Lead RTN:		Site Concerns	Admin/Tech Adequacy	Preliminary actions	Phase I	Tier Classification	Total
4-0026347							
					1		
Submittal	Received	Screened	Flags	TSNOAF			
IRA Status	11/3/2017	12/26/2017	Ν	Ν			
					2		
	Auditor						
	Gallagher						
Release	PFAS/1,4-dioxa	ne					
Site Use	Airport						
Town	Barnstable						

Site Name	Barnstable Municipal Airport
Address	
PRP	Barnstable Municipal Airport
LSP	Mark Nelson
Consultant	Horsley_witten

	IRA	RAM	URAM	Phase 1	T-Class
Plan					
Modification					
Status	x				
Monitoring					
Completion					

Disclaimer: This checklist is for use by DEP in reviewing Preliminary Response Action (PRA) Statements, and may not be relied upon for any other purpose. This checklist is not a comprehensive list of PRA requirements, which are fully set forth in MGL c. 21E and 310CMR 40.0000. Completion of this checklist by DEP does not constitute a final agency decision, and does not create any legal rights or relieve any party of obligations that exist pursuant to applicable laws.

Related RTNs	

Comments

I. SITE CONCERNS (Based upon conditions at time of PRA submittal)									
A. Indoor Air (Based upon conditions at time of submittal)	Yes	No	?	Pg#					
1. <a>Phi Applicable GW-2 standard exceeded @ residence/school with no soil gas/indoor air sampling		x							
2. 🔁 Site contaminants impacting indoor air		x							
B. Groundwater/Drinking Water (Based upon conditions at time of submittal)	Yes	No	?	Pg#					
1. 🔁 More than 0.5" NAPL observed in any monitoring well		x							
2. Site within potential drinking water source area (PDWSA)	x								
3. Site located within IWPA/mapped Zone II	x								
4. Private/Non-municipal public well(s) (TNC, NTNC) located within 500 feet of site		x							
5. Municipal well(s) located within 1000 feet of site	x								
6. D Private well contaminated as a result of site		x							
7. D Public water supply contaminated as a result of site	x								
8. SRM Condition and no groundwater controls			x						
C. Soil (Based upon conditions at time of submittal)	Yes	No	?	Pg#					
1. IH levels of Arsenic (40), Cadmium (60), Chromium (200), Cyanide (100), Mercury (300), Methyl Mercury (10), or PCBs (10) in surface soil (< 1 foot)		x							
D. Environmental Concerns	Yes	No	?	Pg#					
1. Site within 500 feet of surface water and/or wetlands	х								
2. Endangered species habitat, ACEC and/or certified vernal pool within 500 feet		x							
3. Confirmed contamination of surface water, sediments and/or wetlands with site contaminants			x						
4. SRM condition			x						
E. Site & Area Use (Choose all that apply)	Yes	No	?	Pg#					
1. School/Institution/Playground		x							
2. Residential		x							
F. Released OHM (Primary Contaminant Type(s))	Yes	No	?	Pg#					
1. Petroleum Fuel Oils (#2, #4, #6, Jet fuel, kerosene, lube oil, MODF, etc.)		x							
2. Gasoline, waste oil		x							
3. Metals, coal tar, PCBs, pesticides/herbicides, asbestos, PAHs, cyanide		x							
4. Chlorinated solvents or other organic compounds	x								
G. Site Complexity (Check all that apply)	Yes	No	?	Pg#					
1. Co-mingled plumes (i.e., different sources from one or more sites co-mingled)	x								
2. Bedrock contamination		x							
If O conditions currently exist, see supervisor to discuss.									

