



May 13, 2015

Ms. Michelle Kaysen
USEPA Region 5, Mail Code LU-9J
77 West Jackson Boulevard
Chicago, IL 60604

RE: First Quarter 2015 Progress Report, Hartford Petroleum Release Site

Dear Ms. Kaysen,

Trihydro Corporation (Trihydro) is submitting this quarterly report summarizing the progress and status of activities performed at the Hartford Petroleum Release Site (Hartford Site) on behalf of Apex Oil Company, Inc. (Apex) for the time period from January 1 to March 31, 2015.

1. Apex submitted the following deliverables during the First Quarter 2015:
 - The *Fourth Quarter 2014 Progress Report* was submitted to the United States Environmental Protection Agency (USEPA) and the Illinois Environmental Protection Agency (Illinois EPA) on March 19, 2015 via email.
 - Documents supporting an Administrative Record update were provided to the USEPA on March 20, 2015 in accordance with their request to Apex received on March 9, 2015.
 - Comments and suggested revisions to the draft fact sheet provided by the USEPA regarding the Additional LNAPL Recovery Pilot Test, as well as transition of community engagement activities was submitted to the USEPA on March 22, 2015.
 - Analytical results for samples collected from the temporary groundwater treatment system as part of the Area A LNAPL Recovery Pilot Test were submitted to the Illinois EPA in accordance with Special Condition 12 of the Illinois EPA Water Pollution Control Permit (2014-EE-58312) on February 15 and March 10, 2015.
2. Apex submitted the following requests and notifications pertaining to activities at the Hartford Site:
 - The USEPA, Illinois EPA, and Hartford Working Group (HWG) were provided weekly updates regarding routine monitoring and pilot test activities throughout the first quarter of 2015. Routine monitoring results were also made available to the USEPA and Illinois EPA using Trihydro's Environmental Information Management System (Project Direct).
 - The USEPA, Illinois EPA, Village of Hartford, City of Wood River and HWG were provided draft analytical results from the initial batch of treated groundwater collected from the temporary



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treatment system installed as part of the Additional LNAPL Recovery Pilot Test on January 2 and January 3, 2015.

- The USEPA, Illinois EPA, Village of Hartford, City of Wood River, and HWG were provided an update regarding resumption of the Additional LNAPL Recovery Pilot Test on January 3, 2015.
- The USEPA, Illinois EPA, Village of Hartford, City of Wood River, and HWG were provided final analytical results from the initial batch of treated groundwater collected from the temporary treatment system installed as part of the Additional LNAPL Recovery Pilot Test on January 7, 2015. In addition, notification was provided regarding initiation of soil vapor extraction from the five multiphase extraction wells located in Area A of the Hartford Site.
- The USEPA, Illinois EPA, Village of Hartford, City of Wood River, and HWG were provided notification of the initiation of step testing of the production well (HPW-01) in accordance with the *Final LNAPL Recovery Pilot Test Work Plan Addendum* on January 9, 2015.
- The USEPA and Illinois EPA were provided a summary of the upwind and downwind analytical results collected between January 9 and 11, 2015 during the Additional LNAPL Recovery Pilot Test on January 16, 2015. In addition, Apex provided a summary of leak detection monitoring and repairs performed during the first week of operations of the temporary treatment system in Area A.
- The USEPA and Illinois EPA were provided a revised process flow diagram and a revised equipment layout figure for the temporary treatment system in Area A of the Hartford Petroleum Release Site on January 20, 2015.
- The USEPA and Illinois EPA were provided a summary of the upwind and downwind analytical results collected on January 15, 2015 in response to leak detection monitoring and repairs performed during the first week of operations of the temporary treatment system in Area A on January 20, 2015.
- The USEPA, Illinois EPA, Village of Hartford, and HWG were provided a modification to the schedule for connection of the new soil vapor extraction wells installed on West Birch and West Arbor Streets on January 26, 2015.
- The USEPA, Illinois EPA, Village of Hartford, and HWG were provided routine updates regarding additional monitoring performed within select structures, soil vapor extraction wells, and the combined sewer system located along East Watkins Street between February 2 and 12, 2015. Additionally, Apex provided routine updates regarding mitigation efforts conducted within select structures, as well as operation of soil vapor extraction wells HSVE-013 and HSVE-014 located on East Watkins Street.



