# Amendment Report

## Application for Licence Amendment

**Part V Division 3 of the *Environmental Protection Act 1986***

| | |
|---|---|
| Licence Number | L8653/2012/2 |
| Licence Holder | BHP Nickel West Pty Ltd |
| **ACN** | 004 184 598 |
| **File Number** | 2012/003930-4~13 |
| **Premises** | Kalgoorlie Nickel Smelter<br><br>Smelterman Road,<br><br>FEYSVILLE, WA, 6431<br><br>Part of Lot 100 on Deposited Plan 212288 As defined by the Premises maps in Schedule 1 |
| **Date of Report** | 3 October 2024 |
| **Decision** | Revised licence granted |

# Amendment description

This amendment is made pursuant to section 59 of the Environmental Protection Act 1986 (EP Act) to amend the existing licence issued under the EP Act for a prescribed premises as set out below. This notice of amendment is hereby given under section 59B(9) of the EP Act.

This amendment is limited to changes to the infrastructure associated with activities performed under Category 44: metal smelting or refining.

In completing the assessment documented in this report, the department has considered and given due regard to its regulatory framework and relevant policy documents which are available at https://dwer.wa.gov.au/regulatory-documents .

# Purpose and scope of assessment

On 5 June 2024, the BHP Nickel West Pty Ltd (Licence Holder) submitted an application to the department to amend Licence L8653/2012/2 under section 59 and 59B of the *Environmental Protection Act 1986* (EP Act). The amendment seeks to gain approval for the Premises to receive dry nickel concentrate, store the concentrate in the existing nickel concentrate storage shed, and transfer the concentrate off-site.

## Background

The licence holder operates the Kalgoorlie Nickel Smelter (the Premises), located on Smelterman Road, Feysville. The Premises was constructed and commissioned in 1973 under the *Nickel Refinery (Western Mining Corporation Limited) Agreement Act 1968* (the State Agreement).

The Premises smelts nickel concentrate supplied from BHP NiW, and third-party mines and concentrators, which has a nickel content of approximately 15%. The concentrate received is smelted to produce a nickel matte of approximately 66% nickel content, which is then transported to the BHP NiW Kwinana Nickel Refinery for further processing.

The nickel concentrate received contains approximately 18% iron. The primary function of the smelting process is to remove iron by converting iron sulphides into iron oxide. Dry nickel concentrate powder is injected into the furnace operating at 500°C and 40% oxygen, enabling high temperature conversion and producing slag and matte in the three conversion chambers. A coal and coke mixture (with silica and quartz), in addition to dehydrated fuel oil, diesel and natural gas, are utilised as a reductant in the smelting furnace bed.

The smelting process results in the release of sulphur dioxide (SO2), particulates (including heavy metals), combustion gases, and waste heat. A portion of the waste gases are cleaned and passed through the onsite acid plant to produce saleable 98.4% sulphuric acid product, and a waste heat recovery unit is utilised to produce steam and up to 20 MWe of electricity. The remaining waste gases which are not subject to secondary processing are discharged via the common stack.

Existing approved infrastructure at the premises includes:

- A flash furnace and three converters (including a main stack and a converter stack)
- Two oxygen plants
- A waste heat boiler and electrostatic precipitators
- A powerhouse
- An acid plant (including an acid plant stack)
- An effluent treatment plant

- A wastewater treatment plant
- A residue storage facility
- A slag landform (also referred to as a slag dump)
- A matte drier and packing shed (including a matte drier stack)
- A material handling area
- An air quality control system
- A flux drier (including a flux drier stack)
- A stormwater management system
- A vehicle wash-down bay
- Chemical bulk storage area and loadout facilities
- Mechanical workshop
- Hydrocarbon bulk storage area and DFO plant

## Proposed Amendment

The Licence Holder proposes to use the existing nickel concentrate storage shed, located adjacent to the West Kalgoorlie Esperance Railway to receive nickel concentrate, store the nickel concentrate, and then transfer the concentrate off-site.

