Government of Western Australia
Department of Water and Environmental Regulation

Amendment Notice 2

Licence Number	L7178/1997/11
Licence Holder	Dampier Salt Limited
ACN	008 706 590
File Number	DER2014/001046-1
Premises	Dampier Salt – Lake MacLeod AML 70/245, L09/10, L09/11, L09/17 and L09/18 Blowholes Road CARNARVON WA 6701
Date of Amendment	15 November 2018

Amendment

The Chief Executive Officer (CEO) of the Department of Water and Environmental Regulation (DWER) has amended the above Licence in accordance with section 59 of the *Environmental Protection Act 1986* (EP Act) as set out in this Amendment Notice. This Amendment Notice constitutes written notice of the amendment in accordance with section 59B(9) of the EP Act.

[redacted]

Clarrie Green

A/Manager, Licensing (Resource Industries)

an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

Definitions and interpretation

Definitions

In this Amendment Notice, the terms in Table 1 have the meanings defined.

Table 1: Definitions

Term	Definition
ACN	Australian Company Number
Amendment Notice	refers to this document
ASS	Acid Sulfate Soils
Category/ Categories	categories of Prescribed Premises as set out in Schedule 1 of the EP Regulations
CEO	means Chief Executive Officer. CEO for the purposes of notification means: Director General Department Administering the *Environmental Protection Act 1986* Locked Bag 33 Cloisters Square PERTH WA 6850 info@dwer.wa.gov.au
Delegated Officer	an officer under section 20 of the EP Act
Department	means the department established under section 35 of the *Public Sector Management Act 1994* and designated as responsible for the administration of Part V, Division 3 of the EP Act.
DWER	Department of Water and Environmental Regulation
EP Act	Environmental Protection Act 1986 (WA)
EP Regulations	Environmental Protection Regulations 1987 (WA)
Existing Licence	The Licence issued under Part V, Division 3 of the EP Act and in force prior to the commencement of and during this Review
Licence Holder	Dampier Salt Limited
mg/L $CaCO_3$	milligram per litre as calcium carbonate
neutralisation	the process whereby acid produced by the oxidation of iron sulfides is counteracted by the addition of an ameliorant such as lime ($CaCO_3$)
pH	the intensity of the acidic or basic character of a solution, used as

	a measure of the acidity of alkalinity of a soil of water body.
pH_F	refers to the field pH, which is a field determination of pH in a soil: water deionized paste
pH_{FOX}	refers to the field peroxide pH, which is a field determination of pH in a soil: water mixture following reaction with hydrogen peroxide
Prescribed Premises	has the same meaning given to that term under the EP Act.
Risk Event	as described in Guidance Statement: Risk Assessment
TTA	Means total titration acidity, which is a measure of the actual acidity. The acidity measured by titration with dilute sodium hydroxide following extraction with potassium chloride solution.

Amendment Notice

This amendment is made pursuant to section 59 of the *Environmental Protection Act 1986* (EP Act) to amend the Licence issued under the EP Act for a Prescribed Premises as set out below. This notice of amendment is given under section 59B(9) of the EP Act.

This notice is limited only to an application received by the Department of Water and Environmental Regulation (DWER) on 27 July 2018, to allow for the addition of emission point SW11 for the dewatering of Lake MacLeod and the relocation of discharge points as gypsum mining expands within the proposed mining area. The proposed mining area is approximately 5 km south from existing discharge points SW7 and SW8 and the area has been segregated into six gypsum extraction areas identified as Mine Blocks 18 to 23 with a total of nine discharge point locations shown in Figure 1.

However, the Licence Holder has applied only to discharge from a maximum of two leachate discharge points per Mine Block to demonstrate no increase in discharge rates compared to current operations. The discharge points will be progressively relocated as gypsum is extracted from each Mine Block. Mining discharges at emission points SW6, SW7 and SW8 are expected to continue existing gypsum extraction and stockpiling methods (as opposed to the in-situ extraction method).

The in-situ extraction method involves the relocation of up to two leachate discharge points during temporary dewatering done in preparation of gypsum extraction. The discharge points are required for the in-situ method of washing gypsum which involves digging a trench around the target material and washing the salt from the target gypsum with desalinated water. Water is leached and collected in the drain before being discharged to Lake MacLeod. This Amendment Notice assesses the overall risk to the identified sensitive receptors associated with the emission points within the proposed Mine Blocks discharging onto Lake MacLeod and the potential for Acid Sulfate Soils (ASS).

