



March 14, 2006

DuPont Haskell Laboratory  
for Health and Environmental Sciences  
Elkton Road, P.O. Box 50  
Newark, DE 19714-0050

Via Federal Express

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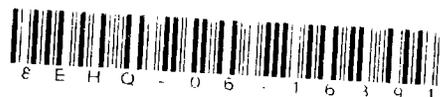
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Document Processing Center (Mail Code 7407M)  
Room 6428  
Attention: 8(e) Coordinator  
Office of Pollution Prevention and Toxics  
U.S. Environmental Protection Agency, ICC Building  
1201 Constitution Ave., NW  
Washington, DC 20460

CONTAIN NO CBI

Dear 8(e) Coordinator:

Copper Hydroxide  
CAS# 20427-59-2



This letter is to inform you of the results of a recently conducted acute oral toxicity study in bobwhite quail with a proprietary mixture containing 53.8 % of the above referenced substance.

Ten northern bobwhite quail, five males and five females, were assigned to each of the treatment groups and the control group by indiscriminate draw. Birds were acclimated to the study room and caging for approximately five weeks prior to test initiation. The birds were fasted for at least 18 hours prior to dosing. At experimental start, a single dose of the test substance in a 0.1% carboxymethyl cellulose aqueous solution was orally intubated directly into the crop or proventriculus of each bird. Each bird was individually weighed and dosed on the basis of milligrams of active ingredient of the test mixture per kilogram of body weight. Dose levels were 0, 18.75, 37.75, 75, 150, 300, 600, or 1200 mg/kg. The control birds received a corresponding volume of 0.1% carboxymethyl cellulose aqueous solution only.

From test initiation until termination (20 days post dosing), all birds were observed at least once daily. A record was maintained of all mortality, signs of toxicity, and abnormal behavior. Body weights were measured individually at the initiation of the test and on Days 3, 7, 14 and 20 of the test. Average feed consumption was determined by pen for each dosage group and the control group for Days 0-3, 4-7, 8-14 and 15-20.

The acute oral LD50 for northern bobwhite quail was determined to be 496 mg/kg with a 95% confidence interval of 357 to 701 mg/kg. No deaths occurred at 150 mg/kg or below. Mortality at 300, 600, and 1200 mg/kg were 2/10, 7/10, and 9/10, respectively.

In the 75 mg/kg treatment group, clinical observations were first noted approximately 30 minutes after dosing, at which time two birds were noted with a slight ruffled appearance. Four more birds were displaying a slight ruffled appearance approximately four hours later. All birds appeared to have recovered, and were normal in appearance and behavior, on the morning of Day 1. However, from the morning of Day 2 through the afternoon of Day 5 as many as 10 birds displayed a ruffled appearance. All birds at the 75 mg/kg dosage level were normal in appearance and behavior from the morning of Day 6 until test termination.

In the 150 mg/kg treatment group, clinical observations were first noted in one bird approximately one hour after dosing. Clinical signs continued to be noted intermittently in as many as four birds through the afternoon of Day 3 and were displayed by all birds at this dosage by the morning of Day 4 of the test.



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Clinical observations noted at the 150 mg/kg dosage level were reduced reaction to external stimuli (sound and movement), loss of coordination and ruffled appearance. All birds appeared to have recovered, and were normal in appearance and behavior, on the morning of Day 9. Signs of toxicity were again noted from Day 12 through Day 16 in as many as two birds. All birds at the 150 mg/kg dosage level were normal in appearance and behavior from the morning of Day 17 until test termination.

At the 300 mg/kg dosage level, clinical observations were first noted in one bird approximately fifty minutes after dosing and the first mortality was noted on the morning of Day 1. Surviving birds were normal in appearance and behavior on Days 1 and 2 of the test but clinical signs were again noted in as many as six birds on Day 3 of the test and noted in all remaining birds by the morning of Day 4. One bird was euthanized on the afternoon of Day 10 due to its emaciated condition. Clinical observations at the 300 mg/kg dosage level were wing droop, loss of coordination, ruffled appearance and lethargy. All surviving birds had recover by the morning of Day 17 and were normal in appearance and behavior through test termination.

At the 600 and 1200 mg/kg dosage levels, clinical observations in moribund and none moribund birds included reduced reaction to external stimuli (sound and movement), wing drop, loss of coordination, lower limb weakness, ruffled appearance, prostrate posture and/or lethargy.

Under these experimental conditions, the findings described above appear to be reportable, based upon the guidance given in the EPA TSCA Section 8(e) Reporting Guide (June 1991).

Sincerely,



A. Michael Kaplan, Ph.D.  
Director - Regulatory Affairs and Occupational Health

AMK/AS: clp  
(302) 366-5260