COMMONWEALTH OF MASSACHUSETTS
BOARD OF REGISTRATION OF
HAZARDOUS WASTE SITE PROFESSIONALS

September 7, 2012

In the Matter of James J. Decoulos Docket No. LSP 10AP 01

RECOMMENDED DECISION

INTRODUCTION

This is an appeal of an Order to Show Cause issued by the Commonwealth of Massachusetts Board of Registration of Hazardous Waste Site Professionals (the "Board") to Mr. James J. Decoulos, a Licensed Site Professional ("LSP") who holds a license from the Board and who is the Respondent in this matter. The Order to Show Cause was issued under 309 CMR 4.00 et seq., particularly 309 CMR 7.07. I conducted the adjudicatory proceedings in accordance with 309 CMR 7.08 and the adjudicatory hearing rules at 801 CMR 1.00.[1] The Board was

[1] I serve as a Presiding Officer, or hearing officer, within the Office of Appeals and Dispute Resolution ("OADR") in the Massachusetts Department of Environmental Protection ("MassDEP"), the agency that initiated a case referral in this matter to the Board. OADR is a separate operational group within MassDEP, providing hearing officer and dispute resolution services. I presided as the hearing officer in this matter pursuant to a formal appointment by the Board. The Board is a separate legal entity established pursuant to G.L. c. 21A §§ 19 and 19A. Section 19A of G.L. c. 21A provides that the Board shall consist of eleven members, all of whom are appointed by the Governor, with the exception of the Board Chair, who is the Commissioner of MassDEP or his designee. Section 19A also provides that "subject to appropriation, the secretary of the executive office of environmental affairs shall employ such staff and other persons as are required to assist him or the board or both in the performance of their functions or duties pursuant to sections." The Board's implementing regulations are found at 309 CMR 1.00 et seq.

represented by counsel and Mr. Decoulos appeared pro se. Although Mr. Decoulos is obligated to comply with all applicable procedural rules and regulations, I have appropriately accounted for his pro se status throughout the adjudicatory proceedings.[2] Below I have made recommended findings of fact and conclusions of law. Pursuant to 309 CMR 7.08, I have not recommended the form of discipline or other disposition to be taken by the Board.

Throughout the adjudicatory proceedings I have issued several rulings and orders, which are as follows:

1.	3/25/10	Scheduling Order
2.	4/12/10	Order Regarding Motion to Extend Hearing
3.	4/28/10	Post Conference Report & Order
4.	5/28/10	Order to Show Cause
5.	7/22/10	Second Post Conference Report & Order
6.	8/2/10	Ruling and Order Allowing Motion to Amend Schedule
7.	9/22/10	Ruling and Order Allowing Motion to Amend Deadlines
8.	9/24/10	Order on additional ten days to file settlement agreement
9.	9/24/10	Ruling and Order Allowing Motion to Correct Exhibits
10.	10/12/10	Ruling and Order Regarding Motion for Order Compelling Discovery and Motion for Oral Testimony
11.	10/19/10	Ruling and Order Regarding Motion to Dismiss, Offer of Proof, Motion to Strike, and Motion to Present Exhibits
12.	10/27/10	Report and Order Regarding Evidentiary and Miscellaneous Issues

[2] See generally Massachusetts Supreme Judicial Court Judicial Guidelines for Civil Hearings Involving Self-Represented Litigants; Russell Engler, Ethics in Transition: Unrepresented Litigants and the Changing Judicial Role, 22 Notre Dame J.L. Ethics & Pub. Pol'y 367 (2008).

13.	11/3/10	Ruling and Order Regarding Motion to Correct, Amend, or Modify and Request a Conference
14.	11/23/10	Report and Order regarding hearing date and relevance of documents held under deliberative process privilege
15.	1/5/11	Ruling and Order Regarding Motion to Compel Documents Pertaining to LNAPL Work Group
16.	1/20/11	Ruling and Order Regarding In-Camera Review of Documents
17.	1/20/11	Ruling and Order Regarding Mr. Decoulos' Motion to Seek Oral Testimony of Millie Garcia-Serrano and Motion to Add Exhibits
18.	2/1/11	Order regarding Motion to Compel
19.	2/9/11	Order regarding Motion to Correct Exhibit B-53
20.	2/11/11	Order of schedule of submission of briefs
21.	3/24/11	Order allowing Motion to Amend Deadlines
22.	4/5/11	Ruling allowing Motion to Amend Deadlines
23.	5/12/11	Ruling Allowing Motion to Amend Deadline for Rebuttal
24.	5/12/11	Ruling Allowing Response to Amend Deadline for Rebuttal
25.	5/23/11	Ruling Allowing Motion for Leave to File Surreply

The following witnesses testified on behalf of the Board at the adjudicatory hearing:

1. Cynthia A. Baran. Ms. Baran has been employed with MassDEP for approximately seventeen years, working primarily in the areas of hazardous material waste site cleanup. Prior to that she worked for about seven years as a public health official on Cape Cod. She holds a BS degree in biology, a MPH degree in epidemiology, and has completed course work at the masters level in environmental engineering.

2. Robert Luhrs. Mr. Luhrs is a corporate manager with Raytheon Company with over twenty three years of combined technical and management experience with respect to subsurface environmental issues, site contamination, and hydrogeology. He holds a

BA in geology and an MS in environmental pollution control. He has served on the LSP Board since 2000.

3. Ian Phillips. Mr. Phillips has been an LSP since 1993. He is presently employed as a Principal Scientist with Roux Associates, Inc. He has over twenty-five years of experience in environmental testing, engineering, and hazardous waste assessment and remediation. He holds a BA in chemistry and an MS in engineering in environmental studies.

4. John Fitzgerald. Mr. Fitzgerald has been employed with MassDEP since 1980, working primarily on the assessment and cleanup of contaminated sites and developing and reviewing substantial regulatory and technical work products issued in the area of waste site cleanup. He is a co-author of the Massachusetts Contingency Plan ("MCP"), 310 CMR 40.0000, and the author of a number of technical guidance documents. He holds a BS and MS in civil engineering.

Decoulos presented testimony and evidence from the following witnesses:

1. Theodore Bosen. Mr. Bosen is a lawyer. No other background information was provided.

2. Paul Wright. Mr. Wright has been involved in the construction business since 1979, primarily in the area of site development, hazardous waste remediation, underground storage tank removal and new installations, utility repairs, wetland replication, bridge construction, and building foundation and road construction. He holds a number of certifications, including a hazardous waste operations and emergency response OSHA certification.

3. Richard Doherty. Mr. Doherty is a registered Professional Engineer and LSP with over twenty years of experience in the assessment and cleanup of sites impacted by chemical releases. He holds a BS in civil engineering and an MS in civil and environmental engineering. He has been an LSP since 1993, serving on the LSP Board of Directors from 2001 to 2003.

4. James J. Decoulos. Mr. Decoulos is a registered Professional Engineer and LSP. He has over twenty-five years of experience as an environmental engineer, working in a variety of areas including waste site cleanup. He holds a BS in civil engineering.

After holding an adjudicatory hearing and considering the entire record and applicable laws, I find that the Board has shown by an overwhelming preponderance of the evidence that Decoulos violated the LSP rules of professional conduct as alleged by the Board. See 309 CMR

4.00 et seq.

REGULATORY FRAMEWORK

Massachusetts General Laws chapter 21E, the Massachusetts Oil and Hazardous Material Release Prevention Act, was enacted to require owners and operators of real property (among others) with releases of oil or hazardous materials on their properties to assess and remediate those releases to protect the public health, safety, welfare and the environment. See G.L. c. 21E, §§ 1, 2, 3, 4, and 5. Such persons are referred to as responsible parties or potentially responsible parties. See 310 CMR 40.0006 (definition of responsible party); G.L. c. 21E § 2 (definition of owner or operator). MassDEP has promulgated comprehensive regulations, known as the Massachusetts Contingency Plan ("MCP"), to govern the conduct of actions to assess, contain, remove and remediate releases of oil or hazardous material. See 310 CMR 40.0000. Such actions are called "response actions," and response actions must be conducted in compliance with the MCP. See Commonwealth v. Springfield Terminal Ry. Co., 80 Mass.App.Ct. 22, 29, 951 N.E.2d 696, 703 (2011).

Among other things, c. 21E and the MCP require that "responsible parties," such as owners and operators, notify MassDEP after they acquire knowledge of a release of oil or hazardous material. G.L. c. 21E §§ 5 and 7; 310 CMR 40.0300 et seq. and 40.1600 et seq. Failure to notify is a violation that is criminally punishable or punishable by fine under G.L. c. 21E § 11. Springfield Terminal Ry. Co., 80 Mass.App.Ct. at 29-30, 951 N.E.2d at 703-04. Each day a violation occurs is considered a separate offense. G.L. c. 21E §11. A responsible party who has knowledge and fails to notify is liable for a violation regardless of his or her intent, absent an explicit exception or exemption. Springfield Terminal Ry. Co., 80 Mass.App.Ct. at

29-30, 951 N.E.2d at 703-04.

