Mr. BINMAN
Private Waste Disposal

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Ms. Yvonne Furlong,
Inspector,
Office of Climate, Licensing & Resource Use,
Environmental protection Agency,
PO Box 3000,
Johnstown Castel Estate,
Co. Wexford.

19th January 2010. Reg No: W0061-03

Re: Notice in accordance with Article 14(2)(b)(ii) of the Waste management (Licensing) Regulations

Dear Ms. Furlong,

With reference to the above waste licence review application, please find below a response to the further information requested in your Notice dated 30th November 2009.

Article 12 Compliance Requirements

1. Please find attached a revised non-technical summary which reflects the information supplied hereafter in compliance with the notice. (Refer to Appendix 1)

2. An update of the current status/situation at the on-site waste water treatment plant is as follows.

All waste water continues to be sent off-site for further treatment as agreed with the Agency. Since the licence review application was submitted in July 2008, a number of improvements have been made in relation to the operation of the wastewater treatment plant.

- A full time Environmental Analyst was employed to set up an environmental laboratory and to monitor and operate the wastewater treatment plant. An intensive in-house assessment of the wastewater treatment plant was undertaken including measuring key parameters at every stage of the waste water treatment plant. This assessment included analysis of the influent in terms of volume and composition and the impact of each stage of the waste water treatment system on key measured parameters.

This assessment provided valuable information on control issues associated with the waste water treatment plant which was used to develop and implement an improvement programme for control of the wastewater treatment plant.

This improvement programme included:

a) Development and implementation of standard operating procedures for operation and maintenance of the wastewater treatment plant and associated equipment on a daily basis and training of relevant personnel.

b) Development and implementation of standard laboratory procedures for conducting regular in-house monitoring of key control parameters to provide information on the efficiency of the wwtp.

c) Managing hydraulic throughput in wastewater treatment plant to ensure plant is not overloaded or underloaded hydraulically. The plant is now limited to the design throughput of 18.9M^3/d.

d) Managing COD/BOD throughput to ensure plant is not overloaded or underloaded. Reduced loadings to wwtp (ramp, diversion of roof drains & Level 3 ramp run-off, replaced use of power washing units with dedicated road sweeper/washer, limiting use and type of detergents).

e) Purchase of a dedicated vacuum tanker for transfer of wastewater off-site immediately. The tanker has also allowed for more regular maintenance of silt trap, grease trap and primary settlement tank.

f) Installation of a polymer dosing system to reduce solids, BOD, etc. in the final effluent(Currently undergoing optimisation trials)

As there have been no discharges from emission point FE1, there was no requirement to test for all the parameters as required under the current licence, therefore data is limited. The effluent sent off-site for further treatment was sampled and tested for the measurable parameters with emission limit values in order to assess the continuous improvement in the operation of the plant – ie BOD, suspended solids and pH. Limited ammonia testing was conducted in the last 18 months as there were no discharges via emission point FE1. EPA monitoring returned results of 0.695mg/l in January 2009 and 1.06mg/l in December 2009 for Ammonia – Total(as N).

As a result of the improvements listed above, the quality of the effluent has improved significantly in the last 18 months. This improvement can be demonstrated by referring to the measured effluent BOD, suspended solids and pH data and trends (see below) in the past 18 months which clearly shows the plant has improved significantly during that period.

Further optimisation measures are ongoing to ensure compliance can be achieved consistently and these are described in more detail in Section 6 hereunder.