This Amendment Notice applies to Category 14 gypsum production at Lake MacLeod and no changes to the aspects of the Existing Licence relating to Categories 58A or 64 have been requested by Dampier Salt Limited. There are no changes to the throughputs or prescribed activities as a result of this amendment.

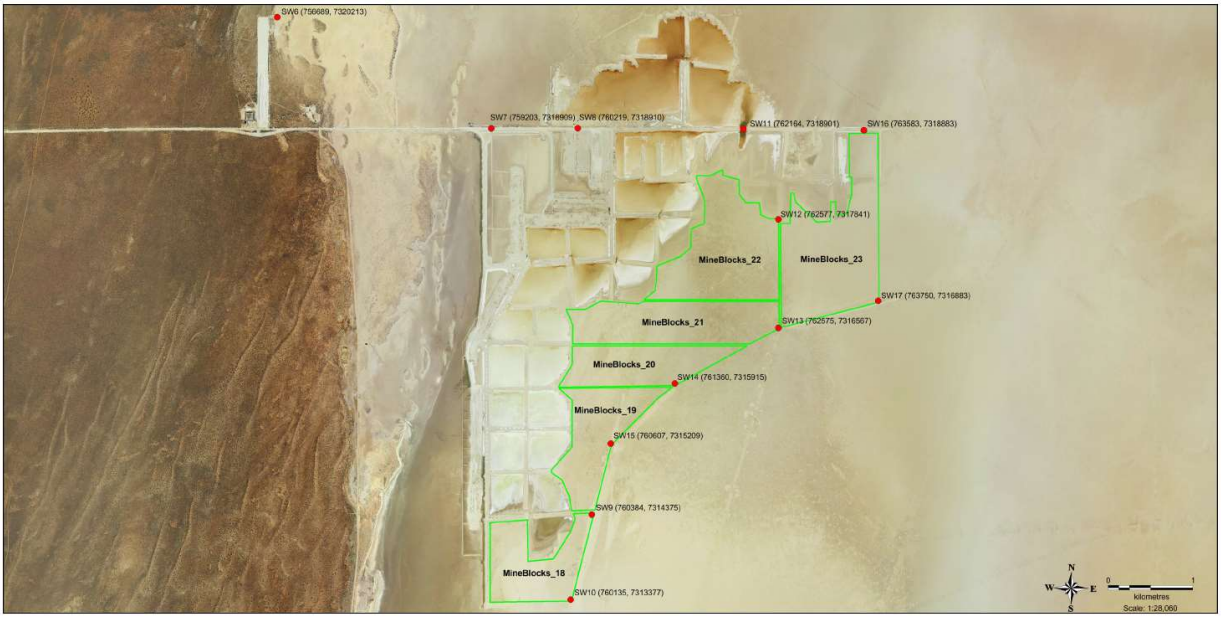


Figure 1: Proposed mining area for gypsum extraction with future surface water emission points (Source: Rio Tinto, 2018)

The following guidance statements have informed the decision made on this amendment*:*

- *Guidance Statement: Regulatory Principles (July 2015)*
- *Guidance Statement: Setting Conditions (October 2015)*
- *Guidance Statement: Decision Making (February 2017)*
- *Guidance Statement: Risk Assessment (February 2017)*
- *Guidance Statement: Environmental Siting (November 2016)*

Discharge monitoring

The Licence Holder is required to monitor for key indicators of Potential Acid Sulfate Soils (PASS) and ASS during and prior to gypsum extraction. ASS are naturally occurring soils, sediments and peats commonly found in low-lying land bordering the coast, or estuarine and saline wetlands that contain sulfide minerals. Disturbing and exposing ASS to oxygen has the potential to cause significant impacts to the sensitive receptors by creating an acidic environment. Lake MacLeod is classified as moderate to low risk of ASS disturbance and is vulnerable to acidification.

The Licence Holder is required to monitor and record emissions at authorised emission points in accordance with condition 2.2.1 and ASS with conditions 3.2.1 and 3.4 of the Existing Licence (L7178/1997/11). While the Existing Licence includes a notification of a risk event for soil monitoring where the pH_F is less than 4 (Condition 3.4.3), there are no notification requirements, management triggers or limits for risk events associated with surface water discharges of pH and Total Titration Acidity (TTA) specified on the Existing Licence.

