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HEALTH SAFETY ENVIRONMENT MANAGEMENT SYSTEM **ENVIRONMENTAL IMPACT ASSESSMENT**

STANDARD NO.: HSE-EN-ST01
VERSION NO.: 1
EFFECTIVE DATE: February, 2020

HSE Management System

HSE Risk Management Standards

HSE Impact Assessment Compliance Checklist

| 1. STANDARD | |
|-----------------------------|---------------------------------|
| Standard Number and Version | HSE-EN-ST01 |
| Standard Title | Environmental Impact Assessment |

| 2. COMPLIANCE CHECK DETAILS | | | | |
|-------------------------------------|--|--------------------------|--|------|
| Completed by (Name) | | Completed by (Signature) | | Date |
| Group Company | | | | |
| Location of check | | | | |
| Contractor Location (If applicable) | | | | |

| 3. CHECKLIST | | | | | |
|---|--|------------|----|------|----------|
| Item No | Description | Compliance | | | Comments |
| | | YES | NO | N/ A | |
| Section 7.1 – Project Life Cycle EIA Phases | | | | | |
| 1. | An Environmental Impact Assessment (EIA) was carried out by the ADNOC Group, or appointed third-party consultant, and submitted to ADNOC Group Health, Safety and Environment (HSE) Function for regulatory approval during all phases of the project. | | | | |
| 2. | The EIA presented recommendations for environmental management and monitoring procedures and identified those which have been committed to during the various phases of the project lifecycle. | | | | |
| 3. | The EIA and associated documentation were updated accordingly during the project design phases. | | | | |
| 4. | Environmental Management Plans (EMPs) were developed, into which the outcomes and commitments from the EIA were communicated, as follows: <ul style="list-style-type: none">The Construction Environmental Management Plan (CEMP);The Operations Environmental Management Plan (OEMP); and,The Decommissioning Environmental Management Plan (DEMP). | | | | |
| 5. | An Action Plan was attached to the EIA report for items needing follow up in the EMPSS, with an associated time frame. | | | | |
| 6. | At each stage of the project lifecycle, the Pollution Prevention and Control (PPC) Standard (HSE-EN-ST02) was referred to in parallel with the EIA Standard (HSE-EN-ST01). | | | | |
| Section 7.2 – Main Objectives of the EIA Process | | | | | |
| 7. | Potentially significant impacts to the environment resulting from project activities were evaluated. | | | | |
| 8. | Where significant adverse impacts were identified, alternative strategies, methods and/or technologies were proposed. | | | | |
| 9. | Choice of mitigation option was informed by the need to comply with all regulatory requirements as well as the guiding principle of Best Available Techniques (BAT). | | | | |
| Section 7.2.1 – Key EIA Requirements and Features | | | | | |
| Section 7.2.2 – When is an EIA Required? | | | | | |
| 10. | An EIA was conducted for the development of artificial islands. | | | | |
| 11. | In line with the approach to using BAT wherever reasonably practical, discharge standards were applied to artificial islands. | | | | |
| 12. | For existing facilities, HSE & Integrity Assurance Audits were conducted every five years and were carried out by an independent audit team. | | | | |
| 13. | The format of the EIA for operational facilities during the five-year Health, Safety and Environmental Impact Assessment (HSEIA) review process followed that of the PPC Compliance Report outlined in the PPC Standard (HSE-EN-ST02). | | | | |
| 14. | For relatively simple modifications to an existing facility, specific environmental studies were identified based on the project screening process, and, any cumulative impacts that resulted from such additions were updated in the existing operational EIA. | | | | |
| 15. | Where an existing facility was planned to undergo substantial change or expansion, and where the Screening Study determined that potentially significant environmental impacts exist, an EIA was conducted. | | | | |
| 16. | The HSEIA screening process outlined in the HSEIA Standard (HSE-RM-02) was referred to when evaluating the scope of any planned demolition projects in order to ascertain whether a standalone EIA was necessary. | | | | |

