



Department of Environmental Protection

Jeb Bush
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Colleen M. Castille
Secretary

February 21, 2005

Mr. Bruce Thurlby
Bioremediation Services, Inc.
185 Newfield Drive
Tyrone, Georgia 30290

Re: **Arkea™**

Dear Mr. Thurlby:

The Bureau of Petroleum Storage Systems hereby accepts the following three products by Archaea Solutions Incorporated that are combined for the purpose of in situ or ex situ bioremediation of petroleum and other suitable contaminants in groundwater and soil: Arkea™ Bio-System Suspension, Arkea™ Lipophile, and Arkea™ Nutrients. As Bioremediation Services Incorporated has indicated, Arkea™ Bio-System Suspension is a biodegradable, aqueous suspension of non-pathogenic Archaea and other microbes; Arkea™ Lipophile is a dry mix of microbes; and Arkea™ Nutrients is a dry mix of macro- and micronutrients. The chemical composition of the mix to be applied is shown in enclosure 1.

This acceptance applies only to the jurisdiction of this Bureau, which is the cleanup of petroleum pursuant to Chapter 62-770, Florida Administrative Code (F.A.C.). Other bureaus within the Florida Department of Environmental Protection, or other state agencies and local governments may choose to recognize this acceptance if their needs and requirements are similar, but this Bureau is not responsible for applications beyond its jurisdiction.

For vadose remediation, if the underlying groundwater will not be affected by leaching of this product, there are no special concerns beyond those that would normally need to be addressed in preparing a Remedial Action Plan and conducting a cleanup in accordance with the petroleum cleanup requirements of Chapter 62-770, F.A.C. But for in situ groundwater remediation, via direct injection of the Arkea™ products into an aquifer, there are underground injection control (UIC) regulations that must be observed. Since in situ aquifer remediation is likely to be the most common application of this product, the bulk of the regulatory requirements discussed herein will be directed to that topic.

The Bureau recognizes Arkea™ as a viable product for the bioremediation of petroleum contaminated sites in Florida. There are no objections to its use provided: (a) the considerations of this letter are taken into account; (b) a Remedial Action Plan is approved by the Department; (c) the Remedial Action Plan meets the requirements of Rule 62-522.300(2)(c), F.A.C., for permitting by rule a temporary injection zone of discharge for iron; and (d) a variance is granted to permit a temporary injection zone of discharge

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for ammonia nitrogen. For Arkea™, the major environmental and regulatory considerations are set forth in enclosure 2.

While the Department of Environmental Protection does not provide endorsement of specific or brand name remediation products or processes, it does recognize the need to determine their acceptability from an environmental standpoint with respect to applicable rules and regulations, and the interests of public health and safety. Vendors must then market the products and processes on their own merits regarding performance, cost and safety against competing alternatives in the marketplace. In no way, however, shall this regulatory letter of acceptance be construed as certification of product performance. Additionally, the Department emphasizes a distinction between regulatory "acceptance" and approval. Products and processes are accepted; they are not approved.

Those who prepare Remedial Action Plans may include a copy of this letter in the appendix of plans they submit, and call attention to it in the text of their document. In this way, technical reviewers will be informed that you have contacted the Department of Environmental Protection to inquire about Arkea's environmental acceptability. To aid those reviewers, the Bureau of Petroleum Storage Systems provides supplemental information as enclosure 3.

Even though it may be convenient to have an acceptance letter for inclusion in the appendix of a plan, as suggested above, the Bureau would like to emphasize that it is not a requirement for a particular remediation product or process have an official acceptance letter in order to be proposed in a site-specific Remedial Action Plan. The plan, however, must contain sufficient information about the product or process to show that it meets all applicable and appropriate rules and regulations, especially those of the Florida Administrative Code pertaining to groundwater and underground injection control.

The Department reserves the right to revoke its acceptance of a product or process if has been falsely represented. Additionally, Department acceptance of any product or process does not imply it has been deemed applicable for all cleanup situations, or that it is preferred over other treatment or cleanup techniques in any particular case. A site-specific evaluation of applicability and cost-effectiveness must be considered for any product or process, whether conventional or innovative, and adequate site-specific design details must be provided in Remedial Action Plans prescribing the product or process. You may contact me at (850) 877-1133, extension 29 if there are any questions.