TTA monitoring results detailed below indicate the presence of stored sulfide irons and other sulfidic minerals (stored acidity in the form of hydrolysable metals) that have the potential to increase acidification.

Surface water discharge results

Licence: L7178/1997/11

Monthly infield testing results for pH and TTA were both sampled on 2 May 2018, 27 June 2018 and 25 July 2018 for emission points SW6 and SW7. Emission point SW8 was not sampled due to no flow and has not been assessed in this notice.

The trigger criteria and action required provided in Table 2 is referenced from the National ASS Guidance (2018) and used to assess surface water monitoring.

Table 2: Trigger criteria used to asses surface water monitoring

Trigger Criteria TTA mg/L $CaCO_3$ and pH	**Action required based on National Acid Sulfate Soils Guidance (2018)**
TTA <40 mg/L, pH > 6	Continue with infield monitoring
TTA <40 mg/L, pH > 4-6	Undertake neutralisation treatment (liming)
TTA 40 to 100 mg/L, pH > 6	Effluent should be aerated to precipitate dissolved iron and directed to a series of settlement basins/ trenches or other treatment system to allow removal of iron and other metals. Undertake neutralisation treatment (liming)
TTA 40 to 100 mg/L, pH 4-6	Effluent should be aerated to precipitate dissolved iron and directed to a series of settlement basins/ trenches or other treatment system to allow removal of iron and other metals. Undertake neutralisation treatment (liming)
TTA > 100 mg/L $CaCO_3$	Effluent should be aerated to precipitate dissolved iron and directed to a series of settlement basins/ trenches or other treatment system to allow removal of iron and other metals. Increase neutralisation treatment (liming) rate.
pH < 4	Increase neutralisation treatment (liming) advise the appropriate authorities immediately who will advise appropriate action.

Monitoring results in Table 3 below show that emission point SW6 had all three samples fall within a neutral pH range of 7.3 to 7.8 with TTA range of 6 to 34 mg/L $CaCO_3$. Emission point SW6 discharges had TTA results within the trigger criteria specified in Table 2 (40 mg/L $CaCO_3$, pH > 6) and had a pH that is greater than 6 indicating that ASS generation is unlikely from the extraction of stockpiled material.

Emission point SW7 had all three samples within a pH range of 6.5 to 7.2 with higher levels of TTA within a range of 130 to 200 mg/L $CaCO_3$ (Table 3). The TTA at emission point SW7 exceeds the trigger criteria of TTA > 100 mg/L $CaCO_3$ (Table 2). This indicates the presence of sulfide irons, not the actual total concentrations that are readily soluble and exchangeable to a reaction (National ASS Guidance 2018).

Acidic water is defined with a pH less than six and is an indication for the potential generation of ASS (DER 2015b). Emission points SW6 and SW7 had a pH range greater than 6 (6.5 to 7.8) shown in Table 3 and acidic water was not indicated to be discharging directly onto Lake MacLeod.

Table 3 : Measured pH and TTA for emission point SW6 and SW7 against National ASS Guidance (2018) trigger criteria

Emission Point	Date Sampled	pH	TTA mg/L $CaCO_3$	National ASS Guidance 2018 Trigger Criteria
SW6	02/05/2018	7.8	6	< 40 mg/L ($CaCO_3$) and pH >6
	27/06/2018	7.3	34	
	25/07/2018	7.5	31	
SW7	02/05/2018	6.5	200	TTA > 100 mg/L ($CaCO_3$)
	27/06/2018	7.2	130	
	25/07/2018	7	170	

Soil monitoring results

Soil monitoring parameters and trigger criteria used to assess the actual presence of ASS are shown in Table 4 below. The monitoring results for all Mine Blocks were not greater than the trigger criteria set within DWER guidance *Identification and investigation of acid sulfate soils and acidic landscapes* (2015a).

Table 4: Trigger criteria for ASS generation for soil monitoring (DER2015a)

Parameter	ASS Trigger criteria	Soil monitoring results
pH_F	<4	All pH_F results were greater than 7
pH_{FOX}	<3	All pH_{FOX} results were greater than 6
ΔpH	> than a one unit change	Mine Blocks 18A, 22D changes in pH were less than 1 Mine Block 18D had changes greater than 1
Reaction rate	significant	Low reaction rates observed

Soil monitoring was sampled on 19 April, 22 May and 22 August. All soil samples were taken from a depth between 0.25 m and 2.75 m. All soil samples for all Mine Blocks indicated a neutral to slightly alkaline pH_F and all pH_{FOX} samples were greater than the trigger criterion of pH_{FOX} < 3 (Table 4). There were no significant reactions that occurred with any of the soil samples across all Mine Blocks and monitoring data indicated no management action was required. The presence of ASS was not indicated across all soil samples.