Table 1: WTTP Effluent Data

Date	BOD level mg/l	BOD limit mg/l	TSS mg/l	TSS limit mg/l	pH	pH lower limit	pH higher limit
31/03/2008	1593	20	742	30			
17/04/2008	1884	20	266	30			
25/04/2008	716	20	94	30			
01/05/2008	2209	20	830	30			
03/09/2008	116	20					
18/09/2008	70	20					
24/09/2008	18	20			6.7	6	9
01/10/2008	27	20					
08/10/2008	64	20					
15/10/2008	96	20					
22/10/2008	75	20					
05/11/2008	140	20	46	30			
26/11/2008	29	20	52	30			
03/12/2008	11	20	15	30			
10/12/2008	18	20	21	30			
17/12/2008	6	20	90	30			
08/01/2009	15	20	49	30			
28/01/2009	27	20	38	30			
04/02/2009	12	20	3.3	30			
25/02/2009	20	20	20	30	7.11	6	9
18/03/2009	52	20	48.4	30	6.98	6	9
16/04/2009	28	20	158	30	7.58	6	9
01/05/2009	29	20	27	30	6.16	6	9
15/07/2009	26	20	98	30	6.98	6	9
24/09/2009	8	20	11	30	6.85	6	9
28/10/2009	24	20	80	30	7.1	6	9
03/10/2009	4	20	34	30	7.2	6	9
12/11/2009	18	20	56	30	7.68	6	9
19/11/2009	9	20	3	30	7.02	6	9
27/11/2009	30	20	29	30	7.88	6	9
***01/12/2009**	31	20	61.5	30	8.2	6	9

