Northern Territory
Environment Protection Authority

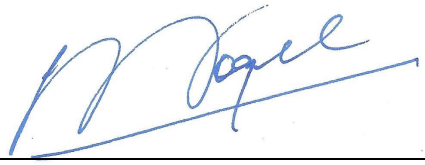
NOTICE OF DECISION AND STATEMENT OF REASONS

Section 55 of the *Environment Protection Act 2019* (EP Act)
Regulations 57(2)(b) and 63 of the Environment Protection Regulations 2020 (EP Regulations)

Name of proposed action	Bonaparte Carbon Capture and Storage Project
Proponent	INPEX Operations Australia Pty Ltd
NT EPA reference	EP2025/048
Nature of the proposed action	Oil and Gas, Carbon Capture and Storage

Description of proposed action	The proposed action is for the construction, commissioning, operation, decommissioning of an onshore inlet station and offshore carbon dioxide (CO_2) transport pipeline with an associated subsea power and fibre optic (SPFO) cable. The pipeline is approximately 90km long, extending from the onshore inlet station, located on the Middle Arm Peninsula within Darwin Harbour, to the boundary of the Northern Territory's Coastal Waters.
	Activities required to be undertaken to support the construction of the proposed infrastructure include:
	• geophysical and geotechnical surveys of the proposed pipeline corridor and prospective subsea and onshore infrastructure areas
	• site establishment including:
	  ○ seabed jetting, levelling and filling
	  ○ foundation installation and cable crossings
	  ○ shore crossing trench and shore-pull preparations
	  ○ dredging within Darwin Harbour and spoil disposal at existing spoil grounds in the Beagle Gulf
	• rock armouring of pipeline within Darwin Harbour
	• post pipeline installation flooding, cleaning, gauging and testing
	• pre-commissioning of the pipeline including dewatering, drying (using mono ethylene glycol and air discharges) and preservation with nitrogen
	• venting of CO_2 during pipeline inspection gauge launch and receipt, and connection to onshore pipelines.
	
	Venting would also occur during emergency scenarios, maintenance, and connection to future booster pumping facilities or onshore pipelines.
	
	The design life of the inlet station, pipeline and SPFO cable is 30 years.

Person authorised to make decision	Dr Paul Vogel AM, Chairperson Northern Territory Environment Protection Authority (NT EPA)

	Delegate of the NT EPA under section 36 of the Northern Territory *Environment Protection Authority Act 2012*.
Decision	**Standard environmental impact assessment is required** in accordance with section 55 of the EP Act and regulation 57(2)(b)(i) of the EP Regulations. The method of environmental impact assessment to be by **environmental impact statement** in accordance with regulation 57(2)(b)(ii) of the EP Regulations.
Signature	
Date of decision	10 March 2026
Matters considered under EP Regulation 56	The NT EPA has considered the following: • the accepted referral (including the referral form, referral report and appendices) • submissions received in relation to the referral
Consultation	Submission period 13 January 2026 – 10 February 2026 Submissions received: • six government authority submissions • seven public submissions Submissions are available on the NT EPA website Key issues raised in the submissions received by the NT EPA include: • Concern that the proposed action is linked to other actions proposed by the proponent including the Ichthys CCS Project, and the view that the proposed action should be assessed together with the related actions to appropriately assess the combined effects of potential impacts. • Concerns regarding the viability of CCS and claims of 'greenwashing' to justify further industrialisation of Darwin Harbour. • Concern that implementation of the proposed action would result in human health impacts and atmospheric pollution. • Concerns regarding impacts to Darwin Harbour from the disturbance of acid sulfate soils; migratory shorebird habitat and cultural values. • Concerns regarding impacts to a range of marine species, including turtles, dugongs and dolphins.

- Concerns that the proponent has not completed adequate assessment to confirm that the proposed CO_2 storage basin is suitable for permanent storage of CO_2.
- A view that the proposed action is unacceptable, if not deemed unacceptable due to significant impacts that cannot be appropriately avoided, mitigated or managed. Alternatively, the proposed action requires an assessment by environmental impact statement or inquiry.

Statement of Reasons

Overview

The proposed action is described in the referral submitted to the NT EPA. The referral also identifies 'relationships with other proposed actions' including the Ichthys Carbon Capture and Storage (CCS) Project.

