



MARYLAND DEPARTMENT OF THE ENVIRONMENT

Oil Control Program, Suite 620, 1800 Washington Blvd., Baltimore MD 21230-1719

410-537-3442 410-537-3092 (fax)

1-800-633-6101, ext. 3442

Martin O'Malley
Governor

Robert M. Summers, Ph.D.
Secretary

Anthony G. Brown
Lieutenant Governor

May 29, 2013

Mr. Thomas Ruszin, III
Environmental Coordinator
Two Farms, Inc.
t/a Royal Farms
3611 Roland Avenue
Baltimore MD 21211

RE: CORRECTIVE ACTION PLAN ADDENDUM RESPONSE
COV-OCP-2012-003
Case No. 2010-0339-BA
Royal Farm Store No. 64
7950 Pulaski Highway, Rosedale
Baltimore County, Maryland
Facility I.D. No. 3975

Dear Mr. Ruszin:

On January 24, 2013, Royal Farms/Two Farms, Inc. entered into a *Settlement Agreement and Consent Order* with the Maryland Department of the Environment. This *Agreement* required the submittal of a *Corrective Action Plan Addendum* that provides specific and measurable remedial goals for the site, proposed deadlines in the form of completion dates, and/or schedules for investigative and remedial work and reporting. The Oil Control Program (OCP) is in receipt of the required *Corrective Action Plan Addendum – March 28, 2013* for Royal Farms No. 64.

The OCP recently completed a review of the case file for the above-referenced property, including the *Corrective Action Plan Addendum (CAPA) - March 28, 2013*. The Department approved the *Corrective Action Plan - Draft - October 7, 2010* for this case in January 2011. The *Corrective Action Plan (CAP)* proposed the installation of a dual phase enhanced fluid recovery system. The dual phase enhanced fluid recovery remediation system was activated in December 2011 and is currently operational. Through March 2013, approximately 1,100,569 gallons of fluids and approximately 46,958,300 cubic feet of vapor have been recovered by the system, removing approximately 1,296 pounds of hydrocarbons. An estimated 4,601 gallons of hydrocarbons have been recovered since release response activities were initiated.

The *Corrective Action Plan Addendum – March 28, 2013* proposes specific and measurable remedial goals for the site and proposes deadlines in the form of completion dates and submission dates and schedules for investigative and remedial work. Based on our review, the Department provides the following comments and requirements:

1. Section 2.1.2.1 – Off-Site Cleanup Goals

- a. The Johnson and Ettinger Model was used to calculate site-specific groundwater clean-up standards. The clean-up standards proposed in the *CAPA* were the calculated maximum on-site dissolved phase petroleum constituent concentrations that would not pose a vapor intrusion risk at off-site residential properties. The use of the Johnson and Ettinger Model for the calculation of groundwater clean-up standards is not applicable or appropriate for this application. Indoor air sampling has been conducted at 1207 Chesaco Avenue on a quarterly basis since August 2010 and soil vapor gas samples were collected in March 2012. Indoor air samples were collected from 1205 Chesaco Avenue from August 2010 until approval was granted from the Department to cease sampling in October 2012. Groundwater and sump water samples are collected from both properties on a quarterly basis. Based on the data collected to date, vapor intrusion of petroleum hydrocarbons is not a risk to off-site properties (Note that the Department considers off-site receptors to include all residential dwellings, regardless of ownership).
- b. The Department will consider documentation of stable or declining trends in off-site dissolved phase concentrations for demonstration of off-site cleanup goal attainment, provided that evidence continues to document the absence of vapor intrusion impact.
- c. Based on an evaluation of current off-site dissolved phase concentrations, the Department has determined that the dissolved phase plume has not been delineated. A work plan for delineation of subsurface conditions down-gradient of monitoring well MW-24 must be submitted. Delineation of any other data gaps identified by Royal Farms may also be proposed, if warranted.

2. Section 2.1.2.2 – On-Site Cleanup Goals

- a. The on-site remedial goals must include the achievement of both asymptotic dissolved phase concentrations in groundwater and recovery wells and asymptotic hydrocarbon recovery from the remediation system (both dissolved and vapor phase hydrocarbons). Provide details regarding what samples will be collected and how the remediation system will be evaluated to determine when asymptotic recovery has been achieved.
- b. The Department requires that system vapor effluent be evaluated on at least a monthly basis using laboratory analysis by EPA Method TO-15.

3. Section 2.1.4 – Rebound Evaluation

- a. Once on-site and off-site groundwater clean-up goals are achieved, a written request must be submitted for approval of a trial system shutdown. The trial system shutdown must evaluate rebound for at least one year and the remediation system must remain on-site.
- b. The Department reserves the right to modify CAP requirements, as needed, based on review of site data during and following remedial action implementation.

A revised *CAPA* must be submitted **no later than July 5, 2013** to address the above requirements related to off-site dissolved phase delineation and remediation system evaluation criteria. Following review of the revised *CAPA*, the Department will issue a response regarding approval of the *CAPA* or a request for additional information, if necessary. In the interim, all site remediation and monitoring activities must continue, as previously required and approved.

Future Quarterly Monitoring Reports

The Department reviews all data presented in *Quarterly Monitoring Reports* to evaluate site conditions. In order to effectively and efficiently evaluate the site and to ensure conditions are on track to meet closure goals, the reports must be comprehensive but concise, consistent, and data must be clearly presented. The Department requires the following modifications be made to the *Quarterly Monitoring Reports*:

1. Include a column for dissolved phase naphthalene concentrations in Table 2. All applicable dissolved phase constituents included in the quantifiable clean-up standards on-site or off-site must be included in Table 2.
2. For each on-site and off-site monitoring well, include dissolved phase concentration graphs over time. The graphs must include benzene, methyl tertiary-butyl ether (MTBE), naphthalene, and total benzene, toluene, ethylbenzene, and xylenes (BTEX) concentrations. Concentrations should be plotted using a log scale that is consistent for all wells.
3. Note which wells are used for groundwater and vapor phase recovery each quarter and the duration of use. This data must be presented in a summary table. The table should allow the reader to clearly understand the past and current well operation scheduled.
4. Provide an area site map noting all adjacent properties and their use (i.e., commercial, residential etc.). Include 1209 and 1209-½ Chesaco Avenue.
5. Include the header on each page of data tables. For example, the header is only present on Page 1 of Table 1.
6. Include a separate data table noting the remediation system effluent vapor sampling data. Note how effluent vapor samples are collected (PID readings or laboratory analytical results).
7. Include graphical representation of hydrocarbon recovery by phase. The graphs should indicate recovery by period and cumulative recovery.

Notify the Oil Control Program at least five (5) working days prior to conducting any field activities associated with this project. When submitting documentation to the Oil Control Program, provide four (4) hard copies and a digital copy on a labeled compact disc (CD). If you have any questions, please contact the case manager, Ms. Jenny Herman, at 410-537-3413 (email: jherman@mde.state.md.us) or me at 410-537-3482 (ejackson@mde.state.md.us).

Sincerely,

A handwritten signature in black ink, appearing to read "Ellen Jackson" with a stylized flourish at the end.

Ellen Jackson, Central Region Section Head
Remediation and State-Lead Division
Oil Control Program

JH/nln

cc: Mr. Jeffery Stein (Advantage Environmental Consultants, LLC)
Mr. Robert Rinehart (Royal Farms)
Mr. Kevin Koepenick (Baltimore County DEPS)
Mr. Andrew B. Miller
Mr. Christopher H. Ralston
Priscilla N. Carroll, Esquire
Mr. Horacio Tablada