The existing nickel concentrate storage shed has the capacity to contain 8,000 tonnes of concentrate including the containment and clean-up of any potential spills.

The shed was primarily designed to ensure that no external drainage can enter the shed for a 1 in 100-year flood event. Design features include internal concrete walls, elevated platforms and ground levels designed to divert stormwater and prevent ingress. As a result of ensuring that external containment requirements are met, concentrate, slurry and any residual water from the fogging system are unable to flow out from the shed. The shed is approximately 120 metres long, 22.4 metres wide and 8.5 metres high and is capable of containing approximately 950m3 of concentrate, water or slurry.

The shed is fitting with a firefighting system and a manually operated fogging system to maintain a 10% moisture content of the concentrate. The moisture levels of the dry nickel concentrate will be regularly sampled by a technician. In the event of the firefighting system being activated, or any runoff from the fogging system, the excess water will be contained within the shed and pumped out via a vacuum truck.

As the Premises operates 24 hours a day for 7 days a week, noise emissions from the operation are required to comply with the most conservative night-time assigned noise levels as defined in the *Environmental Protection (Noise) Regulations 1997*.

This amendment is limited only to changes to Category 44 activities from the Existing Licence. No changes to the aspects of the existing Licence relating to Category 31,39,52 and 87 have been requested by the Licence Holder.

Table 1 below outlines the Licence holder's proposed operational controls

**Table 1: Licence Holder Proposed Controls (from application)**

| Emission | Sources | Potential pathways | Proposed controls |
|---|---|---|---|
| Dust | Lift-off from nickel concentrate in the storage shed.<br><br>Unloading, storage and re-loading of nickel concentrate in the storage shed. | Air/windborne pathway | • Fogging system to maintain 10% moisture content of concentrate.<br>• With approx. 10% moisture content, the concentrate is not a dry, airborne material. |
| Wastewater | Discharge from fogging system installed in the nickel concentrate storage shed | Seepage to soils and groundwater | • The shed has the capacity to contain approximately 950m3 of concentrate, water or slurry<br>• In the event of a malfunction of the fogging system, or an event that the firefighting system is activated, the excess water will be pumped out by a vacuum truck.<br>• Minimal water is used in fogging system (approx. 66 litres per minute during summer)<br>• Fogging system will be fitted with interlocks and will shut down in the event of pipe breakages. |
| Dust | Vehicle movements – unloading and loading materials | Air/windborne pathway | • Trucks will enter and exit the shed via a raised platform to avoid contact with the concentrate and minimise trafficable dust. |
| Noise | | Air/windborne pathway | • As the Premises operates 24 hours a day 7 days a week and consequently noise emissions from the operation are required to comply with the most conservative night-time assigned noise levels as defined in the Environmental Protection (Noise) Regulations 1997.<br>• The facility is surrounded primarily by rural land, with the nearest township at Kalgoorlie Boulder located approximately 8km north of the facility. |

# Other approvals

## State Agreement

Premises was constructed and originally operated in accordance with the State Agreement. The State Agreement was terminated in 2008 under the agreement ratified by the Nickel Refinery (BHP Billiton Nickel West Pty Ltd) (Termination of Agreements) Agreement Act 2008 (WA).

## EP Act Part V Approval

The emissions and discharges from this Premise are conditioned under Part V Licence L8653/2012/2 which expires on 10 June 2034.

## Environmental Protection (Clearing of Native Vegetation) Regulations 2004

Vegetation clearing for the purpose of mineral processing is permitted under state clearing permit (CPS) 8164/2 and vegetation clearing for the purpose of expansion of slag dump and associated processing infrastructure, associated activities and road corridor maintenance is permitted under CPS 9556/1.

## Risk ratings

The table below describes the risk events associated with the amendments consistent with the *Guideline: Risk Assessments* (DWER 2020). The table identifies whether the risk events are acceptable and tolerated, or unacceptable and not tolerated, and the appropriate treatment and degree of regulatory control, where required.