Sincerely,

Rick Ruscito, P.E.
Ecology and Environment, Inc.
Bureau of Petroleum Storage Systems
Petroleum Cleanup Section 6

Rebecca S. Lockenbach
FDEP Section Leader
Bureau of Petroleum Storage Systems
Petroleum Cleanup Section 6

c: T. Conrardy - FDEP/Tallahassee

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ENCLOSURE 1

ARKEA™ CHEMICAL COMPOSITION †

Archaea and other Microbes	0.1801% (by weight)
Nitrogen ‡	0.0324%
Phosphates	0.0054%
Soluble Potash §	0.0054%
Iron *	0.0003%
Water	99.7764%
pH	6.8

† Composition shown is for the fluid to be applied for the purpose of remediation, which is a mixture of Arkea™ Bio-System Suspension, Arkea™ Lipophile, and Arkea™ Nutrients.

‡ Ammonia nitrogen, for which a variance must be granted to permit a temporary zone of discharge for injection at a concentration greater than the 2.8-milligram per liter minimum groundwater criterion that is set forth in Chapter 62-777, F.A.C.

§ Potash is essentially potassium carbonate (K_2CO_3)

* For the iron content of the Arkea™ fluid to be injected, Rule 62-522.300(2)(c), Florida Administrative Code, applies. This rule will permit a temporary zone of discharge for the injection of iron at a concentration greater than the 0.3-milligram per liter secondary drinking water standard that is set forth in Chapter 62-550, F.A.C.

ENCLOSURE 2

ENVIRONMENTAL AND REGULATORY INFORMATION

For Arkea™, the major environmental and regulatory concerns are listed below.

- a. Groundwater cleanup standards: The onus shall be on users of Arkea™ to ensure that all applicable groundwater contaminant standards will be met at the time of project completion, for the contaminants of concern, any residuals associated with the ingredients of Arkea™, and any byproducts produced as a result of chemical or biochemical reactions involving those ingredients. The following chapters of the Florida Administrative Code are cited: Chapter 62-550, F.A.C., for primary and secondary water quality standards; Chapter 62-520, F.A.C. for groundwater classes and standards; Chapter 62-522, F.A.C., for groundwater permitting and monitoring requirements; Chapter 62-528, F.A.C., for underground injection control, particularly Part V, for Class V, Group 4 aquifer remediation projects; Chapter 62-770, F.A.C., for petroleum cleanup criteria; and Chapter 62-777, F.A.C., for cleanup target levels.

A noteworthy aspect of the minimum criteria set forth in Chapter 62-520, F.A.C., is that it requires groundwater to be free from substances that are harmful to plants, animals, and organisms, and free from substances that are carcinogenic, mutagenic, teratogenic or toxic to human beings. In effect, these "free from" requirements form a catchall. They close what would otherwise be a loophole in the regulations by preventing injection of a potentially harmful product in the event that any of its ingredients is not regulated as a specific primary or secondary drinking water contaminant.

- b. Injection well permit: The issuance of a site-specific Remedial Action Plan Approval Order by either the Bureau of Petroleum Storage Systems or the Bureau of Waste Cleanup, for remediation via injection of Arkea™ into an aquifer, constitutes the granting of a Class V injection well permit. [62-528.630(2)(c) and 62-528.640(1)(c), F.A.C.]
- c. Groundwater injection standards: For in situ aquifer remediation, pursuant to Chapter 62-528, F.A.C., the composition of an injected fluid must meet the drinking water standards set forth in Chapter 62-550, F.A.C., and the minimum groundwater criteria described in Chapter 62-520, F.A.C. The minimum groundwater criteria set forth in Chapter 62-777, F.A.C., also apply. Per the chemical analysis of enclosure 1, Arkea™ will not meet the secondary drinking water standard of 0.3 mg/L for iron, and it will not meet the minimum groundwater criterion of 2.8 mg/L for ammonia nitrogen that is set forth in Chapter 62-777, F.A.C. Instructions on what must be done in the case of the iron and the ammonia are given in paragraphs *d* and *e* below.
- d. Iron: Rule 62-522.300(2)(c), F.A.C., applies to iron when Arkea™ will be used for injection-type in situ aquifer remediation. This rule, which became effective August 27, 2001, as applied to Arkea™, allows a temporary zone of discharge for aquifer remediation purposes, within which a temporary exceedance of the secondary drinking water standard for iron is tolerated. In order to comply with this rule, a Department-approved site-specific remediation plan proposing Arkea™ must:
 - (a) identify iron as the parameter whose standard will be exceeded in the fluid to be injected;
 - (b) indicate the size and duration of the temporary

zone of discharge; and (c) include groundwater monitoring of iron. Within the time period allowed for this temporary zone of discharge, the concentration of iron in the groundwater must decrease to meet its 0.3-milligram per liter standard, or decrease to a level that does not exceed its natural-occurring background level, whichever is less stringent.

