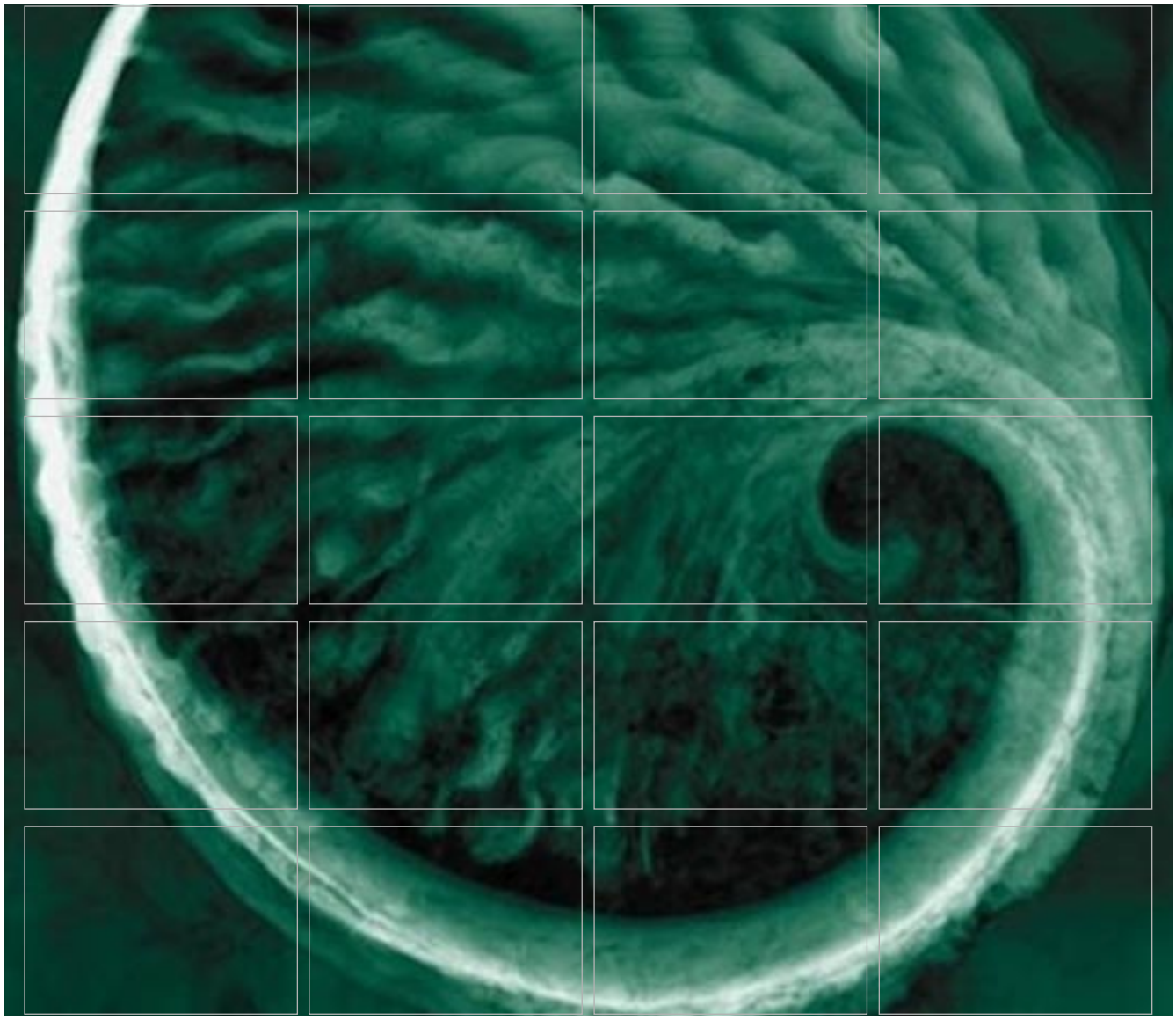

Initial Environmental Site Assessment Work Plan

Holtec Decommissioning International, LLC

Pilgrim Nuclear Power Station

14 October 2020

Project No.: 0552203

The business of sustainability

ERM

Signature Page

14 October 2020

Initial Environmental Site Assessment Work Plan

Pilgrim Nuclear Power Station

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Acronyms and Abbreviations

AOI	Area of Interest
BHI	BHI Energy, Inc.
BUD	Beneficial Use Determination
CDI	Comprehensive Decommissioning International, LLC
CFR	Code of Federal Regulations
CMR	Code of Massachusetts Regulations
DCA	Discharge Canal Area
DCGL	Derived Concentration Guideline Level
DQO	Data Quality Objectives
ERM	Environmental Resources Management
EOCA	East Owner Controlled Area
ESA	Environmental Site Assessment
EPA	Environmental Protection Agency
EPH	Extractable Petroleum Hydrocarbons
HDI	Holtec Decommissioning International, LLC
HSA	Historical Site Assessment
LSP	Licensed Site Professional
MADEP or DEP	Massachusetts Department of Environmental Protection
MARSSIM	Multi-Agency Radiation Survey and Site Investigation Manual
MCP	Massachusetts Contingency Plan
MDPH or DPH	Massachusetts Department of Public Health
NPA	North Protected Area
NRC	Nuclear Regulatory Commission
PSS	Permanent Solution Statement
QA	Quality Assurance
ROC	Radionuclide of Concern
RTN	Release Tracking Number
RWP	Radiological Work Packages
SA	Settlement Agreement
SCP	Site Characterization Plan
SPA	South Protected Area
SOCA	South Owner Controlled Area
VPH	Volatile Petroleum Hydrocarbons
WOCA	West Owner Controlled Area

1. INTRODUCTION

On August 27, 2019, ownership of the Pilgrim Nuclear Power Station (Pilgrim site) located in Plymouth Massachusetts was transferred to Holtec Pilgrim, LLC (Holtec Pilgrim) as the licensed owner and Holtec Decommissioning International, LLC (HDI) as the licensed operator for decommissioning. HDI is responsible for maintaining the Pilgrim site in compliance with federal, state and local regulations, licenses and permits. HDI has contracted with Comprehensive Decommissioning International, LLC (CDI), as the Decommissioning General Contractor (DGC), to perform the site day-to-day activities, including decommissioning the plant under HDI's direct oversight and control. CDI is responsible for performing site activities safely and securely in support of HDI's responsibility to maintain the site in compliance with federal, state and local regulations, licenses and permits. HDI has ultimate decision-making authority and provides direct governance and oversight of CDI activities.

