



Environmental Monitoring Summary Report

Port Kembla Gas Terminal

Infrastructure Approval **SSI-9471**
EPL Licence Number: **21529**

Reporting period: **1 June 2021 – 30 June 2021**

Date published: **30 July 2021**

1 Project background

AIE is developing a Liquefied Natural Gas (LNG) import terminal at Port Kembla, south of Wollongong, NSW (the Project). The Project will be the first of its kind in NSW and will provide a simple and flexible solution to the state's gas supply challenges.

The Project has been declared Critical State Significant Infrastructure (CSSI) in accordance with Section 5.13 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) (NSW) and Schedule 5 of the *State Environmental Planning Policy State and Regional Development* (SRD SEPP). The Project received Infrastructure Approval (the Approval) from the Minister for Planning and Public Spaces on 29 of April 2019, approval SSI-9471.

The construction of the Project is primarily associated with the establishment of a new berth facility at Port Kembla to enable an LNG Carrier to berth alongside the Floating Storage and Re-gasification Unit (FSRU) and new infrastructure to connect the terminal to the existing gas network. The location of the Project is shown on the Environmental Monitoring Location Plan provided as Appendix A.

An Environment Protection Licence (EPL No. 21529) was issued for the Project by the NSW Environment Protection Authority (EPA) on 2 June 2021. The details of the EPL are provided below in Table 1-1.

Table 1-1 EPL Details

EPL No.	21529
Anniversary Date:	2 June
Licensee:	Australian Industrial Energy Pty Ltd
	PO Box 3155 Broadway
	Nedlands WA 6009
Premises:	Port Kembla Gas Terminal, Port Kembla NSW 2505
Scheduled Activity	Chemical storage
	Contaminated soil treatment
	Crushing, grinding or separating

2 Report purpose

This Monthly Environmental Monitoring Report has been prepared to satisfy the monitoring data reporting requirements of the approval and environmental management plans as detailed further below in Table 2-1 for the reporting month of June 2021 (the reporting month).

Table 2-1 Environmental monitoring reporting requirements

Document	Clause or section	Requirement	Addressed:
DPIE SSI-9471	Sch. 4 Cond. 8	Regular Reporting – The Proponent must provide regular reporting on the environmental performance of the development on its website in accordance with the reporting requirements in any strategies, plans or programs approved under the conditions of this approval.	This report to be made available on the Project Website.
	Sch. 4 Cond. 12	Access to information – From the commencement of development under this approval, the Proponent shall: (a) Make copies of the following information publicly available on its website: - a comprehensive summary of the monitoring results of the development, reported in accordance with the specifications in any conditions of this approval, or any approved plans and programs	
AIE Air Quality Management Plan	Section 8.3	A summary of monthly data will be published on the Project’s webpage, noting any exceedance of EPL trigger value, investigation, and response.	This report
AIE Water Quality Management Plan	Section 8.5	Regular reporting A summary of monthly data will be published on the PKGT AIE website in the form of a report. The report will note details for:	This report which will be made available on the Project Website.
		- Any exceedance of COC trigger values, the subsequent investigation and response/resolution	Section 4 and Appendix B
		- Complaint summary (if applicable)	Section 5
		- Statistics related to productivity of work (actual workflow vs planned) including details on any delays encountered	Section 3.1
		- Forecasting for future works	Section 3.3
		- Activities completed for the month	Section 3.2
		- Activities planner for the next month	Section 3.3
		- Current risks and issues, including impact level and mitigation measures.	Section 0

3 Project activities

3.1 Project status

Stage 1: Early enabling works in June 2021.

Early Enabling works are scheduled for approximately 6 months and include:

- Excavation to allow removal of existing structures and services and facilitate construction of the quay wall
- Demolition/removal of Berth 101 and aboveground structures
- Demolition/removal of aboveground and underground services
- Removal of existing stockpiles from site
- Transport of spoil via road from the Marine Berth and Dredging Site Compound to the Emplacement Cell Construction Site in the Outer Harbour
- Platform excavation and stockpiling
- Processing demolished materials (for re-use or recycling) by others.
- Cone Penetration Testing in the Outer Harbour

3.2 Project activities for the reporting month

- Removal of above ground structures – 80% complete
- Outer Harbour air quality monitoring establishment, including high volume air sampling, dust depositional gauges and real-time dust tracking
- Concrete processing (pulverising)
- Commissioning and operation of the site water treatment plant (WTP)