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- The Village of Hartford was provided a request for material modification for backfill material used in trenches installed on West Birch and West Arbor Streets on February 10, 2015. This request was approved by the Village of Hartford on February 11, 2015.
 - The USEPA, Illinois EPA, Village of Hartford, and HWG were provided an update of work completed and a modification to the schedule for connection of the new soil vapor extraction wells installed on West Birch and West Arbor Streets on February 17, 2015.
 - The USEPA and Illinois EPA were provided notification that the HWG Agency Portal was uploaded onto Trihydro's Environmental Information Management System (Project Direct) on February 17, 2015.
 - The USEPA, Illinois EPA, Village of Hartford, and HWG were provided an update to the schedule for final connection and startup of the new soil vapor extraction wells installed on West Birch and West Arbor Streets following weather delays on March 3, 2015.
 - The USEPA, Illinois EPA, and HWG were provided field screening results from the new soil vapor extraction wells installed on West Birch and West Arbor Streets, (HSVE-105S/D, HSVE-106S/D, and HSVE-107S/D) in addition to screening results from wells HSVE-013, HSVE-014, and 101 East Watkins Street on March 6, 2015.
 - The USEPA, Illinois EPA, Village of Hartford, City of Wood River, and HWG were provided notification regarding the conclusion of the Additional LNAPL Recovery Pilot Test on March 9 and March 10, 2015.
3. Apex participated in the following meetings and teleconferences during the First Quarter 2015:
- Teleconference with the USEPA to discuss the global schedule for activities planned for the Hartford Petroleum Release Site for 2015 and status of the Illinois EPA review of the Water Pollution Control Permit No. 2014-EE-58312 was conducted on January 16, 2015.
 - Teleconference with AECOM to discuss HWG comments regarding the subcontractor bid package and procedures for connecting the six soil vapor extraction wells on West Birch and West Arbor Streets was conducted on February 5, 2015.
 - Kick-off meeting to discuss the connection of the six soil vapor extraction wells on West Birch and West Arbor Streets was conducted in Hartford, Illinois on February 9, 2015.
 - Teleconference with the USEPA and Illinois EPA to discuss the status and scheduled conclusion of the Additional LNAPL Recovery Pilot Test, as well as demobilization of the temporary groundwater treatment system from Area A was conducted on February 27, 2015.



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- Meeting with the USEPA and Illinois EPA to inspect the Additional LNAPL Recovery Pilot Test, as well as the new soil vapor extraction wells installed on West Birch and West Arbor Streets was conducted on March 5, 2015.
 - Teleconference with HWG regarding the request for additional documents for the soil vapor extraction system was conducted on March 13, 2015.
 - Monthly teleconferences with the HWG were conducted on January 20, February 17, and March 17, 2015.
4. Summary of In-Home Effectiveness Monitoring Activities:
- Weekly in-home effectiveness monitoring was performed within twelve structures at the Hartford Site during the First Quarter 2015.
 - Quarterly in-home effectiveness monitoring was performed within 32 structures at the Hartford Site between January 6 and 29, 2015.
 - Additional monitoring in select structures, soil vapor extraction wells, and the combined sewer system along East Watkins Street was performed between February 2 and 12, 2015.
5. Summary of Additional LNAPL Recovery Pilot Test Implementation Activities:
- Baseline monitoring activities in Area A continued in the First Quarter 2015 including weekly fluid level gauging and vapor screening in selected monitoring points, groundwater monitoring wells, multiphase extraction wells, and SVE wells.
 - Construction and testing of the temporary groundwater treatment system continued between January 1 and 8, 2015, and included the treatment of approximately 10,000 gallons of groundwater and sampling of the effluent water following the final treatment vessel. The analytical results were submitted to the USEPA, Illinois EPA, Village of Hartford, City of Wood River, and HWG on January 3, 2015.
 - Step testing of the production well installed in Area A was performed between January 9 and 10, 2015.
 - Focused pumping in Area A at a rate of 300 gallons per minute, as well as associated pilot test monitoring activities as described in the *Final LNAPL Recovery Pilot Test Work Plan Addendum* and the *Final Additional LNAPL Partial Pilot Test Summary Report* began on January 10, 2015. The pumping rate was increased to 330 gallons per minute on February 11, 2015 following approval of the Supplemental Water Pollution Control Permit (No. 2014-EE-58312-1) by the Illinois EPA.