On behalf of HDI, Environmental Resources Management (ERM) has prepared this Initial Pilgrim Environmental Site Assessment (ESA) Work Plan for the Pilgrim site. This Initial Environmental ESA Work Plan has been prepared to meet requirements within a Settlement Agreement (SA) executed between the Commonwealth of Massachusetts and Holtec/HDI dated 16 June 2020.

1.1 Background

Section III of the 16 June 2020 SA outlines Site Restoration and Environmental Requirements and Reporting that apply to the decommissioning of the Pilgrim site. These requirements include radiological and non-radiological conditions that shall be met at the time of Partial Site Release, defined as the date upon which the Nuclear Regulatory Commission (NRC) approves HDI's application for release of Pilgrim site land (with exception of the ISFSI) in accordance with 10 CFR 20.1402.

The SA outlines that radiological assessment, remediation, and final status surveys for Partial Site Release will follow established processes described in NUREG-1575, Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM). HDI plans to request Partial Site Release upon satisfaction of the NRC's radiological criteria for unrestricted release, and is committed to comply with the Massachusetts radiological criteria for unrestricted release in 105 CMR 120.245 no later than 5 years of NRC Partial Site Release as per the SA.

The SA outlines that for non-radiological assessment, remediation, and closure, identified non-radiological impacts to the environment will be subject to the requirements of Chapter 21E and the Massachusetts Contingency Plan (MCP; 310 CMR 40.0000). The SA outlines that HDI will obtain a Licensed Site Professional (LSP), and ERM has been retained in this role for the decommissioning of the Pilgrim site.

1.2 Purpose and Scope

The purpose of this Initial Pilgrim ESA Work Plan is to provide the Massachusetts Department of Environmental Protection (MADEP) and the Massachusetts Department of Public Health (MDPH) with preliminary plans on how the Pilgrim site will comply with Chapter 21E and the Massachusetts Contingency Plan (MCP; 310 CMR 40.0000). This report specifically is intended to meet the requirements outlined under Section III, Paragraph 11 of the SA. Specifically, this Initial Pilgrim ESA Work Plan includes the following:

- A description of proposed survey areas for characterization of radiological and non-radiological impacts as understood through review of the Historical Site Assessment (HSA).

