

Mr Damien Cassidy  
Ringsend Irishtown Sandymount  
Environmental Group  
28 Irishtown Road  
Dublin 4

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LoCall: 1890 33 55 99

7 May 2019

W0232-01

Dear Mr Cassidy

Re: W0232-01 Technical Amendment to a Licence in the name of Dublin Waste to Energy Limited, for a facility at Pigeon House Road, Poolbeg, Dublin 4

I received your voicemail and attach the documentation received from the above applicant in relation to the recently issued technical amendment to their licence.

Please don't hesitate to contact me if you need further information.

Yours sincerely



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Eve O'Sullivan  
Programme Officer  
Environmental Licensing Programme  
Office of Environmental Sustainability

Encl

## Licence Alteration Request



### Alteration Details

Licence	<b>W0232-01</b>	<b>Dublin Waste to Energy</b>
Licensee	Dublin Waste to Energy Limited	
Title of Alteration	<b>Addition of EWC codes to Schedule A</b>	

### Screening Report

No.	Question	Answer
1	Does the proposed alteration require a new class of activity or process?	No
2	Does the proposed alteration cause a new / additional main emission point?	No
3	Does the proposed alteration increase or change specified emissions significantly?	No
4	Does the proposed alteration increase significantly the overall total emission from the installation/facility?	No
5	Does the proposed alteration involve development or proposed development that has already been granted planning permission or requires a grant of planning permission and was/is subject to EIA by the Planning Authority or An Bord Pleanála?	No
6	Did the proposed alteration require the preparation of a Natura Impact Statement (NIS) for consideration by any Planning or Public Authority?	No
7	Does the proposed alteration indicate that the EPA should conduct an Appropriate Assessment (on foot of a screening for Appropriate Assessment)?	No
8	Does the proposed change conflict with BAT as set out in the relevant BAT Conclusions? See <a href="#">here</a>	No
9	Does the proposed alteration adversely affect the energy efficiency of the installation/facility?	No
10	Does the proposed alteration adversely affect the environmental risk of the installation/facility significantly?	No

## Licence Alteration Request



11	Does the proposed alteration cause an increase above the capacity limitations specified in the licence?	No
12	Does the proposed alteration require an extension of operating hours (where controlled by the licence) for an installation/facility where the public is likely to have an interest in such an extension?	No
13	Does the proposed alteration involve the incineration or co-incineration of waste materials displaying hazardous properties that were not previously authorised (as per the WID/IED)?	No
14	Does the proposed alteration introduce materials or techniques which adversely alter the probability, magnitude and duration or complexity of the site transboundary impact?	No
15	Does the proposed alteration constitute a substantial change?	No
16	Does the proposed alteration require a change to a condition or schedule of the Licence?	Yes

### Recommendation

Based on your responses to the forgoing questions the recommended option is for you to submit a 'Request Licence Amendment' for this proposed alteration.

To submit this request to the EPA you should locate it in the 'Request Alteration' area in LMA. Click on 'Proceed' against this saved request, and then click on the 'Request Licence Amendment' button (in STEP 2 of the process). Then you will be required to provide more detailed information about your proposed amendment.

**Note:** The responses you have provided in this Screening Report will form part of the information record if you decide to proceed with this alteration request.

Recommendation Date: 07/12/2018

### Clerical or Technical Amendment Application Details

#### Proposed Alteration Description

The addition of the following EWC codes to Schedule A of IE W0232-01

07 02 12

07 05 12

**Priority**

2. High

**Category of Amendment**

(b) Facilitating the doing of any thing pursuant to a condition attached to the licence where the doing of that thing may reasonably be regarded as having been contemplated by the terms of the condition or the terms of the licence taken as a whole but which was not expressly provided for in the condition

## Licence Alteration Request



Licence Condition Changes		
Condition / Schedule Reference	Current Condition / Schedule Wording	Suggested New Wording
A.1	Schedule A.1 Waste Categories and Quantities for Acceptance at the Incineration Plant	07 02 12 and 07 05 12 to be included in the Commercial & Industrial Wastes category with the application of Note 5:

Questions		
Q1	Is planning permission required to support the proposed alteration?	No
Q2	Does the application involve an installation boundary change?	No
Q3	Does the application involve changes to emissions to sewer?	No
Q4	Attach Appropriate Assessment Screening Report here	ScreeningReport_1.pdf

Additional Documentation	
ScreeningReport.pdf	
Technical amendment 07122018 to EDEN.pdf	
Technical amendment 07122018 to EDEN_1.pdf	

Final Declaration	
Name	Mark Heffernan
Position	Environmental Manager

Application Details			
Selected by:	Mark Heffernan	Selected date:	07/12/2018
Submitted by:	Mark Heffernan	Submitted date:	07/12/2018

## Licence Alteration Request



### Alteration Details

Licence	<b>W0232-01</b>	<b>Dublin Waste to Energy</b>
Licensee	Dublin Waste to Energy Limited	
Title of Alteration	<b>Addition of EWC codes to Schedule A</b>	

### Screening Report

No.	Question	Answer
1	Does the proposed alteration require a new class of activity or process?	No
2	Does the proposed alteration cause a new / additional main emission point?	No
3	Does the proposed alteration increase or change specified emissions significantly?	No
4	Does the proposed alteration increase significantly the overall total emission from the installation/facility?	No
5	Does the proposed alteration involve development or proposed development that has already been granted planning permission or requires a grant of planning permission and was/is subject to EIA by the Planning Authority or An Bord Pleanála?	No
6	Did the proposed alteration require the preparation of a Natura Impact Statement (NIS) for consideration by any Planning or Public Authority?	No
7	Does the proposed alteration indicate that the EPA should conduct an Appropriate Assessment (on foot of a screening for Appropriate Assessment)?	No
8	Does the proposed change conflict with BAT as set out in the relevant BAT Conclusions? See <a href="#">here</a>	No
9	Does the proposed alteration adversely affect the energy efficiency of the installation/facility?	No
10	Does the proposed alteration adversely affect the environmental risk of the installation/facility significantly?	No

## Licence Alteration Request



11	Does the proposed alteration cause an increase above the capacity limitations specified in the licence?	No
12	Does the proposed alteration require an extension of operating hours (where controlled by the licence) for an installation/facility where the public is likely to have an interest in such an extension?	No
13	Does the proposed alteration involve the incineration or co-incineration of waste materials displaying hazardous properties that were not previously authorised (as per the WID/IED)?	No
14	Does the proposed alteration introduce materials or techniques which adversely alter the probability, magnitude and duration or complexity of the site transboundary impact?	No
15	Does the proposed alteration constitute a substantial change?	No
16	Does the proposed alteration require a change to a condition or schedule of the Licence?	Yes

### Recommendation

Based on your responses to the forgoing questions the recommended option is for you to submit a 'Request Licence Amendment' for this proposed alteration.

To submit this request to the EPA you should locate it in the 'Request Alteration' area in LMA. Click on 'Proceed' against this saved request, and then click on the 'Request Licence Amendment' button (in STEP 2 of the process). Then you will be required to provide more detailed information about your proposed amendment.

**Note:** The responses you have provided in this Screening Report will form part of the information record if you decide to proceed with this alteration request.

**Recommendation Date:** 07/12/2018

**FAO: Mr. Thomas Sexton,  
Office of Environmental Enforcement,  
Environment Protection Agency,  
Richview,  
McCumisky House,  
Clonskeagh  
Dublin 14.**

**07<sup>th</sup> December 2018**

**Ref: W0232-01: Technical Amendment –Addition of EWC codes to Schedule A**

Dear Mr. Sexton,

Dublin Waste to Energy Limited wish to request the addition of the following non-hazardous EWC codes to schedule A of IE W0232-01.

- 07 02 12 – Sludges from on-site effluent treatment other than those mentioned in 07 02 11\*
- 07 05 12 - Sludges from on-site effluent treatment other than those mentioned in 07 05 11\*

Please see attached analysis of the material from the various sources. We request that the names of the companies producing the sludges remain confidential during this application process. (Details of each facility will be sent under separate cover).

