

## TEMPLATE FOR COMMENTS

| <i>Document reviewed</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                  |
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| <b>Title of the draft being reviewed:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Environmental Management Systems |
| <i>Contact information</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                  |
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| <b>Given Name:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Andrew                           |
| <b>Government (if applicable):</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                  |
| <b>Organization (if applicable):</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | The Pew Charitable Trusts        |
| <b>Country:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                  |
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| <i>General Comments</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                  |
| <p>1. An overarching comment on this guideline document is that it is premature, given that it is premised to be read in conjunction with the Exploitation Regulations - which themselves are in draft form. Further, the guideline should make clear the relationship between the project-specific EMMP (and EIA) and the EMS. It would be better if this guideline acknowledged that an EMMP will be produced by a Contractor and approved by the Authority, with separate guidance issued on the production of the EMMP (and EIA). This draft document could then be reviewed alongside the draft EMMP and EIA guidance to ensure full alignment and remove any contradiction or duplication.</p> <p><b>Purpose of an EMS:</b></p> <p>2. It is usually a goal of EMS to ensure <i>continual improvement</i> in environmental performance. The draft Standard refers (Annex I, para 1, line 7) to <i>maintaining</i> environmental performance. With increasing information on the environment, impacts and effects obtained during mining operations, ensuring ongoing improvement is essential and should be the aspiration emphasised throughout this document.</p> <p>3. Annex I point 3 suggests the EMMP is the most relevant document for setting environmental outcomes. The EMMP is important but this Standard should also incorporate environmental objectives (and potentially other relevant Applicant documentation, like the closure plan) in addition to the EMMP. Alternatively, the exploitation regulations could require that the EMMP demonstrate compliance with specific environmental objectives.</p> <p>4. A fifth step is missing in Annex I, paragraph 4 regarding the key steps that form the core process of environmental management systems. Contractors should also: e) make improvements and evaluate their efficacy. Otherwise contractors need only identify areas for improvement without taking any specific action.</p> <p>5. Generally, the Standards should also incorporate mechanisms for stakeholder communication and feedback.</p> <p><b>Timing of EMS Development:</b></p> |                                  |

6. Annex IV of the draft Regulations states, regarding the EIS contents, that: “*Although a full environmental management system may not exist at the time the Environmental Impact Statement is submitted, outline the standards that will be considered and/or aligned with when developing the system for the project.*” Yet elsewhere reference is made in the draft Regulations to the applicant providing “details of the environmental management system”.

7. The Standard and Guidelines references baseline data collection, conduct of the EIA, and preparation of the EIS within the EMS: all activities that seem likely to occur under an ISA Exploration contract. Yet the Standard is to be promulgated pursuant to the Exploitation Regulations and as such would apply to Exploitation Contractors. These inconsistencies are confusing, and the Standard would benefit from more clarity and about the expected timing of EMS development.

### **Development of a Company or Business EMS:**

8. An EMS (or portions of it) may not form part of the suite of application documents available for public scrutiny where it reflects information on organizational roles, training and other matters that, in some sectors, is viewed as commercially sensitive. However, in sectors where an EMS is not disclosed, general practice is to make it available for external scrutiny via certified third-party accreditation organisations, while the companies themselves publicly report on the implementation of their EMSs and their project performance against environmental objectives.

9. Moreover, in established industries, such as terrestrial mining or oil and gas, a reputable international company would have an accredited EMS in place covering its general business operations (i.e. a ‘company or business EMS’) before developing a new project or any site-specific EMS, EIS and EMMP. Such an EMS is seen as a demonstration of commitment to environmental performance by the leadership of a company, as well as the staff capacity and competence, and organisational framework to deliver on future environmental obligations.

10. The ‘company or business EMS’ would typically reflect:

- the company’s own policies and standards regarding the range of environmental issues (the generic risks) relevant to its activities, such as air and water pollution, greenhouse gas emissions, and resource use and efficiency, with an especially strong focus on matters such as:
- the prominence of environmental management within a company’s strategic planning processes;
- the inputs from company and business leadership; and
- clear commitments to proactive initiatives aimed at continuous improvement;
- industry and international standards and guidance for an EMS (e.g. ISO 14001); and
- host-country legislation and requirements for where the company’s business is located.

