



CORRECTIVE ACTION TIMING PLAN

BUSINESS UNIT :-

Pontypool Site

CHAMPION :-

HSE 0064 & HSE 0065

January 2024

OWNER :-

SUBJECT :-

DATE :-

29/01/2024

Phone :- 4178

Corrective actions ref. ISO 14001 issues 2024

Last update :-

24/01/2025

| No. | ELEMENT | CONCERN | CORRECTIVE ACTION | Resp. | Target Date | In Itiated | 10% | 20% | 30% | 40% | 50% | 60% | 70% | 80% | 90% | 100% | Action Complete | COMMENTS |
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| | | | | | | | | | | | | | | | | | | |
| 1 | Legislative compliance | Compliance with IPPC permit conditions | Provide annual usage figures for effluent, water waste & energy for 2023 to the NRW | ST | Feb '24 | | | | | | | | | | | | Feb '24 | Information submitted |
| 2 | Legislative compliance | Compliance with IPPC permit conditions | IC4 - Review emission of zinc released via the V-notch to reduce levels to benchmarks noted in section 3.2.2 of the Agency Guidance Note IPPC S2.07 | ST | Feb '24 | | | | | | | | | | | | Feb '24 | Information submitted |
| 3 | Legislative compliance | Compliance with IPPC permit conditions | IC6 - Undertake an assessment of the energy management improvement measures on site | ST/NJ | Jul '24 | | | | | | | | | | | | Jul '24 | Projects entered into the SoFi system target energy reduction achieved |
| 4 | Legislative compliance | Compliance with IPPC permit conditions | Provide NRW with completed Annual Pollution Inventory for the site with 2023 data | ST | Mar '24 | | | | | | | | | | | | Mar '24 | Data provided via online portal |
| 5 | Ground Contamination | Current site contamination from past processes | Continue with the remediation of chlorinated solvent contamination with the ZF Remediation Team Arcadis | ST | Jul '24 | | | | | | | | | | | | Jul '24 | Final decisions to close project to be made by ZF remediation team |
| 6 | General | Emergency planning | Plan a fire evacuation for Q2 2023 across all 3 shifts | ST | May '24 | | | | | | | | | | | | May '24 | |
| 7 | Energy Management | Energy Monitoring/reduction | Improve control and flexibility in terms of compressed air - Conduct 2 air leak surveys per year | CH/NJ | Dec '24 | | | | | | | | | | | | Dec '24 | Air leak surveys completed and identified air leaks repaired where possible. |
| 8 | Energy Management | Energy Monitoring/reduction | Continue energy team to review sub metering data to target improvements | ST | Dec '24 | | | | | | | | | | | | Dec '24 | Submetering will not be done until the restructuring and machine moves have been completed Q1 2025 |
| 9 | Energy Management | Energy Monitoring/reduction | Review Machine shutdown procedures to maximise energy saving when not in use | ST | Jul '24 | | | | | | | | | | | | Jul '24 | Machine shutdown procedures in place but are continually being refined to achieve better energy savings |
| 10 | Energy Management | Energy Monitoring/reduction | Use sub metering to improve Energy Profile for the site | ST | Oct '24 | | | | | | | | | | | | Oct '24 | Submetering will not be done until the restructuring has been completed Q1 2025 |
| 11 | General | Chemical Management | Investigate system to pump Zn Ni chemicals into the tanks without having to manually lift them onto the catwalk. Investigate reduction in chemical container waste - Dosing zinc nickel chemicals from IBC as opposed to carboys | ML | Sep '24 | | | | | | | | | | | | | Project on-going |
| 12 | General | Hazardous materials management | Document periodic visual inspections carried out on Asbestos Containing Materials. | NJ | Jun '24 | | | | | | | | | | | | Jun '24 | Quotes for 2025 Asbestos survey obtained |
| 13 | General | Housekeeping throughout the site | Continue with the 5C/Housekeeping improvement projects in each business. | All | Dec '24 | | | | | | | | | | | | Dec '24 | Machine cleaning team in place and program being developed |



