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

In the Matter of:	
James J. Decoulos, Respondent	Docket No.: LSP-10AP-01

AFFIDAVIT OF CYNTHIA A. BARAN

I, Cynthia A. Baran, under the pains and penalties of perjury, state that I am the Cynthia A. Baran whose prepared rebuttal 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 rebuttal testimony in this proceeding.

Signed under the pains and penalties of perjury this 7th day of October, 2010.

Cynthia A. Baran

Exhibit B-60

COMMONWEALTH OF MASSACHUSETTS
BOARD OF REGISTRATION OF HAZARDOUS WASTE SITE CLEANUP PROFESSIONALS
before the
OFFICE OF APPEALS AND DISPUTE RESOLUTION

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

Prepared Rebuttal Testimony of

Cynthia A. Baran,

Witness in support of the Initial Determination of the Board of Registration of Hazardous Waste Site Cleanup Professionals

Q. Please state your name and business address.

A. My name is Cynthia A. Baran and my business address is the Massachusetts Department of Environmental Protection, Southeast Regional Office, 20 Riverside Drive, Lakeville, MA 02347.

Q. Have you reviewed the full text of the rebuttal and direct testimony of Mr. Decoulos and his witnesses, and have you reviewed the Exhibits submitted in support of that testimony related to the Eagle Gas site?

A. Yes.

Q. In paragraph 15 on pages 6-7 of his Rebuttal testimony, Mr. Decoulos states, "During 2003 and 2004, there was no evidence of a subsurface diesel release entering the storm drainage system," citing his visual inspections of the drain manhole in front of the Eagle Gas station and the PID screening on May 16, 2003, as support for this statement. He makes a similar statement in paragraph 17

supported by the same information. Does the evidence he cites provide adequate support for his statements?

A. No. In my opinion, the information contained in MassDEP's Notices to Eagle Gas and the evidence available in Mr. Decoulos' submittals during 2003 and 2004 support the opposite conclusion. MassDEP's records indicate that Mark Jablonski, an Environmental Engineer, performed an inspection at the Eagle Gas Site on May 16, 2003 in response to the report of sheen on South Meadow Brook. Mr. Jablonski (not Mr. Decoulos) actually measured the headspace readings in the catch basins that Mr. Decoulos repeatedly claims collecting. As discussed in my previous testimony, Mr. Jablonski, after reviewing the same lines of evidence as Mr. Decoulos, issued a Field Notice of Responsibility indicating that the diesel fuel LNAPL release at Eagle Gas Station was the source of the contamination in the storm drain system and requiring Immediate Response Actions to stop that discharge. See May 16, 2003 Field Notice of Responsibility (Exhibit B-19). The same determination and requirements were stated in MassDEP's June 13, 2003 Notice of Responsibility (NOR) (Exhibit B-20).

As the LSP for Eagle Gas, Mr. Decoulos had an obligation to respond to the requirements of the NOR, either by complying with them or offering technical justification for an alternate view of the site conditions and proposing an appropriate IRA. I outlined in my previous testimony what lines of evidence would be appropriate to support an IRA assessment of whether the diesel release was infiltrating the storm drain pipe. Mr. Decoulos did not provide information necessary to support his contention, especially in light of MassDEP determination that a release to the storm drain system was occurring and was impacting South Meadow Brook, and MassDEP's repeated requests

