

NOPSEMA Inspection of Ichthys Project Offshore Facility (Operation)

Inspection details

Titleholder	INPEX Operations Australia Pty Ltd
Petroleum Activity	Ichthys Project Offshore Facility (Operation)
NOPSEMA Inspection No.	2109
Environment Plan	Ichthys Project Offshore Facility (Operation) Document No. X075-AH-PLN-00015; Rev 5 (dated 8 March 2018)
Inspection dates (Onshore)	29-30 March 2021
Lead Inspector	██████████
Inspection Team	██████████
Nominated titleholder's representative	██████████

Report distribution

Position	Company
Records management	NOPSEMA
	INPEX Operations Australia Pty Ltd

Revision status

Rev	Date	Description	Prepared by	Approved by
A	25-May-21	Internal draft	██████████	██████████
B	25-May-21	Draft for discussion with duty holders	██████████	██████████
0	27-May-21	Final	██████████	██████████

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1. Inspection legislative framework and methodology

1.1. Legislative framework

NOPSEMA conducts inspections as part of its legislated function to implement an effective compliance monitoring strategy to ensure compliance with NOPSEMA listed laws¹. Inspections are undertaken by NOPSEMA inspectors appointed by NOPSEMA under Section 602 of the *Offshore Petroleum and Greenhouse Gas Storage Act 2006* (OPGGSA).

This report has been prepared as required by the OPGGSA² and includes the Inspectors' conclusions from the inspection and the reasons for those conclusions. Where those conclusions indicate that there is non-compliance with the requirements of the OPGGSA, as described in the permissioning document(s), resulting in a risk or potential risk to environmental management, the Inspectors have made recommendations regarding action(s) required to address these conclusions.

A list of acronyms and abbreviations used in this report are provided in Appendix A.

1.2. Inspection objective and scope

The objectives of this inspection are to ascertain, for the scopes stipulated below, whether risks or impacts to the environment are being managed by the duty holder(s) as required by their duties under the OPGGSA and in accordance with accepted permissioning document(s); and that the controls described in those documents are effective in reducing these risks to ALARP and to an acceptable level.

The planned scope of this inspection was:

Item 1: Verification of commitments regarding the recommendations from previous inspections:

- Inspection 1960 – Planned emissions and discharges (flaring emissions and reduction technologies).

¹ NOPSEMA listed laws are defined in Section 601 of the OPGGSA.

² Under Part 2, Division 3 of Schedule 2A.

1.3. Preparation and conduct of the inspection

The inspection team prepared a planned inspection brief, including a list of documentation required prior to the inspection and proposed inspection itinerary and scope, and issued it to INPEX Operations Australia Pty Ltd (referred to herein as INPEX) on 11 March 2021.

On arrival at the premises, an entry meeting was held to communicate the purpose of NOPSEMA's inspection, the powers of the Inspectors under the OPGGSA and to provide an opportunity to discuss and clarify the inspection brief (including the scope of the inspection and proposed itinerary). A list of persons present at this meeting is included in Appendix B:

The Inspectors collected documents in order to aid in their consideration of the topics and to obtain supporting information for their findings and conclusions. Before leaving the premises, the inspection team prepared an Inspection Exit Brief, which was provided to and discussed with key personnel during an exit meeting. A list of persons present at this meeting is included in Appendix B:

