



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D. C. 20460

OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

DP Barcode: D323526
PC Code 700099

November 17, 2005

MEMORANDUM

SUBJECT: Drinking Water Assessment for the Safener, Cloquintocet-mexyl; and the Major Degradate, CGA-153433, [(5-chloro-8-quinolinyl)oxy]-acetic acid

FROM: Lucy Shanaman, Chemist *Lucy Shanaman*
Environmental Risk Branch III
Environmental Fate and Effects Division (7507C)

THRU: Daniel Rieder, Branch Chief *Daniel Rieder*
Environmental Risk Branch III
Environmental Fate and Effects Division (7507C)

TO: William Cutchin
RD/TRB

Tracy Ward
RD/MUERB

New data has been submitted for the safener, cloquintocet-mexyl; and the major degradate, CGA-153433, [(5-chloro-8-quinolinyl)oxy]-acetic acid. A range finding Tier I drinking water assessment has been conducted for the combined residues using this new data. Because the previous assessment was for parent only, new half-lives for the combined residues would need to be calculated for each model input parameter. As a preliminary screen, two model runs were conducted for surface water and ground water, one using conservative assumptions (assumed stability), and one using combined residues from only the new data. Because no labels were provided with this action, the application rate (0.0157 pounds safener/acre) from the January 2000 new chemical assessment were chosen for this rough screening assessment.



Using the conservative values of complete stability and unlimited mobility, FIRST produced EDWCs from 2 to 2 ½ orders of magnitude greater than in the previous assessment. Using only the combined residue half-life from the new data, and the median Koc values from the only mobility study available, the resulting EDWCs are 2 orders of magnitude higher. For ground water, a preliminary SCIGROW run was made using only the half-life for the combined residues from the new data, and the median Koc value from the only available mobility study. The ground water results are 1 order of magnitude below the previous assessment. If this rough screening level assessment produces EDWCs (Table 1) that are of concern to HED, than a more refined assessment, utilizing all available data will be conducted.

Table 1: Preliminary Estimated Drinking Water Concentrations for Combined Residues

	Surface Water Acute	Surface Water Chronic	Ground Water
Conservative Assumptions	1449 ppt	1039 ppt	
New Data Only	186 ppt	4.5 ppt	0.061 ppt

Table 2: Preliminary Screening Model Input Parameters

	Surface Water Conservative Assumptions	Surface Water New Data	Ground Water
Application Rate	0.016 lbs./acre	0.016 lbs./acre	0.016 lbs./acre
Number of Applications	1	1	1
Soil K _{oc}	mobile	506	560
Aerobic Soil Half-Life	stable	4.7 days	4.7 days
Aerobic Aquatic Half-Life	stable	9.4 days	NA
Hydrolysis	stable	stable	NA
Aqueous Photolysis	stable	stable	NA

RUN No. 1 FOR cloquintocetmexy defaults ON wheat * INPUT VALUES *

RATE (#/AC) No.APPS & SOIL SOLUBIL APPL TYPE %CROPPED INCORP
ONE(MULT) INTERVAL Koc (PPB) (%DRIFT) AREA (IN)

.016(.016) 1 1 .0 800.0 AERIAL(16.0) 87.0 .0

FIELD AND RESERVOIR HALFLIFE VALUES (DAYS)

METABOLIC DAYS UNTIL HYDROLYSIS PHOTOLYSIS METABOLIC COMBINED
(FIELD) RAIN/RUNOFF (RESERVOIR) (RES.-EFF) (RESER.) (RESER.)

.00 2 N/A .00- .00 .00 .00

UNTREATED WATER CONC (MICROGRAMS/LITER (PPB)) Ver 1.0 AUG 1, 2001

PEAK DAY (ACUTE) ANNUAL AVERAGE (CHRONIC)
CONCENTRATION CONCENTRATION

1.449 1.039

RUN No. 2 FOR cloquintocetmexy new data ON wheat * INPUT VALUES *

RATE (#/AC) No.APPS & SOIL SOLUBIL APPL TYPE %CROPPED INCORP
ONE(MULT) INTERVAL Kd (PPB) (%DRIFT) AREA (IN)

.016(.016) 1 1 560.6 800.0 AERIAL(16.0) 87.0 .0

FIELD AND RESERVOIR HALFLIFE VALUES (DAYS)

METABOLIC DAYS UNTIL HYDROLYSIS PHOTOLYSIS METABOLIC COMBINED
(FIELD) RAIN/RUNOFF (RESERVOIR) (RES.-EFF) (RESER.) (RESER.)

4.70 2 N/A .00- .00 9.40 9.40

UNTREATED WATER CONC (NANOGRAMS/LITER (PPT_r)) Ver 1.0 AUG 1, 2001

PEAK DAY (ACUTE) ANNUAL AVERAGE (CHRONIC)
CONCENTRATION CONCENTRATION

185.858 4.457

SCIGROW
VERSION 2.3
ENVIRONMENTAL FATE AND EFFECTS DIVISION
OFFICE OF PESTICIDE PROGRAMS
U.S. ENVIRONMENTAL PROTECTION AGENCY
SCREENING MODEL
FOR AQUATIC PESTICIDE EXPOSURE

SciGrow version 2.3
chemical:cloquintocetmexy
time is 11/17/2005 12:24:51

Application rate (lb/acre)	Number of applications	Total Use (lb/acre/yr)	Koc (ml/g)	Soil Aerobic metabolism (days)
0.016	1.0	0.016	5.60E+02	4.7

groundwater screening cond (ppb) = 6.10E-05
