

Shoalhaven Starches Expansion Development 06_0228, Independent Environmental Audit, Malo Sustainability Consulting Pty Ltd, February 2024

Table 1. Audit Non-compliances (NC)									
NC No.	Sched	Cond	Requirement	Finding	Recommendation	Shoalhaven Starches Response	Action	Time Frame	Status
NC1	2	11	The Applicant shall ensure that all plant and equipment used on the site is: a) maintained in a proper and efficient condition; and b) operated in a proper and efficient manner.	The occurrence of multiple pipeline failures resulting in reportable incidents demonstrates ineffective maintenance. Other incidents are also noted (pump failure and process failure (Fermenter)).	Applicant should consider implementing a recurring site wide pipeline integrity review. The review should be risk-based, focusing on pipelines whose failure could result in potential or actual environmental harm. In line with previous recommendation (refer Schedule 2, Condition 1), the auditor recommends broadening the scope of this review to include a sitewide investigation into suitable approaches or methods to improve preventative maintenance outcomes across the site.	Where a reportable environmental incident occurs, Shoalhaven Starches do review similar plant & equipment across the site to assess if a similar failure would result in a reportable environmental incident, however we acknowledge improvements can be made in this area.	Undertake a risk assessment of pipeline integrity across the site, focusing on pipelines whose failure could result in potential or actual environmental harm. Investigate methods to improve preventative maintenance outcomes across the site.	Dec-24	Incomplete
NC2	3	6A	The Applicant shall ensure that any Independent Odour Audit submitted to the Secretary in accordance with Condition 5 of this Schedule includes: a) 3 monthly (quarterly) odour monitoring with samples taken from the carbon dioxide/ethanol recovery scrubber inlet/s and outlet/s; and b) quarterly odour monitoring with samples taken of single vent stack (direct to atmosphere) emissions from a filling fermenter tank.	Requirements for quarterly odour testing were not met in the 2020 – 2021 Independent Odour Audit.	Ensure all approval requirements are captured, tracked and assigned a responsibility in a compliance management system.	Of the 12 quarters during the audit period, the CO2/ethanol scrubber and Fermenter tank was missed on one occasion. The Quarter 4 2021 testing was missed due to the air quality testing consultant unavailability (personal/health reasons). We were unable to engage another testing consultant within the required quarterly timeframe. A new air quality testing company was engaged and testing was completed during the following quarter. The EPA were notified by phone and email on 7th May 2021 advising them of the situation. No further action required, or taken, by the EPA.	Whilst every effort is made to test all ~ 25 monitoring points during the scheduled days of testing (typically 3 days), there are a number of reasons why a monitoring point may be missed in a quarter including no access due to maintenance in the area, weather conditions, availability of testing consultant or the plant & equipment is not operating. SS to consult with the Secretary & EPA on possible rewording or removal of this condition.	Jul-24	Incomplete
NC3	3	6C	The Applicant shall conduct quarterly odour monitoring from the DDG exhaust stack and report the results in the independent odour audit required under Condition 5 of Schedule 3.	Odour monitoring was not completed in accordance with the requirements of the condition.	Ensure all approval requirements are captured, tracked and assigned a responsibility in a compliance management system.	Of the 12 quarters during the audit period, the DDG Exhaust stack was missed on 3 occasions. The Quarter 4 2021 testing was missed due to the air quality testing consultant unavailability (personal/health reasons). We were unable to engage another testing consultant within the required quarterly timeframe. A new air quality testing company was engaged and testing was completed during the following quarter. The EPA were notified by phone and email on 7th May 2021 advising them of the situation. No further action required, or taken, by the EPA. On the other two occasions the testing was not completed due to unavailability of an EWP to access the sampling point and unable to access the area due to works occurring in the area. Where sampling of the DDG exhaust stack did not occur, odour samples were taken from the known major individual sources that contribute to EPA 46 Stack to provide an indicative measure of the odour concentration.	Whilst every effort is made to test all ~25 monitoring points during the scheduled days of testing (typically 3 days), there are a number of reasons why a monitoring point may be missed in a quarter including no access due to maintenance in the area, weather conditions, availability of testing consultant or the plant & equipment is not operating. SS to consult with the Secretary & EPA on possible rewording or removal of this condition.	Jul-24	Incomplete