for assessment of the storm drainage system. If Mr. Decoulos were relying on the information he noted in his testimony, at a minimum he should have provided documentation of multiple visual inspections of the storm drain system supported by PID readings and sampling and analysis of water and/or sediment in the storm drain pipe and correlated this information with observations and sampling at the stormwater outfall. This information should have been collected to reflect varying Site conditions (e.g., temporal, seasonal and/or and stormwater flow [dry flow versus wet flow] conditions). Mr. Decoulos did not provide adequate documentation of his visual inspections of the storm drain system in his official submittals to MassDEP, and he has not stated whether he correlated his visual observations of the storm drain pipe with observations of conditions at the outfall. As I stated in my direct testimony, in March 2004 MassDEP photographed gross petroleum contamination at the outfall that was consistent with a release of LNAPL into the storm drain system. Mr. Decoulos's visual observations in the drain manhole in front of Eagle Gas were inadequate to support his conclusion that the diesel release was not infiltrating the storm drain pipe because he did not have sufficient information to determine whether there was a hydraulic connection between the surface of the water table and the elevation of the invert of the storm drain pipe. An interruption of that connection during periods of low water elevation or significant dilution from upstream flow could also explain the absence of a sheen in the storm water drainage system At a minimum, I would not base a determination that the diesel release was not infiltrating the storm drain pipe solely on the limited information that he is citing.

Q. In paragraph 12 of his Rebuttal testimony Mr. Decoulos states: "I object to the statement that the Eagle Gas site met or potentially met all six possible conditions of SRM during 2003 and 2004. I further state that MassDEP's insistence to place an interceptor trench on the opposite side of the stormwater drain piping from the source of the diesel release caused a threat to public health, safety, welfare and the environment and led to the unnecessary migration of diesel and gasoline fuels into the stormwater collection system which discharged into South Meadow Brook. After the interceptor trench was constructed in December of 2004, SRM conditions developed in 2005." Do you agree?

A. No. Construction of the interceptor trench alone would not cause SRM conditions to develop. The complete design for the recovery and treatment system was not submitted to MassDEP until July 9, 2005, and the interceptor trench was never connected to the proposed on-site active recovery system. So, even if there were a possibility that the system as designed would draw contamination toward the storm water system, there was no continuous active component operating during the time period to which Mr. Decoulos refers. Further, Mr. Decoulos states on page 26 of his IRA Plan Modification dated July 8, 2005 (Exhibit B-50) that: "The depression of the groundwater table at the interceptor trench shall significantly reduce the threat of petroleum constituents being intercepted by the preferential pathway of the storm drain system. Although this depression does not appear necessary through the end of 2005..." If the interceptor trench were the source of the petroleum release in the storm drain system, as Mr. Decoulos now claims, it would be necessary to create the depression in the groundwater;

thus the quoted statements show that Mr. Decoulos did not at that time believe that the interceptor trench was the cause.

MassDEP never directed Eagle Gas or Mr. Decoulos to design and construct an interceptor trench, and never mandated that a trench be located in the Main Street right of way. There is no documentation that MassDEP gave such direction. Rather, Mr. Decoulos proposed a 50 foot long, three foot wide recovery trench to be installed within the Main Street right of way on page 2 of his June 15, 2004 IRA Plan Status and Modification Report, Exhibit B-33. (He does not note proposed depth of the trench.) However, his proposals did not include the basic technical information necessary to support the large recovery system that was summarized. MassDEP denied the plan for multiple reasons including, but not limited to, lack of sufficient supporting information to demonstrate the efficacy of the contaminant removal capabilities of the proposed passive recovery system. These reasons were outlined in an e-mail to Mr. Decoulos on July 1, 2004 (Exhibit B-34). Nine reasons were specified for the denial in MassDEP's IRA Plan Modification Denial letter dated July 7, 2004 (exhibit B-35.) None of these reasons specifically denied either a trench design or the location of the proposed trench. MassDEP did direct Mr. Decoulos to better delineate to extent of LNAPL. See Mr. Decoulos's e-mail dated December 6, 2004 summarizing the result of MassDEP's meeting with Mr. Decoulos on December 2, 2004 (Exhibit 40). However, MassDEP did not direct Mr. Decoulos to locate the trench on the opposite side of the stormwater drain pipe, because little information was available on the extent of the LNAPL (e.g., whether the diesel LNAPL extended beneath the storm drain system into the road), which in turn was because Mr. Decoulos did not drill soil borings in Main Street until December 10,

