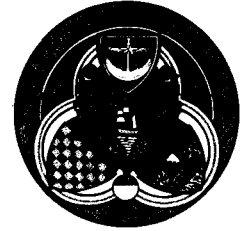


# Comhairle Contae Chorcaí Cork County Council

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Ms Ann Marie Donlon  
Licencing Unit  
Office of Climate Change,  
Licencing and resource Use,  
Environmental Protection Agency  
Johnstown Castle Estate  
County Wexford  
Ireland

11<sup>th</sup> August 2009

Subject : Wastewater Authorisation Regulations Application- Agglomeration of Passage West, Monkstown ,Cork Register Number D0129-01

Dear Ms Donlon ,

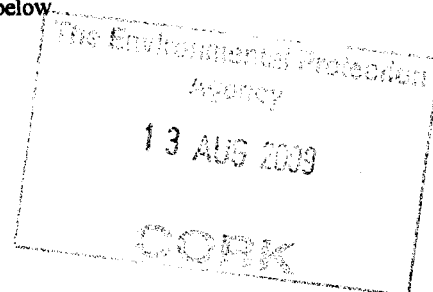
The attached documents are revised Section D of the Cork County Council application for Passage West, Monkstown (Register Number D0129-01) agglomeration as results units incorrectly reported in the original section D . A table has also been included at the rear of the document with revised Limits of detection for digested samples as the samples were digested for metals and diluted prior to analysis on an ICP-MS

In respect of the query raised about Copper levels we have checked our records and the correct results were reported . In terms of the elevated level of copper in one of the locations SW03 the discharge would have some discharges present from the boat dry dock located in that area and there may be discharges of copper from this area however this would need to be investigated further. The samples were digested before analysis and diluted prior to analysis on an ICP-MS. The limit of detection for an undiluted sample was 3 ug/l and there is a possibility with ICP instrumentation particularly when there is saline water intrusion as is the case in for these samples e.g. conductivity of 13,070 us/cm in SW03 that the sodium level present in the sample from the salt water intrusion resulted in a spectral interference in the matrix of the test and resulted in slightly elevated levels of copper in the analytical results. Sodium levels can cause spectral interferences in the analytical wavelengths for Copper using ICP analysis. The samples were also diluted by a factor of 10 resulting in levels that were close to the LOD and more susceptible to spectral interferences as the baseline would have shifted. The result was then multiplied by a factor of 10 which amplified the result and can then explain the figures. The discharge from this agglomeration is totally domestic in nature and except for a small dry dock facility in Monkstown there is no other activity present that would be discharging Copper to the sewer in this locality.

Should you have any queries or clarification my contact details are supplied below  
Phone no. 021-4532700/E mail [valerie.hammon@corkcoco.ie](mailto:valerie.hammon@corkcoco.ie)

Yours Sincerely

Valerie Hannon,  
A/Snr Executive Scientist,  
Environment Directorate,  
Cork County Council.



c.c. Kevin Sugrue , Senior Engineer Water Services South ,Cork County Council

Agglomeration of Passage West, Monkstown ,Cork Register Number D0129-01

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REVISION 02

**TABLE D.1(i)(a): EMISSIONS TO SURFACE/GROUND WATERS - REVISED**  
**(Primary Discharge Point)**

**Discharge Point Code:** SW01PASS

|                                  |                                      |       |   |
|----------------------------------|--------------------------------------|-------|---|
| Source of Emission:              | Passage West/Monkstown Agglomeration |       |   |
| Location:                        | Cork Lower Harbour Townland Pembroke |       |   |
| Grid Ref. (12 digit, 6E, 6N):    | E176559, N069260                     |       |   |
| Name of receiving waters:        | River Lee West Passage, Cork Harbour |       |   |
| River Basin District:            | South Western River Basin District   |       |   |
| Designation of receiving waters: | Sensitive Waters                     |       |   |
| Flow rate in receiving waters:   |                                      | Tidal | $\text{m}^3.\text{sec}^{-1}$ Dry Weather Flow |
|                                  |                                      |       | $\text{m}^3.\text{sec}^{-1}$ 95%ile flow      |