NC4	3	6D	The Applicant shall conduct odour monitoring on the relocated starch dryer described in MOD 7 in accordance with the requirements of the EPL and report the results in the independent odour audit required under Condition 5 of Schedule 3.	Odour monitoring was not completed in accordance with the requirements of the condition.	Ensure all approval requirements are captured, tracked and assigned a responsibility in a compliance management system.	Of the 12 quarters during the audit period, starch dryer 5 was missed on one occasion. The Quarter 4 2021 testing was missed due to the air quality testing consultant unavailability (personal/health reasons). We were unable to engage another testing consultant within the required quarterly timeframe. A new air quality testing company was engaged and testing was completed during the following quarter. The EPA were notified by phone and email on 7th May 2021 advising them of the situation. No further action required, or taken, by the EPA.	Whilst every effort is made to test all ~ 25 monitoring points during the scheduled days of testing (typically 3 days), there are a number of reasons why a monitoring point may be missed in a quarter including no access due to maintenance in the area, weather conditions, availability of testing consultant or the plant & equipment is not operating. SS to consult with the Secretary & EPA on possible rewording or removal of this condition.	Jul-24	Incomplete
NC5	3	9	The Applicant shall ensure the emissions from boiler stacks 2, 4 and combined boiler stack 5 and 6 comply with the limits in the EPL.	Emissions from boiler stacks 2, 4 and combined boiler stack 5 and 6 exceeded the % opacity limits on numerous occasions.	The Auditor recommends the Applicant commences a sitewide investigation into suitable approaches or methods to improve preventative maintenance outcomes across the site.	Investigation into improved preventive maintenance of coal-fired boilers is not required due to the following actions: - Boiler 2 is no longer operational and has been de-commissioned. - Boiler 4 has been converted to gas-fired (no opacity testing requirement for gas boilers) - Boiler 6 scheduled to be shutdown on 15/4/2024 and converted to gas. - Boiler 5 scheduled to be shut down in September 2024 and converted to gas (all as per MOD 23 approval).	No further action required.	-	Complete
NC6	3	9B	Within three months of commissioning a modification to boiler 2, 4 and/or 6 and again after all boiler modifications have been commissioned, as described in MOD 13, the Applicant shall submit a written report to the Secretary and the EPA detailing the results of post-commissioning monitoring. The report shall: a) include the results of source emissions sampling and analysis undertaken in accordance with the requirements in the EPL; b) include data to demonstrate the operational capacity of the boilers during sampling, with sampling undertaken when the boilers are operating at maximum capacity; and c) assess compliance with the limits in the EPL.	A Post commissioning report was not submitted after all modifications were completed.	Ensure all approval requirements are captured, tracked and assigned a responsibility in a compliance management system.	Post commissioning report was submitted for all 3 boilers. A second post commissioning report was not submitted to the Secretary & EPA, as the EPA licence condition E1 only required one post-commissioning test report. Subsequent quarterly boiler testing was completed post-commissioning as per EPA licence requirements and the results submitted to the EPA & the Secretary via Shoalhaven Starches (SS) Annual EPA return and Annual Environmental Management Reports.	No further action required.	-	Complete

NC7	3	9C	If the post commissioning verification report shows that an emission concentration limit is not being met, the Applicant is required to implement all reasonable and feasible measures to achieve compliance with the relevant limit, to the satisfaction of the Secretary.	A Post commissioning report was not submitted after all modifications were completed.	Ensure all approval requirements are captured, tracked and assigned a responsibility in a compliance management system.	Condition not triggered. The emission test report that was submitted was within emission concentration limits specified in the EPL.	No further action required.	-	Complete