3.3 Project activities for the upcoming month

- Continued bulk excavation of bound slag layer
- Commencement of bulk excavation of sub-slag fill layer
- Continued concrete processing
- Continued structure removal
- Berth 101 demolition
- Removal of redundant potable water pipeline (containing asbestos) along western side of excavation zone
- Removal and capping of former bunker oil pipeline
- Relocation of site water reticulation pipeline to facilitate demolition and excavation

3.4 Current project environmental risks and controls

The identified environmental risk and proposed mitigation measures and controls for the current and foreseeable construction activities are presented in Table 3-1.

Table 3-1 Project environmental risks

Ref.	Environmental risk		Associated activity	Mitigation measure
	Aspect	Impact		
2106_01	Water quality	Water pollution	Construction works adjacent to the Port Kembla Harbour	Implementation of the Construction Water Quality Monitoring Plan (CWQMP)
				Water quality monitoring and reporting
				Implementation of water discharge permit procedure for sediment basin discharge.
2106_02	Air quality	Generation of nuisance dust levels	Demolition works	Implementation of the Air Quality Management Plan
				Continuous air quality monitoring
2106_03	Environmental compliance	Breach of legislation and or Management Plan requirements	Commencement of and ongoing works	Establishment and implementation of environmental procedures and processes
				Liaisons with regulatory authorities and seek clarification where required
				Regular site inspections and coordination meetings with contractor

4 Environmental monitoring data

The following sections present a summary of the air quality, water quality and weather monitoring data.

A summary of baseline data is presented in Appendix C.

A copy of this report will be made available on the Project website at the following web-address:

<https://ausindenergy.com/environmental-information/>

4.1 Air quality

4.1.1 Air quality monitoring locations and frequency

Air quality monitoring equipment is installed to the north and south of the demolition area (Berth 101), and to the east, west and central portion of the Outer Harbour stockpile area.

A summary of the air quality monitoring locations are provided below in Table 4-1 and a monitoring location plan is provided in Appendix A.

Table 4-1 Air quality monitoring locations

EPL Ref.	Monitoring location	Monitoring type	Monitoring parameter	Monitoring frequency
8	Northern boundary of the premises, adjacent the southern boundary of Port Kembla Coal Terminal	Dust Deposition Gauge	Particulates - Deposited Matter (gm/m ² /month)	Monthly
10	Southern boundary of Berth 101			
12	Southern side of emplacement area, Outer Harbour	and	and	Special Frequency 1 (24-hour period every 6 days)
14	Eastern side of emplacement area, Outer Harbour	Ambient Air Monitoring - High Volume Air Sampler	Total Suspended Particles (TSP)*	
22	Northern side of emplacement area, Outer Harbour			
9	Northern boundary of the premises, adjacent the southern boundary of Port Kembla Coal Terminal	Dust Trak real time dust monitoring	PM ₁₀ (ug/m ³)	Continuous
11	Southern boundary of Berth 101			
13	Southern side of emplacement area, Outer Harbour			
15	Eastern side of emplacement area, Outer Harbour			
23	Northern side of emplacement area, Outer Harbour			

*TSP not tested for this reporting period.



4.1.2 Air Quality Monitoring Results

The air quality monitoring results for the reporting month are presented below in **Error! Reference source not found.**

