By:		Date	

Figure 8: NWS Shipping Manifest TCN- 40036

		SHIPPING MANIFEST					
Suite 3000, 400 Cooper Street, Ottawa, ON K2P 2H8						NON NEGOTIABLE	
Filled By: JPIALLAQ			Date: Aug 5, 2019, 9:10 AM				TCN-40037
Ship To: QIKIQTAAULK ENVIRONMENTAL (QE) C/O VEOLIA 2630, BOUL. INDUSTRIEL CHAMBLY, QC, J3L 4V2 1-866-634-6367			From: LSS-F/FOX-M, HALL BEACH, DND Storeroom Raytheon Canada Limited, LSS Hall Beach: P.O. Box 46 Hall Beach, NU, X0A 0K0 867-928-8987			Priority 12	
Attention:		Attention:					
Carrier:		Routing:		Waybill #:	Total Pcs.	Total Weight:	
NEAS				L 48" W 48" X 41"	1	1500 LBS	
QTY Order	Type	Line Weight	Item	Description	WO or PO	B/Code or S/N	Remarks
4	2.81	2002406 M3	WASTE - OIL, 45 GAL		XL-2019-008		ASSET # 343878, 382392, 339428, 349106
NOTE: All claims related to this shipment have to be filled with Raytheon within 45 hours of receipt.				Received By:		Date	
				Received By:		Date	

Figure 9: NWS Shipping Manifest TCN- 40037

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SOW Ref: 16.F.5.d



SHIPPING MANIFEST

Suite 3000, 400 Cooper Street, Ottawa, ON K2P 2H8

NON NEGOTIABLE

Filled By: JPIALLAQ	Date: Aug 5, 2019, 9:23 AM	TCN-40038		
Ship To: QIKIQTAAULK ENVIRONMENTAL (QE) C/O VEOLIA 2630, BOUL. INDUSTRIEL CHAMBLY, QC, J3L 4V2 1-866-634-6367	From: LSS-F/FOX-M, HALL BEACH, DND Storeroom Raytheon Canada Limited, LSS Hall Beach: P.O. Box 46 Hall Beach, NU, X0A 0K0 867-928-8987	Priority 12		
Attention:	Attention:			
Carrier: NEAS	Routing:	Waybill #: L 48" W 48" X H 41"	Total Pcs. 1	Total Weight: 1600 LBS
QTY Order	Type Line Weight	Item Description	WO or PO XL-2019-009	B/Code or S/N ASSET # 382390, 352379, 352380, 382393
4	2002406	WASTE - OIL, 45 GAL		
NOTE: All claims related to this shipment have to be filled with Raytheon within 45 hours of receipt.			Received By:	Date
			Received By:	Date

Figure 10: NWS Shipping Manifest TCN- 40038



SHIPPING MANIFEST

Suite 3000, 400 Cooper Street, Ottawa, ON K2P 2H8

NON NEGOTIABLE

Filled By: JPIALLAQ	Date: Aug 5, 2019, 9:28 AM	TCN-40039		
Ship To: QIKIQTAAULK ENVIRONMENTAL (QE) C/O VEOLIA 2630, BOUL. INDUSTRIEL CHAMBLY, QC, J3L 4V2 1-866-634-6367	From: LSS-F/FOX-M, HALL BEACH, DND Storeroom Raytheon Canada Limited, LSS Hall Beach: P.O. Box 46 Hall Beach, NU, X0A 0K0 867-928-8987	Priority 12		
Attention:	Attention:			
Carrier: NEAS	Routing:	Waybill #: L 48" W 48" X H 41"	Total Pcs. 1	Total Weight: 1800 LBS
QTY Order	Type Line Weight	Item Description	WO or PO XL-2019-019	B/Code or S/N ASSET # 352378, 351135, 352053, 351134
4	2.81 M3	2002406 WASTE - OIL, 45 GAL		
NOTE: All claims related to this shipment have to be filled with Raytheon within 45 hours of receipt.			Received By:	Date
			Received By:	Date

Figure 11: NWS Shipping Manifest TCN- 40039

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SOW Ref: 16.F.5.d



SHIPPING MANIFEST

Suite 3000, 400 Cooper Street, Ottawa, ON K2P 2H8

NON NEGOTIABLE

Filled By: JPIALLAQ	Date: Aug 5, 2019, 9:31 AM	TCN-40040		
Ship To: QIKIQTAAULK ENVIRONMENTAL (QE) C/O VEOLIA 2630, BOUL. INDUSTRIEL CHAMBLY, QC, J3L 4V2 1-866-634-6367	From: LSS-F/FOX-M, HALL BEACH, DND Storeroom Raytheon Canada Limited, LSS Hall Beach: P.O. Box 46 Hall Beach, NU, X0A 0K0 867-928-8987	Priority 12		
Attention:	Attention:			
Carrier: NEAS	Routing:	Waybill #: L 48" W 48" X H 43"	Total Pcs. 1	Total Weight: 1950 LBS
QTY Order	Type Line Weight	Item Description	WO or PO XL-2019-020	B/Code or S/N ASSET # 347302, 350548, 350547, 348861
4	2.81 M3	WASTE - OIL, 45 GAL		
NOTE: All claims related to this shipment have to be filled with Raytheon within 45 hours of receipt.			Received By:	Date
			Received By:	Date