Mine Block 18D indicated a decrease in acidity with pH_{FOX} values between 6.22 and 6.38 with a slightly higher change in ΔpH (1.65). Decreasing acidity increases the potential risk of ASS.

Amendment history

Table 5 provides the amendment history for L7178/1997/11 since 2015.

Table 5: Licence amendments

Instrument	Issued	Amendment
L7178/1997/11	20/03/2018	Amendment Notice 1 To increase gypsum production capacity and reclassify gypsum production as a Category 14 and 58A.
L7178/1997/11	1/10/2015	Licence Reissue To change the format of the licence and the addition of discharge points to land and surface water. Increase in solar salt production and the reinstatement of Category 80 for gypsum production.

Location and receptors

Table 6 below lists the relevant sensitive land uses in the vicinity of the Prescribed Premises which may be receptors relevant to the proposed amendment.

Table 6: Receptors and distance from activity boundary

Sensitive receptors	Distance from Prescribed Premises
Human Receptor	Quobba Homestead is approximately 23 km south west of the gypsum production. Carnarvon town is up to 70 km south east of the proposed Mine area and discharge points Cape Cuvier is 18 km west of the proposed Mine area and discharge points.
Marine Water	The marine coastline is more than 17 km west to the proposed Mine area and discharge points.
Drinking Water Reserve	The Carnarvon drinking water reserve is greater than 60 km south east from the proposed Mine area and discharge points.
Lake MacLeod	Direct discharge onto Lake MacLeod The potential for ASS within Lake MacLeod has been classified as moderate to low risk <3m from the surface and is vulnerable to acidification. Lake Macleod is listed in the *Directory of Important Wetlands in Australia* and described as an outstanding example of a major coastal lake with unique assemblage of wetland types.
Threatened Ecological Communities Threatened and Priority Flora	An invertebrate assemblage with priority flora is within 20 km north of the discharge point's and surface water movement flows south. Threatened fauna are 4.3km west from the proposed Mine area and discharge points.

Risk assessment

Below describes the Risk Events associated with the amendment consistent with the *Guidance Statement: Risk Assessments* to identify whether the emissions present a material risk to public health or the environment, requiring regulatory controls.

Identification of emissions, pathways and receptors

In undertaking its risk assessment, DWER has identified all potential emissions pathways and potential receptors to establish whether there is a Risk Event which requires a detailed risk assessment. To establish a Risk Event there must be an emission, a receptor which may be exposed to that emission through an identified actual or likely pathway, and a potential adverse effect to the receptor from exposure to that emission. Where there is no actual or likely pathway and/or no receptor, the emission has been screened out and will not be considered as a Risk Event. In addition, where an emission has an actual or likely pathway and a receptor which may be adversely impacted, but that emission is regulated through other mechanisms such as Part IV of the EP Act, that emission has not been risk assessed further and will be screened out through Table 7 below.

Table 7: Identification of emissions, pathways and receptors

Risk Events						Continue to detailed risk assessment	Reasoning
Sources/Activities		**Potential emissions**	**Potential receptors**	**Potential pathway**	**Potential adverse impacts**		
Cat 14 Solar salt manufacturing	Gypsum mining/ excavation and vehicle movements on unsealed access roads	**Noise**	No residences or other sensitive receptors in proximity	Air / wind dispersion	None	No	No receptor present
		Dust			None	No	No receptor present
	Gypsum extraction and washing of gypsum from in-situ leaching	**Waste:** Discharge of leachates to surface waters	Lake MacLeod: Contamination to surface waters, groundwater. Surface waters and/or groundwater dependent ecosystems	Direct discharge of leachate via drainage channels	Impacts to the health and survival of surface water dependent ecosystems	No	There are no increases in surface water discharge volumes relevant to this notice and therefore contaminants within discharged leachates is not further assessed. Monitoring results have indicated a risk of ASS from existing activities and therefore acidification is further considered in this Amendment Notice.
		ASS: generation of acid sulfate soils/ acidic water discharges	Lake MacLeod: Contamination to surface waters and/or groundwater Surface water and groundwater dependent ecosystems	Direct contamination to Lake MacLeod from exposing ASS to air.	Impacts to the health and survival of groundwater and surface water dependent ecosystems	Yes	A review of DWER's geospatial mapping system has identified Lake MacLeod as a moderate to low risk for the disturbance of ASS and vulnerable to acidification.