The ‘company or business EMS’ thereby provides the leadership, policy and organisational framework that is a prerequisite for developing project-specific EMS and delivering the commitments contained in project-specific EISs and EMMPs. A ‘project-specific EMS’ would then reflect the ‘company or business EMS’, with detail on risks, impacts, mitigation and environmental management and monitoring requirements provided by the project-specific EIS

and EMMP documents. The draft Standard and Guidelines should integrate this established practice of other industries.

### **Other Industry Practice and Guidance:**

11. Generally, the document could benefit from further detail and might draw from other industry guidance on EMS such as that produced by IOGP and IPIECA:

“Operating Management System Framework for controlling risk and delivering high performance in the oil and gas industry” (<https://www.iogp.org/bookstore/product/operating-management-system-framework-for-controlling-risk-and-delivering-high-performance-in-the-oil-and-gas-industry/>).

12. The EMS should reflect a clear focus on sustainability in an Applicant’s corporate strategy. The senior management team of an organisation should include environmental considerations in all aspects of the business and create policies and clear management responsibilities that to integrate environmentally responsible and sustainable management practices into all operations. This is partly covered in the Leadership and Policy section, but should be expanded. Suggestions used elsewhere in related industries/ the IMMS code, would require embedding environmental goals in the job descriptions of all managers. Establishing a senior executive environmental manager, preferably accountable to the CEO (example responsibilities outlined in IMMS code page 6)

### **Staff Code of Conduct:**

13. International oil and gas (and mining) companies usually operate governance systems of internal controls that require all their staff to act in ways which are consistent with:

- applicable host-country and international laws and regulations; and
- with the company’s own specific requirements, performance standards and values.

The above is encapsulated in a company ‘Code of Conduct’ or similar, which is then underpinned by other requirements, including the EMS. Adherence by staff to the requirements of a ‘Code of Conduct’ is critical in implementing the company’s environmental performance and management commitments. The draft document should therefore require a code of conduct for company staff. Although not strictly an integral part of an EMS, the requirement could be set out in the Standard and the expected scope of a Code of Conduct could form an additional Annex.

### **Overlap with Other Guidance:**

14. In several places, the draft addresses matters that are the domain of the EIS and the EMMP, risking contradiction and introducing confusion. Since the draft regulations currently envisage that the EIS will precede a full EMS,, it is inappropriate for the EMS guidance to call for action under the EMS regarding issues that should instead be addressed in the EIS or EMMP (see for example paragraph 20 on baseline data collection).

**Management of Change:**

15. Given the likely importance of adaptive management in addressing some of the environmental management uncertainties for seabed mining, the draft guidance could usefully include a section on ‘management of change’. This could also cover the risks associated with changes to Contractor processes such as changes in its organisational structure, operating practices, changes to technology or introduction of new assets and equipment.

*Specific Comments*

| Page                                                                                         | Line       | Comment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
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| <b>‘Background’ note prefacing the draft Standard and Guideline</b>                          |            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 1                                                                                            | Para. 1    | The identity of the consultant who prepared this draft should be disclosed in the interests of transparency, accountability, and consistency with how other ISA consultancies have been addressed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Annex I</b>                                                                               |            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Draft standard on the development and application of environmental management systems</b> |            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 2                                                                                            | 4-7        | It is usually a goal of EMS to ensure continual improvement in environmental performance. The document refers to maintaining environmental performance. Suggest changing the emphasis.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 2                                                                                            | 15<br>3(a) | “Site-specific” objectives are only part of the criteria for objectives of an EMS. Others are reflected in the Draft Regulations: DR 2(e)(i) states “A fundamental consideration for the development of environmental objectives shall be the effective protection for the Marine Environment, including biological diversity and ecological integrity” while DR 45 includes “(a) Environmental quality objectives, including on biodiversity status, plume density and extent, and sedimentation rates”                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 2                                                                                            | 21         | This clause (and in particular the use of the word ‘including’ rather than ‘such as’) effectively binds the regulations to the ISO standards. It is unclear whether this was the intention, or whether it is an error of drafting. While reliance by the ISA on ISO standards may be an effective way to 'outsource' the determination of appropriate standards for Contractors, it should be noted that the ISO is heavy on systems documentation and provides lighter guidance on operational implementation. Some ISO standard users have noted that ISO reporting requirements are very resource intensive yet following the stringent document processes does not necessarily lead to best practice EMS. It is therefore recommended to amend this wording to indicate that equivalency or alignment with the ISA standards is acceptable, and/or also to refer to other sources (e.g., International Finance Corporation (IFC) Standards) in addition to the ISO standards, to better balance operational implementation and systems documentation. |
| 2                                                                                            | 37         | Given that the Standards are binding, and Guidelines are not, it is suggested that the requirement for external auditing/independent review of environmental monitoring data be included in the Standard.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