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- Vacuum enhanced LNAPL recovery was tested within the LNAPL recovery well (HLRW-01) between January 14 and 16, 2015.
 - Monthly groundwater samples were collected from select Area A monitoring locations and analyzed to evaluate the influence of focused pumping on dissolved phase hydrocarbon concentrations between January 26 and 27, February 24 and 26, and March 26 and 27, 2015.
 - Focused pumping was concluded on March 10, 2015 following completion of the 60-day test period defined in the *Final LNAPL Recovery Pilot Test Work Plan Addendum*.
 - Cleaning and demobilization of the temporary groundwater treatment system was conducted between March 10 and 12, 2015.
6. Summary of Dissolved Phase Investigation Implementation Activities:
- Quarterly manual gauging of fluid levels within 382 groundwater monitoring wells and monitoring points was completed between March 2 and 9, 2015.
 - Monthly manual gauging of fluid levels in select groundwater monitoring wells and monitoring points was performed on January 23 and February 27, 2015.
 - Groundwater samples were collected and analyzed from four monitoring wells between January 28 and 30, 2015.
 - Groundwater samples were collected and analyzed from the five sentinel monitoring wells on January 29, 2015.
 - Geographic survey of three groundwater piezometers located in Area A was conducted on March 23, 2015.
7. Zone 1 Soil Vapor Extraction System Optimization and SVE Transition Activities:
- Operation, Maintenance, and Monitoring (OMM) activities for the Hartford SVE system performed by AECOM were observed by Trihydro personnel between January 26 and 28, 2015 in accordance with the September 18, 2014 correspondence from the USEPA describing reassignment of activities at the Hartford Site.
 - Final connections of the six additional SVE wells installed along West Birch and West Arbor Streets to the vapor collection system (VCS) occurred between February 9 and March 6, 2015.
 - Fluid level gauging and vapor screening at the six additional SVE wells installed along West Birch and West Arbor Streets was completed in accordance with the HSVE Monitoring and Maintenance Manual (URS 2014) beginning March 3, 2015.



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- An inspection of the thermal treatment system components was completed by VBA Compliance and Trihydro between March 3 and 5, 2015.
 - Files and information pertaining to the OMM of the Hartford SVE system including the vapor collection system and thermal treatment system components were reviewed by Trihydro and evaluated for completeness. A summary of missing documents and information was submitted to HWG on March 6, 2015.
 - Geographic survey of the six additional SVE wells, control vaults, and transmission lines installed along West Birch and West Arbor Streets, as well as the multiphase extraction wells located in Area A was conducted on March 23, 2015.
8. Activities Planned During the Second Quarter 2015 at the Hartford Site:
- Continue weekly in-home effectiveness monitoring within twelve structures in accordance with the *Final Interim In-Home Effectiveness Monitoring Plan*.
 - Conduct river stage triggered monitoring in accordance with the triggers established within the *Final Interim In-Home Effectiveness Monitoring Plan*.
 - Conduct quarterly in-home effectiveness monitoring in May 2015 in accordance with the *Final In-Home Interim Effectiveness Monitoring Plan*.
 - Continue implementation of the dissolved phase investigation activities in accordance with the *Final Dissolved Phase Investigation Work Plan* including: (1) monthly and quarterly fluid level gauging, (2) groundwater sampling, and (3) data reduction, analysis, and reporting.
 - Conduct quarterly groundwater monitoring in the five sentinel monitoring wells south of the Hartford Site.
 - Submit a summary report of the results of the Area A LNAPL recovery pilot test to the USEPA and Illinois EPA.
 - Conduct routine OMM activities for the vapor collection components of the SVE system in accordance with the approved *HSVE Monitoring and Maintenance Manual* (URS 2013) pending the approval of the revised *Vapor Collection System Operation, Maintenance, Monitoring Plan for the Soil Vapor Extraction System* to be submitted by Trihydro.
 - Conduct regional effectiveness monitoring for the SVE system in accordance with the approved *Effectiveness Monitoring Plan* (URS 2014).
 - Submit draft Community Engagement Framework to the USEPA and Illinois EPA and conduct community engagement activities in accordance with the framework.



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- Submit the analytical results from the first quarter sentinel well groundwater monitoring activities to the USEPA and Illinois EPA.
- Participate in routine teleconferences and meetings with the USEPA and Illinois EPA.

We appreciate your continued engagement with this project. If you have any questions or require any additional information, please contact me at (513) 429-7452.

Sincerely,

Paul Michalski, P.G.
Team Leader
Trihydro Corporation

cc: James F. Sanders, Apex Oil Company, Inc.
Kevin Turner, United States Environmental Protection Agency
Tom Miller, Illinois Environmental Protection Agency
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