

Durez Groundwater



State of Ohio Environmental Protection Agency

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July 7, 2009

Mr. William Sommer  
Project Manager  
Glenn Springs Holdings, Inc.  
5005 LBJ Freeway; Suite 1350  
Dallas, Texas 75244

**Subject: Notice of Violation and Comments on Glenn Springs' May 22, 2009, Letter  
OHD 990 747 859  
Hardin County**

Dear Mr. Sommer:

On May 28, 2009, the Ohio Environmental Protection Agency (Ohio EPA) received from Glenn Springs Holdings, Inc. (Glenn Springs)<sup>1</sup>, a response to Ohio EPA's April 23, 2009, letter regarding the 2008 ground water monitoring report. The Division of Hazardous Waste Management (DHWM) requested that the Division of Drinking and Ground Waters (DDAGW) review this document for compliance with Ohio Administrative Code (OAC) Rules 3745-54-75, 54-98 and the facility's Baseline Monitoring Post-Closure Plans (BMPCP). Thank you for addressing the concerns identified in comments 1.b, 1.c and 1.d from Ohio EPA's April 23, 2009, letter. Please respond to the following notice of violation and comments by September 1, 2009.

1. **OAC Rule 3745-54-97(C):** Glenn Springs is in violation of OAC Rule 3745-54-97(C) requiring that all monitoring wells be cased in a manner that maintains the integrity of the monitoring well borehole and that the annular space (i.e., the space between the borehole and well casing) above the sampling depth be sealed to prevent contamination of the samples and ground water.

OAC Rule 3745-54-97(C) is required to be met at the time of installation, not at some possible point in the future. Glenn Springs failed to provide an adequate discussion supporting proper well construction of P-18R. Furthermore, the ability of well P-18R to yield ground water samples that represent the quality of ground water passing the point of compliance [OAC Rule 3745-54-97(A)] continues to be in question.

To return to compliance, Glenn Springs must properly abandon well P-18R and install a replacement well in the same general location as P-18R. Please submit a schedule for completing this work.

<sup>1</sup> Ohio EPA understands that Durez Corporation acquired the facility at 13717 State Route 68 South, Kenton, Ohio, from OxyChem in November 2000. Ohio EPA further understands that Glenn Springs Holdings, Inc., is a subsidiary of Occidental Petroleum Corporation, which retained responsibility for the closure/post-closure program at the landfill-closed former surface impoundments.

## Comments

2. Compliance with OAC Rule 3745-54-75, requiring that the owner/operator (Glenn Springs) include the required information in the Supplementary Annual Report for 2008 Final Standards Ground Water Monitoring Information – Form and Instructions, cannot be determined at this time. Glenn Springs needs to submit the information identified below.

Comment 1.a in Ohio EPA's April 23, 2009, letter requested more information for Section 2.0 Wells.xls, of the Supplementary Annual Report for 2008 Final Standards Ground Water Monitoring Information – Form and Instructions. Specifically, the Wells.xls database file was missing the latitude and longitude for wells P-18R and P-30R, and the ground water levels at installation for wells P-20R, P-30R, P-31 and P-33.

Glenn Springs' response included the latitude and longitude for P-18R and P-30R and the ground water levels at installation for P-20R and P-30R. Glenn Springs stated that the data for the installation of wells P-31 and P-33 are being pulled from the archived files. Glenn Springs stated that a response regarding the availability of the archived information would be provided to Ohio EPA within 30 days.

It should be noted that the ground water level at installation for P-20R was not included in the May 20, 2009, Wells.xls database file included with Glenn Springs' response. Please insure that this information is provided in future Annual Report submittals.

3. Ohio EPA disagrees with Glenn Springs' response to Comment 3 of Ohio EPA's April 23, 2009, letter. Failure to comply with the approved Post-Closure Plan for FSI-1 and FSI-2 will result in a compliance issue.

Glenn Springs' argument for purging the wells and allowing them to recover overnight prior to collecting samples is given below (italicized), followed by Ohio EPA's reasoning for continuing to require Glenn Springs to follow its approved Ground Water Sampling and Analysis Plans (GWSAP).

*"The methods of purging the wells and allowing them to recover overnight prior to collecting samples has been employed at this site for at least 10 years and probably much longer. Further, these methods have been previously observed by Ohio EPA and were not commented on. Glenn Springs has modified the sampling protocol during the Spring 2009 sampling event (typically the high water season, and thus the wells tend to be more productive); however, changes to sampling protocol at this point in the program could result in subtle changes to inorganic parameter concentrations. Given that the prediction limits for many of the inorganic parameters are relatively tight, minor changes in concentration could result in a false positive in the sampling program. This would be a change that is not a result of impact to the aquifer from the former surface impoundments, but a result of changes to an effective sampling program."*

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Glenn Springs is responsible for following the approved Post-Closure Plans for FSI-1 and FSI-2. The statement that the current methods have been previously observed by Ohio EPA and were not commented on is irrelevant. The last time Ohio EPA conducted an inspection of the wells and sampling procedures at the Durez Corporation facility was March 23, 2000. During this inspection, ground water sampling was observed only at till monitoring well W-36.