NC8	3	14H	Prior to the construction of any external mechanical plant exceeding a sound power level of 78dB(A), the Applicant shall prepare a noise validation report to demonstrate that operation of the mechanical plant meets the noise limits in condition 12. The noise validation report shall: a) be prepared by an appropriately qualified and experienced noise expert; b) be approved by the Secretary, prior to the installation of external mechanical plant; c) demonstrate that the location, design and operation of external mechanical plant would achieve the noise limits in Condition 12; d) describe any acoustic treatments required to ensure compliance with the noise limits in Condition 12; and e) if necessary, recommend, prioritise and implement measures to improve noise controls on-site to ensure the Development meets relevant criteria and protects off-site receivers from excess noise.	Secretary approval not obtained for MOD 21.	Ensure all approval requirements are captured, tracked and assigned a responsibility in a compliance management system.	Noise report submitted to Secretary on 5-5-2023. Request for Information (RFI) issued by Secretary on 24-8-2023, which required further site wide noise modelling to be completed. Revised noise report submitted to Secretary on 14-2-2024.	SS to follow-up with Secretary on status of approval.	Jun-24	Incomplete
NC9	3	14M	Prior to the construction of any modifications described in Schedule 2, Condition 2, the Applicant shall prepare a design noise verification report to demonstrate the additional plant and equipment will meet relevant design noise goals to ensure noise from the site does not exceed the noise limits in Condition 12. The noise verification report shall: a) be prepared by an appropriately qualified and experienced noise expert; b) be approved by the Secretary, prior to construction of the modification; c) demonstrate that the location, design and operation of the modification would achieve the noise limits in Condition 12; and d) if necessary, recommend, prioritise and implement measures to improve noise controls on-site to ensure the Development as modified meets the noise limits in Condition 12 and protects off-site receivers from excess noise.	Design Noise Verification Reports not prepared for MOD 18 an MOD 19	Ensure all approval requirements are captured, tracked and assigned a responsibility in a compliance management system	Reports were not completed due to the unavailability of the noise consultant that undertook the associated Noise Impact Assessments. A new noise consultant was engaged and noise validation reports (as per Condition 14N) have been completed for MOD 18 and MOD 19.	No further action required.	-	Complete
NC10	3	14N	Within 12 months of operation of each modification described in Schedule 2, Condition 2, the Applicant shall undertake noise validation monitoring to confirm noise from the modified site complies with the noise limits in Condition 12. The results of noise validation monitoring shall be included in the Annual Report required by Schedule 4, Condition 3. If the results of monitoring show any exceedance of the noise limits in Condition 12, the Applicant shall investigate and implement all reasonable and feasible noise mitigation measures to achieve compliance. Note: If a modification does not require a design noise verification report or validation monitoring as required by Conditions 14M and 14N, the Applicant shall provide written justification to the satisfaction of the Secretary.	Noise compliance testing not undertaken in second half of 2022.	Ensure all approval requirements are captured, tracked and assigned a responsibility in a compliance management system	Noise compliance testing was undertaken during the second half of 2022 but we never received the noise consultant's report (consultant became unavailable). A new noise consultant was engaged and the next round of testing was undertaken in April 2023. Reported to the EPA via the Annual Return 2022-23. No further action taken by EPA.	No further action required.	-	Complete
NC11	3	22F	The Applicant shall update the Stormwater Management Plan for the development to include the Packing Plant described in MOD 21. The plan shall include the following requirements for the Packing Plant as follows: a) be prepared in consultation with Council and submitted to the Planning Secretary for approval prior to the commencement of construction; b) include detailed stormwater drainage design plans prepared by a suitably qualified engineer and include the following: i) minor and major systems must be designed for a 10% AEP and 1% Annual Exceedance Probability (AEP) rainfall events, respectively. ii) existing drainage systems through lots draining public roads are to be upgraded where necessary to contain flows in accordance with Council's Engineering Design Specifications – Section D5.04. iii) piping, swales and easements to facilitate future development of the site. c) include detailed design of permanent and vegetated swale stormwater quality improvement devices in accordance with Council's Engineering Design and Construction Specifications including detailed design of permanent water quality, retention and reuse devices; and d) include adopted WSUD Management, Operation, Maintenance and Monitoring Manual/s prepared in accordance with the approved Integrated Water Cycle Management Plan.	Approval from Planning Secretary not obtained prior to construction.	Ensure all approval requirements are captured, tracked and assigned a responsibility in a compliance management system	A revised Integrated Water Cycle Management Strategy (IWCMS) Rev. 2 dated 7 Apr 2022 was prepared and submitted as part of MOD 21 application to address Council comments. The revised IWCMS addressed most of the requirements in Condition 22F, however SS stormwater management plan was not updated to include the IWCMS in the required timeframe. N.B. Packing plant is still under construction.	A Stormwater engineer has been engaged and is currently preparing the updated stormwater management plan.	Jun-24	In progress

