US EPA ARCHIVE DOCUMENT

108801 VALIDATION SHEET CRF #_____ PAGE ____ OF ____

FORMULATION:			IA	IB	T	FW	EC	R	
% a.i.	SC #	CHEMICAL NAME	Validator: Labuda					Date: 31 October, 1977	
Tech.		Metolachlor (CGA-24705)	Test Type: Avian Acute Oral LD_{50} (Mallard Ducks)						
			Test ID.# ESC1						

CITATION: Truslow Farms, Inc., Wildlife Research Division Acute Oral LD_{50} - Mallard Ducks, CGA-24705 Technical, Project # 108-117, 19 May, 1976.

RESULTS: (?) LD_{50} ≐ 4640 mg/kg (2398 to 9877 mg/kg)
or

VALIDATION CATEGORY: Core

VALIDATION CATEGORY RATIONALE: N.A.

CATEGORY REPAIRABILITY/RATIONALE: N.A.

% a.i.	SC #	CHEMICAL NAME	Validator:	Date:
Tech.		Metolachlor (CGA-24705)	Labuda	31 Oct 197

Test Type: Avian acute oral LD_{50} (Mallard ducks)

Test ID.# ESC1

CITATION: Truslow Farms, Inc., Wildlife Research Division Acute Oral LD_{50} - Mallard Ducks, CGA-24705 Technical, Project # 108-117, 19 May 1976.

Results: (?) LD_{50} = 1750 mg/kg (1337 to 2289 mg/kg) or 4640 mg/kg (2398 to 9877 mg/kg)

Validation category: Invalid

Validation category rationale: Two sets of conclusions based evidently on the same test, are presented (see "Results").

~~Validation~~ Category repairability/ rationale:

The study is repairable to the core category if the registrant can satisfactorily explain the discrepancy reported above.

Test Species Mallard PROBIT ANALYSIS WORK SHEET Chemical Metolachlor (CGA-247
Source Truslow Farms Incubated Date Tested
o. Period 8 days Analysis by: Fink, Wildlife Toxicol., 19 May 1976
(Name) (Title) (Date)

Concentration	No. dead/ /No. tested	Observed % Mortality	Expected % Mortality	O-E	Contributions to Chi (Nomo #1)
4640 mg/kg	5/10	50	56.0	6	0.015
2150 "	1/10	10	9.0	1	0.0013
1000	6/16	0 (0.10)	0.30	0.20	0.0013
464	0/10	0	0	—	—
215	0/10	0	0	—	—

Total Fish Tested = 30
Number of Doses (K) = 3
Degrees of freedom (K-2) = 1

Total 0.0176
Chi^2 = Total Cont. to Chi X Total fish / K = 0.176
Chi^2 (p=.05) for 1 deg of freedom = 3.84

DETERMINE fLC_{50}:

LC_{84} _____
LC_{50} _____
LC_{16} _____

$S = \frac{LC_{84}/LC_{50} + LC_{50}/LC_{16}}{2}$ = _____

N'(Fish used between 16% and 84% E) = _____
$\sqrt{N'}$ = _____

$fLC_{50} = S^{2.77/\sqrt{N'}}$ = S _____ (Nomo. #2) = _____

DETERMINE fS:

R (Largest/Smallest dose plotted) _____
S (As determined above) _____
A (Nomo. #3 using R and S) _____

$fS = A^{10(K-1)/K\sqrt{N'}}$ = A _____ (Nomo. #2) = _____

DETERMINE fLC_y:

$(fS)^x = fS^{2.33 \text{ or } 1.30}$ (Table 3 and Nomo. #2) = _____

fLC_y (Nomo. #4 using $(fS)^x$ and fLC_{50}) = _____

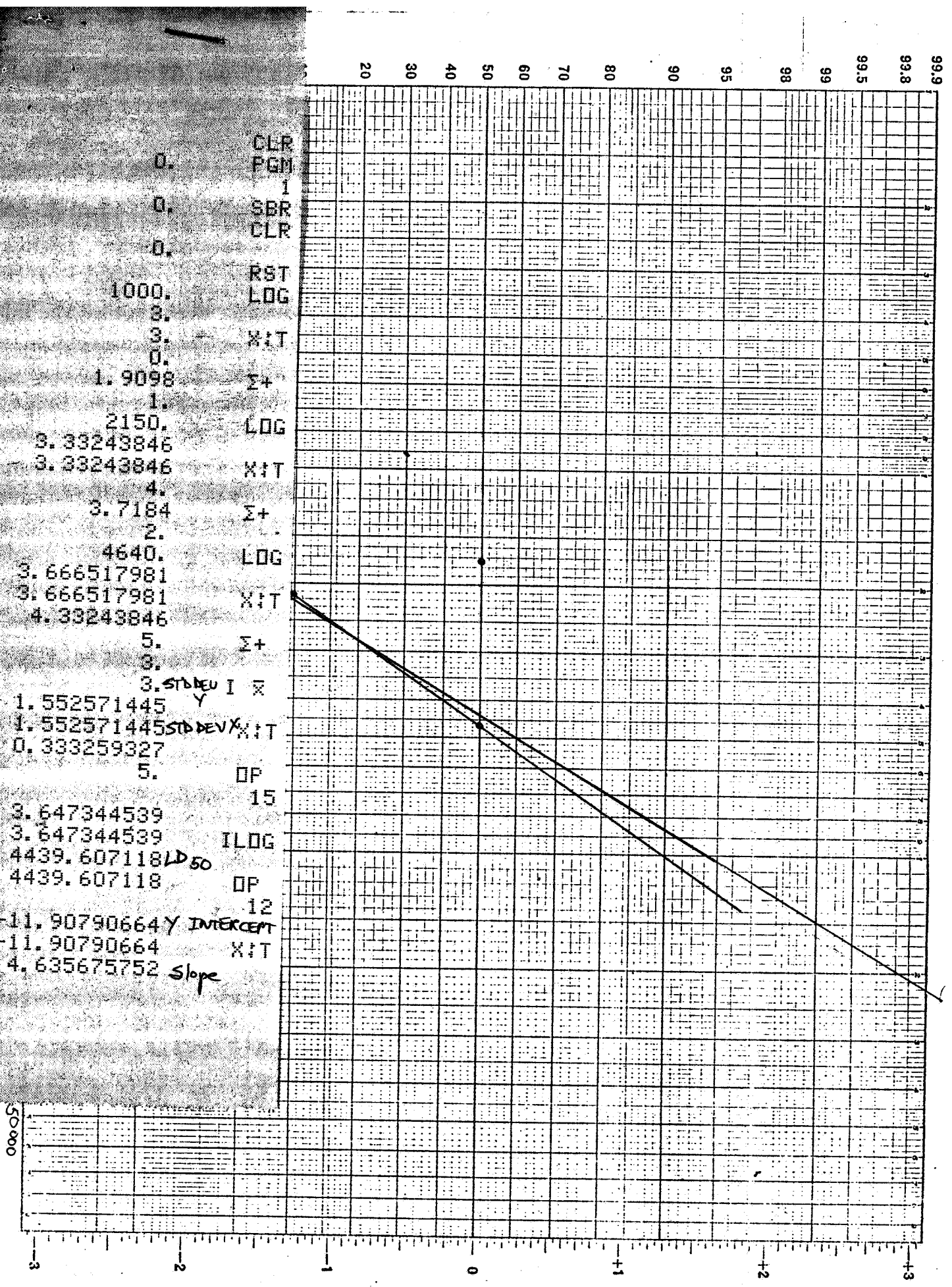
RESULTS (LC_x and Confidence Limits at p = .05):