**Emission Details:**

|                    |                             |                          |   |
|--------------------|-----------------------------|--------------------------|---|
| (i) Volume emitted |                             |                          |   |
| Normal/day         | 811 m <sup>3</sup>          | Maximum/day              | 1187 m <sup>3</sup>                                 |
| Maximum rate/hour  | Not Available               | Period of emission (avg) | <u>60</u> min/hr <u>24</u> hr/day <u>365</u> day/yr |
| Dry Weather Flow   | 0.00939 m <sup>3</sup> /sec |                          |   |

**Note: DWF is estimated. Discharges include seawater intrusion.**

REVISION 02

**TABLE D.1(i)(b): EMISSIONS TO SURFACE/GROUND WATERS - REVISED**  
**Characteristics of the emission**  
**(Primary Discharge Point)**

**Discharge Point Code:** SW01PASS

| Number | Substance                               | As discharged              |                |
|--------|---|----------------------------|----------------|
|        |   | Max. daily average         | 1187 m3/day    |
| 1      | pH                                      | 6.0- 9.0                   |                |
| 2      | Temperature                             | 25°C                       |                |
| 3      | Electrical Conductivity(@25°C)          | 10000                      |                |
|        |   | Max. daily average (mg/l)* | Kg/day**       |
| 4      | Suspended Solids                        | 400                        | 474.8          |
| 5      | Ammonia (as N)                          | 25                         | 29.7           |
| 6      | Biochemical Oxygen Demand               | 350                        | 415.5          |
| 7      | Chemical Oxygen Demand                  | 700                        | 831            |
| 8      | Total Nitrogen (as N)                   | 15                         | 89             |
| 9      | Nitrite (as N)                          | <3.5                       | <4.2           |
| 10     | Nitrate (as N)                          | <10                        | <11.9          |
| 11     | Total Phosphorus (as P)                 | 15                         | 17.8           |
| 12     | Orthophosphate (as P) <sup>Note 1</sup> | 10                         | 11.9           |
| 13     | Sulphate (SO <sub>4</sub> )             | Not applicable             | Not applicable |
| 14     | Phenols (sum) <sup>Note 2</sup> (ug/l)  | Not applicable             | Not applicable |

Note 1: For waste water samples this monitoring should be undertaken on a sample filtered on 0.45µm filter paper.

Note 2: USEPA Method 604, AWWA Standard Method 6240, or equivalent.

Note 3 :\*\* kg/day values estimated at predicted maximum per day discharge values

Note 4: Discharges include seawater intrusion.

REVISION 02

**TABLE D.1(i)(c): DANGEROUS SUBSTANCE EMISSIONS TO SURFACE/GROUND WATERS - REVISED**

Primary Discharge Point - Characteristics of the emission  
**Discharge Point Code:** SW01PASS

| Number | Substance       | As discharged             |                |                |
|--------|-----------------|---------------------------|----------------|----------------|
|        |                 | Max. daily average (µg/l) | kg/day**       | kg/year**      |
| 1      | Atrazine        | Not applicable            | Not applicable | Not applicable |
| 2      | Dichloromethane | Not applicable            | Not applicable | Not applicable |
| 3      | Simazine        | Not applicable            | Not applicable | Not applicable |
| 4      | Toluene         | Not applicable            | Not applicable | Not applicable |
| 5      | Tributyltin     | Not applicable            | Not applicable | Not applicable |
| 6      | Xylenes         | Not applicable            | Not applicable | Not applicable |
| 7      | Arsenic         | Not applicable            | Not applicable | Not applicable |
| 8      | Chromium        | Not applicable            | Not applicable | Not applicable |
| 9      | Copper          | 60                        | 0.071          | 25.995         |
| 10     | Cyanide         | Not applicable            | Not applicable | Not applicable |
| 11     | Fluoride        | 500                       | 0.594          | 216.63         |
| 12     | Lead            | Not applicable            | Not applicable | Not applicable |
| 13     | Nickel          | Not applicable            | Not applicable | Not applicable |
| 14     | Zinc            | 60                        | 0.071          | 25.995         |
| 15     | Boron           | Not applicable            | Not applicable | Not applicable |
| 16     | Cadmium         | Not applicable            | Not applicable | Not applicable |
| 17     | Mercury         | Not applicable            | Not applicable | Not applicable |
| 18     | Selenium        | Not applicable            | Not applicable | Not applicable |
| 19     | Barium          | 25                        | 0.0297         | 10.83          |