Figure 12: NWS Shipping Manifest TCN- 40040



SHIPPING MANIFEST

Suite 3000, 400 Cooper Street, Ottawa, ON K2P 2H8

NON NEGOTIABLE

Filled By: JPIALLAQ	Date: Aug 5, 2019, 9:34 AM	TCN-40041		
Ship To: QIKIQTAAULK ENVIRONMENTAL (QE) C/O VEOLIA 2630, BOUL. INDUSTRIEL CHAMBLY, QC, J3L 4V2 1-866-634-6367	From: LSS-F/FOX-M, HALL BEACH, DND Storeroom Raytheon Canada Limited, LSS Hall Beach: P.O. Box 46 Hall Beach, NU, X0A 0K0 867-928-8987	Priority 12		
Attention:	Attention:			
Carrier: NEAS	Routing:	Waybill #: L 48" W 48" X H 41"	Total Pcs. 1	Total Weight: 2000 LBS
QTY Order	Type Line Weight	Item Description	WO or PO XL-2019-021	B/Code or S/N ASSET # 339432, 334866, 352349, 348290
4	2.81 M3	WASTE - OIL, 45 GAL		
NOTE: All claims related to this shipment have to be filled with Raytheon within 45 hours of receipt.			Received By:	Date
			Received By:	Date

Figure 13: NWS Shipping Manifest TCN- 40041

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SOW Ref: 16.F.5.d



SHIPPING MANIFEST

Suite 3000, 400 Cooper Street, Ottawa, ON K2P 2H8

NON NEGOTIABLE

Filled By: JPIALLAQ	Date: Aug 5, 2019, 9:36 AM	TCN-40042		
Ship To: QIKIQTAAULK ENVIRONMENTAL (QE) C/O VEOLIA 2630, BOUL. INDUSTRIEL CHAMBLY, QC, J3L 4V2 1-866-634-6367	From: LSS-F/FOX-M, HALL BEACH, DND Storeroom Raytheon Canada Limited, LSS Hall Beach: P.O. Box 46 Hall Beach, NU, X0A 0K0 867-928-8987	Priority 12		
Attention:	Attention:			
Carrier: NEAS	Routing:	Waybill #: L 48" W 48" X H 43"	Total Pcs. 1	Total Weight: 1700 LBS
QTY Order	Type Line Weight	Item Description	WO or PO XL-2019-022	B/Code or S/N ASSET # 352500, 352498, 352499, 349016
4	2.81 M3	WASTE - OIL, 45 GAL		
NOTE: All claims related to this shipment have to be filled with Raytheon within 45 hours of receipt.			Received By:	Date
			Received By:	Date

Figure 14: NWS Shipping Manifest TCN- 40042



SHIPPING MANIFEST

Suite 3000, 400 Cooper Street, Ottawa, ON K2P 2H8

NON NEGOTIABLE

Filled By: BGRANDY	Date: Aug 17, 2019, 11:07 AM	TCN-40138		
Ship To: QIKIQTAAULK ENVIRONMENTAL (QE) C/O VEOLIA 2630, BOUL. INDUSTRIEL CHAMBLY, QC, J3L 4V2 1-866-634-6367	From: LSS-F/FOX-M, HALL BEACH, DND Storeroom Raytheon Canada Limited, LSS Hall Beach: P.O. Box 46 Hall Beach, NU, X0A 0K0 867-928-8987	Priority 12		
Attention:	Attention:			
Carrier: NEAS	Routing:	Waybill #: L48"XW40"XH41"	Total Pcs. 1	Total Weight: 940 LBS
QTY Order	Type Line Weight	Item Description	WO or PO XL-2019-040	B/Code or S/N ASSETS 345736, 349837
2	940 LBS	WASTE - OIL, 45 GAL		
NOTE: All claims related to this shipment have to be filled with Raytheon within 45 hours of receipt.			Received By:	Date
			Received By:	Date