NC12	3	25	The Applicant shall prepare a Wastewater Management Plan for the development to the satisfaction of the Secretary. This plan must: a) be prepared in consultation with EPA and be submitted to the Secretary for approval within 12 months of this consent; b) be prepared in accordance with DECC's Environmental Guidelines: Use of Effluent by Irrigation; c) outline the location, design and management of the irrigation, crop and grazing system, including measures to minimise soil and groundwater degradation; and d) include: • baseline data on soil and groundwater quality and characteristics; • wastewater and soil quality impact assessment criteria and the effluent treatment and irrigation system performance measures; • details of the wastewater, soil, silage and groundwater monitoring program; • procedures for the reporting the monitoring results against the criteria and to determine the annual site nutrient and analyte budgets and water balance; • contingency measures to address exceedances, pollutant triggers and problems with the wastewater management systems; and • a description how the effectiveness of actions would be monitored over time. e) be updated to include the additional measures identified in the capacity assessment for MOD 16, including management of sludge inventory, increased alkalinity supplementation and a review of factory process efficiencies to identify and manage sources of hydraulic and organic load peaks.	Update to Wastewater Management Plan not completed within stipulated time frames of MOD 16 Approval.	Ensure all approval requirements are captured, tracked and assigned a responsibility in a compliance management system	Wastewater Management Plan took longer to prepare than anticipated as the previous author of the plan had retired and a new consultant was engaged and had to prepare the plan from 'scratch'.	Updated Wastewater Management Plan dated 12 October 2023 was approved by the Secretary on 23 November 2023.	-	Complete.
NC13	3	26C	The Applicant shall ensure that all hazardous materials stored on site are stored above the 1% AEP flood level.	Not all hazardous materials stored on site are stored above the 1% AEP flood level.	Given the site constraints relating to flood level, the Applicant should, in partnership with a suitably qualified professional, undertake a comprehensive review of hazardous materials storage, that includes findings on best practice approaches available on site. Consultation with the Secretary should then be undertaken to determine appropriate resolution (which may include revision to condition wording).	Condition 26C is derived from Shoalhaven Council's SDCP 2014 Chp. G9 Development on Flood Prone Land. The objective of this clause is to ensure hazardous substances are stored above the 1% AEP so they do not become floating debris and cause potential for pollution during a flood. Chapter 9 states the 'Applicant to demonstrate that there is an area where hazardous and valuable goods can be stored above the 1% AEP Flood Level'. The majority of the SS site is ~ 1 to 1.5 m below the 1% AEP flood level which means there is no area that smaller (portable) hazardous chemical storages could be easily relocated above the 1% AEP, and it is not practical or feasible to construct platforms to store these chemicals above the 1% AEP. For bulk hazardous storage tanks (fixed) and their associated bund walls, they are designed to withstand the forces of flood waters up to the 1% AEP.	In consultation with structural engineer, review adequacy of hazardous material storage with regards to 1% AEP Flood levels. Consult with the Secretary on the outcomes of the review to determine appropriate resolution.	Oct-24	Incomplete
NC14	3	27B	No later than 31 May 2018, the Applicant shall provide written evidence to the Secretary of Council's acceptance of the works-as-executed plans and Council's acceptance of care and maintenance responsibilities for the section of Bolong Road from Railway Street to the Dairy Farmers site access	The requirements have not been met in the agreed timeframe.	Ensure all approval requirements are captured, tracked and assigned a responsibility in a compliance management system.	Evidence of Council's acceptance of Condition 27B was submitted to the Secretary on 13-1-2023 and Secretary's acknowledgement received 18-1-2023.	No further action required.	-	Complete