After notification, the MCP requires specified persons, such as responsible parties, to "complete response actions at sites on a schedule established in the MCP and under the supervision of expert technical professionals in site assessment and cleanup known as Licensed Site Professional ("LSPs")." Matter of Blackinton Common LLC, DEP Docket No. 2007-115 and 2007-147, Recommended Final Decision (September 25, 2009), adopted by Final Decision (January 7, 2010); see 310 CMR 40.0169. LSPs are licensed by the Commonwealth and must comply with the requirements of M.G.L. c. 21E and the MCP in their supervision of response actions at sites as well as with a professional standard of care. 309 CMR 2.00-9.00. The LSP is required to oversee the site cleanup work and file a written opinion that it meets the requirements of 310 CMR 40.0000. See 310 CMR 40.0169. The LSP profession was created by legislation that became effective in 1992. See G.L. c. 21 A, §§ 19-19J. As a result of this legislation, MassDEP no longer had to oversee every phase of cleanup at the site of oil or hazardous waste contamination.

"Specific procedures are also established in the MCP for the conduct of response actions, including the sequencing of response actions into five phases of work: Phase I Preliminary Site Assessment, Phase II Comprehensive Site Assessment and Risk Characterization, Phase III Plan for Comprehensive Remedial Action including an analysis of alternatives; Phase IV Implementation of the Selected Remedial Alternative; and Phase V Operation and Maintenance of Remedial Systems and Monitoring." Blackinton Common, supra.

Further, and importantly here, to ensure that Responsible Parties, Potentially Responsible Parties, or Other Persons comply with the requirements of the MCP, the Legislature also gave

the Department broad regulatory, enforcement and auditing authority over the conduct of response actions by private parties. DEP implemented these broad authorities through the MCP regulations by setting performance standards for the conduct of response actions, particularly for completion of final site remediation opinions known as Response Action Outcome Statements (or "RAO Statements"). See Blackinton Common, supra.; 310 CMR 40.0900 and 40.1000. An RAO statement may be filed with MassDEP when the site has been remediated in compliance with the MCP to a level where, under the MCP, there is "No Significant Risk, as further defined by 310 CMR 40.1000." 310 CMR 40.0006 (definition of "Response Action Outcome"); Matter of Blackinton Common LLC, supra.

The MCP contains detailed regulations regarding the preparation and filing of RAO statements. 310 CMR 40.1000 et seq.; 310 CMR 40.1003 ("General Provisions for Response Action Outcomes"); 310 CMR 40.1004 ("Performance Standards for Response Action Outcomes"). The filing of an RAO by an LSP characterizes the remaining risk (or the absence of risk), signals the end of the cleanup process, and allows a site to exit the MCP's regulatory process. The RAO essentially certifies to MassDEP that in the LSP's professional opinion the site has been fully remediated under the MCP and there is no longer a significant risk at the site, as defined in the MCP.[3] Id. MassDEP, however, has "final administrative authority and discretion to determine" whether an RAO statement is in compliance with c. 21E and the MCP. 310 CMR 40.0100(1)(e). An RAO may be audited by MassDEP for compliance with the MCP and c. 21E. 310 CMR 40.1101. Under certain circumstances, particularly when MassDEP has reason to believe that response actions may have failed to achieve or maintain a level of no

[3] In addition, under 310 CMR 40.1003(2) a person who has submitted an RAO statement must ensure that such submittal is in compliance with the applicable requirements of the MCP.

significant risk, a site can be targeted for an audit at anytime in the future. 310 CMR 40.1110(4); 310 CMR 40.1101(4).

The MCP requires that an LSP report to DEP at various stages of the cleanup process. Since 1993, LSPs have been licensed and their professional practice has been regulated by the Board, see M.G.L. c. 21A, §§ 19C and 19D, an independent, 11-member board within the Executive Office of Environmental Affairs. See M.G.L. c. 21A, § 19A, ¶ 1. The Board adopted Rules of Professional Conduct for LSPs in 1995. See 309 CMR 4.00. LSPs are subject to the Board's disciplinary authority, and the violation of any provision of its Rules for Professional Conduct (as well as other violations) may prompt discipline. 309 CMR 7.01. The Rules of Professional Conduct are intended to "safeguard the public health, safety, welfare and the environment and to establish and maintain a standard of professional integrity . . . ." 309 CMR 4.01. Discipline "may be by revocation of license, suspension of license for a period of up to five years, public censure, or private censure," by assessing a civil administrative penalty, or through "orders imposing such restraints on or requiring action by licensed site professionals as the Board deems necessary to abate a hazard or the violation of any provision of M.G.L. c. 21A, §§ 19 through 19J, or any provision of 309 CMR." 309 CMR 7.02.

309 CMR 7.07 prescribes when and how the Board may initiate an LSP disciplinary proceeding:

> If the Board determines that, based on the preliminary investigation, sufficient grounds exist to initiate disciplinary action or other disposition as described in 309 CMR 7.02, the Board may commence a formal adjudicatory proceeding by providing the respondent with an order to show cause why disciplinary action or other disposition as described in 309 CMR 7.02 should not be taken. The order shall state the grounds for taking disciplinary action or other disposition, including the specific facts relied upon

> and the statute(s) and/or regulations authorizing the Board to take disciplinary action or other disposition. It shall also explain the respondent's right to request an adjudicatory hearing to contest the grounds for discipline or other disposition set forth in the order ...

Here, on January 8, 2010, the Board commenced a proceeding under 309 CMR 7.07 to confirm its asserted grounds for discipline against Decoulos, and Decoulos requested an adjudicatory hearing under the same regulation to contest these grounds. This adjudicatory proceeding resulted. Per 309 CMR 7.08, it is governed by the Standard Adjudicatory Rules of Practice and Procedure, 801 CMR 1.00. The Board must prove the grounds for discipline it asserts by a preponderance of the evidence. See Craven v. State Ethics Commission, 390 Mass. 191, 454 N.E.2d 471 (1983).

DISCUSSION, FINDINGS OF FACT, AND CONCLUSIONS OF LAW

I. Alleged Violations at 131 Main St., Carver, MA

The Site. Carver is approximately 15 to 20 miles from both the coast of the Atlantic Ocean and the northern boundary of Cape Cod. For the time period at issue, the site contained a gas station and auto repair business, known as Eagle Gas, on a .85 acre lot bordering Main St., a busy secondary highway in a rural, residential area. The station's pump island was located between the building and the road, approximately 20 to 30 feet from each. The site is surrounded by a relatively extensive wetland system, including the South Meadow Great Cedar Swamp, and agricultural producers, including cranberry bogs. A two bedroom apartment was located on the second floor of the gas station building and garage on the site. The site is within 500 feet of 4 private drinking water wells, including wells for an abutting residence, the residence directly across the street, and the on-site building and apartment. Board Ex. B-21 and

B-53. Some of the private drinking water wells have been historically contaminated with MTBE[4] and Benzene, constituents of gasoline, dating back to at least 1997. Board Ex. B-21, p. 20. The boundary of an Interim Wellhead Protection Area[5] for a public drinking water supply well intersects the site property and the site is located in an area defined as Current or Potential Drinking Water Resource Area, resulting in a GW-1 classification for the groundwater.[6] Board Ex. B-53

Approximately 600 feet south and down-gradient of the site, South Meadow Brook flows through a culvert beneath Main St. From there it flows into the Weweantic River, which empties into Buzzards Bay. A fifteen-inch, concrete municipal underground storm drain pipe runs parallel to Main St. at the front of the site until its discharge point approximately 600 feet to the south in South Meadow Brook. Groundwater at the site generally flows east/southeast, from the site towards the storm drain pipe and street. Board Ex., B-21, p. 11, 18.

Three 5,000 gallon gasoline tanks and one 5,000 gallon diesel tank were located underground at the site; the diesel tank was located just north of the pumps near the roadway and the three gasoline tanks were located just south of the pumps near the roadway. The site has a significant history of soil and groundwater contamination resulting from its use as a gas station,

[4] MTBE is the acronym for Methyl Tertiary Butyl Ether, a gasoline additive. See http://www.epa.gov/chemfact/f_mtbe.txt.

[5] An Interim Wellhead Protection Area is a Public Water Supply Protection Area regulated under the Drinking Water Regulations at 310 CMR 22.02.

[6] "The MCP GW-1 groundwater standards (310 CMR 40.0974(2)) apply to groundwater that is either a current drinking water resource (e.g., within a Zone 2 of a public water supply) or a potential future source of drinking water, such as a Potentially Productive Aquifer. The criteria used to categorize groundwater as GW-1 are specified in regulation, at 310 CMR 40.0932. These standards are intended to address the potential health effects associated with the use of the groundwater, including ingestion of the water, inhalation of contaminants volatilizing from the water during showering, and dermal absorption of contaminants while in contact with the water." http://www.mass.gov/dep/cleanup/laws/gw1.htm

dating back to at least 1997. That contamination had not been fully remediated as of January 2003, when Decoulos was retained as an LSP by the site owner. Board Ex. B-16 (pp. 10-11); Board Ex. B-21, pp. 12-13.

The Board's Allegations. The Board alleges Decoulos violated the Rules of Professional Conduct as follows: (a) he failed to act with reasonable care and diligence, in violation of 309 CMR 4.02 (1), and (b) he did not follow the requirements and procedures set forth in applicable provisions of G.L. c. 21E and 310 CMR 40.000, in violation of 309 CMR 4.03(3)(b).

