

**Comments of the Massachusetts Departments of Environmental
Protection and Public Health on Holtec’s Amended Initial Pilgrim
Environmental Site Assessment Work Plan**

January 26, 2022

Settlement Agreement Paragraph 11 Requirements	Complies (Yes/No)	Agency Comments
<p>(a) An inventory of all structures, buildings, rooms, equipment, workspaces, land areas, and groundwater resources to be assessed, together with any proposed Operable Units. Consistent with the Atomic Energy Act, HDI shall delineate Operable Units in a manner that maximizes areas available for immediate site characterization, remediation, and release;</p>	<p>No</p>	<ol style="list-style-type: none"> 1. The draft work plan does not include the inventory required by this subparagraph. 2. Holtec shall include in the revised work plan a comprehensive site plan that identifies the location of each structure and includes an identification key that lists each structure by name and number. 3. In the accompanying key to the comprehensive site plan identifying each structure, Holtec shall note, consistent with the requirements of paragraph 10(g), whether the structure has already been demolished (and, if so, the date of demolition) and, if not, when it currently expects to do so prior to License Termination. 4. Holtec should include in the revised work plan the potential non-radiological oil and/or hazardous materials (OHM) to be assessed for each potential source/structure.
<p>(b) A description of all proposed assessment activities to address data gaps identified by the LSP’s review of the HSA;</p>	<p>Partial</p>	<p>The draft work plan does not address needed assessment activities with respect to data gaps for underground structures and components. Significantly, this requirement does not call on Holtec to <i>report</i> the results of its activities to address data gaps but instead calls on Holtec to <i>describe when and how it</i> will address those data gaps. The actual assessment of below</p>

Settlement Agreement Paragraph 11 Requirements	Complies (Yes/No)	Agency Comments
		ground structures must occur throughout the dismantling of the plant and related infrastructure.
(c) A proposed schedule of all proposed activities to be undertaken under the plan (including characterization, demolition, on-site management, regrading, and reseeded);	No	<ol style="list-style-type: none"> 1. The draft work plan does not include a complete and sufficiently detailed proposed schedule “of all activities to be undertaken under the plan,” including site characterization, demolition, on-site management, regrading, and reseeded. 2. With respect to demolition in particular, the proposed schedule in the revised work plan shall identify all structures that Holtec must, consistent with paragraph 10(g) demolish and when it expects to do so (this information can be included with the needed site plan referenced in the comments above with respect to subparagraph 11(a)). 3. Among the missing information is a comprehensive schedule for all demolition activities, which should include the time necessary to comply with asbestos related requirements (demolition notification, asbestos survey, asbestos notification, and the asbestos abatement notification/application process).
(d) A proposed schedule for completion of site-wide environmental assessment activities for the Site;	No	The draft work plan does not include an anticipated comprehensive schedule for all environmental site assessment activities at the site.
(e) A proposed list of potential radiological and non-radiological contaminants for which sampling and testing will be conducted at the Site or, in the event	Partial	1. General Comment: the draft work plan includes nearly 3,000 pages of laboratory analytical reports for non-radiological contaminants. These reports should be

Settlement Agreement Paragraph 11 Requirements	Complies (Yes/No)	Agency Comments
<p>Holtec designates Operable Units, each Operable Unit at the Site and the sampling and analysis protocols for the Site or each Operable Unit, if any;</p>		<p>omitted from the revised work plan as they relate to the results of certain actions Holtec has performed to assess the site and not the work plan for doing so. Instead, the results of actions Holtec undertakes in its performance of actions taken under the work plan should be included in the Initial Pilgrim Environmental Site Assessment report called for in Paragraph 12.</p> <p>2. Radiological:</p> <p>a. in conjunction with Table 3, Holtec needs to include in the work plan a written explanation for why it selected certain radionuclides, including those “hard to detect” radionuclides, and excluded others.</p> <p>b. the work plan must also describe a process for screening for other radionuclides (and identify those specific radionuclides) once subsurface and substructure sampling data are available.</p> <p>3. Non-Radiological: complete for non-radiological oil and hazardous materials.</p>
<p>(f) A proposed plan for testing and demonstrating compliance with the radiological cleanup standard set forth in Paragraph 10(d), which shall include a plan to submit confirmatory radiological surveillance and analytics to DPH and DEP with the Permanent Solution Statement required by Paragraph 10(e) above;</p>	<p>No</p>	<p>1. the draft work plan does not include a date for testing and demonstrating compliance to DEP and DPH with the radiological standard in the Settlement Agreement.</p> <p>2. the draft work plan does not include a description of the process and plan for split samples with DPH.</p>