Figure 15: NWS Shipping Manifest TCN- 40138

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SHIPPING MANIFEST

Suite 3000, 400 Cooper Street, Ottawa, ON K2P 2H8

NON NEGOTIABLE

Filled By: BGRANDY	Date: Aug 17, 2019, 1:25 PM	TCN-40145		
Ship To: QIKIQTAAULK ENVIRONMENTAL (QE) C/O VEOLIA 2630, BOUL. INDUSTRIEL CHAMBLY, QC, J3L 4V2 1-866-634-6367		From: LSS-F/FOX-M, HALL BEACH, DND Storeroom Raytheon Canada Limited, LSS Hall Beach: P.O. Box 46 Hall Beach, NU, X0A 0K0 867-928-8987	Priority 12	
Attention:		Attention:		
Carrier: NEAS		Routing:	Waybill #: L48 "XW48"XH41"	Total Pcs. 1 Total Weight: 1800 LBS
QTY Order	Type Line Weight	Item Description	WO or PO XL-2019-038	B/Code or S/N ASSETS 352354,345854,350004,352650
4	1800 LBS	WASTE - OIL, 45 GAL		
NOTE: All claims related to this shipment have to be filled with Raytheon within 45 hours of receipt.			Received By:	Date
			Received By:	Date

Figure 16: NWS Shipping Manifest TCN-40145



SHIPPING MANIFEST

Suite 3000, 400 Cooper Street, Ottawa, ON K2P 2H8

NON NEGOTIABLE

Filled By: BGRANDY	Date: Aug 17, 2019, 2:28 PM	TCN-40147		
Ship To: QIKIQTAAULK ENVIRONMENTAL (QE) C/O VEOLIA 2630, BOUL. INDUSTRIEL CHAMBLY, QC, J3L 4V2 1-866-634-6367		From: LSS-F/FOX-M, HALL BEACH, DND Storeroom Raytheon Canada Limited, LSS Hall Beach: P.O. Box 46 Hall Beach, NU, X0A 0K0 867-928-8987	Priority 12	
Attention:		Attention:		
Carrier: NEAS		Routing:	Waybill #: L47 "XW39"XH41"	Total Pcs. 1 Total Weight: 470 LBS
QTY Order	Type Line Weight	Item Description	WO or PO XL-2019-049	B/Code or S/N ASSET 350546
1	470 LBS	WASTE - OIL, 45 GAL		
NOTE: All claims related to this shipment have to be filled with Raytheon within 45 hours of receipt.			Received By:	Date
			Received By:	Date

Figure 17: NWS Shipping Manifest TCN- 40147

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SOW Ref: 16.F.5.d

SHIPPING MANIFEST					
Suite 3000, 400 Cooper Street, Ottawa, ON K2P 2H8					
NON NEGOTIABLE					
Filled By: BGRANDY	Date: Aug 19, 2019, 9:35 AM				
TCN-40173					
Ship To: QIKIQTAALUK ENVIRONMENTAL (QE) C/O VEOLIA 2630, BOUL. INDUSTRIEL CHAMBLAY, QC, J3L 4V2 1-866-634-6367	From: LSS-F/FOX-M, HALL BEACH, DND Storeroom Raytheon Canada Limited, LSS Hall Beach: P.O. Box 46 Hall Beach, NU, X0A 0K0 867-928-8987				
Priority 12					
Attention:	Attention:				
Carrier: NEAS	Routing:				
Waybill #: L34 "XW34" XH33"		Total Pcs. 1	Total Weight: 300 LBS		
QTY Order	Type Line Weight	Item Description	WO or PO XL-2019-065	B/Code or S/N ASSET 352904	Remarks
18	300 LBS	WASTE - OIL (5 GALLON PAIL)			
NOTE: All claims related to this shipment have to be filed with Raytheon within 45 hours of receipt.			Received By:	Date	
			Received By:	Date	

Figure 18: NWS Shipping Manifest TCN- 40173

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ANNEX B: TREATED SEWAGE EFFLUENT OUTFALL (FOH-2) LOCATION WITH CO-ORDINATES



Coordinates of sewage treatment outfall: 63° 45'39.50"N, 81°13'28.40"W.

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ANNEX C: ANALYSIS OF TREATED SEWAGE EFFLUENT

Table C-0-1: Summary of Analysis of Treated Sewage Effluent at FOX-M in 2019

Sample Date	Parameter				
	pH	Oil and Grease (Present - P / Absent - A)	Biological Oxygen Demand (mg/L)	Total Suspended Solids (mg/L)	Faecal Coliforms ¹
Maximum Concentration	6.0 to 9.0 (pH units)	No visible sheen	120 mg/L	180 mg/L	10,000 CFU/100 mL
28-Jan-19	8.06	A	<1	<2	14
4-Feb-19	8.08	A	2	<2	0
4-Mar-19	7.64	A	1	<2	25
4-Apr-19	7.71	A	<1	<2	165
2-May-19	7.89	A	<1	3	0
10-Jun-19	7.68	A	20	<2	10
1-Jul-19	7.33	A	16	<2	152
8-Aug-19	7.52	A	5	8	<10
30-Sep-19	7.76	A	88	7	73
7-Oct-19	6.6	A	4	<2	14
15-Nov-19	7.89	A	7	3	42
4-Dec-19	7.51	A	<1	<2	21



