EC Response

Date: _____

Exhibit No.: _____

| **Previously Committed** to by MHBL | New **Acceptable** to MHBL | New **Not Acceptable** to MHBL | **Intervenor Response** |
|---|---|---|---|
| **INAC** | | | |
| **Tailings Seepage Monitoring (Sec 2.3.1)** | | | |
| Monitoring & reporting of any observed seepage below dams to geotechnical engineer of record | | | |
| **WQ Calibration Monitoring (Sec 2.3.2)** | | | |
| Monitoring to Calibrate WQ Model – Tail Lake level, snow depth, rainfall, tailings inflow, tailings density, reclaim volume, discharge volume, Tail Lake bathymetry. | Pan evaporation;<br>Treated sewage water volume to Tail Lake – daily | Ice thickness weekly - suggest once per month<br><br>Multi depth WQ sampling on a regular basis distributed over Tail Lake<br>(The water column will be monitored on a very frequent basis at intake. MHBL suggest, as part of an internal monitoring program, WQ monitoring once per month in open water season in one other location other than the intake, to determine if there is any horizontal gradient and whether that has any implication on discharge strategy. | |
| **Geochemical Monitoring (Sec 2.3.2)** | | | |
| Geochemical monitoring of tailing solids – monthly<br><br>Tonnage of waste rock placed on stockpile by lithology including segregation of non-mineralized waste rock | Geochemical monitoring of leach residue placed UG – monthly + inspection of freeze back + seepage WQ monitoring (MHBLsuggests bi-annually) | CN Destruction circuit Monitoring as proposed by INAC is not accepted (MHBL suggests monthly monitoring of barren bleed stream only)<br><br>Monitoring of where waste rock is placed UG sorted by lithology | |
| **Construction of N & S Dams (Sec 2.5.1)** | | | |
| Subsurface geotechnical monitoring during dam construction | | | |
| **Quarry Rock Monitoring (Sec 2.5.2)** | | | |
| Follow Up (QAQC) ABA monitoring on quarried rock used in construction | Added SFE testing on ~5% of the samples taken | | |
| **Tail Lake Shoreline – geotechnical inspection (Sec 2.7.4)** | | | |

| **Previously Committed** to by MHBL | New **Acceptable** to MHBL | New **Not Acceptable** to MHBL | **Intervenor Response** |
|---|---|---|---|
| Inclusion of tail lake shoreline in annual geotechnical inspection | | | |
| **Seepage from Downstream Side of N & S Dams (Sec 2.8.1)** | | | |
| Monitoring & reporting of any observed seepage below dams to geotechnical engineer of record | | | |
| **Annual Geotechnical Inspection (Sec 2.8.2)** | | | |
| Annual geotechnical inspection extended to include all surface facilities & associated instrumentation | Inclusion of checking UG wall rock temperatures in Doris Lake pillar and groundwater conditions in annual inspection | | |
| **Tail Lake Discharge Standards (Sec 2.8.8)** | | | |
| | | Inclusion of BOD5 & Faecal Coliforms in weekly parameters to be monitored at Tail Lake discharge. (MHBL suggest these parameters be checked monthly during active discharge.) | |
| **Waste Rock Management (Sec 2.9.3)** | | | |
| Segregation of ramp development waste rock from mineralized waste rock | | UG waste rock segregated on surface stockpile by lithology – limited space, cannot create multiple piles in stockpile area | |
| **Camp/Mill Sedimentation Pond (Sec 2.12.1)** | | | |
| Inclusion of nitrates & nitrites in monitoring of sedimentation pond discharges | | | |
| **Temporary Waste Rock Pollution Control Pond (Sec. 2.12.2)** | | | |
| | Inclusion of nitrate, nitrite and ICP-MS metals to parameters monitored monthly at WR Pollution pond discharge | | |
| **Underground Water Quality Monitoring (Sec 2.12.3)** | | | |

