Our Case Number: ABP-317810-23

An Bord Pleanála

Colm Shaughnessy
Derry French
Tynagh
Loughrea
Co. Galway
H62 W422

Date: 25 April 2024

Re: Open Cycle Gas turbine power plant (350MW) and associated infrastructure
Located on land to the north of Tynagh Power Station, Derryfrench, Tynagh, Loughrea, Co. Galway.

Dear Sir / Madam,

An Bord Pleanála has received your recent submission in relation to the above mentioned proposed development and will take it into consideration in its determination of the matter.

The Board will revert to you in due course with regard to the matter.

Please be advised that copies of all submissions / observations received in relation to the application will be made available for public inspection at the offices of the local authority and at the offices of An Bord Pleanála when they have been processed by the Board.

More detailed information in relation to strategic infrastructure development can be viewed on the Board's website: www.pleanala.ie.

If you have any queries in the meantime, please contact the undersigned officer of the Board or email sids@pleanala.ie quoting the above mentioned An Bord Pleanála reference number in any correspondence with the Board.

Yours faithfully,

pp

Niamh Hickey
Executive Officer
Direct Line: 01-8737145

PA04

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Niamh Hickey

From: Colm Shaughnessy [redacted]
Sent: Friday 19 April 2024 00:33
To: SIDS
Subject: Submission regarding ABP-317810-23
Attachments: Submission for power station colm shaughnessy 18.04.2024.docx; doc09400920221121220639.pdf; doc09401520221121221159.pdf

Categories: Niamh

Hi There

Please find attached submission against the planed new power station in Derryfrench Tynagh Loughrea Co. Galway case number ABP-317810-23.
Also attached are the historical documents regarding the Tynagh mines and Particulate matter pollution in to the atmosphere from power stations.
My phone number is [redacted]

Regards

Colm

18/04/2024

REFERANCE # 317810-23

EP Energy Development

Colm Shaughnessy

Derryfrench,

Tynagh,

Loughrea,

Co. Galway

Hi there,

My name is Colm Shaughnessy and I live with my family in Derryfrench, Tynagh, Loughrea Co. Galway. H62W422. I have paid for my submission by Phone.

I live very close to the existing power station with my family, and we would not support an additional power station in our area. We have an existing 40-meter chimney overlooking our house and at night the light from the chimney and power station shines directly at the back of our house and through the windows. The noise is just about bearable now but with an additional power station the noise will be doubled. The amount of pollution of CO2 gas in our living and surrounding area will double as the amount of gas being burned to run the power stations will have doubled as they will be running two power stations. When they are starting up the power station a yellow sulphur comes from the chimney stack and this can be found around our area, and this will also be doubled. This is very scary as a father of a young family living so close to the power station. On the12th of August 2020 we had an explosion of noise where a high-pressure steam pipe blowout and the noise were extremely frightening to our young family as it happened when they were sleeping. This happened a few months later and after speaking with the manager I was not confident it wouldn't happen again, and he couldn't give me any guarantees it wouldn't. Is this something we should be expected to get used to as we will have two power stations to worry about.

I hope that this power station and its location goes through rigorous testing as the first power station after construction began to sink as it was built on an old mine with numerous tunnels under the site. Now they want to build another one directly beside the old one. This does not fill me with confidence all correct procedures and requirements are followed correctly during construction.

Please find below our issues-

1/ Having a second 40-meter chiming overlooking our family home.

2/ Double the output of CO2 gas in the area. (Please see attached document regarding the Particular matter in the atmosphere).

3/ Double the output of sulphur from the chimney (when starting up the power plant) in the area.

4/ Loss of privacy as the power station will be overlooking our house.

5/ Constant noise from the power plant.

6/ The maintenance of the power plant. (Correct PM schedule) (high pressure steam lines blowing out)

7/ Inconvenience of a large building site close to our family home.

8/ The disturbance of an old mine that has harmful and hazards chemicals buried on this site. Land in the area and the water has been poisoned previously due to disturbance on this site. (Please see attached documents regarding the old Tynagh mine).