Note 1: For waste water samples this monitoring should be undertaken on a sample filtered on 0.45µm filter paper.

Note 2: USEPA Method 604, AWWA Standard Method 6240, or equivalent.

Note 3 :\*\* kg/day values estimated at predicted maximum per day discharge values

Note 4: Discharges include seawater intrusion

REVISION 02

**TABLE D.1(ii)(a): EMISSIONS TO SURFACE/GROUND WATERS - REVISED**  
 (Secondary Discharge Point) (1 table per discharge point)  
**Discharge Point Code:** SW02PASS

|                                  |   |
|----------------------------------|---|
| Source of Emission:              | Passage West/Monkstown Agglomeration  |
| Location:                        | Cork Lower Harbour Townland Lackaroe  |
| Grid Ref. (12 digit, 6E, 6N):    | E177181, N067448  |
| Name of receiving waters:        | River Lee West Passage, Cork Harbour  |
| River Basin District:            | South Western River Basin District  |
| Designation of receiving waters: | Sensitive   |
| Flow rate in receiving waters:   | Tidal _____ m <sup>3</sup> .sec <sup>-1</sup> Dry Weather Flow<br>_____ m <sup>3</sup> .sec <sup>-1</sup> 95%ile flow |

**Emission Details:**

|                    |                   |                          |   |
|--------------------|-------------------|--------------------------|---|
| (i) Volume emitted |                   |                          |   |
| Normal/day         | 680m <sup>3</sup> | Maximum/day              | 730 m <sup>3</sup>                                  |
| Maximum rate/hour  | Not Available     | Period of emission (avg) | <u>60</u> min/hr <u>24</u> hr/day <u>365</u> day/yr |
| Dry Weather Flow   | 0.00752           |                          |   |

**Note: Flows include seawater intrusion.**

REVISION 02

**TABLE D.1(ii)(b): EMISSIONS TO SURFACE/GROUND WATERS - REVISED**  
**Characteristics of the emission (1 table per discharge point)**  
**(Secondary Discharge Point)**

**Discharge Point Code:** SW02PASS

| Number | Substance                                 | As discharged              |                |
|--------|---|----------------------------|----------------|
|        |   | Max. daily average         | 730 m3/day     |
| 1      | pH  | 6.0 -9.0                   |                |
| 2      | Temperature                               | 25°C                       |                |
| 3      | Electrical Conductivity (@25°C)           | 10000                      |                |
|        |   | Max. daily average (mg/l)* | Kg/day**       |
| 4      | Suspended Solids                          | 400                        | 292            |
| 5      | Ammonia (as N)                            | 25                         | 18.25          |
| 6      | Biochemical Oxygen Demand                 | 350                        | 255.5          |
| 7      | Chemical Oxygen Demand                    | 700                        | 511            |
| 8      | Total Nitrogen (as N)                     | 75                         | 54.75          |
| 9      | Nitrite (as N)                            | 3.5                        | <2.56          |
| 10     | Nitrate (as N)                            | <10                        | <7.3           |
| 11     | Total Phosphorus (as P) <sup>Note 1</sup> | 15                         | 10.95          |
| 12     | Orthophosphate (as P)                     | 10                         | 7.3            |
| 13     | Sulphate (SO <sub>4</sub> )               | Not applicable             | Not applicable |
| 14     | Phenols (sum) <sup>Note 2</sup> (ug/l)    | Not applicable             | Not applicable |

Note 1: For waste water samples this monitoring should be undertaken on a sample filtered on 0.45µm filter paper.