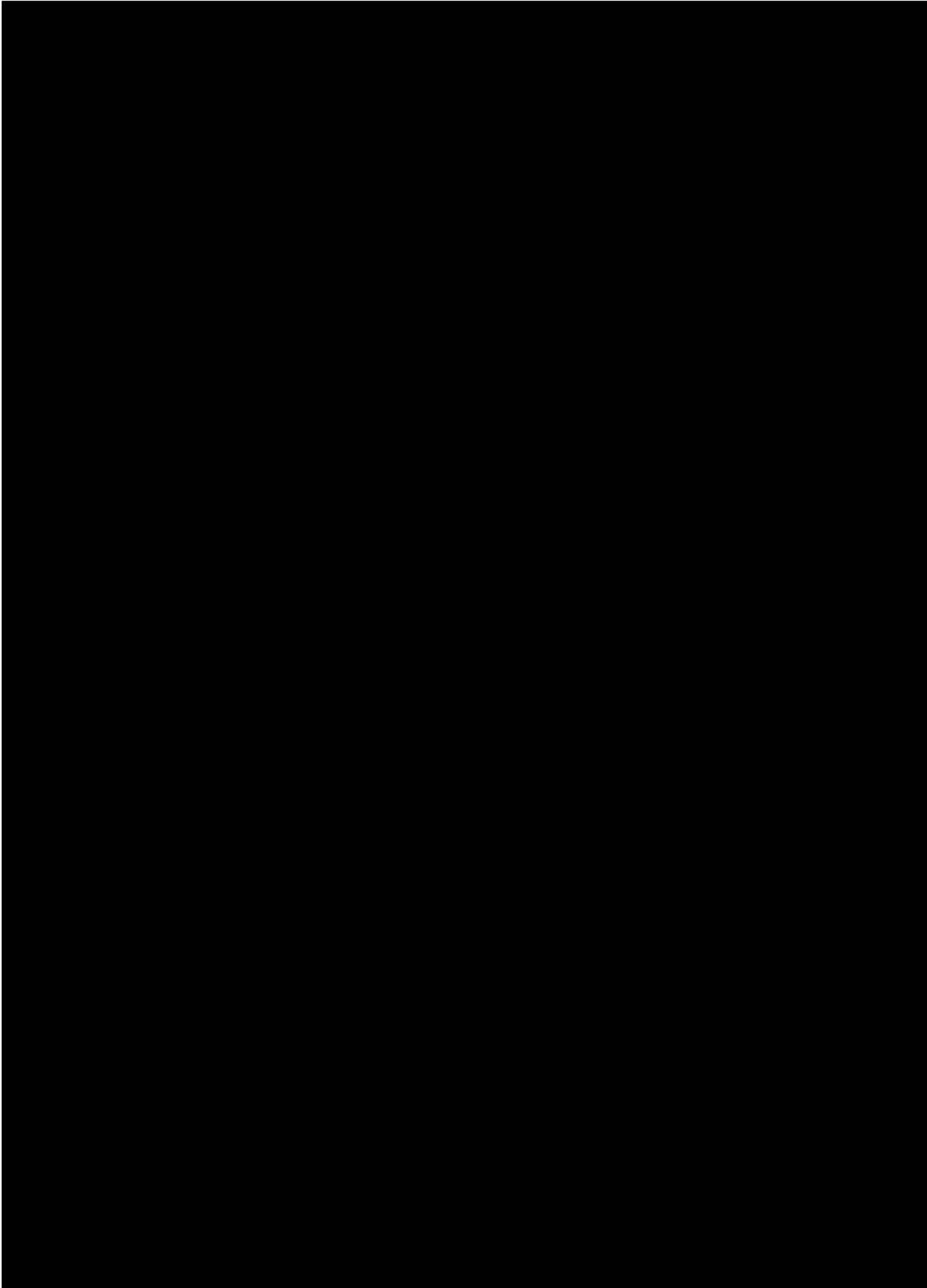
2. Inspection results

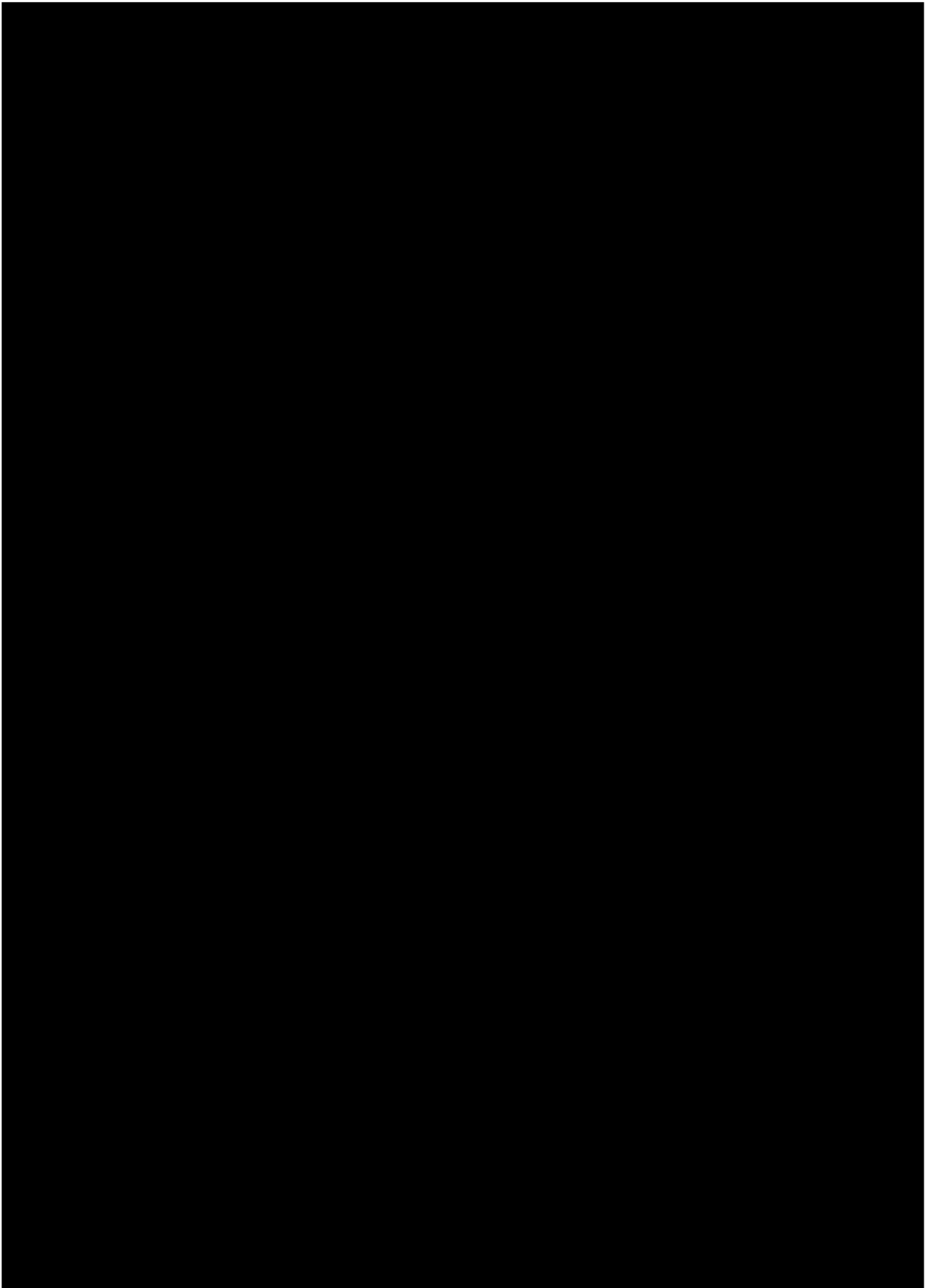
The following sections contain the detailed findings and conclusions for the topics covered in this inspection. As per NOPSEMA's inspection policy, a sampled approach was taken to arrive at the conclusions outlined in this report.