| <b>Annex II<br/>Draft guidelines on the development and application of environmental management systems</b> |            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
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| 3                                                                                                           | 55         | Baseline data should cover more than just the seabed. Suggest changing the heading from “Baseline data on the seabed” to “baseline environmental data” or just “baseline data.”                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 3                                                                                                           | 81         | Suggest reference be made to EMS being important for exploration contractors as well (recognizing that the exploration regulations are distinct).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 3                                                                                                           | 83 I.2.    | The Guidelines should be read “subject to” instead of ‘in conjunction with’ the Exploitation Regulations as well as other relevant International Seabed Authority, Standards and Guidelines, the Convention and the 1994 Agreement.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 4                                                                                                           | 95         | Paragraph 4 appears to be missing.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 4                                                                                                           | 100        | The suggestion that managers would perform effective leadership by ‘pointing out directions’ reads strangely. The guidance should instead call for a ‘Staff Code of Conduct’ to elaborate on personnel roles and functions (refer para 14 in general comments).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 4                                                                                                           | 105        | As the requirements and functions of an EMS should be mandatory, a graphic illustrating these functions as they are expected to be applied should be shown in the Standard, and not the Guidelines.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 4                                                                                                           | 105        | “Improvement” or “Improved Environmental Performance” should be included under the Monitoring and Performance Evaluation section.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 5                                                                                                           | 128 III.A, | Demonstrating leadership and commitment to the EMS also requires ongoing public engagement. Suggest adding “actively ensures public participation and access to information as required by the Regulations.”                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 5                                                                                                           | 127        | Suggest specifying “environmental management” before the word “leadership”.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 5                                                                                                           | 132        | <p>It is unclear whether the reference here is to an environmental policy for the contractor generally, or for the specific project, or both. It would be helpful to clarify.</p> <p>Moreover, the draft Guideline lacks specific detail as to what the Contractor’s Environmental Policy should cover. Details of this policy are a requirement of a contract application, so it would be helpful both for the Contractor, and for the LTC who must review and assess the submitted policy, to provide some more specific guidance about expected content, which could include but not necessarily be limited to: :</p> <ul style="list-style-type: none"> <li>· prevention of incidents that may lead to injuries, pollution, environmental damage, process losses etc;</li> <li>· compliance with legal and other requirements;</li> <li>· alignment with the ISA’s environmental policy/ies (and other relevant instruments, for example, the relevant Regional Environmental Management Plan);</li> <li>· the effective management of environmental risks;</li> <li>· adoption of sustainable practices in key areas;</li> </ul> |

