

NeoChloris Inc.

NeoChloris Inc. is an environmental consulting firm with expertise in mining pollution control, please see attached letter. We do NOT support the issuance of NPDES No. AZ0026387 for January Mine Hermosa Project near Patagonia AZ. Reasons include irreparable harm to the environment, damage to the water table and surface water, and impact upon wildlife INCLUDING RECENTLY IDENTIFIED AND VERIFIED SIGHTINGS OF JAGUAR (Panthera onca) IN THIS AREA. Mining techniques are constantly improving, and we suggest waiting until new mining technologies are established which will reduce tailings production, acid mine drainage generation, and pollution from processing metals. Look to Florence Copper in Florence, AZ as an example of modern mining methodology.

Thank you,
Charles R. Stack, MPH, BCES
Vice-President, CTO
NeoChloris, Inc.
155 N. Harbor Drive, Suite 4203
Chicago IL 60601-7373
cstack@NeoChloris.com
<http://www.neochloris.com>
Cell (630) 841-8706

13415 North Flaxleaf Place
Oro Valley, AZ 85755



Michael Richmond, NTTT Lead, and Chief,
Engineering & Mine Mapping Services Branch
Technical Support Division, DOI Regions 1 and 2
3 Parkway Center, Pittsburgh, PA 15220

May 12, 2020

Dear Dr. Richmond:

This letter is in support of the NeoChloris proposal for a US Office of Surface Mining and Reclamation and Enforcement grant to study sustainable design in coal mine reclamation, FOA No. S20AS00005.

I believe that NeoChloris is developing technology that could be a game changer for algal cultivation. This belief is exemplified by our decision to involve NeoChloris as a partner in our project with BHP Billiton to use algae to produce biofuels and remediate the groundwater at a decommissioned uranium mine in New Mexico. The advantages of their patented photobioreactor include improved biomass and lipid productivity, temperature modulation, 24 hour lighting, reduced land requirements, and water conservation. These qualities offer opportunities for large scale cultivation away from warm coastal environments, greatly expanding the potential for algal biomass production for mine reclamation in the US and around the globe.

Use of microalgae and cyanobacteria for mine reclamation is demonstrated in the literature. However, full-scale implementation of these schemes requires a robust algae cultivation process that is capable of producing a wide variety of products and is resistant to contamination and cold weather. As a result, I believe that NeoChloris technology could be cost effective for this application. The award of a grant from OSMRE could be instrumental in demonstrating this point.

Please do not hesitate to contact me if you have any questions and thank you for your consideration of this letter of support for NeoChloris Inc.

Yours,

Robert M. Baldwin, PhD
Principal Scientist | National Bioenergy Center
National Renewable Energy Laboratory (NREL) | MS 3511
15013 Denver West Parkway, Golden, CO 80401 USA