Risk Assessment – Acid Sulfate Soils (ASS)

Description of Risk Event

Lake MacLeod is vulnerable to acidification and the potential presence of ASS and acidic water from gypsum operations have the potential to cause significant impacts. The disturbance of ASS during activities associated with gypsum extraction and the method of in-situ washing of gypsum may result in the exposure of ASS to air, producing sulfuric acid and resulting in the discharge of acidic water directly onto Lake MacLeod.

Description of potential adverse impacts from ASS

Gypsum extraction that results in the disturbance of ASS may cause adverse impacts by contaminating the wetland through the dissolution of toxic metals as a result of acidification, which may degrade wetland dependent ecosystems. Acidification can reduce ecological biodiversity and the overall integrity of the wetland's ecosystem (DER 2015b; National ASS Guidelines 2018).

Criteria for assessment

The National ASS Guidance (2018) trigger criteria specified in Table 3 has been used to assess the surface water discharge results. Soil monitoring is assessed in accordance with the Existing Licence conditions and the *Guideline: Identification and investigation of acid sulfate soils in acidic landscapes* (DER 2015a) (refer to Table4).

Licence Holder Controls

The Licence Holder has applied to extract gypsum out of the Mine Blocks depicted in Figure 1 discharging leachate from a maximum of two emission points in each Mine Block at any one time. Therefore there is no proposed increase to the rate of discharge. No further controls have been proposed by the Licence Holder.

Consequence

Lake MacLeod is of ecological importance as it is listed as a wetland of national and international importance. The Delegated Officer has determined that should the disturbance of ASS occur through activities associated with gypsum extraction, mid-level on site impacts may arise. Therefore the consequence has been assessed to be ***moderate***.

Likelihood of Risk Event

Monitoring results from sampling events conducted in 2016 to present indicate a fluctuating pH range in both annual periods and signs of potential acidification. Monitoring results at SW7 exceeded trigger criteria shown in Table 2 and decreasing acidity was indicated at Mine Block 18D. Based on monitoring conducted at the Premises, the Delegated Officer has determined that the likelihood to be ***possible*** as ASS disturbance could occur at some time.

Overall rating of Risk Event

The Delegated Officer has compared the consequence and likelihood ratings described above and determined that the overall rating for the risk of ASS on Lake MacLeod and the sensitive receptors during gypsum operations is **Medium**.

Decision

The disturbance of ASS should be avoided wherever possible. Based on recent monitoring data, the Delegated Officer has determined that the relocation and operation of leachate discharge points presents an acceptable level of risk, subject to additional monitoring and management actions conditioned. The Delegated Officer has also made this determination based on the maximum of two discharge points operated per Mine Block at any time to ensure that there are no increases in discharge rates.

In accordance with s.4A of the EP Act, the Delegated Officer has given consideration to the principles; the precautionary principle and the principle of conservation of biological diversity and ecological integrity. Lake MacLeod is vulnerable to acidification and there remains uncertainty around the impacts of key gypsum extraction activities in undisturbed areas of the lake.

Conditions have been applied through this Amendment Notice to require the Licence Holder to manage surface water discharges in accordance with National ASS Guidance (2018). Management may include either:

- avoiding extraction at areas of high ASS risk; and/or
- aerating surface water discharges to precipitate dissolved iron and directed to a series of settlement basins/ trenches; and/or
- undertake a neutralisation treatment (liming) at the area of extraction.

The Licence Holder will continue to be required to monitor emission points in accordance with the conditions set in the Existing Licence. The Delegated Officer has determined that additional monitoring and active management will reduce the risk of generating ASS and direct discharges of acidic water onto Lake MacLeod.

Licence Holder's comments

The Licence Holder was provided with the draft Amendment Notice on 14 November 2018. No comments were received with the Licence Holder electing to waive the 21 day consultation period.

Amendment

1. Condition 2.2.1 of the Licence is amended by the insertion of the underlined red text and deletion of text in strikethrough shown below:

   2.2.1 The Licensee shall ensure that where waste is emitted to surface water from the emission points in Table 2.2.1 and identified on the map of emission points in Schedule 1, it is done so in accordance with the conditions of this Licence.