| **Previously Committed** to by MHBL | New **Acceptable** to MHBL | New **Not Acceptable** to MHBL | **Intervenor Response** |
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| | Monthly monitoring of UG mine water pumped to surface (volume, pH, TSS, Total Ammonia, Nitrate, Nitrite, Sulphate and Total Metals by ICP-MS) | | |
| **Quarry Construction Rock Seepage Monitoring (Sec 2.12.4)** | | | |
| Segregation of ramp development waste rock from mineralized waste rock | Inclusion of Electrical Conductivity as a monitoring parameter to annual construction rock seep survey | UG waste rock segregated on surface stockpile by lithology – limited space, cannot create multiple piles in stockpile area | |
| **Waste Rock Monitoring (Sec 2.12.5)** | | | |
| Quarry rock seep surveys conducted on ephemeral seeps where present not at fixed locations | 20% of seep samples sent for secondary analysis for Total Sulphate, Ammonia, Nitrate, Alkalinity, Acidity and ICP Metals (MHBL believes EC and pH are appropriate triggers for follow up, but are will to do secondary analysis, but believe 20% is excessive and suggest 10% is more reasonable)<br><br>- Seep survey be expanded to include all road rock drains | | |
| **Tailings Solids Monitoring (Sec 2.12.6)** | | | |
| Tons of combined tailings placed in Tail Lake<br><br>Monthly monitoring of Total Al, As, Cd, Cr, Cu, Fe, Pb, Hg, Mo, Ni, Se and Zn on combined tailing solids placed in Tail Lake | | | |
| **Tailings Supernatant Monitoring (Sec 2.12.7)** | | | |

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|---|---|---|---|
| Monitoring of combined tailings supernatant water placed in Tail Lake initially on a daily basis reduced to weekly after 3 months for volume, pH, TSS, Free Cn, Total CN, Total Ammonia, Nitrate, Nitrite, Sulphate, Total Al, As, Cd, Cr, Cu, Fe, Pb, Hg, Mo, Ni, Se and Zn | Inclusion of WAD CN & Total Metals by ICP-MS | Weekly & monthly monitoring of cyanate and thiocyanate – (MHBL suggest these parameters be checked once per quarter). | |
| **Cyanide Leach Residue Monitoring (Sec. 2.12.8)** | | | |
| Tonnage of CN leach residue sent UG. | Inclusion of WAD CN & Total Metals by ICP-MS<br><br>Moisture content of backfill trucked UG – monthly<br><br>Total and WAD CN in backfill placed UG<br><br>Visual inspection of freeze back of backfill in stopes and monitoring of seepage if present on a twice per year basis (not monthly as recommended by INAC) for pH, EC, Metals by ICP-MS, Alkalinity, Acidity, Sulphate, Total & WAD CN, Total Ammonia, Nitrate and Nitrite. | Weekly & monthly monitoring of cyanate and thiocyanate – (MHBL suggest these parameters be checked once per quarter).<br><br>Monthly monitoring of ABA, Total Sulphur and Sulphate, Total Metals by ICP-MS, TIC and effective NP (including mineralogy) on CN leach residue solids placed UG<br><br>Humidity cell test on CN leach residue to continue through active mine life or until NWB approves cessation of test.<br><br>Visual inspection of freeze back of backfill in stopes and monitoring of seepage if present on a monthly basis. | |
| **CN Destruction Circuit Monitoring (Sec 2.12.9)** | | | |
| | | CN Destruction circuit Monitoring as proposed by INAC is not accepted by MHBL– suggest monthly monitoring of barren bleed stream only for pH, Total & WAD CN, COD, Dissolved Fe, Cu, As, Zn, Cd and Ni. | |
| **Tail Lake Monitoring (Sec 2.12.10)** | | | |
| | Dissolved Oxygen and/or Redox monitoring in situ in Tail Lake at SNP TL1 (Tail Lake at Reclaim barge) (not TL5 as recommended by INAC) once every two months | | |

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| **Stormwater Discharge Monitoring (Sec 2.12.11)** | | | |
| Monitoring of flow during periods of discharge to the tundra from the landfarm facility, landfill, camp/mill sedimentation pond, fuel tank farms and fuel transfer station | | | |
| **Tundra Discharge Monitoring (Sec 2.12.13)** | | | |
| Daily visual monitoring, while discharging of all discharges to the tundra<br><br>All tundra discharges to be armoured for erosion protection of the tundra. | | | |
| **Tail Lake Shoreline Erosion Monitoring (Sec 2.12.15)** | | | |
| Visual assessment of suspended sediment in the water at the existing erosion monitoring stations (6)<br><br>Shoreline erosion included in annual geotechnical inspection | | | |
| **Geotechnical Monitoring (Sec 2.12.16)** | | | |
| Monitoring of temperature and deformation measurements on instrumentation installed in the N & S dams<br><br>Assessment included in annual geotechnical inspection | | | |
| **Thermal Monitoring (Sec 2.12.17)** | | | |
| | Install & monitor thermistors to monitor rock temperatures in the wall rock in the UG Mine (particularly between mine & Doris Lake) | | |
| **North & South Dam Seepage Monitoring (Sec 2.12.18)** | | | |
| Monitoring & reporting of any observed seepage below dams to geotechnical engineer of record | | | |