Regarding the first category of violations, the professional competency requirement specifies that "(1) [i]n providing Professional Services, a licensed site professional shall act with reasonable care and diligence, and apply the knowledge and skill ordinarily exercised by licensed site professionals in good standing practicing in the Commonwealth at the time the services are performed." 309 CMR 4.02(1). Under 308 CMR 4.03(1) "[a] licensed site professional shall hold paramount public health, safety, welfare, and the environment in the performance of professional services." The Board primarily based the violation of 309 CMR 4.02 (1) on its contention that Decoulos did not perform sufficient assessment activities to rule out a connection between an underground diesel fuel release at the site and petroleum contamination at the storm drain pipe outfall in South Meadow Brook or to support his assertions that surface runoff, and not the diesel release, caused the contamination at the outfall. Order to Show Cause, p. 10. For these allegations, the focus is on whether Decoulos performed adequate assessment and collected sufficient information and data to support his remedial approach and opinions with respect to the site at the time he performed his work at the site. Luhrs Rebuttal PFT[7], pp. 7-8.

[7] PFT refers to pre-filed written testimony filed by the parties. Witnesses who filed such testimony were

For the second category of alleged violations, under 309 CMR 4.03(3)(b) "a licensed site professional shall: . . . follow the requirements and procedures set forth in applicable provisions of M.G.L. c. 21E, and 310 CMR 40.0000 [the MCP]." The Board based the violation of 309 CMR 4.03(3)(b) on its allegations that Decoulos did not meet the requirements for Immediate Response Actions ("IRA"), including the failure sufficiently, or at all, to: (1) implement MassDEP's repeated IRA requirements to delieneate the extent of the LNAPL release, (2) mitigate the condition of Substantial Release Migration, (3) conduct an Imminent Hazard Evaluation, and (4) conduct active LNAPL recovery and a video survey of the storm drain system to address the condition of Substantial Release Migration. The Board also found that Decoulos placed passive skimmers in monitoring wells, an IRA that Decoulos performed without MassDEP's approval. Order to Show Cause, pp. 10-11.

What Transpired. On January 21, 2003 Decoulos notified MassDEP, as required by the MCP, that a 10 inch layer of Light Nonaqueous Phase Liquid ("LNAPL")[8] was observed in an on-site groundwater monitoring well identified as BP-5RR, adjacent to the public storm drain pipe. Elevated petroleum levels had been previously found in that well. The discovery of greater than one-half inch of LNAPL in a monitoring well is considered to be a time critical condition that requires further assessment and other response actions to abate, prevent, or eliminate a potential Imminent Hazard to health, safety, public welfare or the environment.

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subject to cross examination at the adjudicatory hearing.

[8] "LNAPL is one of a group of organic substances that are relatively insoluble in water and are less dense than water. LNAPLs, such as oil, tend to spread across the surface of the water table and form a layer on top of the water table." http://toxics.usgs.gov/definitions/lnapls.html (citing U.S. Environmental Protection Agency, 2010).

Phillips PFT, p. 5.

On January 27, 2003, Decoulos verbally proposed an IRA (Immediate Response Action) Plan, which included (1) installing a 12 inch recovery well, (2) sampling nearby private drinking water wells, (3) conducting air monitoring and sampling of buildings and utilities, (4) inspecting the underground storm drain system in front of the site for impacts, and (5) conducting a tank tightness test. MassDEP approved the plan. Baran PFT, p. 7; Board Ex. B-14 and B-15.

An IRA is an assessment or remedial action that is required to be performed expeditiously in order to address time-critical release or site conditions. Baran PFT, pp. 8-9. The MCP provides:

> 40.0411: General Provisions for Immediate Response Actions
>
> (1) Immediate Response Actions shall assess release, threat of release and/or site conditions and, where appropriate, contain, isolate, remove or secure a release or threat of release of oil and/or hazardous material in order to:
>
> (a) abate, prevent or eliminate an Imminent Hazard to health, safety, public welfare or the environment; and/or
>
> (b) respond to other time-critical release, threat of release and/or site conditions.

310 CMR 40.0411 (emphasis added); see also Bran PFT, pp. 9-10. Importantly, "[a]ny person who performs an Immediate Response Action shall do so in accordance with all applicable requirements and specifications prescribed in 310 CMR 40.0000." 310 CMR 40.0411(2).

"At a minimum, Immediate Response Actions shall involve the assessment of the release or threat of release and/or site conditions described in 310 CMR 40.0412. The nature and extent of assessment actions taken as an Immediate Response Action shall be commensurate with the type and amount of oil and/or hazardous material released or threatening to be released, site

complexity, and the sensitivity of site and surrounding human and environmental receptors . . . ." 310 CMR 40.0414(1) (emphasis added). The assessment must be sufficient to determine the nature and extent of the release and what remedial actions are required, particularly whether additional time-critical IRAs are required. Baran PFT, pp. 10, 13.

IRAs "shall be conducted in compliance with all applicable provisions and time lines specified in 310 CMR 40.0400, and in compliance with any response action requirements deemed necessary by the Department and/or specified by the Department in its approval of Immediate Response Action Plans." 310 CMR 40.0420(2) (emphasis added). "Except as provided in 310 CMR 40.0421, approval from the Department shall be required prior to the implementation of an Immediate Response Action, or significant modification of a previously approved Immediate Response Action that involves remedial actions." 310 CMR 40.0420(6).

On February 12, 2003, MassDEP issued a Notice of Responsibility and Request for Immediate Response Action Plan with Interim Deadline. Board Ex. B-15. Given the substantial volume of LNAPL in BP-5RR, MassDEP had significant concerns about the existing site conditions and potential migration of vapors and product into the public storm drain system and nearby buildings and residences. Baran PFT, pp. 8, 14. It therefore required the IRAs pursuant to 310 CMR 40.0410-0412. The notice confirmed the need to perform the above verbally proposed and approved IRAs and required Decoulos to file a formal IRA Plan within 30 days, proposing IRAs with respect to: (1) air monitoring and sampling of buildings and proximate utility lines and corridors, (2) installation of monitoring wells (including one 20 feet downgradient from wells where LNAPL was found), and (3) installation of an active remediation system to address historical and reoccurring accumulation of LNAPL, among other

measures. Board Ex. B-15; Baran PFT, p. 8. An active remedial system generally utilizes machinery to maximize the extraction of contamination via mechanically created forces, such as vacuum pressure. An active system may also prevent expansion or dispersion of the underground contaminated area, or plume, by altering groundwater flow. In simple terms, the mechanical forces can alter groundwater flow and thus the dispersion of LNAPL below the ground surface and within the groundwater. In contrast, a passive recovery system utilizes natural conditions, such as the natural flow of groundwater and subsequent hand bailing of contaminants in groundwater from a well. Baran PFT, pp. 11-12. MassDEP required active remediation in well BP5-RR because of its proximity and potential exposure to the public storm water drainage system and human and environmental receptors. Baran PFT, pp. 11, 14. MassDEP shortened the presumptive 60 day IRA plan deadline to 30 days because of the urgency of the situation, including the potential for migration of contaminants and vapors into the storm drain system and nearby buildings and residences. See Baran PFT, p. 8; 310 CMR 40.0420(6).

In April 2003, Decoulos found additional LNAPL in BP-5RR at a thickness of 6.27 feet. Board Ex. B-21, p. 13. In the period leading up to that discovery the record reveals that little to no IRA work had been done at the site. Board Ex. B-15; Baran PFT, pp. 10-11. Upon discovering the increased thickness of LNAPL in BP-5RR, a drum vacuum system driven off a pneumatic compressor was used to remove the contents of the well. Board Ex. B-21, p. 13. Approximately one month later, however, LNAPL had returned to the well at a thickness of 6.67 feet. Board Ex. B-21, p. 13. Decoulos had previously stated that if the LNAPL returned after the initial removal, he would initiate active remediation. He did not follow through on that

despite the return of a substantial volume of LNAPL and he failed to provide a sufficient justification for not following through. Luhrs Rebuttal PFT, pp. 2-3; Board Ex. B-16 and B-21.

Still, by this time (May 2003) Decoulos had not performed most of the IRAs approved on January 27, 2003, including installation of the 12 inch recovery well, sampling of nearby private drinking water wells and on-site monitoring wells, conducting air monitoring and sampling of buildings and utility corridors, and, most importantly, inspecting the public storm drain pipe and system in front of the site for impacts. Nor had Decoulos commenced the active remediation system. Instead he claimed, with an insufficient scientific and evidentiary basis, that active remediation would not be productive or cost effective. Baran PFT, pp. 10-11. If an LSP disagrees with MassDEP's directives, the LSP must provide sufficient data and information from the site to justify an alternative course of action. Luhrs PFT, p. 12; Luhrs Rebuttal PFT, pp. 4-5. I find Decoulos never did that with respect to IRAs assessing the storm drain system and implementing an active remediation system. Id.