Table 4-2 Air quality monitoring results

Monitoring Location (EPL Reference)		Monitoring parameter							
		Particulates Deposited Matter (Depositional dust gauge) ²	Total Suspended Particles (High Volume Air Sampler)			PM10 (Real-time tracker)			Events above criteria ¹
			Average	Minimum	Maximum	Average	Minimum	Maximum	
Unit	gm/m ² /month	ug/m ³	ug/m ³	ug/m ³	ug/m ³ /24 hours	ug/m ³ /24 hours	ug/m ³ /24 hours	No.	
Criteria	NA	NA	NA	NA	NA	NA	50	NA	
Berth 101 North	EPL 8	6.40	NS	NS	NS	No PM10 monitoring required at this EPL Point			NA
	EPL 9	No Dust Deposition Gauge or HiVol required at this EPL Point				41.99	17.67	77.21	6
Berth 101 South	EPL 10	4.30	NS	NS	NS	No PM10 monitoring required at this EPL Point			NA
	EPL 11	No dust gauge or HiVol required at this EPL Point				44.30	20.50	72.54	9
Outer Harbour South	EPL 12	1.70	NS	NS	NS	No PM10 monitoring required at this EPL Point			NA
	EPL 13	No dust gauge or HiVol required at this EPL Point				10.73	2.97	32.62	0
Outer Harbour East	EPL 14	1.70	NS	NS	NS	No PM10 monitoring required at this EPL Point			NA
	EPL 15	No dust gauge or HiVol required at this EPL Point				11.40	2.54	25.67	0
Outer Harbour North	EPL 22	1.80	NS	NS	NS	No PM10 monitoring required at this EPL Point			NA
	EPL 23	No dust gauge or HiVol required at this EPL Point				17.34	5.01	74.67	2 ³

¹Includes individual number of times results recorded above criteria. Refer to Appendix B for event above criteria reports.

² Assessed as Total Insoluble

³No activities occurring at Outer Harbour during this monitoring period.

NS = Not sampled this reporting period

4.2 Water quality

4.2.1 Water quality monitoring locations and frequency

Water quality monitoring is undertaken at five (5) locations within the Port Kembla harbour. Each water quality monitoring location is securely anchored/moored in its location. Details of each of the water quality monitoring locations and corresponding EPL licence reference is provided below in Table 4-3.

Table 4-3 Harbour water quality monitoring locations

EPL Ref.	Monitoring location	Type of monitoring	Parameters	
			Continuous monitoring at 15 min intervals	Weekly grab sample
1	WQM1 - North of Berth 101	Primary- impact works area receiver	<ul style="list-style-type: none"> - Turbidity - Temperature - pH - Electrical Conductivity - Dissolved oxygen 	<ul style="list-style-type: none"> - Aluminium - Arsenic - Cadmium - Chromium (total) - Cobalt - Copper - Lead - Mercury - Nickel - Tributyltin - TSS - Zinc - PAH
16	WQM2 - North of the emplacement cell, Outer Harbour. No more than 20m from emplacement cell silt curtain	Primary- impact works area receiver		
17	WQM3 - South West of Berth 101	Primary- impact works area receiver		
18	WQM4 - Near the Pacific Ocean entrance to Outer Harbour	Background water quality		
19	WQM5 - Near entrance to Allans Creek, near Bluescope Steel	Background water quality		

In addition to the monitoring requirements listed above for the harbour, monitoring is also required for any discharge event from the on-site sedimentation basin located at the southern end of Berth 101. Details of the monitoring requirements associated with the sediment basin discharge point are included below in Table 4-4.

Table 4-4 Sediment basin discharge monitoring

EPL Ref.	Monitoring location	Type of monitoring	Parameters	
			Prior to discharge	Daily grab sample during discharge
20	Sediment basin discharge point at the southern end of Berth 101	Wet weather discharge quality	<ul style="list-style-type: none"> - Oil and grease (visual) - Total suspended solids (TSS) 	<ul style="list-style-type: none"> - Aluminium - Arsenic - Cadmium - Chromium - Cobalt - Copper - Lead - Mercury - Nickel - Oil and grease (visual) - pH - PAHs - Tributyltin - TSS - Zinc

4.2.2 Continuous water quality monitoring results

A summary of the results for the continuous water quality monitoring in the harbour is presented below in Table 4-5. Further details for events above criteria as indicated below are provided in Appendix B.

