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LETTER REGARDING NAVY REQUEST FOR AIR EMISSION STANDARDS FOR VINYL CHLORIDE NSB KINGS BAY GA
2/27/1998
GEORGIA DEPARTMENT OF NATURAL RESOURCES

Georgia Department of Natural Resources
205 Butler Street, S. E., Suite 1162, Atlanta, Georgia 30334
Lonice C. Barrett, Commissioner
Environmental Protection Division
Harold F. Reheis, Director
404-656-2833

COPY

February 27, 1998

NSB Kings Bay Administrative Record
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Mr. Anthony B. Robinson
Installation Restoration I Branch
Southern Division, Naval Facilities Engineering Command
P. O. Box 190010
2155 Eagle Drive
North Charleston, South Carolina 29419-9010

Re: Code 18511
Request for Air Treatment Standards

Dear Mr. Robinson:

We have reviewed your letter of December 11, 1997, requesting a determination of air emissions standards for vinyl chloride monomer (VCM) at the Old Camden County Landfill site at the Naval Submarine Base Kings Bay. To recap our discussion of this subject at the October 1997 team meeting, the Environmental Protection Division (EPD) seeks the following:

1. The protection of human health and the environment from releases of chlorinated hydrocarbons, especially VCM, a known human carcinogen.
2. The cessation of air stripping followed by carbon adsorption. This technology has been demonstrated by the Navy's own studies to result in no significant destruction or removal from the environment of VCM.

During the February 18, 1998, team meeting the Navy's contractor proposed essentially a single corrective action alternative: air stripping with "possible" offgas control. We have subsequently determined that this proposal was based on incomplete background assumptions. This letter is written to clarify our requirements for air stripping.

First, if you wish to propose a pump-and-treat system for groundwater followed by air stripping, the offgases from the air stripping must be treated with the best available control technology, and the system must achieve the lowest achievable emission rate (BACT/LAER). Attached is an EPD policy statement germane to this issue. According to EPD's Air Branch, BACT for chlorinated organics, including VCM, is thermal or catalytic oxidation; LAER is 99.5% mass destruction and removal.

Second, the base would be committing to periodic (probably annual) performance and compliance testing for the air pollution control device. There would also be periodic performance and certification testing for the continuous emissions monitoring system for the unit. This is a corollary to the requirement for achieving LAER. This testing

regimen would be required in addition to the periodic groundwater monitoring needed to determine the overall efficacy of the corrective action program.

Finally, a risk assessment would be required to demonstrate protection of human health and the environment. Air emissions, and the resulting ambient pollutant concentrations, are highly installation-specific, and are dependent upon control efficiency, plume dispersion, and many other factors. If groundwater treatment were performed in the liquid medium, the risk assessment would not be necessary because the cleanup target would be set for each of the site's contaminants of concern at EPA's Maximum Contaminant Limit (MCL), itself a risk-based standard. We have enclosed a copy of EPD's risk guidance.

We applaud your efforts to incorporate innovative methods into your Corrective Action Plan, specifically the in-situ chemical oxidation for parent compounds. The EPD urges the Navy to include liquid phase destruction or removal of VCM and its parent compounds from the contaminated media at the site. Based on our experience at other sites, a liquid-phase treatment scheme is likely to be less expensive, more effective, and exhibit less impact on the environment than air stripping with end-of-pipe controls.

If you have further questions, please contact Billy Hendricks at 404-656-2833.

Sincerely,

Jim Ussery, Program Manager
Hazardous Waste Management Branch

c: John Garner, NSB
File: NSB (B)
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to all staff

August 1, 1989

Georgia Department of Natural Resources
205 Butler Street, S.E., Floyd Towers East, Atlanta, Georgia 30334
J. Leonard Ledbetter, Commissioner
Harold F. Reheis, Assistant Director
Environmental Protection Division

MEMORANDUM

TO: Air Pollution Compliance Program

FROM: Robert H. Collom

SUBJECT: Groundwater Cleanup Actions

If contaminated groundwater is required to be cleaned up pursuant to RCRA regulations administered by the Land Branch, the Division has established a policy that any air stripping must be controlled with best available control procedures and technology. This is predicated on the fact that such contaminants in groundwater are labeled toxic or hazardous under that law and the Division does not want to allow their uncontrolled release to the atmosphere.

The use of best technology for any air stripping in such circumstances is required, even though the Air Branch Toxic Guidelines may not show or demonstrate a need for any control of those air emissions.

I am informing you in this manner since I recently discovered there is some confusion on this point.

RHC:njj:2177N
cc: Harold Reheis
John Taylor