



March 8, 2017

Mackenzie Valley Land and Water Board  
7<sup>th</sup> Floor, 4922 48 Street  
Yellowknife, NT  
X1A 2P6

Attention: Violet Camsell-Blondin  
Acting Chair MVLWB

**RE: Annual Water License Report #MV2009L3-0025**

Dear Ms. Camsell-Blondin,

The Hamlet of Fort Liard (Licensee) is pleased to submit the 2016 Annual Water License report as per Part B, item 1. of our Water License. We are submitting this year's report on Memory Stick to make transmittal of these documents less bulky and easier to submit. If hard copies will be required please contact us.

We trust that these documents meet your requirements for the Annual Report. Please contact myself at 867 770 4104 ext.103 or [mws@fortliard.com](mailto:mws@fortliard.com) if there are any problems or additional information required. Our Senior Administration Officer, Mike Rudkin can also be reached at 867 770 4104 extension 104, or [sao@fortliard.com](mailto:sao@fortliard.com) to provide additional information and answer any questions.

Yours sincerely,

Alan Harris  
Manager Municipal Operations  
Hamlet of Fort Liard

Copy: Brad McInnes  
Regional Water Officer  
Box 240, Ft Simpson, X0E 0N0

## **Summary of 2016 Annual Report**

### **Quantity of Fresh Water**

During fiscal year 2016 a total of 19,300,486 litres of raw water was drawn from the 2 community wells. Water drawn is alternated weekly between the 2 wells, only using one well at any given time. A total of 18,796,945 litres was delivered to customers during 2016. The remainder of filtered treated water is used in daily water plant operations, road and equipment maintenance.

### **Quantity of Waste**

Based on no metered information available for sewage collected, using corresponding Water Plant Truck Fill Outflow volumes a total of 18,796 945 litres of sewage was deposited into the Fort Liard sewage lagoons. Water Plant in house use is not included in this number due to all plant wastewater outflow being deposited directly into the Liard River.

The Hamlet operates its own fleet of sewage trucks for community waste water collection. No private contractors have been permitted to deposit sewage into the community's waste water lagoon operations during 2016. The Hamlet did receive one request for use of its sewage lagoon for waste water from out of the community camp operations but that request was denied.

Using GNWT – MACA formula for solid waste deposited into a Solid Waste Facility a total of 3195.18 cubic meters of waste was deposited into the Fort Liard Solid Waste facility. The Hamlet operates its own municipal waste pick up and disposal service.

No metered tracking or recording of quantity of homeowner waste hauled and deposited directly by private homeowners is done at the Solid Waste Site. Only a small amount of reported private contractor waste was deposited in the waste site during the 2016 reporting year.

## **Summary of Modifications**

### **Water Plant**

Regular ongoing maintenance and daily operations at the water treatment plant is performed by Hamlet Municipal Operations staff.

We have been experiencing ongoing electronic control problems with operation of the HMI/PLC system. It has resulted in many of the automatic control functions having to be performed manually. This has not resulted in any compromise to the quality of water produced but has resulted in the on going constant manual adjustment and activation of control valves. The supplier of the system was in shortly before the end of 2016 to investigate control problem and work is scheduled for March 2017 to rectify the problems.

We experienced Truck Fill pump problems and operated the last of 2016 with only 1 pump functioning. This did not compromise plant water quality or output performance. The rebuilt truck fill pump was successfully installed and put into operation in February of 2017.

### **Sewage Lagoons**

Routine maintenance and regular ongoing sewage lagoon operations were performed by Hamlet staff during the 2016 reporting year. This work included ongoing daily monitoring and maintenance of lagoon structures, access roads, the obtaining of samples of wastewater for testing and performing decant operations. Problems had been identified in lagoon performance resulting in failure of test sample analysis and requirements to meet parameters for decant. An engineering team has been retained to draft a plan for submittal to MVLWB to correct problems with-in the lagoon structures and operations. This work is forecast to be completed during the 2017 reporting year. Changes in the scheduling of lagoon transfers and timing of lagoon decant is forecast to help meet sample analysis requirements for decant procedures in 2017.

