

COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS
BOARD OF REGISTRATION OF
HAZARDOUS WASTE SITE CLEANUP PROFESSIONALS

In the Matter of:)
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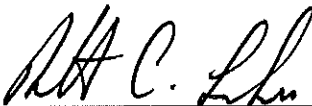
James J. Decoulos,)
Respondent)
)
_____)

Docket No.: LSP-10AP-01

AFFIDAVIT OF ROBERT C. LUHRS

I, Robert C. Luhrs, under the pains and penalties of perjury, state that I am the Robert C. Luhrs whose prepared direct testimony is attached to this affidavit. I further state that, if asked the questions contained in the text of such testimony, I would give the answers that are set forth in the text of such testimony. I adopt the aforesaid answers as my direct testimony in this proceeding.

Signed under the pains and penalties of perjury this 25th day of August, 2010.



Robert C. Luhrs

Exhibit B-4

**COMMONWEALTH OF MASSACHUSETTS
BOARD OF REGISTRATION OF HAZARDOUS WASTE SITE
CLEANUP PROFESSIONALS
before the
DIVISION OF ADMINISTRATIVE LAW APPEALS**

In the Matter of James J. Decoulos

Docket No. LSP 10AP 01

**Prepared Direct Testimony of
Robert C. Luhrs, CPG, LSP
Witness in support of the Initial Determination of the
Board of Registration of Hazardous Waste Site Cleanup Professionals**

1 **Q. Please state your name and business address.**

2 A. My name is Robert Charles Luhrs and my business address is Raytheon
3 Company, 235 Wyman Street, Waltham, MA 02453.

4

5 **Q. What connection, if any, do you have with the Board of Registration**
6 **of Hazardous Waste Site Cleanup Professionals?**

7 A. I have served as a member of the LSP Board from May 2000 to the
8 present. One of my duties as a Board member is to serve on the Complaint Review
9 Teams that investigate complaints against LSPs. In particular, I served as a member of
10 the Complaint Review Team that investigated the complaint against James J. Decoulos
11 that is the subject of these proceedings.

12

13

14

15

1 **Q. What position do you occupy on the LSP Board?**

2 A. I occupy the slot on the Board reserved, pursuant to M.G.L. c.21A, § 19A,
3 for an LSP who is a full-time employee of a manufacturing firm engaged in the
4 utilization of hazardous materials.

5
6 **Q. Are you sponsoring any exhibits in addition to your direct testimony?**

7 A. I am sponsoring Exhibit B-5
8
9

10 **Q. Please describe your educational and professional background.**

11 A. I have an undergraduate degree in geology from the State University College
12 of New York and a Master of Science degree in Environmental Pollution Control (EPC)
13 from Pennsylvania State University. The EPC degree program at Pennsylvania State
14 University is a flexible interdisciplinary academic program that allows students to select
15 courses most tailored to their particular interests. I completed courses related primarily to
16 hydrogeology and groundwater geochemistry.

17 After completing my M.S., I spent approximately seven years working as a
18 groundwater consultant, and have spent the last 16 years managing the soil and
19 groundwater contamination and remediation for Raytheon Company. During my 23
20 years working on hazardous waste site cleanup, I have participated in or reviewed
21 cleanup projects in a wide variety of properties, geologic terrains, and regulatory
22 jurisdictions, many with contaminants identical to this case.

23 I am a Certified Professional Geologist with the American Institute of
24 Professional Geologists and a licensed geologist in the states of Alaska and Maine. I am

1 a Licensed Site Professional in Massachusetts. Additional details regarding my
2 educational and professional background are provided in my resume, Exhibit B-5.

3
4 **Q. What, if any, documents have you reviewed in developing your**
5 **testimony?**

6 A. I have reviewed the Complaint filed with the Board by Najib Badaoui, Mr.
7 Decoulos's responses dated January 20, 2006 and August 31, 2007, the Board's Order to
8 Show Cause and Proposed Order, Mr. Decoulos's Objections and Answers to Order to
9 Show Cause, and the documents from MassDEP's files for the Eagle Gas site in Carver
10 and the Speedy Lube site in Randolph that are the Exhibits in this adjudicatory hearing
11 and other documentation related to them.