9/ Traffic disruption during construction.

10/ Excess noise during construction.

11/ Large amount of combustible fuel stored on site (Large diesel tanks).

12/ Residue on our house from pollution from the power station.

13/ How much Co2 will there be coming out from the power station when they are all up and running together and is it any harm too our health?

I have a family, Wife Myriam and two sons Thomas and Tadhg and it is imperative for me that we know if there is any danger to our health. I can't see how this will not affect us as our family home is the closest to the existing power plant.

Regards

Colm Shaughnessy

Particulate Matter

The lack of data in the IAG Report for the amounts of particulate matter suspended in the atmosphere at relevant locations, or in the dust measurement and analysis reports prepared by the EPA Regional Inspectorate, leaves an unfortunate gap in the record needed for the assessment of health risk. There are no measurements for particle size in the dust samples collected in the monitoring gauges, which might have gone some way towards filling the deficiency in information. However it needs to be borne in mind that the dust collected at the monitoring stations is that which settles at relatively short distance from the source. Smaller particles of 10 micron and 2.5 micron size are more buoyant, and remain suspended in the atmosphere, there to be inhaled as particulate matter expressed in terms of PM_{10} and $PM_{2.5}$. The composition and shape of particles is important with regard to buoyancy and carrying distance, but that was not investigated in the IAG Report.

Enzyme Inhibition

The adverse health effects associated with lead and arsenic involve enzyme inhibition with associated disruption of metabolic pathways, particularly with regard to erythropoiesis, the production of red blood corpuscles, and this has already been the subject of comment. Apart from direct inhibition there are also indirect effects on enzymes, of which the binding of selenium by arsenic is an example, making it unavailable for its role in glutathione peroxidase, and in T3 and T4 deiodinases which are involved in thyroid function, thus adding to immunosuppressive and carcinogenic properties of these toxic metals (20-30). Selenium too is capable of enzyme inhibition, and has toxic properties when present in excess (28).

Tynagh Mines Site

A Legacy of Neglect

Executive Summary

- Tynagh remains the largest historic metal mine site in Ireland without any Long Term Active Management Plan.
- Arsenic levels on site measured at up to 40,000 PPM. (EPA 2007). Dutch Guideline safety limits at 25 PPM and action limits at 55 PPM. **People employed on site.**
- Test well upstream of site clear of Arsenic. Wells downstream tested at up to 299.2 µg/l. Irish IGV limit is 10 µg/l. (Henry EOS 2008). **Completed Exposure Pathway (CEP).**
- EU presentation Groundwater (chemistry) Assessment in Brussels Oct 2008.

- ECJ Judgements 2005 & 2007 ignored by Competent Authorities.
- Site assigned PIN 1 by EPA: Site not characterised. Current EPA/GSI study inadequate.
- Studies undertaken by EPA (2007) confirm elevating levels of contamination (List (i) & (ii) Substances) **Expressly prohibited EU Directive.**
- Precedent Set: ECHR: Citizens are entitled to "essential information that would have entitled them to assess risks they were subject to"
- "Duty to ensure that each member state lives up to its commitments to safeguard the environment and human health" **Commissioner Dimas**

Mine Site History

- The Tynagh deposit was a lead/zinc/copper/silver/barite orebody/mine. Irish Base Metals Ltd. commenced work there in 1965 and closed in 1982.
- The property was sold to Mercury International Holding Limited in 1984.
- Under the terms of the State mining lease (Department of Communications, Energy & Natural Resources) (Covenant L) the company was obliged to ***'leave all surface lands in a proper state so as not to constitute a danger to public health or to persons or animals traversing the same or in the vicinity thereof to constitute a danger to neighbouring grassland or animals thereon or neighbouring lands or crops therein or to constitute an eyesore'***. Not Enforced.
- Site not rehabilitated.
- 2003 EPA Report: Recommendations not adopted by GCC.
- In 2005 the EPA assigned PIN 1 Tynagh Mines site.
- Construction workers allowed to live on site.
- 2007 EPA Letter to GCC confirming increase in contamination levels: Recommendations not adopted b y GCC in 2007.
- Piecemeal Development: Galvanising plant 2003 and Power plant 2005 Extension 2008