II. ADMINISTRATIVE ADEQUACY:	Yes	No	?	NA	Pg #	Citati
A. Regulatory Deadlines						
1. Notification Made On Time Date:	х					<u>40.0300</u>
2. Phase I/TC within 1 yr of notification; Effective Date/Tier	х					<u>40.0406</u>
3. Phase II submitted within 3 years of Tier Classification Date				x		40.0560(2)(b)
4. Phase III submitted with 4 years of Tier Classification Date				x		40.0560(2)(c)
5. Phase IV submitted within 4 years of Tier Classification Date				x		40.0560(2)(d)
6. P/TS submitted within 5 years of Tier Classification Date				x		<u>40.0560(2)(e)</u>
7. Tier II Extension: submitted/ # of Extensions				x		<u>40.0560(7)</u>
8. For IRAs, submittal deadlines have been met: Plan within 60 days.	x					<u>40.0404(2)</u>
9. For IRAs, submittal deadlines have been met : Status Report within 120 days and every 6 months from approval or receipt of Plan, Completion Report within 60 days following completion of IRA activities, Remedial Monitoring Report monthly for IH/SRM or every 6 months for non-IH/SRM		x				<u>40.0425(1), (2), (7)</u>
10. For RAMs, submittal deadlines have been met: Status Report within 120 days and every 6 months from approval or receipt of Plan, Remedial Monitoring Report every 6 months.				x		<u>40.0404(2)</u>
11. For RAMs, submittal deadlines have been met: Completion Report within 60 days following completion of RAM activities,				x		<u>40.0446(1)</u>
12. For URAMs, submittal deadlines have been met (Letter of Intent within 7 days)				x		<u>40.0404(2)</u>
13. For URAMs, submittal deadlines have been met (Status Report within 120 days and every 6 months from notification, Completion Report within 60 days following completion of URAM activities, Remedial Monitoring Report every 6 months)				x		<u>40.0465(1)(5)</u>
III. TECHNICAL ADEQUACY:	Yes	No	?	NA	Pg #	
A. Response Action Type						
1. Assessment Only	x					<u>40.0332</u>
2. Innovative Technology						
3. Soil Excavation Volume						
a. Recycle						
b. Landfill						
c. Reuse						
d. Treat/Stabilize						

