

Waste Classification Report



TQBS7-EGRM6-Z8JN2

Job name

Limerick Gasworks Groundwater 09-03-2020 Version 3

Description/Comments

Project

Site

Related Documents

#	Name	Description
None		

Waste Stream Template

Groundwater Limerick Gasworks

Classified by

Name: Barry Sexton	Company: Ground Investigations Ireland	HazWasteOnline™ Training Record:	
Date: 17 Apr 2020 15:43 GMT	Catherinestown House,	Course	Date
Telephone: 00353876119640	Hazelhatch Road, Newcastle	Hazardous Waste Classification	09 Apr 2019
	Co. Dublin	Advanced Hazardous Waste Classification	10 Apr 2019

Report

Created by: Barry Sexton
Created date: 17 Apr 2020 15:43 GMT

Job summary

#	Sample Name	Classification Result	Hazard properties	Page
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Classification of sample: GW-09

✔ **Non Hazardous Waste**
Classified as **19 13 08**
in the List of Waste

Sample details

Sample Name:	LoW Code:	
GW-09	Chapter:	19: Wastes from Waste Management Facilities, Off-site Waste Water Treatment Plants and the Preparation of Water Intended for Human Consumption and Water for Industrial Use
	Entry:	19 13 08 (aqueous liquid wastes and aqueous concentrates from groundwater remediation other than those mentioned in 19 13 07)

Hazard properties

None identified

Determinands

Density of the liquid: 1 g/cm³

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
1	naphthalene				1882.1 µg/l		1.882 mg/kg	0.000188 %			
	601-052-00-2	202-049-5	91-20-3								
2	acenaphthylene				86.376 µg/l		0.0864 mg/kg	0.00000864 %			
		205-917-1	208-96-8								
3	acenaphthene				12.53 µg/l		0.0125 mg/kg	0.00000125 %			
		201-469-6	83-32-9								
4	fluorene				25.804 µg/l		0.0258 mg/kg	0.00000258 %			
		201-695-5	86-73-7								
5	phenanthrene				51.003 µg/l		0.051 mg/kg	0.0000051 %			
		201-581-5	85-01-8								
6	anthracene				11.578 µg/l		0.0116 mg/kg	0.00000116 %			
		204-371-1	120-12-7								
7	fluoranthene				10.301 µg/l		0.0103 mg/kg	0.00000103 %			
		205-912-4	206-44-0								
8	pyrene				5.784 µg/l		0.0057 mg/kg	0.00000578 %			
		204-927-3	129-00-0								
9	benzo[a]anthracene				1.789 µg/l		0.0017 mg/kg	0.000000179 %			
	601-033-00-9	200-280-6	56-55-3								
10	chrysene				1.321 µg/l		0.0013 mg/kg	0.000000132 %			
	601-048-00-0	205-923-4	218-01-9								
11	benzo[k]fluoranthene				1.935 µg/l		0.0019 mg/kg	0.000000194 %			
	601-036-00-5	205-916-6	207-08-9								
12	benzo[a]pyrene; benzo[def]chrysene				0.952 µg/l		0.0009 mg/kg	0.000000095 %			
	601-032-00-3	200-028-5	50-32-8								
13	indeno[123-cd]pyrene				0.434 µg/l		0.0004 mg/kg	0.000000043 %			
		205-893-2	193-39-5								
14	dibenz[a,h]anthracene				<0.2 µg/l		<0.0002 mg/kg	<0.00000002 %			<LOD
	601-041-00-2	200-181-8	53-70-3								
15	benzo[ghi]perylene				0.458 µg/l		0.0004 mg/kg	0.000000045 %			
		205-883-8	191-24-2								
16	benzo[j]fluoranthene				0.54 µg/l		0.0005 mg/kg	0.000000054 %			
	601-035-00-X	205-910-3	205-82-3								