Although the storm drain pipe at the front of the site drained directly to the brook approximately 600 feet away, Decoulos had not assessed the brook for potential impacts until May 16, 2003, about four months after reporting the LNAPL. Id. Decoulos purported to do the late investigation as part of an imminent hazard evaluation under 310 CMR 40.0950 of the MCP. Board Ex. B-21, p. 15. Around this same time—"during the middle of May"—Eagle Gas discovered that there was a leak in a remote fuel intake line leading to the diesel underground storage tank, resulting in diesel fuel being leaked into the ground.[9] Board Ex. B-21, p. 15. It is not clear from the record how long the leak had existed. However, as discussed in detail below,

[9] There is no evidence in the record indicating more precisely when or how Decoulos or Eagle Gas discovered the leak.

the impacts to soil and groundwater at the site were significant, ultimately requiring substantial remedial work to reduce the risks and remediate the site. Board Ex., pp. 31-36; Luhrs PFT, p. 9.

When Decoulos assessed the brook for impacts on May 16, 2003, he observed from Main St. an oil sheen on the surface of the brook. With the assistance of the local fire department the source of the sheen was traced to the stormwater outfall for the stormwater pipe that traveled directly adjacent to the site and groundwater monitoring well BP-5RR, where Decoulos had previously reported finding the LNAPL, beginning on January 23, 2003. Board Ex. B-21, pp. 15-16. Decoulos reported that water from the outfall "appeared to be impacted from either diesel fuel or home heating oil." Board Ex. B-21, p. 16; Board Ex. B-27 (photographs). Decoulos inexplicably "not[ed] the apparent lack of connection with [the site]" and contacted local officials who responded promptly. Board Ex. B-21, pp. 15.

The impacts at the stormwater outfall were significant. Baran PFT, p. 15. There was substantial contamination of wetland vegetation and sediment. The record does not, however, more precisely reflect the extent to which vegetation and fish and other wetland fauna were impacted. Baran PFT, p. 15.

At the time, MassDEP relied upon several strands of corroborating evidence to determine that diesel fuel at the site was infiltrating the public stormwater collection pipe and flowing to the outfall and brook. Baran PFT, pp. 12, 14. First, on a number of recent occasions multiple feet of LNAPL had been discovered in monitoring well BP-5RR, which was in the path of groundwater flow from the diesel release and directly adjacent to the stormwater pipe. Luhrs PFT, p. 9. Second, the fuel intake line for the diesel tank had been leaking for an unspecified time in unspecified amounts. Third, MassDEP emergency response inspector Mark Jablonski observed

a petroleum sheen and diesel odor in the manholes connected to the storm drain system near monitoring well BP-5RR and in front and downgradient of the site. Baran PFT, p. 14. In contrast, the catch basin near and upgradient of the site did not contain an oil sheen or diesel odor, indicating that there were impacts and infiltration of the public storm drain pipe in front of and downgradient of the site, but not upgradient of the site. Baran PFT, p. 14; Board Ex. B-18; Luhrs PFT, p. 9.

Fourth, Jablonski, in the presence of Decoulos, used a photoionization detector ("PID") to measure volatile organic compounds in the manholes and catch basins of the storm drain system. Baran PFT, pp. 14-15. The PID readings in front of and downgradient of the site were consistent with a diesel release occurring at the site and flowing down the storm drain pipe, while readings upgradient of the site showed insignificant evidence of diesel at that location. Board Ex. B-18; Board Ex. B-20; Luhrs PFT, p. 9. In particular, upgradient and in front of the station the readings were zero and .5 parts per million by volume ("ppmv"). Then 100 feet downgradient to the south the concentration rose to 27 ppmv. The downgradient increase was another piece of evidence indicating the gas station was the source. Phillips PFT, p. 11; Luhrs Rebuttal PFT, pp. 4-5. Fifth, there was no other proximate source of petroleum that would lead to the excessive petroleum contamination at the outfall. Luhrs PFT, p. 9.

Sixth, additional evidence later corroborated the gas station as being the source of the release at the outfall. On July 3, 2003, Decoulos provided test results from surface water at the outfall showing that Extractable Petroleum Hydrocarbons (EPH), compounds associated specifically with diesel fuel, were *extremely* high, exceeding 3,000,000 parts per billion. Baran PFT, p. 18; Luhrs PFT, p. 9.

The above facts in conjunction with the absence of any other logical source of diesel fuel in the area indicated that the site was the source of the release at the outfall. Luhrs PFT, p. 9. This constituted a condition of Substantial Release Migration under the MCP because it met or potentially met each of the possible conditions for Substantial Release Migration, including impacts on the groundwater, soil, surface water, wetlands, and underground utilities. Baran PFT, p. 13. This condition of Substantial Release Migration is important because it constituted another mandatory basis for implementing IRAs to assess the release and determine whether further time-critical IRAs are required. See 310 CMR 40.0412(2) and 310 CMR 40.0414(1); Baran PFT, pp. 12-13. As a consequence, on May 16 and June 13, 2003, MassDEP issued two additional Notices of Responsibility to Eagle Gas, both were for the release at the stormwater outfall (as opposed to the diesel release at the gas station). MassDEP ordered Eagle Gas to eliminate the source of diesel from the leaking diesel fuel storage tank, initiate active collection of LNAPL from BP-5RR, construct a remedial system to stop the diesel fuel discharge to the public storm drain pipe, and clean and contain the contamination from the outfall. Baran PFT, p. 15; Board Ex. B-19.

For the next several months, as detailed below, Decoulos responded to the above evidence and MassDEP's directions for IRAs with a disturbingly myopic view of the problem. This continued unnecessarily to jeopardize the public health, safety, welfare, and the environment. Indeed, the evidence above and below overwhelmingly shows that Decoulos failed to act with reasonable care and diligence, and apply the knowledge and skill ordinarily exercised by licensed site professionals in good standing practicing in the Commonwealth at the time the services are performed, in violation of 309 CMR 4.02(1). Decoulos' approach to the problem

was inconsistent with the need for LSPs in the semi-privatized waste site cleanup program to be mindful of and properly balance the interests of the public, the environment, and their clients. In fact, under 308 CMR 4.03(1) "[a] licensed site professional shall hold paramount public health, safety, welfare, and the environment in the performance of professional services." Decoulos failed sufficiently to evaluate, among other things, the "most obvious pathway for oil to migrate to the brook"—the storm drain pipe. Luhrs PFT, p. 15. Instead of properly and promptly assessing the extent to which the groundwater and LNAPL could infiltrate the storm drain pipe, Decoulos adopted a theory that the stormwater outfall contamination in the brook resulted from surface water runoff from the site, a theory that was inconsistent with the facts and the countervailing compelling evidence indicating that the groundwater and LNAPL were infiltrating the storm drain pipe.

Indeed, even though Decoulos had theoretically ruled out infiltration of the storm drain pipe as a possible cause, he had not performed the most fundamental of assessment activities to do that and support his alternative theory. For example, he still had not assessed the extent to which the groundwater could possibly infiltrate the storm drain pipe. That assessment could easily be performed by measuring the invert elevations[10] of the components of the storm drain system and comparing those elevations to seasonal high groundwater elevations derived from adjacent monitoring wells. That would have been a simple way to determine the extent to which the LNAPL could intersect and possibly infiltrate the storm drain pipe through cracks or holes. Baran PFT, p. 19; Luhrs PFT, pp. 10, 14. If this showed a potential for infiltration, a video survey of the pipe's interior would provide further valuable evidence of LNAPL infiltration.

[10] In this context, "invert" is commonly used to refer to that portion of the interior of a drain or sewer pipe where the liquid is deepest.

Baran PFT, p. 20. Despite MassDEP's repeated requests for such information, Decoulos did not provide the invert and groundwater elevation comparison until January 13, 2005, two years after he reported the initial LNAPL release. Baran PFT, p. 20. The video survey was never conducted despite Decoulos' assurances to the contrary.

The failure to perform promptly these and other assessment measures before ruling out infiltration of the storm drain pipe (despite all the above evidence pointing to infiltration) and to properly support the alternative theory of stormwater runoff are the primary bases for the violation of 310 CMR 4.02(1)—failing to act with reasonable care and diligence and apply the knowledge and skill that an LSP in good standing would ordinarily exercise. Luhrs PFT, p. 15. Quite simply, Decoulos did not perform a sufficient evaluation of the release and site to determine if that pathway existed and whether his alternative pathway was supportable. Id. In addition, Decoulos failed to follow through with active LNAPL recovery, despite the existence of multiple feet of LNAPL detected in close proximity to the storm drain pipe. Luhrs PFT, p. 15. Decoulos himself had stated in March 2003 that he would employ active recovery and MassDEP repeatedly instructed him to do so, but he never performed it as directed. Many months later he did perform some form of active remediation, but only after a substantial passage of time and the continued release of LNAPL into the brook. Luhrs PFT, p. 15; Board Ex. B-16. An LSP applying the knowledge and skill ordinarily exercised would have recognized that passive recovery would not necessarily prevent the LNAPL from migrating horizontally toward the pipe and the brook. Luhrs PFT, p. 15.

Decoulos did perform some additional activities to assess the extent to which the LNAPL plume had migrated. In early June 2003, Decoulos resumed LNAPL recovery with a hand bailer

and the LNAPL thickness measured .28 feet. Board Ex. 21, p. 13. Also in June soil borings DCA, DCB . . . DCH were advanced in and around BP-5RR, three of which became monitoring wells DCW-1, DCW-2, and DCW-3. Board Ex. 21, p. 18. DCW-1, DCW-2, and DCW-3 were installed downgradient of BP-5RR and adjacent to the storm drain pipe. Board Ex. 21, p. 11.