NC15	3	32	The Applicant shall ensure that vehicles associated with the development do not park or queue on the public road network at any time.	Parking viewed on site was considered adequate for normal operations, and appropriately delineated, however the Auditor notes instances where construction contractors parked off site.	Based on historical complaints received with respect to contractors parking offsite, Manildra should consider implementing specific controls around contractor parking onsite. (E.g. tied to sign on/induction/contract requirements)	A number of steps have been taken to ensure contractors do not park on the public road network including Notices, Letters, contractor site inductions, increasing car parking spots on site and disciplinary action for repeat offenders.	SS to review contractor management systems to ensure parking requirements are clearly understood and communicated.	On-going	In Progress
NC16	3	37B	The Applicant shall update and implement the Safety Management System required under Condition 37(c) no more than 1 months prior to the commencement of commissioning of MOD 19, or as otherwise agreed upon by the Planning Secretary. The updated Safety Management System must include a dangerous goods register prepared in consultation with an independent dangerous goods consultant. The register must be maintained for the life of the development and as modified, and provide sufficient details on: a) reasons why full compliance cannot be achieved with all relevant Australian Standards; b) engineered solutions and actions to achieve at least an equivalent level of safety required under full compliance, taking into account industry best practice or requirements by SafeWork NSW; and c) completion dates for all actions in Condition 37B b) above.	The Safety Management System (Hazardous Chemical Manifest) was not updated in the required timeframe.	Ensure all approval requirements are captured, tracked and assigned a responsibility in a compliance management system.	Hazardous Chemical Manifest has been prepared in consultation with an independent DG consultant. Review of hazardous chemical storage occurs as part of WHS scheduled site inspections.	No further action required.	-	Complete
NC17	3	39A	For all works associated with MOD 19 and for any further modifications to this consent approved thereafter, dangerous goods, as defined by the Australian Dangerous Goods Code, must be stored and handled in accordance with: a) all relevant Australian Standards; b) the Environment Protection Manual for Authorised Officers: Bunding and Spill Management – technical bulletin (EPA, 1997).	Dangerous goods not stored in accordance with AS1940-2017 - <i>The storage and handling of flammable and combustible liquids</i> .	Ensure the scope of future Dangerous Goods (DG) Audit covers storage of all dangerous goods on site. Consider including dangerous goods storage checks in weekly or monthly site inspections.	DG Audit checklist and audit schedule has been developed.	Implement DG audits as per schedule.	Jul-24	In Progress

NC18	3	43B	The Applicant shall engage a suitably qualified geotechnical engineer to regularly review the survey data obtained in accordance with Condition 43A and shall carry out maintenance and/or repairs to the rock revetment wall if required, to the satisfaction of the Secretary. Maintenance and/or repairs shall be completed within 2 months of identifying the need for the repairs, unless otherwise agreed with the Secretary.	Repairs to the rock revetment wall were not completed within in 2 months of need for repair being identified.	Ensure all approval requirements are captured, tracked and assigned a responsibility in a compliance management system.	Conditions 43A & 43B were issued in relation to the rock revetment wall adjacent to the Flour Mill. No maintenance repairs to the rock revetment wall have been identified that require repair in this rock revetment. SS engaged a consultant (SMEC) to assess riverbank stability for the entire length of the factory site. A numbers of areas require riverbank stabilisation works, including other rock revetments, which requires development approval. A preliminary development application for riverbank stabilisation works has been submitted to Council.	SS is currently preparing a riverbank stabilisation DA for submission to Council.	Dec-24	In progress
NC19	4	2	The Applicant shall implement the Environmental Management Strategy and the management plans required in Schedule 3 of this consent (as revised and approved by the Secretary from time to time) for the duration of the development, as modified.	Whilst the Auditor considered the Applicant was generally implementing the Environmental Management Strategy, requirements for quarterly odour monitoring were not being met.	Ensure all approval requirements are captured, tracked and assigned a responsibility in a compliance management system. Additionally, the Applicant should undertake a program of annual internal EMS audits to ensure ongoing compliance with the requirements of the system/strategy.	An 'Airtable' has been developed which tracks all the conditions of consent for all Modifications under Development Consent 06_0228, including responsibilities, reminders and due dates for completion.	Implement annual EMS internal audit program.	Jul-24	In progress