*Monitoring carried out by the EPA

Figure 1: WWTP Effluent BOD Trend

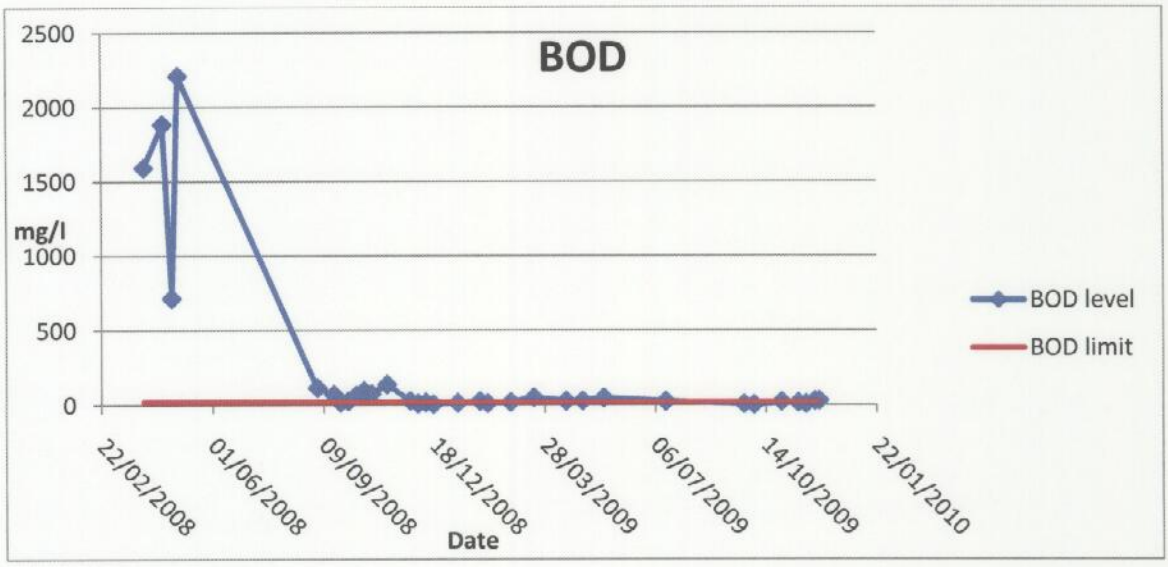


Figure 2: WWTP Effluent Suspended Solids Trend

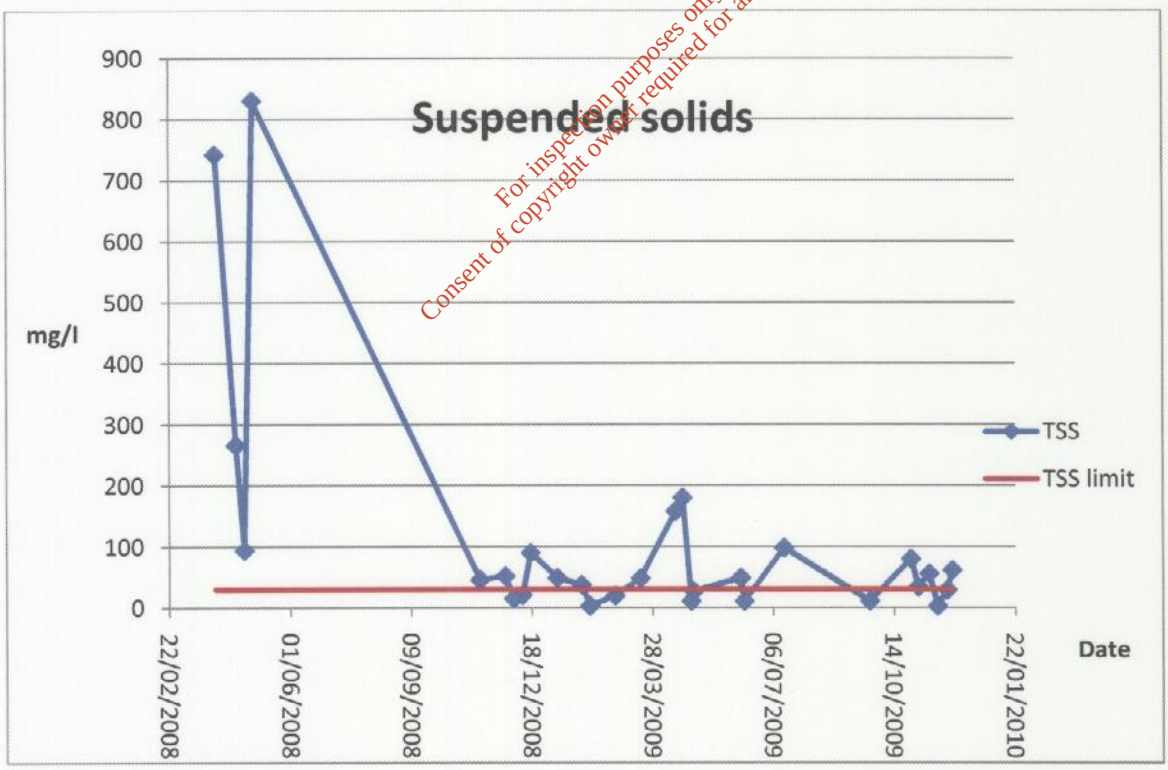
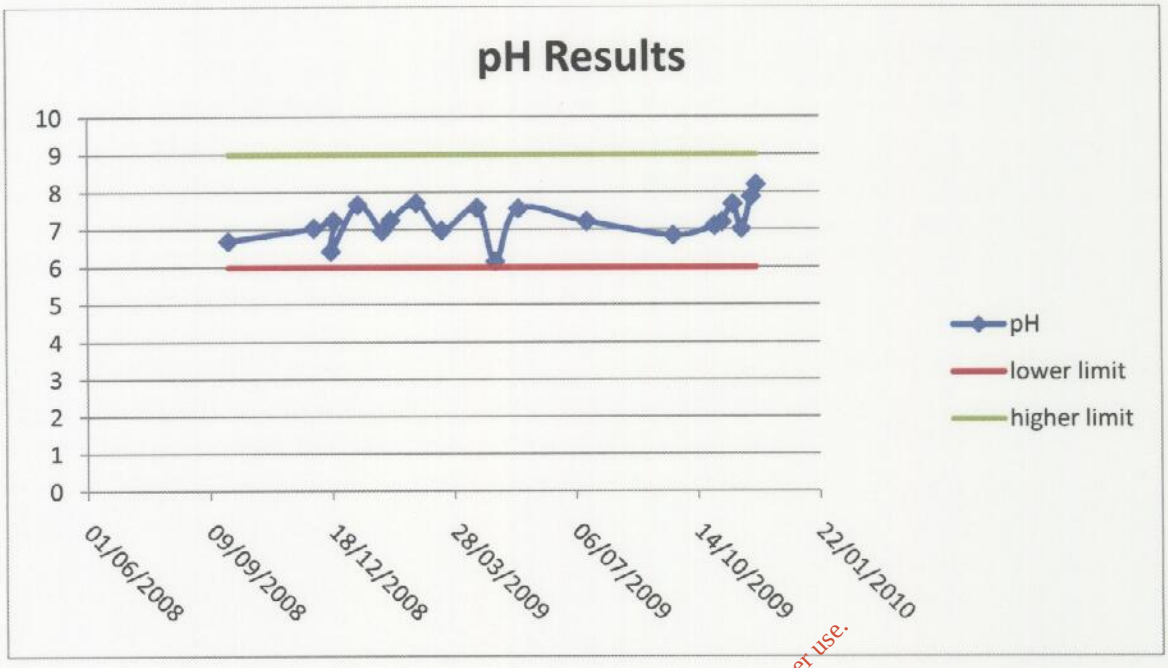


