Schedule 5 Notification

PART B

Permit Number:	BR9715IB
Name of Operator:	Solutia UK Ltd
Location of Installation:	Corporation Road, Newport, Gwent, NP194XF
Location of the emission:	Site Effluent Pipeline
Time and date of the emission:	16/11/23 – 8:30pm

Any more accurate information on the matters for notification under Part A	In summary of the event to which this Notification relates; The site 18" cast-iron effluent pipeline experienced an integrity failure on the evening of the 16th November 2023 within an area to the South of the site known as Traston Meadows. Upon being made aware of the situation, a site response was immediately initiated in conjunction with communications with specialist contractor(s) in-order-to: effect a repair, minimise any potential harm, and assess the impact of the unintended release of treated process effluent In that regard, the main manufacturing site remained shut-down for a period of approximately 10 days whilst the immediate location was secured to; allow for machine excavation, and to replace the damaged section. During this time – to enable the excavation to take place, the pipeline had to be emptied, and as such, liquid was pumped from the location to road tankers for subsequent disposal at a local water-treatment facility An independent environmental consultant was engaged to; take effluent and soil samples from a number of points in & around the area, and advise on any necessary measures that might be required. Their subsequent report(s) indicated that whilst these multiple sampling & analysis exercises did identify evidence of the treated effluent – the soil & water samples taken over the course of several months resulted in not exceeding the respective EQS (Environmental Quality Standard), or GAC (General Assessment Criteria). Nonetheless, the excavated soil was removed from the area for disposal as a precautionary measure in favour of replacement certified top-soil. Following stakeholder consultation, the area was agreed to be fenced off for a period to allow for natural re-vegetation with indigenous plant species The mechanism of the failure was obviously a key consideration, and as

	such, a selection of pipeline sections were dispatched to a metallurgical specialist for analysis. It has become evident that the pipeline failure was as a result of 'graphitic corrosion'. This is a mechanism that does not become evident during routine thickness testing or visual checks, and can occur despite the presence of cathodic protection. This type of corrosion can cause a loss of material strength over time, leading to an increased risk of failure – particularly when combined with other external / manufacturing defect factors. In this instance specifically it is not clear what the factors might be that led to the propagated longitudinal cracking that was observed – but has nonetheless highlighted the need for additional precautions as detailed below
Measures taken, or intended to be taken, to prevent a recurrence of the incident	The following action items have been identified in conjunction with seeking to expedite the deployment of 'Phase 3' pipeline renewal – Phase 1 having been completed in 2022, and Phase 2 scheduled for completion in July 2024: • Increased frequency of visual inspections along the length of the line to a 6-weekly interval – and engagement with metallurgical company to advise on availability & capability of NDT (nondestructive testing) technologies to allow for further investigative testing in-situ • Additional pipe sections are undergoing analysis to further inform on the graphitic corrosion phenomenon – these comprising; sections adjacent to the failure, a previously removed section, a soon to be removed section, and a 'new' spare section • Purchase of a drone with thermographic capability, in-order-to more readily conduct aerial surveys along the length of the pipeline • Elevation of the site response capability by identifying what might be required at the various points along the pipeline length – noting factors such as; land use, access availability, easement specifics, local sensitivities etc. and making provision accordingly • Improvement to public awareness of the pipeline via correspondence and enhanced signage • Modified operation of effluent discharge pumps, such that pressure fluctuations are minimized. Confirmation of effluent non-toxicity & dispersion characteristics could allow for further flexibility in pumping strategy Perhaps worth mentioning also is that the Phase 2 pipeline upgrade (currently underway at time of this submission) will feature additional

	benefits in the form of improved; isolation capability, and pressure / flowrate telemetry
Measures taken, or intended to be taken, to rectify, limit or prevent any pollution of the environment or harm which has been or may be caused by the emission	Other than those items details above - no additional measures are proposed for the event itself – however 'Phase 3' of the effluent pipeline project will target the in-land section of the pipeline, Phases 1 & 2 (near completion) having already replaced / upgraded the; intertidal & marine sections respectively
The dates of any unauthorised emissions from the installation in the preceding 24 months	24/01/2024 - Boiler 16 CO 08/01/2024 - Dequest Amino Recirc Line 14/12/2023 - Formalin in Effluent 12/12/2023 - Boiler 16 CO 04/12/2023 - Effluent Cease Discharge 17/11/2023 - Effluent Pipeline Offsite [This Notification] 13/10/2023 - Benzene Release to Separator 15/09/2023 - Boiler 16 CO 29/08/2023 - Effluent Circulation Pipeline Leak 06/09/2023 - Formalin in Effluent 06/02/2023 - Dequest Amino 24/11/2022 - Effluent Cease Discharge 14/07/2022 - Effluent Hg

*** Signed:** [redacted] **Date:** 17/06/2024

* authorised to sign on behalf of Solutia UK Ltd