**Table 2. Risk assessment of potential emissions and discharges from the operation of the nickel concentrate storage shed on the Premises.**

| **Risk Event** | | | | **Consequence rating[1]** | **Likelihood rating[1]** | **Risk rating[1]** | **Reasoning** | **Regulatory controls** |
|---|---|---|---|---|---|---|---|---|
| **Source/Activities** | **Potential emission** | **Potential receptors, pathways and impact** | **Licence Holder's controls**<br>**See Table 1** | | | | | |
| **Operation** | | | | | | | | |
| Vehicle movements - Unloading and reloading of Nickel Concentrate | Dust | Air/windborne pathway causing impacts to health and amenity of residential dwellings and decline in vegetation health and/or vegetation death | Trucks will enter and exit the shed via a raised platform to avoid contact with the concentrate and minimise trafficable dust. | Low-level on-site impacts **Minor** | Not likely to occur in most circumstances **Unlikely** | **Medium** Acceptable, subject to regulatory controls | Fugitive dust may be generated from vehicles entering and exiting the nickel concentrate storage shed movement within the premises boundary.<br>The Delegated Officer considers that based on the distance to the nearest sensitive receptors (residential 3km NE of the Premise and threatened flora 3.7km NW of the Premise), and limited dust generated from the truck movements, there is a low likelihood of adverse impacts occurring associated with fugitive dust | The delegated officer considers that applicants controls are adequate to manage dust emissions from vehicle movements of unloading and reloading nickel concentrate within the storage shed.<br>However, the Licence holder's controls will be conditioned the revised licence. |

| Risk Event | | | | Consequence rating[1] | Likelihood rating[1] | Risk rating[1] | Reasoning | Regulatory controls |
|---|---|---|---|---|---|---|---|---|
| **Source/Activities** | **Potential emission** | **Potential receptors, pathways and impact** | **Licence Holder's controls**<br>**See Table 1** | | | | | |
| | | | | | | | emissions from the premises. | |
| | Noise | Air/Road causing impacts to health and amenity of residential dwellings | As the Premises operates 24 hours a day 7 days a week and consequently noise emissions from the operation are required to comply with the most conservative night-time assigned noise levels as defined in the Environmental Protection (Noise) Regulations 1997.<br>The facility is surrounded primarily by rural land, with the nearest township at Kalgoorlie Boulder located approximately 8km north of the facility. | Minimal on-site impacts **Slight** | Not likely to occur in most circumstances **Unlikely** | **Low** Risk event is acceptable. | No additional regulatory controls required. | The delegated officer considers that applicants controls are adequate to manage noise from vehicle movements of unloading and reloading nickel concentrate within the storage shed. |
| Operation of storage shed - Unloading, loading and storage of material (nickel | Dust | Air/windborne pathway causing impacts to health and amenity of | Fogging system to maintain 10% moisture content of concentrate.<br>With approx. 10% moisture content, | Low-level on-site impacts **Minor** | Not likely to occur in most circumstances **Unlikely** | **Medium** Acceptable, subject to regulatory controls | Fugitive dust may be generated from unloading, loading and storage of nickel concentrate in the storage shed. | The delegated officer considers that applicants controls are adequate to manage dust emissions from the nickel concentrate within the storage shed. |