The Hamlet was not able to retrieve the end of decant samples for testing from lagoon #3 after the October 6 thru October 11, 2016 decant operation. When pump was checked on for proper operation on October 11<sup>th</sup> at 6:40 PM it was discovered to have pumped the lagoon empty of pooled surface effluent and to not be transferring any effluent. There was only a thick slurry of mud left in the bottom of the lagoon and it was not possible to obtain a sample of effluent for testing.

## **Solid Waste Facility**

The Hamlet performs all community waste pickup and transport to the solid waste site. The solid waste site, including all routine maintenance, is operated by Hamlet Municipal Works staff. Staff inspects the facility daily, performs ongoing site maintenance and weekly control of waste build-up by pushing waste into the active waste cell. Waste was compacted by locally available equipment once during 2016. The solid waste area is constructed with an entry service road that provides access to both the domestic waste area and bulk waste area.

The bulk waste area is divided into specific waste categories for storage and future disposal:

- Metals
- TV's
- Appliances
- Tires
- Recyclable material such as timber and used building materials

A separate bermed noncommercial Hazardous Waste area is located adjacent to the Bulk waste area for the disposal of batteries, paints, oils etc.

## **Unauthorized Discharges**

There were no known unauthorized sewage or solid waste discharged or deposited during the reporting year.

## **Spill Training and Communication Exercises**

There was no active spill training or communication exercises during this reporting year. Municipal Operations has been outfitted with InReach SE Satellite Communicator for emergency communications from the solid and liquid waste site.

## **Abandonment and Restoration Work**

None of this area of work was undertaken during this reporting year.

## **Studies requested by the Water Board**

No requests were received for studies from MVLWB.

## **Planned Work**

In December of this reporting year the Fort Liard Solid Waste Facility Closure and Reclamation Plan was submitted to the Water Board. This plan was submitted in accordance with the requirements of Part G, Item 1. of the Hamlets Water Licence. The project titled: Fort Liard Old Solid Waste Site and Inactive Lagoon Closure has been issued for tender. Most of this planned work is scheduled to take place during 2017. **Copy of Contract Documents Attached**

Construction of the next solid waste cell in the active Solid Waste area is being looked at for possible completion during 2017.

Sewage lagoon upgrade work is planned for 2017. This direction of the work is to improve lagoon performance to avoid problems with meeting parameters for needed decant procedures. Possible dredging or expansion of lagoon structure has been discussed. It is being looked at for possible implementation during the planned Solid Waste Facility Closure and Reclamation time frame.

## Municipal Water Licence Annual Report

**Hamlet of Fort Liard**  
**License #: MV2009L3-0025**  
**Reporting year: 2016**  
**Expires: February 29, 2020**

*The Licensee shall file an Annual Report with the Board not later than March 31<sup>st</sup> of the year following the calendar year reported which shall contain the following information:*

### 1. Water Usage

**Licensed Water Volume Withdrawal: 40,000 m<sup>3</sup>**

Total volume withdrawn for reporting year: 19,616,074    m<sup>3</sup>

Table 1 – Monthly & Annual withdrawal volumes pumped

Month	Volume from main source (m <sup>3</sup> )	Volume from any other source (m <sup>3</sup> )	TOTAL Volume (m <sup>3</sup> )
January	1,668,282	0	1,668,282
February	1,548,293	0	1,548,293
March	1,548,467	0	1,548,467
April	1,510,269	0	1,510,269
May	1,599,222	0	1,599,222
June	1,801,826	0	1,801,826
July	1,618,989	0	1,618,989
August	1,649,295	0	1,649,295
September	1,547,215	0	1,547,215
October	1,576,483	0	1,576,483
November	1,616,071	0	1,616,071
December	1,616,074	0	1,616,074
<b>TOTALS</b>	<b>19,616,074</b>	<b>0</b>	<b>19,616,074</b>
% Increase/decrease from previous year	8.55% decrease	0%	8.55% decrease

Reasons for increase / decrease:

**Unsure of reasons behind decrease in community water consumption. Partial reasons may include less watering of roads for dust control due to community road chipseal application. Closure of several social housing units. Very slight decrease in community population. Drop of work being performed in the surrounding area and corresponding rental of accommodation.**