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| | | YES | NO | N/ A | |
| 17. | A single, 'combined phase' EIA was conducted for projects that did not follow the standard project lifecycle. | | | | |
| 18. | An EIA was considered when considering the decommissioning, demolition and/or abandonment of the entire facility, pipelines or perhaps larger process units. The HSEIA screening process outlined in the HSEIA Standard (HSE-RM-02) was referred to in such instances. | | | | |
| 19. | When a separate EIA was required for decommissioning projects, all significant impacts likely to arise from the decommissioning and abandonment process was considered. | | | | |
| Section 7.3 – Key Elements of an EIA | | | | | |
| Section 7.3.1 – Procedural Requirements | | | | | |
| 20. | An EIA screening study was undertaken as part of the HSEIA screening study. The screening criteria presented in the HSEIA Standard (HSE-RM-02) was referred to when carrying out the screening assessment. | | | | |
| 21. | When an EIA was not required, evidence was provided to ADNOC to justify the evaluation. | | | | |
| 22. | An EIA was carried out, commencing with a Scoping Study, for identified potential impacts deemed as potentially significant. | | | | |
| 23. | The EIA addressed the environmental consequences of abnormal or low-medium scale incidents resulting from operational conditions. | | | | |
| 24. | Major Accident to the Environment (MATTE) that are the consequence of a Major Accident Hazard (MAH) and that are deemed potentially significant were analysed in detail in the Control of Major Accident Hazards (COMAH) report. | | | | |
| Section 7.3.2 – EIA Process | | | | | |
| 25. | The following key elements were included in the EIA report: <ul style="list-style-type: none"> • Screening; • Scoping; • Establishment of the Baseline; • Assessment of Impacts (including social impacts as required); • Establishment of Mitigation Commitments; and, • Development of Environmental Management and Monitoring Plans. | | | | |
| 26. | The Scoping Report contained full justification with regards to issues that warrant further detailed study and those that are 'scoped out'. | | | | |
| 27. | Environmental Impact Identification (ENVID) workshops were undertaken and included in the final scoping report. | | | | |
| 28. | A final Scoping Report (attached as an Appendix to the EIA report) was prepared as the output from the scoping process. | | | | |
| 29. | The Scoping Report was submitted to the Group Company for review and approval prior to commencement of the subsequent EIA phases. | | | | |
| 30. | The EIA included a detailed evaluation of the baseline environmental conditions at the project site and its surroundings. | | | | |
| 31. | Where baseline information for a particular area was available from previous studies, this was used as input to the EIA process (approved by the Group Company in consultation with ADNOC Group HSE Function). | | | | |
| 32. | Baseline information was project specific and was not be more than five years old. | | | | |
| 33. | Collection of environmental baseline data was based on specialist expertise and judgements. Where this expertise was not available within Group Companies, advice was taken from ADNOC Group HSE Unit. | | | | |
| 34. | Baseline data was documented electronically, referenced spatially using Universal Traverse Mercator (UTM) coordinates and compiled in Geographical Information System (GIS) format. | | | | |
| 35. | Where relevant, the environmental baseline study established a social baseline and included the identification of social impacts. | | | | |
| 36. | For the monitoring of baseline marine water quality and marine ecology as well as monitoring the impact of discharges to the marine environment, the parameters that were considered were based on international best practice references, guidelines and published papers. | | | | |
| 37. | Project information such as emission/discharge source details were provided in appropriate units and followed emission unit standards that are provided in the PPC Standard (HSE-EN-ST02). | | | | |