- A conceptual plan for proposed assessment activities to address the current understanding of data gaps within proposed survey areas, including initial characterization activities that will provide site-specific analytical data to inform future work plans.
- A general schedule for the conceptual plan for proposed assessment activities to be undertaken at the site.
- A proposed list of radiological and non-radiological contaminants for which sampling and testing will be conducted at the Pilgrim site.
- A proposed plan for testing and demonstrating compliance with the radiological cleanup standard as outlined in Section III, Paragraph 10(d) of the SA.
- An overview of the conceptual plan for initial soil, groundwater, and storm water sediment sampling of radiological and non-radiological impacts, and how the initial characterization data will inform future updates to this Initial Pilgrim ESA Work Plan.
- A proposed plan for complying with MADEP and Massachusetts Solid Waste regulations regarding the use of off-site materials proposed to be used as fill, and the characterization and management of on-site concrete.

This Initial Pilgrim ESA Work Plan is intended to provide the status of current plans on how potential radiological and non-radiological impacts will be characterized. As the Pilgrim site is currently in early stages of the decommissioning, which is estimated to be an 8-year process, there are still numerous assumptions in place regarding planning, scheduling and the sequencing of activities related to site characterization. Along this line, HDI will provide separately to MADEP and MDPH for review and comment, details of the radiological and non-radiological characterization sample plans by 1 December 2020. The plans will include detailed sample locations by area and analytical requirements. In addition, this Initial Pilgrim ESA Work Plan will be amended within 60 days of HDI receiving all results of the initial characterization sampling activities, which are anticipated to be in HDI's possession by the end of March 2021. As such, an amended Initial ESA Work Plan would be available by the end of May 2021.

1.3 Work Plan Overview

This Initial Pilgrim ESA Work Plan has been prepared to meet the requirements and intent of Section III, Paragraph 11 of the SA executed on 16 June 2020. Prior to finalizing the SA and requirements for this report, CDI, under the direction of HDI, mobilized a specialized sub-contracted team to the Pilgrim site to initiate the planning of site characterization activities. The goal of this effort was to provide guidance and a path forward for closing data gaps outlined in the HSA report, and to ultimately collect characterization data to support future decommissioning decisions. As part of these initial steps, under HDI's direction, CDI and their specialized sub-contractors are working to develop a Site Characterization Plan (SCP) to provide for the initial radiological and non-radiological characterization of the Pilgrim site. The SCP is currently under development, and this Initial Pilgrim ESA Work Plan reflects a high level overview of the SCP in its current state for the intent of meeting the Initial Pilgrim ESA Work Plan requirements under the SA. The SCP under development is not designed to be a comprehensive characterization program, but rather to provide data to identify the scale of potential impacts to support decommissioning planning.

Due to the different regulatory bodies associated with license termination and ultimate site closure, the SCP is divided into radiological and non-radiological efforts. The radiological component of the SCP focuses on the radiological data gaps within the HSA, organizes them according to six survey areas, and incorporates guidance and process for how radiological characterization will proceed at the site. The radiological SCP will incorporate a Data Quality Objectives (DQO) process described in MARSSIM, as well as requirements for radiation detection instrumentation, laboratory analyses and survey designs to

ensure that the quality of collected data is sufficient to support subsequent site cleanup and other decommissioning decisions. Radiological Work Packages (RWPs) will be developed specific to each survey area to address the specific radiological data gaps identified within each survey area.

The chemical or non-radiological component of the SCP focuses on the non-radiological data gaps within the HSA, and work plans will be prepared to address the non-radiological data gaps. The non-radiological data gaps are also organized according to the six survey areas, and work plans are organized according to identified Areas of Interest (AOI), which represent aerial groupings of the non-radiological data gaps identified in the HSA (i.e., locations where known or potential chemical constituents could have been released to the environment). Potential non-radiological impacts to the environment at the Pilgrim site will be subject to the requirements of Chapter 21E and the Massachusetts Contingency Plan (MCP; 310 CMR 40.0000). Non-radiological impacts identified during site characterization that trigger a release notification under the MCP will be issued a Release Tracking Number (RTN) by MADEP. Once a RTN is issued, the schedule for subsequent characterization, remediation and closure of the RTN will follow the timelines and phases outlined under the MCP.