12
13 **EAGLE GAS SITE**

14 **Q. You made a visit to the Eagle Gas site in June 2008. Did you learn**
15 **any information in that site visit on which you are relying in this testimony?**

16 A. Although in my experience site visits are not common during Board
17 investigations, I felt it important to visit the Eagle Gas site because of how adamant Mr.
18 Decoulos was about his theory that surface runoff was the source of oil that was being
19 discharged at the outfall to the brook. Early on during my reading of the site reports it
20 seemed apparent that there was a probable connection between site contaminants and the
21 discharge of oil at the outfall. My site visit helped give me a better understanding of the
22 close proximity of the monitoring wells, underground tanks, and storm drain pipe to each

1 other, which made it evident that there was a potential for a connection between the
2 diesel release and the migration of petroleum through the storm drain pipe to the outfall.

3
4 **Q. Do you believe that Mr. Decoulos's work in regard to his Immediate**
5 **Response Action (IRA) submittals for this site constituted sufficient factual grounds**
6 **for disciplinary action against him by the Board?**

7 A. Yes.

8
9 **Q. Why?**

10 A. Mr. Decoulos's work at the Eagle Gas site was not consistent with
11 direction provided by MassDEP or with Mr. Decoulos's own plans for Immediate
12 Response Actions that he submitted to MassDEP and that MassDEP had approved. Mr.
13 Decoulos's IRA submittals proposed taking certain action, which then were never
14 completed. Rather than complete tasks included in his plans, or that were directed by
15 MassDEP, Mr. Decoulos gave conclusions that were not supported by sufficient data.
16 For two years Mr. Decoulos failed to conduct a thorough investigation of the site despite
17 directives from MassDEP and despite evidence that strongly suggested that diesel
18 LNAPL from the gas station site was migrating into the storm drain pipe. The potential
19 migration of LNAPL into the adjacent storm water pipe, and the observation of oil
20 contaminated groundwater at the outfall and in the brook called for immediate action.

21
22 **Q. Why do you believe that Mr. Decoulos's IRA submittals were not**
23 **consistent with direction provided by MassDEP?**

1 A. As soon as the first notification was given to MassDEP in January 2003
2 that LNAPL had been detected in well BP5-RR immediately adjacent to the storm drain
3 pipe, MassDEP identified the potential for the release to migrate via the pipe. As a result,
4 MassDEP required that the Immediate Response Action Plan to address the LNAPL
5 should include regular sampling of monitoring wells and an active recovery system. See
6 the original Notice of Responsibility dated February 12, 2003, Exhibit B-15. Mr.
7 Decoulos sampled the wells in June 2003 but not again for twelve months, when LNAPL
8 was found in a second well. He never conducted assessment activities that would
9 adequately determine whether the initial release of diesel fuel at the Eagle Gas station
10 would impact the storm drain pipe, as directed by MassDEP. Mr. Decoulos initially
11 indicated in his IRA Plan that he would conduct active LNAPL recovery; however, he
12 reversed himself, and asserted that passive recovery would be sufficient.

13 When the release at the outfall of the storm drain pipe to the brook was
14 discovered in May 2003, MassDEP again required active LNAPL recovery and site
15 assessment focused on discovering whether the diesel release was infiltrating the storm
16 drain system. June 13, 2003 Notice of Responsibility, Exhibit B-20. Mr. Decoulos
17 continued to resist active recovery of LNAPL and concluded without adequate support
18 that passive recovery was sufficient. MassDEP's Notices of Noncompliance and
19 Requests for Modification of Mr. Decoulos's IRA Plans emphasized that Mr. Decoulos
20 was required to address the apparent condition of Substantial Release Migration of diesel
21 contaminants into the storm drain system. Despite several years of intermittent activity
22 and frequent communications with MassDEP, Mr. Decoulos failed to adequately
23 investigate the site, and never adequately documented his assertions that the release to the

1 brook was not from the diesel fill line release at Eagle Gas. He asserted an alternative
2 theory that the release to the brook was caused by storm runoff carrying petroleum from
3 the surface of the gas station, but he did not adequately support that theory with site data
4 or information. It should be noted that many gasoline stations have sheens on and around
5 their properties during precipitation events, but I am not aware of any station where
6 routine storm water runoff caused significant accumulations of oil in storm water pipes or
7 on nearby brooks or streams.

8
9 **Q. Why do you believe that Mr. Decoulos's work at the Eagle Gas site**
10 **was not consistent with his own Immediate Response Action Plans?**

11 A. Mr. Decoulos did not implement a number of activities that he had
12 proposed and MassDEP approved or required. He first proposed to vacuum the LNAPL
13 that had been detected in monitoring well BP-5RR, and if the LNAPL returned, install a
14 12-inch diameter recovery well with an active LNAPL recovery system. March 17, 2003
15 IRA Plan, Exhibit B-16. The LNAPL returned to the one-inch diameter well after
16 removal, but Mr. Decoulos did not install a larger diameter well until August 2004, and
17 argued against active recovery up to his last submittal on July 8, 2005, Exhibit B-50,
18 without adequate support.