Bioremediation Services Incorporated indicates that while a precise zone of discharge size has not been determined, field studies have shown that radii of influence in the range of 10 to 50 feet are not uncommon, and the Bureau of Petroleum Storage Systems believes this is reasonable. As for a time limit on the temporary zone of discharge that will be permitted by rule for the iron, the Bureau suggests that those who prepare Remedial Action Plans consider a period of one (1) year or less.

- e. Ammonia nitrogen: In order for Arkea™ to be used for injection-type in situ aquifer remediation, Bioremediation Services Incorporated must obtain a variance for a deviation from Rule 62-522.300(3), F.A.C., in order to allow a temporary injection zone of discharge for ammonia nitrogen. Once granted, a variance will allow a temporary zone of discharge of specified dimensions around each injection point (usually expressed as a radius of influence) for a specified period of time. The measurement of the time period usually begins after the final injection. By the end of the time period, the groundwater concentration of any residual ammonia nitrogen in the zone of discharge must not exceed the 2.8-mg/L maximum allowed by Chapter 62-777, F.A.C. If the groundwater's natural-occurring background concentration of ammonia nitrogen at a specific remediation site is already in excess of the established minimum groundwater criterion, then its residual concentration at the completion of remediation shall be no greater than the pre-existing background concentration.

If the variance granted by the Department is not site-specific, then it may be considered as portable from one Arkea™ cleanup project to another in Florida, provided a site-specific Remedial Action Plan is submitted for each site. With a portable variance, Bioremediation Services Incorporated and users of Arkea™ do not have to petition for a new variance each time Arkea™ is proposed for the remediation of a site, provided there is no deviation from the terms of the variance. Instructions on how to petition for a temporary injection zone of discharge variance are currently located at web page www.dep.state.fl.us/waste/categories/pcp/pages/innovative.htm.

- f. Utilization of wells: If a remediation site happens to have an abundance of monitoring wells, then the Department has no objection to the use of some wells for the application of Arkea™. However, no "designated" monitoring well, dedicated to the tracking of remediation progress (by sampling) shall be used to apply Arkea™. This will avoid premature conclusions that the entire site meets cleanup goals. By making sure that designated tracking wells are not also used for treatment, there will be more assurance that the treatment process has permeated the entire site and that it did not remain localized to the area immediately surrounding each injection well.
- g. Groundwater monitoring:
 - 1. Active remediation monitoring of petroleum: During the period of active remediation, groundwater shall be monitored for petroleum

contaminants of concern in accordance with the requirements set forth in Section 62-770.700, F.A.C.