| Risk Event | | | | Consequence rating[1] | Likelihood rating[1] | Risk rating[1] | Reasoning | Regulatory controls |
|---|---|---|---|---|---|---|---|---|
| **Source/Activities** | **Potential emission** | **Potential receptors, pathways and impact** | **Licence Holder's controls**<br>**See Table 1** | | | | | |
| concentrate) | | residential dwellings, health of fauna, and decline in vegetation health and/or vegetation death. | the concentrate is not a dry, airborne material. | | | | The Delegated Officer considers that based on the distance to the nearest sensitive receptors (residential 3km NE of the Premise and threatened flora 3.7km NW of the Premise), and the proposed use of the fogging system, there is a low likelihood of adverse impacts occurring associated with fugitive dust emissions from the premises. | However, the Licence holder's controls will be conditioned in the revised licence. |
| | Wastewater | Seepage to soils and groundwater impacting the health of groundwater dependent flora and foraging and burrowing fauna. | The shed has the capacity to contain approximately 950m3 of concentrate, water or slurry<br>In the event of a malfunction of the fogging system, or an event that the firefighting system is activated, the excess water will be pumped out by a vacuum truck. | Low-level on-site impacts<br>**Minor** | Not likely to occur in most circumstances<br>**Unlikely** | **Medium**<br>Acceptable, subject to regulatory controls | The fogging system is manually operated to keep the concentrate moist. The moisture level of the concentrate is assessed by regular sampling by a technician. Due to the manual operation of the fogging system, it is possible that excessive wastewater may be generated and require management to avoid release of wastewater outside of the shed footprint. | The delegated officer considers that applicants controls are adequate to manage potential wastewater generated from the fogging system or firefighting system installed within the storage shed.<br>However, the Licence holder's controls will be conditioned. |

| Risk Event | | | | Consequence rating[1] | Likelihood rating[1] | Risk rating[1] | Reasoning | Regulatory controls |
|---|---|---|---|---|---|---|---|---|
| **Source/Activities** | **Potential emission** | **Potential receptors, pathways and impact** | **Licence Holder's controls**<br>**See Table 1** | | | | | |
| | | | Minimal water is used in fogging system (approx. 66 litres per minute during summer)<br>Fogging system will be fitted with interlocks and will shut down in the event of pipe breakages. | | | | The Delegated Officer considers that based on the distance to the nearest sensitive receptors (residential 3km NE of the Premise and threatened flora 3.7km NW of the Premise), and the proposed limited water use of the fogging system, there is a low likelihood of adverse impacts occurring associated with impacted wastewater emissions from the premises. | |

Note 1: Consequence ratings, likelihood ratings and risk descriptions are detailed in the *Guideline: Risk assessments* (DWER 2020).

Note 2: Proposed Licence Holder's controls are depicted by standard text. **Bold and underline text** depicts additional regulatory controls imposed by department.

# Consultation

The Licence Holder was provided with the draft amendment on 23 August 2024. The Licence Holder provided comments on 20 September 2024. In addition to the comments on the draft amended licence and amendment report, the Licence Holder requested minor administrative changes to the conditional requirements of the licence as the Premises is likely to move into care and maintenance by the end of 2024. The comments and minor administrative amendments received from the Licence Holder on 20 September 2024 have been considered by the Delegated Officer as detailed in Appendix 1.

# Decision

This Amendment Report documents the assessment of potential risks to the environment and public health from proposed changes to the emissions and discharges during operation of the existing nickel concentrate storage shed at the Premises.

It is understood the existing nickel concentrate storage shed has not been identified on the current licence. Therefore, the revised licence lists the storage shed in Table 1 of the licence under 'site infrastructure' and documents the operational requirements for use of the shed. As a result of this assessment, Revised Licence L8653/2012/2 has been granted.

In addition to the above, an assessment was undertaken to assess the risks associated with the Premises accepting dry nickel concentrate, storage of the concentrate in the existing nickel concentrate storage shed, and transfer of the concentrate off-site. It is considered that the potential risks of such activities are likely to be adequately managed by the proposed use of a fogging system to keep the concentrate moist, a firefighting system and other controls proposed by the Licence holder.

The minor administrative requested by the Licence Holder During the consultation period remove the requirement for particular monitoring and actions while the Premises is care and maintenance while the Premises is not operating under normal operating conditions are largely administrative and do not change the risk profile of the Premises. These proposed changes and the Department's response are detailed in Appendix 1 of this report.