As can be seen from the analyses the sludges are non-hazardous in nature. The low ash content of the material and low metal content mean that the resulting bottom ash will not be adversely impacted. Furthermore, the facility is already permitted to accept sludges with the following LoW codes - 06 05 03, 19 08 05, 02 03 05, and 02 07 05). Moreover, the sludges requested are similar in nature to those already licensed.

The Air Pollution Control System will be able to control the emissions through automatically adjusting the dosage rates for the lime, activated carbon and ammonia water, as it currently does, to ensure the ELV's for the plant remain within the license limits. The proposed delivery frequency of the material and associated volumes from each source facility are outlined in the table below.

Customer	Description	Annual Tonnage	Haz/Non Haz	EWC Code	Frequency of delivery
Facility A	Sludge	500.00	Non Haz	07 05 12	1 per week
Facility B	Sludge	214.00	Non Haz	07 05 12	1 per week
Facility C	Sludge	1015.00	Non Haz	07 02 12	2/3 per week
Facility D	Sludge	480.00	Non Haz	07 05 12	2/3 per week
Facility E	Sludge	196.00	Non Haz	07 05 12	1 per month
Facility F	Sludge	336.00	Non Haz	07 05 12	1 per month

The total volume of this material represents less than 0.5% of the total waste volume per annum.



I trust that this Technical Amendment submission meets your approval.

Yours Sincerely,

A handwritten signature in black ink that reads "Mark Heffernan".

Mark Heffernan,  
Environmental Manager.



<b>SAMPLE ID</b>	<b>Facility A</b>
<b>Fitz Scientific Sample ID</b>	<b>1561/769/01</b>
<b>DATE RECEIVED by lab</b>	<b>06/07/2018</b>

<b>Physical Characteristics (Insert Yes/No)</b>	<b>Solid/Sludge</b>	<b>Yes</b>	<b>Liquid</b>	<b>No</b>
<b>Sieve Test</b>	<b>Yes</b>			

<b>Test</b>	<b>Pass/Fail range</b>	<b>Pass/Fail range</b>	<b>Result</b>	<b>Units</b>
pH	report value	≥ 2 to ≤ 10	8	pH
CV (Calorific Value)	0 – 5 MJ/kg	0 – 5 MJ/kg	<5	MJ/kg
Moisture content	report value	report value	83.49	%
Dry Matter	report value	report value	16.51	%
Ash Content (calc. on above)	report value	report value	8.1	%
Flash point	Below 55°	55	>70	°C
Cl (Chlorine) (Hazardous Waste)	max. 1%	10000	15.382	mg/kg
Cl (Chlorine) (Non Hazardous Waste)	max. 4%	40000	15.382	mg/kg
S (Sulphur)	max. 3%	30000	70.980	mg/kg
F (Fluorine)	max. 0.4%	4000	13.243	mg/kg
Br (Bromine)	max. 0.5%	5000	<0.05	mg/kg
I (Iodine)	max. 0.5%	5000	<0.05	mg/kg
P (Phosphorous)	max. 0.5%	5000	180.344	mg/kg
Na (Sodium)	max. 2.5%	25000	1246.3	mg/kg
K (Potassium)	max. 2.5%	25000	254.7	mg/kg
<b>Metals</b>				
Hg (Mercury)	max. 10 ppm	10	<0.01	mg/kg
Cd (Cadmium)	max. 20 ppm	20	<0.01	mg/kg
Se (Selenium)	max. 20 ppm	20	<0.01	mg/kg
Tl (Thallium)	max. 20 ppm	20	<0.01	mg/kg
Mo (Molybdenum)	max. 30 ppm	30	2.790	mg/kg
Ni (Nickel)	max. 60 ppm	60	<0.01	mg/kg
Co (Cobalt)	max. 60 ppm	60	<0.01	mg/kg
As (Arsenic)	max. 100 ppm	100	<0.01	mg/kg
Be (Beryllium)	max. 100 ppm	100	<0.01	mg/kg
Cu (Copper)	max. 100 ppm	100	11.473	mg/kg
Sb (Antimony)	max. 100 ppm	100	11.908	mg/kg
Sn (Tin)	max. 200 ppm	200	6.446	mg/kg
Cr (Chromium)	max. 300 ppm	300	1.479	mg/kg
V (Vanadium)	max. 300 ppm	300	0.495	mg/kg
Pb (Lead)	max. 1000 ppm	1000	<0.01	mg/kg
Zn (Zinc)	max. 1000 ppm	1000	92.475	mg/kg
Pentachlorophenol (not tested if	max. 10 ppm	10	N/A	mg/kg
PCB (Polychlorinated biphenyls)	max. 10 ppm	10	<0.005	mg/kg
PCT (Polychlorinated terphenyls)	max. 10 ppm	10	N/A	mg/kg