Current Condition Detail (1 of 2)

- Co-Contributor to BREF Principles states that Tynagh now poses a potentially more significant environmental threat than Silvermines based on Arsenic contamination. **(Stokes 2008)**
- Tynagh is assigned Pollution Index No. 1 with sites in this category having the greatest potential to cause pollution **(EPA 2005).** List (i) & (ii) substances (incl. Cadmium & Arsenic) discharging from site.
- No previous work has been undertaken to accurately characterise the groundwater regime in the area:(**Henry EOS 2008**) (Contravening EU Directive & ECJ Ruling Oct 2007) & EPA Recommendation No. 13 2003
- Preliminary Groundwater Report; five exceedences of IGV values; concentration of Arsenic (Class 1 carcinogen) in wells between 4 and 30 times greater than standard.**(Henry EOS 2008)** ***Arsenic is "very toxic to humans"*** **(EPA 2001)**
- Contaminant levels have increased from 2003 baseline.

Current Condition Detail (2 of 2)

- Dust deposition test exceeded EPA limits for old mine sites.
- EPA air pollution assessment technically incorrect; **"Given the rural quality of the area and the fact that the mining operation would not have given rise to particulate matter of a size distribution of 10 microns or less, it is appropriate to estimate that air quality is typical of the rural environment.....In addition there are no other significant sources of particulate matter (PM_{10}) in the area". (Donlon EPA2004)**
- **Arsenic absolute carcinogen in air**
- Dust blow from tailings pond
- Tailings pond: physical and chemical instability
- Open Pit unstable: visual evidence of subsidence
- Gully erosion, discharging into wetlands "lead[s] to a breach in pit lake wall resulting in uncontrolled discharges" **(EPA 2007)**
- The EPA requested GCC to fence off mine processing area/other areas **to prevent human access;** HSE/HSA to be informed of health risks. **(EPA to GCC 2003 & 2007)**
- EPA recommendations in 2003 Report and 2007 letter not sufficiently addressed.

EU Perspective (1 of 2)

Initial meeting in Brussels December 2007 with Mr. Liam Cashman, Principal Administrator, DG Environment, EU Commission.

Our presentation covered the following:

- **Legal framework relating to site** – European Directives; Principle of Preventative Action; Precautionary Principle; UK BSE Case; Ospar Convention.
- **European Perspective** - Arising out of complaint in 2003 the case was successful (still open): batch of eight cases determined in 2005 by ECJ – attracting comment from the Advocate General (Geelhoed) that the Irish Government had engaged "**in persistent widespread and serious failure**" to comply with EU Waste Law.
- Subsequently Commissioner Dimas stated that they have "**a duty to ensure that each member state lives up to its commitments to safeguard the environment and human health**".
- **European Convention on Human Rights**: Two cases on cause and effect set precedents which established that citizens are entitled to "essential information that would have entitled them to access risks they were subject to"
- Review of HRB Report 2003
- Review of matters relating to site based on EPA Reports & Investigations; consultant reports; matters of long term closure; chemical stability; physical stability; care and maintenance; cumulative damage; biological effects.
- Performance Review of Irish Authorities comparison with Scottish EPA

EU Perspective (2 of 2)

- ECJ Judgement 2005 C-282/02 and ECJ Judgment 2007 C – 248/05
- Oct 2007 EPA grant extension to Sperrin IPPC license in direct contravention of both ECJ cases and their own instructions to GCC the previous July.
- MEP De Rossa's comments on 2007 judgment: "The ECJ today found that Ireland was in breach of the directive by failing to take all possible measures to prevent discharges of dangerous substances and heavy metals (such as cadmium) leaching into groundwater and from there into aquifers and rivers"; "should the Commission in the future be presented with evidence of pollution of groundwater.....it has the right to ask the ECJ to impose substantial fines against Ireland."
- Advised by Mr. Cashman to seek meeting with Minister Gormley: No meeting.
- Mr Cashman requested Report and he presented details to Irish Authorities on two occasions in Jan 2008
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EU : Current Position

