



Minerals 260

Works Approval Application - WWTP Attachment 6A - Emissions and Discharges

19/12/2025

Summary of emissions, discharges and controls associated with this Works Approval application

Source of emission or discharge	Emission or discharge type	Volume and frequency	Proposed controls and Monitoring Measures	Location
Discharge of treated effluent water to spray field irrigation area	Emission to land	More than 20 but less than 100 m3 per day	<p>Engineering and Operational controls:</p> <ul style="list-style-type: none"> • The WWTP and spray field will be suitably fenced to restrict fauna from accessing the areas. • The WWTP and infrastructure is located within appropriately sized bunding to contain leaks and spills • Pipelines associated with the WWTP and spray field are to be buried or located within v-drains • Pipelines are to include automatic cutoff valves • Sprinklers will be designed to contain effluent spray within the approved spray field area • The WWTP and spray field will be located away from natural drainage lines; these areas will be windrowed to manage stormwater inflows. • The spray field will have significant separation from local groundwater levels (50+ meters). • Maintenance of the WWTP in accordance with manufacturer's requirements • Hydrocarbons and chemicals will be stored on appropriately sized bunding. 	Refer to figures in attachment 2

			<p>Administrative controls:</p> <ul style="list-style-type: none"> • All hydrocarbon/chemical storages will be designed and constructed in accordance with Australian Standards AS1940 and AS1692. • Approved hydrocarbons and chemical handling procedure. • Spill response training/procedure. • Inductions/toolbox training. • All chemicals to be approved prior to dispatch to site. • Contaminated soil will be managed by external - Licenced Contractor. • Service vehicles to be fitted with spill kits. • Spill kits will be located at all chemical and fuel storage areas. • SDS registers <p>Monitoring and Surveillance:</p> <p>The WWTP and spray field will be monitored in accordance with the following:</p> <ul style="list-style-type: none"> • The WWTP and spray field infrastructure will be regularly inspected (minimum monthly) to ensure it is operating in accordance the manufacturers specifications and without leaks or spills present. • Quarterly monitoring and analysis of discharge water quality will occur to be assessed against parameters as detailed in Table 1 below. • WWTP outflow (to the spray field) will be recorded via flowmeters monthly to assess the volume of treated and discharge to the spray field. 	
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			<ul style="list-style-type: none"> • The spray field will be inspected for weeds (minimum quarterly) and weeds recorded will be managed appropriately. • Conduct a monthly and annual review of incident reporting and investigations. <p>Table 1: WWTP design effluent discharge parameters</p> <table border="1"> <thead> <tr> <th>Parameter</th> <th>Units</th> <th>Effluent Output Specification</th> </tr> </thead> <tbody> <tr> <td>Biological oxygen demand (BOD)</td> <td>mg/L</td> <td><20</td> </tr> <tr> <td>Escherichia coli / thermotolerant coliforms</td> <td>CFU/100mL</td> <td><10</td> </tr> <tr> <td>Total Nitrogen</td> <td>mg/L</td> <td><15</td> </tr> <tr> <td>Total Phosphorus</td> <td>mg/L</td> <td><8</td> </tr> <tr> <td>Suspended Solids</td> <td>mg/L</td> <td><30</td> </tr> <tr> <td>pH</td> <td>Units</td> <td>6.8 – 8.5</td> </tr> <tr> <td>Turbidity</td> <td>NTU</td> <td><5</td> </tr> <tr> <td>Residual Chlorine</td> <td>mg/L</td> <td>0.2 – 2.0</td> </tr> </tbody> </table>	Parameter	Units	Effluent Output Specification	Biological oxygen demand (BOD)	mg/L	<20	Escherichia coli / thermotolerant coliforms	CFU/100mL	<10	Total Nitrogen	mg/L	<15	Total Phosphorus	mg/L	<8	Suspended Solids	mg/L	<30	pH	Units	6.8 – 8.5	Turbidity	NTU	<5	Residual Chlorine	mg/L	0.2 – 2.0	
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