As a result, the Revised Licence has been issued and this amendment supersedes the existing Licence previously granted in relation to the Premises. The Revised Licence has been granted with existing conditions being transferred, but not reassessed.

The amendment reports for the previous licence will remain on the DWER website for future reference and will act as a record of DWER's decision making.

# Conclusion

Based on the assessment in this Amendment Report, the Delegated Officer has determined that a Revised Licence will be granted, subject to conditions commensurate with the determined controls and necessary for administration and reporting requirements.

## Summary of amendments

Table 1 and 2 provide a summary of the amendments and will act as record of implemented changes. All proposed changes have been incorporated into the Revised Licence as part of the amendment process.

**Table 1: Summary of licence amendments (new infrastructure)**

| Condition no. 1 | Infrastructure | Operational requirements | Location |
|---|---|---|---|

| | | | |
|---|---|---|---|
| Table 1 | Concentrate storage shed | • Fogging system is functional to maintain moisture content of concentrate.<br>• The shed is to maintain the capacity to contain approximately 950m3 of concentrate, water and/or slurry<br>• Firefighting system is installed<br>• A vacuum truck is to be used to pump out excess water in the event of a malfunction of the fogging system, or when the firefighting system is activated.<br>• The shed is fitted with a raised platform to avoid trucks being in contact with the concentrate and minimise trafficable dust | Appendix 3 |

**Table 2: Summary of licence amendments (administrative wording amendment)**

| Former Condition/Table numbers | New condition number | Summary of amendments (bolded) |
|---|---|---|
| Licence Table 1 – | | **During operational periods,**<br>a) To ensure continuous monitoring of the concentration of $SO_2$ in, and rate of emission of, all gas emitted from:<br>(i) The main stack and the converter stack must be operated with an OPSIS AR 600 $SO_2$ analyser; and<br>(ii) The acid plant stack must be operated with a URAS26 analyser or an OPSIS AR 600 $SO_2$ analyser<br>b) Monitoring equipment must be maintained and operated so as to provide reliable data for greater than 90 percent of the time in every calendar month, and for greater than 95 percent of the time in any period of twelve calendar months. c) Emission sampling ports must be maintained and accessible for the purposes of monitoring air emissions in compliance with the appropriate USEPA Methods |
| Licence Table 1 –<br>Residue Storage Facility (Stabilised Dam 3) | N/A | An operational freeboard of at least 500mm must be maintained at all times.<br>**During operational periods:**<br>Supernatant water must be recovered and pumped back to the Process Water Pond for reuse at the premises.<br>Deposition of slurry into SRD3 will occur from a single spigot situated along the northern embankment.<br>The volume of slurry deposited into SRD3 must be recorded<br>The volume of supernatant water recovered from SRD3 must be recorded. |
| Licence Table 1 –<br>Air Quality Control System | N/A | Must maintain all installed dust collection and dust control systems.<br>**During operational periods**, must operate all installed dust collection and dust control systems utilised to prevent, so far as practicable, the generation of dust from the Premises. |
| Licence Table 1 –<br>VSPA Oxygen Plants with a capacity of not more than 69,525 tonnes (each) per year | N/A | a) Wastewater generated to be directed to the existing wastewater system;<br>b) Exhaust gases to be directed to vent A1 and A2 to the atmosphere;<br>c) **During operational periods**, cooling tower water must be continually monitored with automated treatment, as required, to maintain the pH of the closed loop recycled water system; and<br>d) During planned maintenance or emergency events, water may be discharged from the cooling towers onto the existing hardstand and directed to nearby drainage/ discharge points connected to the existing stormwater system |
| 11 | N/A | **During operational periods,** the licence holder must monitor emissions for the parameters listed in Table 5: |