a. Ph III was completed before a cap/engineered barrier was proposed or constructed as part of a Permanent iolution Image: Construction of Building in Contaminated Area Image: Construction Area		-					
SolutionSolutio	4. Cap/Cover/Engineered Barrier						
Groundwater TreatmentImage: Constraint of the state of the	a. Ph III was completed before a cap/engineered barrier was proposed or constructed as part of a Permanent Solution						<u>40.0414(7)</u>
a. Pump & Treataaaaaab. Removal (Vacuum)abaaaaac. Free Product Recoveryabaaaaad. Bioremediation: Application within 50' surface water/100' private well/800' public well or within 100 ft of a chool, daycare, child care, or occupied residential dwelling.aa	5. Construction of Building in Contaminated Area						
b. Removal (Vacuum) Image: Constraint of the second se	6 Groundwater Treatment						
c. Free Product RecoveryImage: Constraint of the second secon	a. Pump & Treat						
d. Bioremediation: Application within 50' surface water/100' private well/800' public well or within 100 ft of a chool, daycare, child care, or occupied residential dwelling.40.0046(3)4. Venting/Sub Slab Depressurization SystemIIII5. Soil Vapor Extraction/Air SpargingIIII6. Chemical OxidationIIIII7. Venting/Sub Slab Depressurization SystemIIIII8. Soil Vapor Extraction/Air SpargingIIIII9. Chemical OxidationIIIIII9. Application within 50' surface water/100' private well/800' public wellIIIII9. Description of Response Actions – Indication That:YesNo?NAPg #9. Plan/Status Report/Completion Report is adequate/complete (IRA/RAM)III	b. Removal (Vacuum)						
chool, daycare, child care, or occupied residential dwelling.40.0046(3). Venting/Sub Slab Depressurization SystemIII. Soil Vapor Extraction/Air SpargingIII. Chemical OxidationIIIIa. Application within 50' surface water/100' private well/800' public wellIIIIB. Description of Response Actions – Indication That:YesNo?NAPg #a. Plan/Status Report/Completion Report is adequate/complete (IRA/RAM)XI40.0046(3)b. Plan/Status Report/Completion Report is adequate/complete (URAM)XI40.0420a. RAR Response actions taken were in accordance with MassDEP approvals (i.e., special conditions, Interim leadlines, etc.)X40.0440(1)b. RAM/URAM Response actions taken were in accordance with MassDEP approvals (i.e., special conditions, Interim deadlines, etc.)X40.0443(3)c. Response actions proposed or taken demonstrate the level of diligence necessary, consider relevant policies, or have been technically justifiedX40.0443(3)c. Analytical or environmental monitoring data is scientifically valid and defensible, and of a level of precision and accuracy commensurate with its stated or intended useX40.0405(2)c. Analytical or environmental monitoring data is scientifically valid and defensible, and of a level of precision and accuracy commensurate with its stated or intended useX40.0017	c. Free Product Recovery						
A. Soil Vapor Extraction/Air Sparging Image: Constraint of the sparse of the spare	d. Bioremediation: Application within 50' surface water/100' private well/800' public well or within 100 ft of a school, daycare, child care, or occupied residential dwelling.						<u>40.0046(3)</u>
A. Chemical Oxidation Image: Chemical Oxidation Image: Chemical Oxidation Image: Chemical Oxidation a. Application within 50' surface water/100' private well/800' public well Image: Chemical Oxidation Image: Chemical Oxidation B. Description of Response Actions – Indication That: Yes No ? NA Pg # a. Plan/Status Report/Completion Report is adequate/complete (IRA/RAM) X Image: Chemical Oxidation X 40.0420 b. Plan/Status Report/Completion Report is adequate/complete (URAM) X X 40.0460 a. IRA Response actions taken were in accordance with MassDEP approvals (i.e., special conditions, Interim leadlines, etc.) X 40.0404(1) b. B. RAM/URAM Response actions taken were in accordance with MassDEP approvals (i.e., special conditions, Interim deadlines, etc.) X 40.0443(3) c. Response actions proposed or taken demonstrate the level of diligence necessary, consider relevant policies, or have been technically justified X 40.0191 Monitoring of response actions is adequate (soil, groundwater, air, dust, etc.) X 40.0405(2) 40.0405(2) Monitoring of response actions is adequate (soil, groundwater, air, dust, etc.) X 40.0405(2) 40.0405(2) Analytical or environmental monitoring data is scientifically valid and defensible, and of a level of prec	7. Venting/Sub Slab Depressurization System						
a. Application within 50' surface water/100' private well/800' public wellImage: Constraint of the second seco	8. Soil Vapor Extraction/Air Sparging						
Yes No NA Pg # .a Plan/Status Report/Completion Report is adequate/complete (IRA/RAM) x 40.0420 .b Plan/Status Report/Completion Report is adequate/complete (URAM) x 40.0420 .b Plan/Status Report/Completion Report is adequate/complete (URAM) x 40.0460 .a IRA Response actions taken were in accordance with MassDEP approvals (i.e., special conditions, Interim leadlines, etc.) x 40.0404(1) .b RAM/URAM Response actions taken were in accordance with MassDEP approvals (i.e., special conditions, Interim deadlines, etc.) x 40.0443(3) .b Response actions proposed or taken demonstrate the level of diligence necessary, consider relevant policies, nethods or practices, or have been technically justified x 40.0405(2) .c X 40.0405(2) 40.0405(2) 40.0405(2) .c Analytical or environmental monitoring data is scientifically valid and defensible, and of a level of precision ind accuracy commensurate with its stated or intended use x 40.0017	9. Chemical Oxidation						
.a Plan/Status Report/Completion Report is adequate/complete (IRA/RAM)x40.0420.b Plan/Status Report/Completion Report is adequate/complete (URAM)x40.0460.b Plan/Status Report/Completion Report is adequate/complete (URAM)x40.0460.a IRA Response actions taken were in accordance with MassDEP approvals (i.e., special conditions, Interim leadlines, etc.)x40.0404(1).b RAM/URAM Response actions taken were in accordance with MassDEP approvals (i.e., special conditions, Interim deadlines, etc.)x40.0404(1).b RAM/URAM Response actions taken were in accordance with MassDEP approvals (i.e., special conditions, Interim deadlines, etc.)x40.0443(3).b RAM/URAM Response actions taken demonstrate the level of diligence necessary, consider relevant policies, nethods or practices, or have been technically justifiedx40.0191.b. Monitoring of response actions is adequate (soil, groundwater, air, dust, etc.)x40.0405(2).b. Analytical or environmental monitoring data is scientifically valid and defensible, and of a level of precision and accuracy commensurate with its stated or intended usex40.0017	a. Application within 50' surface water/100' private well/800' public well						<u>40.0046(3)</u>
b Plan/Status Report/Completion Report is adequate/complete (URAM) x 40.0460 a IRA Response actions taken were in accordance with MassDEP approvals (i.e., special conditions, Interim leadlines, etc.) x 40.0404(1) a RA Response actions taken were in accordance with MassDEP approvals (i.e., special conditions, Interim deadlines, etc.) x 40.0404(1) b RAM/URAM Response actions taken were in accordance with MassDEP approvals (i.e., special conditions, Interim deadlines, etc.) x 40.0443(3) c. Response actions proposed or taken demonstrate the level of diligence necessary, consider relevant policies, nethods or practices, or have been technically justified x 40.0191 b. Monitoring of response actions is adequate (soil, groundwater, air, dust, etc.) x 40.0405(2) c. Analytical or environmental monitoring data is scientifically valid and defensible, and of a level of precision and accuracy commensurate with its stated or intended use x 40.0017	B. Description of Response Actions – Indication That:	Yes	No	?	NA	Pg #	
RA Response actions taken were in accordance with MassDEP approvals (i.e., special conditions, Interim leadlines, etc.) x 40.0404(1) RAM/URAM Response actions taken were in accordance with MassDEP approvals (i.e., special conditions, Interim deadlines, etc.) x 40.0443(3) S. Response actions proposed or taken demonstrate the level of diligence necessary, consider relevant policies, or have been technically justified x 40.0191 B. Monitoring of response actions is adequate (soil, groundwater, air, dust, etc.) x 40.0405(2) B. Analytical or environmental monitoring data is scientifically valid and defensible, and of a level of precision and accuracy commensurate with its stated or intended use x 40.0017	1.a Plan/Status Report/Completion Report is adequate/complete (IRA/RAM)			x			<u>40.0420</u>
leadlines, etc.) X 40.0404(1) 2.b RAM/URAM Response actions taken were in accordance with MassDEP approvals (i.e., special conditions, Interim deadlines, etc.) X 40.0443(3) 3. Response actions proposed or taken demonstrate the level of diligence necessary, consider relevant policies, or have been technically justified X 40.0191 4. Monitoring of response actions is adequate (soil, groundwater, air, dust, etc.) X 40.0405(2) 4. Analytical or environmental monitoring data is scientifically valid and defensible, and of a level of precision and accuracy commensurate with its stated or intended use X 40.0017	1.b Plan/Status Report/Completion Report is adequate/complete (URAM)				x		<u>40.0460</u>
conditions, Interim deadlines, etc.) X 40.0443(3) c. Response actions proposed or taken demonstrate the level of diligence necessary, consider relevant policies, nethods or practices, or have been technically justified X 40.0191 c. Monitoring of response actions is adequate (soil, groundwater, air, dust, etc.) X 40.0405(2) c. Analytical or environmental monitoring data is scientifically valid and defensible, and of a level of precision and accuracy commensurate with its stated or intended use X 40.0017	deadlines, etc.)			x			<u>40.0404(1)</u>
nethods or practices, or have been technically justified X 40.0191 A. Monitoring of response actions is adequate (soil, groundwater, air, dust, etc.) X 40.0405(2) B. Analytical or environmental monitoring data is scientifically valid and defensible, and of a level of precision and accuracy commensurate with its stated or intended use X 40.0017	2.b RAM/URAM Response actions taken were in accordance with MassDEP approvals (i.e., special conditions, Interim deadlines, etc.)				x		<u>40.0443(3)</u>
Analytical or environmental monitoring data is scientifically valid and defensible, and of a level of precision x 40.0017 and accuracy commensurate with its stated or intended use 40.0017 40.0017	3. Response actions proposed or taken demonstrate the level of diligence necessary, consider relevant policies, methods or practices, or have been technically justified			x			<u>40.0191</u>
and accuracy commensurate with its stated or intended use 40.0017	4. Monitoring of response actions is adequate (soil, groundwater, air, dust, etc.)			x			<u>40.0405(2)</u>
s. System shutdown/operational problems x <u>40.0027</u>	Analytical or environmental monitoring data is scientifically valid and defensible, and of a level of precision and accuracy commensurate with its stated or intended use			x			<u>40.0017</u>
	6. System shutdown/operational problems				x		<u>40.0027</u>