19 Mr. Decoulos proposed "forensic geochemistry assessment of water, sediment
20 and soil data" in his April 21, 2004 IRA Plan Modification, Exhibit B-29, but never
21 carried it out. This type of assessment could have provided information directly relevant
22 to his theory that the source of the contaminants at the outfall was surface runoff, by
23 comparing whether the site storm water or diesel release were chemically distinct from

1 the contaminants at the outfall. In the same IRA Plan, Mr. Decoulos proposed to perform
2 a video inspection of the stormwater collection system from the outfall to the manhole
3 upstream of the Eagle Gas station. He did not perform a video inspection.

4
5 **Q. Why do you believe that Mr. Decoulos did not adequately support his**
6 **conclusion that active LNAPL recovery was not warranted and passive recovery**
7 **was sufficient?**

8 A. LNAPL re-appeared in monitoring well BP5-RR in thicknesses of
9 multiple feet after LNAPL had been purged. This indicated that there was an amount of
10 LNAPL in the subsurface that would likely be recovered more effectively with an active
11 recovery system. A passive skimmer would collect the LNAPL that entered the
12 monitoring well, but would not actively draw the LNAPL to the well, and LNAPL
13 outside the passive collection well could still move away from the well towards the storm
14 sewer piping. Thus passive collection would not necessarily stop the migration to the
15 storm drain pipe that appeared to be happening based on visual observations of gross
16 contamination and the high EPH concentrations at the outfall. In contrast, active
17 pumping of the well would create a depression in the groundwater table, drawing the
18 LNAPL to the depression, preferably below the elevation of the storm drain pipe, where
19 it would be collected and removed from the subsurface.

20 Mr. Decoulos persisted in hand-bailing the one-inch well BP5-RR, even though
21 the LNAPL had repeatedly collected there in thicknesses of multiple feet immediately
22 adjacent to the storm drain pipe.

1 In May 2003, five months after the diesel release, oil was discovered on the
2 stream where the storm drain pipe has an outfall. MassDEP again required active
3 recovery of the LNAPL at the Eagle Gas station, but Mr. Decoulos ignored that
4 requirement. His January 2004 IRA Plan, Exhibit B-24, proposed only actions that
5 would address stormwater runoff from the gas station.

6 In June, 2004, LNAPL was found in a second monitoring well, DCW-1. At that
7 point, Mr. Decoulos submitted a proposal to construct an interceptor trench, Exhibit B-
8 33, but the trench system was to be fitted with one passive LNAPL skimmer that had a
9 collection capacity of one-half gallon. It was not until his November 5, 2004 IRA Plan,
10 Exhibit B-37, that Mr. Decoulos expressly proposed to use an active pump system to
11 recover LNAPL. Although that submittal acknowledged "the probable migration of
12 NAPL and dissolved diesel constituents underneath the Main Street surface," Mr.
13 Decoulos continued to dispute that active LNAPL recovery was required as late as his
14 July 8, 2005, IRA Plan Modification, Exhibit B-50. In that submittal, he argued that
15 recent standards and practices for LNAPL recovery had changed, but he offered no site-
16 specific information to support his position that passive recovery was sufficient as an
17 Immediate Response Action to reduce or eliminate the migration of LNAPL from the
18 Eagle Gas site under the street and into the storm drain pipe.

19
20 **Q. Why do you believe that Mr. Decoulos did not adequately document**
21 **his conclusion that the diesel release at the Eagle Gas station was not a source of the**
22 **release to the brook?**

1 A. Several basic facts about the Eagle Gas site indicated that the diesel
2 release was a likely source of the release to the brook. The fill line to the diesel tank
3 failed a pressure test, indicating it had leaked an undetermined amount of diesel fuel.
4 Multiple feet of LNAPL were detected in monitoring well BP-5RR, which was located
5 near the diesel fill line, and adjacent to the storm drain pipe. No other properties in the
6 area were potential sources of the petroleum contamination at the outfall.