<table>
<tr><td></td><td></td><td>(a) at the corresponding monitoring location;<br>(b) in the corresponding unit;<br>(c) at no less than the corresponding frequency;<br>(d) for the corresponding averaging period; and<br>(e) using the corresponding method,<br><br>as set out in Table 5.</td></tr>
<tr><td>13</td><td>N/A</td><td>During operational periods, the licence holder must undertake, during each relevant period throughout the period of this licence for equipment under operation, sampling at the specified locations, for the corresponding parameters and in accordance with the corresponding methods in Table 6, for the purpose of measuring concentrations of emissions.</td></tr>
<tr><td>14</td><td>N/A</td><td>During operational periods, the licence holder must ensure that under normal operation, emissions from the main stack, converter stack, flux drier stack, and matte drier stack do not exceed the limits specified in Table 6 and are managed such that they are at or below the targets specified Table 6.</td></tr>
<tr><td>15</td><td>N/A</td><td>During operational periods, the licence holder must ensure that the concentration of sulfur dioxide in the relevant portion of the environment is continuously monitored and recorded throughout the period of this licence.</td></tr>
<tr><td>21</td><td>N/A</td><td>During operational periods, the licence holder must ensure that the meteorological parameters at the monitoring points referred to Table 7 and Schedule 6 are continuously monitored and recorded throughout the period of this licence.</td></tr>
<tr><td>23 and 24</td><td>23</td><td>Former Condition 23 has been removed as it repeats the requirements of Condition 24</td></tr>
<tr><td>25 - 47</td><td>24 - 46</td><td>Renumbering</td></tr>
<tr><td>Table 8</td><td>N/A</td><td>Table 8: Monitoring of groundwater concentrations
<table>
<tr><th>Monitoring Location</th><th>Parameter</th><th>Unit</th><th>Frequency</th><th>Averaging Period</th><th>Method</th></tr>
<tr><td rowspan="7">KNSMB09, KNSMB12, KNSMB26, KNSMB42, KNSMB43, KNSMB60 and KNSMB61 As shown in Figure 3 in Schedule 1</td><td>pH[1]</td><td>-</td><td rowspan="7">Quarterly (March, June, September & December)</td><td rowspan="7">Spot Sample</td><td rowspan="7">AS/NZ 5667.1:1998</td></tr>
<tr><td>Standing water level (SWL)[2]</td><td>mbgl</td></tr>
<tr><td>TDS[1]</td><td rowspan="5">Mg/L</td></tr>
<tr><td>Chloride</td></tr>
<tr><td>Sulphate</td></tr>
<tr><td colspan="2">Total and soluble forms of As, Cd, Cr, Pb, Ni & Sb</td></tr>
</table>
Note 1: These parameters should be measured and recorded in the field to ensure representativeness. An exemption from National Association of Testing Authorities (NATA) laboratory analysis is allowed given geographical remoteness of the sample site and the short holding time of the parameter.<br>Note 2: SWL shall be determined prior to collection of other water samples</td></tr>
<tr><td>Schedule 4 – Table 11</td><td>N/A</td><td>Inclusion of “during operational periods” to the requirement for ‘frequency of reporting’ for all parameters with the exception of water monitoring and reporting which must continue as per current licence conditions.</td></tr>
</table>

# References


1. Department of Environment Regulation (DER) 2015, *Guidance Statement: Setting Conditions*, Perth, Western Australia.
2. Department of Water and Environmental Regulation (DWER) 2020, *Guideline: Environmental Siting*, Perth, Western Australia.
3. DWER 2020, *Guideline: Risk Assessments*, Perth, Western Australia.
4. BHP Ni West 2024, Application to amend the licence (BHP, 5 June 2024)
5. BHP Ni West 2024, Response to proposed amendments (BHP, 20 September 2024)

