

BEFORE THE STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

In re: Parsons Engineering Science, Inc.
Petition for Variance

OGC File No. 00-1015

FINAL ORDER GRANTING PETITION FOR
VARIANCE FROM RULE 62-522.300(2)(a), F.A.C.

On May 9, 2000, Parsons Engineering Science, Inc., on behalf of the United States Air Force, 45th Space Wing, filed a petition for variance from requirements in rule 62-522.300(2)(a) of the Florida Administrative Code, under section 120.542 of the Florida Statutes and rule 28-104.002 of the Florida Administrative Code. The petition was for a variance from rule 62-522.300(2)(a), which prohibits a zone of discharge for discharges through wells, in order to use its in-situ remedial product. 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 May 26, 2000.

1. Petitioner is located at 1375 South Semoran Boulevard, Suite 1348, Winter Park, Florida 32792.

2. Parsons Engineering Science, Inc., wants to use in-situ enhanced reductive dechlorination using vegetable oil for a pilot study of remediation of a site at Hangar K at Cape Canaveral Air

Force Station that is contaminated with chlorinated ethenes in ground water.

3. Under rule 62-520.420 of the Florida Administrative Code, 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 of the Florida Administrative Code, and the minimum criteria of rule 62-520.400.

4. Approximately 50 gallons of food-grade vegetable (soybean) oil will be injected at each of 36 injection points. At six of the injection points, the oil will be mixed with an oil-soluble fluorescent dye (Chromatint Fluorescent Yellow) that is insoluble in water. The dye will be mixed (0.6 ounces dye per 50 gallons of oil) to produce a final concentration of approximately 100 parts per million by volume (ppmv). Subsequent to the oil injection, approximately 10 to 15 gallons of water mixed with 0.13 to 0.19 ounces of water soluble fluorescent dye (Chromatint Uranine) will be injected at six of the points at a concentration of approximately 100 ppmv. The purpose is to monitor ground water flow in the area. Although the vegetable oils are non-toxic food-grade substances, the analysis of the oil or ground water in contact with the oil by the FL-PRO method will likely result in false positive values for total recoverable petroleum hydrocarbons (TRPH).

5. The primary goal of the pilot study is to evaluate the effectiveness of using food-grade vegetable oil to enhance

bioremediation of chlorinated solvents dissolved in ground water. However, the TRPH concentrations may temporarily exceed the Department's regulatory criteria of 5 mg/L as specified in Table 1 of chapter 62-777 of the Florida Administrative Code. The results are considered false positives as the vegetable oils are not petroleum-based hydrocarbons. There are no primary or secondary drinking water standards for TRPH, however, TRPH above the chapter 62-777 criteria of 5 mg/L is considered one of the minimum criteria under Rule 62-520.400. The injection of Chromatint Uranine, a water soluble dye, is expected to exceed the secondary drinking water standard for color, because of the very nature of the dye. The presence of TRPH and color above the standards has no anticipated adverse impacts to human health because such exceedances will occur only in ground water at a site already contaminated by chlorinated hydrocarbon solvents, and the ground water is not presently used for domestic purposes. The entire area of contamination has occurred in an area under industrial use at the Cape Canaveral Air Force Station. No other constituents of the injected products or resulting reductive dechlorination will exceed any other minimum criteria or primary or secondary drinking water standard. The TRPH and color will return to meeting the respective standards, within, at most, one year from injection.

6. The injection of these products 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."

7. The rule (62-522.300(2)(a)) 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 enhanced reductive dechlorination using vegetable oil for remediation of contaminated ground water.

8. 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(2) No zone of discharge shall be allowed under any of the following circumstances:

(a) Discharges through wells or sinkholes that allow direct contact with Class G-I and Class G-II ground water

9. Parsons Engineering Science, Inc., has stated in its petition that to apply the zone of discharge prohibition to its

use of this remediation process for the pilot study would create a substantial hardship because the use of the process is to remediate contaminated ground water as quickly and economically as possible so that the ground water will be returned to its designated use. 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 criteria 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 the in-situ enhanced reductive dechlorination using vegetable oil at the pilot study, the clean up of the contaminated ground water will be accelerated and returned to a usable condition. In addition, the use of the in-situ vegetable oil has been tentatively approved by the Department's Division of Waste Management as being a sound environmental solution to the contamination, so long as Parsons Engineering Science, Inc., is able to obtain a variance.

10. Zones of discharge for the use of the in-situ enhanced reductive dechlorination using vegetable oil are necessary because of the temporary exceedance of the TRPH and color criteria 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 for color and an area not meeting the minimum criteria as part of an approved remediation strategy for chlorinated hydrocarbon solvents contaminants 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.

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

12. For the foregoing reasons, Parsons Engineering Science, Inc., has demonstrated that it is entitled to a variance from the prohibition of zones of discharge in rule 62-522.300(2)(a) for its remedial product at the pilot study site at Hangar K of the Cape Canaveral Air Station, with the conditions below.

a. Use of the in-situ vegetable oil 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 TRPH and color shall be a 15-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 target cleanup level in chapter 62-777; or the secondary drinking water standard for color in chapter 62-550, or the naturally occurring background level for color at the site, whichever is less stringent.

d. The injection of the products shall be at such a rate and volume that no undesirable migration occurs of either the products, their 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 enhanced reductive dechlorination 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 in-situ vegetable oil and dyes, to determine the naturally occurring background levels of color and any background level of TRPH, which are the parameters pertinent to this variance. They should also include monitoring of these parameters in ground water downgradient from the injection points for at least one year after active remediation.

This order will become final unless a timely petition for an administrative hearing is filed under sections 120.569 and 120.57 of the Florida Statutes before the deadline for a filing a petition. The procedures for petitioning for a hearing are set forth below.

A person whose substantial interests are affected by the Department's action may file 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) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000.

Petitions filed by the Parsons Engineering Science, Inc., or any of the parties listed below must be filed within 21 days of receipt of this written notice. Petitions filed by any other persons other than those entitled to written notice under section 120.60(3) of the Florida Statutes must be filed within 21 days of publication of the public notice receipt of the written notice, 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. The petitioner shall mail a copy of the petition to Parsons Engineering Science, Inc., 1375 South Semoran Boulevard, Suite 1348, Winter Park, Florida 32792, 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 (in a proceeding initiated by another party) will be 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.

A petition that disputes 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 shall 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's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any such final decision of the Department 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.

Any 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 28 day of June 2000 in
Tallahassee, Florida.



Mimi A. Drew
Director
Division of Water Resource
Management

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FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to s. 120.52, Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

Clerk

Date

Copies furnished to:

George Heuler, UIC Section
Jeff Lockwood, Bur. Waste Cleanup
Brent Hartsfield, Bur. Waste Cleanup
Rick Ruscito, Petroleum Cleanup
Cynthia Christen, OGC

CERTIFICATE OF SERVICE

I certify that a copy of the foregoing Final Order has been furnished to Charles Mangan, P.E., by facsimile at 407/671-5454, and to him by U.S. Mail at Parsons Engineering Science, Inc., 1375 South Semoran Boulevard, Suite 1348 Winter Park, Florida 32792, on this _____ day of _____ 2000.

Cynthia K. Christen
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