Note 2: USEPA Method 604, AWWA Standard Method 6240, or equivalent.

Note 3 :\*\* kg/day values estimated at predicted maximum per day discharge values

Note 4: Discharges include seawater intrusion.

REVISION 02

**TABLE D.1(ii)(c): DANGEROUS SUBSTANCE EMISSIONS TO SURFACE/GROUND WATERS - REVISED**

**Secondary Discharge Point - Characteristics of the emission (1 table per discharge point)**

**Discharge Point Code:** SW02PASS

| Number | Substance       | As discharged             |                |                |
|--------|-----------------|---------------------------|----------------|----------------|
|        |                 | Max. daily average (µg/l) | kg/day***      | kg/year**      |
| 1      | Atrazine        | Not applicable            | Not applicable | Not applicable |
| 2      | Dichloromethane | Not applicable            | Not applicable | Not applicable |
| 3      | Simazine        | Not applicable            | Not applicable | Not applicable |
| 4      | Toluene         | Not applicable            | Not applicable | Not applicable |
| 5      | Tributyltin     | Not applicable            | Not applicable | Not applicable |
| 6      | Xylenes         | Not applicable            | Not applicable | Not applicable |
| 7      | Arsenic         | Not applicable            | Not applicable | Not applicable |
| 8      | Chromium        | Not applicable            | Not applicable | Not applicable |
| 9      | Copper          | Not applicable            | Not applicable | Not applicable |
| 10     | Cyanide         | Not applicable            | Not applicable | Not applicable |
| 11     | Fluoride        | 500                       | 0.37           | 135.1          |
| 12     | Lead            | Not applicable            | Not applicable | Not applicable |
| 13     | Nickel          | Not applicable            | Not applicable | Not applicable |
| 14     | Zinc            | Not applicable            | Not applicable | Not applicable |
| 15     | Boron           | Not applicable            | Not applicable | Not applicable |
| 16     | Cadmium         | Not applicable            | Not applicable | Not applicable |
| 17     | Mercury         | Not applicable            | Not applicable | Not applicable |
| 18     | Selenium        | Not applicable            | Not applicable | Not applicable |
| 19     | Barium          | Not applicable            | Not applicable | Not applicable |

Note 1: For waste water samples this monitoring should be undertaken on a sample filtered on 0.45µm filter paper.

Note 2: USEPA Method 604, AWWA Standard Method 6240, or equivalent.

Note 3 :\*\* kg/day values estimated at predicted maximum per day discharge values

Note 4: Discharges include seawater intrusion

REVISION 02

**TABLE D.1(ii)(a): EMISSIONS TO SURFACE/GROUND WATERS - REVISED**  
**(Secondary Discharge Point) (1 table per discharge point)**  
**Discharge Point Code: SW03PASS**

|                                  |   |
|----------------------------------|---|
| Source of Emission:              | Passage West/Monkstown Agglomeration  |
| Location:                        | Cork Lower Harbour Townland Monkstown   |
| Grid Ref. (12 digit, 6E, 6N):    | E177235, N066512  |
| Name of receiving waters:        | River Lee West Passage, Cork Harbour  |
| River Basin District:            | South Western River Basin District  |
| Designation of receiving waters: | Sensitive   |
| Flow rate in receiving waters:   | Tidal _____ m <sup>3</sup> .sec <sup>-1</sup> Dry Weather Flow<br>_____ m <sup>3</sup> .sec <sup>-1</sup> 95%ile flow |

**Emission Details:**

|                    |                             |                          |  |
|--------------------|-----------------------------|--------------------------|--|
| (i) Volume emitted |                             |                          |  |
| Normal/day         | 619 m <sup>3</sup>          | Maximum/day              | Not Available  |
| Maximum rate/hour  | Not Available               | Period of emission (avg) | ____60____ min/hr ____24____ hr/day ____365____ day/yr |
| Dry Weather Flow   | 0.00683 m <sup>3</sup> /sec |                          |  |