# Appendix 1: Summary of Licence Holder's comments on draft amendment

| Original Condition and Table numbers | Summary of Licence Holder's comment | Department's response |
|---|---|---|
| Licence Table 1 | Remove **"Nickel"** from **"Nickel Concentrate Storage Shed"** in the Infrastructure column of Table 1. | The Delegated Officer accepts the changes, and the licence has been updated accordingly. |
| | Remove '10%' from *Fogging system is functional to maintain 10% moisture content of concentrate* of Table 1. | |
| | Insert 'to be used' A vacuum truck is ~~made available at all times~~ '**to be used'** to pump out excess water in the event of a malfunction of the fogging system, or when the firefighting system is activated of Table 1. | |
| | Please add a new column to Table 1 to include an item number related to each item of infrastructure.<br>Each 'Site Infrastructure and equipment' row will have an 'Item' number for ease of referencing and tracking throughout the licence. | |
| Licence Table 1 –<br>Residue Storage Facility (Stabilised Dam 3) | Proposed inclusion of "During operational periods" in applicable areas to clarify that this condition only applies during operational periods. | |
| Licence Table 1 –<br>Air Quality Control System | | |
| Licence Table 1 –<br>VSPA Oxygen Plants with a capacity of not more than 69,525 tonnes (each) per year | | |
| 11 | Proposed inclusion of "During operational periods" to clarify that this condition only applies during operational periods. | |

| Original Condition and Table numbers | Summary of Licence Holder's comment | Department's response |
|---|---|---|
| | **During operational periods,** the licence holder must monitor emissions for the parameters listed in Table 5:<br>(a) at the corresponding monitoring location;<br>(b) in the corresponding unit;<br>(c) at no less than the corresponding frequency;<br>(d) for the corresponding averaging period; and<br>(e) using the corresponding method,<br>as set out in Table 5. | |
| 13 | Proposed inclusion of "During operational periods" to clarify that this condition only applies during operational periods.<br><br>**During operational periods,** the licence holder must undertake, during each relevant period throughout the period of this licence for equipment under operation, sampling at the specified locations, for the corresponding parameters and in accordance with the corresponding methods in Table 6, for the purpose of measuring concentrations of emissions. | |
| 14 | Proposed inclusion of "During operational periods" and deletion of "under normal operation" will ensure consistency with wording of other conditions.<br><br>**During operational periods,** the licence holder must ensure that **under normal operation,** emissions from the main stack, converter stack, flux drier stack, and matte drier stack do not exceed the limits specified in Table 6 and are managed such that they are at or below the targets specified Table 6. | |
| 15 | Proposed inclusion of "During operational periods" to clarify that this condition only applies during operational periods.<br><br>**During operational periods,** the licence holder must ensure that the concentration of sulfur dioxide in the relevant portion of the environment is continuously monitored and recorded throughout the period of this licence. | |
| 21 | Proposed inclusion of "During operational periods" to clarify that this condition only applies during operational periods.<br><br>**During operational periods,** the licence holder must ensure that the meteorological parameters at the monitoring points referred to Table 7 and Schedule 6 are continuously monitored and recorded throughout the period of this licence. | |
| 23 and 24 | Proposed deletion of Condition 23 will simplify compliance and Condition 23 repeats information that is provided in Condition 24. | |

