



Mayor Robert E Simison

City Council Members

Joe Borton

Treg Bernt

Luke Cavener

Brad Hoaglund

Jessica Perreault

Liz Strader

February 2, 2021
Idaho Department of Environmental Quality
1410 N Hilton
Boise, ID 83706

**Subject: Review Comments for DRAFT IPDES USERS GUIDE VOLUME 6 –
SEWAGE SLUDGE AND BIOSOLIDS**

Dear Ms. Williams:

The City of Meridian has reviewed the updated draft IPDES User's Guide to Permitting and Compliance Volume 6 – Sewage Sludge and Biosolids. Thank you for adjusting the guidance based on many of our comments from the first draft of comments.

Please do not hesitate to contact me for further clarification or information related to any of the following comments.

The City greatly appreciates the efforts of the DEQ staff in drafting IPDES guidance, rules, and permits that are fair, equitable, scientifically-based and protective of the environment while not exceeding the stringency or complexity of the federally set requirements.

Thank you for your consideration and response to our comments.

Sincerely,

A handwritten signature in black ink that reads "Laurelei McVey". The signature is written in a cursive, flowing style.

Laurelei McVey
Deputy Director Utility Operations, City of Meridian
(208) 888-2191 ext. 1259
lmcvey@meridiacity.org

Comment 1: Annual Report

Will the annual report be web based, form fillable (similar to the current form through EPA's CDX biosolids website), or will facilities just be required to submit a report in any format to the IPDES site as an attachment? The EPA site/form is easy to use and collects all the information in a consistent manner from all dischargers. It may be worthwhile for DEQ to mirror the EPA submission site, if possible.

Request

Consider current EPA submission site when developing IPDES equivalent. If DEQ does not utilize an automatic form filling site for submission, it is recommended to post an example annual report for dischargers to utilize to assist in creation of their annual reports.

Comment 2: Struvite and Class A/EQ Requirements

Struvite (magnesium ammonium phosphate) is a phosphate mineral that can be removed from the solids processing stream of a wastewater facility and beneficially reused as a slow release fertilizer. In 2017, EPA acknowledged that struvite products are highly refined, safe products and perhaps should not be regulated under the 503 requirements as a biosolids or sludge material.

“Some products originating from sewage sludge could conceivably be so heavily refined or processed that a significant transformation or change in quality has occurred to the extent that it would be unreasonable to describe those products as "material derived from sewage sludge.... such products...would be outside the scope of Part 503." (Jan 2017 EPA letter to NACWA, emphasis added).

Requiring struvite products to meet Class A Exceptional Quality biosolids standards in Idaho is unnecessary and will likely reduce the beneficial reuse of struvite based slow release fertilizers in Idaho.

As City of Boise has demonstrated through their attempts at further processing struvite products as Class A biosolids, “typical time and temperature requirements specified for Class A biosolids treatment are difficult to apply in the treatment for struvite to meet Class A condition. This challenge is due to the temperature-sensitive nature of the struvite crystal. The struvite crystal structure is destroyed when heat is applied due to release of bound water and the subsequent release of bound ammonia, leaving a dusty, low-nutrient and low-value product. The release of bound water inside the heat treatment vessel can also produce a dense, sticky material that is impossible to reclaim and requires extensive maintenance to remove” (City of Boise's Struvite Story 10-19, emphasis added).

Additionally, running pathogen and virus testing on salt matrices is expensive, unnecessary, and challenging at best. Traditional, approved wastewater testing methods are generally developed for use on liquid or non-crystal solid matrices.

With the likely increase in the installation of intentional struvite producing facilities in Idaho as a necessary way for dischargers to help meet stringent effluent nutrient limits, it is important for DEQ to analyze the reasoning and justifications for requiring regulations that are more stringent than necessary for non-biosolids product (struvite) by deeming it a Class A biosolid.

Additionally, it would be useful for DEQ to survey other states and regions to better understand how and why struvite is regulated across the nation. Many of the companies that are developing struvite production equipment in the US have many years of experience in the production, handling, and regulations of struvite material in Europe, as well, and may be able to provide DEQ with valuable insight. It is recommended that DEQ meet with these vendors to better understand struvite products, composition, and risks/benefits (vendor examples include Ostara, CNP/Centrisys, and Schwing) before imposing additional regulations.

Struvite is an important, recoverable mineral resource for Idaho, and it would be a shame to hamper beneficial use of struvite due to unnecessarily over regulation based on an improper classification that ignores the significant transformation and change in quality from the source material.

Request

Struvite products should be exempted from meeting the requirements of the 503 regulations as this product is no longer a sewage sludge or biosolids material. This clear exemption will give facilities the regulatory certainty necessary to continue to pursue the important beneficial reuse of this product in our state.

Suggested language for guidance document could include:

Section 5.2- Struvite and Struvite Based Products

Struvite, or magnesium ammonium phosphate ($\text{NH}_4\text{MgPO}_4 \cdot 6\text{H}_2\text{O}$), is a solid, crystalline phosphate mineral that forms naturally under certain conditions during wastewater treatment. Struvite can also be intentionally formed using advanced wastewater treatment processes to treat phosphorus-rich sidestreams.

Struvite is significantly transformed from sewage sludge so that the change in quality and primarily inorganic nature allows it to fall outside of the definitions of sewage sludge and biosolids, thus allowing struvite to fall outside of the scope of Part 503. Struvite generated and sold into a commodity market can also be considered outside of the scope of Part 503.

DEQ may on a case-by-case basis require facilities who produce and wish to dispose of struvite in a beneficial manner to demonstrate the quality and/or safety of the struvite

material before disposal/reuse. This material however is not required to meet the analysis of heavy metals contamination; pathogenic potential elimination; or vector attraction reduction methods listed in the 503 regulations as this material is not a sludge or biosolids product.