Maintenance dredging at the MOF, and disposal of dredge spoil is needed to allow prefabricated modules (and potentially specialised pipeline materials), to be delivered via ship to onshore areas. The NT EPA considers it almost certain that this dredging and disposal will occur alongside the construction activities described in the referral. However, because it is not part of the referred proposed action, it is not within the scope of any approval that may result from the referral.

While the other proposed actions, maintenance dredging of the MOF and commissioning of the Ichthys LNG Facility and upgraded AGRUs, are not part of the proposed action, they are closely linked to it and from herein are referred to as associated activities. These associated activities could change the scale, intensity, and location of impacts that need to be considered. Together, the proposed action and these associated activities form part of a single, interconnected project to develop a carbon sequestration system. The nature, scope, and feasibility of that system are, or should be, largely known to the proponent.

The associated activities form a necessary part of the context in which the impacts of the proposed action must be assessed and the extent that the proposed action enables the associated projects to occur, it will potentially be a substantial cause of the impacts that those associated activities cause, and to this extent their combined contributions to any consequences or events have the potential to be cumulative impacts of the current action.

The pipeline section has no clear standalone function. The proposed action and the related projects are planned on an integrated schedule, with overlapping timeframes to allow them to be connected and operate together as a system. Information provided by the proponent indicates that the proposed action and the construction and operation of a full pipeline are mutually dependent.

As a result, the indirect impacts of the proposed action will include impacts arising from these associated activities or a similar pipeline. The assessment will consider indirect impacts of interdependent projects where their scope is already largely known or can be reasonably anticipated. Understanding those impacts is also essential to assessing the sensitivity of the environment in which the proposed action would occur.

The NT EPA recognises that the associated activities are subject to their own regulatory controls and approval processes. However, for the reasons set out above, this does not remove the need to consider their indirect impacts when assessing the proposed action. This is particularly

relevant given that the proponent has presented the proposed action as critical to achieving its decarbonisation objectives, stating that captured CO_2 would be compressed and transported by pipeline for permanent underground storage. This message has been emphasised in public-facing materials and in the referral itself.

The proposed action has the potential to have significant impact on environmental values associated with ten environmental factors[1]. The potential impacts are considered significant, due to the reasons outlined below.

Land	**Terrestrial environmental quality** The proposed action requires the disturbance of approximately 32 ha within the onshore development area to facilitate the construction of the onshore inlet station and onshore pipeline. Mapping of Acid Sulfate Soil (ASS) within the Darwin Region (DNRETAS, 2008)[2] indicates a high probability of the occurrence of ASS within the upper 1 metre of the soil profile across the onshore development area of the proposed action. The disturbance of these soils can result in acid generation and run-off, and liberation of metal and metalloid contaminants and nutrients impacting adjacent soils and receiving waters including Darwin Harbour. Erosion and soil loss during construction would potentially impact land and soil quality and result in sedimentation and water quality impacts on the receiving environment including tidal flats and Darwin harbour. The proposed associated activities would require the disturbance of an additional 93.5 ha[3]. These disturbances are likely to intersect volumes of ASS and experience erosion and soil loss during construction, resulting in cumulative impacts on terrestrial environmental quality. The referral does not provide sufficient information to determine the significance of potential impacts (including direct, indirect and cumulative) from the proposed action in its full context. There is insufficient information to determine whether the proposed management and mitigation measures identified in the referral are adequate to reduce the significance of those impacts. The significance of impacts and the ability to meet the NT EPA's factor objective for terrestrial environmental quality is uncertain.
	Terrestrial ecosystems The onshore development area covers approximately 32 ha and is within Darwin Harbour mangrove communities and salt pan habitat that potentially provides habitat for threatened and migratory fauna species. Construction of the onshore inlet station would also involve clearing of dry monsoon rainforest. Construction and operational noise have the potential to affect threatened or migratory species including the Far Eastern Curlew and Northern Brushtail Possum, which is known to occur at the onshore development area. Submissions on the referral raise concerns that planned and unplanned venting,

[1] NT EPA Environmental factors and objectives
[2] Territory Stories - Acid sulfate soils of the Darwin region
[3] Ichthys CCS proposes 76.5 ha terrestrial disturbance. Ichthys AGRU and CCS preparedness proposed 17 ha disturbance.

