

BEFORE THE STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

In re: Geo-Cleanse International, Inc.  
Petition for Variance

OGC File No. 01-0953

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FINAL ORDER DENYING PETITION FOR  
VARIANCE FROM RULE 62-522.300(3), F.A.C.

On June 8, 2001, Geo-Cleanse International, Inc., filed a petition for variance from requirements in rule 62-522.300(3) of the Florida Administrative Code. The petition was for a variance from rule 62-522.300(3), which prohibits a zone of discharge for discharges through wells, in order to use a potassium permanganate reagent as an oxidizer for an in-situ remediation process. This process involves the use of wells or borings which is considered installation of one or more temporary Class V underground injection control wells at the site of contamination. A notice of receipt of the petition was published in the Florida Administrative Weekly on July 6, 2001.

1. Petitioner is located at 4 Mark Road, Suite C, Kenilworth, New Jersey 07033.

2. Geo-Cleanse International, Inc., wants to perform in-situ chemical oxidation using potassium permanganate to clean up sites that are contaminated with chlorinated hydrocarbons.

3. Under rule 62-520.420 of the Florida Administrative Code (F.A.C.), the standards for Class G-II ground waters include the primary and secondary drinking water standards of rules 62-550.310 and 62-550.320, F.A.C., and the minimum criteria of rule 62-520.410, F.A.C. However, on August 27, 2001, Rules 62-

522.300(2) and 62-528.605(3), F.A.C., were amended to allow injection of products for ground water cleanup that do not meet the primary or secondary drinking water standards. Specific limitations were included in the rules, and the source of the primary standards that would be exceeded from the use of this potassium permanganate are NOT part of the rules' amendments. The use of a potassium permanganate reagent as an oxidizer for this In-Situ Remedial Technology would still require a variance for antimony, arsenic, chromium, mercury, beryllium, cadmium, lead, and thallium, as described below. These elements are primary drinking water contaminants, and are present as impurities in the potassium permanganate. They are not prime constituents of the potassium permanganate reagent that is necessary for remediation of site contaminants, as is now required by rule 62-522.300(2)(c). Aluminum, chloride, manganese, total dissolved solids (TDS), pH, and color are not an issue in this denial of a variance, since rule 62-522.300(2)(c) allows a zone of discharge and ground water monitoring for such secondary drinking water contaminants to be addressed in the Remedial Action Plan without the need for a variance.

4. The Geo-Cleanse in-situ remediation process can make use of more than one chemical species of permanganate as an oxidizer to destroy contaminants. The species of permanganate for which the petition of June 8, 2001, seeks a variance is potassium permanganate, for injection into the soil and ground water through injection wells or borings. When the oxidizer comes in contact with the contaminants, a reaction occurs which breaks apart the complex hydrocarbon bonds that form the contaminants. The end products from this reaction are carbonate

species, chloride, potassium, and manganese dioxide. The concentrations of the heavy metal impurities antimony, arsenic, chromium, mercury, beryllium, cadmium, lead, and thallium that are present in the 4% by weight aqueous solution of potassium permanganate to be injected, are in exceedance of injection standards set forth in Chapter 62-522, Florida Administrative Code, which reference the primary drinking water standards under rule 62-550.310, F.A.C. Those standards are as follows: antimony (0.006 milligrams per Liter (mg/L)), arsenic (0.05 mg/L), chromium (0.1 mg/L), mercury (0.002 mg/L), beryllium (0.004 mg/L), cadmium (0.005 mg/L), lead (0.015 mg/L), and thallium (0.002 mg/L). The Petitioner has stated that antimony, arsenic, chromium, mercury, beryllium, cadmium, lead, and thallium, are only expected to exceed their respective ground water standard within an area extending out in a radius of a 50 feet from the immediate point of injection for a period of 12 months. However, the adsorption of these heavy metals to the aquifer matrix with probable leaching into the ground water at some future time could result in exceedances of those primary drinking water standards. These exceedances may continue long after the completion of clean up of the contaminated ground water, which would result in contamination at a site with substances that were not original contaminants of concern and not present before the commencement of the remediation process using potassium permanganate as the oxidizer. Thus, a site whose original contaminants of concern have been "cleaned up" could be recontaminated by impurities from the chemicals used during the remediation process. This clearly would not meet the purposes of the underlying statute, which is

protection of the ground water resource for use as a drinking water supply.

5. The injection of potassium permanganate through temporary wells or borings is considered a type of underground injection control well, Class V, Group 4, "injection wells associated with an aquifer remediation project," as described in rule 62-528.300(1)(e)4 of the Florida Administrative Code. Under rule 62-528.630(2)(c), "Class V wells associated with aquifer remediation projects shall be authorized under the provisions of a remedial action plan . . . provided the construction, operation, and monitoring of this Chapter are met."

6. Rule 62-522.300(3) from which this petition seeks a variance, prohibits the Department from granting a zone of discharge for a discharge through an injection well to Class G-II ground water.

7. The applicable rules state in pertinent part:

62-522.300(1) . . . [N]o installation shall directly or indirectly discharge into any ground water any contaminant that causes a violation in the ground water quality standards and criteria for the receiving ground water as established in Chapter 62-520, F.A.C., except within a zone of discharge established by permit or rule pursuant to this chapter.