This Initial Pilgrim ESA Work Plan provides a high level (i.e., conceptual) overview of the non-radiological activities contemplated under the SCP at this time, recognizing that the SCP is under development. As outlined earlier, the SCP is not intended to be a comprehensive characterization program, but rather to provide data to identify the scale of potential impacts. Non-radiological site characterization under the SCP is anticipated to commence in late 2020 and be completed in early 2021. Since site-specific non-radiological data and laboratory sampling results will be available in early 2021, HDI intends to incorporate the results of these initial characterization sampling activities into an amended version of this Initial Pilgrim ESA Work Plan that will be provided to MADEP and MDPH for their review and comment. As indicated earlier, the anticipated timeframe for this submittal is by the end of May 2021. At that time, the non-radiological work plans included in the amended Initial Pilgrim ESA Work Plan will have the benefit of relying on sampling analysis results.

The remainder of this report is structured to align with the specific requirements under Section III, Paragraph 11 of the SA, and provides non-radiological information that is available at this time to meet these requirements, under the assumptions outlined within this section.

2. INITIAL PILGRIM ENVIRONMENTAL SITE ASSESSMENT WORK PLAN

2.1 Paragraph 11(a)

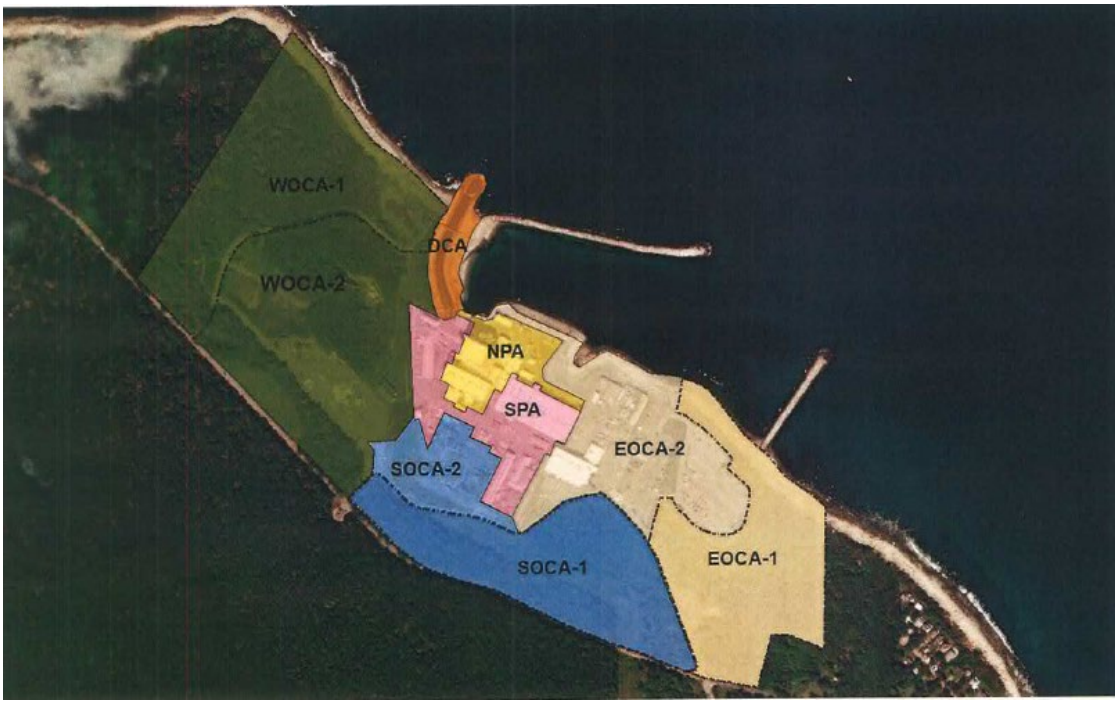
An inventory of all structures, buildings, rooms, equipment, workspaces, land areas, and groundwater resources to be assessed, together with any proposed Operable Units. Consistent with the Atomic Energy Act, HDI shall delineate Operable Units in a manner that maximizes areas available for immediate site characterization, remediation, and release.

Initial site characterization of the Pilgrim site will proceed according to the development of six primary survey areas that have been established for, and focus on, the approximately 140-acre industrial portion of the licensed property north of Rock Hill Road. The survey areas are established based on recognizable site features, and are summarized below and depicted in Figure 1.

