Incomplete understanding of biogas chemical hazards – Serious gas poisoning accident while unloading food waste at biogas plant

At a biogas plant, a truck driver was overcome by toxic fumes while unloading food waste slurry collected at sites that operate a shredder and tank system. Trucks unload their cargo into a feedstock pit. While unloading, hydrogen sulfide, carbon dioxide and possibly other toxic gases were released. Ventilation systems were overwhelmed. The driver narrowly escaped death. Several would-be rescuers collapsed. Under marginally different conditions, this accident could have led to five fatalities. The case offers a rich account of the actions of fellow workers who with stubborn determination sought to extract the unconscious driver. Even after having collapsed themselves, been extracted and recovered, they re-entered the building - amazingly still without realizing the gas danger. The article argues that long retention time in the logistics chain may alter the hazard profile of food waste slurry. This emerging risk appears overlooked and under-studied. The case exposes insufficient attention to safety in the rapidly expanding biogas sector. The biogas plant was unprepared. The investigation was quick, superficial and woefully inadequate. Root causes were not identified. Broad information sharing is limited or non-existent.