Although Decoulos had already improperly dismissed the pipe itself as a potential preferential pathway, he recognized that backfill adjacent to the pipe could also constitute a potential preferential pathway. In a July 3, 2003, report to MassDEP Decoulos recognized that the backfill and immediate area surrounding the stormwater pipe could serve as a preferential pathway for product to travel "underground along the exterior of the stormwater drainage piping." Board Ex. B-21, p. 15. He stated that this "preferential pathway outside the stormwater drainage pipes could pose an Imminent Hazard (IH) . . . ." Board Ex. 21, p. 15. Decoulos concluded from soil borings and monitoring wells that diesel fuel had not migrated "along a potential preferred pathway outside the stormwater piping on Main Street." Board Ex. 21, p. 20 (emphasis added).

Despite all of the above countervailing evidence and his failure sufficiently to assess the pipe itself as a pathway, on July 3, 2003, Decoulos still inexplicably reported "an apparent lack of connection" that the oil release from the outfall in the brook had with the site. Board Ex. B-21, p. 15. He also stated unequivocally that "it is clear from the recent investigations that the diesel delivery line failure has not caused the impact to the stormwater system."[11] Board Ex. B-21, p. 20. He concluded that the source of the LNAPL in BP-5RR had been "identified and

[11] The LSP who was retained to replace Decoulos found that "[e]vidence indicates that diesel fuel has migrated from the source area into the municipal storm water drainage system beneath Main Street." The diesel fuel was found to have traveled with storm water flow through the pipe to the discharge at South Meadow Brook. Board Ex. B-53, pp. 5, 18-19, 25-26, 31, 32.

eliminated" and he stated that it would not be "productive or cost effective to install a recovery well to collect NAPL from the low yielding silt and clay strata," which he found at depths between four feet to ten feet below the surface; above that was fine to medium sand. Board Ex. B-21, p. 20. These conclusions were premature and in error given all of the contradictory evidence and Decoulos' failure to assess possible infiltration of the storm pipe. Phillips PFT, pp. 9-10. Moreover, the data that Decoulos did rely upon was insufficient. Soil samples from DCW-2 and DCW-3 were tested only for volatile petroleum hydrocarbons, which are associated with lighter petroleum products, like gasoline. EPH, in contrast, is associated with diesel. Soil samples that were tested for EPH at DCA, DCB, and DCE were in proximity to BP-5RR and the pipe, and they exceeded cleanup standards for EPH petroleum fractions associated with diesel. Phillips PFT, p. 9.

Decoulos' continuing assessment was not only substantively deficient it was untimely. Decoulos did not file an IRA Plan in response to the May 16 and June 13, 2003 Notices of Responsibility within 60 days, as required by those notices and the MCP. Baran PFT, p. 16. MassDEP therefore issued a Notice of Noncompliance on November 26, 2003. Board Ex. B-22. In response, on January 21, 2004, one year after notifying MassDEP of the LNAPL in BP-5RR, Decoulos filed an IRA Plan and Release Notification form for the release at the outfall. Board Ex. B-24. Decoulos stated unequivocally, incorrectly, and without sufficient technical, factual, and scientific support, that the release at the outfall resulted from "stormwater surface flows at Eagle Gas." Board Ex. B-24, p. 18. His theory was that precipitation was washing petroleum spills into downgradient catch basins on the street, which flowed into the storm drain and then to the outfall. Decoulos proposed that Eagle Gas would implement best management practices,

including cleansing the impacted system and installing a (1) new concrete driveway pad, (2) overhead canopy, and (3) oil/water separator to collect and separate runoff. MassDEP justifiably did not accept Decoulos' position and theory and determined that they were not supported by site-specific data and information. Baran PFT, pp. 17-18. There was no evidence of recent diesel surface releases and rainfall events. Just as important, in the face of all the above contrary evidence pointing towards infiltration of the public storm water system, there was no scientific justification to believe that the inordinate amount of contamination at the outfall was unrelated to the diesel release and explained simply by surface water runoff of unidentified and unquantified surface spills. Likewise, there was an insufficient site-specific and technical justification to deviate from and not comply with the prior Notices of Responsibility directing Decoulos to take certain IRAs relating, at a minimum, to further assessing the storm water pipe itself as a preferential pathway. Baran PFT, pp. 17-19. Decoulos' IRA plan did not address eliminating or mitigating the continuing source of LNAPL infiltrating the storm drainage system, initiating active LNAPL recovery, installing a system to prevent the migration of LNAPL to the storm drainage system, or conducting sufficient remedial measures at the stormwater outfall to contain, eliminate or mitigate the continuing discharge of diesel oil to the brook. Baran PFT, p. 17. MassDEP rightly believed that Decoulos' response indicated that he did "not understand the complexity of the site or the potential risk the release posed to human and environmental receptors." Baran PFT, p. 20. He was wrongfully and imprudently not proposing or taking IRAs that were commensurate with these factors and the releases, as directed by MassDEP. Baran PFT, pp. 20, 22.

After a March 2004, site visit (one year and two months after Decoulos reported LNAPL

in BP-5RR and almost a year after reporting it at the outfall in the brook) MassDEP official Cynthia Baran reported that she was "astounded by the amount of contamination . . . at the outfall. While the IRA Plan described the contamination as a sheen on the brook, [she] observed thick petroleum emulsion and brown oil floating on the surface water at the outfall. . . . The banks of the outfall and the low wetlands were stained black. When [she] walked on the bank and wetland areas surrounding the outfall, black oil oozed out of the soil and coated [her] boots. The odor of petroleum was so strong at the outfall that it was difficult to remain there to discuss conditions. The amount of petroleum product at the outfall did not comport with Mr. Decoulos' theory that the source of the release was surface runoff as described in the January 2004 IRA Plan." Baran PFT, pp. 21-22. Photographs and a contemporaneous report corroborate her observations and conclusions. Id.; Board Ex. B-25 and B-26. Newly placed absorbent booms and pads were preventing some but not all of the release from travelling further downstream from the area near the outfall. At times petroleum broke through the attempted containment measures and travelled downstream. Baran PFT, p. 23; Baran Rebuttal PFT, pp. 10-11. Most noteworthy was MassDEP's continuing position that the release and impacts at the outfall were not consistent with Decoulos' position that they were from stormwater runoff. Baran PFT, p. 23.

After the March 2004 site visit, MassDEP issued yet another Notice of Noncompliance, this one was dated March 19, 2004 and was for the release at the site. Board Ex. B-27. It was based upon Decoulos unjustified and imprudent failure to perform necessary and appropriate IRAs that were commensurate with site conditions and risks to the health, safety, public welfare, and the environment, and to identify and address the Condition of Substantial Release Migration and other MCP violations. Baran PFT, p. 22; Board Ex. B-27. Indeed, Decoulos had wrongfully

not implemented IRAs commensurate with the May 21, 2003 reports of concentrations of oil in nearby drinking water wells exceeding the GW-1 standards, and thus constituting a critical exposure pathway, and the substantial release migration. 310 CMR 0410, 310 CMR 0412(2), 310 CMR 0313(3) and (5), and 310 CMR 414(3); Board Ex. B-27. Moreover, Decoulos had not even sampled monitoring wells for approximately twelve months, from June 2003 to June 2004. Luhrs Rebuttal PFT, p. 4.

DEP also directed Decoulos in April 2004 to perform IRAs that he was previously directed to but wrongfully did not perform at the site without providing a sufficient technical justification, in addition to other IRAs. Board Ex. B-28. The other IRAs included sampling of the contamination at the outfall, the wetlands, and the storm drainage system. Baran PFT, p. 23. The additional information was necessary to determine the source, the nature and extent of impacts, exposure pathways, and the magnitude of the release, all of which would help in getting the release under control. Baran PFT, p. 24. MassDEP also again directed Decoulos to determine and evaluate invert and groundwater elevations to ascertain whether groundwater infiltration into the storm drain was even possible and to perform a video survey of the storm drain. Baran PFT, p. 24. He was directed to perform an Imminent Hazard Evaluation, evaluate conditions of Substantial Release Migration, and eliminate or mitigate the Critical Exposure Pathways, all pursuant to 310 CMR 40.0426(2) and (3), 40.412(3), and 0414(3). Instead, he had proposed to implement stormwater management best practices as IRAs, which MassDEP found to be inadequate and not responsive or commensurate with the problem and the risks. Baran PFT, pp. 22-23.

As of June 2004, Decoulos was still recovering LNAPL from BP-5RR with a passive

recovery device, approximately 25 gallons in total, even though the device was not checked on a routine basis. Decoulos also reported finding LNAPL in DCW-1, which is downgradient by approximately 40 feet and directly adjacent to the storm water pipe. Board Ex. B-33, B-34; Exhibit B-21, p. 11; Luhrs Rebuttal PFT, p. 3. In response he proposed to construct a LNAPL interceptor trench, another passive means for collecting LNAPL as it drains and collects into the trench and then is skimmed, collected, and manually emptied. Board Ex. B-33. MassDEP denied this proposal because it was a passive collection method with no supporting technical justification for using it over an active method, in addition to several other reasons. Indeed, Decoulos had still wrongfully not sufficiently determined the size of the plume or provided sufficient information on how the plume was migrating. Baran PFT, pp. 25-26; Luhrs PFT, p. 13; Board Ex. B-34 and B-35. A passive skimmer would only collect LNAPL from the top of the groundwater without causing any significant drawdown that would help to avoid the continued migration of LNAPL downgradient, contaminating the storm pipe and ultimately the brook. Luhrs PFT, p. 13.