<b>SAMPLE ID</b>	<b>Facility B</b>
<b>Fitz Scientific Sample ID</b>	<b>1561/766/01</b>
<b>DATE RECEIVED by lab</b>	<b>06/07/2018</b>

<b>Physical Characteristics (Insert Yes/No)</b>	<b>Solid/Sludge</b>	<b>Yes</b>	<b>Liquid</b>	<b>No</b>
<b>Sieve Test</b>	<b>Yes</b>			

Test	Pass/Fail range	Pass/Fail range	Result	Units
pH	report value	≥ 2 to ≤ 10	7	pH
CV (Calorific Value)	0 – 5 MJ/kg	0 – 5 MJ/kg	<5	MJ/kg
Moisture content	report value	report value	87.36	%
Dry Matter	report value	report value	12.64	%
Ash Content (calc. on above)	report value	report value	1.9	%
Flash point	Below 55°	55	>70	°C
Cl (Chlorine) (Hazardous Waste)	max. 1%	10000	37.188	mg/kg
Cl (Chlorine) (Non Hazardous Waste)	max. 4%	40000	37.188	mg/kg
S (Suiphur)	max. 3%	30000	74.565	mg/kg
F (Fluorine)	max. 0.4%	4000	19.536	mg/kg
Br (Bromine)	max. 0.5%	5000	<0.05	mg/kg
I (Iodine)	max. 0.5%	5000	<0.05	mg/kg
P (Phosphorous)	max. 0.5%	5000	142.462	mg/kg
Na (Sodium)	max. 2.5%	25000	310.3	mg/kg
K (Potassium)	max. 2.5%	25000	102.5	mg/kg
<b>Metals</b>				
Hg (Mercury)	max. 10 ppm	10	<0.01	mg/kg
Cd (Cadmium)	max. 20 ppm	20	0.333	mg/kg
Se (Selenium)	max. 20 ppm	20	<0.01	mg/kg
Tl (Thallium)	max. 20 ppm	20	<0.01	mg/kg
Mo (Molybdenum)	max. 30 ppm	30	7.727	mg/kg
Ni (Nickel)	max. 60 ppm	60	15.674	mg/kg
Co (Cobalt)	max. 60 ppm	60	<0.01	mg/kg
As (Arsenic)	max. 100 ppm	100	<0.01	mg/kg
Be (Beryllium)	max. 100 ppm	100	<0.01	mg/kg
Cu (Copper)	max. 100 ppm	100	5.22	mg/kg
Sb (Antimony)	max. 100 ppm	100	15.938	mg/kg
Sn (Tin)	max. 200 ppm	200	8.614	mg/kg
Cr (Chromium)	max. 300 ppm	300	2.39	mg/kg
V (Vandium)	max. 300 ppm	300	0.675	mg/kg
Pb (Lead)	max. 1000 ppm	1000	0.627	mg/kg
Zn (Zinc)	max. 1000 ppm	1000	81.96	mg/kg
Pentachlorophenol (not tested if	max. 10 ppm	10	N/A	mg/kg
PCB (Polychlorinated biphenyls)	max. 10 ppm	10	<0.005	mg/kg
PCT(Polychlorinated terphenyls)	max. 10 ppm	10	N/A	mg/kg

<b>SAMPLE ID</b>	<b>Facility C</b>
<b>Fitz Scientific Sample ID</b>	<b>1561/770/01</b>
<b>DATE RECEIVED by lab</b>	<b>06/07/2018</b>
<b>Physical Characteristics (Insert Yes/No)</b>	<b>Solid/Sludge</b> Yes <b>Liquid</b> No
<b>Sieve Test</b>	<b>Yes</b>