Glenn Springs stated that they "modified" the sampling protocol during the spring 2009 sampling event. During the spring 2009 sampling event, Ohio EPA observed the sampling procedures at wells P-11, P-33 and P-15. Ohio EPA would argue that during the spring 2009 sampling event Glenn Springs actually followed their GWSAPs, contained in the approved Post-Closure Plan for FSI-1 and FSI-2, with respect to collecting samples as soon as possible after purging. The "modified" protocol Glenn Springs conducted during the spring 2009 sampling event is what is actually approved in the Ground Water Sampling and Analysis Plan for FSI-1 and FSI-2.

Glenn Springs appears to be concerned that collecting samples as soon as possible after purging could cause changes to inorganic (metals) parameter concentrations. Considering that Glenn Springs filters for metals, Ohio EPA would not expect significant false positives with regard to the inorganic (metal) parameter list. Ohio EPA is more concerned with Glenn Springs' historic sampling procedure of purging one day and sampling the next, regardless of well yield, and the effect this procedure may have on the detection of organic constituents. Allowing formation of water to equilibrate or volatilize in the well casing overnight may change the physical and chemical properties of the sample and decrease the actual sample concentration or perhaps cause a constituent to not be detected.

*"It is important to note that none of the inorganic parameters monitored for these former impoundments represent compounds that would enter the ground water system from the surface impoundments. Constituents of concern (COCs) that were actually present in the impoundments were organic compounds – primarily volatile organic compounds. The inorganic COCs are monitored to detect changes in the ground water system that could be indicative of a release of leachate to the ground water from the former surface impoundments. The inorganic parameters may represent a leading indicator for other forms of impact that could occur in the aquifer, but are not themselves COCs from the former impoundments. Therefore, the semi-annual monitoring of these parameters and the comparison of the concentrations to prediction limits is done for the sole purpose of being able to detect subtle changes in ground water quality. Changes to the purging and sampling procedures that can result in similar subtle changes to inorganic parameters concentrations is not advisable for a program that is based on the ability to detect real changes that could be a result of a release."*

Glenn Springs submitted a GWSAP as part of the Post-Closure Plans for FSI-1 and FSI-2 for the purpose to "detect real changes that could be a result of a release." This plan contained procedures, approved by Ohio EPA, to collect representative ground water samples. As Glenn Springs previously stated, constituents of concern (COCs) that were actually present in the impoundments were organic compounds – primarily volatile organic compounds. As Ohio EPA previously pointed out, allowing formation of water to equilibrate or volatilize in the wells overnight does not provide a representative sample as physical or chemical alteration could occur. Ohio EPA is not asking that any changes to the GWSAP be made. Ohio EPA is simply stating that to ensure representative ground water samples are being collected Glenn Springs needs to follow the methods approved in the GWSAPs for FSI-1 and FSI-2.

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*"If there is a reason that the methods that have been used and approved for many years are no longer considered acceptable, these reasons should be laid out, discussed and consensus alternative methods developed. Major changes to the ground water sampling methods should be avoided, where possible, to prevent a potentially large number of false-positive results."*

The current ground water method of purging one day and waiting until the next day to sample, regardless of yield, is not the method approved in the post-closure GWSAPs for FSI-1 and FSI-2. The method approved in the GWSAPs can be found in current technical guidance manuals and literature. Ohio EPA would not anticipate a large number of false-positives when Glenn Springs begins following the methods described in the GWSAPs for FSI-1 and FSI-2 as the inorganic (metal) samples will continue to be filtered.

For reference, the method to collect a representative sample is contained in the approved GWSAP for FSI-1 and FSI-2 (collect samples as soon as possible after purging, but not more than 24 hours after purging). The samples need to be collected immediately after purging, unless site-specific conditions preclude it (e.g., low-yielding wells). If immediate sampling is not possible, then the sample needs to be collected when a sufficient yield becomes available, but not more than 24 hours after purging.

If you have any questions or would like to schedule a meeting to discuss this letter, please contact me at (419)373-4113. Any written correspondence should be sent to my attention at Ohio EPA, Northwest District Office, Division of Hazardous Waste Management, 347 North Dunbridge Road, Bowling Green, Ohio 43402.

Sincerely,



Lynn Ackerson  
Environmental Specialist  
Division of Hazardous Waste Management

/cs

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**NOTE:** Ohio EPA's failure to list specific deficiencies or violations in this letter does not relieve your company from having to comply with all applicable regulations.