**No modifications were made to water withdrawal or water plant facilities during this reporting year.**

## 2. Solid Waste Disposal

**Approximate total yearly volume of solid waste deposited: 3195.18 m<sup>3</sup>**

**Based on Statistics Canada estimated 2016 community population total of 582**

Table 2 – Monthly solid waste disposal volumes

Month	Volume of solid waste deposited (m <sup>3</sup> )
January	270.63
February	253.17
March	270.63
April	261.90
May	270.63
June	261.90
July	270.63
August	270.63
September	261.90
October	270.63
November	261.90
December	270.63
TOTALS	3195.18
% Increase/decrease from previous year	0.07% decrease

GNWT – MACA has provided a standard formula for estimating the amount of solid waste deposited into a Solid Waste Facility in the absence of a metered Garbage Truck. The following can be used: **Volume per person per day X number of days X population**  
(582)

e.g. **0.015 m<sup>3</sup> X 30 days X 860 people = 387 m<sup>3</sup> of domestic trash**  
deposited into Solid Waste Facility in a 30 day month

Reasons for increase / decrease: (e.g. an industrial project close to the Hamlet of Fort Liard, or a large influx of people into town)

**Very small decrease in volume due to slight decline in population. (2 residents less than 2015 reported population, 584)**

General information:

Information regarding any agreements with outside organizations to be a waste receiving facility should be outlined here along with an estimate of the amount and type of waste to be received.

**No agreements are in place, have been made or formal requests received from outside organizations for use of the Solid Waste Facility during this reporting period.**

### 3. Waste Deposited to Primary Sewage Cells

Table 3 – Monthly waste volumes deposited

Month	Volume of waste deposited (m <sup>3</sup> )				
	Pumper Truck	Piped	WTP sludge	WTP backwash	TOTAL
January	1,606,913	0	0	0	1,606,913
February	1,525,467	0	0	0	1,525,467
March	1,509,050	0	0	0	1,509,050
April	1,470,852	0	0	0	1,470,852
May	1,535,590	0	0	0	1,535,590
June	1,740,384	0	0	0	1,740,384
July	1,579,485	0	0	0	1,579,485
August	1,606,403	0	0	0	1,606,403
September	1,490,340	0	0	0	1,490,340
October	1,545,164	0	0	0	1,545,164
November	1,590,197	0	0	0	1,590,197
December	1,597,100	0	0	0	1,597,100
TOTALS	18,796,945	0	0	0	18,796,945
Is this an estimated volume? (yes/no)	Yes, volumes are based on water plant truck fill volumes	No piped service	No water treatment plant sludge	No Backwash of deposited in Sewage Cells	Yes Amounts recorded are based on water plant truck fill volumes
% Increase/decrease from previous year	9.72% Decrease	0%	0%	0%	9.72% Decrease

To calculate monthly sewage waste deposited to the Primary Lagoon, please provide the above information if metered information is available. If metered information is not available, please fill in the table using the corresponding TOTAL water volumes from Table 1. This provides estimation only and equals water in/sewage out. WTP = Water Treatment Plant.

Reasons for increase / decrease: (eg.: an industrial project close to the Hamlet of Fort Liard, or a large influx of people into town)

**Decrease would be directly related to drop in volume of water needed for delivery or consumed with-in the community. See reasons presented in corresponding question:**

#### 1. Water Usage

Has any sludge been removed from the primary sewage cells during this reporting year? If so, what volume of sludge was removed? What testing was completed on the sludge and where it was disposed of? Please provide documentation for testing and ENR Water License Inspector approval of placement.

**No sludge was removed from sewage lagoon disposal facilities during this reporting year.**

Was there any decanting this reporting year? Please provide dates. What was the decant duration and the approximate volume decanted? As this is a Surveillance Network Program (SNP) site, the resulting testing is to be presented as part of the tabular SNP data to be provided as per the Water License [Part B(1)(d)].