Table 4-5 Harbour water quality – Continuous monitoring results

Monitoring location	Statistic	Results - based on individual 15-minute median				
		Turbidity (NTU)	Temperature (Deg. C)	pH	Electrical conductivity (uS/cm)	Dissolved Oxygen (%sat)
Criteria		25 ¹	N/A	Background +/- 0.5 pH units	Background +/- 20% (+ baseline)	Background - 20% (+ baseline)
WQM1	Average	1.6	17.7	8.2	53308.3	92.8
	Minimum	0.8	16.7	8.1	51668.7	81.5
	Maximum	9.8	19.2	8.2	53761.4	100.1
	No. Events above Criteria ²	0	N/A	0	0	0
WQM2	Average	2.0	17.4	8.2	53873.4	96.4
	Minimum	1.3	16.7	8.2	51539.4	92.4
	Maximum	8.6	18.4	8.2	54189.9	100.7
	No. Events above Criteria ²	0	N/A	0	0	0
WQM3	Average	1.8	17.7	8.2	53491.6	94.7
	Minimum	1.0	14.7	8.1	49090.2	90.8
	Maximum	9.3	19.7	8.2	53812.3	100.4
	No. Events above Criteria ²	0	N/A	0	0	0
WQM4 (Background)	Average	1.4	17.5	8.2	53693.0	95.6
	Minimum	0.7	16.8	8.2	51339.5	92.3
	Maximum	4.9	18.5	8.3	54239.9	99.4
WQM5 (Background)	Average	3.6	19.9	8.1	52429.9	96.7
	Minimum	1.1	14.0	7.5	0.0	87.7
	Maximum	1.9	24.3	8.2	53733.6	104.3

1 – Indicative value based on previous EPL's issued at Port Kembla indicate that 50 mg/l of suspended sediment is equal to 25 NTU (as per CWQMP). To be modified throughout the project to reflect actual TSS / NTU correlation data as it becomes available.

2 - Includes individual number of times results exceeded background. Refer to Appendix B for report on results above criteria.

4.2.3 Water Quality Monitoring Results – Port Kembla Harbour Grab Samples

A summary of the results for the Port Kembla Harbour weekly grab samples is presented below in Table 4-6. Further details for event above criterias as indicated below are provided in Appendix B.



Table 4-6 Harbour water quality – Weekly grab sample results summary

Monitoring Location	Statistic	Aluminium	Anthracene	Arsenic	Benzo(a)pyrene	Cadmium	Chromium (total)	Cobalt	Copper	Lead	Mercury	Naphthalene	Nickel	Total PAHs ^{3*}	Total Suspended Solids (TSS)	Tributyltin	Zinc
Unit		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	Ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L
Criteria ²		BL	0.10	BL	BL	5.50	4.40	1.00	1.3 + BL	4.4 + BL	0.40	70.00	70.00	BL ³	50 + BG	0.01	15 + BL
WQM1	Average	36.00	<0.1	2.00	<0.1	<0.1	1.40	<1	1.20	<1	<0.05	<0.2	1.20	<0.1	7.80	<0.002	8.80
	Minimum	<10	<0.1	2.00	<0.1	<0.1	<1	<1	<1	<1	<0.05	<0.2	<1	<0.1	<5	<0.002	3.00
	Maximum	60.00	<0.1	2.00	<0.1	<0.1	2.00	<1	2.00	<1	<0.05	<0.2	2.00	<0.1	14.00	<0.002	14.00
	Events above criteria ¹	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WQM2	Average	16.00	<0.1	2.00	<0.1	<0.1	1.60	<1	<1	<1	<0.05	<0.2	<1	<0.1	11.00	<0.002	3.00
	Minimum	<10	<0.1	2.00	<0.1	<0.1	<1	<1	<1	<1	<0.05	<0.2	<1	<0.1	<5	<0.002	1.00
	Maximum	30.00	<0.1	2.00	<0.1	<0.1	2.00	<1	<1	<1	<0.05	<0.2	<1	<0.1	29.00	<0.002	7.00
	Events above criteria ¹	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WQM3	Average	34.00	<0.1	2.00	<0.1	<0.1	1.20	<1	<1	<1	<0.05	<0.2	1.20	<0.1	5.80	<0.002	5.20
	Minimum	<10	<0.1	2.00	<0.1	<0.1	<1	<1	<1	<1	<0.05	<0.2	<1	<0.1	<5	<0.002	3.00
	Maximum	60.00	<0.1	2.00	<0.1	<0.1	2.00	<1	<1	<1	<0.05	<0.2	2.00	<0.1	7.00	<0.002	9.00
	Events above criteria ¹	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WQM4	Average	28.00	<0.1	2.00	<0.1	<0.1	1.20	<1	<1	<1	<0.05	<0.2	1.20	<0.1	7.80	<0.002	3.60
	Minimum	<10	<0.1	2.00	<0.1	<0.1	<1	<1	<1	<1	<0.05	<0.2	<1	<0.1	<5	<0.002	2.00
	Maximum	40.00	<0.1	2.00	<0.1	<0.1	2.00	<1	<1	<1	<0.05	<0.2	2.00	<0.1	12.00	<0.002	5.00
WQM5	Average	40.00	<0.1	2.40	<0.1	<0.1	2.80	1.20	4.00	3.60	<0.05	<0.2	1.80	0.18	10.60	<0.002	27.20
	Minimum	20.00	<0.1	2.00	<0.1	<0.1	<1	<1	<1	<1	<0.05	<0.2	<1	<0.1	6.00	<0.002	7.00
	Maximum	70.00	<0.1	4.00	<0.1	<0.1	9.00	2.00	16.00	14.00	<0.05	<0.2	2.00	0.57	23.00	<0.002	82.00