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|   |              | <ul style="list-style-type: none"> <li>· establishing measurable objectives and targets for improving performance;</li> <li>· providing the staff and other resources needed to meet performance objectives;</li> <li>· encouraging employee participation;</li> <li>· respecting defined standards of staff conduct.</li> </ul> <p>The Guideline states that senior management should ‘communicate an environmental policy’ but does not indicate to whom this communication should be made.</p>                                                                                                                                                                                                                                                                                                                                                             |
| 5 | 135          | <p><i>11. Environmental objectives</i></p> <p>In addressing environmental objectives, the draft guidance focuses almost exclusively on compliance. Compliance objectives will be set in law, regulations, the outcomes of the EIA and EMMP and in the Contract. The EMS will not set these objectives. The draft guidance should therefore consider more emphasis on the following:</p> <ul style="list-style-type: none"> <li>• establishing objectives that are consistent with Contractor corporate and/or Sponsoring State objectives and targets for sustainability and environmental protection;</li> <li>• objectives that are integrally connected to continued improvement;</li> <li>• documentation of objectives; and</li> <li>• linking the objectives to the elements of to the ‘Strategy’ as described in Para 14, lines 152 to 159.</li> </ul> |
| 5 | 138          | “[A]ny environmental rules” should be replaced with “all environmental rules and other relevant rules” etc. (e.g. to capture health and safety rules).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 5 | 139          | Suggest replacing the word “procedures” with “standards”                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 5 | 141-146      | Paragraph 12’s list of criteria for the use of environmental objectives should reflect that such objectives should also be ‘time bound’. This is the implication of the following paragraph 13, but it would be clearer if it were expressly stated. A fifth criteria should also be that such objectives are: “Referred to when reporting the outcomes of monitoring undertaken according to the EMMP”                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 5 | 143          | Environmental objectives should also be “monitored”: “in a standardised manner, which is to be documented in the EMMP.”                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 5 | 148 III.B.13 | Environmental objectives should be both short- and long-terms, as both are required. That this clause implies a choice between them is probably not intended. Suggest wording as: “environmental objectives <i>will include</i> long term (e.g. 3 – 5 years) <i>and</i> short term (e.g. annual) <i>objectives.</i> ”                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 5 | 153          | The required content of a plan for operationalisation of the environmental objectives should be clearly elaborated. Suggest removing the word “ideally” as a caveat to these provisions., section (b) should include: “ <i>how it will be achieved and what resources will be required</i> ”                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 5 | 156          | Section (b) in the list of that required content should include: “ <i>how it will be achieved and what resources will be required</i> ”                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

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| 5 | 159 | Suggest adding a new point (f) reading: “how the results will be communicated, both internally and externally”.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 5 | 159 | Suggest adding a new point (g) reading: “how and when the strategy will be adapted according to the monitoring data collected.”                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 6 | 162 | Para 15: The draft guidance is not sufficiently specific on ‘Roles, responsibilities and authorities’. It would be better to specify that a senior management representative (i.e. an individual) should be appointed or given the responsibility to ensure the necessary financial, technical and organisational resources are available to implement and maintain the EMS. This should be a requirement of subcontractors as well as contractors.                                                                                                                                                                                    |
| 6 | 165 | <p>Additionally, the draft guidance focuses on senior management. That is critical, but in reality a number of staff functions from junior to senior will have a role that directly or indirectly involves environmental performance. The draft guidance should consider adding a paragraph to the effect that:</p> <p>“All roles with accountability and responsibilities (including legislative) must be defined, documented and communicated.”</p> <p>Reference should also be made to a staff ‘Code of Conduct’ or similar as noted in <b>General Comments</b>.</p>                                                                |
| 6 | 173 | As noted above, this document should be expanded to incorporate a required “company/business’ EMS. In the context of such an EMS (as opposed to a project-specific EMS) the identification of requirements should include an identification of hazards, risks and impacts that are inherent to the types of assets being operated, the nature of the activities, the operational locations and the products. Relevant examples of this are provided in Operating Management System Framework OGP Report No 510 produced by OGP and IPIECA (see ‘OMS Fundamentals: Risk Management’ and ‘OMS Element 5 - Risk Assessment and Control’). |
| 6 | 182 | Para 18: Requirements concerning the identification of activities and/or installations which may be affected should be included in a site-specific EIS and EMMP so do not need a specific paragraph.                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 6 | 186 | Para 19: This paragraph seems to be out of place as the final paragraph in the ‘Legal Requirements’ subsection. A heading ‘D. Management Through Operational Controls’ could be added and paragraph 19 moved accordingly.                                                                                                                                                                                                                                                                                                                                                                                                              |
| 6 | 189 | As a standalone requirement concerning baseline data seems out of place in guidance on an EMS. A fit-for-purpose environmental baseline would be a standard expectation of an EIS, thereafter being added to through monitoring set out in an EMMP. This paragraph could be deleted.                                                                                                                                                                                                                                                                                                                                                   |
| 6 | 191 | If this paragraph is retained, its reference to ‘Guidelines’ [only] is insufficient, as there should be legally binding Standards for this important subject, and not only guidance.                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 6 | 193 | Additionally, the words “before starting any mining activities” imply that discretion as to when baseline data collection should begin. Suggest rewording as “in order to inform an Environmental Impact Assessment and                                                                                                                                                                                                                                                                                                                                                                                                                |