Environment Testing

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Mr. Will Wyman
PO#: 002160-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1901573
Date Submitted: 2019-02-01
Date Reported: 2019-02-07
Project: COC #: 840155

Group	Analyte	MRL	Units	Guideline	Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.	1409609 Sewage 2019-01-28 FOX-MAIN CYCLE-LET
General Chemistry	BOD5	1	mg/L	<1		
	pH	1.00		8.06		
Oil and Grease	Total Suspended Solids	2	mg/L	<2		
	Oil & Grease - Mineral	1	mg/L	<1		
	Oil & Grease - Non-mineral	1	mg/L	2		
	Oil & Grease - Total	1	mg/L	2		
	Visible Sheen		P/A	A		

Figure 19: January 2019, sewage effluent laboratory results page 1 of 2

¹ This column contains the average of the Cyclot 1A, Cyclot 1B, and Cyclot 1C

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Environment Testing

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Mr. Will Wyman
PO#: 002160-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1901594
Date Submitted: 2019-02-01
Date Reported: 2019-02-03
Project: NWS-SCM-03039
COC #: 840155

Lab I.D.	1409677	1409678	1409679
Sample Matrix	Sewage	Sewage	Sewage
Sample Type	-	-	-
Sampling Date	2019-01-28	2019-01-28	2019-01-28
Sample I.D.	Fox-Main Cycle-Let A	Fox-Main Cycle-Let B	Fox-Main Cycle-Let C

Group	Analyte	MRL	Units	Guideline			
Microbiology	Faecal Coliforms	0	ct/100mL		11	1	31

Figure 20: January 2019, sewage effluent laboratory results page 2 of 2



Environment Testing

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Mr. Will Wyman
PO#: 002160-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1901910
Date Submitted: 2019-02-08
Date Reported: 2019-02-13
Project:
COC #: 840323

Group	Analyte	MRL	Units	Guideline		
General Chemistry	BOD5	1	mg/L		2	
	pH	1.00			8.08	
	Total Suspended Solids	2	mg/L		<2	
Oil and Grease	Oil & Grease - Mineral	1	mg/L		<1	
	Oil & Grease - Non-mineral	1	mg/L		<1	
	Oil & Grease - Total	1	mg/L		<1	
	Visible Sheen		P/A		A	

Figure 21: February 2019, sewage effluent laboratory results page 1 of 2

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Environment Testing

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Mr. Will Wyman
PO#: 002160-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1901917
Date Submitted: 2019-02-08
Date Reported: 2019-02-10
Project:
COC #: 840323

Group	Analyte	MRL	Units	Guideline	Lab I.D.	Sample Matrix	Sample Type	Sampling Date	Sample I.D.	1410496	1410497	1410498		
Microbiology	Faecal Coliforms	0	ct/100mL					2019-02-04	FOX-MAIN CYCLE-LET A		2019-02-04	FOX-MAIN CYCLE-LET B	2019-02-04	FOX-MAIN CYCLE-LET C

Figure 22: February 2019, sewage effluent laboratory results page 2 of 2



Environment Testing

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Mr. Will Wyman
PO#: 002160-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1903298
Date Submitted: 2019-03-08
Date Reported: 2019-03-18
Project:
COC #: 841064

Group	Analyte	MRL	Units	Guideline	Lab I.D.	Sample Matrix	Sample Type	Sampling Date	Sample I.D.	1414369	WW
General Chemistry	BOD5	1	mg/L							1	
	pH	1.00								7.64	
	Total Suspended Solids	2	mg/L							<2	
Oil and Grease	Oil & Grease - Mineral	1	mg/L							<1	
	Oil & Grease - Non-mineral	1	mg/L							<1	
	Oil & Grease - Total	1	mg/L							<1	
	Visible Sheen		P/A							A	

Figure 23: March 2019, sewage effluent laboratory results page 1 of 2

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Environment Testing

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Mr. Will Wyman
PO#: 002160-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1903311
Date Submitted: 2019-03-08
Date Reported: 2019-03-10
Project: NWS-SCM-03039
COC #: 841064

Group	Analyte	MRL	Units	Guideline	Lab I.D.	Sample Matrix	Sample Type	Sampling Date	Sample I.D.	1414390	1414391	1414392		
Microbiology	Faecal Coliforms	0	ct/100mL					2019-03-04	FOX-MAIN CYCLE-LET - A		2019-03-04	FOX-MAIN CYCLE-LET - B	2019-03-04	FOX-MAIN CYCLE-LET - C