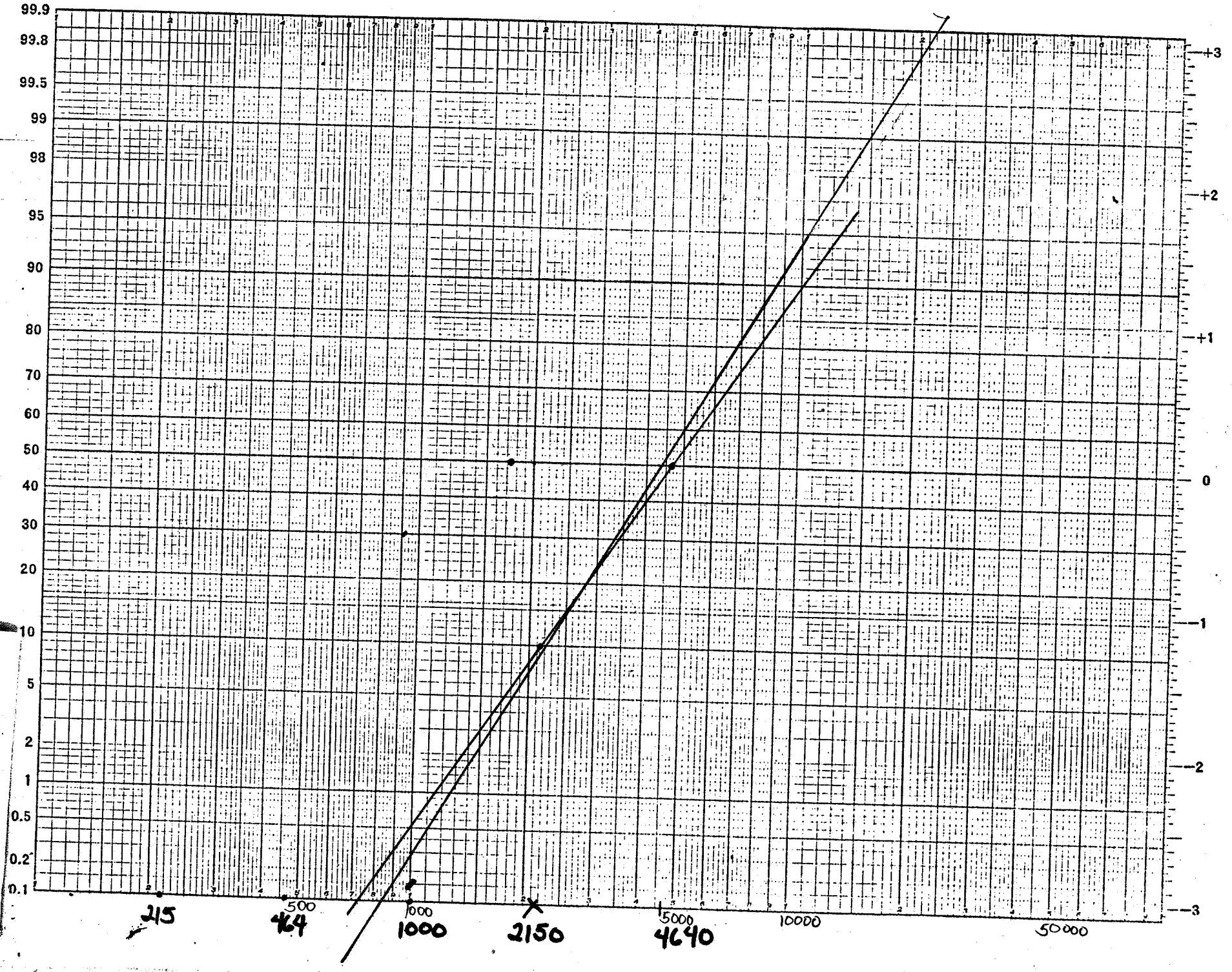
LC_1 = _____
Lower Limit (LC_1/LC_y) _____
Upper Limit (LC_1 X LC_y) _____