Table 1: Survey Areas

Survey Area	Code	Approximate Area (m^2)
West Owner Controlled Area	WOCA-1 WOCA-2	99,400 115,800
South Owner Controlled Area	SOCA-1 SOCA-2	79,200 25,800
East Owner Controlled Area	EOCA-1 EOCA-2	79,800 72,900
Discharge Canal Area	DCA	12,500
North Protected Area	NPA	21,500
South Protected Area	SPA	37,200

Figure 1 Pilgrim Site Survey Areas (BHI 2020)



Based on review of the HSA and identified non-radiological data gaps, specific AOIs have been identified within each survey area. These AOIs represent aerial groupings where known or potential chemical constituents could have been released to the environment, or building structures/materials where constituents are more likely to reside, and will therefore be subject to the initial characterization activities. The survey areas, identified AOIs and media for characterization are summarized in Table 2.

Table 2: Survey Areas

Survey Area	Area of Interest	Media for Characterization
WOCA	Sewer Treatment and Disposal Systems Sludge Dewatering Facility Upper Parking Lot	Soil and groundwater
SOCA	Security Diesel Generator Spare Transformer Storage Area Switchyard	Soil and groundwater
EOCA	Off Site Shipping and Receiving Building Trash Compaction Facility Engineering and Plant Support Building Employee Parking Lots Storm Water Outfall 6 Storm Water Outfall 7	Soil, groundwater and sediment
DCA	Non-contact Cooling Outfall Storm Water Outfall 4 Storm Water Outfall 5	Soil, groundwater and sediment
NPA	Emergency Diesel Generator Building Kelly Building Oil Storage House Haz-Stor Building Turbine Building Reactor Building Radwaste and Access Building Transformer Area Existing ISFSI Triangle Area	Soil and groundwater
SPA	Boston Edison Co. Warehouse Contractor Office, Warehouse and Shops Fire Brigade Equipment Locker Intake Structure Operations and Maintenance Building Station Blackout Emergency Generator Building	Soil and groundwater

In addition to the 6 (six) survey areas discussed above, the characterization effort will include an assumed original construction disposal area south of Rocky Hill Road and west of Power House Road.

2.2 Paragraph 11(b)

A description of all proposed assessment activities to address data gaps identified by the LSP's review of the HSA.

The HSA identified a total of 144 potential areas of interest relative to potential non-radiological impacts that may have resulted in a spill or release to the environment. Based on records review and a site reconnaissance, a total of 50 of the 144 areas were subsequently classified as non-impacted. These 50 locations largely represent buildings or facilities where a low probability that non-radiological contaminants may have impacted the environment. ERM notes that for many of the buildings identified in the list, the structures and foundations will ultimately be removed during decommissioning, allowing opportunity to visually confirm the non-impacted assumption at a later time.

The remaining 94 areas of interest identified in the HSA represent unknown conditions where some potential for historical activities and therefore potential for non-radiological impacts to have entered the environment. The HSA subgroups these 94 areas and groups the impacts according to categories including side wide impacts, buildings/structures, chemical and drum storage areas, oil-filled mechanical equipment, storage tanks, exterior areas, and transformers. Storage tanks and transformer areas represent a total of 20 (7 storage tanks and 13 transformers) of the 94 areas and represent the highest priority/risk from ERM's perspective. Many of the identified areas of interest in the HSA are contained within buildings or structures and therefore shielded from the direct exterior environment. For these areas of interest, a pathway to the environment would be required for transporting the non-radiological impact to the environment (i.e., leakage through a seam, seal or fault (crack) in building/structure that isolates the material).

Based on available information, the USTs and transformer areas are the highest priority for non-radiological site characterization, as these represent aged infrastructure with a long history of use. In addition, these areas are readily accessible, allowing for the collection of soil samples, and groundwater samples from the existing monitoring well network. The Triangle Area was not identified as a non-radiological area of concern within the HSA. The Triangle Area is located in the NPA and is an area where soil, asphalt, concrete and gravel excavated from within the plant yard have been placed over time. ERM believes the Triangle Area should be subject to non-radiological site characterization for potential soil and groundwater impacts.

The HSA identified small portable equipment in the eastern portion of main parking lot as a potential area of concern. Based on ERM's familiarity with the Pilgrim site, this equipment is associated with recent industry initiatives to have temporary equipment on-site for moving water in the event of a power outage. As this equipment is modern and has not been used (other than required testing), ERM believes the area of equipment storage should be reclassified as non-impacted.