| **Previously Committed** to by MHBL | New **Acceptable** to MHBL | New **Not Acceptable** to MHBL | **Intervenor Response** |
|---|---|---|---|
| **Expansion of Project Beyond Two Year Mine Life (Sec 2.10.2)** | | | |
| | | Recommendation that WL include condition requiring WQ model be re-run, added geochemical characterization & ground temperature conditions be studied 6 months before application to expand mine life can be submitted – MHBL feels this is irrelevant to the current application, and suggests that these are issues to be assessed during EA of any application for expansion. Information should be required as part of any EIS submitted under NIRB review of such an application. | |
| **KIA** | | | |
| **Water Monitoring** | | | |
| | | KIA suggest samples taken at more than one depth to ensure that results are not biased by stratification of the water column. See response to INAC request under Section 2.3.2.<br><br>Detailed monthly reporting during the first year of operation. MHBL believes this is duplication of water licence SNP report, and extra detail is excessive.<br><br>KIA suggest daily or twice daily measurements of water quality and flow rates during freshet.<br>Water flow rate will be monitored on a continuous basis.<br>MHBL believe that our proposed water quality monitoring frequency is adequate and is based on the system dynamics | |
| **Other Issues: MHBL provide proof of laboratory accreditation prior to discharge of water from Tail lake into Doris Creek** | | | |

| **Previously Committed** to by MHBL | New **Acceptable** to MHBL | New **Not Acceptable** to MHBL | **Intervenor Response** |
|---|---|---|---|
| | | MHBL will seek accreditation, however this is an extended process, and cannot be done within the requested timeline<br>QC measures will be in place including external lab checks and verification<br>There will also be independent sampling and verification by regulators | |
| **EC** | | | |
| **EC: suggested that targets below CCME Guidelines should be applied** | | | |
| | | MHBL disagrees. MHBL is proposing to comply with CCME guidelines for protection of aquatic life<br><br>"Canadian water quality guidelines are meant to protect all forms of aquatic life and all aspects of the aquatic life cycles, including the most sensitive life stage of the most sensitive species over the long term.", Canadian Environmental Quality Guidelines<br><br>MHBL is not aware of any other water licence that has receiving water quality limits set at or below CCME guidelines | EC suggests that for those parameters w/ baseline below CCME guidelines, the baseline should be used as a management objective and not a regulated target. |
| **EC suggested that for parameters which do not have CCME guidelines (such as chloride and TDS), that targets are set that maintain ambient conditions within 2 standard deviations from baseline values.** | | | |
| | | MHBL disagrees. There are no guidelines because those parameters are not parameters of concern | EC suggests using the BC guidelines of 150 mg/L for chloride or 2x the baseline levels as a threshold. For TSS, EC is satisfied with a limit of 15 mg/L at end of pipe to be protective of aquatic life. |

INAC Response



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| **Tailings Seepage Monitoring (Sec 2.3.1)** | | | |
| Monitoring & reporting of any observed seepage below dams to geotechnical engineer of record | | | INAC agrees with MHBL's proposal |
| **WQ Calibration Monitoring (Sec 2.3.2)** | | | |
| Monitoring to Calibrate WQ Model – Tail Lake level, snow depth, rainfall, tailings inflow, tailings density, reclaim volume, discharge volume, Tail Lake bathymetry. | Pan evaporation;<br>Treated sewage water volume to Tail Lake – daily | Ice thickness weekly - suggest once per month<br><br>Multi depth WQ sampling on a regular basis distributed over Tail Lake<br>(The water column will be monitored on a very frequent basis at intake. MHBL suggest, as part of an internal monitoring program, WQ monitoring once per month in open water season in one other location other than the intake, to determine if there is any horizontal gradient and whether that has any implication on discharge strategy. | Once a month ice thickness monitoring program is INAC agrees with MHBL's proposal<br><br>Within its internal monitoring program, MHBL has committed to the implementation of one (1) additional water quality monitoring station at the deepest portion of Tail Lake where analyses will be carried out at various depths (i.e., lake bed, 1.5 metres above lake bed, and surface). This monitoring program will commence two (2) weeks prior to any discharge from Tail Lake. |
| **Geochemical Monitoring (Sec 2.3.2)** | | | |
| Geochemical monitoring of tailing solids – monthly | Geochemical monitoring of leach residue placed UG – monthly + inspection of freeze back + seepage WQ monitoring (MHBLsuggests bi-annually) | CN Destruction circuit Monitoring as proposed by INAC is not accepted (MHBL suggests monthly monitoring of barren bleed stream only) | Refer to INAC comments for sections 2.12.8 (Cyanide Leach Residue Monitoring) and 2.12.9 (Cyanide Destruction Circuit Monitoring). In addition, INAC agrees with monthly monitoring of cyanide leach residue (monitoring frequency is not discussed in section 2.12.8). |
| Tonnage of waste rock placed on stockpile by lithology including segregation of non-mineralized waste rock | | Monitoring of where waste rock is placed UG sorted by lithology | INAC agrees with MHBL's proposal |
| **Construction of N & S Dams (Sec 2.5.1)** | | | |

