

BEFORE THE STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

In re: ARCADIS G&M, Inc.
Petition for Variance

OGC File No. 02-1902

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

On November 13, 2002, ARCADIS G&M, Inc., filed a petition for variance from requirements in Rule 62-522.300(3) of the Florida Administrative Code (F.A.C.). The petition was for a variance under section 120.542 of the Florida Statutes, from Rule 62-522.300(3), which prohibits a zone of discharge for discharges through wells, in order to use 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, and on the Department's Internet site on December 27, 2002.

1. Petitioner is located at 712 U.S. Highway One, Suite 200, North Palm Beach, Florida, 33408.
2. ARCADIS G&M, Inc., wants to perform in-situ chemical oxidation, using a five percent sodium permanganate concentration, to clean up a site contaminated with chlorinated

solvents (44 ug/L tetrachloroethene) in the Miami, Florida area. The contaminated site was a former dry cleaner site identified as Grove Gate, Miami, Florida.

3. Under Rule 62-520.420, 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, and the minimum criteria of Rule 62-520.410 (as reflected in Chapter 62-777 as ground water target cleanup levels). 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. The use of this In-Situ Remedial Technology now only requires a variance for antimony, arsenic, chromium, mercury, beryllium, cadmium, lead, nickel, thallium, molybdenum, and selenium as described below. Sodium (prime reagent of sodium permanganate), aluminum, chloride, manganese, total dissolved solids (TDS), pH, sulfate, silver, iron, and color will be addressed in the Remedial Action Plan, pursuant to Rule 62-522.300(2)(c), without the need for a variance for those parameters.

4. This process uses sodium permanganate as an oxidizing chemical to destroy contaminants. The sodium permanganate is to be injected through wells or borings into the soil and ground water. 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, sodium, chloride, and manganese dioxide. Trace metals such as antimony, arsenic, chromium, mercury, beryllium, cadmium, lead, nickel, thallium, and molybdenum may also be present in certain manufacturing grades and production batches of sodium permanganate. As a result of the injection of the sodium permanganate, the primary drinking water standards under Rule 62-550.310, F.A.C., for 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), nickel (0.1 mg/L), and thallium (0.002 mg/L) may be temporarily exceeded. The injection of the sodium permanganate may also result in the temporary exceedence of the ground water cleanup target level for molybdenum (0.035 mg/L). Antimony, arsenic, chromium, mercury, beryllium, cadmium, lead, nickel, thallium, and molybdenum are only expected to exceed their ground water standard/ground water cleanup target level within an area extending out in a radius of a 25 feet from the immediate point of injection for a period of 12 months. The presence of antimony, arsenic, chromium, mercury, beryllium, cadmium, lead, nickel, thallium, and molybdenum above the drinking water standards maximum contaminant levels (MCLs) or the ground water cleanup target levels has no anticipated adverse impacts to human health because such exceedances will occur only in ground water at a site already contaminated by chlorinated

hydrocarbons and the ground water is not presently used for domestic purposes. No other constituents of the injected product or resulting remediation by-products will exceed any primary or secondary drinking water standard not covered by the rule amendments discussed in paragraph 3 above. The antimony, arsenic, chromium, mercury, beryllium, cadmium, lead, nickel, thallium, and molybdenum will return to meeting their respective standards/ground water cleanup target levels, or natural background, whichever is less, within one year from injection.

5. The injection of sodium 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, F.A.C. 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. The 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. Strict adherence to this rule would preclude the Department from granting approval for the use of the in-situ chemical oxidation with sodium permanganate for remediation of contaminated ground water and soils.

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. ARCADIS G&M, Inc., has stated in its petition that to apply the zone of discharge prohibition to its use of this remediation process for this site 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. This small and temporary exceedance is not the usual occurrence, nor are most dischargers involved in the remediation of contaminated ground water. By allowing the use of sodium permanganate, the clean up of contaminated ground water and soils will be accelerated and

returned to a usable condition. In addition, the use of sodium permanganate has been tentatively approved by the Department's Division of Waste Management as being a sound environmental solution to the contamination, so long as ARCADIS G&M, Inc., is able to obtain a variance.

9. A zone of discharge for the use of in-situ chemical oxidation with sodium permanganate is necessary because of the temporary (not to exceed one year) exceedance of the antimony, arsenic, chromium, mercury, beryllium, cadmium, lead, nickel, thallium, and molybdenum standards or ground water cleanup target levels in the ground water immediately surrounding the injection. Because this ground water is already contaminated and does not meet all applicable standards, allowing a zone of discharge as part of an approved remediation strategy for the Grove Gate, Miami, dry cleaner site which is contaminated with chlorinated hydrocarbons, meets the purpose of the underlying statute, which is to improve the quality of the waters of the state for beneficial uses. Such contaminated ground water is not presently used for drinking purposes, thus posing no threat to human health.