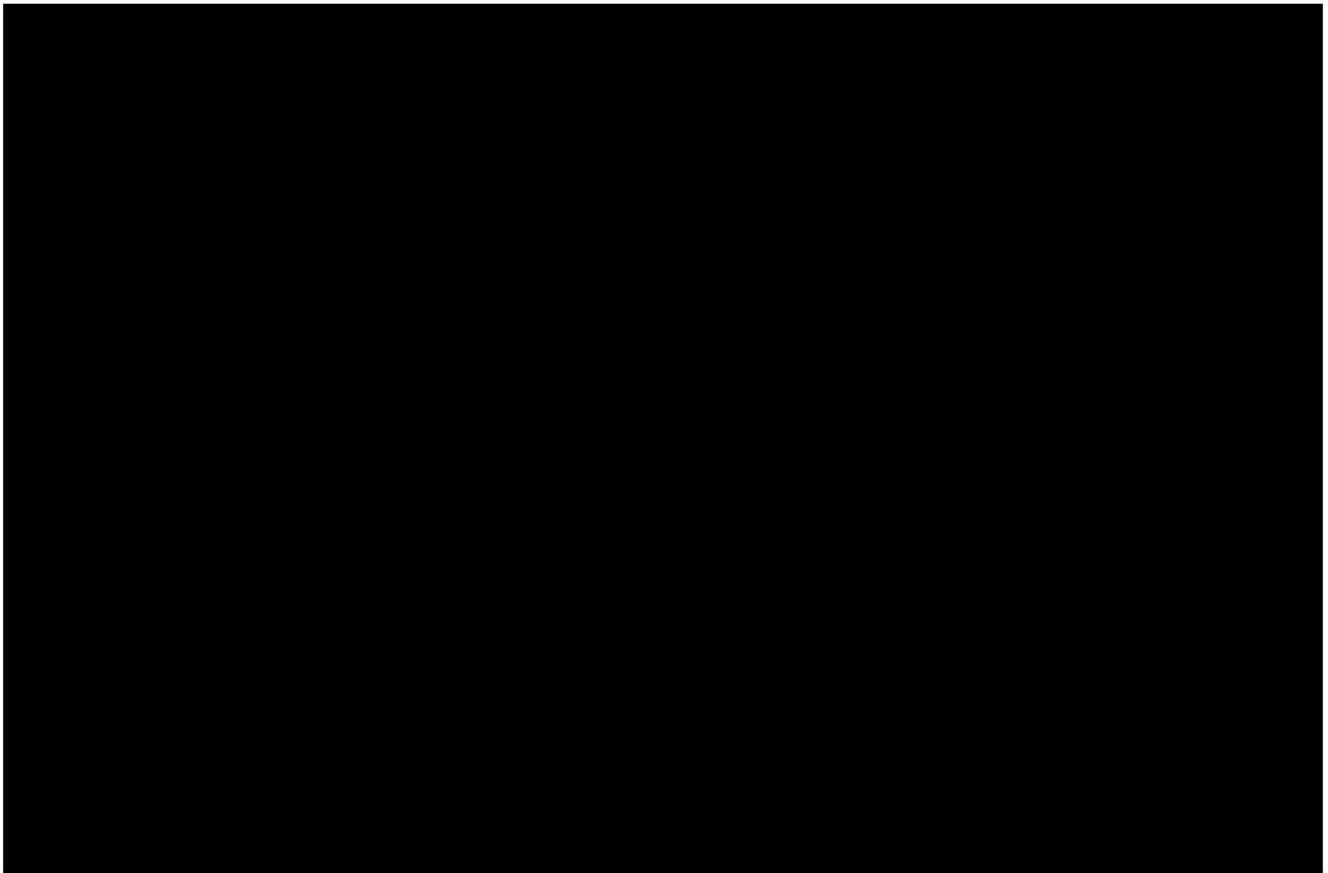
NOPSEMA expects the duty holder(s) to consider these findings and conclusions and undertake sufficient action of their own to both fully understand the issues presented and to take action to reduce the risks and impacts to ALARP and acceptable levels and come back into compliance with their duties under the OPGGSA and/or the requirements of relevant permissioning document(s).

2.1. Operational context

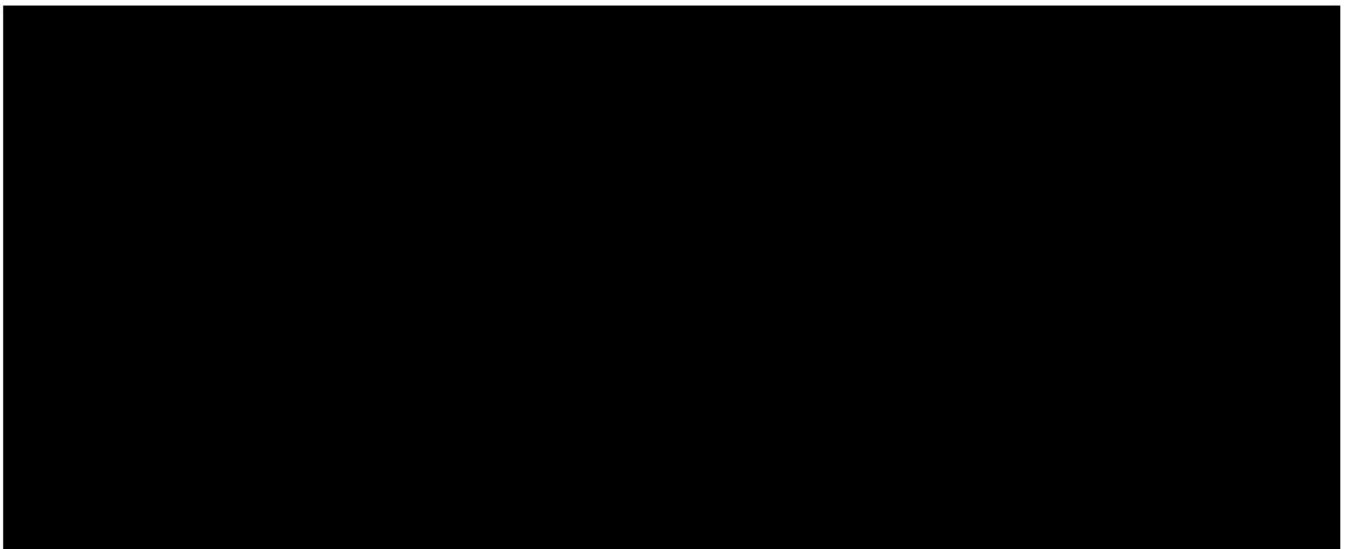
This EP covers the commissioning, start-up and operation of the CPF (Ichthys Explorer), the FPSO (Ichthys Venturer) and associated subsea equipment to the gas export riser base (GERB). In accordance with the NOPSEMA inspection programming framework, the present inspection aims to address all outstanding recommendations to complete the 2-year 'biannual' inspection cycle for a newly commissioned facility. Advice and recommendations will be provided to NOPSEMA with regard to the future frequency of inspections based on the established environmental management compliance profile of INPEX.