7 The known available data and information strongly indicated that a potential
8 connection existed between the diesel release and the contamination at the outfall.
9 Additional information included in a MassDEP report stated that a MassDEP
10 representative, while with Mr. Decoulos during May 2003 observed that the catchbasin
11 located upgradient from the Eagle Gas station was clean while the catchbasin next to the
12 gas station had petroleum odor and a sheen on the water. Both Mr. Decoulos and
13 MassDEP collected vapor readings of the air inside the catch basins that detected no
14 volatile organic compounds in the catchbasin upgradient from the gas station while there
15 were increasing concentrations of volatile compounds indicative of contaminants in the
16 catchbasins next to and downgradient from the gas station respectively. Laboratory
17 analysis of surface water at the outfall detected high concentrations of extractable
18 petroleum hydrocarbons ("EPH") exceeding three million parts per billion. EPH's are
19 petroleum fractions consistent with diesel fuel. Together these data made the diesel
20 release at Eagle Gas the prime candidate for being the potential source.

21 Mr. Decoulos did not collect sufficient data and information to determine what
22 was happening at the site. He never thoroughly evaluated whether the storm pipe was a
23 migration pathway. The most effective way to rule out the possibility that the diesel

1 release had migrated into the storm drain pipe would be to survey well casing elevations,
2 measure depth to water, survey the elevations of the invert of the storm drain pipe and
3 calculate the difference between the elevation of the water table and adjacent piping. If
4 the piping was installed above the seasonal high water table, direct migration of LNAPL
5 into the pipe would be unlikely. Mr. Decoulos should have determined where the water
6 table was in relation to the storm pipe. If the water table was in contact with the storm
7 drain pipe at some location, then the LNAPL floating on the surface of the water table
8 could potentially be in contact with the pipe at that location. No such data were provided
9 by Mr. Decoulos. Mr. Decoulos failed to take these simple steps to adequately support
10 his opinions despite the visual evidence of oil on the brook, specific guidance provided
11 by MassDEP staff, and his obligations as LSP of Record for this site.

12 Mr. Decoulos stated in multiple submittals that the diesel release was not
13 migrating along the outside of the storm drain pipe. He cited laboratory analytical data of
14 groundwater from monitoring wells DCW-1, DCW-2, and DCW-3 located immediately
15 adjacent to the pipe showing relatively low concentrations of petroleum contaminants.
16 See July 2003 IRA Status Report, Exhibit B-21. However, this evidence was not
17 conclusive on the question whether the diesel release had infiltrated the storm drain pipe
18 because LNAPL could have come into contact with the pipe and entered through joints or
19 cracks at any point other than the locations of those wells. Furthermore as stated above,
20 DCW-1, one of the wells he used as evidence of no migration pathway developed an
21 accumulation of LNAPL.

22 A video survey of the interior of the storm pipe also could have provided direct
23 evidence whether the diesel release was infiltrating the storm pipe. Although Mr.

1 Decoulos eventually proposed performing a video survey, none was completed until a
2 new LSP replaced Mr. Decoulos on the project.

3
4 **Q. Why do you believe that Mr. Decoulos did not adequately support his**
5 **alternative theory that the release to the brook was caused by storm runoff and not**
6 **by the subsurface release at the gas station?**

7 A. There was no evidence in Mr. Decoulos's submittals that a substantial
8 release had occurred on the surface at the gas station that was sufficiently large to create
9 the amount of petroleum contamination that MassDEP had photographed at the outfall on
10 March 11, 2004, Exhibit B-25. Mr. Decoulos did not have basic water table and invert
11 elevation data to show that the diesel LNAPL that he knew was in the subsurface at Eagle
12 Gas would not enter the storm drain pipe.

13
14 **Q. Why do you believe that the photographs of the outfall of the storm**
15 **water collection pipe taken by MassDEP in March 2004, Exhibit B-25, depicted an**
16 **amount of contamination that was not consistent with Mr. Decoulos's assertion that**
17 **surface runoff was the source of the release to South Meadow Brook?**

18 A. The photographs demonstrate that there was a substantial amount of
19 LNAPL coming out of the storm drain pipe and coating the banks of the brook below the
20 outfall. Mr. Decoulos's interpretation that these conditions were the result of sheens
21 coming off the gas station during rain events realistically would not equate to the
22 volumes photographed by MassDEP at the outfall. Surficial storm water flow containing
23 the volume of oil depicted at the outfall would have caused a substantial amount of

1 staining and would have left residual oil along the pathway to the catch basin; no such
2 volume of residual petroleum was documented in Mr. Decoulos's submittals, nor is/was it
3 visible in the photographs for the site and roadway or during my site visit in 2008.