<table>
<tr><th>Original Condition and Table numbers</th><th>Summary of Licence Holder's comment</th><th>Department's response</th></tr>
<tr><td>35</td><td>Originally<br><br>The licence holder must monitor the groundwater for concentrations of the parameter listed in Table 8:<br>(a) at the corresponding monitoring location;<br>(b) in the corresponding unit;<br>(c) at no less than the corresponding frequency;<br>(d) for the corresponding averaging period; and<br>(e) using the corresponding method, as set out in Table 8.<br><br>Table 8: Monitoring of groundwater concentrations<br><br>Proposed wording to simplify compliance.<br>The Licence Holder shall undertake the monitoring in Table 8 according to the specifications in that table and record and investigate results that do not meet any limit specified.</td><td>The format of the condition wording is in accordance with the Departments standard phrasing used for this type of condition. Therefore, the Delegated Officer has not made and changes to the licence.</td></tr>
<tr><td>35 Table 8</td><td>Due to the remote geographical location of NKS, meeting compliance with the short holding times to enable laboratory analysis with AS/NZS 5667.1:1998 is not possible, BHP Ni suggest the following changes: Please add Note 1 to pH and TDS parameters and change current Note 1 on SWL parameter to Note 2, as follows:<br>Table 8: Monitoring of groundwater concentrations
<table>
<tr><th>Monitoring Location</th><th>Parameter</th><th>Unit</th><th>Frequency</th><th>Averaging Period</th><th>Method</th></tr>
<tr><td rowspan="6">KNSMB09, KNSMB12, KNSMB26, KNSMB42, KNSMB43, KNSMB60 and KNSMB61 As shown in Figure 3 in Schedule 1</td><td>pH[1]</td><td>-</td><td rowspan="6">Quarterly (March, June, September & December)</td><td rowspan="6">Spot Sample</td><td rowspan="6">AS/NZ 5667.1:1998</td></tr>
<tr><td>Standing water level (SWL)[2]</td><td>mbgl</td></tr>
<tr><td>TDS[1]</td><td rowspan="4">Mg/L</td></tr>
<tr><td>Chloride</td></tr>
<tr><td>Sulphate</td></tr>
<tr><td>Total and soluble forms of As, Cd, Cr, Pb, Ni & Sb</td></tr>
</table>
Note 1: These parameters should be measured and recorded in the field to ensure representativeness. An exemption from National Association of Testing</td><td>The Delegated Officer accepts the changes, and the licence has been updated accordingly.</td></tr>
</table>

| Original Condition and Table numbers | Summary of Licence Holder's comment | Department's response |
|---|---|---|
| | **Authorities (NATA) laboratory analysis is allowed given geographical remoteness of the sample site and the short holding time of the parameter.**<br>**Note 2: SWL shall be determined prior to collection of other water samples** | |
| 39 and 40 | Originally:<br><br>**Condition 39:**<br>The licence holder must:<br>(a) undertake an audit of their compliance with the conditions of this licence during the preceding annual period; and<br>(b) prepare and submit to the CEO by 30 September in each year an Annual Audit Compliance Report in the approved form in.<br>Condition 40:<br>The licence holder must provide to the CEO, by 30 September in each year, an Annual Environmental Report containing data collected during the 12 month period beginning 1 July the previous year and ending on 30 June in that year. The report shall contain, but not limited to, the following:<br>(a) product throughput (tonnage) of the smelter during the reporting period;<br>(b) an overview of the monthly and quarterly monitoring data as required by this licence;<br>(c) a comparison of all collected data required by this licence against previous years' monitoring data and against the corresponding targets and limits specified by this licence;<br>(d) a separate time series graph of data collected for each emitted contaminant required to be monitored by this licence with the corresponding limit and target as specified in this licence depicted as horizontal lines on each graph;<br><br>(e) a summary of key findings and proposed remedial actions as required for identified target exceedances.<br><br>This report shall exclude information previously provided for monthly meteorological or quarterly emissions monitoring data required in Conditions 11, 13, 15, 21 and 25.<br><br>BHP Ni suggests consolidation of conditions 39 and 40 into a single "**Annual Compliance Report**" such as: | The format of the condition wording is in accordance with the Departments standard phrasing used for this type of condition. Therefore, the Delegated Officer has not made and changes to the licence. |

| Original Condition and Table numbers | Summary of Licence Holder's comment | Department's response |
|---|---|---|
| | **The licensee shall prepare an Annual Compliance Report containing the monitoring data and other collected data required by any condition of this licence by 30 September each year.**<br><br>**This report shall cover the 12-month period from 1 July until 30 June. One copy of this report shall be provided to the CEO.** | |
| Schedule 4 – Table 11 | Inclusion of "during operational periods" to the requirement for 'frequency of reporting' for all parameters with the exception of water monitoring and reporting which must continue as per current licence conditions. | The Delegated Officer accepts the changes, and the licence has been updated accordingly. |