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|---|---|---|---|
| Subsurface geotechnical monitoring during dam construction | | | INAC agrees with MHBL's proposal |
| **Quarry Rock Monitoring (Sec 2.5.2)** | | | |
| Follow Up (QAQC) ABA monitoring on quarried rock used in construction | Added SFE testing on ~5% of the samples taken | | INAC and MHBL have agreed to remove shake flask extraction (SFE) testing from the quarry rock solids monitoring program. |
| **Tail Lake Shoreline – geotechnical inspection (Sec 2.7.4)** | | | |
| Inclusion of tail lake shoreline in annual geotechnical inspection | | | INAC agrees with MHBL's proposal |
| **Not applicable.** | | | |
| Monitoring & reporting of any observed seepage below dams to geotechnical engineer of record | | | INAC agrees with MHBL's proposal |
| **Annual Geotechnical Inspection (Sec 2.8.2)** | | | |
| Annual geotechnical inspection extended to include all surface facilities & associated instrumentation | Inclusion of checking UG wall rock temperatures in Doris Lake pillar and groundwater conditions in annual inspection | | INAC agrees with MHBL's proposal |
| **Tail Lake Discharge Standards (Sec 2.8.8)** | | | |
| | | Inclusion of BOD5 & Faecal Coliforms in weekly parameters to be monitored at Tail Lake discharge. (MHBL suggest these parameters be checked monthly during active discharge.) | Acceptable. INAC's request was for monthly monitoring of Biological Oxygen Demand (BOD5) and Faecal Coliforms, not weekly. |
| **Waste Rock Management (Sec 2.9.3)** | | | |
| Segregation of ramp development waste rock from mineralized waste rock | | UG waste rock segregated on surface stockpile by lithology – limited space, cannot create multiple piles in stockpile area | INAC agrees with MHBL's proposal |
| **Camp/Mill Sedimentation Pond (Sec 2.12.1)** | | | |
| Inclusion of nitrates & nitrites in monitoring of sedimentation pond discharges | | | INAC agrees with MHBL's proposal |
| **Temporary Waste Rock Pollution Control Pond (Sec. 2.12.2)** | | | |

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| | Inclusion of nitrate, nitrite and ICP-MS metals to parameters monitored monthly at WR Pollution pond discharge | | INAC agrees with MHBL's proposal |
| **Underground Water Quality Monitoring (Sec. 2.12.3)** | | | |
| | Monthly monitoring of UG mine water pumped to surface (volume, pH, TSS, Total Ammonia, Nitrate, Nitrite, Sulphate and Total Metals by ICP-MS) | | INAC agrees with MHBL's proposal |
| **Quarry Construction Rock Seepage Monitoring (Sec 2.12.4)** | | | |
| | Inclusion of Electrical Conductivity as a monitoring parameter to annual construction rock seep survey | | INAC agrees with MHBL's proposal |
| Segregation of ramp development waste rock from mineralized waste rock | | UG waste rock segregated on surface stockpile by lithology – limited space, cannot create multiple piles in stockpile area | INAC agrees with MHBL's proposal |
| **Waste Rock Monitoring (Sec 2.12.5)** | | | |
| Quarry rock seep surveys conducted on ephemeral seeps where present not at fixed locations | 20% of seep samples sent for secondary analysis for Total Sulphate, Ammonia, Nitrate, Alkalinity, Acidity and ICP Metals (MHBL believes EC and pH are appropriate triggers for follow up, but are will to do secondary analysis, but believe 20% is excessive and suggest 10% is more reasonable)<br><br>- Seep survey be expanded to include all road rock drains | | INAC agrees with MHBL's proposal Note that the title is mislabeled. This should be titled "Quarry Rock Monitoring" not "Waste Rock Monitoring." |
| **Tailings Solids Monitoring (Sec 2.12.6)** | | | |
| Tons of combined tailings placed in Tail Lake<br><br>Monthly monitoring of Total Al, As, Cd, Cr, Cu, Fe, Pb, Hg, Mo, Ni, Se and Zn on combined tailing solids placed in Tail Lake | | | INAC and MHBL have agreed to include total inorganic carbon (TIC) and ICP metals (which must include sulphur). |