1. Includes individual number of times results reported above criteria. Refer to Appendix B for report on results on criteria.
2. BL = Baseline BG = Background (WQM4 / WQM5)
3. In the absence of an assessment criteria in the CWQMP, a criteria of BL has been applied.

4.2.4 Water quality monitoring results – sediment basin discharge

During the reporting month, there was one (1) one authorised discharge event and zero (0) discharge events as a result of excessive rainfall (>43.5 mm in any 5-day period). Refer to Section 4.3 for site weather monitoring details. The date of the discharge event is provided below in Table 4-7.

A summary of the water quality results for the authorised discharge event from the sediment basin is included below in Table 4-7.

Table 4-7 Sediment basin discharge water quality – Pre-discharge and daily grab sample results

Date of discharge/ sampling	Naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benzo(a)anthracene	Chrysene	Benzo(b,j,k)fluoranthene	Benzo(a)pyrene	Indeno(1,2,3-c,d)pyrene	Dibenzo(a,h)anthracene	Benzo(g,h,i)perylene	Benzo(a)pyrene TEQ	Total PAH
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Criteria	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
09-Jun 21	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1
10-Jun 21	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1

Date of discharge/ sampling	Aluminium	Arsenic	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Nickel	Zinc	Tributyltin	TSS	pH	Oil & Grease
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L	-	-
Criteria	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	50	NA	Visible
09-Jun 21	NT	<1	<0.1	<1	NT	2	<1	<0.05	2	32	<0.002	<5	NT	Not visible
10-Jun 21	NT	<1	<0.1	<1	NT	1	<1	<0.05	<1	10	<0.002	<5	NT	Not visible

1. NA = No licence limit, monitoring requirement only
2. NS = Not Sampled



4.3 Weather station results

Under the EPL (Condition M5), AIE is required to monitor and record temperature, humidity, wind direction, wind velocity and rainfall at either a project weather station, or through analysis of equivalent weather information obtained from the Australian Bureau of Meteorology.

AIE established and maintains a weather station for the project site located at the southern point of Berth 101 (EPL monitoring point 21) as shown in the Monitoring Location Plan in Appendix A. The monthly data obtained from the onsite weather station is provided below in Table 4-8.

Table 4-8 Site weather station monitoring results summary

Parameter	Unit of measure	Monthly statistic	Result EPL Point 21
Wind velocity	m/s (15min average)	Average	4.05
		Minimum	0.10
		Maximum	12.37
Wind direction at 10m	Degrees (1hr average)	Average	235.34
Rainfall rate	mm/hr (1hr average)	Average	0.06
		Minimum	0.00
		Maximum	2.82
Rainfall (Total)	mm	Monthly total	41.15
Temperature	Degrees Celsius	Average	14.58
		Maximum	7.10
		Minimum	21.80
Humidity	%	Average	65.68
		Minimum	32.40
		Maximum	95.10



5 Environmental complaints

A summary of environmental complaints received during the reporting month and follow-up close-out and or corrective actions are presented below in Table 5-1.

