

20 June 2016

Dalradian phone conference with staff from TARA Boliden mines

- Dewatering of the mine and related discharge of water.
- How was/ is environmental impact of dewatering assessed/ verified?
- Monitoring of water environment: baseline monitoring as mine progresses.
- Monitoring in an operating mine.
- Monitoring in finished parts or recovering parts of the mine.
- Monitoring plan for closed mine?

- TARA history: 1967 discovered

Zinc
lead

1977 production started
1998 fully state owned
2004 sold to Boliden

2021 mine plan
exploration continuing

- exploration governed by DCENR (GSI)

- trust

- EPA gives licence for all operations

- DCENR, EPA/HSE, local council (planning)

- dewatering: number of pump stations

clean water
(shallow gw above mine)

process water

- $600 \frac{m^3}{h}$

- cyanide used as pyrite/iron suppressant
• natural background in rivers

- baseline - domestic well 2-3 year prior
then monthly basis
mine then supplies mains water
concentration of metals

- water quality continuously mon



monitored from main stream

- closure/remediation asset plan (CR AP)

↳ forced recharge - pump stabilizes a lot faster : 2-4 years
metal concentration low

most metal from in water from hydraulic drainage of backfill

- offer to place mon equipment in houses: noise, vibration
- less than 10 complaints per year
- make mon data available to people + explain it
data are publicly available

^{exclusive} waste rock stored underground and used as backfill
no waste rock coming to site

- haz waste transported by licensed hauliers, usually collected once a month
- brought from warehouse onto site - prepared on site, staff have full PPE: body suit / respirator
pellets kept in locked separate store
mixing buildings separate
amount of pellets stored limited by pellets

cyanide

- inspection rate:

- EPA: 1x
- HSE: 2x
- DCNR: 2x
- NPW / OPW / local council

pre-planning meeting - frequent basis

→ if incident on site relevant authority will be notified

- no JR
- but An board/plenaria, but not high (cost of Appeals)
↓
has agreed with grant of permission

- footprint : 200 acre at main mine site
 - 180 acre actively involved
 - 350 acre tailings 2 active cell
 - 200 acre around perimeter
 - 200 acre owned for extension depending on planning permission
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- Σ 1000 acre - 700-800 active