**Note: DWF is estimated. Discharges include seawater intrusion.**



REVISION 02

**TABLE D.1(ii)(b): EMISSIONS TO SURFACE/GROUND WATERS - - REVISED**  
**Characteristics of the emission (1 table per discharge point) (Secondary Discharge Point)**

**Discharge Point Code:** SW03PASS

| Number | Substance                                 | As discharged                |                |
|--------|---|------------------------------|----------------|
|        |   | Max. daily average           | 619 m3/day     |
| 1      | pH  | 6.5- 8.5                     |                |
| 2      | Temperature                               | 25°                          |                |
| 3      | Electrical Conductivity (@25°C)           | 15000                        |                |
|        |   | Max. daily average (mg/l) ** | Kg/day**       |
| 4      | Suspended Solids                          | 400                          | 247.6          |
| 5      | Ammonia (as N)                            | 25                           | 15.5           |
| 6      | Biochemical Oxygen Demand                 | 350                          | 216.7          |
| 7      | Chemical Oxygen Demand                    | 700                          | 4333           |
| 8      | Total Nitrogen (as N)                     | 75                           | 46.4           |
| 9      | Nitrite (as N)                            | <3.5                         | <2.17          |
| 10     | Nitrate (as N)                            | <10                          | <6.19          |
| 11     | Total Phosphorus (as P) <sup>Note 1</sup> | 15                           | 9.29           |
| 12     | Orthophosphate (as P)                     | 10                           | 6.19           |
| 13     | Sulphate (SO <sub>4</sub> )               | Not applicable               | Not applicable |
| 14     | Phenols (sum) <sup>Note 2</sup> (ug/l)    | Not applicable               | Not applicable |

Note 1: For waste water samples this monitoring should be undertaken on a sample filtered on 0.45µm filter paper.

Note 2: USEPA Method 604, AWWA Standard Method 6240, or equivalent.

Note 3: \*\* Average flow data of 619m3/day

Note 4: Discharges include seawater intrusion

REVISION 02

**TABLE D.1(ii)(c): DANGEROUS SUBSTANCE EMISSIONS TO SURFACE/GROUND WATERS - REVISED**

Secondary Discharge Point - Characteristics of the emission (1 table per discharge point)

**Discharge Point Code: SW03PASS**

| Number | Substance       | As discharged             |                |                |
|--------|-----------------|---------------------------|----------------|----------------|
|        |                 | Max. daily average (µg/l) | kg/day**       | kg/year**      |
| 1      | Atrazine        | Not applicable            | Not applicable | Not applicable |
| 2      | Dichloromethane | Not applicable            | Not applicable | Not applicable |
| 3      | Simazine        | Not applicable            | Not applicable | Not applicable |
| 4      | Toluene         | Not applicable            | Not applicable | Not applicable |
| 5      | Tributyltin     | Not applicable            | Not applicable | Not applicable |
| 6      | Xylenes         | Not applicable            | Not applicable | Not applicable |
| 7      | Arsenic         | 3.1                       | 0.00192        | 0.7004         |
| 8      | Chromium        | Not applicable            | Not applicable | Not applicable |
| 9      | Copper          | 89                        | 0.0551         | 20.11          |
| 10     | Cyanide         | 7                         | 0.0043         | 1.58           |
| 11     | Fluoride        | 500                       | 0.31           | 112.97         |
| 12     | Lead            | Not applicable            | Not applicable | Not applicable |
| 13     | Nickel          | Not applicable            | Not applicable | Not applicable |
| 14     | Zinc            | Not applicable            | Not applicable | Not applicable |
| 15     | Boron           | Not applicable            | Not applicable | Not applicable |
| 16     | Cadmium         | Not applicable            | Not applicable | Not applicable |
| 17     | Mercury         | Not applicable            | Not applicable | Not applicable |
| 18     | Selenium        | 6.673                     | 0.88751        | 323.941        |
| 19     | Barium          | 30                        | 0.0186         | 6.78           |

Note 1: For waste water samples this monitoring should be undertaken on a sample filtered on 0.45µm filter paper.