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|   |            | Environmental Management and Monitoring Plan, in support of a Plan of Work Application.”                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 7 | 203        | This section of the draft Guideline concerning “Operations,” while mentioning concepts like Best Available Technology (BAT), does not directly acknowledge the role of equipment design and operating parameters; equipment includes everything from the seabed mining tools to the transfer of product to shipping barges. Operating Management System Framework OGP Report No 510 produced by OGP and IPIECA addresses this issue under ‘Element 6 - Asset Design and Integrity’ and could be referred to or advise the draft guidance.                                                                                                                                                                                                   |
| 7 | 207-209    | Paragraph 22 quotes one environmental obligation placed upon contractors by the draft Exploitation Regulations, pertaining specifically to pollution. There are many other environmental obligations to which exploitation contractors are subject (for example ‘ <i>ensuring effective protection for the Marine Environment from harmful effects</i> ’). This is unclear and potentially misleading, not least because the remainder of this section focuses on all environmental effects from the mining operations, not only pollution. There will also be specific parameters placed upon Contractor environmental impacts by the Plan of Work and contract, and by the ISA’s environmental Standards, which could be referenced here. |
| 7 | 212        | There appears to be a typographical error. ‘to both own operations’ should read ‘to both <b>the Contractor’s</b> own operations’                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 7 | 215-239    | <i>Paragraphs 24 to 27.</i><br>In the context of a Contractor or ‘company/business/ EMS (as opposed to a project-specific EMS) the identification of operational controls should be based on the identification of hazards, risks and impacts that are inherent to the types of assets being operated, the nature of the activities, the operational locations and the products. A project-specific EMS would provide the framework for implementing the measures set out in an EIS and EMMP. The Guideline does not effectively account for the existence of the Plan of Work (including the EIS and EMMP) which will already set operational criteria for the seabed mineral activities.                                                  |
| 7 | 215 V.A.24 | Suggest deletion of paragraph 24 since the EMS is not the correct place to establish mitigation measures. Mitigation measures should be established in planning and designing a project and its EIS. The EMMP must then set out the way in which the measures will be implemented, and effectiveness monitored.                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 7 | 218        | The use of best practices, technologies and techniques for mitigation, should be documented in the EMMP.<br><br>Suggest also deleting the words ‘wherever possible’. These are mandatory requirements of the draft Exploitation Regulations and there should be no qualification placed upon that requirement in the Guideline.                                                                                                                                                                                                                                                                                                                                                                                                             |
| 7 | 224        | The generalized requirement to retain documentation on operational controls in subparagraph (d) could be better and more specifically captured as: “ensure the EMMP reflects the operational criteria and processes to be                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