Figure 3: WWTP Effluent pH Trend



3. The total volume of waste water to be generated including building washdowns was measured for 2009 as all wastewater generated was sent off-site for further treatment and each load was weighed on our calibrated weighbridge. The total volume of wastewater generated in 2009 was 5,468m^3 of water and it is anticipated that similar volumes will be generated in the future.

The wastewater generated due to building washdowns is collected in the wastewater storage tanks at the wastewater treatment plant where up to18.9M^3/day of wastewater is treated in the wastewater treatment plant. If any excess wastewater is generated it will be collected in the wastewater storage tanks and will be sent off-site for further treatment. A dedicated tanker was purchased for this purpose to ensure wastewater can be sent off-site for further treatment immediately. In the event that the wastewater treatment plant discharges do not meet the emission limit values, the waste water can and will be sent off-site immediately for further treatment. Based on the design capacity of the waste water treatment plant, it will be capable of treating up to approximately 7,000 M^3/annum.

4. Sources of all wastewater and foul water to be treated at the on-site waste water treatment plant will be as follows:

a. Foul water from the canteen and toilets.

b. Wastewater from process buildings.

c. Wastewater from process yard areas in front of waste delivery areas of process buildings.

d. Vehicle/container wash bay and surrounding yard area.

See Drawing No. 071-258-003-P5 (Refer to Appendix 2) which highlights(in red) the existing and proposed foul sewerage system to be discharged to the wastewater treatment plant system and Drawing No. 071-258-012 P4 (Refer to Appendix 3) which highlights the yard catchment areas (in red) to be discharged to the wastewater treatment plant.

5. The sources of all waters that will be treated via a two-stage settlement system and a Class 1 hydrocarbon interceptor prior to discharging to emission point FE2 will be as follows:

a. Vehicle thoroughfares and open hard standing areas away from waste processing building delivery/dispatch areas.

b. Yard areas in front of maintenance buildings.

c. Fuel filling area in front.

See attached drawing No. 071-258-012 P4 (Refer to Appendix 3) for highlighted catchment areas.

The oil interceptor is designed for a maximum flow rate of 20l/sec which is a maximum flow rate of over 6,000,000m^3 per annum which will accommodate any predicted abnormal rainfall events. The estimated quantity of water to be discharged via FE2 is expected to be less than 20,000m^3 per annum.

6. As detailed in the original licence review application, a feasibility study was completed to determine if a constructed wet-land was an option for further treatment of wastewater on-site, if required to ensure emission limit values can be met consistently.

As indicated above a number of improvements have been made to the existing wastewater treatment plant and further optimisation measures are in progress and will be implemented, if successful. These include:

i) Optimisation of the polymer dosing system. A polymer dosing system was installed to flocculate suspended solids in the discharge to the clarifier in order to reduce the residual suspended solids and thereby further improve emission discharges. At present the polymer dosing system is undergoing an optimisation stage as there are a number of variables associated with such a dosing system including:

- location of the dosing point to maximise mixing of the polymer with the effluent

- dosing frequency relative to flow/suspend solids concentration.