62-522.300(3) Other discharges through wells or sinkholes that allow direct contact with Class G-I, F-I, or Class G-II ground water shall not be allowed a zone of discharge.

8. Geo-Cleanse International, Inc., has stated in its petition that to apply the zone of discharge prohibition to its use of this remediation process would create a substantial hardship or would violate the principles of fairness because the use of this process is to remediate contaminated ground water as

quickly and inexpensively as possible, without causing further harm to the environment or public health. The petition also states that other methods of remediation not using in-situ products or processes are more costly and take longer.

Remediation would improve the water quality, and to prohibit any exceedance of the specified drinking water standards in such a small area of already contaminated ground water and for short duration would cause a substantial hardship. Although this may be true, the probability of recontamination after active clean up has concluded does not allow the Department to grant a variance for the use of this product. There are other products, and other chemical species of permanganate with lower concentrations of heavy metal impurities, that may be used for in-situ ground water remediation. These alternatives present less of a threat to the environment, as they have either no such impurities, or concentrations of them that are lower, thereby minimizing the amount of adsorption and reducing the potential for future leaching of heavy metals into the ground water at levels above their respective primary drinking water standards.

9. The Department received no comments about the petition for variance.

10. For the foregoing reasons, Geo-Cleanse International, Inc., has not demonstrated that it is entitled to a variance from the prohibition of zones of discharge in rule 62-522.300(3) for the use of potassium permanganate as an in-situ chemical oxidizer for the destruction of contaminants in soil and ground water.

This order will become final unless a timely petition for an administrative proceeding is filed pursuant to the provisions of sections 120.569 and 120.57 of the Florida Statutes. Any person

whose substantial interests are affected by the Department's action may file such a petition. The petition must contain the information set forth below and must be filed (received) in the Department's Office of General Counsel, 3900 Commonwealth Boulevard, MS 35, Tallahassee, Florida 32399-3000. Petitions filed by Geo-Cleanse International, Inc., or any of the parties listed below must be filed within 21 days of receipt of this order. Petitions filed by any other person must be filed within 21 days of publication of the public notice or within 21 days of receipt of this order, whichever occurs first. Under section 120.60(3), however, any person who asked the Department for notice of agency action may file a petition within 21 days of receipt of such notice, regardless of the date of publication. A petitioner must mail a copy of the petition to Geo-Cleanse International, Inc., 4 Mark Road, Suite C, Kenilworth, New Jersey 07033 at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under sections 120.569 and 120.57 of the Florida Statutes, or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will only be at the discretion of the presiding officer upon the filing of a motion in compliance with rule 28-106.205 of the Florida Administrative Code.

A petition that disputed the material facts on which the Department's action is based must contain the following information:

(a) The name, address, and telephone number of each petitioner; the Department case identification number and the county in which the subject matter or activity is located;

(b) A statement of how and when each petitioner received notice of the Department action;

(c) A statement of how each petitioner's substantial interests are affected by the Department action;

(d) A statement of the material facts disputed by the petitioner, if any;

(e) A statement of facts that the petitioner contends warrant reversal or modification of the Department action;

(f) A statement of which rules or statutes the petitioner contends require reversal or modification of the Department action; and

(g) A statement of the relief sought by the petitioner, stating precisely the action that the petitioner wants the Department to take.

A petition that does not dispute the material facts on which the Department's action is based shall state that no such facts are in dispute and otherwise contain the same information as set forth above, as required by rule 28-106.301.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department final action may be different from the position taken by it in this order. Persons whose substantial interests will be affected by any such final decision of the Department on the petitions have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.


Mediation under section 120.573 of the Florida Statutes is not available for this proceeding.



This action is final and effective on the date filed with the Clerk of the Department unless a petition is filed in accordance with the above.

A party to this order has the right to seek judicial review of it under section 120.68 of the Florida Statutes, by filing a notice of appeal under rule 9.110 of the Florida Rules of Appellate Procedure with the clerk of the Department in the Office of General Counsel, Mail Station 35, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399-3000, and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate district court of appeal. The notice must be filed within thirty days after this order is filed with the clerk of the Department.

DONE AND ORDERED this 15 day of October 2001 in Tallahassee, Florida.

  
Mimi A. Drew  
Director  
Division of Water Resource  
Management  
Department of Environmental  
Protection

2600 Blair Stone Road  
Mail Station 3500  
Tallahassee, Florida 32399-2400  
Telephone (850) 487-1855

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to s. 120.52, Florida Statutes, with the designated Agency Clerk,

receipt of which is hereby acknowledged. All copies were mailed before the close of business on the date below to the persons listed.