Tynagh is "One of the main point sources of heavy metals of concern in the country" (L Cashman 2007)

- Irish Competent Authorities informed DG Environment: EPA aware site seriously contaminated; indication that Silvermines type solution will be implemented; Silvermines got priority over Tynagh because of animal deaths.
- In Oct. 2008 invited to Brussels to Present Technical Case on Groundwater etc. Based on Technical Reports prepared in March & September 2008.(Henry).
- Expert report; supporting technical discussion; Further detail on Scottish EPA process
- Mr Cashman outlined EU Position and presented procedure for technical details request from Irish Authorities.Obligating a single response format.
- Reactivated EIA case against Ireland Feb 2009 (Poolbeg) –Tynagh implications.

Perceived Health Effects

- Completed Exposure Pathway :(Arsenic in Groundwater/Air)
- Completed Exposure Pathway :(On site soil—Portumna March 2008)
- EPA had such concerns about human health in and around the mine site, due to gross levels of Arsenic that they wrote to GCC and recommended that they inform HSA/HSE.
- No health initiatives iniated at Tynagh; we engaged an eminent epidemiologist. Having reviewed reports and carried out visual inspection of the perimeter of the site, noting the discharges, she has indicated that an epidemiology study is necessary. She got limited response from HSE/HSA
- Widespread perception that Tynagh area is a cancer black spot.L ocal anecdotal evidence of Leukaemia, prostate and bowel cancer's, brain tumours, multiple sclerosis, still births, vertigo etc.HSE/HSA not engaging.
- Over 20% of school class died before reaching 50 years of age
- Significant second generation effects: subgroup over 50% require speech therapy

Expert Assesment

Our consultants have formed the view that;

- There is an urgent need to halt all further development on the site until a comprehensive characterisation assessment is undertaken to define the extent of contamination at Tynagh, assess the impact on the local environment particularly in terms of human and animal health with a comprehensive environmental risk assessment incorporating all aspects of the site and its environs. Where risks are identified and considered significant, then appropriate remedial measures need to be recommended and implemented without delay, based on a comprehensive integrated remediation strategy for all contaminated media on the Tynagh site and its environs.

Expert Assessment

- The current condition of the site shows clear evidence of environmental pollution with significant risks to human and animal health. Studies undertaken by the EPA and others in 2003/2005 outline the details. The EPA have undertaken further investigations during 2007 confirming elevating levels of contamination (List (i) & (ii) Substances) and have again written to Galway County Council expressing concerns regarding the overall site outlining recommendations that have not been adopted.

Expert Recommendations (1/2)

In particular the following areas need to be assessed in determining the optimum rehabilitation solution for the Tynagh site:

- Hydro geological investigations to determine source and extent of contamination particularly as regards local drinking water sources, hydraulic testing, groundwater risk assessment and development of any remediation measures necessary to protect human health, safety and the environment.

- Geotechnical investigation on dam stability and rock dumps including slope stability analysis to determine any remediation required to protect human health, safety and the environment.

Expert Recommendations (2/2)

- Vegetation assessments as regards long term sustainability including geochemical analysis of tailings to determine acid generating potential and metal (total and extractable) uptake in existing vegetation to determine optimum cover solution for bare areas and any remediation required on existing vegetated areas to protect human health, safety and the environment..
- Hydrological investigations to determine surface water drainage arrangements and contamination sources, chemical and biological quality in receiving waters including sediments, surface water risk assessment and determination of any remediation necessary to protect human health, safety and the environment..
- Air dispersion modeling, dust deposition and PM10 monitoring to determine extent of air related contamination, risk assessment and development of any remediation measures necessary to protect human health, safety and the environment.