2.2.3. Conclusions

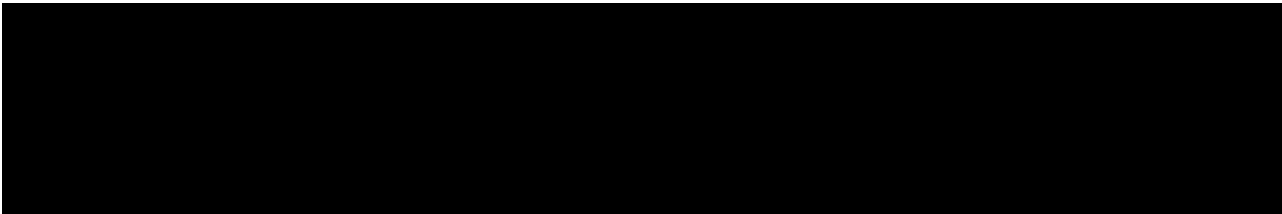




2.3. Follow up of previous Recommendations

Please refer to Appendix C for a detailed status of previous recommendations.


Suitable evidence has been provided to demonstrate completion of actions for outstanding Recommendations:



- 
- 1960-1: Revision of monthly and yearly flaring target calculation;
 - 1960-2: Implementation and completion of the action plan for commissioning of the 'Flash Gas Compressor' and 'Off-gas Recovery System'.

INPEX has demonstrated a thorough investigation of the issues associated with flaring and 
, which has highlighted the complexities of resolving these issues. It is noted that additional corrective actions beyond those specified in action plans for outstanding Recommendations has been observed. As a result of these observations and findings, the NOPSEMA Inspectors conclude that Recommendations 1801-9, 1866-1, 1866-2, 1866-3, 1866-7, 1960-1 and 1960-2 are closed.

NOPSEMA will consider compliance measures for addressing ongoing non-compliances with commitments in the EP including the implementation of:

- Greenhouse gas emissions reduction technologies; and,
- , practices and procedures.

Appendix A: Acronyms and abbreviations used in this report

Acronym or abbreviation	Definition
ALARP	As Low As Reasonably Practicable
CCR	Central Control Room
CPF	Central Processing Facility
EP	Environment Plan
EPO	Environmental Performance Outcomes
EPS	Environmental Performance Standards
GHG	Greenhouse Gas
LEMP	Liquid Effluent Management Plan
LIMS	Laboratory Information Management System
MOC	Management of Change
NOPSEMA	National Offshore Petroleum Safety and Environmental Management Authority
OIW	Oil-in-Water
OPGGSA	Offshore Petroleum and Greenhouse Gas Storage Act 2006
QC	Quality Control
TOR	Terms of Reference