Test	Pass/Fail range	Pass/Fail range	Result	Units
pH	report value	≥ 2 to ≤ 10	7.5	pH
CV (Calorific Value)	0 – 5 MJ/kg	0 – 5 MJ/kg	<5	MJ/kg
Moisture content	report value	report value	91.29	%
Dry Matter	report value	report value	8.71	%
Ash Content (calc. on above)	report value	report value	0.6	%
Flash point	Below 55°	55	>70	°C
Cl (Chlorine) (Hazardous Waste)	max. 1%	10000	12.127	mg/kg
Cl (Chlorine) (Non Hazardous Waste)	max. 4%	40000	12.127	mg/kg
S (Sulphur)	max. 3%	30000	46.155	mg/kg
F (Fluorine)	max. 0.4%	4000	3.832	mg/kg
Br (Bromine)	max. 0.5%	5000	<0.05	mg/kg
I (Iodine)	max. 0.5%	5000	<0.05	mg/kg
P (Phosphorous)	max. 0.5%	5000	516.661	mg/kg
Na (Sodium)	max. 2.5%	25000	645.2	mg/kg
K (Potassium)	max. 2.5%	25000	170.4	mg/kg
<b>Metals</b>				
Hg (Mercury)	max. 10 ppm	10	<0.01	mg/kg
Cd (Cadmium)	max. 20 ppm	20	0.278	mg/kg
Se (Selenium)	max. 20 ppm	20	<0.01	mg/kg
Tl (Thallium)	max. 20 ppm	20	<0.01	mg/kg
Mo (Molybdenum)	max. 30 ppm	30	2.141	mg/kg
Ni (Nickel)	max. 60 ppm	60	<0.01	mg/kg
Co (Cobalt)	max. 60 ppm	60	<0.01	mg/kg
As (Arsenic)	max. 100 ppm	100	<0.01	mg/kg
Be (Beryllium)	max. 100 ppm	100	<0.01	mg/kg
Cu (Copper)	max. 100 ppm	100	2.265	mg/kg
Sb (Antimony)	max. 100 ppm	100	8.454	mg/kg
Sn (Tin)	max. 200 ppm	200	6.039	mg/kg
Cr (Chromium)	max. 300 ppm	300	1.433	mg/kg
V (Vanadium)	max. 300 ppm	300	0.336	mg/kg
Pb (Lead)	max. 1000 ppm	1000	0.205	mg/kg
Zn (Zinc)	max. 1000 ppm	1000	88.262	mg/kg
Pentachlorophenol (not tested if	max. 10 ppm	10	N/A	mg/kg
PCB (Polychlorinated biphenyls)	max. 10 ppm	10	<0.005	mg/kg
PCT (Polychlorinated terphenyls)	max. 10 ppm	10	N/A	mg/kg

<b>SAMPLE ID</b>	<b>Facility E</b>
<b>Fitz Scientific Sample ID</b>	<b>1561/768/01</b>
<b>DATE RECEIVED by lab</b>	<b>06/07/2018</b>
<b>Physical Characteristics (Insert Yes/No)</b>	<b>Solid/Sludge</b> Yes <b>Liquid</b> No
<b>Sieve Test</b>	<b>Yes</b>