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| | | | | | | | | | | | | | | | | | | |
| 14 | Waste Management | Quantity of sludge tankers required | Re-investigate capacity of the filter presses to improve filter cake production and reduce req ^{mt} for sludge tankers | All | Nov '24 | | | | | | | | | | | | Nov '24 | Quote for new filter press obtained. Business case required to obtain CAPEX spend. Payback currently outside ZF criteria 45% reduction in hydroxide sludge waste achieved with current filter presses |
| 15 | General | Site Management | Develop a zinc plant decommissioning plan to ensure that the closure and removal of equipment takes environmental issues into account | All | Dec '24 | | | | | | | | | | | | Dec '24 | Ground water monitoring carried out - results good surrender documentation to be prepared and submitted to NRW |
| 16 | General | Information knowledge | Conduct annual MWF refresher training - Information leaflet on MWF to be issued to employees - review document to ensure it remains relevant | All | Oct '24 | | | | | | | | | | | | Oct '24 | MWF information leaflet information to be reviewed and re-issued |
| 17 | General | Legionella Management | Carry out remedial works in line with the 2024 Legionella risk assessment | All | Jun '24 | | | | | | | | | | | | Jun '24 | |
| 18 | Waste Management | Waste Management | Review waste streams to determine further opportunities to reuse/reduce/recycle | All | Dec '24 | | | | | | | | | | | | Dec '24 | On-going throughout the year |
| 19 | Waste Management | Waste Monitoring/reduction | Reinvestigate potential to recycle plastic tray packaging | All | Dec '24 | | | | | | | | | | | | Dec '24 | Some recycling opportunities but it is dependent upon the tray and plastic used. Each load is assessed prior to disposal. |
| 20 | Waste Management | Waste Monitoring/reduction | Investigate why the zinc nickel plating solution waste is being produced and take the necessary actions to eliminate/reduce this waste stream. | All | Dec '24 | | | | | | | | | | | | Dec '24 | No current fix for this issue at present due to the nature of the process |
| 21 | Waste Management | Waste Monitoring/reduction | Investigate sampling each IBC of zinc nickel plating solution waste to determine the concentrations of metals and direct to the correct waste stream. | All | May '24 | | | | | | | | | | | | May '24 | Not currently viable due to current site equipment but in discussion with supplier to see if they can assist in the analysis |
| 22 | Maintenance | Effective control of fume from the plating process | Conduct air monitoring of the process plants to ensure that emissions are compliant with current legislation | All | May '24 | | | | | | | | | | | | May '24 | Survey undertaken and report received |
| 23 | Energy Management | Energy Monitoring/reduction | Review the heating profile on the zinc nickel process to optimise the use of the chiller Chiller pipework modified to include a return loop to prevent the chiller dead heading when there is no flow through the system. Chiller still having issues _ increase the size of the pipework for the loop section. | ST/CH | July '24 | | | | | | | | | | | | July '24 | One valve cracked open slightly to prevent the chiller dead heading. |



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| | | | | | | | | | | | | | | | | | | |
| 24 | Waste Management | Waste Monitoring/reduction | Install new briquetter for aluminium swarf to remove the need for forklift truck movement in the area | All | Jun '24 | | | | | | | | | | | | Dec '24 | New briquetter delivered to site Feb '24 Installation area being prepared. Briquetter not installed due to issues in preparing the area. Installation Q1 2025 |
| 25 | Waste Management | Waste Monitoring/reduction | Review briquetting of cast iron swarf to investigate if all cast iron swarf can be briquetted | All | Dec '24 | | | | | | | | | | | | Dec '24 | CAPEX required for more briquetters or a larger unit. Business case required to obtain CAPEX spend. |
| 26 | Waste Management | Waste Monitoring/reduction | Review method for disposal of the filter paper | ST/NJ | Dec '24 | | | | | | | | | | | | Dec '24 | Waste currently disposed of in clip top drums via GD Environmental. Not viable alternative identified as yet |
| 27 | Waste Management | Waste Monitoring/reduction | Review the use of filter paper media to clean coolant in machines | MG | Dec '24 | | | | | | | | | | | | Dec '24 | Cost to retrofit existing machines prohibitive at present. Cost per machine circa £35K - Decision needs to be made to identify if a retrofit campaign is to be undertaken |
| 28 | Waste Management | Waste Monitoring/reduction | Review the process to determine if there are alternative options to disposing of the various waste streams | All | Sep '24 | | | | | | | | | | | | Sep '24 | Current disposal method are the most cost effective at present |
| 29 | Legislative compliance | General System Management | Check if the policy has been updated since 2018. If so obtain a copy of any new policy documents and display on site. | All | Mar '24 | | | | | | | | | | | | Mar '23 | No policy update since the 2018 version. ZF plan to review the policy in 2024. |
| 30 | Ground Contamination | Current site contamination from past processes | Check with [REDACTED] in relation to formal closure of the project | All | Jul '24 | | | | | | | | | | | | Jul '24 | Project closed end of 2025. Majority of bore hole filled to prevent risk of further contamination |
| 31 | Energy Management | Energy Monitoring/reduction | Investigate alternative factory heating options to replace the boilers | All | Dec '24 | | | | | | | | | | | | Dec '24 | Capex agreed, confirmation of Welsh Government funding agreement. Installation due April 2025 |
| 32 | Energy Management | Energy Monitoring/reduction | ZF target of 3% energy reduction required | All | Dec '24 | | | | | | | | | | | | Dec '24 | Projects entered into the SoFi system target achieved |
| 33 | Energy Management | Energy Monitoring/reduction | ZF target of 2% waste reduction required | All | Dec '24 | | | | | | | | | | | | Dec '24 | Projects entered into the SoFi system target achieved |
| 34 | Energy Management | Energy Monitoring/reduction | ZF target of 2% water reduction required | All | Dec '24 | | | | | | | | | | | | Dec '24 | Projects entered into the SoFi system target achieved |
| 35 | Legislative compliance | General System Management | Document periodic visual inspections of site sumps | ST | May '24 | | | | | | | | | | | | May '24 | |
| 36 | Legislative compliance | General System Management | Arrange stack emissions testing | ST | Apr '24 | | | | | | | | | | | | Apr '24 | Emissions tested and report received |