IV. Preliminary Response Action Type	Yes	No	?	NA	Pg#	Citation(s)
A. Immediate Response Actions (required for 2/72-hr release) – Indication That:						
1. Release/TOR has been adequately assessed or additional assessment is planned	x					<u>40.0405</u>
2. An Imminent Hazard condition has been eliminated/controlled			х			<u>40.0427</u>
3. A condition of Substantial Release Migration has been mitigated			х			<u>40.0414</u>
4. An Imminent Hazard condition has been assessed			x			<u>40.0414(3)&(4)</u>
 Excavation and stockpiling of >100 cyds (cum.) UST-related oil- or waste oil- contaminated soil before notification 			x			<u>40.0421(3)</u>
B. Release Abatement Measures – Indication That:	Yes	No	?	NA	Pg#	
1. Off-site disposal of > 500 cubic yards (cumulative) of OHM-contaminated soil						<u>40.0442(2)(a)</u>
2. On or off-site treatment, recycling, or reuse of > 1500 cubic yards (cum.) of OHM contaminated soil						<u>40.0442(2)(b)</u>
3. Certification of sufficient financial resources if excavation of >1500 cyds (cum.) OHM contaminated soil						<u>40.0442(5)</u>
4. RAM was initiated within one year of receipt of RAM Plan						<u>40.0443(5)</u>
5. RAM fee paid, if prior to Tier Classification/PTS						<u>40.0444(2)</u>
C. Utility-related Abatement Measures – Indication That:	Yes	No	?	NA	Pg#	
1. During emergency repair, notification provided within 72-hours of conducting URAM						<u>40.0462(3)</u>
2. A 2-hour or 72-hour reporting condition likely exists						<u>40.0461(3)</u>
3. Excavation of >100 cyds (cum) oil- or waste oil-contaminated soil (LSP required)						<u>40.0462(4)(a)</u>
4. Excavation of >20 cyds (cum.) haz. matcontaminated soil or mix (LSP required)						40.0462(4)(b)
5. Temporary relocation of soil is returned to site or otherwise managed within 14 days						<u>40.0462(6)</u>
6. Reasonable attempt made to notify property owner, except during non-business-hour emergency repairs						<u>40.462(7)</u>