	pipeline leaks or ruptures can lead to direct mortality of fauna, including migratory shorebirds, through asphyxiation. The proponent has identified that CO_2 leaks from the pipeline below ground can also lead to hypoxic and sub-zero soil conditions, leading to potential significant impacts on surrounding vegetation health. The indirect impacts via associated activities which are anticipated to involve substantial vegetation clearing and noise, has the potential to have cumulative impacts on threatened and migratory species including shorebirds. The referral does not provide sufficient information to determine the significance of potential impacts (including direct, indirect and cumulative) from the proposed actions in its full context. There is also insufficient information to determine whether the proposed management and mitigation measures identified in the referral are adequate to reduce the significance of those impacts. The significance of impacts and the ability to meet the NT EPA's factor objective for terrestrial ecosystems is uncertain.
Sea	**Coastal Processes** The referral identifies the requirement to dredge between 600,000 and 900,000 m^3 of sediment from Darwin Harbour to accommodate construction of the pipeline and SPFO cable. The resulting changes to seabed topography and sediment transport and deposition dynamics has the potential to impact local hydrodynamics, affecting geophysical and hydrological processes of Darwin Harbour. Submission on the referral from the Department of Lands, Planning and Environment (DLPE) agree with the proponent's conclusion that hydrodynamic and sediment transport modelling be undertaken to inform the assessment of potential impacts. The indirect impacts via associated activities which involve dredging and the disposal of dredge spoil and has the potential to have cumulative impacts on coastal process. The referral does not provide sufficient information to determine the significance of potential impacts (including direct, indirect and cumulative) from the proposed action in its full context. There is also insufficient information to determine whether the proposed management and mitigation measures identified in the referral are adequate to reduce the significance of those impacts. The significance of impacts and the ability to meet the NT EPA's factor objective for coastal processes is uncertain.
	Marine environmental quality The referral identifies the requirement to dredge between 600,000 and 900,000 m^3 of sediment from Darwin Harbour to accommodate construction of the pipeline and SPFO cable. Dredge spoil plus an undetermined volume of PASS from the onshore development area may be disposed of at the offshore dredge spoil disposal grounds in the Beagle Gulf, approximately 12 km north-west of Lee Point. Dredging and dredge spoil disposal has the potential to impact on marine environmental quality through changes to marine water quality, suspended sediments and sedimentation. The proponent has committed to undertaking numerical/quantitative modelling of credible CO_2 leak scenarios to evaluate the fate and effect of plumes. The DLPE submission supports this commitment to enable proper assessment of the significance of impacts associated with leak scenarios, such as seawater acidification, hypoxia, oxygen displacement and associated temperature drops, and benthic

	toxicity. The indirect impacts via associated activities which involve wastewater discharges to the marine environment, dredging and the disposal of dredge spoil and PASS at the dredge spoil disposal ground and has the potential to have cumulative impacts on marine environmental quality through increases in turbidity and sedimentation, waste and liquid discharges, and site run-off. The referral does not provide sufficient information to determine the significance of potential impacts (including direct, indirect and cumulative) from the proposed action in its full context. There is also insufficient information to determine whether the proposed management and mitigation measures identified in the referral are adequate to reduce the significance of those impacts. The significance of impacts and the ability to meet the NT EPA's factor objective for marine environmental quality is uncertain.
	Marine ecosystems The referral identifies that potential impacts to marine ecosystems through seabed disturbance, underwater noise, light emissions, vessel discharges, and various geophysical survey techniques. The referral also identifies that the following unplanned events may impact marine ecosystems; introduction of invasive marine species, marine fauna interactions, discharge of waste or equipment, hydrocarbon releases, CO_2 release from a pipeline leak during operation. The DLPE submission supports the proponent's commitment to obtaining further information to inform the assessment of the significance of impacts associated with the proposed action on various fauna, including: • listed migratory pelagic seabirds and shorebirds • fish, sharks and rays • mammals including Australian snubfin, Australian humpback and Spotted bottlenose dolphin • reptiles including flatback turtles. The referral does not provide sufficient information to determine the significance of potential impacts (including direct, indirect and cumulative) from the proposed action in its full context. There is also insufficient information to determine whether the proposed management and mitigation measures identified in the referral are adequate to reduce the significance of those impacts. The significance of impacts and the ability to meet the NT EPA's factor objective for marine ecosystems is uncertain.

