Subm No 1

Feidhmeannacht na Seirbhíse Sláinte
Health Service Executive

Dublin North East
Environmental Health Service
Co. Clinic
Navan
Co. Meath

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Ms. Liz Leacy
Environmental Licensing Programme
Environmental Protection Agency Headquarters
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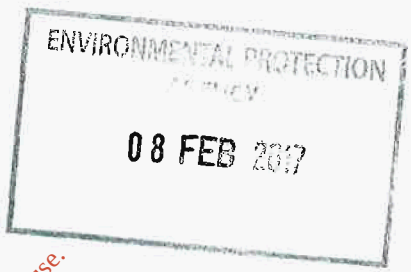

27th January 2016

Re: Review of an Industrial Emissions Licence

Class and Nature of Activity:
1.3 The extraction and processing (including size reduction, grading and heating) of minerals within the meaning of the Minerals Development Acts, 1940 to 1990, where an activity involves – (a) a metalliferous operation, or (b) any other operation where either the level of extracted or processed minerals is greater than 200,000 tonnes per annum or the total operational yield is greater than 1,000,000 tonnes, and storage of related mineral waste.

11.5 Landfills, within the meaning of section 5 (amended by Regulation 11(1) of the Waste Management (Certification of Historic Unlicensed Waste Disposal and Recovery Activity) Regulations 2008 of the Act 1996, receiving more than 10 tonnes, other than landfills of inert waste.

Applicant: Boliden Tara Mines

Reference No: P0516-04

EHIS Reference No: 0561

Dear Ms. Leacy,

The Environmental Health Service response to the application is in the attached consultation report. The report was compiled based on the following:

- Previous site visits

- An assessment of documentation submitted to this office.
- EPA guidance documents
- No additional investigations/measurements were undertaken.
- This report refers only to those sections of the documents which are relevant to the Health Service Executive.

If you have any queries regarding the report the initial contact is Ms. Elish O'Reilly, Principal Environmental Health Officer, County Clinic, Navan, Co. Meath.

Yours sincerely,

Elish O Reilly

Elish O'Reilly
Principal Environmental Health Officer

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Ms. Elish O'Reilly
Principal Environmental Health Officer
Co. Clinic
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Applicant: Boliden Tara Mines

Reference No: P0516-04

EHIS Ref No: 0561

Dear Elish,

I refer to the recent submission of an EIS from Boliden Tara Mines regarding a licence review. This review application of the existing Industrial Emissions Licence is being made to:

- Include the proposed stage 6 extension to the Tailings Storage Facility
- Extend the site boundary of the Tailings Storage Facility
- Extend the IE Licence application to cover possible extensions of future mining areas.

The following are observations made whilst reviewing the said application, EIS, current IE Licence and related documents in conjunction with EPA guidance documents and associated legislation. Previous site visit were carried out of both the mine site and the tailings storage facility.

There are no changes to the existing processes at the mine and no new emissions points are being proposed. The tailings storage facility shall be extended laterally in a northerly direction to cover a footprint of 58 hectares and extend to a height of 22m above ground level. Stage 5 of the tailings storage facility will enter into its closure phase. An Integrated Constructed Wetland of 12 hectares is being proposed to treat water runoff from the closed tailings storage facility.

Site Location

Tara Mines is located in the Blackwater Valley Landscape Character area. The river Blackwater and the River Boyne are located in the vicinity, both of which are designated as Special Areas of Conservation. The mine itself is located in the townland of Knockumber, 2km west to the town of Navan which has a population of 28,559. It is predicted that Navan will grow to a population of approximately 50,000 within the next 5 years. The tailings storage facility is located in the townland of Randalstown, 2.5k to the north of the mine. There is extensive ribbon housing development along all roads surrounding the site; the nearest sensitive residential receptors are located over 100m from the application boundary.

Air

Air emissions within the mine site are from a single ventilation stack located on the concrete storage building and 6 mine return air shafts which serve to ventilate the underground workings in the mine itself. There are also minor air emissions from central heating boilers on site. Air emissions are monitored on a quarterly basis, this work is contracted out to 'Air Scientific' and all air emissions meet with the requirements laid out in ISO 17025:2005 and the EPA Air Emissions Monitoring Guidance.

With regard to the operation of the tailings storage facility the main source of air emissions will arise from dust generated on site. Monitoring using Bergerhoff gauges is carried out at 7 locations in the vicinity of the existing facility. No monitoring results exceeded the recommended EPA guidance of 350mg/m2/day. A specific dust management plan based on the UK(BRE) Document "Control of Dust from Construction and Demolition Activities" 2003 shall be implemented to minimise airborne emissions from the construction phase of the new extension. Dust is not expected to be of significant impact.

Water

Tara has two 'point source emission' to surface water, SW1 of process effluent to the River Boyne and SW2 of groundwater to the River Blackwater.
Discharge at SW1 includes treated waste water from the process plant, drainage water from the mine and surface drainage water captured in the site water management system. This excess, treated water is discharged through a diffuse pipeline to the River Boyne at a flow dilution ratio of >100:1. Discharge is recorded and controlled from the Processing Departments automated ABB system.