Table 5-1 Environmental complaints summary

Date	Complaint No.	Nature of the complaint	Follow-up close-out and or corrective action
NA	NA	No environmental complaints received for the reporting month	NA



Appendices

Appendix A - Monitoring location plan



<p>Paper Size: ISO A4</p> <p>0 0.1 0.2 0.3 0.4 Kilometers</p> <p>Map Projection: Transverse Mercator Horizontal Datum: GDA 1994 Grid: GDA 1994 MGA Zone 56</p>			<p>Australian Industrial Energy Port Kembla Gas Terminal</p> <p>EPL Licence Premises Stage 1</p>	<p>Project No. 21-27477 Revision No. - Date 04/06/2021</p> <p>FIGURE 1</p>
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Data source: Aerial imagery - nearmap 2021 (image date 16/04/2018, date extracted 18/02/2019); General topo - NSW LPI DTDB 2017 & 2015; Cadastre - NSW LPI DCDB 2017. Created by: aldrich

Appendix B – Summary of Events Above Criteria

Table 2: Air Monitoring Events Above Criteria

Date	Location	Recorded Value (ug/m ³) – 24hr average	Action Taken	Investigation Outcomes
1/06/2021	EPL 9	77.21	Initial Investigation, Evaluate wind direction and site contribution at time of event. Dust prevention controls assessed upon return to work. No further action required.	Peak causing event above criteria occurred outside of work hours. Elevated readings are consistent with the baseline data.
1/06/2021	EPL 11	63.42	Initial Investigation, Evaluate wind direction, comparison of upwind and downwind monitors and site contribution at time of event. Dust prevention controls assessed upon return to work. No further action required.	Event above criteria resulted from peak occurring outside of work hours on 31/05/21. Elevated readings are consistent with the baseline data.
2/06/2021	EPL 9	59.04	Initial Investigation, Evaluate wind direction and site contribution at time of event. Dust prevention controls assessed upon return to work. No further action required.	Outside work hours, wind direction westerly. Event above criteria also recorded at monitors west of site. Elevated readings are consistent with the baseline data.
2/06/2021	EPL 11	73.88	Initial Investigation, Evaluate wind direction and site contribution at time of event. Dust prevention controls assessed upon return to work. No further action required.	Outside work hours, wind direction westerly. Event above criteria also recorded at monitors west of site. Elevated readings are consistent with the baseline data.
3/06/2021	EPL 11	117.50	Initial Investigation, Evaluate wind direction and site contribution at time of event. Dust prevention controls assessed. No further action required.	Event above criteria carry over from previous day, and peak in early morning. Westerly wind direction. Event above criteria also recorded at monitors west of site. Elevated readings are consistent with the baseline data.
5/06/2021	EPL 9	54.63	Initial Investigation, Evaluate wind direction, comparison of upwind and downwind monitors and site contribution at time of event. No further action required.	Northerly wind direction event above criteria and northern boundary. Likely to be an offsite/ambient event above criteria. Elevated readings are consistent with the baseline data.

Date	Location	Recorded Value (ug/m ³) – 24hr average	Action Taken	Investigation Outcomes
12/06/2021	EPL 11	72.54	Initial Investigation, Evaluate wind direction and site contribution at time of event. Dust prevention controls assessed upon return to work. No further action required.	Outside work hours, WSW wind direction, likely to be offsite/ambient dust source. Elevated readings are consistent with the baseline data.
13/06/2021	EPL 11	71.04	Initial Investigation, Evaluate wind direction and site contribution at time of event. Dust prevention controls assessed upon return to work. No further action required.	Outside work hours, WSW wind direction, likely to be offsite/ambient dust source. Elevated readings are consistent with the baseline data.
14/06/2021	EPL 11	58.17	Initial Investigation, Evaluate wind direction and site contribution at time of event. Dust prevention controls assessed upon return to work. No further action required.	Peak outside of work hours. SSW wind direction, likely to be offsite/ambient dust source. Elevated readings are consistent with the baseline data.
15/06/2021	EPL 11	55.17	Initial Investigation, Evaluate wind direction and site contribution at time of event. Dust prevention controls assessed upon return to work. No further action required.	Peak outside of work hours. SW wind direction, likely to be offsite/ambient dust source. Elevated readings are consistent with the baseline data.
17/06/2021	EPL 9	54.25	Initial Investigation, Evaluate wind direction, comparison of upwind and downwind monitors and site contribution at time of event. Dust prevention controls assessed.	10am and 5pm, SW to W wind direction Grain dust and coal dust (berth 111) observed in the area at the time.
17/06/2021	EPL 11	51.38	Initial Investigation, Evaluate wind direction, comparison of upwind and downwind monitors and site contribution at time of event. Dust prevention controls assessed.	10am, 2pm, and 5pm, SW to W wind direction Grain dust and coal dust (berth 111) observed in the area at the time.
18/06/2021	EPL 9	51.38	Initial Investigation, Evaluate wind direction, comparison of upwind and downwind monitors and site contribution at time of	11am-4pm WSW wind direction, likely offsite source Grain dust and coal dust (berth 111) observed in the area at the time.