2004. Only days later, he emailed what is at best a conceptual plan in his e-mail dated December 15, 2004, Exhibit B-41. When I objected to his plan due to lack of design information and technical specifications, he informed me in a telephone call that it would cost his client significant amounts of money if MassDEP denied it because the construction equipment had already been staged. He then accused MassDEP of impeding implementation of his IRA Plan, and said if construction did not begin immediately, implementation of the IRA would be delayed until May. Thus Mr. Decoulos evaded the requirement to submit the IRA Plan for 21 days of review and approval or denial. MassDEP reluctantly agreed to the insufficiently supported conceptual plan for the construction of the interceptor trench only. In fact, Jonathan Hobill expressed his significant concerns over Mr. Decoulos's proposed location of the interceptor trench in the middle of the road due to the potential for trench collapse and roadway damage and urged Mr. Decoulos to take the necessary time to reevaluate the proposed trench location (e.g., if the location could be moved to one side of the road layout or the other and still provide effective treatment.) This is why MassDEP required that no excavation be conducted until Mr. Decoulos provided stamped design plans and obtained a road opening permit from the Carver Department of Public Works. See e-mail from Mr. Decoulos dated December 16, 2004 documenting MassDEP conditions for construction of the interceptor trench only. Exhibit RR-47. MassDEP required that no additional IRA activities be conducted until a complete IRA Plan Modification, prepared in compliance with 310 CMR 40.0424, was properly submitted to MassDEP for review.

Q. In paragraph 52 of his Rebuttal testimony Mr. Decoulos states: "A Condition of Substantial Release Migration did not exist for RTN 4-17825 because

the contamination in the stormwater collection system was not a 'release' as defined in the MCP. The release was historic and caused from surface water runoff." Do you agree?

A. No. Substantial available data from the Eagle Gas site indicated that the diesel LNAPL was present (10" LNAPL initially reported in BP-5RR) in close proximity to the stormwater drain system and contaminated groundwater was infiltrating the stormwater drainage system, which acted as a preferential pathway directly to South Meadow Brook. This condition constituted a separate reportable release and was therefore issued a new Release Tracking Number (RTN: 4-17825). As discussed on pages 12-14 of my Direct Testimony, the diesel release at the Eagle Gas station met or potentially met all the six possible conditions of SRM. Mr. Decoulos never provided sufficient evidence to support his contention that stormwater runoff was the cause of the gross contamination that I witnessed at South Meadow Brook. In my experience, small, incidental petroleum releases do not result in the significant contamination present at the outfall. For example, the surface release that occurred on December 10, 2004 had a component of surface flow along the west side of Main Street that flowed to a catch basin approximately 400 feet down gradient from the Site that discharges to a drain pipe at the Main Street bridge over South Meadow Brook. While there was a sheen on South Meadow Brook from the surface water runoff at this location, there was no evidence of the significant contamination that had been observed at the outfall.

Q. In paragraphs 15 and 19 of his Rebuttal testimony, Mr. Decoulos asserts that the contrast between the high EPH concentrations at the outfall in 2003

and the low EPH concentrations in 2005 in water from the storm drain manhole in front of the gas station supports his position that the diesel release at the gas station did not cause the contamination at the outfall. Do you agree?

No. That testimony is comparing 2003 data from the outfall with 2005 data from the storm drain system. Data taken almost two years apart, under different conditions, is not directly comparable. Data may be affected by temporal, seasonal, and/or precipitation and stormwater flow conditions. Contaminant levels may be affected by dilution from upgradient flow within the storm drainage system. Contaminant levels present within the storm drainage system may be also affected by groundwater elevation. (e.g., Depending on the groundwater elevations on the sampling date in 2005, there may not have been as much contact between the LNAPL floating on the groundwater and the storm drainage system as there was on the date in 2003 when the samples were taken at the outfall. If the groundwater was not in contact with the storm drainage system, then the LNAPL floating on the groundwater may not infiltrate the system. Mr. Decoulos acknowledged on page 9 of his IRA Plan Modification dated July 8, 2005 (Exhibit B-50) that "Although the levels of MTBE and EPH fractions identified in the storm drain system in front of the Site are below Method 1 standards in the MCP, these numbers may not be indicative of a worst-case scenario." Moreover, by April 2005 when he sampled the water in the storm drain pipe, Mr. Decoulos had already begun a series of LNAPL and groundwater extractions via a 3500 gallon press vacuum truck from recovery wells adjacent to the storm drain system ERW-1, BP-5RR, ERW-2, and ERW-4 as well as DCW-7 and the interceptor trench. Significant volumes of LNAPL and contaminated groundwater were recovered in the first several months of 2005 (Mr. Decoulos notes on