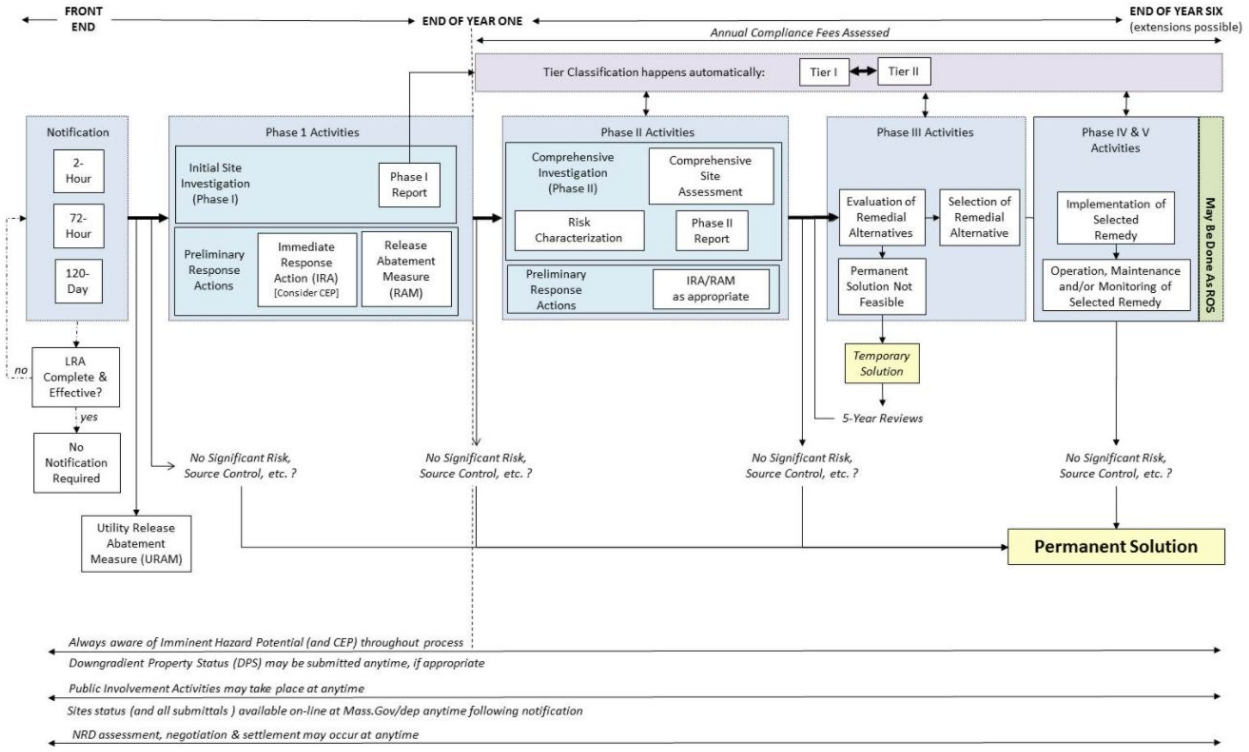
2.3 Paragraph 11(c)

A proposed schedule of all proposed activities to be undertaken under the plan (including characterization, demolition, on-site management, regrading, and reseeding).

The SCP under development anticipates that initial non-radiological sampling and testing activities will commence in fall 2020 and continue into early 2021. The SCP anticipates that results of the initial characterization activities will be available to HDI in March 2021. As indicated earlier, HDI anticipates that the results of these initial characterization activities will be incorporated into an amended Initial ESA Work Plan, which would be subject to review and comment by MADEP and MDPH. Any non-radiological reportable condition triggering notification during the initial site characterization activities would be communicated to MADEP according to the applicable reporting condition under the MCP, with subsequent activities following the MCP process as highlighted in Figure 2.

A schedule for demolition, on-site management, regrading and reseeding will be provided at a later date once these details have been planned.

Figure 2 MCP Process and Schedule Overview (MADEP)



2.4 Paragraph 11(d)

A proposed schedule for completion of site-wide environmental assessment activities for the Site.

Identified environmental (i.e., non-radiological) impacts that trigger a release notification under the MCP will be issued a Release Tracking Number (RTN) by MADEP. Once the RTN is issued, the schedule for subsequent characterization, remediation and closure of the RTN will follow the timelines and phases outlined under the MCP.