4
5 **Q. In your opinion, if an LSP disagrees with MassDEP's requirements**
6 **for an IRA condition, what, if any, recourse does the LSP have?**

7 A. It is fine for an LSP to disagree with MassDEP as long as the LSP has
8 enough scientific data to support the LSP's opinion. I do not always agree with
9 MassDEP interpretations. An LSP's recourse if they disagree with MassDEP's
10 requirements is to submit sufficient information regarding why MassDEP's requirements
11 are not well-directed and support the LSP's own proposal with sufficient data and
12 information from the site. The LSP would be well served to have a meeting with
13 MassDEP to review the LSP's information to see whether MassDEP concurs based on
14 the information provided. If an LSP moves forward with Immediate Response Actions
15 that differ substantially from MassDEP's requirements, the LSP must recognize that such
16 work is being completed at risk, and could be challenged after the fact. Although the
17 cleanup of hazardous releases is a privatized program where LSPs work for the private
18 party responsible for the cleanup, the LSP is bound to perform cleanup activities within
19 the constraints of the MCP and the Board's rules of professional conduct.

20
21 **Q. Why do you believe that Mr. Decoulos did not respond adequately to**
22 **the discovery of NAPL in a second monitoring well in June 2004?**

1 A. Mr. Decoulos's June 15, 2004 IRA Modification, Exhibit B-33,
2 responded only partially to the finding of LNAPL in a second monitoring well. His
3 proposal for an interceptor trench in the area between the gas station and the storm pipe
4 was not a bad concept, because a trench would provide a permeable zone where the
5 LNAPL could accumulate. However Mr. Decoulos continued to propose that the
6 recovery well(s) in the trench be fitted with passive LNAPL recovery skimmer(s), when
7 it was not clear that passive recovery would be adequate. As discussed above, the
8 passive skimmer would only collect LNAPL off the top of the groundwater without
9 causing any appreciable drawdown, and there was still potential for some LNAPL to
10 migrate downgradient and contaminate the storm drain pipe. In contrast, active pumping
11 of the well would create a depression in the groundwater table, drawing the groundwater
12 and LNAPL towards the depression, preferably below the elevation of the storm drain
13 pipe, where it would be collected and removed from the subsurface. Furthermore, the
14 continued proposal for passive skimmers in the trench was not responsive to MassDEP's
15 repeated directives to implement active LNAPL recovery and it was not even consistent
16 with Mr. Decoulos's own earlier plan for active remediation of the LNAPL.

17
18 **Q. Do you believe there were any problems with Mr. Decoulos's work in**
19 **regard to his plans for the construction of an interceptor trench in November and**
20 **December 2004, and if so, what were these problems?**

21 A. As I noted above, the proposal for an interceptor trench was a concept that
22 had the potential to be effective, particularly if it included active recovery to depress the
23 water table and to remediate the LNAPL. In the November 5, 2004 IRA Modification,
24 Exhibit B-37, Mr. Decoulos acknowledged that the diesel release was migrating under

1 Main Street; however, he still had not provided the data that was necessary to determine
2 whether LNAPL migration on top of ground water under Main Street was in contact or
3 migrating into the storm drain pipe as a migration pathway to the brook. Surveyed
4 elevations for the pipe inverts, updated groundwater elevations, or a video of the pipe's
5 interior were needed to answer this question.

6
7 **Q. Mr. Decoulos submitted an IRA Status Report in May 2005 (Exhibit**
8 **B-49) that used data from the nearest United States Geological Survey (USGS)**
9 **monitoring well (located in Lakeville, MA) to estimate when the LNAPL would**
10 **come into contact with the storm drain system. Do you believe there were any**
11 **problems with that analysis?**

12 A. Yes. Mr. Decoulos used USGS data collected a significant distance from
13 the site rather than collect accurate water level and storm drain pipe invert elevations at
14 the site itself. There is no plausible reason Mr. Decoulos should not have done an actual
15 survey of groundwater at the site using existing monitoring wells and compared the
16 results to the elevation of the storm drain pipe inverts. The use of the USGS data
17 suggests an attempt to compensate for a lack of site-specific groundwater elevation data
18 that was necessary to determine whether in fact the groundwater and the LNAPL floating
19 on it had been in contact with the storm drain pipe on the dates Mr. Decoulos was
20 addressing. I believe a primary flaw with Mr. Decoulos's work at the Eagle Gas site was
21 his failure or refusal throughout 2003 and 2004 to conduct a thorough investigation of the
22 Eagle Gas site to determine whether the storm drain pipe was a preferred pathway for the
23 LNAPL release to migrate to the South Meadow Brook.