Figure 24: March 2019, sewage effluent laboratory results page 2 of 2



Environment Testing

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Mr. Will Wyman
PO#: 002160-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1905546
Date Submitted: 2019-04-16
Date Reported: 2019-04-25
Project:
COC #: 842330

Group	Analyte	MRL	Units	Guideline	Lab I.D.	Sample Matrix	Sample Type	Sampling Date	Sample I.D.	1420784	Sewage
General Chemistry	BOD5	1	mg/L							<1	
	pH	1.00								7.71	
	Total Suspended Solids	2	mg/L							<2	
Oil and Grease	Oil & Grease - Mineral	1	mg/L							<1	
	Oil & Grease - Non-mineral	1	mg/L							2	
	Oil & Grease - Total	1	mg/L							2	
	Visible Sheen									A	

Figure 25: April 2019, sewage effluent laboratory results page 1 of 2

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Environment Testing

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8

Attention: Mr. Will Wyman
PO#: 002160-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1905568
Date Submitted: 2019-04-16
Date Reported: 2019-04-17
Project:
COC #: 842330

Group	Analyte	MRL	Units	Guideline	Lab I.D.	Sample Matrix	Sample Type	Sampling Date	Sample I.D.	1420877	1420878	1420879
Microbiology	Faecal Coliforms	0	ct/100mL		1420877	Sewage	Sewage	2019-04-04	Fox-Main Cycle-Let 1A	1420878	Sewage	2019-04-04

Figure 26: April 2019, sewage effluent laboratory results page 2 of 2



Environment Testing

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8

Attention: Mr. Will Wyman
PO#: 002160-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1907127
Date Submitted: 2019-05-09
Date Reported: 2019-05-16
Project:
COC #: 843232

Group	Analyte	MRL	Units	Guideline	Lab I.D.	Sample Matrix	Sample Type	Sampling Date	Sample I.D.	1425394	Sewage	2019-05-02
General Chemistry	BOD5	1	mg/L		1425394	Sewage	Sewage	2019-05-02	FOX-MAIN CYCLE-LET	<1		
	pH	1.00								7.89		
	Total Suspended Solids	2	mg/L							3		
Oil and Grease	Oil & Grease - Mineral	1	mg/L							<1		
	Oil & Grease - Non-mineral	1	mg/L							<1		
	Oil & Grease - Total	1	mg/L							<1		
	Visible Sheen		P/A							A		

Figure 27: May 2019, sewage effluent laboratory results page 1 of 2

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Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Mr. Will Wyman
PO#: 002160-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1907144
Date Submitted: 2019-05-09
Date Reported: 2019-05-10
Project:
COC #: 843232

Lab I.D.	1425463	1425464	1425465
Sample Matrix	Sewage	Sewage	Sewage
Sample Type			
Sampling Date	2019-05-02	2019-05-02	2019-05-02
Sample I.D.	Fox-Main Cyclt A	Fox-Main Cyclt B	Fox-Main Cyclt C

Figure 28: May 2019, sewage effluent laboratory results page 2 of 2



Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Mr. Will Wyman
PO#: 004438-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1909946
Date Submitted: 2019-06-18
Date Reported: 2019-06-26
Project:
COC #: 844872

Group	Analyte	MRL	Units	Guideline	Lab I.D.	Sample Matrix	Sample Type	Sampling Date	Sample I.D.
Microbiology	Faecal Coliforms	0	ct/100mL		1425463	Sewage		2019-05-02	Fox-Main Cyclt A
					1425464	Sewage		2019-05-02	Fox-Main Cyclt B
					1425465	Sewage		2019-05-02	Fox-Main Cyclt C
Group	Analyte	MRL	Units	Guideline	Lab I.D.	Sample Matrix	Sample Type	Sampling Date	Sample I.D.
General Chemistry	BOD5	1	mg/L		1433662	Sewage		2019-06-10	Fox-Main Cycle-let
	pH	1.00							
	Total Suspended Solids	2	mg/L						
Oil and Grease	Oil & Grease - Mineral	1	mg/L						
	Oil & Grease - Non-mineral	1	mg/L						
	Oil & Grease - Total	1	mg/L						
	Visible Sheen	0	A/P						

Figure 29: June 2019, sewage effluent laboratory results page 1 of 2

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Environment Testing

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Mr. Will Wyman
PO#: 002160-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1909955
Date Submitted: 2019-06-18
Date Reported: 2019-06-19
Project:
COC #: 844872

Lab I.D.	1433685	1433686	1433687
Sample Matrix	Sewage	Sewage	Sewage
Sample Type			
Sampling Date	2019-06-10	2019-06-10	2019-06-10
Sample I.D.	Fox-Main Cycle-let A	Fox-Main Cycle-let B	Fox-Main Cycle-let C