V. Phase I – Initial Site Investigation – Information Regarding:	Yes	No	?	NA	Pg#	Citation(s)
A. General site information including:						
1. Address and Geographical Location (Street, Lat./Long. and UTM Coordinates)						<u>40.0483(1)(a)(2)</u>
2. Disposal Site Locus Map with 500 foot and ½ mile radii						40.0483(1)(a)(3)
3. Estimated number of workers on-site						40.0483(1)(a)(4)
4. Estimated residential population within ½ mile						<u>40.0483(1)(a)(5)</u>
5. General description of land uses surrounding the disposal site						<u>40.0483(1)(a)(6)</u>
6. Number of Institutions within 500 feet						<u>40.0483(1)(a)(7)</u>
7. Natural Resources within 500 feet (surface waters, wetlands, drinking water supplies, ACECs, etc.)						<u>40.0483(1)(a)(8)</u>
B. Disposal Site Map, including:	Yes	No	?	NA	Pg#	
1. Disposal Site Boundaries						40.0483(1)(b)(1)
2. Property boundaries located within the disposal site boundaries						40.0483(1)(b)(2)
3. On-site buildings						40.0483(1)(b)(3)(a)
4. Floor and storm drains						40.0483(1)(b)(3)(b)
5. Subsurface utilities						40.0483(1)(b)(3)(c)
6. OHM storage and disposal structures						40.0483(1)(b)(3)(d)
7. Location of known OHM releases						40.0483(1)(b)(3)(e)
8. Monitoring wells, borings, test pits, and other relevant screening and/or sampling points						40.0483(1)(b)(3)(f)
C. Disposal Site History, including:	Yes	No	?	NA	Pg#	
1. Owner/Operator and Operations History						<u>40.0483(1)(c)(1)</u>
2. Release History (source and locations, cause, approx. date and duration, type of OHM, volume, etc.)						<u>40.0483(1)(c)(2)</u>
3. OHM Use and Storage History (type, chemical name, uses, quantities, periods, storage locations)						<u>40.0483(1)(c)(3)</u>
4. Waste Management History (land disposal, subsurface, surface water, WWTP, etc.)						40.0483(1)(c)(4)
5. Environmental Permits and Compliance History (21E, OHM, WW, GW, Air, RCRA, NPDES permits)						<u>40.0483(1)(c)(5)</u>
6. Potentially Responsible Parties (names and addresses of all PRPs)						40.0483(1)(c)(6)