Note 2: USEPA Method 604, AWWA Standard Method 6240, or equivalent.

Note 3: \*\* Average flow data of 619m3/day

Note 4: Discharges include seawater intrusion

Note 5: \*\* Note Saline analytical interference in analysis of Boron, Arsenic, Selenium

REVISION 02

**TABLE D.1(iii)(a): EMISSIONS TO SURFACE/GROUND WATERS  
(Storm Water Overflow) (1 table per discharge point)**

**Discharge Point Code:** SW04 Passage

|                                  |   |
|----------------------------------|---|
| Source of Emission:              | Cork Road Pumping Station Storm Overflow  |
| Location:                        | Passage West Townland Ardmore   |
| Grid Ref. (12 digit, 6E, 6N):    | E175621, N069656  |
| Name of receiving waters:        | Lough Mahon, Cork Harbour   |
| River Basin District:            | South Western River Basin District  |
| Designation of receiving waters: | Sensitive, NHA, SPA   |
| Flow rate in receiving waters:   | _____ Tidal _____ m <sup>3</sup> .sec <sup>-1</sup> Dry Weather Flow<br>_____ m <sup>3</sup> .sec <sup>-1</sup> 95%ile flow |

**Emission Details:**

|                                  |                |                          |  |
|----------------------------------|----------------|--------------------------|--|
| (i) Volume emitted Not available |                |                          |  |
| Normal/day                       | m <sup>3</sup> | Maximum/day              | m <sup>3</sup>                         |
| Maximum rate/hour                | m <sup>3</sup> | Period of emission (avg) | _____ Min/hr _____ hr/day _____ day/yr |

REVISION 02

**TABLE D.1(iii)(a): EMISSIONS TO SURFACE/GROUND WATERS  
(Storm Water Overflow) (1 table per discharge point)**

**Discharge Point Code:** SW05 Passage

|                                  |   |
|----------------------------------|---|
| Source of Emission:              | Passage West Central Pumping Station Storm Overflow   |
| Location:                        | Passage West Townland Pembroke  |
| Grid Ref. (12 digit, 6E, 6N):    | E176987, N068831  |
| Name of receiving waters:        | River Lee West Passage, Cork Harbour  |
| River Basin District:            | South Western River Basin District  |
| Designation of receiving waters: | Sensitive   |
| Flow rate in receiving waters:   | <div style="text-align: right;">             _____ Tidal _____ m<sup>3</sup>.sec<sup>-1</sup> Dry Weather Flow<br/>             _____ m<sup>3</sup>.sec<sup>-1</sup> 95%ile flow           </div> |

**Emission Details:**

|                                  |                |                          |                                     |
|----------------------------------|----------------|--------------------------|-------------------------------------|
| (i) Volume emitted Not available |                |                          |                                     |
| Normal/day                       | m <sup>3</sup> | Maximum/day              | m <sup>3</sup>                      |
| Maximum rate/hour                | m <sup>3</sup> | Period of emission (avg) | _____Min/hr _____hr/day _____day/yr |

REVISION 02

**TABLE D.1(iii)(a): EMISSIONS TO SURFACE/GROUND WATERS  
(Storm Water Overflow) (1 table per discharge point)**

**Discharge Point Code:** SW06 Passage

|                                  |  |
|----------------------------------|--|
| Source of Emission:              | Glenbrook Pumping Station Storm Overflow   |
| Location:                        | Glenbrook Townland Lackaroe  |
| Grid Ref. (12 digit, 6E, 6N):    | E177116, N067734   |
| Name of receiving waters:        | River Lee West Passage, Cork Harbour   |
| River Basin District:            | South Western River Basin District   |
| Designation of receiving waters: | Sensitive  |
| Flow rate in receiving waters:   | <p style="text-align: right;">_____ Tidal _____ m<sup>3</sup>.sec<sup>-1</sup> Dry Weather Flow</p> <p style="text-align: right;">_____ m<sup>3</sup>.sec<sup>-1</sup> 95%ile flow</p> |