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| 37 | Legislative compliance | General System Management | Arrange internal air monitoring | ST | Oct '24 | | | | | | | | | | | | Oct '24 | Monitoring conducted and report received |
| 38 | Legislative compliance | General System Management | Monitor sulphate levels in the effluent monthly to ensure compliance with Welsh Water limits | ST | Dec '24 | | | | | | | | | | | | Dec '24 | Samples compliant |
| 39 | Waste Management | Waste Monitoring/reduction | Investigate alternative options for absorbent materials used to contain and clear up spills. | ST | Dec '24 | | | | | | | | | | | | Dec '24 | Reusabel mats currently being trialled |
| 40 | Waste Management | Waste Monitoring/reduction | Investigate monthly disposal of hazardous waste as opposed to waiting for bulk disposal. | ST | Apr '24 | | | | | | | | | | | | Apr '24 | Bulk waste disposed of in Feb 24 to clear the decks ready for monthly collections to begin. Additional transport const associated with monthly collection prohibitive and not cost effective. |
| 41 | Waste Management | Waste Monitoring/reduction | Investigate the possibility of separately recycling appropriate solid materials. | ST | Dec '24-Apr '24 | | | | | | | | | | | | Dec '24-Apr '24 | Recycling bins provided throughtu the site |
| 42 | General | Chemical Management | Continue to investigate UK requirements for REACH post Brexit | ST | Dec '24 | | | | | | | | | | | | Dec '24 | No change to the current position for the site |
| 43 | Waste Management | Waste Monitoring/reduction | Implement requirements of the Waste Separation Requirements (Wales) Regulations 2023 | ST | Apr '24 | | | | | | | | | | | | Apr '24 | Recycling bins provided throughtu the site |
| 44 | Energy Management | Energy Monitoring/reduction | Review process temperatures on the machine shop wash plants | ST | Sep '24 | | | | | | | | | | | | Sep '24 | Currently set at temperature to maintain quality |
| 45 | Energy Management | Energy Monitoring/reduction | Remove mechanical agitation from the zinc nickel process. | ST | Apr '24 | | | | | | | | | | | | Jan '24 | |
| 46 | Energy Management | Energy Monitoring/reduction | Consolidate capacity on the zinc nickel process to run on 3 plating tanks as opposed to 6 | ST | Apr '24 | | | | | | | | | | | | Feb '24 | |
| 47 | Energy Management | Energy Monitoring/reduction | Investigate zoning for factory lighting. | ST | Sep '24 | | | | | | | | | | | | Sep '24 | All changes that are effective have been completed. Not cost effective to replace the entire system. Hardware would cost more than the savings made. Payback period over 2 years |
| 48 | Energy Management | Energy Monitoring/reduction | Continue with Machine shutdown procedures to maximise energy saving when not in use (including weekdays) | ST | Dec '24 | | | | | | | | | | | | Dec '24 | Weekend energy monitored and reviewed at the monthly HS&E meeting |
| 49 | Resource Management | Water management/reduction | Investigate reusing water from effluent for zinc nickel plant rinses | ST | Dec '24 | | | | | | | | | | | | | Dicussion commenced with supplier,. On site workshop to be held in Q1 2025 |
| 50 | Resource Management | Water management/reduction | Review flow rates of the rinse tanks on the zinc nickel and anodise plants | ST | Dec '24 | | | | | | | | | | | | Dec '24 | Anodise flowrates reduced to 250 l/hour from 300 |
| 51 | Resource Management | Water management/reduction | Investigate the potential to re-use the water from the effluent in other parts of the site. | ST | Dec '24 | | | | | | | | | | | | | Dicussion commenced with supplier,. On site workshop to be held in Q1 2025 |