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

11. For the foregoing reasons, ARCADIS G&M, Inc., has demonstrated that it is entitled to a variance from the

prohibition of zones of discharge in Rule 62-522.300(3) for its remedial product, with the conditions below.

a. Use of this product must be through a Department-approved remedial action plan, or other Department-enforceable document, for an aquifer remediation project and such approval shall not be solely by a delegated local program.

b. The discharge to the ground water must be through a Class V, Group 4 underground injection control well which meets all of the applicable construction, operating, and monitoring requirements of chapter 62-528 of the Florida Administrative Code.

c. The extent of the zone of discharge for antimony, arsenic, chromium, mercury, beryllium, cadmium, lead, nickel, thallium, and molybdenum shall be a 25-foot radius from the point of injection and the duration of the zone of discharge shall be one year. This will allow ample time for the temporarily exceeded parameters to return to the drinking water standards or applicable levels set forth in chapter 62-550 and chapter 62-777 of the Florida Administrative Code or their naturally occurring background levels at the site, whichever is less stringent.

d. The injection of the product shall be at such a rate and volume (no greater than 5 percent sodium permanganate concentration) that no undesirable migration occurs of either the product, its by-products, or the contaminants already present in the aquifer.

e. The Department-approved remedial action plan shall address appropriate ground water monitoring requirements associated with the use of the in-situ chemical oxidation using sodium permanganate for remediation based on site-specific hydrogeology and conditions. These shall include the sampling of ground water at monitoring wells located outside the contamination plume, before use of the sodium permanganate, to determine the naturally occurring background levels of antimony, arsenic, chromium, mercury, beryllium, cadmium, lead, nickel, thallium, molybdenum, sodium, aluminum, chloride, manganese, TDS, pH, sulfate, silver, and color which are the parameters pertinent to this variance. Monitoring of these parameters in ground water should also be included downgradient from the injection points for at least one year after active remediation. (Sodium, aluminum, chloride, manganese, TDS, pH, sulfate, silver, and color are included herein solely because of the recent rules amendments discussed in paragraph 3 above, which require any parameter that will not meet its standard, and for which a variance is no longer needed, to be included in the remedial action plan for monitoring and zone of discharge purposes).

f. The grade of sodium permanganate shall be as pure or more pure than what was submitted in the variance petition as Appendix 1 and 2 (Carus Chemical Company Material Safety Data Sheet for Liquox™ Sodium Permanganate).

g. A final report of the results of using the sodium permanganate at this site must be submitted to the Florida Department of Environmental Protection, UIC Program, MS 3530, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400; Attn: Cathy McCarty. The report must include the number of injections used at this site, number of wells used, number of wells rendered unusable because of unintentional plugging during or after the clean-up process, number of replacement wells constructed to replace plugged wells, amount of product used (in pounds), detection of monitored parameters (concentrations, frequency, duration, time frame from nearest injection, etc.), sampling analysis from samples taken for the background, during testing, and post injection along with an interpretation of the sampling data, actual cost of the clean-up using the sodium permanganate, and a discussion of the success of the clean-up.

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 ARCADIS G&M, 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 ARCADIS G&M, Inc., 712 U.S. Highway One, Suite 200, North Palm Beach, Florida, 33408, 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, F.A.C.

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.

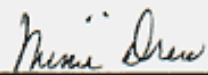
Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department final action may be different from the position taken by it in this order. Persons whose substantial interests will be affected by any such final decision of the 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 10 day of February 2003 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) 245-8335

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	Jeff Lockwood, MS 4535
Richard Deuerling, MS 3530	Rob Cowdery, MS 4520
Cathy McCarty, MS 3530	Cynthia Christen, MS 35
Rick Ruscito, MS 4580	Kathy Carter, MS 35
Dona Milinkovich, MS 3530	

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, F.A.C., 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 3530, 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 a variance from the zone of discharge prohibition for injection through wells has been granted to ARCADIS G&M, Inc., for the use of sodium permanganate for aquifer remediation of the Grove Gate, Miami dry cleaner site.

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 (F.A.C.).

In accordance with Rules 28-106.111(2) and 62-110.106(3)(a)(4), F.A.C., 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), F.A.C., 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, 850/245-8654.