#	Author and Title	Salient information	Regulatory implications for the industry	Source/link
Environmental publications				
1	**Beane et al., 2016.** Abandoned metal mines and their impact on receiving waters: A case study from Southwest England	The study provides a quantitative assessment of a historic mine site in southwest England, and its contribution to non-compliance with Water Framework Directive (WFD) Environmental Quality Standards (EQS) for Cd, Cu, Pb and Zn. Surface water and sediment samples showed significant negative environmental impacts even taking account of the bioavailability of the metal present, Benthic invertebrates showed a decline in species richness adjacent to the mine site with lead and cadmium the main cause.	Weight of evidence to impose stringent regulatory limits to account for point and diffuse sources of contamination and stringent regulatory policy for site remediation.	Chemosphere,153:294-306
2	**Brown et al., 2015.** Lead in Urban Soils: A Real or Perceived Concern for Urban Agriculture?	Plant uptake of Pb is typically very low and studies have shown limited absorption of Pb when ingested with food. It is highly unlikely that urban agriculture will increase incidences of elevated blood Pb for children in urban areas.	Weight of evidence showing that urban agriculture is not likely to pose any additional health and environmental risks associated with soil Pb.	Journal of Environmental Quality
3	**Van Sprang et al., 2016.** The derivation of effects threshold concentrations of lead for European freshwater ecosystems.	The paper derives ecologically relevant effect threshold concentrations of Pb for selected European Union freshwater rivers using a comprehensive chronic toxicity dataset, comprising 159 individual high quality toxicity data for 25 different species, and presents the biotic ligand models developed for predicting bioavailability and toxicity of lead in algae, invertebrates and fish.	A milestone presenting state-of-the-art information on fate and effects of Pb in freshwater and models that are used under regulatory frameworks for ecological risk assessment and derivation of environmental quality standards.	Environmental Toxicology & Chemistry, 35(5):1310-1320

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4	**Alsop et al., 2016** Interactions of waterborne and dietborne Pb in rainbow trout, Oncorhynchus mykiss: Bioaccumulation, physiological responses, and chronic toxicity	The paper examines the interactive effects of waterborne and dietary lead exposure in fish (rainbow trout) under ecologically relevant conditions and reveals that dietary lead exposure to freshwater organisms is not concerning at levels that are much higher than chronic regulatory standards used for freshwater.	Weight of evidence to remove concerns raised by regulators in different jurisdictions on dietary lead exposure.	Aquatic Toxicology 177: 343-354
5	**Johnston et al., 2016a**. Trace metal bioavailabilities in the Thames estuary: continuing decline in the 21st century.	Levels of pollution, including contamination by toxic metals, in the Thames estuary reduced over the last four decades of the 20th century. The bioavailability of trace metals including Pb varied along the estuary, and, in general, fell between 2001 and 2014, a reflection of the continuing remediation of the Thames estuary from its severely polluted state in the middle of the 20th century.	The remediation activities have been effective and the level of contamination is relatively safer	Journal of the Marine Biological Association of the United Kingdom, 96: 205 – 216
6	**Johnson et al., 2016b**. State of remediation and metal toxicity in the Tri-State Mining District, USA	Despite remedial actions undertaken in the 1980's, areas within the Tri-State Mining District (Kansas, Missouri and Oklahoma) still contain Cd, Pb, and Zn concentrations exceeding safe levels. Abandoned mining wastes continue to release metals to the environment. Remediation should be applied to highly contaminated sites, before contamination disperses further	The mine wastes in the area remain a problem and further remediation is needed.	Chemosphere 144: 1132-1141
7	**Smolders et al., 2015** Toxicity in lead salt spiked soils to plants, invertebrates and microbial processes:	Lead toxicity in spiked, unleached soils is primarily confounded by salinity stress. Toxicity of Pb to soil organisms in fully aged soils reduced significantly relative to freshly-	Scientific evidence showing that risk thresholds derived by the industry from lab studies are conservative and regulators may	Science of the Total Environment, 536: 223 – 231.

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	Unraveling effects of acidification, salt stress and ageing reactions	spiked soils and is only found above 1000 mg Pb/kg soil.	not need to impose additional measures to protect soil organisms in the field.	
8	**Toth et al., 2016.** Heavy metals in agricultural soils of the European Union with implications for food safety	The concentration of metals including As, Cd, Cr, Cu, Hg, Pb, Zn, Sb, Co and Ni in soil of the EU was assessed in a large number of soil samples from approximately 22,000 locations in the European Union. Only a small percentage of agricultural land (6.24% or 137,000 km2) needs local assessment and eventual remediation action. The paper calls for establishment of harmonized screening values for soil contamination in the EU.	Weight of evidence suggesting that the majority of agricultural land is safe for food production.	Environment International, 88: 299–309.
9	**Davidson et al., 2016** Lead industry life cycle studies: environmental impact and life cycle assessment of lead battery and architectural sheet production	This paper described the results of 3 LCA studies on lead metal production and use recently conducted by ILA on the environmental impact of lead metal production, and on the products that make up approximately 90% of the end uses of lead (i.e., lead-based batteries and architectural lead sheet). The high recycling rates of lead automotive and industrial batteries and lead sheet in Europe (99 and 95%, respectively), coupled with the fact that both products are manufactured from recycled material, have a beneficial impact on the results of LCA studies, significantly lowering their overall environmental impact, to the	The LCA studies described in this paper were undertaken to provide stakeholders, including regulators, a thoroughly transparent overview of the sustainability of lead industry operations and products.	Intern. J. Lifecycle Assessment, 2016

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		point that impacts associated with mining and smelting of lead ores are minimized and in some cases avoided completely. This paper also demonstrated that the technological capabilities of innovative advanced lead batteries used in start-stop vehicles significantly offset the environmental impact of their production.		