Group	Analyte	MRL	Units	Guideline			
Microbiology	Faecal Coliforms	0	ct/100mL		11	8	10

Figure 30: June 2019, sewage effluent laboratory results page 2 of 2



Environment Testing

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Mr. Will Wyman
PO#: 004438-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1911989
Date Submitted: 2019-07-10
Date Reported: 2019-07-17
Project:
COC #: 845959

Lab I.D.	1440133	Sewage
Sample Matrix		
Sample Type		
Sampling Date	2019-07-02	
Sample I.D.	Fox-Main Cycle-Let	

Group	Analyte	MRL	Units	Guideline	
General Chemistry	BOD5	1	mg/L	16	
	pH	1.00		7.33	
Oil and Grease	Total Suspended Solids	2	mg/L	<2	
	Oil & Grease - Mineral	1	mg/L	<1	
	Oil & Grease - Non-mineral	1	mg/L	<1	
	Oil & Grease - Total	1	mg/L	<1	
	Visible Sheen	0	P/A	A	

Figure 31: July 2019, sewage effluent laboratory results page 1 of 2

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Environment Testing

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8

Attention: Mr. Will Wyman
PO#: 004438-OT

Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1912021
Date Submitted: 2019-07-10
Date Reported: 2019-07-11
Project:
COC #: 845959

Group	Analyte	MRL	Units	Guideline	Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.	1440248 Sewage 2019-07-02 Fox-Main Cyclet A	1440249 Sewage 2019-07-02 Fox-Main Cyclet B	1440250 Sewage 2019-07-02 Fox-Main Cyclet C
Microbiology	Faecal Coliforms	0	ct/100mL			139	151	167

Figure 32: July 2019, sewage effluent laboratory results page 2 of 2



Environment Testing

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8

Attention: Mr. Will Wyman
PO#: 004438-OT

Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1914715
Date Submitted: 2019-08-15
Date Reported: 2019-08-21
Project:
COC #: 847658

Group	Analyte	MRL	Units	Guideline	Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.	1447359 WW 2019-08-09 FOX-Main Cyclet
General Chemistry	BOD5	1	mg/L			5
	pH	1.00				7.52
	Total Suspended Solids	2	mg/L			8
Oil and Grease	Oil & Grease - Mineral	1	mg/L			<1
	Oil & Grease - Non-mineral	1	mg/L			<1
	Oil & Grease - Total	1	mg/L			<1
	Visible Sheen		P/A			A

Figure 33: August 2019, sewage effluent laboratory results page 1 of 2

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SOW Ref: 16.F.5.d



Environment Testing

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Mr. Will Wyman
PO#: 004438-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1914726
Date Submitted: 2019-08-15
Date Reported: 2019-08-16
Project:
COC #: 847658

Group	Analyte	MRL	Units	Guideline	Lab I.D.	Sample Matrix	Sample Type	Sampling Date	Sample I.D.	1447458	Sewage	1447459	Sewage	1447460	Sewage
Microbiology	Faecal Coliforms	010	ct/100mL	<10	2019-08-09	FOX-Main Cyclet A				2019-08-09	FOX-Main Cyclet B		2019-08-09	FOX-Main Cyclet C	
		10	ct/100mL												<10

Figure 34: August 2019, sewage effluent laboratory results page 2 of 2



Environment Testing

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Mr. Will Wyman
PO#: 004438-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1918199
Date Submitted: 2019-10-04
Date Reported: 2019-10-11
Project:
COC #: 207955

Group	Analyte	MRL	Units	Guideline	Lab I.D.	Sample Matrix	Sample Type	Sampling Date	Sample I.D.	1457661	Sewage
General Chemistry	BOD5	1	mg/L	88	2019-09-30	Fox-Main Cyclelet					
	pH	1.00		7.76							
	Total Suspended Solids	2	mg/L	7							
Oil and Grease	Oil & Grease - Mineral	1	mg/L	1							
	Oil & Grease - Non-mineral	1	mg/L	<1							
	Oil & Grease - Total	1	mg/L	1							
	Visible Sheen		P/A		A						

Figure 35: September 2019, sewage effluent laboratory results page 1 of 2

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SOW Ref: 16.F.5.d



Environment Testing

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Mr. Will Wyman
PO#: 002160-PO
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1918196
Date Submitted: 2019-10-04
Date Reported: 2019-10-07
Project: NW SCMO3039
COC #: 207955

Group	Analyte	MRL	Units	Guideline	Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.	1457655 WW 2019-09-30 Fox-Main Cycolet - A	1457656 WW 2019-09-30 Fox-Main Cycolet - B	1457657 WW 2019-09-30 Fox-Main Cycolet - C
Microbiology	Faecal Coliforms	0	ct/100mL	30		30	80	110