**Decanting was performed on two occasions during the 2016 reporting year. Depth of lagoon effluent contained in the lagoons was approaching license freeboard limit at the time of decant request. Due to effluent test samples obtained exceeding license effluent quality standards emergency decants were requested. These decant requests were approved. Dates, duration and estimated quantities are listed below. Pump used for decant procedures, a 4" Thompson Pump is not a meted pump and Decant quantities are estimates only.**

**2016 Emergency Decant #1, Lagoon #3: Start of Decant: 3:00 PM October 6, 2016  
End of Decant: October 11, 2016 6:40 PM Total estimated volume of decant: 9000 m3**

**2016 Emergency Decant #2, Lagoon #2: Start of Decant: 2: PM October 15, 2016  
End of Decant: October 18, 2016 10:30 AM Total estimated volume of decant: 4500 m3**

**Estimated 2016 total volume decanted: 13500 m3**

**4. Problems, modifications or repairs completed during the year on water supply and waste disposal facilities**

Include any work done to infrastructure for all facilities completed during the year in this section. This includes any changes, repairs and modifications. If any problems occurred during the year, please note them here. If there are no changes, make note of that. If required please attach any as-built drawings or reports as an appendices to this report.

**There were no modifications or needed repairs performed during this reporting period. There was on-going water plant maintenance performed as needed. Problems have been identified with the PLC Controller. The supplier was on site at the end of this reporting period to identify needed changes and upgrades to the control panel programming. These necessary changes will be made during the 2017 period. Waste disposal facilities underwent regular on-going maintenance as needed. Roads and access points were graded and surface areas topped off as needed. The active solid waste area was pushed back from side being actively used for dumping and access switched to opposite side of waste trench area.**

**5. Surveillance Network Program Data**

Surveillance Network Program (SNP) information is to be submitted in a tabular format and shall indicate date of testing, parameters tested for and any other information requested by the ENR Water License Inspector or the MVLWB. This section can be completed separately on an Excel worksheet – see attached MVLWB excel template. All lab results should be attached to the summary.

**A new SNP location was identified by the Regional Water resource Officer for future testing.**

**6. Unauthorized discharges**

List any unauthorized discharges here including any spills, how and when they were reported, and how they were cleaned up. Please attach copies of spill reports, correspondence with the ENR Water License Inspector or any other pertinent documentation as an appendices to this report.

**There were no reported, known or evidence of any unauthorized discharges during this reporting period.**

**7. Spill Training and Communications Exercises**

List any spill training and communications exercises that have been carried out including courses on spills prevention, waste management, SNP sampling, etc.

**Continued training of water plant/disposal site staff on waste management and sampling is on-going. Reviews of spill prevention and clean-up procedures is regularly conducted. The responsibility of proper communications is a constant focus of Hamlet operations.**

**8. Abandonment and restoration**

Include any abandonment and restoration details here including any work anticipated to be completed during the next year. If required please attach any as-built drawings or reports as an appendices to this report.

**The solid waste area that was closed in 2011 will be undergoing final closure and reclamation work during the 2017 reporting period. The Solid Waste Facility Closure and Reclamation Plan was submitted to MVLWB in November 2016. Copy of this Plan is attached to the back of this report.**

**There has been no abandonment and restoration work completed on lagoon structures during the 2015 reporting year. A plan is being developed to dredge sewage lagoons #2 and #3 during 2017. No further information regarding the proposed work is available at this time.**

**9. Studies requested by the Board**

If the Board has requested that specific studies be completed, include details of the plan in this section with a summary of the outcome. Include any attachments with the submission of the Annual Report.

**No Studies were requested during the 2016 reporting year.**

**10. Updates or revisions to approved plans**

Details on any changes to approved plans such as the Operations and Maintenance Plan, the Closure and Reclamation Plan, the Spill Contingency Plan, or any other that is specific to this Municipal Water License. Please attach documents as appendices to this report.

**No updates or revisions to plans have been made.**

**11. Sewage deposited by remote camp and liquid waste haulers**

The annual quantity of all sewage deposited by each remote camp and liquid waste hauler into the Sewage Disposal Facilities.

