US ERA ARCHIVE DOCUMENT

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R	٥	C	0	7	a		No.

Review No.	•
009901	
Shaughnessey	No.

EEB REVIEW

DATE: IN NOVEMBEL 8, 1989 OUT DECEMBER 26, 1989			
FILE OR REG. NO. <u>56228-10</u>			
PETITION OR EXP. NO.			
DATE OF SUBMISSION October 6, 1989			
DATE RECEIVED BY EFED <u>November 7, 1989</u>			
RD REQUESTED COMPLETION DATA December 26, 1989			
EEB ESTIMATED COMPLETION DATE <u>December 26, 1989</u>			
			
RD ACTION CODE/TYPE OF REVIEW 325			
TYPE PRODUCTS(S): I, D, H, F, N, R, S Avicide			
MRID NO(S). 412672-01, -02, -03 and -04			
PRODUCT MANAGER NO. <u>Wm Miller, PM#16, Steve Palmateer 557-440</u>	8_		
PRODUCT NAME(S) <u>Starlicide, Compound DRC-1339</u>			
COMPANY NAME <u>USDA, Animal and Plant Health Inspection Service</u>			
SUBMISSION PURPOSE Proposed registration of feedlot use			
TIOPOSCA TEGISCIACION OF TECATOR ASS			
	-		
SHAUGHNESSEY NO. CHEMICAL AND FORMULATION % A.I.			
009901 DRC-1339, Technical grade 98.8%			



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

OFFICE OF
PESTICIDES AND TOXIC SUBSTANCES

MEMORANDUM

Subject: Review of a submission to meet the guideline data

requirements for Starlicide.

From: My James W. Akerman, Chief

Ecological Effects Branch

Environmental Fate and Effects Division (H7507C)

To: William Miller

Insecticide and Rodenticide Branch Product Management Team Number 16 Registration Division (H7505C)

The Ecological Effects branch has reviewed the submission by the Animal and Plant Health Inspection Service of the U.S. Department of Agriculture to meet the guideline requirement to register Starlicide (3-chloro-4-methylbenzenamine HCl) for feedlot uses. The submission consisted of published papers, research reports and miscellaneous data sheets on work done by the Denver Wildlife Research Center (none of which was done specifically to satisfy registration requirements).

FIFRA requires that a registrant inform EPA of any adverse information that it has about a chemical that it wishes to register; this submission does fulfil that requirement.

Since the reports do not contain enough information about the individual tests, do not present the raw data and because the experimenters used many nonstandard animals, this submission does not fulfil the Guideline Requirements for an avian acute toxicity, avian dietary toxicity, aquatic invertebrate toxicity or freshwater fish toxicity. The experiments must be done and the research reports submitted. The information on nonstandard species is of interest and could be used in evaluating an application for an Experimental Use Permit. Please contact Dr. James Goodyear (557-7726) if you have any questions.

009901 Shaughnessy No.

Data Evaluation Record STARLICIDE

Aquatic Invertebrate Toxicity Test

GUIDELINE N	NUMBER: <u>72-2</u>		
CITATION:		And the second of the second o	-
3-chloro-4-methylt	enzenamine Hydroch		om toxicity data for the chemical 0; CPTH). USDA, APHIS, T&S, ol. 5. MRID No. 412672-04.
REASON FOR	SUBMISSION:		
Submitted to supp	ort the registration o	f feedlot uses of Starlicide.	
RESULTS-	Valid	Invalid X	Incomplete
GUIDELINE-	Satisfied	Partially Satisfied	Not Satisfied X
DISCUSSION:			
that it wishes to a enough information paper does not for nonstandard speci-	register; this paper do on about the individua ulfil the guideline re	pes fulfil that requirement. So tests and because many nor quirements for a invertebrate ould be used in evaluating an	stion that it has about a chemical Since the reports do not contain astandard animals were used, this e toxicity. The information on application for an Experimental
REVIEWED B	SY:		
James J. Goodyea Biologist, Section Ecological Effects Environmental Fa	1 Branch	Signature:	Dec 22 1989
	te and Lifeets Divisio	on (H7507C)	

009901 Shaughnessy No.

Data Evaluation Record STARLICIDE

Aquatic Invertebrate Toxicity Test

GUIDELINE N	NUMBER: <u>72-2</u>		
CITATION:	udustica de consta de como e e en producero e e e e e e e e e e e e e e e e e e	And the state of t	
hydrochloride to s in, Knittle, C.E. 1 3-chloro-4-methyll	hrimp and crabs. Bu 989. Summary of cu penzenamine Hydroc	ill. Environm. Contam. Toxico rrently available aquatic organ	3-chloro-4-methyl Benzenamine l. 21:643-651. DWRC No. 12400. ism toxicity data for the chemical 9; CPTH). USDA, APHIS, T&S, ol. 5. MRID No. 412672-04.
REASON FOR	SUBMISSION:		
Submitted to supp	oort the registration	of feedlot uses of Starlicide.	
RESULTS-	Valid	Invalid X	Incomplete
GUIDELINE-	Satisfied	Partially Satisfied	Not Satisfied X
DISCUSSION:		The state of the s	
following faults we uniform size and a commercial mix concentrations we	ere found: 1) the su condition, 2) the che ture, 3) the pH and or re too widely spaced	bjects were purchased from a emical medium was not specificather conditions of the study was, 5) the confidance intervals w	e experiment was conducted, the live bait dealer and were not of iced other than to say that it was were not included, 4) the toxicant ere not calculated, 6) two species ent of the control animals died.
REVIEWED E	BY:		
James J. Goodyea Biologist, Section Ecological Effects Environmental Fa	1	Signature:Date:	pecember 22,1989
APPROVED E	BY:		\
Raymond W. Mat Head, Section 1 Ecological Effects	Branch	Date:_	Demin fle fax 12-22-89
Environmental Fa	ite and Effects Divisi	ion (H/SU/C)nypn	

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009901 Shaughnessy No.