**Emission Details:**

|                                  |                |                          |                                     |
|----------------------------------|----------------|--------------------------|-------------------------------------|
| (i) Volume emitted Not available |                |                          |                                     |
| Normal/day                       | m <sup>3</sup> | Maximum/day              | m <sup>3</sup>                      |
| Maximum rate/hour                | m <sup>3</sup> | Period of emission (avg) | _____Min/hr _____hr/day _____day/yr |

REVISION 02

**TABLE D.1(iii)(a): EMISSIONS TO SURFACE/GROUND WATERS  
(Storm Water Overflow) (1 table per discharge point)**

**Discharge Point Code:** SW07 Passage

|                                  |  |
|----------------------------------|--|
| Source of Emission:              | Monkstown Pumping Station Storm Overflow   |
| Location:                        | Monkstown Townland Monkstown (Castlefarm)  |
| Grid Ref. (12 digit, 6E, 6N):    | E177114, N066095   |
| Name of receiving waters:        | River Lee West Passage, Cork Harbour   |
| River Basin District:            | South Western River Basin District   |
| Designation of receiving waters: | Sensitive  |
| Flow rate in receiving waters:   | <div style="display: flex; justify-content: space-between;"> <span>_____ Tidal _____ m<sup>3</sup>.sec<sup>-1</sup> Dry Weather Flow</span> </div> <div style="display: flex; justify-content: space-between;"> <span>_____ m<sup>3</sup>.sec<sup>-1</sup> 95%ile flow</span> </div> |

**Emission Details:**

|                                  |                |                          |  |
|----------------------------------|----------------|--------------------------|--|
| (i) Volume emitted Not available |                |                          |  |
| Normal/day                       | m <sup>3</sup> | Maximum/day              | m <sup>3</sup>                         |
| Maximum rate/hour                | m <sup>3</sup> | Period of emission (avg) | _____ Min/hr _____ hr/day _____ day/yr |

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**TABLE D.1(iii)(a): EMISSIONS TO SURFACE/GROUND WATERS  
(Storm Water Overflow) (1 table per discharge point)**

**Discharge Point Code:** SW08 Passage

|                                  |   |                   |   |
|----------------------------------|---|-------------------|---|
| Source of Emission:              | Coast Road Pumping Station Storm Overflow |                   |   |
| Location:                        | Monkstown Townland Monkstown (Castlefarm) |                   |   |
| Grid Ref. (12 digit, 6E, 6N):    | E176659, N065460                          |                   |   |
| Name of receiving waters:        | Monkstown Creek, Cork Harbour             |                   |   |
| River Basin District:            | South Western River Basin District        |                   |   |
| Designation of receiving waters: | NHA, SPA                                  |                   |   |
| Flow rate in receiving waters:   |   | _____ Tidal _____ | $m^3 \cdot sec^{-1}$ Dry Weather Flow<br>_____ $m^3 \cdot sec^{-1}$ 95%ile flow |

**Emission Details:**

|                                  |       |                          |  |
|----------------------------------|-------|--------------------------|--|
| (i) Volume emitted Not available |       |                          |  |
| Normal/day                       | $m^3$ | Maximum/day              | $m^3$                                  |
| Maximum rate/hour                | $m^3$ | Period of emission (avg) | _____ Min/hr _____ hr/day _____ day/yr |

REVISION 02

SWO1,SWO2 and SWO3 Samples were digested prior to metal analysis by a contract laboratory prior to analysis on an ICP-MS instrument  
Revised Limits of detection for digested samples ;note all samples were digested prior to metal analysis

| Metal         | LOD Without digestion | LOD with digestion |
|---------------|-----------------------|--------------------|
| Barium ug/l   | 1                     | 10                 |
| Boron ug/l    | 20                    | 200                |
| Cadmium ug/l  | 0.1                   | 1                  |
| Chromium ug/l | 1                     | 10                 |
| Copper ug/l   | 3                     | 30                 |
| Lead µg/l     | 0.3                   | 3                  |
| Nickel µg/l   | 0.5                   | 5                  |
| Zinc µg/l     | 1                     | 10                 |

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