**There are no remote camps using the Hamlet facility. Only Hamlet Municipal Operations has been collecting or depositing liquid waste in this facility.**



## 12. Other Information

- *Include any other details on Water Use or Waste disposal requested by the Board by November 1 of the year being reported;*
- *Include all correspondence between the Inspector and the Licensee.*

**All correspondence is attached to the back of this report.**

- *Include any other information here that may be valuable to the MVLWB.*

**A copy of the planed Solid Waste Facility Closure is attached to the rear of this report. A new location for SNP 1478-6 has been identified for possible future testing. ENR indicated that testing time frames and methods will be identified during the 2017 reporting period. Plans are in place by MACA to install monitoring wells on the Solid Waste Site in January of 2017. Sampling training of these wells is planned to be given in August or September of 2017.**

- *Include details on upcoming studies that will be completed.*

**No studies have been planned for 2017**

- *Please include any non-compliance items identified in the ENR Water Licence Inspection report and detail how the Hamlet of Fort Liard is addressing them.*

**No noncompliance items have been identified.**

- *If there is any contaminated soil piles currently in use (land farming), please list the details of containment, remediation and progress in this section.*

**There are no contaminated soil piles or land farming practices in place with in the Hamlet boundaries or Waste Site location.**

- Please identify any on-going compliance issues for the Hamlet of Fort Liard. This can facilitate discussions to resolve the issues.

**Difficulties were identified in meeting license compliance with sewage lagoon discharge Maximum average concentration limits. Modifications in inter-cell and Decanting Procedures were being implemented during this reporting year. The changes to lagoon operation were identified in the Sewage Lagoon Capacity Study attached to the 2015 Annual Water report. Plans are being put in place to de-sludge the sewage lagoons in the forecast that this will help to control high Suspended Solids concentration levels in sewage contained within the lagoons.**

Hamlet of Fort Liard Annual Report for 2015

B.1 d) Tabular Summaries of all Surveillance Network Program Data (please attach all laboratory data to this summary)