Approximately four months later in November 2004, Decoulos formally reported that in August 2004 he had supervised the installation of four four-inch and five one-inch monitoring wells and an additional passive recovery device was added to one of the wells, without seeking or obtaining MassDEP's authorization, in violation of the MCP. Baran PFT, p. 27; Board Ex. B-37. More importantly, it was also reported that a significant amount of LNAPL was recovered from a number of the wells. Board Ex. 37, p. 3. In the new well DCW-7, 6.99 feet of LNAPL was measured. DCW-7 was located south of the diesel tank between the pump island and the station building. Board Ex. B-37, Fig. 1. LNAPL was also measured at the following

thicknesses in these wells: ERW-1 = .6 feet, ERW-2 = 3.28 feet, ERW-4 = 1.88 feet, and BP-5RR = 3.83 feet. These wells were located relatively close to BP-5RR, particularly DCW-2, which is also only approximately five feet from the stormwater drain pipe. Board Ex. B-37, Fig. 1; Baran PFT, p. 28. Indoor air samples from the second floor residence at the site included measurable concentrations of benzene, ethyl benzene, toluene, and zylenes, which constituted another critical exposure pathway. Baran PFT, p. 28.

Around this time, Decoulos finally recognized that passive recovery was not sufficient by itself to address the probable migration of LNAPL and dissolved diesel constituents. He thus proposed an active recovery system with the newly installed wells that involved withdrawing and treating the groundwater, and returning it to the ground at the site. Board Ex. B-37, p. 3. Part of the proposed treatment process included introducing chemical oxidants, including hydrogen peroxide or persulfate, to the soil and groundwater through a proposed infiltration trench on private property served by a private drinking water well. The area was also within an Interim Wellhead Protection Area for a Public Water Supply Well. Such proposed treatment, being within susceptible drinking water areas, is prohibited. See 310 CMR 40.0046(3); Baran PFT, p. 27.

MassDEP denied the new proposed system because there was insufficient information to show it would be viable or efficacious, in addition to several specific problems identified by MassDEP. Baran PFT, pp. 28-30; Board Ex. B-39. Moreover, the wells at issue had been installed near the stormwater pipeline and thus an active system at that location could pull petroleum product from across the site closer to the stormwater system, potentially leading to additional impacts at the stormwater outfall or private property across the street. Baran PFT, pp.

29-30; Board Ex. B-39. These were problems that would have been identified in the typical case by the LSP of record following the standard of care. Baran PFT, p. 29.

Despite recognizing the need for active recovery, as of November 24, 2004, Decoulos was still adamantly and unjustifiably denying any connection between the release at the stormwater outfall and the diesel release at the site. Board Ex. B-38.

In December 2004, Decoulos responded to the denial of his proposed recovery system with a proposal to construct a trench in the roadway. The proposal was deficient in many respects and it failed to address many of the concerns and issues that MassDEP had raised with Decoulos. Baran PFT, pp. 30-31; Luhrs PFT, pp. 13-14. Indeed, Decoulos had still not ruled out the possibility that the groundwater and LNAPL were intersecting the storm pipe cracks or seams. Luhrs PFT, pp. 13-14. The deficiencies again included the failure to conduct a hydraulic conductivity test and to provide construction detail for the trench or the treatment system. MassDEP eventually learned that Decoulos had already scheduled the trench to be constructed on the next day, without approval. Baran PFT, p. 32. Therefore, the construction proceeded the next day, with a number of resulting problems. Baran PFT, p. 32.

By this time, Decoulos had still failed to follow through on or respond sufficiently and in a timely manner to MassDEP directives to perform an Imminent Hazard Evaluation and assess conditions of Substantial Release Migration and Critical Exposure Pathways. Phillips PFT, pp. 4-5. Decoulos did not complete these activities until December 22, 2004, even though in April 2004 MassDEP had directed them to be completed and Decoulos committed to completing them by June 2004. Phillips PFT, pp. 5-6.

In January and July 2005, Decoulos submitted Imminent Hazard Evaluations, the January

evaluation being filed approximately nine months after it was required. Baran PFT, p. 33, 36. Both evaluations were deficient in many respects. In a number of instances he failed to base conclusions on data or evaluation; for example with the substantial release migration he failed to measure vapors in underground utilities against explosive standards, and he failed to evaluate impacts on fish from the release. He also did not prepare the quantitative evaluation required by 310 CMR 40.0951(1). He still unjustifiably denied that the outfall release in the brook was related to the site, despite all of the above evidence, continued release of petroleum from the pipe, and his failure to video survey the storm pipe interior. Baran PFT, pp. 33-34, 36; Phillips Rebuttal PFT, p. 9. Decoulos also continued to perform other IRAs without MassDEP approval. Baran PFT, p. 34.

Finally, in May 2005 (two years after discovering the release at the outfall), Decoulos finally acknowledged that the contaminant levels in the storm drain pipe may be affected by groundwater elevation when a sheen was observed on the water in a manhole located in front of the gas station. Baran PFT, p. 34; Board Ex. B-49, p. 19. He stated that there was gasoline and "known diesel contamination" affecting the storm drain system. Id. He relied on data from the nearest USGS monitoring well in Lakeville to determine that groundwater elevations could indeed intersect the pipe. Board Ex. B-49, p. 20. Decoulos should have used one of the 11 on-site monitoring wells to determine groundwater elevation instead of the Lakeville USGS monitoring well, which is a significant distance away and provides information for the region but not the site. Baran PFT, p. 35; Luhrs PFT, p. 14; Luhrs Rebuttal PFT, pp. 6-7. Indeed, the use of groundwater elevations taken two towns away "has little to no bearing on groundwater fluctuations and flow at the site . . . ." Luhrs Rebuttal PFT, p. 7. In fact, Decoulos had still not

determined groundwater elevation at the site on days when there was substantial contamination at the outfall. Baran PFT, p. 35.

As of July 2005, there continued to be technical omissions in Decoulos' approach to the site. He continued to propose a combination of active and passive remediation techniques that MassDEP believed would dangerously draw the LNAPL toward the storm pipe. Baran PFT, p. 37. He also continued to state that the impacts to the brook were caused by the surface water runoff, while at the same time stating that contamination was likely migrating into the storm drain and storm pipe to create a migration pathway when groundwater reached specified elevations. Baran PFT, p. 37; Board Ex. B-50, p. 10.

On October 5, 2005, MassDEP received a letter from Decoulos stating that his engagement as LSP of record for the site had been terminated. Exhibit B-52.

Within a few months the newly retained LSP had commenced active extraction of the contaminants from the site. Baran PFT, p. 38. Within one year thousands of gallons of diesel fuel LNAPL and groundwater were extracted. Id. A video screening of the interior of the storm pipe revealed evidence "that diesel fuel ha[d] migrated from the source area into the municipal storm water drainage system beneath Main Street." Infiltration had apparently occurred through joints and cracks. The diesel fuel was found to have traveled within the pipe to the discharge outfall at South Meadow Brook. Board Ex. B-53, pp. 5, 18-19, 25-26, 31, 32; Baran PFT, p. 38. The new LSP also properly compared the elevations of LNAPL and groundwater to the corresponding drain pipe invert locations, and found that LNAPL had been present at elevations above the drain pipe invert elevation during the period for which the new LSP had collected data in 2005 and 2006.

In April 2007 MassDEP entered an Administrative Consent Order with Penalty with the owner of the site for violations related to Decoulos' work at the site, including the failure to conduct necessary response actions. Baran PFT, p. 39; Board Ex. B-54.

Decoulos' Evidence. I have addressed Decoulos' primary claims above, citing to countervailing, persuasive evidence that I find establishes the Board's allegations against Decoulos by an overwhelming preponderance of the evidence. Nevertheless, I will briefly discuss and further elaborate upon Decoulos' primary evidence and arguments.

Given the gravity of what is at stake in this appeal, I have reviewed the testimony and evidence submitted on behalf of Decoulos in great detail, searching for factual and scientific justifications to support Decoulos' theory of the case and to explain why he acted as he did. However, I find the vast majority of Decoulos' evidence to be unpersuasive and nonresponsive to the above overwhelming evidence against him; much of the testimony is based upon conclusory and conjectural statements, unsupported by sufficient facts or scientific evidence. See Decoulos PFT; Decoulos' Rebuttal PFT; Decoulos' Supplemental Rebuttal PFT 2; Bosen PFT; Wright PFT; Doherty PFT; Respondent's Post Hearing Brief; Surreply to the Board's Post-Hearing and Rebuttal Briefs; Second Surreply to the Board's Post-Hearing and Rebuttal Briefs. Further, the Board's testimony in rebuttal exposes numerous inconsistencies and statements that are unsupported by evidence in the record; it easily undermines Decoulos' testimony and that of his witnesses, revealing fatal flaws with Decoulos' approach at the site and undermining the credibility of Decoulos' testimony. Much of Decoulos' evidence ignores the well established facts, attempting to create a scenario that is not supported by sufficient factual evidence. See Phillips Rebuttal PFT; Luhrs Rebuttal PFT; Baran Rebuttal PFT.

