067701 VALIDATION SHEET ORP# PAGE ___ OF ___

FORMULATION:			IA	IB	T	FW	EC	R		
% a.i.	SC#	CHEMICAL NAME	Validator: Larry Turner			Date: 8/21/78				
98-99%		Diphacinone	Test Type: Avian acute oral LD_{50} Mallard duck							
		DER #1	Test ID # ES-C1							

CITATION: Fink, Robert. 1976. Acute oral LD_{50} - mallard duck; technical diphacinone, final report. 9 p. Study conducted by Truslow Farms. Submitted by Velsicol Corporation; 576-EUP-35, Acc.# 234422, 7/12/78.

RESULTS: Mallard duck acute oral LD_{50} = 3158 mg/kg (95% c.i. 1605-6211 mg/kg). No mortality occurred at the two lowest levels of 215 and 464 mg/kg; 60% mortality occurred at the highest level of 4640 mg/kg. Toxic symptoms were depression and reduced reaction to external stimuli (sound and movement) at the 1000, 2150, and 4640 mg/kg levels. Food consumption, when compared to controls, was 25% reduced at 215 mg/kg and was 37-47% reduced at all higher levels. Weight gain may also have been lower in treated birds, but this could not be accurately assessed because of the disparity in weights between control and treatment birds.

VALIDATION CATEGORY: Core

CATEGORY RATIONALE: Internal EEEB memo of 3/13/78

ABSTRACT: Mallard ducks were given a single dose by intubation, of diphacinone in concentrations of 0 (control), 215, 464, 1000, 2150, and 4640 mg/kg. Procedures generally followed the proposed guidelines except as noted below:

1. The percent a.i. was not reported. see BW Quail study - same?
2. Birds were only 14 days old.
3. Housing conditions were incompletely reported.
4. Doses were much farther apart than recommended.
5. Post-dosage observation period was only 8 days. when was last death
6. No mention was made that birds were fasted 15 hours before dosing.

The LC_{50} was determined by the method of Litchfield-Wilcoxon. When checked with Finney probit, a similar LC_{50} value of 3098 mg/kg was obtained with an acceptable chi square value.

2028348

Bobwhite dietary LC_{50}
Diphacinone technical
Finney probit

L. Turner
8/18/78

464.	
0.	
10.	
1000.	
1.	
10.	
2150.	
2.	
10.	
4640.	
4.	
10.	
10000.	
10.	
10.	
2.986	M
-5.720	YINT
2.162	LW M
3.783	CHI^2
3893.588	LD50
2694.894	LOCL
5625.463	UPCL
1448.677	LD10
824.313	LOCL
2545.958	UPCL
10464.736	LD90
5522.119	LOCL
19831.282	UPCL

Mallard oral LD_{50}
Diphacinone tech
Finney probit

L. Turner
8/18/78

215.	
0.	
10.	
464.	
0.	
10.	
1000.	
2.	
10.	
2150.	
4.	
10.	
4640.	
6.	
10.	
2.219	M
-2.747	YINT
2.823	LW M
0.901	CHI^2
3097.816	LD50
1783.298	LOCL
5381.300	UPCL
819.101	LD10
411.380	LOCL
1630.918	UPCL
11715.840	LD90
3659.389	LOCL
37509.240	UPCL