Table 2.2.1: Emission points to surface water

Emission point reference	Emission point reference on Map of emission points	Description	Source including abatement
SW1	Discharge point 1 (wet salt stockpile discharge)	Outlet pipe into Lake MacLeod from wet salt stockpile.	Wet salt stockpile discharge of excess water to Lake MacLeod.
SW2	Discharge point 2 (wet salt stockpile discharge)		
SW3	Discharge point 3 (wash plant brine overflow)	Overflow pipe into Lake MacLeod from Wash Plant	Salt wash brine from Wash Plant overflow point
SW4	Discharge point 4 (Truck waste, lube bay & reverse osmosis plant Discharge Point)	Unlined pond on Lake MacLeod from which truck wash bay, Lube bay and Reverse Osmosis plant (at salt operations) discharge into.	Wastewater from truck wash bay via a triple interceptor.
SW5	~~Discharge point 5~~ SW5	Outlet pipe into ocean from truck wash bay at Cape Cuvier.	Wastewater from truck wash bay via a triple interceptor.

SW6	~~Gypsum Discharge point 1~~ SW6	Outlet pipe into Lake MacLeod from Gypsum Stockpile 1.	Wastewater from heap leach pad for Gypsum Stockpile 1.
SW7	~~Gypsum Discharge point 2~~ SW7	Outlet pipe into Lake MacLeod from Gypsum Stockpile 8 drainage system.	Wastewater from heap leach pad for Gypsum Stockpile 8.
SW8	~~Gypsum Discharge point 3~~ SW8	Outlet pipe into Lake MacLeod from in-situ drainage systems.	Wastewater from in-situ heap leach areas located within Lake MacLeod.
SW11	SW11		
Mine Block 18	SW9 & SW10		
Mine Block 19	SW15		
Mine Block 20	SW14		
Mine Block 21	SW13		
Mine Block 22	SW11 & SW12		
Mine Block 23	SW16 & SW17		

2. Condition 2.2.2 of the Licence is amended by the insertion of the underlined red text shown below:

2.2.2 The Licensee ~~shall~~ must:

(a) not cause or allow point source emissions to surface water greater than the limit listed in Table 2.2.2; and

(b) perform the management actions specified in Table 2.2.2 where Trigger Criteria is exceeded.

Table 2.2.2: Point source emission limits and Management Trigger Criteria to surface water

Emission point reference	Parameter	Limit (including units)	Trigger Criteria	Averaging period	Management Actions
SW4 SW5	Total Recoverable Hydrocarbons	15 mg/L	N/A	Spot sample	N/A
SW6 SW7 SW8 SW9 SW10 SW11 SW12 SW13 SW14 SW15 SW16 SW17	pH[1] Titratable Acidity[1]	N/A	pH <6; and Titratable Acidity >100 mg/L $CaCO_3$	Monthly	The Licence Holder must: • aerate leachate to precipitate dissolved iron and directed to a series of settlement basins/trenches; and/or • undertake neutralisation treatment (liming); and/or • relocate the disturbance area to another location.

Note 1: In-field non-NATA accredited analysis permitted

3. The Licence is amended by the insertion of Condition 2.2.3 in red underlined text

shown below:

2.2.3 The Licence Holder must only discharge leachate from Mine Blocks, depicted Schedule 1, from a maximum of two emission points at any one time.

4. Condition 3.2.1 of the Licence is amended by the insertion of the underlined red text shown below:

3.2.1 The Licensee shall undertake the monitoring in Table 3.2.1 according to the specifications in that table.

Table 3.2.1: Monitoring of point source emissions to surface water

Emission point reference	Parameter	Units	Frequency
SW4	Total Recoverable Hydrocarbons	mg/L	Quarterly
SW5			
SW6 SW7 SW8 SW9 SW10 SW11 SW12 SW13 SW14 SW15 SW16 SW17	Chloride, sulfate, sodium, magnesium, potassium, calcium, total suspended solids, arsenic, beryllium, boron, cadmium, chromium, copper, fluoride, lead, mercury, nickel, total nitrogen, total phosphorus, selenium, bicarbonate	mg/L	Quarterly
	Electrical conductivity[1]	µS/cm	Quarterly
	pH[1]	-	Monthly
	Titratable Acidity[1]	mg/L	Monthly