In particular, I find Decoulos' position that contamination at the stormwater outfall was caused by stormwater surface runoff at the site was never unsupported by any credible, persuasive evidence. Luhrs PFT, pp. 6, 11. On the contrary, although Decoulos stated he would perform forensic geochemistry assessment of water, sediment and soil data, it was never carried out. That evidence would have been important to proving or disproving his theory. Luhrs PFT, p. 6. Although activities at gasoline stations may result in *sheens* on nearby stormwater, there is no evidence that routine stormwater runoff can cause the egregious degree of contamination that was observed in this case. Luhrs PFT, p. 6; Phillips PFT, pp. 7-8; Phillips Rebuttal, pp. 2-3. The claims that historical use of the site and contamination led to surface stormwater contamination amounts to conjecture, and is simply not supported by the evidence. See e.g. Luhrs Rebuttal PFT, pp. 8-9. The evidence shows there was a substantial amount of diesel LNAPL coming from the storm drain pipe. It was an amount that is not consistent with Decoulos' theory that it was from stormwater runoff from the site. Luhrs PFT, p. 11; Phillips PFT, pp. 7-8. The EPH concentration of over three million parts per billion is inconsistent with the theory that it was caused by stormwater surface runoff. Phillips PFT, pp. 7-8. It would have been too diluted by runoff water. Id. Moreover, there is no credible and reliable evidence that that quantity of petroleum product at the outfall ever existed on the surface at the gas station or between the station and the immediately downgradient catch basin where it allegedly flowed. Luhrs PFT, pp. 11-12. Decoulos' statements and those of Doherty that the contamination resulted from historical runoff are unsupported by any scientific or sufficient site-specific data. Phillips Rebuttal PFT, pp. 5-6; Baran Rebuttal PFT, pp. 7-10.

Likewise, Decoulos' position to rule-out the stormwater pipe itself as a migration

pathway was also never justified. Although Decoulos pointed to some groundwater monitoring wells as supporting evidence, the relatively low concentrations of contaminants in DCW-2 and DCW-3 were at best inconclusive given all the countervailing evidence and the possibility that the LNAPL could have infiltrated the pipe at a point other than those wells. Phillips Rebuttal PFT, p. 7. This is particularly true given the soil borings showing diesel contamination in the soil along the pipe. Phillips PFT, p. 10. Moreover, DCW-1 eventually developed a substantial accumulation of LNAPL. Luhrs PFT, p. 10. Indeed, Decoulos himself reported seeing evidence of petroleum in and around the storm drain pipe in front of the station and downgradient from it. Luhrs PFT, p. 10; Phillips Rebuttal PFT, p. 4. Decoulos' evidence also either ignores much of the evidence showing the storm drain pipe to be a preferential pathway or draws unsupported, illogical conclusions from the scientific evidence. Luhrs Rebuttal PFT, pp. 4-5. Decoulos' post-hoc rationalization that the interceptor trench also caused the infiltration into the storm drain pipe in 2005 is unsupported by the record evidence and not credible. Baran PFT, pp 4-5.

Decoulos' evidence regarding active versus passive recovery is also unpersuasive. The thickness of LNAPL discovered in BP5-RR indicated that there was a significant amount of LNAPL in the subsurface that would have been more effectively recovered with an active recovery system. Luhrs PFT, p. 7; Barran Rebuttal PFT, pp. 12-13. To recover a plume indicated by several feet of LNAPL in a monitoring well not reported in the immediate vicinity of the source area requires hydraulic control of the site, which is achieved with active not passive recovery. Barran Rebuttal PFT, pp. 17-18. Active pumping creates a depression in the groundwater table, drawing LNAPL to the depression, where it would be collected and removed. Luhrs PFT, p 7. Moreover, a passive system was less likely to capture LNAPL outside the well

before it intersected the storm water pipe. Luhrs PFT, p. 7. In fact, the continued release of contamination at the outfall indicated that the LNAPL persisted in migrating to the stormwater pipe, necessitating active collection. Luhrs PFT, p. 7; Phillips Rebuttal PFT, p. 3.

Decoulos never offered sufficient technical justification to conduct passive instead of active collection of LNAPL. Luhrs PFT, p. 8; Phillips PFT, p. 6; Barran Rebuttal PFT, pp. 13-15. Although Decoulos described the soils as not being appropriate for active recovery, he failed to provide sufficient technical information regarding soils types, such as adequate boring logs. He had not tried a pump test or a bail-down test on the monitoring wells. Phillips PFT, p. 6. Moreover, the soil boring logs that Decoulos did provide in fact show that silt and clay did not appear until 6 to 8 feet below ground surface, two feet deeper than Decoulos claimed. Phillips Rebuttal PFT, p. 3. The soils less than six feet deep were permeable and the bottom of the storm drain pipe was located less than six feet below ground surface. Phillips Rebuttal PFT, p. 3. Moreover, the record demonstrates that active LNAPL recovery was successful, after Decoulos began employing it and ultimately by the LSP who replaced him. Phillips Rebuttal PFT, pp. 7-8.

Summary. Summing up the above, I find that Decoulos violated the Rules of Professional Conduct by an overwhelming preponderance of the evidence. First, he did not act with reasonable care and diligence, and apply the knowledge and skill ordinarily exercised by licensed site professionals in good standing practicing in the Commonwealth at the time the services were performed. 309 CMR 4.02(1). This is primarily because he did not perform sufficient assessment activities to rule out a connection between an underground diesel fuel release at the site and petroleum contamination at the outfall in South Meadow Brook or to support his assertions that surface runoff, and not the diesel release, caused the contamination at

the outfall.

Second, Decoulos violated 309 CMR 4.03(3)(b), which requires an LSP to follow the requirements and procedures set forth in applicable provisions of G.L. c. 21E and the MCP. As discussed above in detail, Decoulos did not satisfy the IRA requirements in the MCP and c. 21E when he failed, among other things, to: (1) implement MassDEP's repeated IRA requirements to delineate sufficiently the extent of the LNAPL release, (2) mitigate the condition of Substantial Release Migration, (3) conduct a timely and sufficient Imminent Hazard Evaluation, and (4) conduct active LNAPL recovery and a video survey of the storm drain system to address the condition of Substantial Release Migration. Decoulos also placed passive skimmers in monitoring wells without MassDEP's approval.

II. Alleged Violations at 633 North Main St., Randolph

The Site. The Randolph site fronts on both North Main St. and Orchard St in an area that is zoned residential. Board Ex. B-55, p. 7. Since approximately 1935 the site has been used as a retail gasoline filling station. The site has a history of significant petroleum releases, dating back to at least 1997. Id. at p. 10. Substantial prior remedial work was performed pursuant to the MCP, including the removal of soils and underground storage tanks. Id. at pp. 10-11, 25. As of 2002, the site was occupied by a business that operated in a one-story commercial building as a retail vehicle fueling and light automotive repair station. Id. at p. 7. A 12,000 gallon underground storage tank for fuel is located on the property. Id. The building is heated by fuel oil contained in two 275 gallon fuel oil tanks. The site is abutted to the north by a business that distributes heating oil and sells diesel fuel from its property. Id. at p. 10.

In about May 2002, the site owner retained Decoulos to perform response actions,

including installation of soil borings and groundwater monitoring and soil gas wells. On June 14, 2002, Decoulos filed with MassDEP a Class A-3 RAO. Based upon Method 1 and Method 2 Risk Characterizations, Decoulos certified that there is no significant risk to public health, safety, welfare, or the environment from the remaining petroleum constituents within groundwater on the site and a potentially significant risk from the remaining petroleum constituents within the soil on the site. Id. at p. 25. MassDEP subsequently issued a Notice of Noncompliance, asserting that the RAO violated a number of MCP provisions. Board Ex. B-57. The site owner was required to perform additional assessment activities and response actions.

The Board's Allegations. The Board alleged that Decoulos did not follow the requirements and procedures set forth in applicable provisions of G.L. c. 21E and 310 CMR 40.000, in violation of 309 CMR 4.03(3)(b) as follows: (a) failing to show the source of the contamination was eliminated or controlled when data showed increasing concentrations of petroleum contaminants in groundwater in violation of 310 CMR 40.1003(5); (b) failing to perform the Method 2 Risk Characterization consistent with scientifically acceptable risk assessment practices in violation of 310 CMR 40.0901(4) by using incorrect calculations and not following available guidance; (c) failing to adequately define the horizontal and vertical extent of the contamination in violation of 310 CMR 40.0904(2); (d) failing to identify conservative estimates of contaminant concentrations to which receptors may be exposed by averaging widely divergent analytical results in violation of 310 CMR 40.0901(3)(b)(1); and (e) filing an RAO without achieving a condition of No Significant Risk in violation of 310 CMR 40.0973(7) and 310 CMR 40.1003(1). Order to Show Cause, pp. 13-14.

The Board also alleged Decoulos violated the Rules of Professional Conduct by failing to

act with reasonable care and diligence in violation of 309 CMR 4.02(1), asserting he did not demonstrate that a level of No Significant Risk existed or had been achieved because the data showed increasing concentrations of petroleum contaminants on the site and in some cases was widely divergent.