Station Number 1478-3: Raw water supply from community wells															
Parameters - list as per direction from the Environmental Health Officer and/or Inspector	2016			2015			2014			2013			2012		
	September 22 Results	Reported Detection Limit (RDL)	Units	September 9 Results	Reported Detection Limit (RDL)	Units	October 21 Result	Reported Detection Limit (RDL)	Units	June 19 Results	Reported Detection Limit (RDL)	Units	June 22 Results	Reported Detection Limit (RDL)	Units
Calcium, dissolved	75.4	0.1	mg/L	103	0.1	mg/L	89.7	0.1	mg/L	90.9	0.1	mg/L	not tested	0.1	mg/L
Magnesium, dissolved	14.8	0.05	mg/L	19.1	0.05	mg/L	17.8	0.05	mg/L	16.7	0.05	mg/L	not tested	0.05	mg/L
Sodium, dissolved	14.8	0.05	mg/L	17.5	0.05	mg/L	18.3	0.05	mg/L	11.8	0.05	mg/L	13.2	0.05	mg/L
Alkalinity, Total as CaCO3	254	1	mg/L	287	1	mg/L	333	1	mg/L	259	1	mg/L	276	1	mg/L
Chloride	9.3	0.5	mg/L	11.1	0.5	mg/L	10.7	0.5	mg/L	8.1	0.5	mg/L	9.5	0.5	mg/L
Flouride	< 0.10	0.1	mg/L	0.1	0.1	mg/L	< 0.1	0.1	mg/L	< 0.1	0.1	mg/L	0.1	0.1	mg/L
Nitrogen, Nitrate as N	< 0.05	0.05	mg/L	<0.05	0.05	mg/L	< 0.05	0.05	mg/L	< 0.05	0.05	mg/L	< 0.05	0.05	mg/L
Sulfate	20.8	0.5	mg/L	28.2	0.5	mg/L	26	0.5	mg/L	37.5	0.5	mg/L	37.4	0.5	mg/L
Carbon, Total Organic	5.9	1	mg/L	4.8	1	mg/L	8.2	1	mg/L	7	1	mg/L	5	1	mg/L
Carbon, Dissolved Organic	5.8	1	mg/L	4.6	1	mg/L	7.6	1	mg/L	7	1	mg/L	4	1	mg/L
Colour, Apparent	12	5	Color Units	7	5	Color Units	15	5	Color Units	50	5	Color Units	40	5	Units
Conductivity (EC)	515	1	uS/cm	617	1	uS/cm	638	1	uS/cm	629	1	uS/cm	629	1	uS/cm
Cyanide, Total	< 0,0100	0.010	mg/l	<0.010	0.010	mg/l	< 0.010	0.010	mg/l	< 0.010	0.010	mg/l	< 0.010	0.010	mg/l
pH	7.03	0.05	pH units	7.93	0.05	pH units	7.5	0.05	pH units	7.69	0.05	pH units	7.55	0.05	pH units
Solids, Total Dissolved	310	10	mg/L	374	10	mg/L	416	10	mg/L	352	10	mg/L	342	10	mg/L
Solids, Total Suspended	<2	2	mg/L	<4	2	mg/L	< 2	2	mg/L	< 2	2	mg/L	< 2	2	mg/L
Turbidity	2.94	0.1	NTU	6.6	0.1	NTU	8.6	0.1	NTU	6.1	0.1	NTU	6.78	0.1	NTU
Total Trihalomethanes	< 0.004	0.004	mg/L	<0.004	0.004	mg/L	< 0.004	0.004	mg/L	< 0.004	0.004	mg/L	not tested	0.004	mg/L
Total Trihalomethanes (asCHC13)	not tested	< 0.003	mg/L	not tested	< 0.003	mg/L	not tested	< 0.003	mg/L	< 0.003	< 0.003	mg/L	not tested	< 0.003	mg/L
Hardness, Total (as CaCO3)	249	0.46	mg/L	335	0.46	mg/L	297	0.46	mg/L	296	0.46	mg/L	321	0.46	mg/L
Aluminum, extractable	< 0,050	0.005	mg/L	<0.05	0.005	mg/L	< 0.05	0.005	mg/L	0.009	0.005	mg/L	< 0.050	0.005	mg/L
Arenic, extractable	< 0.0050	0.0005	mg/L	<0.005	0.0005	mg/L	< 0.005	0.0005	mg/L	< 0.0005	0.0005	mg/L	< 0.0050	0.00010	mg/L
Barium, extractable	0.448	0.005	mg/L	0.41	0.005	mg/L	0.59	0.005	mg/L	0.534	0.005	mg/L	0.565	0.005	mg/L
Cadmium, extractable	0.00025	0.00030	mg/L	<0.0001	0.00030	mg/L	< 0.0001	0.00030	mg/L	0.00030	0.00030	mg/L	< 0.00010	0.00030	mg/L
Chromium, extractable	< 0.0050	0.0005	mg/L	<0.005	0.0005	mg/L	< 0.005	0.0005	mg/L	< 0.0005	0.0005	mg/L	< 0.0050	0.0005	mg/L
Copper, extractable	< 0.0020	0.0002	mg/L	<0.002	0.0002	mg/L	< 0.002	0.0002	mg/L	0.0003	0.0002	mg/L	< 0.0020	0.0002	mg/L
Iron, extractable	1.06	0.01	mg/L	1.22	0.01	mg/L	1.09	0.01	mg/L	1.37	0.01	mg/L	1.11	0.01	mg/L
Lead, extractable	< 0.0010	0.0001	mg/L	<0.001	0.0001	mg/L	< 0.001	0.0001	mg/L	< 0.0001	0.0001	mg/L	< 0.0010	0.0001	mg/L
Maganese, extractable	0.106	0.0002	mg/L	0.13	0.0002	mg/L	0.14	0.0002	mg/L	0.128	0.0002	mg/L	0.134	0.0002	mg/L
Mercury, extractable	< 0.00020	0.00002	mg/L	<0.00020	0.00002	mg/L	< 0.0002	0.00002	mg/L	< 0.00002	0.00002	mg/L	< 0.00020	0.00002	mg/L
Selenium, extractable	< 0.0050	0.0005	mg/L	<0.005	0.0005	mg/L	< 0.005	0.0005	mg/L	< 0.0005	0.0005	mg/L	< 0.0050	0.0005	mg/L
Uranium, extractable	0	0.00002	mg/L	0.0006	0.00002	mg/L	0	0.00002	mg/L	0.00116	0.00002	mg/L	0	0.00002	mg/L
Zinc, extractable	< 0.040	0.004	mg/L	<0.04	0.004	mg/L	< 0.04	0.004	mg/L	0.015	0.004	mg/L	< 0.040	0.004	mg/L
Bromodichlorometane	< 0.0010	0.001	mg/L	<0.001	0.001	mg/L	< 0.001	0.001	mg/L	< 0.001	0.001	mg/L	< 0.001	0.001	mg/L
Bromoform	< 0.001	0.001	mg/L	<0.001	0.001	mg/L	< 0.001	0.001	mg/L	< 0.001	0.001	mg/L	< 0.001	0.001	mg/L
Chloroform	< 0.001	0.001	mg/L	<0.001	0.001	mg/L	< 0.001	0.001	mg/L	< 0.001	0.001	mg/L	< 0.001	0.001	mg/L

