STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Bureau of Remediation and Solid Waste Management
Division of Technical Services

MEMORANDUM

TO: Nicholas Hodgkins, VRAP Coordinator, Division of Remediation

FROM: Troy Smith, Certified Environmental Hydrogeologist, GE502,
Troy Smith Technical Services Division
DATE: December 31, 2014

PROGRAM: Voluntary Remedial Action Program

SITE: General Alum Chemical, Searsport

REMEDIATION NUMBER: REM01170

SUBJECT DOCUMENT:
Response to Comments on Investigation, Remedial Work Plan, and Public Communications Plan, Voluntary Response Action Program, 34 Kidder Point Road, Searsport, Maine; prepared by CES, Inc., December 30, 2014.

The purpose of this memo is to provide recommendations for your consideration on the subject document submitted as part of the VRAP Application. Please contact me if you have any questions or concerns.

This memo is a follow-up to the December 10, 2014 memo that reviewed the VRAP application documents.

The CSM includes low pH as a parameter, but does not include any contaminants of concern or how they might be related to the low pH conditions. The lowering of the pH by the presence of sulfur has effects on the geochemistry that are not addressed in the CSM. Without understanding the contaminants of concern and their relationship to the low pH condition, the selection of a remedy and evaluation of a remedy will be incomplete.

Additional data is needed to complete the CSM prior to implementation of the remedy. Water samples should be collected during the proposed remediation demonstration test to determine the contaminants of concern. Water samples should be collected from influent and effluent to determine the effects of the proposed remediation on the groundwater geochemistry. Analytes should include major cations

(Ca^{+2}, Mg^{+2}, Na^{+}, K^{+}), major anions (HNO_3^{-}/$CO3^{-2}$, $SO4^{-2}$, Cl^{-}, $NO3^{-}$), and selected trace species (Fe^{+2}/Fe^{+3}, Mn, As, NH4). The major cations and major anions should be collected as unfiltered samples. The trace species should be collected as both unfiltered and filtered (using a 0.45 micron in-line filter). This will provide the data needed to complete the CSM and evaluate the proposed remedy.