1 **Q. In your opinion, did Mr. Decoulos's work in regard to the Eagle Gas**
2 **site violate the standard of care set forth in 309 CMR 4.02(1)?**

3 A. Yes. 309 CMR 4.02(1) states:

4 In providing Professional Services, a licensed site professional shall act
5 with reasonable care and diligence, and apply the knowledge and skill
6 ordinarily exercised by licensed site professionals in good standing
7 practicing in the Commonwealth at the time services are performed.
8

9 In my opinion, Mr. Decoulos failed in two ways to apply the knowledge and skill
10 that an LSP in good standing would ordinarily exercise. First, Mr. Decoulos did not
11 evaluate the most obvious pathway for oil to migrate to the brook. He continually tried to
12 explain that the migration of oil to the storm drain pipe was via surface water flow despite
13 having significant contrary evidence, including the presence of LNAPL in well BP5-RR
14 adjacent to the storm pipe, the vapor data collected from manholes and catchbasins along
15 the road, the discovery of LNAPL in a second well (DCW-1) adjacent to the pipe, and
16 despite MassDEP repeatedly voicing its concerns about the storm pipe as a migration
17 pathway. Mr. Decoulos did not conduct a thorough evaluation of the release and the site
18 to determine if that pathway existed. Secondly, he failed to follow through with active
19 LNAPL recovery even when multiple feet of LNAPL were detected in close proximity to
20 the storm drain pipe. Active recovery had been an integral component of his own March
21 2003 IRA Plan, Exhibit B-16, and was a required action repeatedly directed by MassDEP.
22 An LSP applying the knowledge and skill ordinarily exercised at that time would
23 recognize that passive recovery would not necessarily prevent the LNAPL from migrating
24 horizontally toward the pipe and the brook. These failures to assess the site and to
25 implement active recovery violated his duty to act with reasonable care and diligence,
26 because although Mr. Decoulos devoted time to his work on the site, he did not complete

1 the work that he proposed or that was required under the direction of MassDEP. Instead,
2 he proposed an alternate theory that the contamination at the outfall was caused by surface
3 runoff rather than address the problem, and never even collected data that would support
4 his own theory.

5
6 **Q. In your opinion, did Mr. Decoulos's work in regard to the Eagle Gas**
7 **site violate the Board's Rule of Professional Conduct 309 CMR 4.03(3)(b)), which**
8 **requires LSPs to comply with the MCP?**

9 A. Yes. 309 CMR 4.03(3)(b) reads as follows:

10 In providing professional services, a licensed site professional shall follow the
11 requirements and procedures set forth in applicable provisions of M.G.L. c. 21E
12 and 310 CMR 40.0000.

13
14 I do not believe Mr. Decoulos's work in regard to his Immediate Response Action
15 submittals for the Eagle Gas site met MCP requirements. The MCP requires that the
16 investigation done for Immediate Response Actions be commensurate with the type of
17 release, the site's complexity, and the sensitivity of the site and surrounding human and
18 environmental receptors, 310 CMR 40.0414(1), Exhibit B-3. Mr. Decoulos's site
19 assessment was not commensurate with the proximity of the release to the storm drain
20 pipe and the strong evidence that suggested the LNAPL had infiltrated the storm drain
21 pipe and migrated to the environmental receptors at the outfall. The MCP also requires
22 that Immediate Response Actions be conducted in compliance with requirements deemed
23 necessary by the Department and/or specified by the Department in its approvals of IRA
24 Plans, 310 CMR 40.0420(2), , Exhibit B-3, but Mr. Decoulos failed for two years to
25 implement MassDEP's requirements for the Eagle Gas site, including active recovery of

1 LNAPL and site assessment sufficient to determine if the LNAPL was infiltrating the
2 storm drain pipe. MassDEP repeatedly found deficiencies with Mr. Decoulos's
3 submissions. Rather than fulfill his obligation as LSP of Record and address the issues,
4 Mr. Decoulos continually proposed an unsubstantiated explanation that the oil was
5 caused by surface water flow/runoff in an effort to relieve his client of liability for the
6 site.

7
8 **SPEEDY LUBE SITE**

9 **Q. Do you believe there were any problems with Mr. Decoulos's work in**
10 **regard to the Response Action Outcome ("RAO") Statement he submitted in June**
11 **2002 for the Speedy Lube site at 633 North Main Street, Randolph, Massachusetts?**

12 A. Yes.

13
14 **Q. What were these problems?**

15 A. The problems with the RAO for the Randolph site relate primarily to an
16 insufficient amount of investigation, flawed risk calculations, and closing the site with an
17 RAO despite the presence of concentrations exceeding MCP standards.

