



Minnesota Pollution Control Agency

520 Lafayette Road North | St. Paul, MN 55155-4194 | 651-296-6300 | 800-675-3843 | 651-282-5332 TTY | www.pca.state.mn.us

April 6, 2009

Mr. Jack Curtis
Curtis Oil Company
4997 Miller Trunk Highway
Duluth, MN 55811

RE: Corrective Action Design Approval
Site: Junction Food-n-Fuel, 5493 Miller Trunk Hwy, Hermantown, MN 55811
Site ID#: LEAK00003534

Dear Mr. Curtis:

Minnesota Pollution Control Agency (MPCA) staff has reviewed the "Conceptual Corrective Action Design Worksheet", dated December 9, 2008, submitted by Twin Ports Testing (TPT), your environmental consultant for this site. MPCA staff hereby approve of TPT's recommendation for replacing the nearby water supply wells with the following comments/modifications:

- 1) Install replacement water supply wells at the following properties:
 - a) 5497 Miller Trunk Highway (currently listed as the Radco property).
 - b) 4621 Lindahl Road (currently listed as the MMT Heating and Cooling property).
- 2) Additional construction/installation measures will need to be employed to reduce the risk that the new wells will become contaminated during installation or during post-installation operation. Since the on-site (Junction Food-n-Fuel) replacement water supply well (MN Unique Well No. 559694) has remained petroleum-compound free for over 11 years, the MPCA recommends that each of the new replacement wells be constructed in a similar manner. This should include, but may not be limited to:
 - a) Utilizing the underlying bedrock aquifer.
 - b) Installing an outer (double) casing through the overlying, unconsolidated glacial deposits.
 - c) Installing an inner casing into the upper portion of the bedrock aquifer.
 - d) Full length grouting of the annular space around the inner casing.
- 3) If the new water supply wells need to undergo hydrofracturing to increase well yield, the MPCA strongly advises that additional consideration be given to the placement of the packer and to which vertical intervals will be subjected to the fracturing forces. If fractures are opened up from the open-hole portion of the well's borehole to the glacial drift/bedrock interface, contaminated water may migrate from the impacted overlying aquifer into the uncontaminated bedrock aquifer.
- 4) The MPCA agrees with TPT's proposed well sampling schedule. Sample the new wells once every other month for one year. These water samples should be analyzed for volatile organic compounds (VOCs), gasoline range organics (GRO), and diesel range organics (DRO). The DRO samples should undergo silica gel cleanup at the laboratory prior to analysis.

Mr. Jack Curtis

Page 2

- 5) Construction of the new water supply wells and sealing of the old water supply wells must be done in accordance with all rules and regulations established in Minnesota Rules Chapter 4725 (the Minnesota well code). Copies of the Minnesota Department of Health (MDH) well construction and well sealing records must be included in the next report that is submitted to the MPCA.
- 6) Based on the rapidly declining analytical trends and the low analytical results during the last sampling event, the MPCA will **not** be approving or requiring corrective actions with respect to the site building's indoor air at this time.
- 7) An implementation report detailing the results of the work listed above must be submitted to the MPCA no later than June 1, 2010.

If subsequently obtained information indicates that the approved corrective actions are inappropriate or inadequate, the MPCA may require additional work or modifications in the approved work.

Approval of this corrective action design is based on its environmental merits for addressing the petroleum contamination only. This letter does not apply to other types of contamination that may be present on the subject property. You are responsible for insuring that this remedial system complies with all applicable building, electrical and fire codes and health department rules, and that all necessary state and local approvals are obtained. You are also responsible for ascertaining the need for and for obtaining any patents, licenses, or other permits, approvals or intellectual property rights which may be necessary.

This approval qualifies you for reimbursement of eligible costs from the Petroleum Tank Release Compensation Fund (Petrofund) under Minn. Stat. § 115C.09, subd. 2a. (a)(2) (2008). Applications for reimbursement must be made directly to the Petrofund staff at the Minnesota Department of Commerce. Please contact Petrofund staff at 651-297-1119 or 1-800-638-0418 for application forms and specific information regarding the reimbursement process.

If you have questions regarding the investigation of ground water at this site, please contact MPCA staff hydrogeologist Kevin Mustonen at 218-302-6641. If you have any other questions, please call me at 651-757-2517.

Sincerely,



Sarah Larsen
Project Leader
Petroleum and Closed Landfill Section
Remediation Division

SL:ls

cc: Laura Novitzki, Twin Ports Testing
Minnesota Department of Commerce Petrofund Staff