2. Post remediation monitoring of petroleum: During the period of post active remediation, groundwater monitoring for petroleum contaminants of concern shall be conducted in accordance with the requirements set forth in Section 62-770.750, F.A.C.
3. Monitoring for underground injection control purposes: Pursuant to rule 62-522.300(2)(c), F.A.C., groundwater monitoring of the primary and secondary drinking parameters set forth in Chapter 62-550, F.A.C., that are not met by a fluid injected for aquifer remediation must be addressed in a Department-approved Remedial Action Plan. Additionally, if an injected fluid does not meet the minimum groundwater criteria of Chapters 62-520 and 62-777, F.A.C., then groundwater monitoring must be conducted for the specific parameters associated with the necessary temporary zone of discharge variance for the injection of such a fluid. In the case of Arkea™, the secondary drinking water standard for iron is not met, and the minimum groundwater criterion for ammonia nitrogen is not met. Therefore, the groundwater at a remediation site will have to be monitored for these two parameters for underground injection control purposes, pursuant to rule 62-522.300(2)(c), F.A.C., in the case of the iron, and in accordance with the terms of a temporary zone of discharge variance for the ammonia nitrogen.
- h. Underground injection control inventory: Remedial Action Plans prescribing in situ aquifer injection-type remediation shall include information pursuant to Rule 62-528.630(2)(c)1 through 6, F.A.C., for the inventory purposes of underground injection control. Per Rule 62-528.630(2)(c), F.A.C., aquifer remediation projects involving injection wells may be authorized under the provisions of a Remedial Action Plan, provided the construction, operation, and monitoring requirements of Chapter 62-528, F.A.C., are met. A memorandum outlining the inventory information about injection-type aquifer remediation plans, to be transmitted by Department reviewers, to the Underground Injection Control Section is provided as enclosure 4.
- i. Avoidance of migration: For in situ injection-type aquifer remediation projects, injection of Arkea™ shall be performed in such a way, and at such a rate and volume, that no undesirable migration of either the product's ingredients or the contaminants of concern in the aquifer results, pursuant to Rule 62-528.630(3), F.A.C.
- j. Operating parameters: Section 62-770.700, F.A.C., sets forth frequency requirements for the measurement of bioremediation operating parameters such as dissolved oxygen levels, rates of nutrient addition, temperature, etc. It also includes an option for reduction in the frequency or discontinuation of some measurements in situations when appropriate.
- k. Abandonment of wells: Upon issuance of a petroleum Site Rehabilitation Completion Order, or a declaration of "No Further Action", injection wells shall be abandoned pursuant to Section 62-528.645, F.A.C. The Underground Injection Control Section of the Department shall be notified so that the injection wells can be removed from the inventory-tracking list.
- l. Surface waters: The Bureau anticipates that most applications of Arkea™ will be at petroleum cleanup sites where only the groundwater is in need

of remediation, and that surface waters will not be nearby, or at least not affected by the groundwater or groundwater remediation activities. Therefore, in most cases, the phosphate present in Arkea™ should not be of great concern.

If surface waters, however, happen to be present, and could be affected by the chemicals used to clean up the groundwater, then sufficient consideration should be given to the phosphate and applicable surface water standards. In such cases, it may be prudent to take background, upstream surface water samples for analysis of phosphate prior to the use of Arkea™, in order to establish a baseline phosphate concentration.

- m. Open pit applications: The application of Arkea™ to an open excavation pit prior to backfilling, for the purpose of remediating groundwater, is not an injection. In such cases, it is not necessary to notify the Underground Injection Control Section by using the notification memorandum in enclosure 4. However, this does not release the user from the responsibility of making sure that no long-term negative groundwater impacts occur as a result of the chemicals added to the pit. In the case of Arkea™, it would be prudent to measure the iron and ammonia nitrogen concentrations of the groundwater in the pit area prior to application, and to measure them again some time after the application, in order to demonstrate that the groundwater meets the 0.3-mg/L standard for iron and the 2.8-mg/L groundwater criterion for ammonia nitrogen, or their natural-occurring background levels, whichever is less stringent.

ENCLOSURE 3

SUPPLEMENTAL INFORMATION

The information below, compiled from several sources, may be helpful to reviewers of Remedial Action Plans prescribing bioremediation.

- a. Department of Environmental Protection reviewers of injection-type in situ aquifer remediation plans, regardless of whether in Tallahassee or district offices, must fill in the blanks on the enclosure 4 memorandum, whose subject is "Proposed Injection Well(s) for In situ Aquifer Remediation at a Petroleum Remedial Action Site". The completed form must be submitted to the Underground Injection Control Section at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400.

Only the appropriate bureau chiefs and division directors within the Department and its district offices may sign in situ injection-type remediation plan approval orders that constitute the granting of a Class V injection permit. Local program staff may review such plans but are not authorized to sign the approval orders. Reason: Although an arrangement between the Environmental Protection Agency and the Department delegates underground injection control authority to the Department, it does not allow the Department to delegate that authority any further. This includes delegation to the Department's contracted remediation review agencies such as those operated by the counties and other local governments.