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|   |     | implemented, and that the monitoring component of the EMMP is developed to objectively measure performance against these criteria.”                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 7 | 227 | Suggest clarifying and confirming that the “mitigating measures” are “detailed in the EMMP”                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 7 | 238 | Paragraph 27’s observation that mitigating measures may “also involve the use of equipment and/or chemicals” is unnecessary and should be deleted.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 7 | 241 | This subsection on “nonconformities” seems out of place and would appear to more logically be included in ‘VI. Monitoring and Performance Evaluation’, perhaps following ‘B. Evaluation of Performance’.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 7 | 243 | <p>The term “Nonconformity” is not based in the draft Regulations. Suggest renaming the subsection and throughout to refer instead to a “breach of an objective or management measures in the EMMP”</p> <p>The Guideline addresses a circumstance in which an environmental acceptance criterion is exceeded. The Guideline should instead emphasis that efforts should be focused on preventing such an event, rather than responding to it once it happens. To this end, thresholds should be set which can serve as a warning if exceeded, but which precede the acceptance criteria.</p> <p>The Guideline should also require urgent reporting to the ISA and Sponsoring State(s), should any ‘breaches/nonconformities’ occur.</p> |
| 8 | 250 | <p>Suggest adding a new bullet point regarding reactions to breach which reads: “reporting the [non-conformity/breach] to the ISA, including the measures proposed to be undertaken by the Contractor to rectify the non-conformity (as per (b) below)”.</p> <p>“Eliminate” the breach should be added to “control and correct”.</p>                                                                                                                                                                                                                                                                                                                                                                                                    |
| 8 | 258 | Add “cease operations until the breach is addressed” and “notify the Authority and relevant national authorities of the breach”.<br>(refer line 48)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 8 | 264 | A post-breach audit to verify the effectiveness of corrective actions should also require the results of such an audit be communicated to the ISA.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 8 | 270 | <p>Para 34: It would be helpful if the draft Guideline were more specific regarding procurement of equipment and made referred to ‘critical equipment’ that could be associated with significant environmental risk. Some Contractors are developing their own seabed mining equipment, others may lease or purchase the equipment. The EMS should make provision for the following.</p> <ul style="list-style-type: none"> <li>· During development of equipment and material specifications, risks should be evaluated, and controls embedded into the procurement contract as required to manage significant risks, together with environmental performance criteria and controls for those pieces of critical equipment.</li> </ul> |

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|    |         | <ul style="list-style-type: none"> <li>· Assessment of equipment performance to specification should be included when awarding a procurement contract.</li> <li>· Subsequently, equipment should be checked for conformance to the procurement contract and verified against performance criteria prior to commissioning.</li> </ul>                                                                                                                                                                              |
| 8  | 275     | The process for subcontractors should also include “evaluating” so it becomes “taken into consideration when selecting, engaging and evaluating subcontractors”                                                                                                                                                                                                                                                                                                                                                   |
| 8  | 287     | The document should reflect that subcontractors should be bound and accountable to the same environmental requirements as apply to the Contractor through its contract with the ISA.                                                                                                                                                                                                                                                                                                                              |
| 9  | 294     | It is unclear whether the term ‘incidents’ is used here in relation to subcontractors to mean the defined term in the draft Exploitation Regulations or some other meaning. In any event the guidance that Contractors merely ‘request notification’ seems very weak, and could be strengthened by replacing this clause with the stipulation to have in place a requirement and system for immediate notification in the event of any notifiable event or incident (as defined in the Exploitation Regulations). |
| 9  | 296     | Similarly, Contractors should not merely ‘request’ but ‘require’ regular reporting of environmental performance from their subcontractors.                                                                                                                                                                                                                                                                                                                                                                        |
| 9  | 310-320 | Paragraphs 37 and 38 refer to an environmental monitoring plan, and an Environmental Management and Monitoring Plan, respectively. This is confusing – the guidance should refer to EMMP consistently.                                                                                                                                                                                                                                                                                                            |
| 9  | 310     | The “purpose” of the EMMP should be edited: The purpose of the Environmental Monitoring Plan <i>‘is to ensure that all activities undertaken in the Area are environmentally sound and safe’</i> and to confirm that environmental effects meet the environmental objectives...                                                                                                                                                                                                                                   |
| 9  | 313     | Regarding the monitoring of environmental parameters through the EMMP, it is not obvious why some parameters may be “calculated” rather than “monitored”. Some examples might clarify.                                                                                                                                                                                                                                                                                                                            |
| 9  | 328     | Regarding the performance evaluation, the assessment of operational criteria and environmental objectives should be “as reflected in the EMMP”                                                                                                                                                                                                                                                                                                                                                                    |
| 10 | 333     | A general suggestion that trends may be evaluated in the performance evaluation, should instead reflect that “medium and long term trends should be evaluated and reported”                                                                                                                                                                                                                                                                                                                                       |
| 10 | 336     | The result of a performance evaluation should be reported to the ISA “not less than annually” rather than on a “regular basis”.                                                                                                                                                                                                                                                                                                                                                                                   |
| 10 | 342     | Paragraphs 43 and 44 imply that a Contractor might be approved without the capacity requisite to meet performance objectives and criteria. This capacity should be instead be assumed, and these provisions deleted.                                                                                                                                                                                                                                                                                              |
| 10 | 354-371 | This subsection implies that the only reporting to the ISA would be Annual Reports and ‘Notifiable Events’ (the latter defined in the Draft Regulations). It omits ‘Incidents’ (as defined in the Draft Regulations). It is reasonable to assume that there will be other reporting to the ISA such as: <ul style="list-style-type: none"> <li>· real-time mining vessel position;</li> </ul>                                                                                                                     |