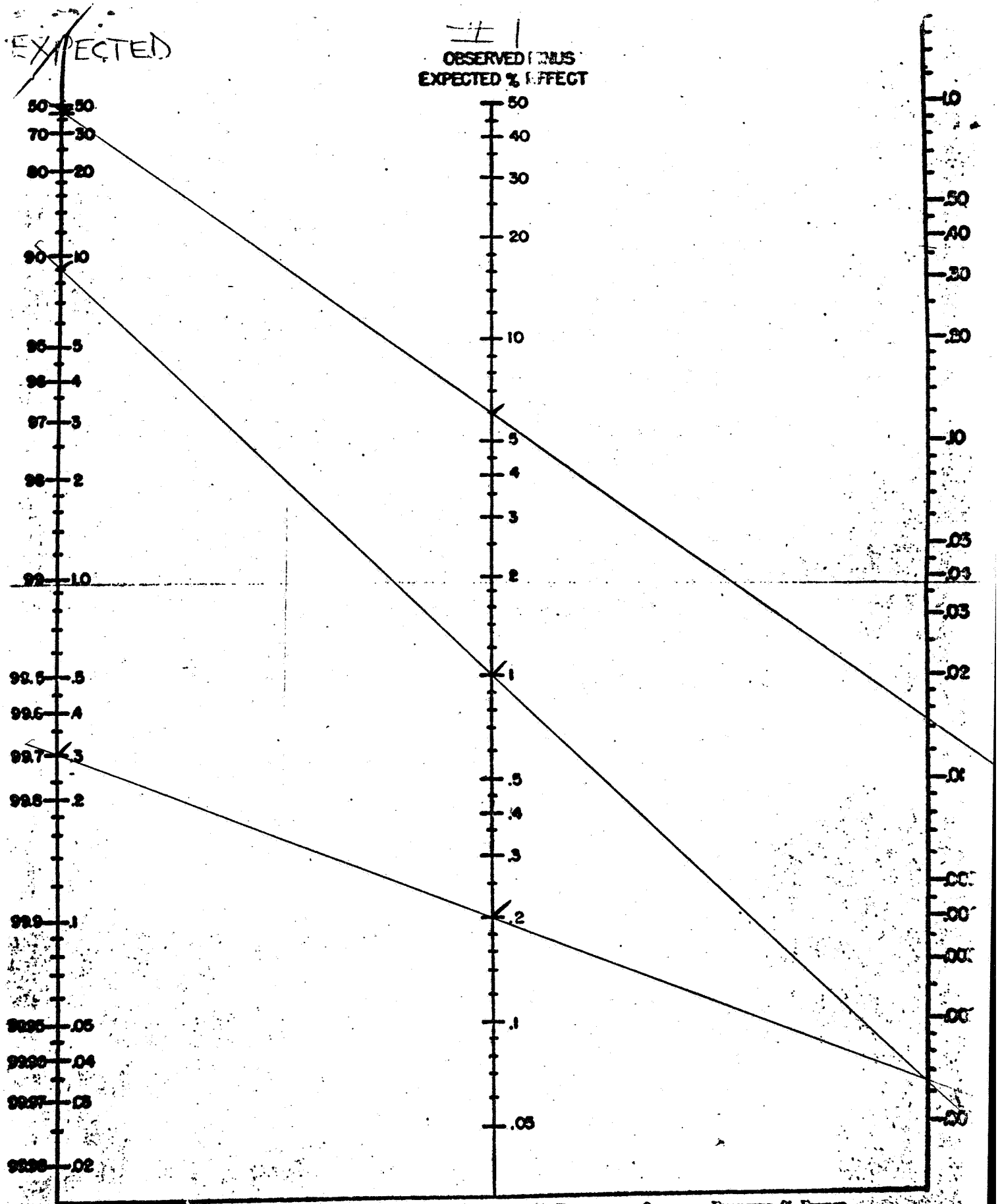
LC_{50} = _____
Lower Limit (LC_{50}/fLC_{50}) _____
Upper Limit (LC_{50} X fLC_{50}) _____

LC_{99} = _____
Lower Limit (LC_{99}/LC_y) _____
Upper Limit (LC_{99} X LC_y) _____

	CLR
0.	PGM
	1
0.	SBR
	CLR
0.	
	RST
1000.	LOG
3.	
3.	X:T
0.	
1.9098	Σ+
1.	
2150.	LOG
3.33243846	
3.33243846	X:T
4.	
3.7184	Σ+
2.	
4640.	LOG
3.666517981	
3.666517981	X:T
4.33243846	
5.	Σ+
3.	
3.	STDDEV I $\bar{x}$
1.552571445	Y
1.552571445	STDDEV X X:T
0.333259327	
5.	OP
	15
3.647344539	
3.647344539	ILOG
4439.607118	LD_{50}
4439.607118	OP
	12
-11.90790664	Y INTERCEPT
-11.90790664	X:T
4.635675752	Slope




99.9
99.8
99.5
99
98
95
90
80
70
60
50
40
30
20
10
5
2
1
0.5
0.2
0.1
+3
+2
+1
0
-1
-2
-3
500
1000
5000
10000
50000
215
464
1000
2150
4640



No. 1. Nomograph for Obtaining (Chi)² from Expected % Effect and Observed-Expected % Effect