page 20 of his testimony that over 8,000 gallons of diesel fuel NAPL and groundwater were pumped from the Site within four months of the installation of the interceptor trench), which reduced the likelihood that the LNAPL was in contact with the storm drain system when the sample was collected.

Q. In paragraph 52 of his Rebuttal testimony Mr. Decoulos states: "MassDEP never informed myself or Eagle Gas, Inc., that it disagreed with my "theory" or that it sought additional information to refute my professional opinion as to what caused the significant contamination at the outfall." Do you agree?

A. No. MassDEP communicated expressly and frequently its disagreement with Mr. Decoulos's assertions that surface runoff was the source of the contamination at the outfall. Mr. Decoulos first made this assertion in his January 21, 2004 IRA Plan, Exhibit B-24. MassDEP's first response to that assertion was that "The IRA Plan...does not provide sufficient information to support the assertion that the impact to the surface water body was caused solely by surface water runoff from the gasoline station." Request for IRA Plan Modification, April 5, 2004, Exhibit B-28. Additional Notices of Noncompliance to Eagle Gas and denials of Mr. Decoulos's IRA Plans reiterated these views. MassDEP's view that available site data indicated that the subsurface release of LNAPL and contaminated groundwater were infiltrating the stormwater drainage system, which acted as a preferential pathway directly to South Meadow Brook, and that the Immediate Response Actions must address that pathway. MassDEP held multiple meetings with Mr. Decoulos also attempting to impress upon him that he had not substantiated his assertions that surface runoff was the source of the contamination at the

outfall. Additional Notices of Noncompliance to Eagle Gas and denials of Mr. Decoulos's IRA Plans reiterated MassDEP's view that available site data indicated that the subsurface release of LNAPL and contaminated groundwater were infiltrating the stormwater drainage system, which acted as a preferential pathway directly to South Meadow Brook, and that the Immediate Response Actions must address that pathway. Due to Mr. Decoulos' failure to take appropriate actions, MassDEP's Notices of Noncompliance, IRA Plan Denial letters and e-mails specified the types of data that Mr. Decoulos must collect and document to meet IRA requirements to address the conditions of Substantial Release Migration and Critical Exposure Pathways, and evaluate potential Imminent Hazards at the site. See, e.g., Exhibits B-31, B-34, B-35, B-39. MassDEP also held multiple meetings with Mr. Decoulos attempting to impress upon him that he had not substantiated his assertions that surface runoff was the source of the contamination at the outfall.

Q. In paragraph 24 of his Rebuttal testimony, Mr. Decoulos states: "While I was LSP-of-record, there was no sheen breakthrough into South Meadow Brook from the contaminated outfall after the implementation of containment actions." Do you agree?

A. No. I witnessed sheen breakthrough from the containment booms into South Meadow Brook at the outfall area during several site inspections, including, but not limited to inspections where I took photographs on November 30, 2004, December 1, 2004, and December 10, 2004. A copy of one of my photos from December 10, 2004 is attached as Exhibit A to this rebuttal testimony.

The November 30 and December 1, 2004 inspections prompted specific discussion at MassDEP's December 2, 2004 meeting with Mr. Decoulos regarding the lack of control of the sheen breakthrough into S. Meadow Brook. Item 9 in Mr. Decoulos' e-mail dated December 6, 2004 (Exhibit B-40), discusses measures necessary to be implemented to control the sheen at the stormwater outlet. This e-mail is Mr. Decoulos' synopsis of deficiencies and action items that required immediate attention as outlined in the December 2, 2004 meeting. Item 9 is in direct response to MassDEP's requirement to control the sheen breakthrough that was not being captured by Mr. Decoulos' "containment actions."