Below, I have set forth each of the alleged violations and the corresponding evidence along with findings of fact and conclusions of law.

(a) Failing to show the source of the contamination was eliminated or controlled when data showed increasing concentrations of petroleum contaminants in groundwater in violation of 310 CMR 40.1003(5).

Under 310 CMR 40.1003(5) for a Class A or B RAO an RAO "shall not be achieved unless and until each source of oil and/or hazardous material which is resulting or is likely to result in an increase in concentrations of oil and/or hazardous material in an environmental medium, either as a consequence of a direct discharge or through intermedia transfer of oil and/or hazardous material . . . is eliminated or controlled." The Board presented persuasive evidence that Decoulos filed an RAO when data showed increasing concentrations of petroleum contaminants in groundwater, and thus did not show that the source of the contamination was eliminated or controlled. Luhrs PFT, pp. 17-18, 19; Fitzgerald PFT, p. 6, 17-18. The contaminant levels were substantially higher than the Method 1 standards applicable to the site's groundwater. Luhrs PFT, pp. 19-20. This precludes a finding of no significant risk unless Method 2 or Method 3 standards can be developed to show site specific conditions will reduce the exposure concentrations that the receptors will encounter. Luhrs PFT, pp. 19-20, 22; Fitzgerald Rebuttal PFT, pp. 1-5. Decoulos had collected only two rounds of groundwater samples less than for weeks apart,

with the contaminant levels in the second round being significantly higher than in earlier rounds. Luhrs PFT, pp. 19-20. This undermines the contention that the source, including the possibility of residual soil contamination, had been removed. Luhrs PFT, p. 21; Phillips PFT, p. 26, 27-28, 29-30. Decoulos failed in the RAO to support the contention that groundwater fluctuations were to blame for increasing concentrations. Phillips PFT, p. 28.

(b) Failing to perform the Method 2 risk Characterization consistent with scientifically acceptable risk assessment practices in violation of 310 CMR 40.0901(4) by using incorrect calculations and not following available guidance.

Under 310 CMR 40.0901(4), which sets forth requirements for risk characterization, the "characterization of the risk of harm to health, safety, public welfare and the environment shall be performed in a manner consistent with scientifically acceptable risk assessment practices, and shall take into consideration guidance published by the Department." The Board provided persuasive evidence that Decoulos used incorrect calculations and failed to follow available guidance and thus did not perform the Method 2 Risk Characterization consistent with scientifically acceptable risk assessment practices. Luhrs PFT, pp. 20-21; Phillips PFT, p. 27; Fitzgerald PFT, pp. 8-9. The flaws included the omission of benzene and MTBE from the risk assessment for indoor air, improper use of consideration of groundwater filtering, insufficient LNAPL gauging, incorrect placement of soil gas probes, and failure to calculate exposure point concentrations at each individual monitoring point. Luhrs PFT, pp. 20-21; Phillips PFT, p. 27; Fitzgerald PFT, pp. 8-13; Fitzgerald Rebuttal PFT, pp. 2-4. Decoulos failed sufficiently to include MTBE and benzene in his risk calculations even though the

concentrations in groundwater exceeded Method 1 cleanup standards for groundwater. Moreover, Decoulos did not adequately explain how he derived his Method 2 cleanup standards. Luhrs PFT, p. 20, 22; Phillips PFT, p. 27; Fitzgerald PFT, pp. 9-10, 15-17.

(c) Failing to adequately define the horizontal and vertical extent of the contamination in violation of 310 CMR 40.0904(2).

The MCP at 310 CMR 40.0904 provides that "an adequate characterization of the disposal site is a prerequisite to the characterization of risk of harm to health, safety, public welfare and the environment . . . ." Under 310 CMR 40.0904(2) "particular attention" shall be paid to the extent of the release, requiring that the "documentation of the Risk Characterization shall contain a description of the source and extent of the release of the oil and/or hazardous material, including, where appropriate: (a) the horizontal and vertical extent and concentrations of oil and/or hazardous material in all evaluated media . . . ."

The Board presented persuasive evidence that Decoulos did not adequately define the horizontal and vertical extent of the contamination. For example, Decoulos did not place wells downgradient of wells with high concentrations of MTBE and other contaminants. Luhrs PFT, pp. 18-19, 22; Phillips PFT, pp. 25-26, 29-30; Fitzgerald PFT, p. 6.

(d) Failing to identify conservative estimate of contaminant concentrations to which receptors may be exposed by averaging widely divergent analytical results in violation of 310 CMR 40.0926(3)(b)(1).

The MCP at 310 CMR 40.0920 sets for requirements for "Receptor Information Required For Risk Characterization," stating:

> The identification of receptors, Site Activities and Uses, Exposure Points and Exposure Point Concentrations shall be conducted in a manner which provides a conservative estimate of

the exposure to oil and/or hazardous material which a receptor may receive within the contaminated area over a period of time.

Under 310 CMR 40.0926(3), in determining or estimating the Exposure Point Concentration ("EPC") "the objective shall be to identify a conservative estimate of the average concentration contacted by a receptor at the Exposure Point over the period of exposure."

The Board presented persuasive evidence that Decoulos inappropriately averaged two substantially divergent high and low soil gas test results from two separate locations to calculate soil gas Exposure Point Concentrations for certain petroleum compounds. One concentration was more than 140 times higher than the other with which it was averaged. Luhrs PFT, pp. 22-23; Phillips PFT, pp. 26-27. Decoulos thus failed to provide a conservative estimate in violation of the MCP.

(e) Filing an RAO without achieving a condition of No Significant Risk in violation of 310 CMR 40.0973(7) and 310 CMR 40.1003(1).

The Board presented persuasive evidence in support of this allegation. An RAO may only be filed with MassDEP when it sufficiently documents and shows that the release does not present a significant risk of harm to health, safety, public welfare and the environment. The RAO presented two rounds of groundwater data collected within four weeks of one another on May 10, 2002 and June 4, 2002. The data showed significantly increasing levels of benzene, toluene, ethyl-benzene, xylenes (total BTEX), methyl teriary butyl ether (MTBE), C5-C8 aliphatics, and C9-C10 aromatics at several on-site groundwater monitoring wells, including at the two most downgradient wells. This does not show that the source of the release has been eliminated or controlled or that the extent of the plume has been adequately defined to evaluate potential exposure risks to downgradient receptors. Luhrs PFT, pp. 21-22.

In addition, data from the two groundwater sampling events were averaged to develop Exposure Point Concentrations (EPCs) for each contaminant at each well. The calculated EPCs do not represent conservative estimates of contaminant concentrations to which receptors may be exposed, primarily because higher concentrations measured during the second groundwater monitoring event were averaged downward. Despite this approach, the EPCs calculated for benzene, toluene, xylenes, MTBE, C5-C8 aliphatics, and C9-C10 aromatics in some of the wells continued to exceed the Method 1, GW-2 and GW-3 standards. The subsequently developed GW-2 and GW-3 standards were inadequate to rule out future vapor migration to buildings or discharge to surface water in light of the upward trend in groundwater concentrations.

For the above reasons, the RAO did not support a finding of no significant risk.

(f) Failing to act with reasonable care and diligence in violation of 309 CMR 4.02(1).

The Board presented all of the above evidence to persuasively show that Decoulos failed to act with reasonable care and diligence, particularly by filing an RAO after collecting only two rounds of groundwater samples less than four weeks apart when the samples showed increasing concentrations of contaminants and failing to adequately delineate the extent of contamination. Luhrs PFT, p. 21; Phillips PFT, pp. 28-29. For these reasons Decoulos failed to adequately characterize the source and extent of contamination or that the source had been controlled or eliminated. Phillips PFT, pp. 29-30. He therefore wrongly certified that no significant risk existed in violation of 309 CMR 4.02(1). Luhrs PFT, p. 22.

Decoulos' Evidence. For the above alleged violations the evidence presented by Decoulos is even thinner than that presented for the Eagle Gas violations. In fact, Decoulos presented no direct evidence from any witnesses and only offered rebuttal evidence from

himself. Decoulos Rebuttal PFT, pp. 31-35 (responding to testimony from Luhrs), pp. 45-47 (responding to testimony from Phillips), pp. 47-54 (responding to Fitzgerald testimony). Much of Decoulos' rebuttal testimony is nonresponsive to the specific testimony against him and is in the form of general objections with conclusory and conjectural statements that Decoulos believes he complied with the MCP, with little to no explanation regarding how Decoulos believes he complied with the MCP. Luhrs Rebuttal PFT, pp. 10-12; Fitzgerald Rebuttal PFT, pp. 1-5. Moreover, I find that whatever explanation was provided was undermined by the rebuttal testimony of Luhrs and Fitzgerald. Luhrs Rebuttal PFT, pp. 10-12; Fitzgerald Rebuttal PFT, pp. 1-5.

Summary. I find based upon the persuasive evidence from the Board and the dearth of persuasive evidence from Decoulos that the Board has proven the above alleged violations by an overwhelming preponderance of the evidence.

NOTICE- RECOMMENDED DECISION

This decision is a Recommended Decision of the Presiding Officer pursuant to 309 CMR 7.08 for consideration and issuance of a Final Decision by the Board pursuant to 309 CMR 7.10.

9/7/12

Timothy M. Jones
Presiding Officer

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