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|    |                | <ul style="list-style-type: none"> <li>· incident reporting as noted above;</li> <li>· reporting of non-conformities that fall below the ‘notifiable event’ or ‘incident’ thresholds;</li> <li>· more frequent (than annually) reporting of certain environmental parameters; and</li> <li>· the results of company audits.</li> </ul> <p>It would be more appropriate for this section to simply refer to reporting to the ISA in the context of the requirements set out in the EMMP, Draft Regulations 33 and 34, and the results of company audits. This would avoid potential contradiction of or overlap with other ISA guidance.</p>                 |
| 10 | 363            | This paragraph seems out of place and was perhaps included in error.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 10 | 369            | The Appendix I list of notifiable events should include breaches as described in Section V.B. The draft Regulations should be updated in this regard as well. Currently, they require only notification of listed events (Appendix I). There is no general inclusion of a breach of the ISA requirements such as an environmental exceedance of the Environmental Management and Monitoring Plan: an incident or occurrence would have to fit rigorous criteria such as “10. Adverse environmental conditions with likely significant safety and/or environmental consequences” or “14. Impairment/damage to safety or environmentally critical equipment”. |
| 10 | 373            | Auditing and management system review are quite different activities. This section could be clarified by splitting it up into <i>VII. Audits</i> and <i>VIII. Management System Review</i> . See further comments below.                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 11 | 379            | “Audit criteria” cannot be made synonymous with an environmental management system. This text should instead read “The audit criteria should consist of the environmental goals, objectives and criteria developed under the EMS and documented in the EMMP.”                                                                                                                                                                                                                                                                                                                                                                                               |
| 10 | 385 or 399-400 | Guidance should also reflect the possibility that a first-party audit may be carried out by an independent third-party hired for that purpose by the Contractor.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 11 | 387-388        | Para 50: A Contractor audit of a sub-contractor or supplier may involve an audit of their environmental performance and of their EMS. However, where a sub-contractor or supplier has an externally verified EMS it would be unlikely for the Contractor to require an audit. The draft guidance should acknowledge this distinction.                                                                                                                                                                                                                                                                                                                       |
| 11 | 389            | Suggest adding the words, “an independent consultant or contracted body” after the word “ISA”.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 11 | 392-393        | Para 51: Contractor first-party audits would be more focused on environmental performance than on auditing its EMS. Contractors with their own compliance assurance functions may additionally carry out internal audits on verifying that an operational facility was adhering to the requirements of its own EMS. The draft guidance should make this distinction.                                                                                                                                                                                                                                                                                        |