Further, Mr. Decoulos does not adequately document his inspections or the condition of the containment booms and whether or not breakthrough was occurring. I sent Mr. Decoulos an e-mail dated May 20, 2004, with my comments regarding his April 21, 2004 IRA Plan for S. Meadow Brook (Exhibit B-31). In the e-mail, I specifically requested documented inspections of the outfall area once a week and during significant rainfall events at a minimum. Mr. Decoulos incorporated this and all 15 comments into his May 26, 2004 IRA Plan Modification for RN 4-17825. Mr. Decoulos did not comply with this inspection schedule, and therefore did not meet his responsibility to inspect and document the condition of the containment booms and whether the containment system was effective in preventing sheen breakthrough at the outfall area.

Q. In paragraph 24 of his Rebuttal testimony, Mr. Decoulos states: "I dispute any allegation that the [June 13, 2003 NOR (Exhibit B-20)] 'specifically required active collection of LNAPL and a remedial system to stop the diesel fuel

from discharging to the storm pipe,' " and in paragraphs 16, 31, 32, 36, 40, and 52(a) he asserts that in June and November 2004 he had proposed active LNAPL recovery if necessary, that MassDEP specifically rejected those proposals, and DEP mandated active recovery in December 2004. Do you agree with these statements?

A. No. MassDEP required an active remediation system in the first Notice of Responsibility (NOR), dated February 12, 2003 for the 10" of diesel LNAPL detected in monitoring well BR-5RR (Exhibit B-15). MassDEP further required active LNAPL recovery in the NOR dated June 13, 2003 for the release to the brook, Exhibit B-20, which stated that Eagle Gas must submit an IRA Plan to "initiate active collection of non-aqueous phase liquid from the impacted monitoring well." The requirement to submit an IRA Plan that must include active recovery meant that Eagle Gas must submit the Plan to MassDEP for review and approval of the specifications for active recovery before they were implemented, or submit technical justification for an alternative to active recovery. MassDEP did not vary from that requirement, and Mr. Decoulos did not submit adequate technical justification for his IRA proposals for passive recovery, thus MassDEP denied the proposals and continued to require active LNAPL recovery. Any suggestion in Mr. Decoulos's testimony that MassDEP did not require active recovery until December 2004 is incorrect.

Q. In paragraph 40 of his Rebuttal testimony Mr. Decoulos states: "Several times during 2004 and 2005, I asked Ms. Baran if she wanted for me to comply with the provisions of Subpart G [of the MCP] and she informed me that it was not important." Do you concur with this testimony?

A. No. I did not state to Mr. Decoulos that MCP subpart G was not important. I would not ever characterize any part of the MCP as not important. The MCP Subpart E requires all sites to be classified as either Tier I or Tier II using the Numerical Ranking System within one year of notification to MassDEP of the release. 310 CMR 40.0501. A Tier I site is required to submit a Tier I Permit Application, which after approval, authorizes the Responsible party and their LSP to perform response actions. A person who does not have a Tier I Permit for a site for which a Tier I Permit is required is prohibited from performing Comprehensive Response Actions. Id. at 40.0702(4). Mr. Decoulos submitted a Numerical Ranking System Scoresheet for RTN 4-17582, scoring the Eagle Gas site as Tier IA Site, when he submitted the Phase I Report, dated April 30, 2004to MassDEP on May 24, 2004 but he never applied for a Tier I permit. During this timeframe, Mr. Decoulos was also required to submit IRA Plan Submittals for both releases. Mr. Decoulos appeared to be struggling to meet the requirements for the IRAs. In fact, I offered significant comments on his IRA Plan dated April 21, 2004, which he incorporated into his IRA Plan Modification dated May 26, 2004. In this context, since he had already not filed the required Permit Application by the required deadline, he may have asked me which requirement to perform first, the submission of the required Immediate Response Action Plans or filing a Tier I Permit Application. I do not have an independent memory of such a discussion. I certainly never told him that the filing the Tier 1 Permit Application was not important nor would I have advised him to miss a required MCP deadline. I asked repeatedly when he would be filing the Tier I Permit Application. It is likely that I told him that he was in direct

violation of the MCP, and it is simply not the case that over the course of two years I told him his Subpart G requirements were "not important."