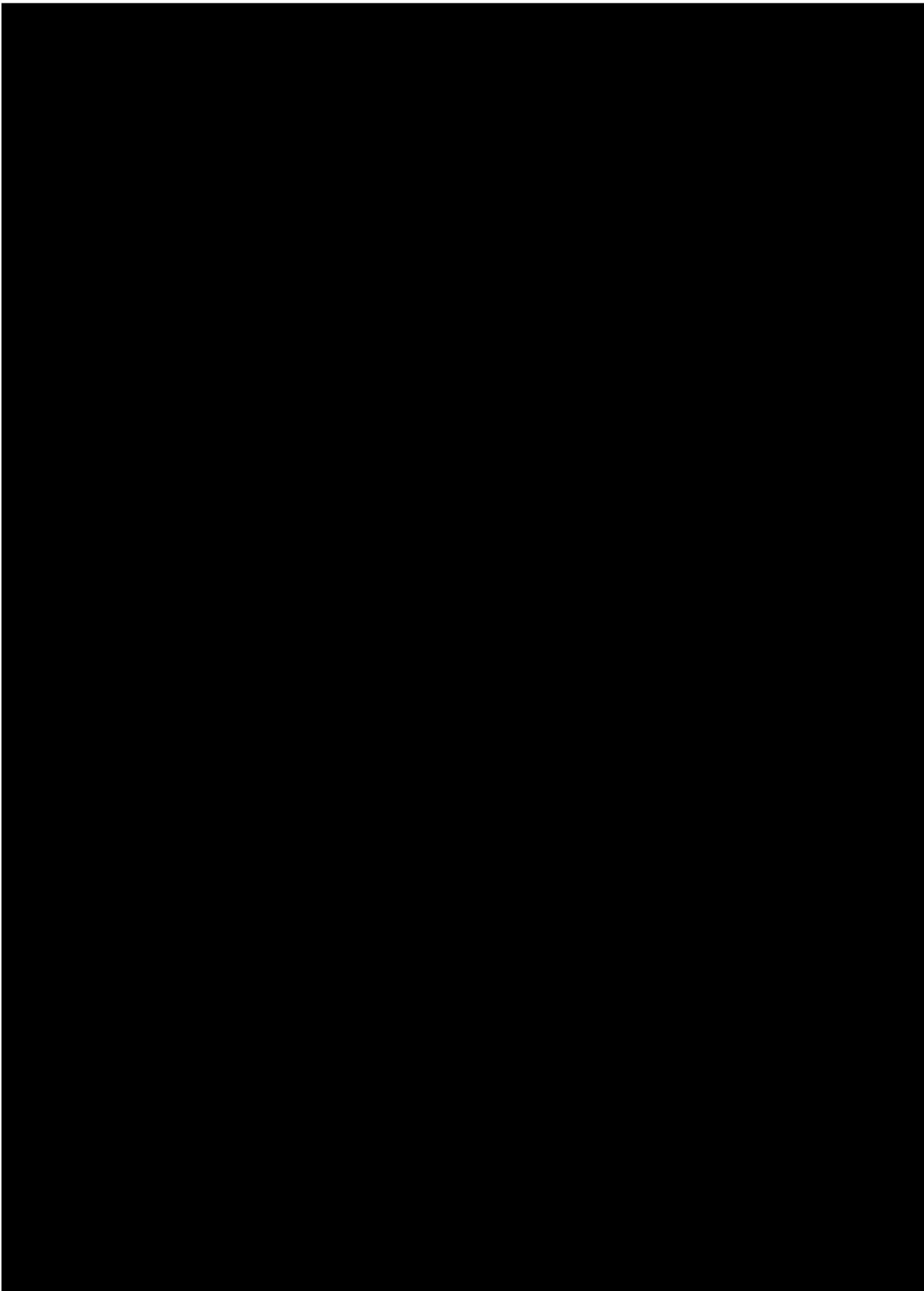
Appendix B: Summary of meeting attendance

