



## Environmental Health & Safety

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37 Dewey Field Road, Suite 6216 • Hanover, NH 03755

TEL: (603) 646-1762 • FAX: (603) 646-2622 • <http://www.dartmouth.edu/~ehs/>

August 19, 2013

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Twila Kenna, PhD  
Manager, Radioactive Materials Program  
Radiological Health Section  
New Hampshire DHHS Public Health Services  
29 Hazen Drive  
Concord, NH 03301-4604

Re: Rennie Farm Radiological Decommissioning,  
Request for Authorization to Conduct Phase Two Operations

Dear Dr. Kenna,

This letter serves as a follow-up to our May 15, 2013 meeting where we discussed completed remedial operations at the Rennie Farm site as well as a path forward to complete the radiological decommissioning of that site. Dartmouth College is requesting authorization to proceed with Phase Two of this project as detailed herein.

As you are aware, Phase One operations focused on the removal and off-site disposal of the waste that had been buried at the site. After each plot was remediated a sample of the remaining soil was collected and subsequently analyzed for radioactivity associated with the radionuclides identified at the site. These samples were originally intended to support site characterization and to guide any further remedial efforts.

The College is proposing to use these characterization samples, as well as data from groundwater sampling, in the assessment of the site for unrestricted release from radiological controls. This assessment would follow the guidance in the latest versions of NUREG 1757, *Consolidated Decommissioning Guidance* and NUREG 1575, *Multi-Agency Radiation Site Survey and Investigation Manual (MARSSIM)*. Further, the College proposes to use the screening values of common radionuclides for surface soil contamination levels listed in NUREG 1757, Volume 2, Revision 1 (2006), Table H.2 as the Derived Concentration Guideline Levels (DCGLs) for the radionuclides of interest (see Table 1).



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**Table 1 Proposed DCGLs for Surface Soil Screening**

<b>Radionuclide</b>	<b>Symbol</b>	<b>Surface Soil Screening Values (pCi/g)</b>
Hydrogen-3	<sup>3</sup> H	110
Carbon-14	<sup>14</sup> C	12
Nickel-63	<sup>63</sup> Ni	2100
Cesium-137	<sup>137</sup> Cs	11
Lead-210	<sup>210</sup> Pb	0.9

With your approval, the College will complete the statistical testing necessary to compare the available characterization data with the requirements for site decommissioning found in the guidance documents. If the site is found to pass such testing, a report will be prepared and submitted to you along with a formal request to release the site from radiological controls. Should additional sampling be required, these samples would be collected and analyzed and the resulting data used in final reporting.

If the College finds that additional remedial work or invasive site investigation (other than soil sampling) is required, a specific request will be made of the Radiological Health Section prior to the implementation of such work.

Thank you for your support during this project and I look forward to completing this final phase of operations under your guidance.

Sincerely,  
Dartmouth College



Maureen O'Leary, PhD, MBA  
Director, Environmental Health and Safety