Air	**Air quality** The referral identifies that the proposed action has the potential to result in localised changes in air quality and subsequent exposure to receptors to air pollutants. The referral identifies that a detailed assessment of atmospheric emissions will be conducted to inform an assessment of potential impacts of air quality. Submissions on the referral raise concerns with the composition of the CO_2 stream, including concentrations of pollutants including, but not limited to, volatile organic compounds (including BTEX[4]) & hydrogen sulfide and the impacts to air quality from planned and unplanned venting (during operations, upset conditions), and pipeline leaks or ruptures. The referral does not provide sufficient information to determine the significance of potential impacts (including direct, indirect and cumulative)s resulting from the proposed action in its full context. There is also insufficient information to determine whether the proposed management and mitigation measures identified in the referral are adequate to reduce the significance of those impacts. The significance of impacts and the ability to meet the NT EPA's factor objective for air quality is uncertain.
	Atmospheric processes Direct greenhouse gas emissions resulting from the proposed action are limited to vehicles and equipment during construction, commissioning, operation of facilities and operational venting and unplanned releases. The proponent asserts that the proposed action will minimise greenhouse gas emissions so as to contribute to the NT Government's goal of achieving net zero greenhouse gas emissions by 2050. The NT EPA accepts that this is a potential indirect impact of the proposed action, and notes the importance of further information to understand the extent and likelihood of this potential benefit. Information provided in the referral for context indicates that emissions from associated activities may result in a significant impact to atmospheric processes. The referral does not provide sufficient information to determine the significance of potential indirect and cumulative impacts from the associated activities. There is also insufficient information to determine whether any proposed management and mitigation measures are adequate to reduce the significance of those impacts including direct, indirect and cumulative. The significance of impacts and the ability to meet the NT EPA's factor objective for atmospheric processes is uncertain.

[4] Benzene, Toluene, Ethylbenzene & Xylenes

People	**Community and economy** The proposed action area is situated less than 4 km from Darwin and 10 km from Palmerston and will generate noise and vibration including during construction of the pipeline, onshore development area, and operation of the onshore inlet station. The referral has identified that the construction of the proposed subsea pipeline and cable has the potential to impact on other marine users including: • commercial shipping industry • commercial fishing industry • recreational fishers • Defence • users of existing petroleum and telecommunications infrastructure. Submissions on the referral also identify potential impacts to recreational boaters and the tourism industry. The nearshore pipeline development area overlaps with the Charles Point Wide Reef Fish Protection Area and is also in proximity to the Lorna Shoals Reef Fish Protection Area. These areas are intended to protect and assist in the recovery of reef fish species vulnerable to overfishing, including golden snapper and black jewfish. Construction and operation of the subsea pipeline within and in proximity to these areas has the potential to cause significant impacts to commercial and recreational fishers, and tourism operators. The proposed action detailed in the referral has the potential to significantly impact on community and economy values, through further increased noise, workforce activities and vessel movements. The referral does not provide sufficient information to determine the significance of potential impacts (including direct, indirect and cumulative) from the proposed action in its full context. There is also insufficient information to determine whether management and mitigation measures are adequate to reduce the significance of those impacts. The significance of impacts and the ability to meet the NT EPA's factor objective for community and economy is uncertain.