As stipulated in Paragraph 10(e)(2) of the SA, if a Permanent Solution Statement (PSS) for a RTN is not achieved at the time of Partial Site Release, then HDI shall establish financial assurances necessary for achieving the specified closure condition. The SA identifies that a PSS with or without Conditions may be achieved, and the terms for meeting the respective closure conditions.

2.5 Paragraph 11(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 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;

Based on review of the HSA, the SCP had identified the following list of potential radionuclides of concern (ROC):

Table 3: Radionuclides of Concern (ROC)

Americium-241	Europium-152	Plutonium-238
Carbon-14	Europium-154	Plutonium-239
Curium-243	Iron-55	Plutonium-241
Curium-244	Tritium	Antimony-125
Cobalt-60	Niobium-94	Strontium-90
Cesium-137	Nickel-63	Technetium-99

Testing for the above radionuclides will be completed by deploying radiation surveys that will include one or more techniques for radiation detection instrumentation. The following techniques and methodologies are considered in the SCP:

- Gamma scans
- Beta scans
- Total Radioactivity (Direct) Measurements
- Removable Radioactivity Measurements
- Volumetric Samples
- Laboratory analytical methods
  - Gamma spectroscopy
  - Beta/Alpha counting
  - Liquid Scintillation
  - Radiochemical Analysis

Site characterization will initially be performed in the “outer” survey areas (i.e., WOCA-1, EOCA-1 and SOCA-1) for the purpose of determining whether these areas are MARSSIM Class 3 areas, or whether they can be reclassified as non-impacted areas. The SCP will incorporate an “outside-in” approach, with interior (i.e., WOCA-2, EOCA-2, SOCA-2, DCA, SPA and NPA) survey areas undergoing characterization after the outer areas, and subject to access availability within the inner survey areas.

RWPs will be generated to guide the specific radiological sampling and characterization activities within each survey area. The RWPs will contain the following information:

- Brief discussion of targeted survey area, including identified ROCs
- Objectives of survey/sampling
- Area preparation requirements
- Health and safety requirements
- Types and number of radiological measurements and/or samples
- Measurement/sample identification system (normal and QA samples)
- Area survey map(s)
- Identification of specific instruments for radiation measurements
- Applicable survey/sample procedures

- Action levels for alternative actions if not included in the procedures
- Analytical requirements for samples
- Identification of the recipients(s) for samples
- Radiation Worker Plan requirements, as applicable.

Based on review of the HSA and ERM experience, the SCP has identified the following list of potential non-radiological (chemicals) of concern:

Table 4: Non-Radiological (Chemical) Constituents of Concern

Dielectric oil	Lubricating oil	Per- and polyfluoroalkyl substances (PFAS)
Diesel fuel	Metals (various)	Polychlorinated Biphenyl (PCB) oils
Fuel oil	Oil and grease	
Hydraulic oil	Herbicides	

Testing for the above potential constituents of concern will be completed by the collection of environmental samples (soil, groundwater and/or sediment) for laboratory analysis. Analytical techniques anticipated to be incorporated into the non-radiological site characterization include the following:

- Volatile organic carbons by Method 8260D
- Semivolatile organic carbons by Method 8270D
- Polynuclear aromatic hydrocarbons by EPA 626
- Extractable and Volatile petroleum hydrocarbons by EPH and VPH
- Metals by MCP 14 Metals (Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Mercury, Lead, Nickel, Selenium, Silver, Thallium, Vanadium and Zinc)
- PCBs by EPA 8082A
- Herbicides by EPA 8151A
- PFAS by EPA Method 537 Rev 1.15

2.6 Paragraph 11(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.

A plan for testing and demonstrating compliance with the radiological standard to MADEP and MDPH will be provided at a later date once these details have been planned.

2.7 Paragraph 11(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.

The Pilgrim site has a network of 23 groundwater monitoring wells that are spatially located across the developed portion of the property north of Rocky Hill Road. A large percentage of the wells were installed as part of the station's efforts at developing and maintaining a groundwater monitoring program under Nuclear Energy Institute Initiative 07-07, the Industry Groundwater Protection Initiative.

