Sub. (61)

Licensing Unit,
Office of Licensing & Guidance,
Environmental Protection Agency.
Johnstown Castle Estate,
County Wexford

Sliding Rock,
Blackglen Road,
Sandyford,
Dublin 18.

12-9-2006

Re: Waste Licence Application W 0231-01 Fingal Landfill

Dear Sirs,

I note the Agency's request of August 23rd, 2006 to the Geological Survey of Ireland for clarification regarding some aspects of the numerical model used by the Survey in its determination of the zone of contribution supplying the Bog of the Ring well field.

You might also request of the Survey and of the Applicant to reconcile the differences in the geological cross sections presented in the GSI study and in the Applicant's EIS. Also, you might ask both parties to reconcile their respective sections with the geological cross section that accompanies the GSI published map of the area, Geology of Meath, Sheet 13.

It would be important that the GSI's and the Applicant's sections are broadly similar as they underpin the conceptual hydrogeological models used by the GSI and the Applicant in their assessment of the Nevitt / Bog of the Ring area. This would naturally be expected as both are reportedly based on the same published GSI map, Sheet 13. Unfortunately, this is not the case.

The GSI cross section is referenced as Figure 3 in the Survey's Source Protection report while the Applicant's cross section is presented as Figure Appendix A1.1 in Volume 5 of the EIS.

For instance, you might note that the Loughshinny Formation is shown as only c.10m thick beneath the proposed landfill on the Applicant's cross section. In contrast, the Survey's conceptual model cross section shows the Loughshinny Formation as being c.50m thick in the Nevitt-Tooman area.

The Memoir that accompanies Sheet 13 indicates that the Loughshinny Formation in the Balbriggan area ranges in thickness from less than 100m to150m.

Note also how the Loughshinny Formation is shown in both sections as being >200m thick along the northern limb of the syncline and in the Applicant's section a similar thickness to the east of the proposed landfill. Both the GSI's and the Applicant's sections show a dramatic thinning of the Loughshinny Formation from north to south across the

syncline axis. The cross section accompanying the GSI published map in contrast shows no such thinning of the Loughshinny Formation across the syncline axis.

No information is provided in either the GSI report or by the Applicant in the EIS to support these reinterpretations of the published GSI cross section.

I respectfully suggest that, in the absence of such additional geological information, the Agency request both the GSI and the Applicant to apply the published geological structure for the region to their respective conceptual models. This would allow for subsequent conclusions to be based on the accepted published geological picture rather than on personal variations which have no supporting factual evidence.

The bedrock geology of the area is the fundamental building block of both conceptual models. It is critical that this key component has a firm foundation so that the subsequent risk analysis can be relied upon as reflecting the most likely case.

The GSI's and the Applicant's hydrogeological conceptual models are the basis of their respective assessments and confidence in their conclusions is dependent on the robustness of the input data. Applying the published geological picture to the GSI's and the Applicant's respective conceptual models would be a first step in arriving at a consensus regarding the potential impact of the planned landfill on the groundwater resources in this part of County Dublin.

Yours Sincerely,

EurGeol Kevin T. Cullen PGeo.