	Culture and heritage Proposed activities within the onshore development area and pipeline development area have to potential to impact on culture and heritage. Impacts to culture and heritage in the marine environment have the potential to occur primarily through seabed disturbance activities including trenching and dredging. The referral identifies that five shipwrecks, three of which are protected are located within the nearshore pipeline development area. The referral states the proponent has applied to the Aboriginal Areas Protection Authority (AAPA) for an Authority Certificate for the nearshore pipeline development area. Submission from AAPA on the referral confirms that Authority Certificates have been issued over areas affected by the proposal, which include restricted work areas associated with an Aboriginal sacred site within part of the offshore pipeline corridor area. The referral also identifies that the placement of infrastructure has not been confirmed, therefore creating uncertainty regarding the potential impacts for culture and heritage from the nearshore pipeline development area. The referral does not provide sufficient information to determine the significance of potential impacts (including direct, indirect and cumulative) likely to result from the proposed action. There is also insufficient information in the referral to determine whether impacts from associated activities can be appropriately managed or mitigated. The significance of impacts and the ability to meet the NT EPA's factor objective for culture and heritage is uncertain.
	Human health The referral identifies that the proposed action has the potential to result in localised changes in air quality and subsequent exposure to air pollutants. The referral identifies that a detailed assessment of atmospheric emissions will be conducted to inform an assessment of potential impacts of air quality. Submissions on the referral raise concerns with the composition of the CO_2 stream, including concentrations of pollutants including, but not limited to, volatile organic compounds (including BTEX) & hydrogen sulfide and the impacts to human health from planned and unplanned venting (during operations, emergencies and upset conditions), and pipeline leaks or ruptures. The referral does not provide sufficient information to determine the significance of potential impacts (including direct, indirect and cumulative) to human health as a result of the proposed action in its full context. Without sufficient information to determine potential impacts to human health it is unclear that management and mitigation measures are appropriate to prevent significant impacts to human health. The significance of impacts and the ability to meet the NT EPA's factor objective for human health is uncertain.

Other environmental factors

The NT EPA considered other environmental factors during its consideration of the referral; however, the impact on those factors was not considered to be significant.

Justification

A standard assessment by environmental impact statement is required because:

Regulation 59 (a) the high level of uncertainty regarding the significance of the potential direct, indirect and cumulative impacts of the proposed action in its full context on ten of the NT EPA's environmental factors.

Regulation 59 (b) the need to improve the NT EPA's level of confidence in predicting potential significant direct, indirect and cumulative impacts of the proposed action in its full context taking into account the extent and currency of existing knowledge, particularly in relation to the:

- significance of impacts to terrestrial environmental quality through vegetation clearance and volumes and characteristics of potentially acid sulfate soils within the disturbance footprint of the associated activities
- construction timing and locale of infrastructure required for the proposed activity, and their proximity to habitat for threatened and migratory fauna particularly migratory shorebirds
- significance of impacts on coastal processes resulting from activities including subsea disturbance activities in the near shore development area
- significance of impacts on marine environmental quality resulting from activities including subsea disturbance activities in the near shore development area and activities in the onshore development area that have potential to impact the marine environmental quality
- significance on impacts on marine ecosystems from proposed activities that have the potential to impact on marine habitats or marine fauna
- degradation of air quality from emissions associated with the proposed activities and associated activities including their commissioning and operations, including venting
- CO_2 emissions across the life of the proposed action and associated activities
- construction timing and locale of infrastructure required to facilitate the associated activities, and the potential disruptions to the communities of the greater Darwin region, including commercial and recreational users of Darwin Harbour
- the locations of the proposed action and locations of associated infrastructure required to facilitate the associated activities to ensure the protection of the cultural and heritage values
- impacts to human health from degraded air quality from emissions and pollutants associated with venting and operation of facilities and associated infrastructure.

Regulation 59 (c)	the low level of confidence in the effectiveness of the proposed measures identified in the referral to avoid, mitigate or manage potential significant impacts of the proposed action and the associated activities.
Regulation 59 (d) & (e)	the extent of community engagement that has occurred, and whether it is sufficient to ensure that affected communities and individuals understand the proposed action and its associated activities and the potential direct, indirect and cumulative impacts on the ten environmental factors as described above.

Conclusion

The NT EPA considers that the proposed action has potential for significant impacts (including direct, indirect and cumulative impacts) on ten environmental factors, and that environmental impact assessment is required. There is a high level of uncertainty regarding the potential significant impacts (including indirect and cumulative impacts) from the proposed action and the associated activities and there is insufficient information for the NT EPA to be confident that the proponent has (a) adequately predicted the potential significant impacts of the proposed action, and (b) demonstrated that the proposed measures to avoid, mitigate or manage potential significant impacts are likely to be effective. Further information is required to enable the NT EPA to complete its assessment.

In making its decision under section 55 of the EP Act and regulation 57 of the EP Regulations, the NT EPA has considered:

- the objects of the Act in section 3 of the EP Act
- the principles of environment protection and management in Part 2 of the EP Act
- the purpose of the environmental impact assessment process in section 42 of the EP Act
- the matters under regulation 56 of the EP Regulations
- the matters relevant to a consideration of the method of environmental impact assessment in regulation 59 of the EP Regulations.