Q. Also in paragraph 40 of his Rebuttal testimony Mr. Decoulos states: "As the numerous email exchanges and construction of the recovery trench in December of 2004 demonstrate, Ms. Baran and Mr. Hobill allowed significant MCP work to be completed in an informal fashion – outside of what would be considered 'normal requirements' of the MCP." Do you concur with this testimony?

A. No. The reason for the numerous denials of Mr. Decoulos's IRA Plans was that Mr. Decoulos consistently submitted plans that attempted to circumvent MCP requirements and IRA requirements issued by MassDEP. MassDEP called several meetings with Mr. Decoulos to make clear to him what the MCP required. Each of the Department's denials of his IRA Plans was an attempt to obtain and document the results required by the MCP.

The only time MassDEP approved an IRA Plan for Mr. Decoulos in a process that might be considered outside of normal MCP requirements was the December 2004 proposal and construction of the interceptor trench, but that was because Mr. Decoulos circumvented the IRA requirements by not submitting a complete IRA Plan Modification and not providing MassDEP the required 21 days to review and comment on the plan. The e-mail he sent on December 15, 2004, did not constitute a complete IRA Plan as defined by the MCP, 310 CMR 40.0424. The plan did not include the required specifications, was not accompanied by the required transmittal forms with the LSP signature and stamp, and did not include the required certification of the person

undertaking the IRA. The e-mail further did not meet the requirements for determining date of receipt of a document submitted to MassDEP as outlined in 310 CMR 40.0008(4). As discussed above, Mr. Decoulos e-mailed the Department a mere concept of a design for the LNAPL recovery trench. MassDEP first denied the plan on December 15, but Mr. Decoulos responded by telling me that the construction equipment was already staged at the site and his client would lose large sums of money if MassDEP did not approve construction for the following day. I began to consider approving it only because Mr. Decoulos appeared likely to construct the trench without approval, and I wanted MassDEP to be able to require some conditions for the construction, at least.

Mr. Decoulos was well aware of the requirement to submit a complete written IRA Plan Modification, in accordance with 310 CMR 40.0424, to provide active LNAPL and groundwater recovery and treatment to control and mitigate condition(s) of Substantial Release Migration at the Site by December 24, 2004 as required in the IRA Modification Plan Denial letter, dated November 26, 2004. (Exhibit B-39). This requirement was again reviewed at MassDEP's December 2, 2004 meeting with Mr. Decoulos to review the deficiencies in his previous IRA Plan Modification. Mr. Decoulos reiterated his understanding of his requirement to respond to the IRA Modification Denial letter on page 2 of his December 6, 2004 e-mail synopsis of required actions outlined at the December 2nd meeting, Exhibit B-40.

Q. Richard Doherty, on page 9-10 of his testimony, sets forth his rationale why MassDEP should not have required Mr. Decoulos to "fully delineate"

the separate-phase petroleum plume prior to designing and implementing an oil recovery system at the Eagle Gas site. Do you concur with this testimony?