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| **Tailings Supernatant Monitoring (Sec 2.12.7)** | | | |
| Monitoring of combined tailings supernatant water placed in Tail Lake initially on a daily basis reduced to weekly after 3 months for volume, pH, TSS, Free Cn, Total CN, Total Ammonia, Nitrate, Nitrite, Sulphate, Total Al, As, Cd, Cr, Cu, Fe, Pb, Hg, Mo, Ni, Se and Zn | Inclusion of WAD CN & Total Metals by ICP-MS | Weekly & monthly monitoring of cyanate and thiocyanate – (MHBL suggest these parameters be checked once per quarter). | The inclusion of weak acid dissociable (WAD) cyanide and total metals by ICP MS is acceptable to INAC.<br><br>MHBL's suggested frequency of quarterly monitoring for cyanate and thiocynate is is acceptable to INAC. |
| **Cyanide Leach Residue Monitoring (Sec. 2.12.8)** | | | |
| Tonnage of CN leach residue sent UG. | Inclusion of WAD CN & Total Metals by ICP-MS | Weekly & monthly monitoring of cyanate and thiocyanate – (MHBL suggest these parameters be checked once per quarter). | The inclusion of WAD CN & Total metals by ICP-MS is INAC agrees with MHBL's proposal Monitoring of cyanate and thiocyanate at a quarterly frequency is INAC agrees with MHBL's proposal |
| | Moisture content of backfill trucked UG – monthly<br><br>Total and WAD CN in backfill placed UG | Monthly monitoring of ABA, Total Sulphur and Sulphate, Total Metals by ICP-MS, TIC and effective NP (including mineralogy) on CN leach residue solids placed UG | INAC and MHBL have agreed to include total inorganic carbon (TIC) and ICP metals (which must include sulphur). |
| | Visual inspection of freeze back of backfill in stopes and monitoring of seepage if present on a twice per year basis (not monthly as recommended by INAC) for pH, EC, Metals by ICP-MS, Alkalinity, Acidity, Sulphate, Total & WAD CN, Total Ammonia, Nitrate and Nitrite. | Humidity cell test on CN leach residue to continue through active mine life or until NWB approves cessation of test.<br><br>Visual inspection of freeze back of backfill in stopes and monitoring of seepage if present on a monthly basis. | INAC agrees with MHBL's proposal |
| **CN Destruction Circuit Monitoring (Sec 2.12.9)** | | | |
| | | CN Destruction circuit Monitoring as proposed by INAC is not accepted by MHBL– suggest monthly monitoring of barren bleed stream only for pH, Total & WAD CN, COD, Dissolved Fe, Cu, As, Zn, Cd and Ni. | INAC agrees with MHBL's suggestion and recommends that identified data be included in the annual water quality model update report. |
| **Tail Lake Monitoring (Sec. 2.12.10)** | | | |

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|---|---|---|---|
| | Dissolved Oxygen and/or Redox monitoring in situ in Tail Lake at SNP TL1 (Tail Lake at Reclaim barge) (not TL5 as recommended by INAC) once every two months | | INAC agrees with MHBL's proposal |
| **Stormwater Discharge Monitoring (Sec 2.12.11)** | | | |
| Monitoring of flow during periods of discharge to the tundra from the landfarm facility, landfill, camp/mill sedimentation pond, fuel tank farms and fuel transfer station | | | INAC agrees with MHBL's proposal, believing that total volume and dicharge rates are included. |
| | | | |
| Daily visual monitoring, while discharging of all discharges to the tundra<br><br>All tundra discharges to be armoured for erosion protection of the tundra. | | | INAC agrees with MHBL's proposal |
| **Tail Lake Shoreline Erosion Monitoring (Sec 2.12.15)** | | | |
| Visual assessment of suspended sediment in the water at the existing erosion monitoring stations (6)<br><br>Shoreline erosion included in annual geotechnical inspection | | | INAC agrees with MHBL's proposal |
| **Geotechnical Monitoring (Sec 2.12.16)** | | | |
| Monitoring of temperature and deformation measurements on instrumentation installed in the N & S dams<br><br>Assessment included in annual geotechnical inspection | | | INAC agrees with MHBL's proposal |
| **Thermal Monitoring (Sec 2.12.17)** | | | |