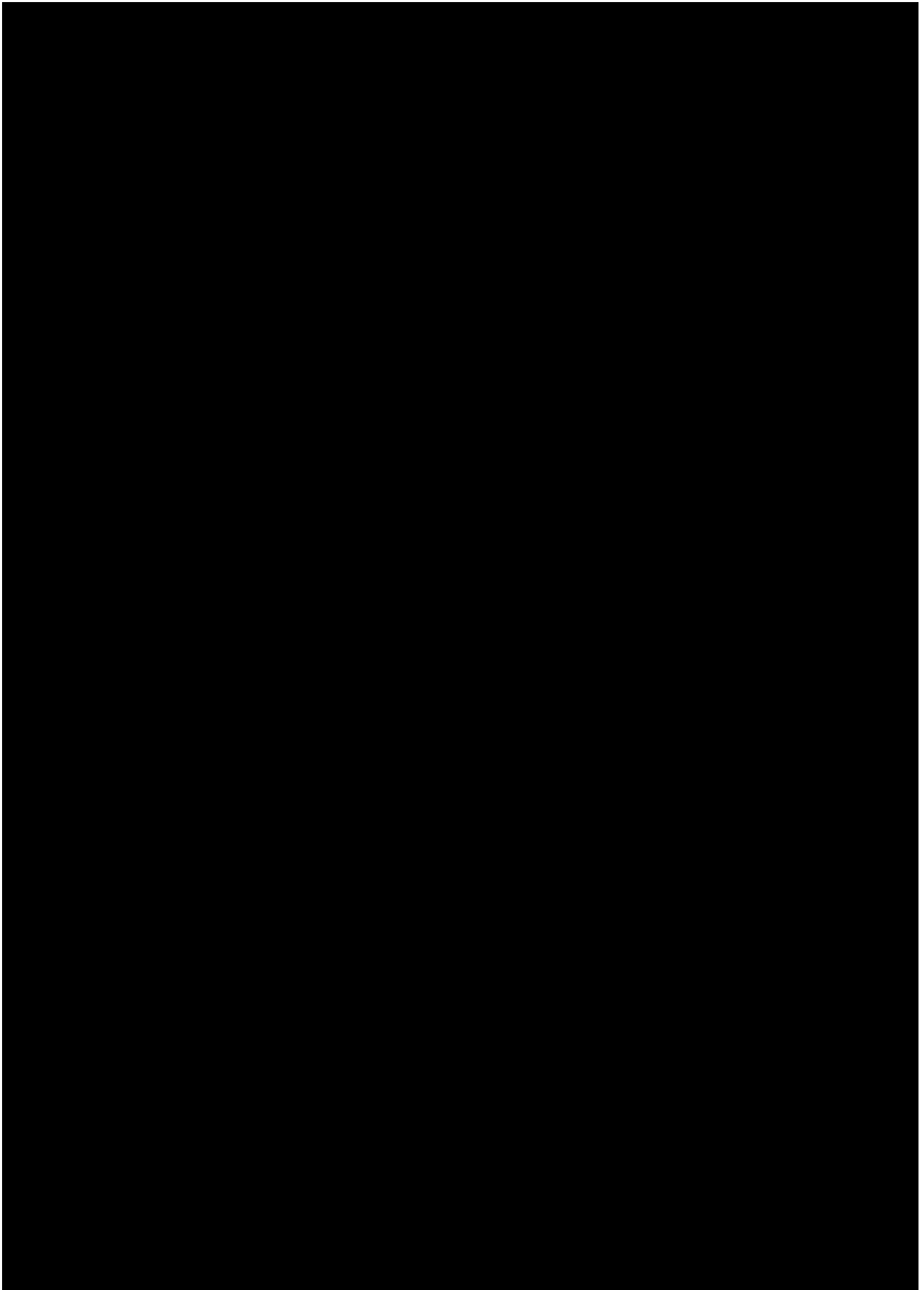
ATTENDANCE REGISTER

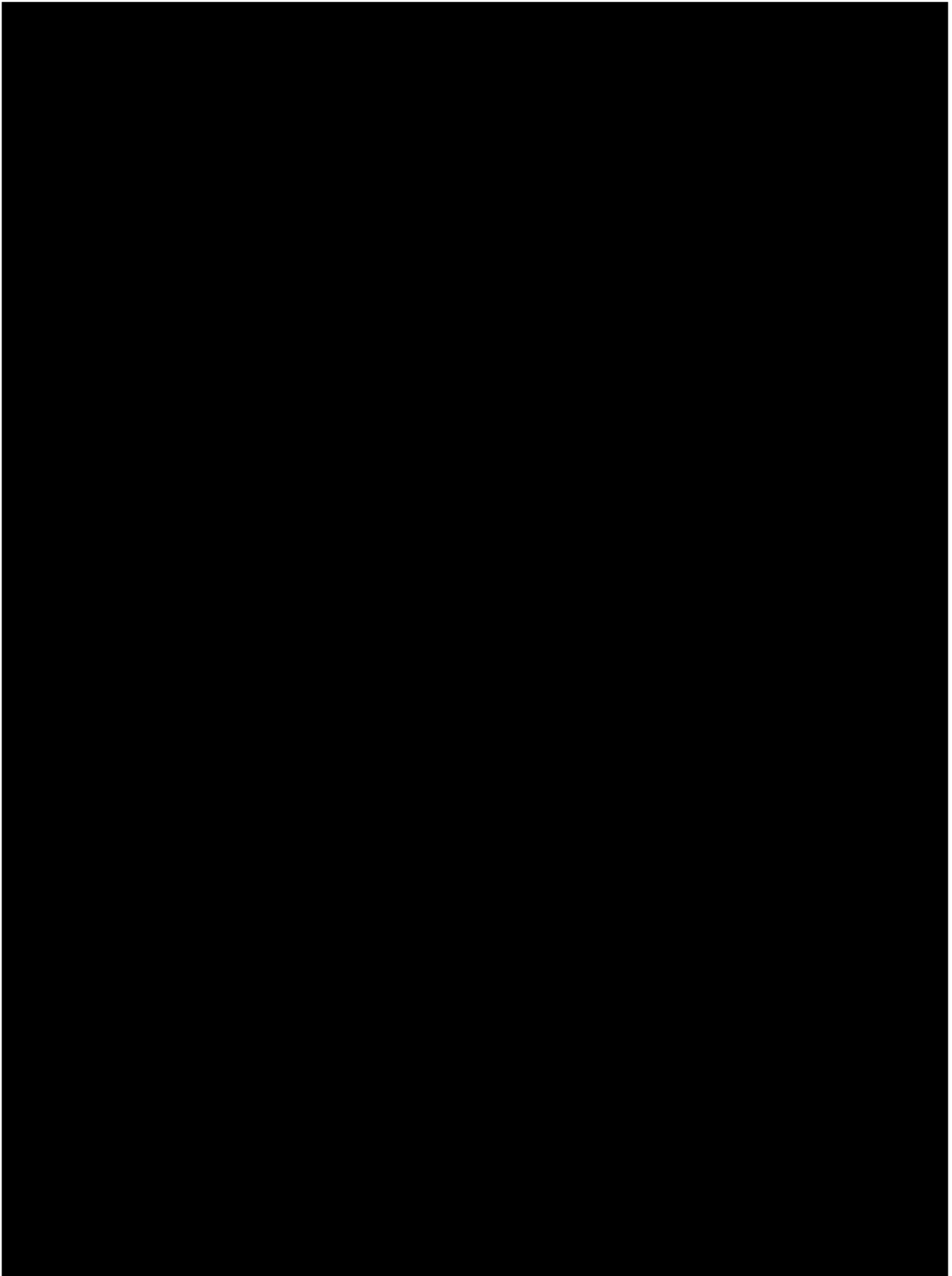
Environmental Inspection

Document No: N-02200-FM1214 A383123
Date: 18/08/2020

TITLEHOLDER:	INPEX Operations Australia Pty Ltd	Entry meeting date:	29 March 2021	
ACTIVITY:	Ichthys Project Offshore Facility (Operation)	Exit meeting date:	30 March 2021	
NAME (Please Print)	COMPANY	POSITION	Entry	Exit (Please Initial)*







September 2019	1960-1	INPEX will incorporate a revision of the assumptions for the calculation of	The 2019 'Offshore Facilities End of Year and Monthly Flaring Targets'
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		<p>monthly and yearly flaring targets to include additional representative data obtained during November 2019 to establish the 2020 Flaring targets.</p> <p>[15 January 2020]</p>	<p>management plan has been updated to include representative data obtained from the current flaring regime [Reference X060-A3-REP-60015; dated 17 June 2019]. It is however noted that monthly and annual flaring targets have been exceeded in 2020 (see findings in 1960-2).</p> <p>[Recommendation Closed]</p>
September 2019	1960-2	<p>1. INPEX will include the revised commissioning timeframe for the Flash gas compressors and the off-gas compressors within the Integrated activity plan (30 day look ahead).</p> <p>2. Prepare a technical note to evaluate the potential environmental impacts and risks associated with continuous flaring.</p> <p>[15 January 2020]</p>	<p>1. An 'Ichthys (IAP) Integrated Activity Plan: Level 2 - 30d IAP All Assets Overview' has been provided for the Flash Gas Compressor and Off-gas Recovery Compressor, with corrective actions indicated as being completed by January/February 2020.</p> <p>It is noted however that the corrective actions were not completed as planned due to technical challenges associated with commissioning the Flash Gas Compressor and Off-gas Recovery System. Successful implementation of emissions reduction technologies have not yet been achieved in accordance with commitments in the Environment Plan.</p> <p>It is noted that significant corrective actions (beyond requirements of Recommendation 1960-2) are presently being implemented for the Flash Gas Compressor (e.g. flare tip replacement campaign) and Off-gas Recovery System (e.g. investigation and technical assessment).</p> <p>2. The 'New Environmental Information Risk Assessment-Flaring' technical note [Reference: X075-AH-TCN-70000; 2 December 2019] has been provided. The outcome of this assessment incorporates the new flaring regime and concludes that no changes to the EP are required given additional processes are being implemented to ensure critical equipment is commissioned as soon as practicable to reduce light and air emissions from flaring.</p> <p>[Recommendation Closed]</p>

Appendix D: Summary of recommendations from this inspection