- b. Pilot study: For bioremediation, per Section 62-770.700, F.A.C., a pilot study proposal shall be submitted for review, and a pilot test shall be performed prior to designing a treatment system. If conditions or the situation at a site do not warrant a pilot study, then a proposal explaining the rationale for the decision not to perform a pilot study shall be submitted for review. The state's technical reviewers are encouraged to use judgment in balancing cost and the need for technical information to be obtained from a pilot study.
- c. Bacteria: It is generally reported (on a total weight basis) that bacteria are approximately 70 to 80 percent water. On a dry weight basis, approximately 95 percent of the composition is represented by 5 elements: carbon, oxygen, nitrogen, hydrogen, and phosphorus. At a petroleum remediation site, it is intended that the source of carbon for the growth of bacteria will come from the petroleum hydrocarbons themselves. Natural-occurring organic carbon at a site can also serve as a carbon source for bacteria. Depending on site's specific conditions, the remaining four elements must either be available naturally, or added as macronutrients in order to stimulate bioremediation. Micronutrients must also be present for bacteria to grow.

Bioremediation Services Incorporated indicates that Archaea are unique, and that "biochemically they are as different from bacteria as they are from eukaryotes". And while it is not necessary for users of Arkea™ to have an advanced degree in microbiology to use them, the Bureau of Petroleum Storage Systems would like to pass along a brief explanation that was located at a cell biology web page for the Massachusetts Institute of Technology: "Historically, it was thought that there were two general classes of cells: prokaryotic and eukaryotic. It is now known that a morphologically distinct class known as Archaea also exists." It also contained an explanation of the differences between these types of organisms: "A major and extremely significant difference between prokaryotes, archaea and eukaryotes is that eukaryotes have a nucleus and membrane-bound organelles, while prokaryotes do not. Archaea

have a distinct and separate nuclear region but it is not isolated in the same fashion as the eukaryotic nucleus".

- d. Degradation products: Carbon dioxide and water are the ultimate products of aerobic and most anaerobic biodegradations of hydrocarbons. In the case of methanogenesis, an anaerobic process, carbon dioxide and methane are produced. The intermediate products of aerobic degradation may include simple acids, alcohols, and fatty acids. Aerobic processes use oxygen as an electron acceptor to produce carbon dioxide and water.

Bioremediation Services Incorporated explains where Archaea fit into the degradation path of contaminants. The explanation is that bacteria first begin the breakdown process of contaminants to intermediates such as simple acids, fatty acids and alcohols. The Archaea then help to carry the breakdown process of these intermediates to completion, with the ultimate degradation products being carbon dioxide, water, nitrogen, oxygen and methane.

- e. Parameters: The following parameters may be useful in determining the potential for bioremediation at a site, or whether bioremediation is already occurring. They were selected from a list that appears in the publication "In situ Treatment Technology" by E. Nyer et al., Lewis Publishers, 1996. The parameters are dissolved oxygen; redox potential; pH; temperature; specific conductance; volatile organic compounds; nitrate; nitrite; ammonia nitrogen; manganese (total and dissolved); iron (total, dissolved, and ferrous); sulfate; sulfide; and total organic carbon. Gaseous parameters include carbon dioxide, oxygen, nitrogen, and methane. Other parameters that may be helpful are chemical oxygen demand, biochemical oxygen demand, and total inorganic carbon. Those who prepare bioremediation plans and their reviewers should determine which parameters, if any, should be investigated on a site-specific basis.
- f. Vendor information: Below is some of the information included in the submittal for Arkea™ that the Bureau of Petroleum Storage Systems would like to pass along to potential users of the product.

<u>Parameter</u>	<u>Range</u>	<u>Optimum</u>
Temperature	Survives in temperatures ranging from 0°C to 70°C	20°C to 45°C
pH	Functions from 1 to 14	Neutral to slightly acidic
Dissolved Oxygen	0 to 4 mg/L or more	<2 mg/L
Salinity	0 to 9%	< 9%
Quantity	Arkea™ hydrated in potable water and applied in a quantity equal to 1% of the contaminated plume (by volume)	Site-specific
Additives	Lipophile® microbes and nutrients are added to the hydrated Arkea™ immediately prior to application	Amounts used correlate directly to the amount of Arkea™ required to treat site.

- g. Application: Bioremediation Services Incorporated indicates that Arkea™ can be applied in a number of ways, including injection via permanent injection well, direct-push injection, or existing monitoring wells. The

Bureau of Petroleum Storage Systems, in the case of existing monitoring wells, would like to provide a reminder that only monitoring wells not needed to measure the progress of a cleanup, by sampling, should be used to apply Arkea™, in order to avoid a premature and possibly erroneous conclusion that the cleanup is complete, when in fact only the groundwater in the well and around it to a limited radial distance has been treated. Potential users of Arkea™ should also note an indication by Bioremediation Services Incorporated that the remediation of a groundwater contamination plume typically involves a series of three (3) treatments over a 45-day period.