Currently, the monitoring well network is sampled on a quarterly basis for the analysis of tritium in groundwater. As part of the fall 2020 SCP field activities, all 23 site monitoring wells will be sampled and analyzed for a select list of potential radionuclides and non-radiological constituents of concern as outlined in Section 2.5, respectively. Existing monitoring wells near transformers will be analyzed for PCBs. Groundwater samples will be collected following low flow sampling techniques and analyzed by a National Environmental Laboratory Accreditation Program accredited commercial laboratory and will meet MCP quality objectives. HDI will provide separately to MADEP and MDPH for review and comment, details of the radiological and non-radiological groundwater characterization sample plans by 1 December 2020. The plans will include detailed sample locations by area and analytical requirements.

Based on results of the initial groundwater samples, a groundwater sampling work plan will be prepared to reflect the frequency and suite of analytical parameters for subsequent groundwater samples under the SCP. In addition to the sampling plan, the results will be reviewed in order to identify temporary grab groundwater sampling locations that will provide additional data to guide the location of additional monitoring well installations at the Pilgrim site

2.8 Paragraph 11(h)

A proposed plan to perform initial soil sampling of radiological and nonradiological 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 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.

As indicated earlier, CDI, under the direction of HDI, is in the process of finalizing specific plans associated with the site characterization of soil based on review of the data gaps identified in the HSA and summarized in Section 2.1. HDI will provide separately to MADEP and MDPH for review and comment, details of the radiological and non-radiological characterization sample plans by 1 December 2020. The plans will include detailed sample locations by area and analytical requirements.

2.9 Paragraph 11(i)

A proposed plan to perform initial sampling of radiological and nonradiological contamination in environmental media other than soil and groundwater consistent with the recommendations contained in the HSA and the data gap review.

As indicated earlier, CDI, under the direction of HDI, is in the process of finalizing specific plans associated with the site characterization of sediment based on review of the data gaps identified in the HSA and summarized in Section 2.1. HDI will provide separately to MADEP and MDPH for review and comment, details of the radiological and non-radiological characterization sample plans by 1 December 2020. The plans will include detailed sample locations by area and analytical requirements.

2.10 Paragraph 11(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;

In general, Beneficial Use Determination (BUD) applications will be prepared to provide MADEP, MDPH and other regulatory and non-regulatory stakeholders with documentation necessary to review and approve plans and procedures to beneficially reuse materials on-site during site restoration activities. BUD applications will be prepared in accordance with MADEP's Draft Interim Guidance Document for Beneficial Use Determination Regulations 310 CMR 19.060 (MADEP 2004).

At this time, it is anticipated that more than one BUD application will be prepared and submitted for approval. One BUD application is anticipated for the reuse of on-site soil, or for the use of off-site soil, in regrading and restoring areas of the Pilgrim site during site restoration. A second BUD application is anticipated for reuse of concrete and asphalt for site regrading, and to leave building slabs and foundations and utility lines in-place.

Each BUD application will be formatted to address the information requirements outlined in the BUD application form. Applications will include a description of the material to be reused, its proposed location for reuse, its estimated quantity, physical and chemical properties, and proposed handling methods to ensure that there are no adverse effects to public health, safety, or the environment. Any chemical or hazardous materials at concentrations exceeding applicable BUD re-use criteria on concrete surface will be removed prior to reuse. The potential for mastic surfaces on concrete will be tested for asbestos prior to reuse. For proposed concrete to be left in place, a human health risk assessment may be completed in order to support demonstrating no risk to future receptors for potential residual radionuclides in concrete at or below Derived Concentration Guideline Levels (DCGLs). A human health risk assessment is proposed, as unlike non-radiological (chemical) compounds, no standards for radionuclides exist in the BUD guidance. The BUD application for concrete will rely on the restoration of site topography by re-grading with at least 36 inches of soil over any non-native materials that are left on site under the BUD.

BUD applications will be provided to MADEP Division of Solid Waste and other stakeholders, along with supporting information necessary for MADEP to review and approve plans for the beneficial reuse of material during site restoration. ERM anticipates that revisions and/or updates to the original BUD applications may be required in order to address and incorporate comments from MADEP or other stakeholder reviews of the original application.

2.11 Paragraph 11(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.

A plan for concrete material handling and processing will be provided at a later date once these details have been planned.

2.12 Paragraph 11(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.

In general, HDI anticipates that structures will be removed down to a depth of 3 feet below ground surface. A plan for characterization and disposition of below grade structures will be provided at a later date once these details have been planned. As indicated earlier, a BUD application will be prepared for the reuse of concrete as fill and for leaving foundations at a depth of 3 feet or more below ground surface.

3. REFERENCES

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