Dibromochlorometahne	< 0.001	0.001	mg/L	<0.001	0.001	mg/L	< 0.001	0.001	mg/L	< 0.001	0.001	mg/L	< 0.001	0.001	mg/L
Surrogate: Toluene-d8	91%	80-120		98%	80-120		98%	80-120		89%	80-120		173%	80-120	
Surogate: 4-Bromoflourobenezene	95%	80-120		73%	80-120		104%	80-120		87%	80-120		113%	80-120	

**Station Number 1478-7: Backwash discharge water from water treatment plant**

No information has been provided for timing and location of backwash sample location.

**Station Number 1478-8: Runoff from Solid Waste Disposal Facilities**

No Surveillance Station location has been identified for testing

**Station Number 1478-9: Wastewater sample from cell 3 of the Sewage Disposal Facility**

Maximum average concentration	Oct 5, 2016	11-Oct-16	Sept 22, 2016	Oct 18, 2016	Nov 25,2015	Dec 1,2015	July 14, 2015	July 28, 2015	Feb 05 2014	Feb 26/14	May 23/14	June 6/14	Sept 11/14	Oct 3/14
Parameters	Pre	Post	Pre decant	Post	Pre decant	Post	Pre decant	Post	Pre decant	Post	Pre	Post	Pre	Post
BOD5 (mg/L)	48	No sample obtained	< 12.9	84	81	<1710	21	104	14	25	23	29	28	25
CBOD	< 18.3		< 13.4	48	65	<1410	20	101	5	10	25	24	12	23
Conductivity	1000		764	1120	1400	1850	885	1140	1290	1450	528	786	853	861
Ammonia-Nitrogen	6.32		0.51	10.4	33.5	138	0.07	16.5	4.35	9.26	6.54	6.08	3.83	2.91
pH	8.57		9.69	7.54	7.46	7.23	9.09	7.45	7.88	7.67	8.16	9.22	9	9.16
Total Dissolved Solids (mg/L)	646		482	660	684	914	594	674	833	717	307	478	576	638
Total Suspended Solids (mg/L)	108		68	380	54	24800	37	90	8	9	28	124	102	110
Faecal Coliform	< 500		< 50.0	< 0.10	>10025	42000	4.2	28.8	25.4	40.6	38.4	1	23.8	2

Lagoon #2 Lagoon #2

**Station Number 1478-10: Sedimentation pond at new Solid Waste Facility**

No fluid has collected in Sedimentation pond

### **Water Truck tank cleaning 2016**

Unit #6 tank cleaned July 13<sup>th</sup> 2016 – 24-hour soak with mix of 5 litres Hypochlor 12, drained and rinsed

Unit #19 tank cleaned September 14<sup>th</sup> 2016 - 24-hour soak with mix of 5 litres Hypochlor 12, drained and rinsed

Unit #30 tank cleaned after delivery (new unit) December 5<sup>th</sup> 2016 - 24-hour soak with mix of 5 litres Hypochlor 12, drained and rinsed