Settlement Agreement Paragraph 11 Requirements	Complies (Yes/No)	Agency Comments
		<ol style="list-style-type: none"> <li>3. the draft work plan does not include a detailed discussion on the Derived Concentration Guideline Level (DCGL) selection to demonstrate compliance with the cleanup standards; instead, the draft work plan includes only a conclusory statement that Holtec is committed to meeting the standard. <li>4. the work plan must include a DCGL table <li>5. Appendix A (pp.1-5) discusses the radiological criteria for unrestricted use but only addresses the radionuclides identified in Table 3 without an accompanying explanation for how radionuclides in Table 3 were selected and why others were excluded (see comment regarding ¶ 11(a) above). <li>6. BHI Table 1.2-1 includes a reference to the resident farmer standard but omits any reference or discussion about the basement inventory model. The revised work plan must include both and describe how Holtec plans to demonstrate compliance with them. <li>7. the draft work plan specifies that gamma scans will occur for surface areas but omits a detailed plan describing the monitoring necessary for subsurface contamination, which is required for unrestricted release (Subsurface defined as greater than 15-cm, NUREG/CR-5512 Vol. 1: Residual Radioactive Contamination from Decommissioning).

Settlement Agreement Paragraph 11 Requirements	Complies (Yes/No)	Agency Comments
<p>(g) A proposed plan to perform initial groundwater sampling of radiological and non-radiological contamination, including a plan for the installation of any additional monitoring wells necessary to characterize the scope and extent of radiological and non-radiological groundwater contamination; proposed sampling and independent analysis protocols, including the frequency with which sampling will occur, the contaminants to be tested, and the results of the independent laboratory analysis reported to DEP and DPH; protocols for quality assurance and split sampling with DEP and DPH; and proposed protocols in the event a radionuclide or hazardous material is identified;</p>	<p>Partial</p>	<ol style="list-style-type: none"> 1. the work plan describes sampling that Holtec has completed to date. This is helpful information, but the purpose of the work plan is not to describe the results of activities undertaken to characterize and assess the site. Rather, that information should be provided to DEP and DPH separately and, in all events, included in the Initial Pilgrim Environmental Site Assessment report called for in Paragraph 12. 2. the revised work plan needs to describe the frequency of groundwater sampling and should indicate clearly how the groundwater sampling frequency will vary based on seasonal conditions. 3. the revised work plan needs to include the protocols for quality assurance and split sampling with DEP 4. the revised work plan needs to include protocols in the event a radionuclide or oil or hazardous materials is identified as part of the site characterization and assessment work.
<p>(h) A proposed plan to perform initial soil sampling of radiological and non-radiological contamination, including a plan for the location of surficial soil samples, soil borings and/or test pits necessary to characterize the scope and extent of radiological and non-radiological soil contamination; proposed sampling and independent analysis protocols, including the frequency with which sampling will occur, the contaminants to be tested, and the results of the</p>	<p>Partial</p>	<ol style="list-style-type: none"> 1. General Comment: the revised work plan needs to include protocols in the event a radionuclide or oil or hazardous materials is identified as part of the site characterization and assessment work. 2. Radiological: <ol style="list-style-type: none"> a. the draft work plan contains an insufficient level of detail with respect to protocols for sampling and

Settlement Agreement Paragraph 11 Requirements	Complies (Yes/No)	Agency Comments
<p>independent laboratory analysis reported to DEP and DPH; protocols for quality assurance and split sampling with DEP and DPH; and proposed protocols in the event a radionuclide or hazardous material is identified;</p>		<p>independent analysis, the frequency with which sampling will occur, protocols for quality assurance, and a plan for split sampling with DPH.</p> <p>b. the revised work plan must describe the frequency with which sampling will occur.</p> <p>3. Non-Radiological:</p> <p>a. the revised work plan must describe the frequency with which sampling will occur.</p> <p>b. the revised work plan shall make clear that Holtec will use a photoionization detector (PID) to screen soil samples in suspected source areas.</p> <p>c. the revised work plan shall make clear that Holtec will sample and analyze soil that is stained, contains stressed vegetation, contains debris, has an odor or registers on the PID.</p> <p>d. the revised work plan shall make clear that the number and location of soil samples will be determined by observed field conditions. If there are no observable field conditions that indicate that a release has occurred, then Holtec shall perform a sufficient number of random samples to ensure adequate characterization and assessment of the area.</p> <p>e. the Non-Radiological Site Characterization Plan, Phase 1A identifies several areas where non-rad</p>