- dosing quantity relative to flow/suspended solids concentration.

ii) Currently all waste water effluent is discharged to a storage tank for the purpose of pumping the water to a road tanker for off-site treatment. In the event that the effluent is discharged to FE1, it was proposed to discharge the effluent direct from the clarifier via FE1 to the percolation area as per the original set-up. A potential improvement currently being assessed is to continue discharging to the storage tank to allow further settlement before discharging to FE1. It is expected that this will further improve the quality of the final effluent discharge. Trials will be completed in January, 2010 to measure and compare the quality of the effluent direct from the clarifier and from the storage tank (prior to pumping to the tanker for off-site disposal).

As shown above, the emissions from the waste water treatment plant have improved significantly in the last 18 months since we began our optimisation process and it is anticipated that compliance can be achieved on a consistent basis, subject to the success of the additional improvements noted above.

Subject to the success of these improvements a decision will then be made whether the exiting plant is capable of achieving compliance on a consistent basis. If compliance cannot be achieved consistently, then additional works will be required to ensure compliance.

Polish filtration systems are being considered as an alternative mechanism to achieve compliance on a consistent basis if the process optimisation proves inadequate. Proposals for alternative technologies are currently being prepared by consultants engaged by Mr. Binnian. The efficiency, scale and cost of the proposals will determine the viability of such a system. A number of options are under consideration as an alternative to the constructed wet-land system.

If compliance cannot be achieved through implementation of the above improvement projects, then further consideration will be given to implementation of a constructed wetland system. In response to the further information request regarding the constructed wetland:

a. Jerome Keohane completed a preliminary site assessment to determine the feasibility of constructing a wetland system. This involved a desk study of the underlying geology and excavation of trial holes adjacent to the proposed location of the wetland in order to examine the subsoils, etc. Silt/clay was identified which is expected to have low natural permeability. It was concluded that it would be feasible to develop a constructed a constructed wetland on site to polish surface water run-off, as the natural subsoils will provide adequate protection to the underlying aquifer. It was recommended that further assessment of the subsoil should be undertaken including laboratory assessment of in-situ permeability to determine the construction profile of the wetland. This assessment was subsequently completed as part of the follow-up wet land proposal which was submitted with the original Licence Review Application.

b. Jerome Keohane recommended a minimum thickness of 1.5m of suitable low permeability materials for the constructed wetland. Based on the report submitted with the original Licence Review Application, the trial holes at the proposed wetland location indicated depths of 3metres indicating that the minimum soil depths can be achieved. If required, additional materials can be provided.

c. A layout of the proposed wetland is attached. Drawing No. BINMAN CW 0808. (Refer to Appendix 4).

7. Please find attached:

A. A map showing the existing monitoring point a FE2 and the proposed monitoring point at FE1, Drawing reference no. 071-258- 003 P5 (Refer to Appendix 2). A map showing the existing (GW1 & GW2) and proposed groundwater monitoring point (GW08-2), Drawing reference 3076-2500 Issue A (Refer to Appendix 5).

B. A drawing showing all on-site drainage systems. Drawing reference no. 071-258- 003 P5 (Refer to Appendix 2)

C. Please refer to Appendix 6 containing a hydro geological report prepared by RPS/McHugh which includes a drawing no. IR1137/2 Rev 1 showing the direction of groundwater flow, and Drawing No. IR1137/1-Rev 1 showing the existing locations of groundwater monitoring points GW1 and GW2. Please refer to Drawing No.3076-2500 Issue A (Appendix 5) showing the existing ground water monitoring points GW1, GW2 and the proposed location for monitoring point GW08-2.

D. A hydro geological report prepared by RPS/McHugh which includes a drawing which shows the direction of groundwater flow in relation to relevant local abstraction points. Drawing reference No. IR1137/2 Rev 1 (Please refer to Appendix 6).