Test	Pass/Fail range	Pass/Fail range	Result	Units
pH	report value	≥ 2 to ≤ 10	8.5	pH
CV (Calorific Value)	0 – 5 MJ/kg	0 – 5 MJ/kg	<5	MJ/kg
Molsture content	report value	report value	61.98	%
Dry Matter	report value	report value	38.02	%
Ash Content (calc. on above)	report value	report value	31.9	%
Flash point	Below 55°	55	>70	°C
Cl (Chlorine) (Hazardous Waste)	max. 1%	10000	7.625	mg/kg
Cl (Chlorine) (Non Hazardous Waste)	max. 4%	40000	7.625	mg/kg
S (Sulphur)	max. 3%	30000	48.758	mg/kg
F (Fluorine)	max. 0.4%	4000	2.877	mg/kg
Br (Bromine)	max. 0.5%	5000	<0.05	mg/kg
I (Iodine)	max. 0.5%	5000	<0.05	mg/kg
P (Phosphorous)	max. 0.5%	5000	8107.035	mg/kg
Na (Sodium)	max. 2.5%	25000	1011.1	mg/kg
K (Potassium)	max. 2.5%	25000	89.7	mg/kg
<b>Metals</b>				
Hg (Mercury)	max. 10 ppm	10	<0.01	mg/kg
Cd (Cadmium)	max. 20 ppm	20	0.381	mg/kg
Se (Selenium)	max. 20 ppm	20	<0.01	mg/kg
Tl (Thallium)	max. 20 ppm	20	<0.01	mg/kg
Mo (Molybdenum)	max. 30 ppm	30	6.177	mg/kg
Ni (Nickel)	max. 60 ppm	60	0.813	mg/kg
Co (Cobalt)	max. 60 ppm	60	<0.01	mg/kg
As (Arsenic)	max. 100 ppm	100	<0.01	mg/kg
Be (Beryllium)	max. 100 ppm	100	<0.01	mg/kg
Cu (Copper)	max. 100 ppm	100	22.62	mg/kg
Sb (Antimony)	max. 100 ppm	100	11.339	mg/kg
Sn (Tin)	max. 200 ppm	200	7.710	mg/kg
Cr (Chromium)	max. 300 ppm	300	3.585	mg/kg
V (Vandlum)	max. 300 ppm	300	7.791	mg/kg
Pb (Lead)	max. 1000 ppm	1000	0.634	mg/kg
Zn (Zinc)	max. 1000 ppm	1000	35.46	mg/kg
Pentachlorophenol (not tested if	max. 10 ppm	10	N/A	mg/kg
PCB (Polychlorinated biphenyls)	max. 10 ppm	10	<0.005	mg/kg
PCT(Polychlorinated terphenyls)	max. 10 ppm	10	N/A	mg/kg

<b>SAMPLE ID</b>	<b>Facility D</b>
<b>Fitz Scientific Sample ID</b>	<b>1561/767/01</b>
<b>DATE RECEIVED by lab</b>	<b>06/07/2018</b>

<b>Physical Characteristics (Insert Yes/No)</b>	<b>Solid/Sludge</b>	<b>Yes</b>	<b>Liquid</b>
<b>Sieve Test</b>	<b>Yes</b>		

No

Test	Pass/Fail range	Pass/Fail range	Result	Units
pH	report value	≥ 2 to ≤ 10	5.2	pH
CV (Calorific Value)	0 – 5 MJ/kg	0 – 5 MJ/kg	<5	MJ/kg
Molsture content	report value	report value	78.9	%
Dry Matter	report value	report value	21.1	%
Ash Content (calc. on above)	report value	report value	1.3	%
Flash point	Below 55°	55	>70	°C
Cl (Chlorine) (Hazardous Waste)	max. 1%	10000	44.623	mg/kg
Cl (Chlorine) (Non Hazardous Waste)	max. 4%	40000	44.623	mg/kg
S (Sulphur)	max. 3%	30000	305.275	mg/kg
F (Fluorine)	max. 0.4%	4000	4.384	mg/kg
Br (Bromine)	max. 0.5%	5000	<0.05	mg/kg
I (Iodine)	max. 0.5%	5000	<0.05	mg/kg
P (Phosphorous)	max. 0.5%	5000	21.983	mg/kg
Na (Sodium)	max. 2.5%	25000	988.1	mg/kg
K (Potassium)	max. 2.5%	25000	678.5	mg/kg
<b>Metals</b>				
Hg (Mercury)	max. 10 ppm	10	<0.01	mg/kg
Cd (Cadmium)	max. 20 ppm	20	0.281	mg/kg
Se (Selenium)	max. 20 ppm	20	<0.01	mg/kg
Tl (Thallium)	max. 20 ppm	20	<0.01	mg/kg
Mo (Molybdenum)	max. 30 ppm	30	5.488	mg/kg
Ni (Nickel)	max. 60 ppm	60	0.197	mg/kg
Co (Cobalt)	max. 60 ppm	60	<0.01	mg/kg
As (Arsenic)	max. 100 ppm	100	0.714	mg/kg
Be (Beryllium)	max. 100 ppm	100	<0.01	mg/kg
Cu (Copper)	max. 100 ppm	100	3.484	mg/kg
Sb (Antimony)	max. 100 ppm	100	14.93	mg/kg
Sn (Tin)	max. 200 ppm	200	8.686	mg/kg
Cr (Chromium)	max. 300 ppm	300	2.305	mg/kg
V (Vanadium)	max. 300 ppm	300	1.125	mg/kg
Pb (Lead)	max. 1000 ppm	1000	<0.01	mg/kg
Zn (Zinc)	max. 1000 ppm	1000	39.733	mg/kg
Pentachlorophenol (not tested if	max. 10 ppm	10	N/A	mg/kg
PCB (Polychlorinated biphenyls)	max. 10 ppm	10	<0.005	mg/kg
PCT (Polychlorinated terphenyls)	max. 10 ppm	10	N/A	mg/kg