A. No. Mr. Doherty's testimony ignores the fact that on page 26 of my Direct Testimony, I stated that "it was not necessary to have the LNAPL plume or the groundwater contaminant plume completely delineated," but that Mr. Decoulos had not even attempted to show the areas of greatest LNAPL thickness or highest concentrations of volatile organic compounds, to support his proposed location of the LNAPL recovery trench. An LSP needs to delineate both the vertical and the horizontal extent of the LNAPL plume so that the recovery system can be designed to capture both the thickness and the width of the plume. The LSP also must have a general estimate of the total quantity of LNAPL and groundwater contamination at the Site so that the system may be properly designed to effectively recover and treat the contaminant mass. I never testified that the LSP has to "fully delineate" the LNAPL or has to define the "fringe" to which Mr. Doherty refers. My testimony is that the LSP needs to collect basic information about the extent of contamination to ensure that the recovery mechanisms he proposes will capture the contaminant plume and that the LNAPL will not migrate around or under the recovery system. In March 2003, when Mr. Decoulos proposed one recovery well downgradient from BP-5RR, and in June 2004 when he proposed the recovery trench, Mr. Decoulos had no idea what the LNAPL extent was at the Eagle Gas site, as shown by the fact that in August 2004, monitoring well DCW-7 was installed near the building (upgradient of the reported source area) and pure petroleum saturated soil was encountered, and in October 2004, gauging of that monitoring well indicated that seven feet of LNAPL was present. See November 5, 2004 IRA Status Report pages 4-5 Exhibit

B-37. The large volume of LNAPL in the monitoring well immediately adjacent to the building was inconsistent with Mr. Decoulos's descriptions of the release as "small amounts of diesel product to the ground every time a diesel fuel delivery was made to fill the 5,000 gallon UST." IRA Status Report July 3, 2003, Exhibit B-21. The remote fill line was located close to the frontage along Main Street, so until he drilled well DCW-7 in August 2004 after MassDEP's repeated requests, Mr. Decoulos had no idea that the LNAPL plume extended back to the building, and the measurement of seven feet of LNAPL in that well indicated that his proposed passive skimmer with a one-half gallon capacity would not capture the volume of LNAPL present at the site. To recover a plume indicated by seven feet of LNAPL in a monitoring well, not located in the immediate vicinity of the reported source area, requires hydraulic control of the site. Hydraulic control is achieved with active, not passive, recovery.

Q. On page 9 of his testimony, Mr. Doherty discusses Mr. Decoulos's March 17, 2003 IRA Plan and states, "Mr. Decoulos, in his IRA Plan dated March 17, 2003, (Exhibit B-16), proposed oil recovery from well BP-5RR, and, if oil continued to flow into BP-5RR after his field testing, a recovery well would be installed downgradient of BP-5RR and utilized for active oil recovery. I believe this approach would have recovered a greater volume of separate-phase petroleum than the active recovery trench located in the middle of Main Street, and would have done so at a substantially lower cost." Do you concur with this testimony?

A. I concur in part with this testimony. First, I note that Mr. Decoulos's March 17, 2003 IRA Plan was presumptively approved by MassDEP. That is, Mr.

Decoulos submitted it for review and approval, and the 21-day review period passed without MassDEP rejecting the plan, and thus the plan was presumptively approved. I also note that Mr. Decoulos's July 3, 2003 IRA Status Report states that LNAPL continued to flow into BP-5RR, and therefore, according to the March 13, 2003 IRA Plan, Mr. Decoulos should have installed a downgradient recovery well and utilized it for active recovery. Had Mr. Decoulos proceeded with this plan in a timely fashion, and had he submitted an actual design for an active recovery system, such a system might well have been approved and may have operated more effectively than the trench that Mr. Decoulos presented in concept by e-mail to MassDEP on December 15, 2004, for which he supervised the installation on December 16 and 17, 2004. I agree that this approach would have recovered more LNAPL and would have been more cost effective, if for no other reason than it would have been implemented within a timeframe normally required for an IRA. Any active recovery initiated in early 2003 may have reduced the contaminant mass and could have significantly reduced the continued migration of LNAPL and the groundwater contaminant plume, which would also make remediation more cost effective. Mr. Decoulos did not finalize his design for the active recovery until submission of the IRA Plan Modification, dated July 8, 2005, and this design was never implemented.

Q. Does this conclude your testimony?

A. Yes.