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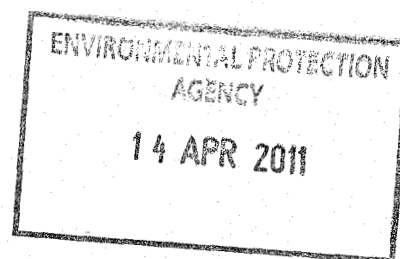
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6th April 2011

Pat Byrne,
Inspector,
Office of Climate, Licensing & Resource Use,
EPA
Po Box 3000,
Johnstown Estate,
County Wexford



Re: Carrickmacross Waste Water Treatment Plant – Urban Waste Water Discharge
(Authorisation) Regulations 2007; Reg No D0062-01

Dear Mr Byrne,

I understand that the EPA requires the following information regarding Carrickmacross Waste Water Treatment Plant and other similar information as set down in letter dated 15th April 2009.

Information as requested:

Carrickmacross STW has a current design capacity of 12,150 p.e. of which 5066 p.e. relates to domestic loading.

In relation to actual discharges at the plant during March 2011 which was unusually dry the total average daily flows were as follows;

Average daily Flow 1 st March – March 30 th	1,517 m ³
Average Daily Flow March 15 th – March 30 th	1,315 m ³

Under the Water Services Investment Program proposals to construct a new treatment plant in Carrickmacross with design capacity of 30,000 p.e. under a Design Build Operate Contract are currently on hold due to affordability issues. However, advance works progressing priority elements of the scheme will be undertaken on the treatment plant slightly increasing p.e. to 12,500 – excluding Rye Valley which is considered separately as below. This should provide ample reserve capacity for future residential and commercial developments into the future. The works will include the following;

- Pumping Station (inlet & outlet) - €455,800
- Storm water tanks - €1,566,600
- Inlet works - €544,800
- Effluent Outfall - €1,192,800
- Associated Site Works - €323,000

Total Estimated cost of Advance Works €4,210,000. Monaghan County Council is currently awaiting approval from the Department of the Environment to commence these works.

In relation to the waste water collection network contact substantial completion of the scheme should occur in Q2 2011 to be followed by a twelve month maintenance period. The scheme will completely decommission all CSO's (Combined Storm Overflows). However, in the event of approval of the above advance works not occurring prior to completion of the collection network contract then Monaghan County Council will be



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required to construct one CSO in proximity to the current waste water treatment plant to avoid flooding issues.

Monaghan County Council has included with the contract documents for the construction of the advance works the requirement to construct an outfall pipe.

Attached is sampling data from Rye Valley foods in Table 1 as requested.

The revised license arrangement proposed for the load from Rye Valley is 350 kg/day in 800 m³/day of effluent. From a hydraulic point of view the load proposed is as follows.

Future domestic and non-domestic excluding Rye Valley @12,500 PE and 180 l/hd/day	- 2,250 m ³ /day
Infiltration Flows m ³ /day	- 800
Rye Valley as per their license	- <u>800 m³/day</u>
1xDWF=	3,850 m ³ /day

Sampling data for the Waste Water Treatment plant is included in table 2 for your records.

The design BOD load to the plant proposed is 1,100 kg BOD/day. It is noted that this exceeds the nominal capacity of the existing plant (approx 18,333 PE). Additionally it is expected that peak flows to the works from the hydraulic loads described above may be expected to exceed the hydraulic capacity of the main treatment stream of the existing works. This capacity is usually referred to as the Flow to Full Treatment of FFT value. However under the works proposed a new balancing tank is to be provided at the inlet works, to receive any overflow discharges from the peak of the diurnal cycle that may arise and to subsequently pump these flows back to the main treatment stream when influent conditions permit. I will confirm the future FFT to you in due course but this will not exceed the current design value of some 80 l/s.

From various simulations undertaken to assess different combinations of plant loadings and arrival times of the Rye Valley effluent, we have established that for total loads up to 12,500 PE as above (excluding the Rye Valley) and the Rye Valley load arriving at a rate of 80 m³/hr (over 10 hours) to coincide with the morning diurnal peak flow, the maximum balancing storage requirement is not expected to exceed 500m³ the remaining storage in the 2,500m³ tank will be used for stormwater storage.

It's proposed to retain the existing ELVs with a discharge to the Longfield via the new outfall – but this is subject to assimilative capacity calculations.

Best regards


Mark Johnston
SENIOR EXECUTIVE ENGINEER,
Water Services, Monaghan County Council -047 30513

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Below is recent sampling data fro RYE Valley Foods as requested;

Table 1: Rye valley foods, Carrickmacross effluent data.

Date	UDC Water Usage M3	Effluent Discharge Licence Limit 800M ³	mg/ltr BOD Licence Limit 550 mg/l	Suspended Solids Licence Limit 500 (125kgs)	FOG Licence Limit 150 mg/l	pH Licence Limit 6 - 8.5	Temp Licence Limit 40°C	Kgs Licence Limit Kgs	BOD 350
2-Mar-11	0	629	292			7.97	26	183	
3-Mar-11	0	617	281			7.40	26	173	
4-Mar-11	0	408	308			7.50	27	126	
5-Mar-11	0	408	338			7.41	27	138	
6-Mar-11	0	855	283					242	
7-Mar-11	0	718	279			6.90	25	200	
8-Mar-11	0	740	255			5.98	23	189	
9-Mar-11	0	672	247			6.30	23	166	
10-Mar-11	0	711	370			6.90	23	263	
11-Mar-11	0	601	438			7.10	24	263	
12-Mar-11	0	417	210			7.20	23.5	88	
13-Mar-11	0	418	178					74	
14-Mar-11	0	708	222			6.75	18	157	
15-Mar-11	0	553	286			7.11	24	158	
16-Mar-11	0	390	334			6.68	26	130	
17-Mar-11	0	390	192					75	
18-Mar-11	0	390	166					65	
19-Mar-11	0	173	127			7.26	24	22	
20-Mar-11	0	173	153					26	
21-Mar-11	0	565	209			7.50	21	118	
22-Mar-11	0	609	201			7.74	24	123	
23-Mar-11	0	613	256			7.52	27	157	
24-Mar-11	0	589	296			7.40	28	175	
25-Mar-11	0	580	240			7.55	28	139	
26-Mar-11	0	212	278			7.47	27	59	
27-Mar-11	0	211	186					39	
28-Mar-11	0	643	188			7.42	23	121	
29-Mar-11	0	690	236			7.60	25	162	



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Table 2: Results from samples taken at Carrickmacross STW in 2011.

Influent Or Effluent	Date of Sampling	Sample Type (C or G)	BOD mg/l	COD mg/l	TSS mg/l	Total P mg/l	Ortho P mg/l	Total N mg/l	Ammonia NH4	TON mg/l N
Influent	16/2/11	C	135.0	404	176	3.84	2.68	0.12	17.46	
Effluent	16/2/11	C	2.0	17	11	0.34	0.36	9.36	0.07	
USW	16/2/11	G	2.0	16	7	0.11	0.06	4.03	0.12	
DSW	16/2/11	G	2.0	15	4	0.13	0.06	3.90	0.09	

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