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| 38. | A review to assess possible options to reduce Green House Gas (GHG) emissions and assess any impacts the project may have on carbon sinks was undertaken. | | | | |
| 39. | Emission sources were identified, applicable GHG regulations and reporting protocols determined, and a GHG inventory prepared for various phases of the project. | | | | |
| 40. | The quantification of project emissions in carbon dioxide equivalent (CO _{2eq}) included Scope 1 and Scope 2 emissions in accordance with internationally recognised methods and good practices. | | | | |
| 41. | Computer simulation models used for impact predictions conformed to the following requirements: <ul style="list-style-type: none"> US EPA, UK (United Kingdom) Environment Agency (EA)); Demonstrable track record of use in similar applications; and, Provided output in an easily interpretable format, including graphics. | | | | |
| 42. | During impact prediction, where predictive modelling was used for the EIA, the EIA report contained information justifying the use of selected models and basic model assumptions. | | | | |
| 43. | The EIA considered the use of raw materials, water usage and optimisation, and GHG emissions quantification and reduction during 'Impact Assessment and Significance'. | | | | |
| 44. | All planned impacts were identified and assessed for significance as part of the EIA process. | | | | |
| 45. | The EIA report demonstrated how all planned impacts will be managed via the facility or operation Health, Safety & Environmental Management System (HSEMS). | | | | |
| 46. | All accidental environmental impacts were identified and assessed accordingly for magnitude of potential risk within the ENVID and EIA Report. | | | | |
| 47. | Environmental hazards and their potential impacts assessed to have MATTE were addressed in the COMAH report. | | | | |
| 48. | The EIA clearly explained and justified the techniques, standards and guidelines that were used to determine impact significance in each environmental hazard case. | | | | |
| 49. | Any impact which resulted in an exceedance of the environmental regulatory standard was regarded as significant. | | | | |
| 50. | The Environmental Impact Severity Matrix (EISM) and the information in Appendix 1 of the EIA Standard (HSE-EN-ST01) was used to help identify all significant environmental impacts. | | | | |
| 51. | All planned significant environmental impacts were addressed by showing that the principles of BAT have been applied in the project design and operation phase. | | | | |
| 52. | It has been proved that all planned impacts have been minimised to levels which are deemed As Low As Reasonably Practicable (ALARP). | | | | |
| 53. | 'Best Practice' was adopted to minimise all planned environmental impacts, whether or not they were deemed to be significant. | | | | |
| 54. | Projects which may have the potential to introduce a positive impact to the environment, society, and economy were highlighted and noted within the EIA process. | | | | |
| 55. | Adequate control and mitigation measures were planned (for new projects) or put in place (existing facilities and operations) to reduce the potential risk of Significant Environmental Impacts caused by accidental releases to levels which are deemed ALARP. | | | | |
| 56. | The assessment of environmental impacts resulting from a major accident were addressed during the COMAH assessment and documented in the COMAH Report. The control and mitigation measures were documented in the COMAH report. | | | | |
| Section 7.3.3 – Environmental Input to the Design Process | | | | | |
| Section 7.3.4 – Quality Assurance of EIA Report | | | | | |
| 57. | Prior to submitting the EIA report to ADNOC Group HSE Unit and Group Company Corporate HSE Unit (CHSE), the report was subject to thorough quality assurance (QA) by suitably experienced and competent person(s). | | | | |
| Section 7.4 – Consultation, Submission and Approval | | | | | |
| Section 7.4.1 – Consultation | | | | | |
| 58. | For projects located outside of ADNOC concession areas, consultation and approval with external bodies, such as Environment Agency - Abu Dhabi (EAD) was undertaken. | | | | |
| 59. | All consultations with EAD, Department of Culture and Tourism for archaeological related aspects or other bodies were coordinated through ADNOC Group HSE Unit. | | | | |