Settlement Agreement Paragraph 11 Requirements	Complies (Yes/No)	Agency Comments
		<p>OHM may have been released to the ground or underlying soil, yet only groundwater is proposed to be sampled (SOCA AOI, EOCA AOI and SPA AOI). Many of the non-radiological OHM potentially associated with these sources are relatively insoluble and may impact the soil but not the groundwater. The revised work plan shall make clear that Holtec will collect soil samples for the full suite of analysis using the criteria identified in item c. above. The revised plan shall also make clear that Holtec will conduct soil samples of soil presently covered by pavement or concrete after the pavement or concrete is removed.</p>
(i) A proposed plan to perform initial sampling of radiological and non-radiological contamination in environmental media other than soil and groundwater	No	<p>The draft work plan contains insufficient detail regarding the performance of initial sampling of radiological and non-radiological contamination in environmental media other than soil and groundwater and the criteria for triggering the need to perform such sampling if ongoing assessment work demonstrates such a need.</p>
(j) A proposed schedule for submitting a plan that complies with the MCP and the Massachusetts Solid Waste regulations for use of off-site materials proposed to be used as fill on Site, including a proposed plan to characterize off-site materials that includes, at a minimum, the following: a list of all non-radiological contaminants for which the off-site materials will be characterized and the specific sampling and analysis methods and processes that will be used to characterize the off-site materials;	No	<ol style="list-style-type: none"> 1. the draft work plan does not include any information regarding a proposed schedule for submitting a plan that complies with the MCP and the Massachusetts Solid Waste regulations for use of off-site materials proposed to be used as fill on Site or the remaining requirements of this subparagraph (j). 2. if Holtec does not plan to use any off-site materials/soil subject to DEP's Solid Waste policies are regulations as part of any future site work at the site, then Holtec shall so state in the revised work plan and need not include

Settlement Agreement Paragraph 11 Requirements	Complies (Yes/No)	Agency Comments
		details regarding a proposed schedule for submitting the plan described in this subparagraph (j).
(k) A proposed schedule for submitting a detailed description of how concrete material will be processed, managed, and removed from the Site, including how concrete materials will be processed (removal of rebar and other reinforcing materials) and resulting size of specification of resulting aggregate material; and	No	The draft work plan does not include a detailed description (or, for that matter, any description whatsoever) of how Holtec will process, manage, and remove concrete material from the site or specifications for the resulting size of any resulting aggregate material. In addition to including this information in the revised work plan, the revised work plan should also include a description of how Holtec will manage demolition materials more generally (e.g., rebar and other structural materials).
(l) A description of a process to characterize each below grade structure and the steps that Holtec would need to take if removal of those structures is necessary for Partial Site Release or under the terms of this Agreement.	No	<ol style="list-style-type: none"> 1. The draft work plan does not include a description of a process to characterize each below grade structure or the steps that Holtec would need to take if removal of those structures is necessary for Partial Site Release or under the terms of the settlement agreement, including the requirements in paragraph 10(g). 2. The revised work plan must include such a description and identify each below grade structure at the site (see related comments with respect to subparagraph (a) above). 3. In the draft work plan, Holtec cited inaccessibility to below grade structures as a reason for not satisfying this requirement, but Holtec does not need to access the below grade structures to provide a description of how it will characterize those structures once they are accessible or how it will, in general terms, safely remove them.

Settlement Agreement Paragraph 11 Requirements	Complies (Yes/No)	Agency Comments
		<p>4. If, at this time, Holtec anticipates seeking approval from DEP to leave in place any underground structures (as described in paragraph 10(g)(3)) through issuance by DEP of a beneficial use determination, then Holtec should identify those structures in the revised work plan.</p> <p>5. With respect to the latter, DEP reminds Holtec that a request for approval of a beneficial use determination may be submitted only for “clean, uncontaminated underground structures” (paragraph 10(g)(3)), and that underground structures with residual contamination (even if below the DCGL or reportable concentration level of oil and hazardous materials) is not considered clean and uncontaminated.</p>