Note 1: In-field non-NATA accredited analysis permitted

5. Condition 3.4.2 of the Licence is amended by the insertion of the underlined red text and deletion of the text shown in strikethrough below:

3.4.2 The Licence Holder must maintain accurate records of in-field testing that includes:

(a) pH and TTA in accordance with Table 2.2.2;
(b) a visual observation of the strength of the reaction;
(c) pH_F and pH_{FOX} values for each test;
(d) the difference between pH_F and pH_{FOX} values for each test (Δ pH); and
(e) any management actions undertaken following the identification of Potential Acid Sulfate Soils or Acid Sulfate Soils in accordance with Table 2.2.2 that may include, but not be limited to:
  (i) relocating the disturbance area to another location; and/or
  (ii) treating the leachate from the associated emission point ~~specified in Table 3.2.1~~ with a neutralising agent (lime); and/or
  (iii) aeration of leachate to precipitate dissolved iron and directed to a series of settlement basins/trenches.

6. Condition 3.4.3 of the Licence is amended be the insertion of underlined red text shown below:

3.4.3 The Licence Holder must provide notification to the CEO of any sampling event where:

(a) the pH_F, as measured in accordance with the steps outlined in Schedule

3, is equal to, or less than 4;

(b) the pH is equal to or less than 4; or

(c) the TTA exceeds 100 mg/L $CaCO_3$.

7. Condition 3.4.4 of the Licence is amended be the insertion of underlined red text and deletion of text shown in strikethrough below:

3.4.4 Notification required by condition 3.4.3 must be provided within 30 days of the sampling event and include:

(a) the Titratable Acidity measured at the emission point;

(b) the most recent quarterly and monthly monitoring results for that emission point;

(c) a map of the sampling location with MGA coordinates and a north facing arrow; and

(d) any management actions undertaken that include, but not be limited to management actions in accordance with Table 2.2.2.

~~i. relocating the disturbance area to another location; or~~

~~ii. treating the leachate from the associated emission point specified in Table 3.2.1 with a neutralising agent (lime).~~

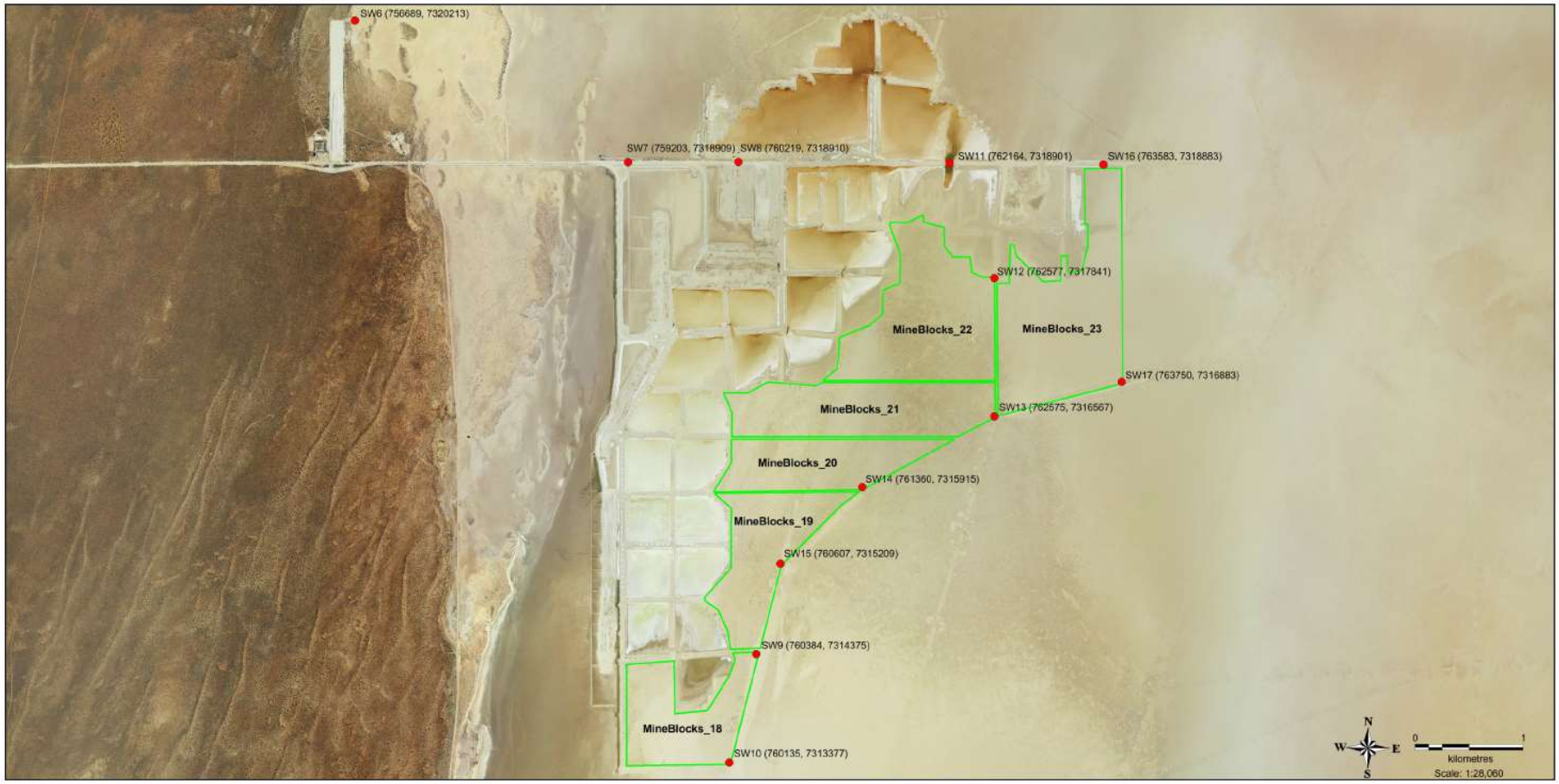
8. Condition 4.2.1 of the Licence is amended be the insertion of underlined red text shown below:

4.2.1 The Licensee shall submit to the CEO an Annual Environmental Report within 120 calendar days after the end of the annual period. The report shall contain the information listed in Table 4.2.1 in the format or form specified in that table.

Table 4.2.1: Annual Environmental Report

Condition or table (if relevant)	Parameter	Format or form
-	Summary of any failure or malfunction of any pollution control equipment and any environmental incidents that have occurred during the annual period and any action taken	None specified
Table 3.2.1	Discharge to water monitoring results	
Table 3.3.1	Discharge to land monitoring results	
3.4.2	Acid Sulfate Soil investigation data and management actions required by Condition ~~3.4.1~~ 3.4.2	Pre-extraction monitoring data to be presented in the format shown in Schedule 3 (Table S-3)
4.1.3	Compliance	Annual Audit Compliance Report (AACR)
4.1.4	Complaints summary	None specified

9. The map depicting emission points defined in Table 2.2.1 and as shown in Schedule 1 is replaced with the figure below.



Legend

- Surface Water Emission points (MGA coordinates)
- Future Gypsum Mine block areas (MB18 – MB23)

Appendix 1: Key documents

	Document title	In text ref	Availability
1	DER, June 2015. *Guideline: Identification and investigation of acid sulfate soils and acidic landscapes*	DER 2015a	Accessed at www.dwer.wa.gov.au
2	DER June 2015. *Guideline. Treatment and management of soil and water in acid sulfate soil landscapes*	DER 2015b	Accessed at www.dwer.wa.gov.au
3	Water Quality Australia June 2018. *National Acid Sulfate Soils Guidance: Guidance for the dewatering of acid sulfate soils in shallow groundwater environments*	National ASS guidance 2018	Accessed at http://waterquality.gov.au/SiteCollectionDocuments/dewatering-acid-sulfate-soils.pdf
4	Annual environmental report 2016	AER 2016	DWER records (A1429996)
5	Annual environmental report 2017	AER 2017	DWER records (A1663198)
6	Directory of important wetlands in Australia: Information sheet Lake MacLeod	accessed at www.environment.gov.au	
7	DER, July 2015. *Guidance Statement: Regulatory principles.* Department of Environment Regulation, Perth.	accessed at www.dwer.wa.gov.au	
8	DER, October 2015. *Guidance Statement: Setting conditions.* Department of Environment Regulation, Perth.		
9	DER, February 2017. *Guidance Statement: Risk Assessments*. Department of Environment Regulation, Perth.		
10	DER, February 2017. *Guidance Statement: Decision Making*. Department of Environment Regulation, Perth.		
11	DER, November 2016. *Guidance Statement: Environmental Siting* Department of Environment Regulation, Perth		