

Sub (11).

Kilshannig House

Cratloe Wood

Cratloe

Co. Clare

Ms Ann Marie Donlon

Inspector,

Environmental Protection Agency

P.O Box 3000

Johnstown Castle Estate

Co. Wexford

22 October 2012

Dear Ms Donlon,

Please note the response below to the Section 90 reply sent to the Agency by the applicant on the 17 October 2012

The enclosed letter has been presented by Hoffmann La Roche to the Agency in response to the following :

"With regard to the landfill including the H2 area, provide a copy of any agreement with the Office of Environmental Enforcement in relation to risk assessment, conceptual model, and remediation proposals".

On reading the letter, it is evident that:

A: The letter relates to "cells 1 to 7" only.

B: The H2 Unlined Hazardous Waste Pits are not included in the letter.

It would appear that **no agreement** exists between Hoffmann La Roche and the EPA relating to risk assessment, conceptual model and remediation proposals for the H2 Unlined Hazardous Waste Pits containing 90,000 tonnes of hazardous waste, located beneath the water table.

Roche Ireland Ltd own consultants URS on H2 area landfill

“The waste in the H2 area was deposited in unlined pits (up to 3.4m deep), with no facilities for leachate interception and collection. In some areas the wastes are emplaced below the water table (the water table was 0.85 to 2.59m below the well casing in surrounding monitoring wells in October 2004).”

Roche Ireland Ltd own consultants URS on Monitored Natural Attenuation of H2 Area

“The aim of MNA would be to document stable or improving groundwater quality around the H2 area (as was the case up to 2001) to the satisfaction of the regulators, as an alternative to active intervention. However contaminant concentrations in leachate samples taken from the 2005 trial pits continue to show elevated concentrations of volatile organics (solvents), semi-volatile organics (phenolics) and heavy metals 25 years after the cessation of landfilling in the H2 area, despite extraction of contaminated groundwater from this area for several years. It is therefore likely that MNA would have to be continued for decades in order to meet regulatory requirements, with no reduction of the risk of an unforeseen future incident, such as the drum rupture which occurred near well 216 in 2001, which could lead to future regulatory enforcement. “

Roche Ireland Ltd own consultants URS on Capping of H2 area

“Capping of the H2 area to reduce rainfall infiltration is considered to be of limited benefit, as the chemical/process waste in some areas is emplaced below the water table and there is through flow of shallow groundwater through the waste, driven by natural gradients due to the hillside to the west of the H2 area. Capping would require considerable engineering works to profile the H2 area to promote runoff and manage the drainage, but would not eliminate the release of leachate to groundwater. In addition the presence of a landfill cap would restrict the future use of the H2 area and, despite the capital investment, would not provide Roche with a reduction of liability in the event of an unforeseen future incident”.

Roche Ireland Ltd own consultants URS recommendation to Hoffmann La Roche on H2 area (Job No. 45078361, 14 October 2005, Section 11.3.2)

“In terms of reducing or eliminating the long term environmental liability associated with material deposited in the unengineered H2 area, excavation and removal of the chemical/process wastes involving segregation and re-use of uncontaminated fill material overlying the chemical/process waste) is proposed as it :

- Removes the source of leachate generation and groundwater contamination of the H2 area:
- Does not require indefinite operation, maintenance and monitoring:

- Eliminates uncertainty relating to impacts of possible future incidents , or changes in regulatory approach, which affect options where the waste mass remains in-situ:
- Facilitates re-use of the H2 area for other purposes such as expansion of the plant”.

Yours sincerely

Roger O’Mahony

Encl:

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2 SECTION 90 RESPONSE

1. With regard to the landfill including the H2 area, provide a copy of any agreement with the Office of Environmental Enforcement in relation to risk assessment, conceptual model and remediation proposals

On the following page is a letter issued to Roche Ireland on the 6th June 2006 (EPA Correspondence Reference M768(06)AK01CN)) from Caoimhin Nolan, Inspector with the Office of Environmental Enforcement agreeing to the proposed capping works for the landfill.

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Mr Billy O'Shea
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7th June 2006

Our Ref: M768(06)AK01CN

Dear Mr O'Shea

I refer to your correspondence which was received by the Agency on the 5th May 2006 in relation to the proposed capping of waste deposition cells 1 to 7 at Roche Ireland Ltd. Based on the information provided, the Agency agrees to the proposed capping of these cells and notes that finalised design plans will be submitted to the Agency for approval prior to the commencement of such works.

In relation to the proposed management of any landfill gas present within the waste cells, please ensure that appropriate consideration is given to the provision of landfill gas management infrastructure, particularly in cells 4, 6, and 7, where the age and composition of waste (e.g. with a known presence of fibre drums) is more likely to lead to landfill gas generation. The need for gas management infrastructure, if any, should initially be assessed based on the present gas levels within the waste body, and the risk/likelihood of gas migration.

In relation to the proposed capping of Cell 1, the reprofiling work here should be designed and carried out in such a way so as to prevent damage to the basal liner. The load bearing capacity of the liner should be sufficient to handle the expected weight/load of any additional capping materials.

Should you have any queries regarding this communication, please quote the above reference and contact the undersigned at the EPA Regional Inspectorate, Iniscarra, Co. Cork.

Yours sincerely

Mr Caoimhin Nolan, Inspector
Office of Environmental Enforcement