| | | | |
|---|---|---|---|
| | Install & monitor thermistors to monitor rock temperatures in the wall rock in the UG Mine (particularly between mine & Doris Lake) | | INAC agrees with MHBL's proposal |
| **North & South Dam Seepage Monitoring (Sec 2.12.18)** | | | |
| Monitoring & reporting of any observed seepage below dams to geotechnical engineer of record | | | INAC agrees with MHBL's proposal. The monitoring information should be included in the annual report. |
| **Expansion of Project Beyond Two Year Mine Life (Sec 2.10.2)** | | | |
| | | Recommendation that WL include condition requiring WQ model be re-run, added geochemical characterization & ground temperature conditions be studied 6 months before application to expand mine life can be submitted – MHBL feels this is irrelevant to the current application, and suggests that these are issues to be assessed during EA of any application for expansion. Information should be required as part of any EIS submitted under NIRB review of such an application. | INAC agrees with MHBL's proposal |
| KIA | | | |
| **Water Monitoring** | | | |
| | | KIA suggest samples taken at more than one depth to ensure that results are not biased by stratification of the water column. See response to INAC request under Section 2.3.2.<br><br>Detailed monthly reporting during the first year of operation. MHBL believes this is duplication of water licence SNP report, and extra detail is excessive. | |

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|---|---|---|---|
| | | KIA suggest daily or twice daily measurements of water quality and flow rates during freshet.<br>Water flow rate will be monitored on a continuous basis.<br>MHBL believe that our proposed water quality monitoring frequency is adequate and is based on the system dynamics | |
| **Other Issues: MHBL provide proof of laboratory accreditation prior to discharge of water from Tail lake into Doris Creek** | | | |
| | | MHBL will seek accreditation, however this is an extended process, and cannot be done within the requested timeline<br>QC measures will be in place including external lab checks and verification<br>There will also be independent sampling and verification by regulators | |
| **EC** | | | |
| **EC: suggested that targets below CCME Guidelines should be applied** | | | |
| | | MHBL disagrees. MHBL is proposing to comply with CCME guidelines for protection of aquatic life<br><br>"Canadian water quality guidelines are meant to protect all forms of aquatic life and all aspects of the aquatic life cycles, including the most sensitive life stage of the most sensitive species over the long term.", Canadian Environmental Quality Guidelines<br><br>MHBL is not aware of any other water licence that has receiving water quality limits set at or below CCME guidelines | |
| **EC suggested that for parameters which do not have CCME guidelines (such as chloride and TDS), that targets are set that maintain ambient conditions within 2 standard deviations from baseline values.** | | | |
| | | MHBL disagrees. There are no guidelines because those parameters are not parameters of concern | |

KIA and NTI Intervenor Response Aug. 14/07 M. Mehl



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| **INAC** | | | |
| **Tailings Seepage Monitoring (Sec 2.3.1)** | | | |
| Monitoring & reporting of any observed seepage below dams to geotechnical engineer of record | | | |
| **WQ Calibration Monitoring (Sec 2.3.2)** | | | |
| Monitoring to Calibrate WQ Model – Tail Lake level, snow depth, rainfall, tailings inflow, tailings density, reclaim volume, discharge volume, Tail Lake bathymetry. | Pan evaporation;<br>Treated sewage water volume to Tail Lake – daily | Ice thickness weekly - suggest once per month<br><br>Multi depth WQ sampling on a regular basis distributed over Tail Lake<br>(The water column will be monitored on a very frequent basis at intake. MHBL suggest, as part of an internal monitoring program, WQ monitoring once per month in open water season in one other location other than the intake, to determine if there is any horizontal gradient and whether that has any implication on discharge strategy. | |
| **Geochemical Monitoring (Sec 2.3.2)** | | | |
| Geochemical monitoring of tailing solids – monthly<br><br>Tonnage of waste rock placed on stockpile by lithology including segregation of non-mineralized waste rock | Geochemical monitoring of leach residue placed UG – monthly + inspection of freeze back + seepage WQ monitoring (MHBLsuggests bi-annually) | CN Destruction circuit Monitoring as proposed by INAC is not accepted (MHBL suggests monthly monitoring of barren bleed stream only)<br><br>Monitoring of where waste rock is placed UG sorted by lithology | |
| **Construction of N & S Dams (Sec 2.5.1)** | | | |
| Subsurface geotechnical monitoring during dam construction | | | |
| **Quarry Rock Monitoring (Sec 2.5.2)** | | | |
| Follow Up (QAQC) ABA monitoring on quarried rock used in construction | Added SFE testing on ~5% of the samples taken | | |
| **Tail Lake Shoreline – geotechnical inspection (Sec 2.7.4)** | | | |

