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NTC ORLANDO  
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LETTER REGARDING REGULATORY REVIEW AND ACCEPTANCE OF GROUNDWATER  
TREATMENT MODIFICATIONS TREATMENT CHEMICALS AT OPERABLE UNIT 4 (OU 4)  
NTC ORLANDO FL  
12/4/1998  
FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

# Department of Environmental Protec

09.01.04.0015

00314



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

Virginia B. Wetherell  
Secretary

December 4, 1998

Mr. Wayne Hansel  
Code 18B7  
Southern Division  
Naval Facilities Engineering Command  
P.O. Box 190010  
North Charleston, South Carolina 29419-0068

RE: Groundwater Treatment System Modifications, Groundwater  
Treatment Chemicals for Operable Unit 4, Naval Training  
Center Orlando, Florida

Dear Mr. Hansel:

I have reviewed the Groundwater Treatment System Modifications for Operable Unit 4 at NTC Orlando dated November 5, 1998 (received November 6, 1998), prepared by Bechtel. The Department has no objection to the proposed use of either Tolcide PS-200 or B-126, provided that the concerns outlined in the attached memorandum are considered, and if needed, addressed. Information provided in the proposal indicates that the chemicals are biodegradable and non-biocumulative with half-lives less than 24 hours. The chemicals also appear to have low toxicity to aquatic and terrestrial organisms. For these reasons, the proposed chemicals appear appropriate for their intended use as antifouling agents if applied as specified in the proposal.

If I can be of any further assistance with this matter, please contact me at (850)488-3693.

Sincerely,

A handwritten signature in black ink, appearing to read "David P. Grabka". The signature is fluid and cursive, written over the typed name.

David P. Grabka  
Remedial Project Manager

cc: Lt. Gary Whipple, NTC Orlando  
Barbara Nwokike, Navy SouthDiv  
Nancy Rodriguez, USEPA Region 4  
Richard Allen, HLA, Jacksonville  
Steve McCoy, Brown & Root, Oak Ridge  
Robert Cohose, Bechtel, Knoxville  
Bill Bostwick, FDEP Central District

TJB

B

JJC

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ESN

B, E, W

## Memorandum

# Florida Department of Environmental Protection

**TO:** David Grabka, Remedial Project Manager, Technical Review Section

**THROUGH:** Tim Bahr, P.G., Supervisor, Technical Review Section **TB**

**FROM:** Greg Brown, P.E., Professional Engineer II, **AB**  
Technical Review Section

**DATE:** November 9, 1998

**SUBJECT:** Groundwater Treatment System Modifications, Groundwater Treatment Chemicals, for Operable Unit 4, Naval Training Center Orlando, FL.

I reviewed the request dated November 5, 1998, (received November 6, 1998), from Mr. Robin Manning, P.E., to use the microbiocides, Tolcide PS-200 or B-126. Mr. Manning, P.E., intends to use one of these two microbiocides to control biofouling in the recirculation wells located at OU-4, NTC Orlando, Florida. Mr. Manning, P.E., proposes to inject one of these two microbiocides in the influent of the recirculation wells at an average concentration of 60 mg/l to control biological growth inside the wells. Due to the design, construction, and intended operation of these recirculation wells, residual concentrations of the microbiocides will be incidentally discharged back into the aquifer. In general, I have no objections to the proposal as long as the concerns outlined in this memorandum are considered by Mr. Manning, P.E., or his designated successor engineer, and client before and during application.

Information supplied by Mr. Manning, P.E., for these proprietary products, manufactured by the Remede Products, Inc., of Newfane, Vermont, shows that they are biodegradable and non-bioaccumulative with environmental half-lives less than 24 hours. The information also reports that they have low toxicity to aquatic and terrestrial organisms. Toxicity data are summarized in a table located at the end of this memorandum (refer to vender data for additional information if necessary).

These microbiocides appear to be viable as antifouling agents during remediation of the chlorinated solvent contaminated groundwater at OU-4, NTC Orlando, Florida. There are underground injection control (UIC) regulations, however, that should be considered due to the incidental discharge of these microbiocides into a G-II aquifer during in situ groundwater remediation. Specifically, the following issues should be considered, as applicable: (1) the site should have an approved Remedial Action Plan, or equivalent; (2) a variance from Rule 62-522.300(2)(a), Florida Administrative Code (F.A.C.), should be obtained if a

*"Protect, Conserve and Manage Florida's Environment and Natural Resources"*

MEMORANDUM

Dave Grabka

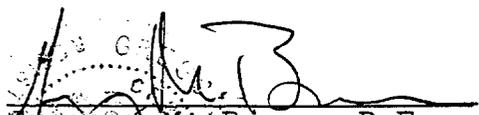
November 9, 1998

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temporary exceedance of secondary drinking water quality standard, or a temporary exceedance of the naturally occurring background value (whichever is less stringent), is expected because of the actions taken in the proposal; and (3) all applicable groundwater contaminant standards will be met at the time of project completion. Those applicable standards apply to both contaminants and any residuals associated with the ingredients of the proposed microbiocides, and any byproducts produced as a result of chemical or biochemical reactions involving those ingredients.

An approved RAP, or equivalent, exists for this site, so item (1) is already addressed. For item (2), the information provided in the proposal indicates that pH and sulfate could exceed secondary standards at excessively high dose concentrations. Mr. Manning, P.E., or his designated successor engineer, and his client should insure that the application of the proposed microbiocides will not cause temporary exceedances of these or other secondary drinking water standards unless a variance is requested and approved beforehand. For item (3), Mr. Manning, P.E., or his designated successor engineer, and his client must ensure that they comply with the following chapters of the Florida Administrative Code: 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; and Chapter 62-528, F.A.C., for underground injection control, particularly Part V, for Class V, Group 4 aquifer remediation projects.

The Department of Environmental Protection does not provide endorsement of specific or brand name remediation products or processes. Rather, the objective of this memorandum is to summarize the applicable rules and regulations that apply to the subject request at OU-4 groundwater remediation site, NTC Orlando, Florida, and for no other site. If you have any questions, call me at (850) 488-3935.

  
Gregory M. Brown, P.E.  
Professional Engineer No. 42194  
Expires February 28, 1999

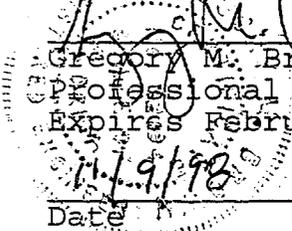
  
Date 11/9/98

Table 1: Toxicity Data <sup>1</sup>			
Product	Species	Test	Value
Tolcide (as breakdown product, THPO)	Rainbow Trout	96 hr. LC50	>5000 mg/l
	Daphnia magna	48 hr. EC50	>1000 mg/l
	Skeletonema costatum	72 hr. EC50	2090 mg/l
	Rats	Acute Oral Toxicity LD50	575 mg/kg
	Rats	Dermal Toxicity LD50	>2000 mg/kg
		Mutagenicity	Not Mutagenic
		Carcinogenicity	Negative
B-126 Microbiocide	Rainbow Trout	96 hr. LC50	42.1 mg/l
	Daphnia (ns)	48 hr. LC50	16.9 mg/l
	Skeletonema costatum	Not reported	Not Reported
	Rats	Acute Oral Toxicity LD50	Not Reported
	Rats	Dermal Toxicity LD50	Not Reported
		Mutagenicity	Not Reported
		Carcinogenicity	Not Reported

<sup>1</sup>Based on information provided from Mr. Manning, P.E., November 6, 1998.