Date	Location	Recorded Value (ug/m ³) – 24hr average	Action Taken	Investigation Outcomes
			event. Dust prevention controls assessed.	
18/06/2021	EPL 11	57.17	Initial Investigation, Evaluate wind direction, comparison of upwind and downwind monitors and site contribution at time of event. Dust prevention controls assessed.	11am-4pm WSW wind direction, likely offsite source based on EPL 9 (upwind) results at the same times. Elevated readings are consistent with the baseline data.
21/06/2021	EPL 9	58.58	Initial Investigation, Evaluate wind direction, comparison of upwind and downwind monitors and site contribution at time of event. Dust prevention controls assessed upon return to work.	6pm onwards, WSW to S wind direction, 6pm and 10pm peaks detected at monitors to west of site. Elevated readings are consistent with the baseline data.
23/06/2021	EPL 23	74.67	Check of equipment to ensure operating effectively. No other action taken.	Activities at Outer Harbour have not yet commenced. Readings are considered baseline data.
24/06/2021	EPL 23	50.19	Check of equipment to ensure operating effectively. No other action taken.	Activities at Outer Harbour have not yet commenced. Readings are considered baseline data.
26/06/2021	EPL 11	62.54	Initial Investigation, Evaluate wind direction, comparison of upwind and downwind monitors and site contribution at time of event.	During southerly, likely to be offsite/ambient dust source. Elevated readings are consistent with the baseline data.
27/06/2021	EPL 11	58.21	Initial Investigation, Evaluate wind direction, comparison of upwind and downwind monitors and site contribution at time of event.	During southerly, likely to be offsite/ambient dust source. Elevated readings are consistent with the baseline data.
28/06/2021	EPL 9	76.00	Initial Investigation, Evaluate wind direction, comparison of upwind and downwind monitors and site contribution at time of event. Dust prevention controls assessed upon return to work.	Outside work hours and during very low wind speed. Elevated readings are consistent with the baseline data.
30/06/2021	EPL 9	66.29	Initial Investigation, Evaluate wind direction, comparison of upwind and downwind	Outside work hours and during very low wind speed. Elevated readings are consistent with the baseline data.

Date	Location	Recorded Value (ug/m ³) – 24hr average	Action Taken	Investigation Outcomes
			monitors and site contribution at time of event. Dust prevention controls assessed upon return to work.	

Table 3: Water Monitoring Events Above Criteria

Date	Location	Recorded Value	Action Taken	Investigation Outcomes
No events above criteria in reporting period				

Appendix C – Baseline Data

Baseline air quality data presented below. Baseline water quality measurements undertaken in this reporting period and presented in relevant sections of this report.

Table 4: Berth 101 Air Quality Historical Data

Monitoring Location (EPL Reference)		Monitoring parameter PM10 (Real-time tracker)					
		April 2021			May 2021		
		Average	Minimum	Maximum	Average	Minimum	Maximum
		ug/m ³ /24 hours	ug/m ³ /24 hours	ug/m ³ /24 hours	ug/m ³ /24 hours	ug/m ³ /24 hours	ug/m ³ /24 hours
Unit		ug/m ³ /24 hours	ug/m ³ /24 hours	ug/m ³ /24 hours	ug/m ³ /24 hours	ug/m ³ /24 hours	ug/m ³ /24 hours
Criteria		NA	NA	50.00	NA	NA	50.00
Berth 101 North	EPL 9	38.50	2.33	96.80	44.10	22.21	82.38
Berth 101 South	EPL 11	43.75	0.00	94.29	55.35	5.74	113.67

Table 5: Outer Harbour Air Quality Historical Data

Monitoring Location (EPL Reference)		Monitoring parameter PM10 (Real-time tracker)		
		June 2021		
Unit		Average ug/m ³ /24 hours	Minimum ug/m ³ /24 hours	Maximum ug/m ³ /24 hours
Criteria		NA	NA	50.00
Outer Harbour South	EPL 13	10.73	2.97	32.62
Outer Harbour East	EPL 15	11.40	2.54	25.67
Outer Harbour North	EPL 23	17.34	5.01	74.67