8. The following control measures are in place on-site or are proposed to give effect to Articles 3,4,5,6 & 7 of Council Directive 80/68/EEC of 17 December 1979 on the protection of groundwater against the risk of pollution by certain dangerous substances and Article 6 of Directive 2006/118/EC on the protection of groundwater against pollution and deterioration:

- Only non-hazardous waste is accepted on site. All sources of waste are assessed in advance to prevent hazardous materials being accepted on-site. In addition a waste acceptance procedure is in place to assess all waste loads and ensure no hazardous waste materials are processed on-site. Any potentially hazardous waste materials identified are rejected or isolated in a contained quarantine area for further treatment off-site.
- There are no direct discharges to groundwater from the facility
- There is no disposal of waste on-site
- All areas where waste is handled are covered by a hardstanding with sealed joints
- Wastewater will be discharged via dedicated drainage system to a wastewater treatment plant or will be further treated off-site.
- Stormwater from hardstanding areas will be discharged via a dedicated drainage system to a two stage solids separation system followed by a Klargester Class 1 Hydrocarbon Interceptor prior to discharge to a certified soakaway.

- Uncontaminated water from roofs will be diverted from the dedicated abatement systems to ensure the abatements systems are optimised.
- Regular cleaning of all surface areas with a dedicated roadsweeper will be in place.
- Regular cleaning and housekeeping of all areas will be in place
- All fuel storage will be bunded to 110% or 25% of the total volume, whichever is greater.
- Fuel loading areas will be enclosed by dedicated drainage to the hydrocarbon interceptor
- Fuel nozzles will be within a bunded area when not in use
- Bunds and wastewater drainage systems will be integrity tested every three years
- Residual waste acceptance & processing areas will be enclosed to minimise rainwater ingress and leachate generation
- A standard operating procedure for the operation and maintenance of the wastewater treatment plant on a daily basis is in place.
- A standard operating procedure for the operation and maintenance of the solids settlement systems and hydrocarbon interceptor is in place
- An on-site laboratory is in place to allow regular monitoring of the operation of the waste water treatment plant and oil interceptor.
- The waste water treatment plant and associated percolation area is now limited to its design capacity of treating a hydraulic load of 18.9M^3/d
- Standard laboratory procedures are in place for the laboratory test procedures including calibration protocols.
- In addition to the existing environmental team on-site, an environmental analyst was employed with responsibility for the wastewater treatment plant, hydrocarbon interceptor, laboratory, environmental monitoring and checks, SOP development and EMP management on-site.
- Currently there are no discharges of waste water effluent from emission point FE1.
- As referenced earlier, improvements in the wastewater treatment plant monitoring, operation and maintenance have resulted in a significant improvement in the quality of the effluent and further improvement are in progress.
- Subject to the success of the above improvements, polish filtration systems, constructed wetlands or diversion of the emissions from FE1 will be considered.
- The percolation/soakway associated with FE1 will be reconstructed and certified in line with relevant standards in the event that emissions via FE1 are continued.
- Regular groundwater monitoring upstream and down stream of the facility is in place which demonstrates the facility is not having an impact of environmental significance on the quality of the groundwater.

9. For information relating to the depth of bedrock and the permeability of the subsoil under the site on the southern side of the site (where the percolation area is located), please refer to the Hydrogeological Report (attached) prepared by RPS McHugh (Refer to Appendix 6). Section 4.2 refers to the site subsoil geology which confirms the bedrock is up to 24m deep on the south side of the site. The subsoil consisted of limestone tills with a 4m deep clay deposit encountered beneath the till. In addition,

trial holes associated with the proposed constructed wetland were excavated to 3 metres. This information demonstrates that sufficient depths of the bedrock are available in the area of the percolation area.

Prior to implementation of the current controls on the waste water treatment plant, the plant and associated percolation area were hydraulically overloaded. The hydraulic loading for the waste water treatment plant is now under control and prior to discharging via emission point FE1, the associated percolation area will be assessed, reconstructed and certified to relevant standards to deal with the proposed discharge volumes

Article 13 Compliance Requirements

The relevant EIS documents were updated having regard to the information contained herein under the 'Article 12 Compliance Requirements' (Please refer to Appendix 7).

If you require further information, please do not hesitate to contact me.

Yours sincerely,

Seamus Leahy,

Group Environmental Manager.