<hr/> Clerk	<hr/> Date
Copies furnished to:	
George Heuler, MS 3530	
Richard Deuerling, MS 3530	
Cathy McCarty, MS 3530	
Rick Ruscito, MS 4580	
Jeff Lockwood, MS 4535	
Brent Hartsfield, MS 4520	
Cynthia Christen, MS 35	
Kathy Carter, MS 35	

## NOTICE OF RIGHTS OF SUBSTANTIALLY AFFECTED PERSONS

This determination is final and effective on the date filed with the Clerk of the Department unless a timely and sufficient petition for an administrative hearing is filed under sections 120.569 and 120.57 of the Florida Statutes as provided below. If a sufficient petition for an administrative hearing is timely filed, this determination automatically becomes only proposed agency action subject to the result of the administrative review process. Therefore, on the filing of a timely and sufficient petition, this action will not be final and effective until further order of the Department. The procedures for petitioning for a hearing are set forth in Rules 28-106.201-.202 and 62-110.106, Florida Administrative Code, and are summarized below.

Be advised that, under Florida law, your neighbors and other parties who may be substantially affected by this determination have a right to request an administrative hearing. Because the administrative hearing process is designed to re-determine final agency action, the filing of a petition for an administrative hearing may result in a final determination different from this determination. Generally speaking, the 21-day period for filing a petition begins to run on the date of publication of the notice (if published) or the date a person receives actual notice, whichever occurs first (see below).

The Department will not publish notice of this determination. Publication of notice by you is optional and is not required for you to proceed. However, in the event that an administrative hearing is held and the Department's determination is reversed, proceeding with the proposed activity before the time period for requesting an administrative hearing has expired

would mean that the activity was conducted without the required permit or authorization. In cases where notice is not published, there may be instances in which a substantial amount of time could pass before an affected person receives notice of the agency action.

If you wish to limit the time within which all substantially affected persons may request an administrative hearing, you may elect to publish, at your own expense, the notice specified below in the legal advertisement section of a newspaper of general circulation in the county where the activity is to take place. A single publication will suffice.

If you wish to limit the time within which any specific person(s) may request an administrative hearing, you may provide direct notice to such person(s), by certified mail and enclosing a copy of this determination.

For the purposes of publication, a newspaper of general circulation means a newspaper meeting the requirements of sections 50.011 and 50.031 of the Florida Statutes. In the event you do publish this notice, within seven days of publication, you must provide to the following address proof of publication issued by the newspaper as provided in section 50.051 of the Florida Statutes. If you provide direct written notice to any person as noted above, you must provide to the following address a copy of the direct written notice: Florida Department of Environmental Protection, UIC Program, MS 2600, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400; Attn: Cathy McCarty.

NOTICE  
STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

The Department of Environmental Protection gives notice that variance from the zone of discharge prohibition for injection through wells has been denied to Geo-Cleanse International, Inc., for the use of potassium permanganate as a reagent product for chemical oxidation solution for aquifer remediation.

A person whose substantial interests are affected by the Department's action may petition for an administrative proceeding (hearing) under sections 120.569 and 120.57 of the Florida Statutes. The petition must contain the information set forth below and must be filed (received by the clerk) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000.

Mediation is not available.

If a timely and sufficient petition for an administrative hearing is filed, other persons whose substantial interests will be affected by the outcome of the administrative process have the right to petition to intervene in the proceeding. Intervention will be permitted only at the discretion of the presiding officer upon the filing of a motion in compliance with rule 28-106.205 of the Florida Administrative Code.

In accordance with rules 28-106.111(2) and 62-110.106(3)(a)(4), petitions for an administrative hearing must be filed within 21 days of publication of the notice or receipt of written notice, whichever occurs first. Under rule 62-110.106(4) of the Florida Administrative Code, a person whose substantial interests are affected by the Department's action may also request an extension of time to file a petition for an administrative hearing. The Department may, for good cause shown, grant the request for an extension of time. Requests for extension of time must be filed with the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000 before the applicable deadline. A timely request for extension of time will toll the running of the time period for filing a petition until the request is acted upon. Upon motion by the requesting party showing that the failure to file a request for an extension of time before the deadline was the result of excusable neglect, the Department may also grant the requested extension of time.

The petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. The failure of any person to file a petition for an administrative hearing within the appropriate time period shall constitute a waiver of that right.

A petition that disputes the material facts on which the Department's action is based must contain the following information:

(a) The name and address of each agency affected and each agency's file or identification number, if known;

(b) The name, address, and telephone number of the petitioner; the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an

explanation of how the petitioner's substantial interests are or will be affected by the agency determination;

(c) A statement of when and how the petitioner received notice of the agency decision;

(d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate;

(e) A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the agency's proposed action;

(f) A statement of the specific rules or statutes that the petitioner contends require reversal or modification of the agency's proposed action; and

(g) A statement of the relief sought by the petitioner, stating precisely the action that the petitioner wishes the agency to take with respect to the agency's proposed action.

A petition that does not dispute the material facts on which the Department's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by rule 28-106.301.

Under sections 120.569(2)(c) and (d) of the Florida Statutes, a petition for administrative hearing shall be dismissed by the agency if the petition does not substantially comply with the above requirements or is untimely filed. Complete copies of all documents relating to this determination are available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, at Florida Department of Environmental Protection, UIC Program, Room 212F, 2600 Blair Stone Road, Tallahassee, Florida. Please call Cathy McCarty to set up appointment, 850/921-9412.