| **Previously Committed** to by MHBL | New **Acceptable** to MHBL | New **Not Acceptable** to MHBL | **Intervenor Response** |
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| Inclusion of tail lake shoreline in annual geotechnical inspection | | | |
| **Seepage from Downstream Side of N & S Dams (Sec 2.8.1)** | | | |
| Monitoring & reporting of any observed seepage below dams to geotechnical engineer of record | | | |
| **Annual Geotechnical Inspection (Sec 2.8.2)** | | | |
| Annual geotechnical inspection extended to include all surface facilities & associated instrumentation | Inclusion of checking UG wall rock temperatures in Doris Lake pillar and groundwater conditions in annual inspection | | |
| **Tail Lake Discharge Standards (Sec 2.8.8)** | | | |
| | | Inclusion of BOD5 & Faecal Coliforms in weekly parameters to be monitored at Tail Lake discharge. (MHBL suggest these parameters be checked monthly during active discharge.) | |
| **Waste Rock Management (Sec 2.9.3)** | | | |
| Segregation of ramp development waste rock from mineralized waste rock | | UG waste rock segregated on surface stockpile by lithology – limited space, cannot create multiple piles in stockpile area | |
| **Camp/Mill Sedimentation Pond (Sec 2.12.1)** | | | |
| Inclusion of nitrates & nitrites in monitoring of sedimentation pond discharges | | | |
| **Temporary Waste Rock Pollution Control Pond (Sec. 2.12.2)** | | | |
| | Inclusion of nitrate, nitrite and ICP-MS metals to parameters monitored monthly at WR Pollution pond discharge | | |
| **Underground Water Quality Monitoring (Sec 2.12.3)** | | | |

| **Previously Committed** to by MHBL | New **Acceptable** to MHBL | New **Not Acceptable** to MHBL | **Intervenor Response** |
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| | Monthly monitoring of UG mine water pumped to surface (volume, pH, TSS, Total Ammonia, Nitrate, Nitrite, Sulphate and Total Metals by ICP-MS) | | |
| **Quarry Construction Rock Seepage Monitoring (Sec 2.12.4)** | | | |
| Segregation of ramp development waste rock from mineralized waste rock | Inclusion of Electrical Conductivity as a monitoring parameter to annual construction rock seep survey | UG waste rock segregated on surface stockpile by lithology – limited space, cannot create multiple piles in stockpile area | |
| **Waste Rock Monitoring (Sec 2.12.5)** | | | |
| Quarry rock seep surveys conducted on ephemeral seeps where present not at fixed locations | 20% of seep samples sent for secondary analysis for Total Sulphate, Ammonia, Nitrate, Alkalinity, Acidity and ICP Metals (MHBL believes EC and pH are appropriate triggers for follow up, but are will to do secondary analysis, but believe 20% is excessive and suggest 10% is more reasonable)<br><br>- Seep survey be expanded to include all road rock drains | | |
| **Tailings Solids Monitoring (Sec 2.12.6)** | | | |
| Tons of combined tailings placed in Tail Lake<br><br>Monthly monitoring of Total Al, As, Cd, Cr, Cu, Fe, Pb, Hg, Mo, Ni, Se and Zn on combined tailing solids placed in Tail Lake | | | |
| **Tailings Supernatant Monitoring (Sec 2.12.7)** | | | |

| **Previously Committed** to by MHBL | New **Acceptable** to MHBL | New **Not Acceptable** to MHBL | **Intervenor Response** |
|---|---|---|---|
| Monitoring of combined tailings supernatant water placed in Tail Lake initially on a daily basis reduced to weekly after 3 months for volume, pH, TSS, Free Cn, Total CN, Total Ammonia, Nitrate, Nitrite, Sulphate, Total Al, As, Cd, Cr, Cu, Fe, Pb, Hg, Mo, Ni, Se and Zn | Inclusion of WAD CN & Total Metals by ICP-MS | Weekly & monthly monitoring of cyanate and thiocyanate – (MHBL suggest these parameters be checked once per quarter). | |
| **Cyanide Leach Residue Monitoring (Sec. 2.12.8)** | | | |
| Tonnage of CN leach residue sent UG. | Inclusion of WAD CN & Total Metals by ICP-MS<br><br>Moisture content of backfill trucked UG – monthly<br><br>Total and WAD CN in backfill placed UG<br><br>Visual inspection of freeze back of backfill in stopes and monitoring of seepage if present on a twice per year basis (not monthly as recommended by INAC) for pH, EC, Metals by ICP-MS, Alkalinity, Acidity, Sulphate, Total & WAD CN, Total Ammonia, Nitrate and Nitrite. | Weekly & monthly monitoring of cyanate and thiocyanate – (MHBL suggest these parameters be checked once per quarter).<br><br>Monthly monitoring of ABA, Total Sulphur and Sulphate, Total Metals by ICP-MS, TIC and effective NP (including mineralogy) on CN leach residue solids placed UG<br><br>Humidity cell test on CN leach residue to continue through active mine life or until NWB approves cessation of test.<br><br>Visual inspection of freeze back of backfill in stopes and monitoring of seepage if present on a monthly basis. | |
| **CN Destruction Circuit Monitoring (Sec 2.12.9)** | | | |
| | | CN Destruction circuit Monitoring as proposed by INAC is not accepted by MHBL– suggest monthly monitoring of barren bleed stream only for pH, Total & WAD CN, COD, Dissolved Fe, Cu, As, Zn, Cd and Ni. | |
| **Tail Lake Monitoring (Sec 2.12.10)** | | | |
| | Dissolved Oxygen and/or Redox monitoring in situ in Tail Lake at SNP TL1 (Tail Lake at Reclaim barge) (not TL5 as recommended by INAC) once every two months | | |

