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LETTER AND COMMENTS FROM FLORIDA DEPARTMENT OF ENVIRONMENTAL
PROTECTION REGARDING NATURAL ATTENUATION AS A REMEDIAL ALTERNATIVE FOR
OPERABLE UNITS NAS JACKSONVILLE FL

5/2/1996

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION



Department of Environmental Protection

Lawton Chiles
Governor

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2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Virginia B. Wetherell
Secretary

May 2, 1996

Mr. Dana Gaskins, Code 1857
Southern Division
Naval Facilities Engineering Command
2155 Eagle Dr., P. O. Box 190010
Charleston, South Carolina 29411

RE: Natural Attenuation as a Remedial Alternative for
Operable Units at Naval Air Station Jacksonville CERCLA
Site, Florida

Dear Mr. Gaskins:

The purpose of this letter is to state some concerns that FDEP has regarding the use of natural attenuation as a remedial alternative at the NAS Jacksonville Superfund Site. The following comments apply to all units at NAS Jacksonville, including operable unit 1, where natural attenuation is being considered as a remedial option.

Current federal groundwater policy, specified in the NCP 55 Fed. Reg. 8733-8734 (March 8, 1990) establishes that natural attenuation is advisable in the following cases:

- a. In reducing low levels of contamination to achieve remediation goals.
- b. When active restoration is not practicable, cost effective, or warranted because of site specific conditions (e.g., Class III groundwater or groundwater which is unlikely to be used in the foreseeable future, and, therefore, can be restored over an extended period of time).
- c. Where natural attenuation is expected to reduce the concentration of contaminants in groundwater to concentrations determined to be protective (of human health and sensitive ecological environments) in a reasonable timeframe.

However, natural attenuation does not mean that the groundwater has been written-off and is not to be cleaned up. Rather, it can mean that biodegradation, dispersion, adsorption, and other natural processes have the potential to reduce

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contaminants in the groundwater to concentrations protective of human health in a timeframe comparable to that which could be achieved through active restoration. In this case, the implementation of institutional controls may be necessary to ensure that such groundwater is not used before levels protective of human health are reached.

There are several categories of groundwater that require reasonable remediation timeframes given particular site circumstances. For example, a) groundwater that feeds into or is interconnected with sensitive or vulnerable ecosystems; and, b) groundwater used as a source of drinking water both require rapid and active restoration, to the extent practicable. The Department also views other factors such as location, proximity to population, and likelihood of exposure as factors determining the acceptability of natural attenuation as a viable remedial option.

Taking into consideration these comments, any Proposed Plan and/or ROD, when describing the rationale supporting natural attenuation as the chosen alternative should discuss the following factors: a) the Class of groundwater we are dealing with (Class I, II, or III), b) the timeframe in which natural attenuation will reduce concentrations of contaminants to the remediation goals (i.e., short term effectiveness) and how it will compare with the restoration time frame under active remediation; c) the type of institutional controls to be used; d) the biological and chemical degradability of the contaminants; e) the physical and chemical characteristics of the groundwater and how it affects the biological and chemical degradability of the contaminants; f) the physical characteristics of the geological medium and how they will enhance the reduction of the contaminants through natural attenuation; g) whether the groundwater is interconnected to surface water bodies; h) the location, proximity to population and likelihood of exposure to the contaminated groundwater; and h) the observed decline in contaminant concentrations during the sampling events.

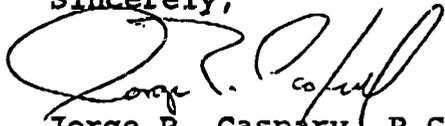
Other elements that might support natural attenuation include the levels of contamination in soils and groundwater are relatively low and removal of the source of contamination has occurred.

Finally, the Proposed Plan and/or the Record of Decision should establish a timeframe for groundwater monitoring to determine whether natural attenuation is effective in meeting performance standards, and a contingency for active remediation in the event that the contamination does not reduce as predicted.

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If I can be of any assistance in this matter, please contact me at 904/488-3935.

Sincerely,



Jorge R. Caspary, P.G.
Project Manager
Federal Installations

cc: Diane Lancaster, NAS Jacksonville
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