18
19 **Q. Why do you believe that Mr. Decoulos performed an insufficient**
20 **amount of investigation before submitting this RAO Statement?**

21 A. Mr. Decoulos submitted a Response Action Outcome Statement, which is
22 permitted only where the site has been demonstrated to pose no significant risk to human
23 health, safety, public welfare or the environment ("No Significant Risk"). Mr. Decoulos

1 did not identify on the site plan the locations of the former USTs that were a source of the
2 contamination, and he did not locate any groundwater monitoring wells in the eastern
3 portion of the property where those USTs had been. The five monitoring wells that he
4 utilized were all located in the western and southern portion of the property, and four of
5 them were located near the property boundary. No monitoring wells were located in the
6 northern portion of the property near the site building. Mr. Decoulos sampled
7 groundwater twice within only four weeks, which is not a sufficient amount of time to
8 evaluate the seasonal fluctuations of groundwater or the effect of those fluctuations on
9 the contaminant concentrations. More importantly, concentrations of contaminants for
10 the second round of groundwater sampling were significantly increasing and exceeded
11 cleanup standards, but he did not take any further groundwater samples before closing the
12 site cleanup.

13
14 **Q. Why do you believe that Mr. Decoulos did not adequately define the**
15 **horizontal and vertical extent of contamination at the Speedy Lube site?**

16 **A.** Mr. Decoulos did not collect adequate site data to define the vertical and
17 horizontal extent of contamination. For instance, methyl-tert butyl ether (MtBE) was
18 identified in the most downgradient well only 60 feet from the property boundary at
19 concentrations of 34,200 and 69,880 parts per billion (ppb) while the applicable GW-2
20 standard is 50,000 ppb. Mr. Decoulos did not place wells farther downgradient of these
21 high concentrations to assess the horizontal extent of MtBE contamination. As noted
22 above, the monitoring wells used by Mr. Decoulos were located only in the western and
23 southern parts of the property. Also, Mr. Decoulos did not evaluate the off site extent of

1 contamination even though concentrations of several petroleum compounds in the wells
2 along the western portion exceeded Method 1 cleanup standards.

3
4 **Q. Do you believe that Mr. Decoulos adequately supported a finding of**
5 **No Significant Risk in his 2002 Response Action Outcome Statement?**

6 A. No. Concentrations of contaminants on the site exceeded the “Method 1”
7 standards applicable to the site’s groundwater, but rather than conducting a thorough site
8 assessment or implementing remedial actions, Mr. Decoulos claimed that the small
9 amount of site data he had collected met “Method 2” standards and showed a level of No
10 Significant Risk existed so that the site could be closed. His site data did not adequately
11 support a finding of No Significant Risk because he had collected only two rounds of
12 groundwater samples less than four weeks apart. Moreover, contaminant concentrations
13 in the second round of groundwater samples were significantly higher than in the earlier
14 round of samples. Notably, individual compound results for the second-round of
15 analytical samples were two to three times higher than the first-round results, and seven
16 of the ten contaminants analyzed exceeded MCP standards for groundwater within 30
17 feet of the building and ten feet of the ground surface. The MCP categorizes
18 groundwater at those distances as “GW-2,” and the “Method 1” standards for GW-2 are
19 designed to protect against the risk that volatile contaminants would migrate into indoor
20 air. Groundwater concentrations that exceed Method 1 standards preclude a finding that a
21 level of No Significant Risk exists at the site, unless “Method 2” or “Method 3” standards
22 can be developed to show that site-specific conditions will reduce the exposure
23 concentrations that a receptor will encounter.

1 Mr. Decoulos made several errors in attempting to develop alternative Method 2
2 standards for the site contaminants that exceeded Method 1 GW-2 standards, thus he did
3 not adequately rule out a vapor intrusion pathway and did not demonstrate a condition of
4 No Significant Risk. More importantly, he simply neglected to consider two primary
5 constituents of gasoline in his Method 2 approach, benzene and MtBE.

6
7 **Q. Mr. Decoulos omitted benzene and MtBE from his Method 2 Risk**
8 **Characterization. Do you believe there were any problems with these omissions?**

9 A. Yes. The gasoline constituent benzene is a known human carcinogen, and
10 in the second round of groundwater sampling at this site the concentration of benzene
11 increased at one well by more than 50 percent and exceeded the GW-2 cleanup standards
12 that protect against vapor exposures in indoor air. MtBE is another common constituent
13 of gasoline, and as noted above, it was identified in the most downgradient well at
14 concentrations of more than 15,000 parts per billion above the applicable GW-2 standard.
15 It was scientifically and ethically inexcusable for Mr. Decoulos to omit benzene and
16 MtBE from his risk assessment for indoor air.

