

**Subject:** McPhillamys Gold Mine Project (SSD 9505) - Notice of Exhibition

**From:** Nicholas Hon <Nicholas.Hon@planning.nsw.gov.au>  
**Sent:** Monday, 21 October 2019 11:46 AM  
**To:** Elle Clementine <Elle.Clementine@planning.nsw.gov.au>  
**Cc:** Doris Yau <doris.yau@planning.nsw.gov.au>  
**Subject:** RE: McPhillamys Gold Mine Project (SSD 9505) - Notice of Exhibition

Hi Elle,

Thanks for forwarding this SSD for our review.

Having reviewed the EIS, it is noted that dangerous goods (DG) storage quantities and transportation rates exceed the relevant thresholds in the Department's *Applying SEPP 33*. As such, the SSD is considered potentially hazardous under SEPP 33, and a preliminary hazard analysis (PHA) is submitted (EIS Appendix R) as required under SEPP 33.

Although not clearly stated in the SEARs of 10 December 2018, we expect the PHA to be prepared in accordance with the Department's *Hazardous Industry Planning Advisory Paper No. 6, 'Hazard Analysis'* (HIPAP 6) and *Multi-level Risk Assessment* (MLRA), showing that the SSD can comply with the Department's *Hazardous Industry Planning Advisory Paper No. 4, 'Risk Criteria for Land Use Safety Planning'* (HIPAP 4). This approach is in-line with assessments for other potentially hazardous developments.

Having reviewed the PHA, it is understood that the PHA adopted an approach consistent with a Level 2 semi-quantitative risk analysis as per MLRA. This approach is considered appropriate, given that the SSD is situated relatively remotely from significantly populated areas. However, further information as set out below should be requested from the Applicant to:

- clarify the information provided in the PHA (i.e. EIS Appendix R);
  - ensure that the PHA is prepared in accordance with HIPAP 6; and
  - verify that the SSD can comply with HIPAP 4.
1. Provide a site layout diagram of the "magazine and ammonium nitrate emulsion storage" area as shown in EIS Figure 2.8, clearly showing:
    - a. the location of each magazine and tank;
    - b. the quantity of dangerous goods (DG) within each magazine and tank;
    - c. separation distances between magazines, tanks and protected works as defined under AS 2187 and AIESG codes of practice; and
    - d. how item 1c above can comply with all relevant Australian Standards and codes of practices for explosives and explosives precursors.
  2. In view of item 1 above, provide:
    - a. the TNT-equivalency for precursors (i.e. ammonium nitrate emulsion, ANE), boosters and detonators;
    - b. the quantity and type of explosive (TNT?) for estimating the worst case explosive impacts in PHA Section 4.3.2.1; and
    - c. verification that suitable ANE quantities are included in item 2b above. Please note that ANE presents explosives risks, although classified as DG Class 5.1, conforming to UN 3375. From prior assessments of an ANE plants, the Department understands that the TNT-equivalency for ANE could be as high as 68%.
  3. In view of items 1 and 2 above, verify if the appropriate quantity and type of explosives have been considered in the PHA for assessing the explosives impacts. Particularly, verify if the explosive impacts would not significantly impact the tailing storage facility (i.e. structural damage causing loss of containment) and processing plant area

(i.e. would not escalate beyond the worst cases described in PHA Sections 4.2.3.2 [hydrogen cyanide] and 4.3.2.3 [flammable materials]). In addition, assessment with HIPAP 4 Section 2.4.4 (environmental risk) must be included in the PHA with regards to risks to the tailings storage facility.

4. Provide a site layout diagram of the processing plant area as shown in EIS Figure 2.8, clearly showing:
  - a. the location of all DG and hazardous chemicals (which may be non-DG, such as diesel) stores and tanks. "Reagents store", "reagent area" and "emergency stockpile area" are noted;
  - b. the quantity of DG and hazardous chemicals within each store and tank;
  - c. the separation distances between stores, tanks and protected works as defined under the relevant Australian Standards and consistent with relevant codes of practice; and
  - d. how item 4c above can comply with all relevant Australian Standards and relevant codes of practice.
5. In view of item 4 above, and considering separation distances between 14 tonnes of LPG and 240 tonnes of diesel (only quantities and not locations are indicated in PHA Table 2, and Sections 4.3.1 and 4.3.2.3), provide verification that the fire impacts as shown in PHA Figure 6 would not escalate beyond the worst cases described in PHA Sections 4.2.3.2 (hydrogen cyanide) and 4.3.2.3 (flammable materials).

Please refer to me any queries from the Applicant on the above.

Thanks.

Regards,

**Nicholas Hon**

Technical Specialist (Hazards)

Industry Assessments

320 Pitt Street | Sydney NSW 2000

T 02 9274 6344



**Planning,  
Industry &  
Environment**