



7 October 2019

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Subject	Draft Terms of Reference for PACL use EIA		

1 Introduction

In response to landowners' opposition to the use of polyaluminium chloride (PACL), MFEM and TTV have requested the PMU prepare a draft "Terms of Reference" document that would form the basis of an Environmental Impact Assessment (EIA) for the use of PACL in the water treatment process.

2 Draft Terms of Reference

These terms of reference (TOR) outline the matters to be addressed in an environmental impact assessment for the use of PACL in the Te Mato Vai (TMV) project (specifically the water treatment process). The proponent for the activity is To Tatou Vai (TTV), the water network operator in Cook Islands.

The EIA should only assess the activity of using PACL during operation of the water treatment plants. The wider environmental and social impacts associated with construction and operation of the TMV project have been considered separately and are subject to a separate approvals process.

The EIA report should use a level of analysis and detail that reflects the significance of the activity's potential environmental impacts, and that allows the Cook Islands Government and interested stakeholders to clearly understand the activity's likely environmental, social and cultural consequences.

Technical jargon should be avoided or accompanied by a clear, understandable explanation. Key impacts should be explained in a culturally-appropriate format, using graphics and illustrations to assist with interpretation, where relevant.

EIA – TERMS OF REFERENCE
Section 1 – Executive summary Present a concise, non-technical outline of the proposed use of PACL and each chapter of the EIA report. Include the results of impact and risk assessments, the proposed management/mitigation actions, and the conclusions reached.
Section 2 – Table of contents
Section 3 – Glossary List acronyms/abbreviations.
Section 4 – Introduction Provide a high-level overview of the TMV project and associated water treatment plants. Provide a description to the proposed use of PACL in the water treatment process including the purpose and objectives.

Section 5 – Policy and legal framework

Outline the relevant policies and laws that apply to the use of use of PACL and identify any approvals needed from government agencies. For example:

- National laws and related government approvals
- Multilateral Environmental Agreements
- Industry policies or codes of practice
- Health, safety, hazard and risk management standards

Section 6 – Activity description and justification

Present a detailed description of the proposed activity, including:

- The location of TMV project water treatment plants, size and layout, including a description of their proximity to watercourses, towns/villages, transport infrastructure and cultural/ecological assets.
- The water treatment plant components, processes, infrastructure and design, including technology and equipment likely to be used.
- The use of PACL for coagulation in the settlement tank.
- Method used to determine PACL usage.
- The removal of PACL-laden sludge from the settlement tanks.
- The potential carry forward of PACL to the AVG units.
- The drying of sludge in scour ponds and digging out the ponds.
- The transportation and disposal of dried sludge.
- The predicted resource and public infrastructure requirements, including for example, energy, water, labour, transport, minerals, hazardous materials.
- Predicted type and quantity of waste outputs (liquid, solid and gas emissions).
- Timeline for implementation, operation and expected lifespan of using PACL.
- Activity cost estimates.

Analysis of alternatives:

- Alternatives to the proposed use of PACL including chemicals, technologies, treatment processes or disposal methods.
- Advantages and disadvantages of alternatives (cost, practicality, feasibility).
- Explanation for choice of the preferred option.

Provide justification for the activity and its benefits

- Benefits to the local area, island, country (more efficient/cost-effective infrastructure, improved environmental outcomes, improved treatment outcomes).
- Consistency of the activity with national development objectives and plans.
- The need for the use of PACL.

Section 7 – Description of the baseline environment

Detail baseline (existing) environmental conditions relevant to where PACL will be used in the water treatment process. The level of examination and effort will depend on the scale of the activity, its physical setting and its area of influence.

Where relevant, the following aspects of the environment should be described:

- Climate (temperature, rainfall, winds, extreme weather events, climate change projections).
- Topography, geology and soils (landscape gradient or slope, seismic characteristics, areas vulnerable to landslides, erosion).
- Sensitive environmental areas or landuses immediately surrounding PACL storage areas, the scour ponds and sludge disposal locations. Identify any high value or threatened flora, fauna or herptofauna that may be present immediately surrounding these areas. .
- Water (surface and groundwater quantity and quality; site hydrology; local catchment area; downstream water uses/users; areas vulnerable to flooding, inundation or storm surges).
- Air (existing sources of air emissions or odour; ambient air quality, location of nearest sensitive receptors).
- Social context of the areas surrounding where PACL will be used (towns/villages; housing; transport and other community infrastructure; cultural traditions and community activities).
- Cultural resources and heritage (objects or sites of social/cultural significance, cultural values or beliefs relevant to the use of PACL).

Section 8 – Impact assessment

Assess and describe the potential impacts of the activity on the environment, social and cultural values identified in Section 7. The impact assessment should detail negative and positive; immediate, short-term and long-term; permanent and temporary impacts. The impact assessment should consider:

- A toxicity, fate and transport assessment of PACL.
- All relevant aspects of the environment identified in Section 7 and how they are likely to be changed or affected by the use of PACL, either directly or indirectly.
- The nature of the changes or effects, including negative consequences and/or benefits.
- The scale and magnitude of the changes likely to occur (over what area, or on what scale).
- The changes or affects that will arise at different stages of the water treatment process (settlement, drying and disposal).

Explain the methods used for the impact assessment, such as modelling, site surveys, or review of existing information or previous studies.

Section 10 – Operation environmental management

Provide a draft operational environmental management plan framework (OEMP Framework) that includes the following:

- Environmental performance objectives for the activity.
- Who will have responsibility for overseeing the implementation of different mitigation measures, incident response, environmental monitoring and reporting.
- A monitoring plan, including performance criteria for measuring the extent of environmental impacts, and/or the success of mitigation measures.

- The names of the government agencies the proponent will report their outcomes and monitoring results to.
- Staffing and equipment requirements, any training programmes or capacity development necessary to ensure successful OEMP implementation.
- A process for managing and responding to stakeholder concerns or complaints.

Provision should be made for periodic review of the OEMP once the activity becomes operational.

Section 11 –Community, land owner and stakeholder consultation

Landowner and stakeholder engagement for the use of PACL will be led by TTV. The EIA should include a summary of this consultation including:

- Meetings, workshops or other forms of consultation held to date.
- The outcomes of consultation, including issues and concerns raised by different groups or affected parties.
- A discussion of how issues and concerns have been addressed.
- An overview of future planned consultation and engagement activities.

Section 12 – Conclusions and recommendations

- Present the main conclusions of the EIA report and the proponent’s suggested recommendations for progressing with the activity, including key environmental management and mitigation measures that should be undertaken.

Section 14 – References

Appropriately reference all information sources that have been used or consulted during EIA report preparation.

Section 15 – Appendices

Include appendices that support the main text, including:

- Relevant environmental studies and reports.
- Detailed technical information.
- A table listing how this TOR has been addressed, cross-referenced to relevant sections of the EIA report.
- A table listing environmental mitigation/management commitments made by the proponent.
- Evidence of activity support from stakeholders.

3 Next steps

The PMU recommends that:

1. TTV review the draft TOR and table for discussion with NES.
2. TTV and NES agree on TOR structure, inclusions and exclusions, and nature of submission (i.e. as addendum to the Stage 2 construction EIA or as separate submission).
3. TTV engage an independent consultant to prepare the EIA submission.
4. Concurrently, TTV and PMU continue to complete the technical assessment work required to address the landowners' concerns around PACL use and disposal. This technical work will inform further landowner consultations (to be led by TTV and MoH) as well as provide technical input into the EIA submission.

Regards,



Ying Yang

Project Manager