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| 60. | All relevant project stakeholders identified were consulted. Details of stakeholders and extent of consultation were documented in the project HSEIA and in the Community Engagement and Communications Plan. | | | | |
| 61. | Consultation with Department of Planning and Municipality (DPM) was carried out on new projects that may be of relevance to, or impact upon, the Abu Dhabi 2030 Plan. | | | | |
| 62. | Adequate consultation took place with relevant external bodies such as DPM and the Abu Dhabi Municipality on matters such as planning controls and safety zones, where applicable. | | | | |
| Section 7.4.2 – Submission and Approval | | | | | |
| 63. | The EIA report was approved by ADNOC Group HSE Function as stipulated in the EIA process before proceeding to its next phase. | | | | |
| 64. | EIA Reports and dossier (all phases of project) were submitted to ADNOC Group HSE Function along with technical approval, summary of the changes and status of the EIA recommendations from earlier phases through their respective Business Line Directorates for Regulatory Approval. | | | | |
| 65. | The EIA report was submitted at least 45 days prior to the date by which Regulatory Approval is required. | | | | |
| 66. | The EIA report contains details of all third-party consultations carried out and the status of the third-party approvals at the time of production of the EIA report including approval conditions for some projects. | | | | |
| Section 7.4.3 – Special Cases | | | | | |
| 67. | Clarification was obtained from ADNOC Upstream Directorate to determine whether the project fell within an ADNOC concession area. | | | | |
| 68. | In special cases, the EAD's EIA procedure took precedence over the procedures described within the EIA Standard (HSE-EN-ST01). The EIA Report was prepared in EAD format and submitted to ADNOC Group HSE for their review prior to onward submission to EAD. | | | | |
| 69. | The key requirements for the EAD procedure listed in the EIA Standard (HSE-EN-ST01) were met. | | | | |
| 70. | Confirmation was sought at the commencement of the project with ADNOC Group HSE as to which EIA standards were applicable. | | | | |
| Section 7.5 – Preparation of the Environmental Impact Assessment Report | | | | | |
| Section 7.5.1 – Key Information | | | | | |
| 71. | The assessment considered associated facilities/developments in which all emissions/discharges from the facility complied with relevant environmental standards (See PPC Standard, HSE-EN-ST02). | | | | |
| 72. | The EIA Report was structured in a clear and systematic manner in accordance with the example contents shown in Appendix 3 of the EIA Standard (HSE-EN-ST01). | | | | |
| Section 7.5.2 – Mitigation of Adverse Effects | | | | | |
| 73. | The EIA report contained information on the proposed mitigation measures that will be incorporated to eliminate/reduce impacts. | | | | |
| 74. | The anticipated effect of mitigation was quantified. | | | | |
| 75. | Any consequential impacts arising from the use of mitigation measures were identified. | | | | |
| 76. | Residual impacts after the application of mitigation were clearly identified and proposals for management of these residual impacts clearly identified. | | | | |
| 77. | Consideration was given to the concepts of BAT. | | | | |
| 78. | The principles of PPC requirements (HSE-EN-ST02) have been applied. | | | | |
| Section 7.5.3 – Environmental Management Requirements | | | | | |
| 79. | The EIA report contained information on the EMPs to be introduced during the project implementation phase. | | | | |
| 80. | Detailed EMPs were provided as separate documents. | | | | |
| 81. | If environmental monitoring was required during the construction, operation and/or decommissioning phase, this was clearly stated in the EIA report, together with an outline environmental monitoring plan. Such monitoring was incorporated into suitable contractor scope(s) of work(s) during project implementation and into operating or decommissioning | | | | |

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| | | YES | NO | N/ A | |
| | procedures during the operating or decommissioning phases respectively. | | | | |
| 82. | All EMPs were structured in a clear and systematic manner in accordance with the respective examples' contents shown in Appendix 4 of the EIA Standard (HSE-EN-ST01). | | | | |
| 83. | For major projects with significant impact potential, separate EMPs were prepared covering all environmental management requirements of the project during the construction and operational phases, or, where appropriate, decommissioning. | | | | |
| 84. | The CEMP was prepared according to the EIA Standard (HSE-EN-ST01) prior to commencement of construction activities. | | | | |
| 85. | Where it has been deemed that an EIA was not necessary based on the limited potential for significant environmental impacts arising during the operations phase of the project, a CEMP was still prepared where there remains the potential for environmental impacts to occur during construction activities. | | | | |
| 86. | An archaeological/cultural chance find procedure was developed for the construction phase of the project. | | | | |
| 87. | The OEMP was prepared before normal operations commenced. The principal contents of the OEMP included those listed in the EIA Standard (HSE-EN-ST01). | | | | |
| 88. | The OEMP was incorporated into the project HSEMS. | | | | |
| 89. | The DEMP contained specific information on how any particular decommissioning environmental and social risks identified are to be controlled. | | | | |
| 90. | The DEMP was prepared prior to any decommissioning tasks being undertaken. | | | | |
| Section 7.5.4 – Statement of Commitments | | | | | |
| 91. | In cases where the EIA was required for submission to EAD, a separate Statement of Commitments was provided in the EIA report as per the EAD requirements. | | | | |
| Section 7.5.5 – Project Alternatives | | | | | |
| 92. | Aspects of the project that were likely to have the largest impact on cost and the environment were targeted and examples of less impacting alternatives to those aspects were provided. | | | | |