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| 11 | 393           | Additionally, the draft guidance suggests annual or bi-annual audits. It would be better to say that the programme of audits should be set out in the EMS and be of sufficient frequency to provide assurance to the Contractor leadership, the Sponsoring State and the ISA that environmental risks are being managed and the Contractor EMS is being adhered to.                                                    |
| 11 | 409           | The results of audits should be reported to the ISA.                                                                                                                                                                                                                                                                                                                                                                   |
| 11 | 411           | A more appropriate title for this section would be 'Management System Review'.                                                                                                                                                                                                                                                                                                                                         |
| 11 | 413-415       | It would be useful to acknowledge that senior management review of the EMS would be advised by third-party audits of the EMS by an accredited certification/verification body.<br>More detail is needed as to the timescale envisaged by 'planned intervals' and 'regular intervals'.                                                                                                                                  |
| 11 | 413-421       | Paragraphs 56 and 57 appear to repeat (in slightly different phrasing) paragraph 55.                                                                                                                                                                                                                                                                                                                                   |
| 12 | 429-430       | The EMMP should be included in the list of inputs to the management review, along with the occurrence of Incidents or Notifiable Events, or any compliance interventions by the ISA or the Sponsoring State, or any complaints about environmental matters arising from third parties..                                                                                                                                |
| 12 | 438 VII.B. 58 | Regarding input into the management review inputs, "relevant communication(s)" should include those "with ISA, <i>Sponsoring States and Stakeholders</i> "                                                                                                                                                                                                                                                             |
| 12 | 451           | The results of management reviews should also be included in the Contractor's annual reports to the ISA.                                                                                                                                                                                                                                                                                                               |
| 12 | 452           | Regarding maintaining documents evidencing the results of the management review, a Contractor should also "communicate the outcomes of any management reviews, including the proposed amendment to any EMS documents (such as the EMMP) to the ISA as part of its annual environmental report".                                                                                                                        |
| 13 | 458           | The draft Guideline could be more specific about how the need for sufficient resources can be factored into the project / annual budgeting process by the Contractor.                                                                                                                                                                                                                                                  |
| 13 | 465-466       | Regarding awareness and competence of management policies, Paragraph 62 could be improved by providing some examples of modalities by which Contractors can secure personnel awareness e.g. via a mandatory induction and ongoing training programme, via making relevant materials readily accessible to staff, by requiring an annual signature to affirm that relevant documents have been read and understood etc. |
| 13 | 474           | Suggest replacing the word "provide" with "providing".                                                                                                                                                                                                                                                                                                                                                                 |
| 13 | 475           | Para 64: It would be useful to mention the specific need for introducing all new personnel, including sub-contractors, to the requirements of the EMS.                                                                                                                                                                                                                                                                 |
| 13 | 492           | It is unclear what 'relevant communications' regarding the EMS should receive a response.                                                                                                                                                                                                                                                                                                                              |
| 14 | 501           | Suggest including after the word "improvement" the words: ", including particularly the staff who have responsibilities for achieving environmental objectives".                                                                                                                                                                                                                                                       |

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| 14 | 506     | Suggest adding a final sentence after the word “Authority.” which reads: “External communications, including (but not limited to) communications regarding non-conformances, and all communications required under the Regulations (such as annual environmental reporting) must be communicated in a timely manner, and in accordance with any timeframes imposed by the ISA.”<br>Drafting note: ‘towards’ reads strangely here. |
| 14 | 515     | The documentation system should comply with ISO standards (given the ISO standards are referenced in the Standard). Suggest inserting a reference to ISO14001 here.                                                                                                                                                                                                                                                               |
| 14 | 536     | Suggest replacing the word “disposition” with the word “disposal”.                                                                                                                                                                                                                                                                                                                                                                |
| 15 | 538-540 | The drafting of paragraph 77 \ could benefit from simplification to clarify the meaning and purpose of this paragraph.                                                                                                                                                                                                                                                                                                            |
| 15 | 544-545 | Is the repeated use of the word ‘revisions’ in his paragraph 78 meant to read ‘versions’?                                                                                                                                                                                                                                                                                                                                         |
| 15 | 548     | It is recommended to include the stipulation in this Section D that data relevant to the protection of the marine environment and safety (other than equipment design data), shall not be deemed proprietary.                                                                                                                                                                                                                     |
| 15 | 555     | The abbreviation ‘BEP’ is not used in this document. (‘BAT’, ‘ALARP’ and ‘EMS’ are also not used in the document, apart from directly alongside the full wording that they abbreviate)                                                                                                                                                                                                                                            |
| 15 | 558     | Suggest adding the term “Environmental Management and Monitoring Plan (EMMP)”                                                                                                                                                                                                                                                                                                                                                     |