**Florida Department of
Environmental Protection**

Memorandum

TO: Richard Deuerling, Mail Station 3530
Division of Water Facilities
Underground Injection Control Section
Florida Department of Environmental Protection
2600 Blair Stone Road, Tallahassee, FL 32399-2400

FROM: _____ (Note 1.)

DATE: _____

SUBJ: **Proposed Injection Well(s) for In situ Aquifer
Remediation at a Petroleum Remedial Action Site**

Pursuant to Rule 62-528.630(2)(c), F.A.C, inventory information is hereby provided regarding the proposed construction of temporary injection well(s) for the purpose of in situ aquifer remediation at a petroleum-contaminated site.

Site name: _____
Site address: _____
City/County: _____
Latitude/Longitude: _____
FDEP Facility Number: _____

Site owner's name: _____
Site owner's address: _____

Well contractor's name: _____ (Note 2.)

Well contractor's address: _____

Brief description of the in situ injection-type aquifer remediation project:

Summary of major design considerations and features of the project:

Areal extent of contamination (square feet): _____
Number of injection wells: _____
Composition of injected fluid (Note 3)
(ingredient, wt. %): _____

Injection volume per well (gallons): _____
Single or multiple injection events: _____
Injection volume total (all wells, all
events): _____

Richard Deuerling
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Date: _____

Site name: _____
FDEP facility no.: _____

A site map showing the areal extent of the groundwater contamination plume, and the location and spacing of injection wells and associated monitoring wells is attached.

The following is a summary description of the affected aquifer:

Name of aquifer: _____
Depth to groundwater (feet): _____
Aquifer thickness (feet): _____

The injection well(s) features are summarized below, and/or a schematic of the injection well(s) is attached.

Direct-push or Conventional (*circle the appropriate well type*)
Diameter of well(s) (i.e., riser pipe & screen) (inches): _____
Total depth of well(s) (feet): _____
Screened interval: _____ to _____ feet below surface
Grouted interval: _____ to _____ feet below surface
Casing diameter, if applicable (inches): _____
Cased depth, if applic.: _____ to _____ feet below surface
Casing material, if applic.: _____

The in situ injection-type aquifer remediation plan for this petroleum contaminated site is intended to meet the groundwater petroleum cleanup criteria set forth in Chapter 62-770, F.A.C. Additionally, all other groundwater standards will be met at the time of project completion for any residuals associated with the ingredients of the injected remediation products, and any by-products or intermediates produced as a result of the chemical or biochemical transformation of those ingredients or the contaminating petroleum during their use. Applicable primary and secondary drinking water standards are set forth in Chapter 62-550, F.A.C., and additional groundwater quality criteria are set forth in Chapter 62-520, F.A.C.

The remediation plan estimates that site remediation will take _____ months. We will notify you if there are any modifications to the remediation strategy, which will affect the injection well design or the chemical composition and volume of the injected remediation product(s).

The proposed remediation plan was approved on _____ by an enforceable approval order. A copy is attached. The remediation system installation is expected to commence within 60 days. Please call me at _____ if you require additional information.

Note 1. Local programs are not authorized to approve underground injections into aquifers. Reason: Per agreement with EPA, the FDEP cannot delegate this authority. Local programs, after reviewing a Remedial Action Plan or an injection proposal document, should arrange for Department headquarters' execution of an approval order, and then complete this form. This form is primarily for use by state and local program technical reviewers, but petroleum remediation contractors may fill in all blanks except those labeled "FROM", "DATE", "approval date", and "telephone number" blanks in the last paragraph. Those blanks should be completed only by a state or local program reviewer.

Note 2. If an injection well installation contractor has not yet been selected, then indicate the name and address of the project's general remediation contractor/consultant.

Note 3. Complete chemical analysis of injected fluid is required by Chapter 62-528, Florida Administrative Code. Proprietary formulations shall make confidential disclosure. Injected fluids must meet drinking water standards of Chapter 62-550, F.A.C., unless an injection zone of discharge has been permitted by Rule 62-522.300(2)(c), F.A.C., or by variance.