Discharge at SW2 is clean groundwater, derived from the Nevinstown mine area which has minimal or no contact with the orebody. This groundwater is collected in a dedicated reservoir and pumped directly to surface for discharge to the River Blackwater. Discharge is recorded and controlled from the Processing Departments automated ABB system. As the mine expands, further dewatering of groundwater will occur. **It is recommended that an assessment is carried out to assess what impact this dewatering due to mine works will have on both the quality and yields of local wells in the vicinity.**

Water Quality is monitored in several key locations, from the carrying water leaving the mine processing plant and onto the tailings pond, dam seepage, the perimeter interceptor channel and the wider environment including monitoring wells and local streams and rivers. A water quality monitoring review of water at the tailings storage facility is carried out by an independent company on an annual basis and must comply with limits set in the Industrial Emissions licence.

It is stated the proposed extension for the tailings storage facility will be located in a previous borrow pit, which is already excavated. A geomembrane instillation is proposed to be installed to protect groundwater. This will be independently supervised, subject to a strict CQA procedure and a leak detection survey. It is also state this geophysical method was previously used and previous experience of these systems indicates the presence of between 2 and 5 leaks per hectare and that these are generally less than 10mm in size.

Noise

Tara mines is run on a continuous 24/7 basis, 365 days per year. Noise emissions on site are continuous, the same for day and night. The noise source on site is mainly tonal in nature. The EPA have set noise limits as part of their Industrial Emissions Licence. There are 4 permanent noise monitoring stations on the periphery of the mine site and noise is continually monitored to ensure compliance with these limits. Normal operation of the tailings storage facility does not generate any discernible noise.

A noise assessment was carried out to assess the impact of noise from construction of the stage 6 extension of the tailings storage facility on the existing rural environment. A

baseline noise survey was carried out in accordance with *ISO 1996 Part 1 (Description and Measurement of Environmental Noise – Part 1: Basic Quantities and Procedures).* A prediction of noise levels of the construction and operational phases along with an assessment of the effects of noise both during construction and operation was carried out in line with the guidance document *"Guidelines for the Treatment of Noise and Vibration in National Road Schemes"* published in 2004 by the NRA. The stage 6 construction will be carried out from March to October over 3 consecutive years. All construction will be carried out in accordance with *BS 5228:Noise Control on Construction and Open Sites Part 1: 2009* and specific noise control measures are outlined in the construction management plan. It is also proposed that continuous noise monitoring will be carried out. Noise was not expected to be of significant impact with the exception of traffic noise at work start and finish times. This is a short term impact.

Complaints

Boliden Tara Mines has a documented complaints procedure for dealing with issues from the public that arise. Personnel from the environmental department are available on a 24 hour call out basis to deal with environmental matters including complaints and incidents. They implement an Environmental Management System which is certified to ISO 14001:2004 and are working towards certification for ISO 14001:2015. They also comply with all emission limits as set by the EPA. With regard to the proposed extension of the tailings storage facility a process of public consultation was carried out, as documented in section 2.4 of their EIS. This department has received no complaints in relation to the existing tailings storage facility and the operation of the mine in the recent past.

Pipe Leakage

An onsite risk assessment carried out by Boliden Tara Mines and included within the EIS identifies there is a high risk of leaks occurring in the pipeline from the mine to the tailings facility and on pipelines from the tailings facility to sumps at the reclaim pipeline. **Leaks occurring shall be an ongoing problem and I would recommend that in addition to leak detection, a programme of preventative maintenance is put in place and pipes are routinely replaced.**

Pest Control

I could not locate any mention of measures to control pests on site and prevent them from becoming a nuisance upon commencement of construction works. **An extensive pest control programme should be implemented prior to any site works at the new tailings storage extension. The programme should be implemented by a competent person(s).**

Closure and Decommissioning

The company has a detailed Closure, Remediation and Aftercare Management Plan to cater for the mine and tailings storage facility when works on site cease. It is estimated Stage 5 will be at full capacity by the end of 2019. Part of the closure phase is the construction of an Integrated Constructed Wetland to the south of the tailings storage facility to treat water runoff. This system was refused permission by Meath Co Council, who requested it be the subject of separate planning application and requested more information on the treatment system proposed. As it stands the CRAMP is incomplete and this new planning application along with the additional information requested should be submitted as a matter of urgency. **No new development should be granted until the management of surface water runoff from the existing tailings storage facility is agreed and finalised in the CRAMP and planning permission is received for the proposed Integrated Construction Wetland.**

Conclusion

Tara Mines is operated in a very efficient manner by the applicant. Other than the issues stated above, the Environmental Health Service have no further concerns at this time regarding the facility.

Yours sincerely,

Lisa Maguire

Lisa Maguire
Environmental Health Officer