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
17	TPH (C6 to C40) petroleum group				<10 µg/l		<0.01 mg/kg	<0.000001 %			<LOD
			TPH								
18	arsenic { arsenic trioxide }				<2.5 µg/l	1.32	<0.0033 mg/kg	<0.00000033 %			<LOD
	033-003-00-0	215-481-4	1327-53-3								
19	cadmium { cadmium oxide }				<0.5 µg/l	1.142	<0.0005 mg/kg	<0.000000057 %			<LOD
	048-002-00-0	215-146-2	1306-19-0								
20	chromium in chromium(III) compounds { chromium(III) oxide }				<1.5 µg/l	1.462	<0.0021 mg/kg	<0.000000219 %			<LOD
		215-160-9	1308-38-9								
21	copper { copper sulphate pentahydrate }				27 µg/l	3.929	0.106 mg/kg	0.0000106 %			
	029-023-00-4	231-847-6	7758-99-8								
22	lead { lead chromate }			1	<5 µg/l	1.56	<0.0078 mg/kg	<0.0000005 %			<LOD
	082-004-00-2	231-846-0	7758-97-6								
23	mercury { mercury dichloride }				<1 µg/l	1.353	<0.0013 mg/kg	<0.000000135 %			<LOD
	080-010-00-X	231-299-8	7487-94-7								
24	zinc { zinc chromate }				<3 µg/l	2.774	<0.0083 mg/kg	<0.000000832 %			<LOD
	024-007-00-3										
25	phenol				6520 µg/l		6.52 mg/kg	0.000652 %			
	604-001-00-2	203-632-7	108-95-2								
26	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				5310 µg/l	1.884	10.004 mg/kg	0.001 %			
	006-007-00-5										
27	pH				10.15 pH		10.15 pH	10.15 pH			
			PH								
28	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<5 µg/l		<0.005 mg/kg	<0.0000005 %			<LOD
	603-181-00-X	216-653-1	1634-04-4								
29	benzene				80 µg/l		0.08 mg/kg	0.000008 %			
	601-020-00-8	200-753-7	71-43-2								
30	toluene				220 µg/l		0.22 mg/kg	0.000022 %			
	601-021-00-3	203-625-9	108-88-3								
31	ethylbenzene				62 µg/l		0.062 mg/kg	0.0000062 %			
	601-023-00-4	202-849-4	100-41-4								
32	xylene				662 µg/l		0.662 mg/kg	0.0000662 %			
	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]								
Total:									0.00198 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
•	Determinand defined or amended by HazWasteOnline (see Appendix A)
•	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
ND	Not detected
CLP: Note 1	Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and ≤ 75°C"

Force this Hazardous property to non hazardous because The flash point of the liquid has been proven under laboratory conditions to be greater than 60 degrees C, therefore the liquid is not flammable and non-hazardous.

Hazard Statements hit:

Flam. Liq. 2; H225 "Highly flammable liquid and vapour."

Because of determinands:

benzene: (conc.: 8.0e-06%)
toluene: (conc.: 0.00002%)
ethylbenzene: (conc.: 6.2e-06%)

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

xylene: (conc.: 0.00006%)

Appendix A: Classifier defined and non CLP determinands

■ **acenaphthylene** (EC Number: 205-917-1, CAS Number: 208-96-8)

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 17 Jul 2015

Hazard Statements: Skin Irrit. 2 H315 , STOT SE 3 H335 , Eye Irrit. 2 H319 , Acute Tox. 1 H310 , Acute Tox. 1 H330 , Acute Tox. 4 H302

■ **acenaphthene** (EC Number: 201-469-6, CAS Number: 83-32-9)

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 17 Jul 2015

Hazard Statements: Aquatic Chronic 2 H411 , Aquatic Chronic 1 H410 , Aquatic Acute 1 H400 , Skin Irrit. 2 H315 , STOT SE 3 H335 , Eye Irrit. 2 H319

■ **fluorene** (EC Number: 201-695-5, CAS Number: 86-73-7)

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 06 Aug 2015

Hazard Statements: Aquatic Chronic 1 H410 , Aquatic Acute 1 H400

■ **phenanthrene** (EC Number: 201-581-5, CAS Number: 85-01-8)

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 06 Aug 2015

Hazard Statements: Skin Irrit. 2 H315 , Aquatic Chronic 1 H410 , Aquatic Acute 1 H400 , Skin Sens. 1 H317 , Carc. 2 H351 , STOT SE 3 H335 , Eye Irrit. 2 H319 , Acute Tox. 4 H302

■ **anthracene** (EC Number: 204-371-1, CAS Number: 120-12-7)

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 17 Jul 2015

Hazard Statements: Aquatic Chronic 1 H410 , Aquatic Acute 1 H400 , Skin Sens. 1 H317 , Skin Irrit. 2 H315 , STOT SE 3 H335 , Eye Irrit. 2 H319

■ **fluoranthene** (EC Number: 205-912-4, CAS Number: 206-44-0)

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 21 Aug 2015

Hazard Statements: Aquatic Chronic 1 H410 , Aquatic Acute 1 H400 , Acute Tox. 4 H302

■ **pyrene** (EC Number: 204-927-3, CAS Number: 129-00-0)

Description/Comments: Data from C&L Inventory Database; SDS Sigma Aldrich 2014

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 21 Aug 2015

Hazard Statements: Aquatic Chronic 1 H410 , Aquatic Acute 1 H400 , STOT SE 3 H335 , Eye Irrit. 2 H319 , Skin Irrit. 2 H315

■ **indeno[123-cd]pyrene** (EC Number: 205-893-2, CAS Number: 193-39-5)

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 06 Aug 2015

Hazard Statements: Carc. 2 H351

■ **benzo[ghi]perylene** (EC Number: 205-883-8, CAS Number: 191-24-2)

Description/Comments: Data from C&L Inventory Database; SDS Sigma Aldrich 28/02/2015

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 23 Jul 2015

Hazard Statements: Aquatic Chronic 1 H410 , Aquatic Acute 1 H400

■ **TPH (C6 to C40) petroleum group** (CAS Number: TPH)

Description/Comments: Hazard statements taken from WM3 1st Edition 2015; Risk phrases: WM2 3rd Edition 2013