Figure 36: September 2019, sewage effluent laboratory results page 2 of 2



Environment Testing

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Mr. Will Wyman
PO#: 004438-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1918966
Date Submitted: 2019-10-16
Date Reported: 2019-10-30
Project:
COC #: 97128

Group	Analyte	MRL	Units	Guideline	Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.	1460007 Water 2019-10-07 Fox-Main Cycle-let
General Chemistry	BOD5	1	mg/L			4
	pH	1.00		6.5-8.5		6.60
	Total Suspended Solids	2	mg/L			<2
Microbiology	Faecal Coliforms	0	ct/100mL			14
Oil and Grease	Oil & Grease - Mineral	1	mg/L			<1
	Oil & Grease - Non-mineral	1	mg/L			1
	Oil & Grease - Total	1	mg/L			1
	Visible Sheen					A

Figure 37: October 2019, sewage effluent laboratory results

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SOW Ref: 16.F.5.d



Environment Testing

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Mr. Will Wyman
PO#: 004438-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1921554
Date Submitted: 2019-11-26
Date Reported: 2019-12-03
Project:
COC #: 851739

Group	Analyte	MRL	Units	Guideline	Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.	1468645 Sewage 2019-11-15 Fox-Main Cycle-let
General Chemistry	BOD5	1	mg/L			7
	pH	1.00				7.89
Oil and Grease	Total Suspended Solids	2	mg/L			3
	Oil & Grease - Mineral	1	mg/L			<1
	Oil & Grease - Non-mineral	1	mg/L			<1
	Oil & Grease - Total	1	mg/L			<1
	Visible Sheen		P/A			A

Figure 38: November 2019, sewage effluent laboratory results page 1 of 2



Environment Testing

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Mr. Will Wyman
PO#: 17-00919
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1921577
Date Submitted: 2019-11-26
Date Reported: 2019-11-27
Project:
COC #: 851739

Group	Analyte	MRL	Units	Guideline	Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.	1468725 Sewage 2019-11-15 Fox-Main Cycle-let A	1468726 Sewage 2019-11-15 Fox-Main Cycle-let B	1468727 Sewage 2019-11-15 Fox-Main Cycle-let C
Microbiology	Faecal Coliforms	0	ct/100mL			33	29	55

Figure 39: November 2019, sewage effluent laboratory results page 2 of 2

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Environment Testing

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Mr. Will Wyman
PO#: 004438-OT
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1922696
Date Submitted: 2019-12-13
Date Reported: 2019-12-20
Project:
COC #: 207959

Group	Analyte	MRL	Units	Guideline	Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.	1472105 Sewage 2019-12-04 Fox-Main Cycle-Let
General Chemistry	BOD5	1	mg/L	<1		
	pH	1.00		7.51		
Oil and Grease	Total Suspended Solids	2	mg/L	<2		
	Oil & Grease - Mineral	1	mg/L	<1		
	Oil & Grease - Non-mineral	1	mg/L	<1		
	Oil & Grease - Total	1	mg/L	<1		
	Visible Sheen		P/A	A		

Figure 40: December 2019, sewage effluent laboratory results page 1 of 2



Environment Testing

Certificate of Analysis

Client: Raytheon Canada Limited Ottawa
400 Cooper St.
Ottawa, ON
K2P 2H8
Attention: Mr. Will Wyman
PO#: 17-00919
Invoice to: Raytheon Canada Limited Ottawa

Report Number: 1922694
Date Submitted: 2019-12-13
Date Reported: 2019-12-18
Project:
COC #: 207959

Group	Analyte	MRL	Units	Guideline	Lab I.D. Sample Matrix Sample Type Sampling Date Sample I.D.	1472100 Sewage 2019-12-04 Fox-Main Cycle-Let A	1472101 Sewage 2019-12-04 Fox-Main Cycle-Let B	1472102 Sewage 2019-12-04 Fox-Main Cycle-Let C
Microbiology	Faecal Coliforms	0	ct/100mL	25		25	16	22

Figure 41: December 2019, sewage effluent laboratory results page 2 of 2

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ANNEX D: LOCATION OF BERMED FUEL STORAGE FACILITIES AND ANALYSIS OF BERM WATER²

The berms at FOX-M were sampled using hydrocarbon test strips as per the approved QA/QC Plan for Berm Water Sampling as stated in the water licence 8BC-FOH1929, PART D, Item 11.

Table D-1: Location of Bermed Fuel Storage Facilities and Date Sampled in 2019

Berm	Location on-site	Discharge Latitude ³	Discharge Longitude	Date
HAL W20B	Beach	68°46'23.93"N	81°12'51.11"W	24-Jul-19
HAL W20D&E	Airstrip	68°46'15.85"N	81°13'58.33"W	26-Jul-19
HAL W20F	Beach	68°46'23.75"N	81°12'46.12"W	24-Jul-19
HAL W22A	Summit	68°45'42.24"N	81°13'25.04"W	24-Jul-19
HAL W22B	Summit	68°45'43.00"N	81°13'27.27"W	24-Jul-19



Figure 42: Hydrocarbon test strips used in berm of tank W22A (24-Jul-2019)

² Effluent from bermed fuel storage facilities.