0. Site Hydrogeological Characteristics, including:	Yes	No	?	NA	Pg#	
. Concise description of all subsurface investigations and assessments to date						40.0483(1)(d)(1)
. Documentation of boring advancement, well construction and development, including drilling logs						40.0483(1)(d)(2)
. Characterization of general site topography (slope, bedrock outcrops, surface drainage features)						40.0483(1)(d)(3)
. Characterization of geologic and stratigraphic conditions						40.0483(1)(d)(4)
. Description and graphical depiction of groundwater flow direction including monitoring well locations						<u>40.0483(1)(d)(5)</u>
. Nature and Extent of Contamination, including:	Yes	No	?	NA	Pg#	
. Evidence of releases (visual, olfactory, field screening, lab analysis, historical knowledge)						40.0483(1)(e)(1)
. Names, concentrations, and volumes of released OHM						40.0483(1)(e)(2)
. Laboratory data sheets						40.0483(1)(e)(3)
. Details on approximate horizontal and vertical extent						40.0483(1)(e)(4)
. Details on presence and thickness of non-aqueous phase liquids						40.0483(1)(e)(5)
. Migration Pathways and Exposure Potential, including	Yes	No	?	NA	Pg#	
. Description and evaluation of known and potential migration by air, soil, groundwater, surface water						40.0483(1)(f)(1)
. Description of known and potential human exposure by inhalation, dermal contact, or ingestion of OHM						<u>40.0483(1)(f)(2)</u>
. Description of known and potential impacts to environmental receptors, especially ACECs, etc.						40.0483(1)(f)(3)
6. Evaluation of the need for Immediate Response Actions	Yes	No	?	NA	Pg#	
. Evaluated the need for Immediate Response Actions						<u>40.0483(1)(g)</u>
I. Conclusions	Yes	No	?	NA	Pg#	
. Presented a summary of findings and a statement of conclusions						<u>40.0483(1)(h)</u>
Technical Justification for omission of any of the above categories	Yes	No	?	NA	Pg#	
. Presented technical justification for omission of any of the above categories						40.0483(2)

VI. Tier Classification – Numerical Ranking System:	Yes	No	?	NA	Pg#	Citation(s)
1. A Phase I Report (or equivalent) was prepared in accordance with 40.0480						<u>40.0510(1)(a)</u>
2. Tier I Criteria (Zone II, IWPA, GW > RCGW-1) are present at the site						<u>40.0520(2)(a)</u>
3. The site is Tier I as a result of an Imminent Hazard						40.0520(2)(b)
4. Risk Reduction measures resulted in a lower Tier Classification						<u>40.0520(1)(c)</u>
5. The site Classification was correct; or the site was correctly reclassified after Tier 1 Criteria were eliminated.						<u>40.0520(3)</u>
6. DEP review raised the original classification						<u>40.0530(1), (2)</u>