NESTI É WATERS NORTH AMERICA INC.

305 Nestle Way Breinigsville, PA 18031



July 6, 2018

ARROWHEAD.

Hon. David G. Argall, Chair

Senate Majority Policy Committee

DEER PARK

171 Main Capitol Building

ICE MOUNTAIN

Harrisburg, PA 17120

Re: Senate Majority Policy Committee Hearing on Placement of Fill in Quarries

Ozarka PolandSpring

Dear Senator Argall:

Zephyrhills

At the request of Senator Mario M. Scavello, I am writing to provide the Senate Majority Policy Committee with some observations and perspectives on the issues which the Committee is considering at its hearing in Northampton County on the subject of placement of fill in abandoned quarries.



I am a Pennsylvania licensed professional geologist and currently serve as a Natural Resources Manager for Nestlé Waters North America Inc. ("NWNA"). NWNA is Pennsylvania's largest manufacturer and distributor of bottled water. NWNA's two major bottling plants located in Breinigsville, Pennsylvania employ more than 600



workers, making NWNA one of the Lehigh Valley's most significant employers.



Our observations are largely based on issues arising from efforts to fill in an abandoned quarry, located upgradient of an NWNA spring water source, using left over slate and overburden remaining from past mining activities. The situation we encountered was perhaps different than those brought to the attention of the Committee regarding activities in other parts of the Slate Belt, since it did not involve dredged fill or other fill materials brought from other sites or states. However, the lessons learned from the situation are valuable in terms of the precautions appropriate when considering placement of any fill material in abandoned quarry pits.



S.PELLEGRINO

I would like to share the following lessons learned from our recent experiences:



First, any approach to the issue of placing fill in abandoned quarries needs to recognize an important point: avoiding the introduction of constituents into an aquifer is much less expensive than containing and remediating contamination.



Second, before placing material in abandoned quarry pits - whether it be left-over mined material and overburden from past mining activities or fill material being brought in from off-site – it is critical that the Pennsylvania Department of Environmental Protection and other regulators know the nature of the constituents in the material. Appropriate test results should be obtained and reviewed. Material to be placed in water-filled quarry pits should be tested for constituents and/or contaminants that may be mobilized by the water or dissolved into the water.

Third, the patterns of surface water and groundwater flows from abandoned quarry pits should be evaluated to determine what is downgradient, and what downstream natural resources and water users may be impacted if the quarry pit water becomes contaminated. Abandoned quarry pits are not isolated from the surface and ground water systems; rather, groundwater naturally flows into and out of the pits. If fill material is placed into a quarry pit and leaches contaminants into the water, those constituents will almost inevitably flow into the adjoining groundwater and downgradient toward other users. This outward flow from quarry pits will be exacerbated as fill is placed into the pits, displacing the pit water – which causes it to flow in greater quantities outward and downgradient.

Fourth, monitoring of quarry pit water quality and downgradient surface and ground water quality should be considered and required in all cases. Monitoring wells should be located based on a solid understanding of aquifer ground water flow directions, and monitoring should be conducted for appropriate indicator parameters at a frequency that can spot potential contamination issues in time to take necessary corrective action (which may be to stop placement of the fill material).

Finally, responsibility should be placed on those who undertake the placement of fill to conduct the required pre-activity material testing, the required monitoring, and any required corrective action to clean-up impacted groundwater. Landowners who wish to "reclaim" their land to facilitate future development need to be responsible for the consequences of their actions. In addition, government agencies should likewise be held accountable as trustees of public natural resources if they fund and facilitate activities that adversely impact the environment.

I respectfully hope that these observations and perspectives are helpful to the Committee.

Sincerely yours,

Eric Andreus, P.G.

cc: Hon. Mario M. Scavello