17
18 **Q. Do you believe that Mr. Decoulos appropriately described his methods**
19 **and calculations in performing his Method 2 Risk Characterization?**

20 A. No. Mr. Decoulos did not set out the calculations by which he derived his
21 Method 2 cleanup standards, and his explanations of those calculations in the footnotes to
22 Table 4 of his submittal words did not make the calculations clear.

1 **Q. Mr. Decoulos has stated that it was appropriate to file the RAO after**
2 **only two rounds of groundwater sampling because the source of the contamination**
3 **had been removed. Do you concur?**

4 A. No. A significant increase in several contaminant concentrations during
5 his second round of samples contradicts his assertion that the source was removed. Mr.
6 Decoulos had no data to determine that residual soil contamination was not a continuing
7 source of ground water contamination.

8

9 **Q. In your opinion, did Mr. Decoulos's work in regard to his Response**
10 **Action Outcome submittal for the Randolph site violate the standard of care set**
11 **forth in 309 CMR 4.02(1)?**

12 A. Yes. 309 CMR 4.02(1) states:

13 In providing Professional Services, a licensed site professional shall act
14 with reasonable care and diligence, and apply the knowledge and skill
15 ordinarily exercised by licensed site professionals in good standing
16 practicing in the Commonwealth at the time services are performed.

17

18 Mr. Decoulos did not act with reasonable care and diligence by filing a Response
19 Action Outcome Statement for the Speedy Lube site after collecting two rounds of
20 groundwater samples less than four weeks apart, with significantly increasing
21 contaminant levels in the second round of samples. He also violated the standard of care
22 by not attempting to determine how far downgradient the contaminants extended or
23 whether they had migrated off-site and by not gauging or sampling the groundwater in
24 differing seasonal conditions. In doing so, he failed to apply the knowledge and skill
25 ordinarily exercised by LSPs in good standing. In certifying that No Significant Risk

1 existed and the site could be closed, he allowed contaminant concentrations to be left in
2 place at concentrations that potentially posed risk of harm to human health and the
3 environment.

4
5 **Q. In your opinion, did Mr. Decoulos's work in regard to his Response**
6 **Action Outcome submittal for the Randolph site violate the Board's Rule of**
7 **Professional Conduct 309 CMR 4.03(3)(b)), which requires LSPs to follow the**
8 **requirements of Chapter 21E and the MCP?**

9 A. Yes. 309 CMR 4.03(3)(b) in effect when Mr. Decoulos did the work at
10 issue reads as follows:

11 In providing professional services, a licensed site professional shall
12 follow the requirements and procedures set forth in applicable provisions
13 of M.G.L. c. 21E and 310 CMR 40.0000.
14

15 Mr. Decoulos violated several requirements of the MCP for closing a site with a
16 Response Action Outcome Statement, and in doing so violated the Board's rule of
17 professional responsibility 309 CMR 4.03(3)(b). Mr. Decoulos did not adequately define
18 the horizontal and vertical extent of contamination before closing the site, in violation of
19 310 CMR 40.0904(2). By closing the site with an RAO despite significant increases in
20 contaminants in the second round of groundwater sampling and exceedances of GW-2
21 standards, Mr. Decoulos did not demonstrate that the source or sources of contamination
22 were eliminated or controlled as required by 310 CMR 40.1003(5), and he did not show
23 that a level of No Significant Risk existed before submitting the RAO. By averaging the
24 second round of significantly higher contaminant concentrations with the lower first
25 round, Mr. Decoulos attempted to mask the exposure levels and failed to identify a

1 conservative estimate of the concentration to which a receptor would be exposed, in
2 violation of 310 CMR 40.0926(3)(b)(1). See Exhibit B-11. In avoiding the MCP's
3 requirement to demonstrate that the site poses No Significant Risk, Mr. Decoulos evaded
4 standards designed to protect against harm to human health and the environment.

5

6 **Q. Does this conclude your testimony?**


7 A. Yes.

CERTIFICATE OF SERVICE

I hereby certify that on this date a true copy of the Direct Testimony of Robert J. Luhrs was served upon each party in this action by electronic mail, to the following address: jamesj@decoulos.com, and that by agreement, the Exhibits in this matter were served upon each party in this action by overnight mail for delivery to the following address:

James J. Decoulos, LSP
Decoulos & Company
185 Alewife Brook Parkway
Cambridge, MA 02138

8/25/10
Date


Lynn Peterson Read