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|---|---|---|---|
| **Stormwater Discharge Monitoring (Sec 2.12.11)** | | | |
| Monitoring of flow during periods of discharge to the tundra from the landfarm facility, landfill, camp/mill sedimentation pond, fuel tank farms and fuel transfer station | | | |
| **Tundra Discharge Monitoring (Sec 2.12.13)** | | | |
| Daily visual monitoring, while discharging of all discharges to the tundra<br><br>All tundra discharges to be armoured for erosion protection of the tundra. | | | |
| **Tail Lake Shoreline Erosion Monitoring (Sec 2.12.15)** | | | |
| Visual assessment of suspended sediment in the water at the existing erosion monitoring stations (6)<br><br>Shoreline erosion included in annual geotechnical inspection | | | |
| **Geotechnical Monitoring (Sec 2.12.16)** | | | |
| Monitoring of temperature and deformation measurements on instrumentation installed in the N & S dams<br><br>Assessment included in annual geotechnical inspection | | | |
| **Thermal Monitoring (Sec 2.12.17)** | | | |
| | Install & monitor thermistors to monitor rock temperatures in the wall rock in the UG Mine (particularly between mine & Doris Lake) | | |
| **North & South Dam Seepage Monitoring (Sec 2.12.18)** | | | |
| Monitoring & reporting of any observed seepage below dams to geotechnical engineer of record | | | |

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|---|---|---|---|
| **Expansion of Project Beyond Two Year Mine Life (Sec 2.10.2)** | | | |
| | | Recommendation that WL include condition requiring WQ model be re-run, added geochemical characterization & ground temperature conditions be studied 6 months before application to expand mine life can be submitted – MHBL feels this is irrelevant to the current application, and suggests that these are issues to be assessed during EA of any application for expansion. Information should be required as part of any EIS submitted under NIRB review of such an application. | |
| **KIA** | | | |
| **Water Monitoring** | | | |
| | | KIA suggest samples taken at more than one depth to ensure that results are not biased by stratification of the water column. See response to INAC request under Section 2.3.2.<br><br>Detailed monthly reporting during the first year of operation. MHBL believes this is duplication of water licence SNP report, and extra detail is excessive.<br><br>KIA suggest daily or twice daily measurements of water quality and flow rates during freshet.<br>Water flow rate will be monitored on a continuous basis.<br>MHBL believe that our proposed water quality monitoring frequency is adequate and is based on the system dynamics | Samples should be taken at more than one depth at the intake in spring to exclude stratification. If there is no stratification, then multi-depth sampling should be discontinued for the remainder of the year.<br><br>Monthly SNP reports are acceptable.<br><br>Good.<br><br>Sampling frequency should be increased if there is significant divergence between proposed and predicted water quality or if significant variation in water quality are observed. Increases in |
| **Other Issues: MHBL provide proof of laboratory accreditation prior to discharge of water from Tail lake into Doris Creek** | | | |

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|---|---|---|---|
| | | MHBL will seek accreditation, however this is an extended process, and cannot be done within the requested timeline<br>QC measures will be in place including external lab checks and verification<br>There will also be independent sampling and verification by regulators | KIA supports MHBL's commitment to applying for laboratory accreditation. |
| **EC** | | | |
| **EC: suggested that targets below CCME Guidelines should be applied** | | | |
| | | MHBL disagrees. MHBL is proposing to comply with CCME guidelines for protection of aquatic life<br><br>"Canadian water quality guidelines are meant to protect all forms of aquatic life and all aspects of the aquatic life cycles, including the most sensitive life stage of the most sensitive species over the long term.", Canadian Environmental Quality Guidelines<br><br>MHBL is not aware of any other water licence that has receiving water quality limits set at or below CCME guidelines | |
| **EC suggested that for parameters which do not have CCME guidelines (such as chloride and TDS), that targets are set that maintain ambient conditions within 2 standard deviations from baseline values.** | | | |
| | | MHBL disagrees. There are no guidelines because those parameters are not parameters of concern | |