³ Final discharge point of bermed fuel storage facility

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Figure 43: Hydrocarbon test strips used in the berm of tank W22B (24-Jul-2019)



Figure 44: Hydrocarbon test strips used in the berm of tank W22F (24-Jul-2019)

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Figure 45: Hydrocarbon test strips used in the berm of tank W20B (24-Jul-2019)

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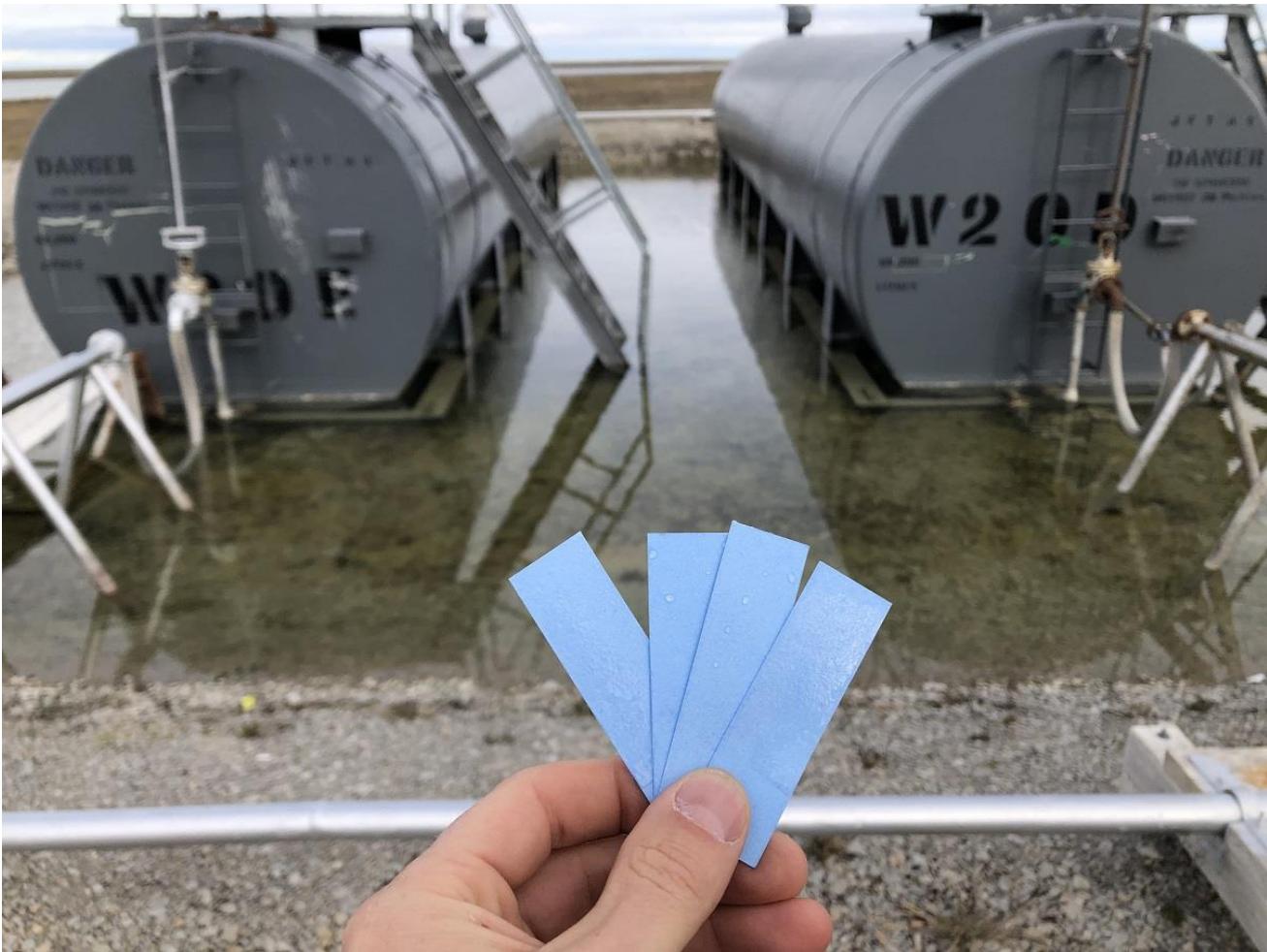


Figure 46: Hydrocarbon test strips used in the berm of tanks W20D&E (26-Jul-2019)

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