<b>SAMPLE ID</b>	<b>Facility F</b>
<b>Fitz Scientific Sample ID</b>	<b>1561/780/01</b>
<b>DATE RECEIVED by lab</b>	<b>10/07/2018</b>
<b>Physical Characteristics (Insert Yes/No)</b>	<b>Solid/Sludge</b> Yes <b>Liquid</b> No
<b>Sieve Test</b>	<b>Yes</b>

<u>Test</u>	<u>Pass/Fail range</u>	<u>Pass/Fail range</u>	<u>Result</u>	<u>Units</u>
pH	report value	≥ 2 to ≤ 10	8.18	pH
CV (Calorific Value)	0 – 5 MJ/kg	0 – 5 MJ/kg	<5	MJ/kg
Moisture content	report value	report value	84.58	%
Dry Matter	report value	report value	15.42	%
Ash Content (calc. on above)	report value	report value	2.3	%
Flash point	Below 55°	55	>70	°C
Cl (Chlorine) (Hazardous Waste)	max. 1%	10000	107.617	mg/kg
Cl (Chlorine) (Non Hazardous Waste)	max. 4%	40000	107.617	mg/kg
S (Sulphur)	max. 3%	30000	60.530	mg/kg
F (Fluorine)	max. 0.4%	4000	<0.05	mg/kg
Br (Bromine)	max. 0.5%	5000	<0.05	mg/kg
I (Iodine)	max. 0.5%	5000	<0.05	mg/kg
P (Phosphorous)	max. 0.5%	5000	732.627	mg/kg
Na (Sodium)	max. 2.5%	25000	1214.8	mg/kg
K (Potassium)	max. 2.5%	25000	387	mg/kg
<b>Metals</b>				
Hg (Mercury)	max. 10 ppm	10	<0.01	mg/kg
Cd (Cadmium)	max. 20 ppm	20	0.295	mg/kg
Se (Selenium)	max. 20 ppm	20	2.145	mg/kg
Tl (Thallium)	max. 20 ppm	20	<0.01	mg/kg
Mo (Molybdenum)	max. 30 ppm	30	5.562	mg/kg
Ni (Nickel)	max. 60 ppm	60	1.121	mg/kg
Co (Cobalt)	max. 60 ppm	60	<0.01	mg/kg
As (Arsenic)	max. 100 ppm	100	<0.01	mg/kg
Be (Beryllium)	max. 100 ppm	100	<0.01	mg/kg
Cu (Copper)	max. 100 ppm	100	14.753	mg/kg
Sb (Antimony)	max. 100 ppm	100	13.431	mg/kg
Sn (Tin)	max. 200 ppm	200	6.388	mg/kg
Cr (Chromium)	max. 300 ppm	300	2.692	mg/kg
V (Vanadium)	max. 300 ppm	300	0.967	mg/kg
Pb (Lead)	max. 1000 ppm	1000	0.788	mg/kg
Zn (Zinc)	max. 1000 ppm	1000	88.262	mg/kg
Pentachlorophenol (not tested if	max. 10 ppm	10	N/A	mg/kg
PCB (Polychlorinated biphenyls)	max. 10 ppm	10	<0.005	mg/kg
PCT(Polychlorinated terphenyls)	max. 10 ppm	10	N/A	mg/kg