Data source: WM3 1st Edition 2015

Data source date: 25 May 2015

Hazard Statements: Aquatic Chronic 2 H411 , Repr. 2 H361d , Carc. 1B H350 , Muta. 1B H340 , STOT RE 2 H373 , Asp. Tox. 1 H304 , Flam. Liq. 3 H226

■ **chromium(III) oxide** (EC Number: 215-160-9, CAS Number: 1308-38-9)

Conversion factor: 1.462

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 17 Jul 2015

Hazard Statements: Aquatic Chronic 1 H410 , Aquatic Acute 1 H400 , Repr. 1B H360FD , Skin Sens. 1 H317 , Resp. Sens. 1 H334 , Skin Irrit. 2 H315 , STOT SE 3 H335 , Eye Irrit. 2 H319 , Acute Tox. 4 H302 , Acute Tox. 4 H332

■ **salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex**

CLP index number: 006-007-00-5

Description/Comments: Conversion factor based on a worst case compound: sodium cyanide

Data source: Commission Regulation (EC) No 790/2009 - 1st Adaptation to Technical Progress for Regulation (EC) No 1272/2008. (ATP1)

Additional Hazard Statement(s): EUH032 >= 0.2 %

Reason for additional Hazards Statement(s):

14 Dec 2015 - EUH032 >= 0.2 % hazard statement sourced from: WM3, Table C12.2

■ **pH** (CAS Number: PH)

Description/Comments: Appendix C4

Data source: WM3 1st Edition 2015

Data source date: 25 May 2015

Hazard Statements: None.

■ **ethylbenzene** (EC Number: 202-849-4, CAS Number: 100-41-4)

CLP index number: 601-023-00-4

Description/Comments:

Data source: Commission Regulation (EU) No 605/2014 – 6th Adaptation to Technical Progress for Regulation (EC) No 1272/2008. (ATP6)

Additional Hazard Statement(s): Carc. 2 H351

Reason for additional Hazards Statement(s):

03 Jun 2015 - Carc. 2 H351 hazard statement sourced from: IARC Group 2B (77) 2000

Appendix B: Rationale for selection of metal species

arsenic {arsenic trioxide}

Reasonable case CLP species based on hazard statements/molecular weight and most common (stable) oxide of arsenic. Industrial sources include: smelting; main precursor to other arsenic compounds.

cadmium {cadmium oxide}

Reasonable case CLP species based on hazard statements/molecular weight, very low solubility in water. Industrial sources include: electroplating baths, electrodes for storage batteries, catalysts, ceramic glazes, phosphors, pigments and nematocides. (edit as required) Worst case compounds in CLP: cadmium sulphate, chloride, fluoride & iodide not expected as either very soluble and/or compound's industrial usage not related to site history (edit as required)

chromium in chromium(III) compounds {chromium(III) oxide}

Reasonable case species based on hazard statements/molecular weight. Industrial sources include: tanning, pigment in paint, inks and glass

copper {copper sulphate pentahydrate}

Worst case CLP species based on hazard statements/molecular weight (edit as require

lead {lead chromate}

Worst case CLP species based on hazard statements/molecular weight (edit as require

mercury {mercury dichloride}

Worst case CLP species based on hazard statements/molecular weight

zinc {zinc chromate}

Worst case CLP species based on hazard statements/molecular weight (edit as required)

cyanides {salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex}

Worst Case

Appendix C: Version

HazWasteOnline Classification Engine: **WM3 1st Edition v1.1, May 2018**

HazWasteOnline Classification Engine Version: 2020.88.4220.8373 (28 Mar 2020)

HazWasteOnline Database: 2020.88.4220.8373 (28 Mar 2020)

This classification utilises the following guidance and legislation:

WM3 v1.1 - Waste Classification - 1st Edition v1.1 - May 2018

CLP Regulation - Regulation 1272/2008/EC of 16 December 2008

1st ATP - Regulation 790/2009/EC of 10 August 2009

2nd ATP - Regulation 286/2011/EC of 10 March 2011

3rd ATP - Regulation 618/2012/EU of 10 July 2012

4th ATP - Regulation 487/2013/EU of 8 May 2013

Correction to 1st ATP - Regulation 758/2013/EU of 7 August 2013

5th ATP - Regulation 944/2013/EU of 2 October 2013

6th ATP - Regulation 605/2014/EU of 5 June 2014

WFD Annex III replacement - Regulation 1357/2014/EU of 18 December 2014

Revised List of Wastes 2014 - Decision 2014/955/EU of 18 December 2014

7th ATP - Regulation 2015/1221/EU of 24 July 2015

8th ATP - Regulation (EU) 2016/918 of 19 May 2016

9th ATP - Regulation (EU) 2016/1179 of 19 July 2016

10th ATP - Regulation (EU) 2017/776 of 4 May 2017

HP14 amendment - Regulation (EU) 2017/997 of 8 June 2017

13th ATP - Regulation (EU) 2018/1480 of 4 October 2018

POPs Regulation 2004 - Regulation 850/2004/EC of 29 April 2004

1st ATP to POPs Regulation - Regulation 756/2010/EU of 24 August 2010

2nd ATP to POPs Regulation - Regulation 757/2010/EU of 24 August 2010