Data Evaluation Record STARLICIDE

Aquatic Invertebrate Toxicity Test

GUIDELINE NUMBER: 72	2-2	
CITATION:	A Control of the second of	
organisms. Bull. Environ. Conta Summary of currently available methylbenzenamine Hydrochlorid	er, Jr. 1981. Toxicity of six birds m. Toxicol. 26:705-716. DWRC No. e aquatic organism toxicity data e (Compound DRC-1339; CPTH). blished Special Report. Vol. 5. MR	. 145. in, Knittle, C.E. 1989. for the chemical 3-chloro-4- USDA, APHIS, T&S, Denver
REASON FOR SUBMISSION	DN:	
Submitted to support the registra	tion of feedlot uses of Starlicide.	
RESULTS- Valid	Invalid X	Incomplete
GUIDELINE- Satisfied	Partially Satisfied	Not Satisfied X
DISCUSSION:		
explanations are given for all of Daphnia magna and CPTH, e.g., it isn't stated which was used for of solvent, 3) the existence of concentration of CPTH at 24- ar	vas Daphnia magna, but many chemicals the species-chemicals tested without the chemicals tested were dissolved in CPTH. Other information is omitted; controls and solvent controls, 4) that 48-hours, 5) the pH, 6) D.O., 7) the pH is submission does not meet the guident	at specifying what was done to in either water or acetone, but 1) the raw data, 2) the amount the method of determining the the dose and 8) the number of
REVIEWED BY:		
James J. Goodyear Biologist, Section 1 Ecological Effects Branch Environmental Fate and Effects 1	Signature:	rec 22,1989
APPROVED BY:	٨	. 47
Raymond W. Matheny Head, Section 1		Ju few
Ecological Effects Branch Environmental Fate and Effects		12-22-89

009901 Shaughnessy No.

Data Evaluation Record STARLICIDE

Freshwater Fish Acute Toxicity Test

GUIDELINE N	IUMBER: <u>72-1</u>		
CITATION:	grammanya , , , , , , , , , , , , , , , , , , ,	yang ay gayay - Arabanan ayan 1911	
chloro-4-methylber	nzenamine hydrochloric	y available toxicity data to de (Compound DRC-1339 blished Special Report Vo	freshwater fish for the chemical 3- 2; CPTH). USDA, APHIS, S&T, ol. 4 MRID 412672-03.
REASON FOR	SUBMISSION:		
Support registration	on of feedlot use.		
RESULTS-	Valid	Invalid X	Incomplete
GUIDELINE-	Satisfied	Partially Satisfied	Not Satisfied X
DISCUSSION:		,	
Wildlife Research FIFRA requires the that it wishes to renough infirmation	Center and the other on the aregistrant inform legister; this paper does not about the individual lfil the guideline requires	n work done by the LaCro EPA of any adverse inform as fulfil that requirement. tests and because many n	"; one on work done by the Denver use Fisheries Research Laboratory. In that it has about a chemical Since the reports do not contain onstandard animals were used this sh acute toxicity. The two papers
REVIEWED B	Y:		
James J. Goodyea Biologist, Section Ecological Effects Environmental Fa	1	Signature:Date:	Dec 22, 1989
APPROVED B	SY:	^	
Raymond W. Mat Head, Section 1 Ecological Effects Environmental Fa	•	Signature: Date:_ 1 (H7507C)	

O09901 Shaughnessy No.

Data Evaluation Record STARLICIDE

Freshwater Fish Acute Toxicity Test

lished report. US 2574. in, Knittle chemical 3-chloro	SFWS, National Fis c, C.E. 1989. Summ -4-methylbenzenamin	heries Research Laboratory. L ary of currently available toxicit	at 12° C. Table 6 from unpubaCrosse. WI. 1 p. DWRC No. by data to freshwater fish for the C-1339; CPTH). USDA, APHIS, t, Vol. 4. MRID 412672-03.
REASON FOR	R SUBMISSION:		
Support registrati	ion of feedlot use.		
RESULTS-	Valid	Invalid X	Incomplete
GUIDELINE-	Satisfied	Partially Satisfied	Not Satisfied X
DISCUSSION:	:		
There is no mean of miscellaneous,	improperly recorded	h this submission could be calle	d a paper or a study. It is a bit
have approved its sunfish study is su are mistakes that no details about	upossed to have occur LaCrosse would never	ted manner. It is a single sheet rred at 12° C and the abbreviation or make: the attribution cannot experiment. The submission	with incorrect data on it. The on ppm is listed as p.p.m. These be accepted. The paper contains
have approved its sunfish study is su are mistakes that no details about	LaCrosse would never the condition of the eshwater fish acute t	ted manner. It is a single sheet rred at 12° C and the abbreviation or make: the attribution cannot experiment. The submission	Research Laboratory would never twith incorrect data on it. The on ppm is listed as p.p.m. These be accepted. The paper contains does not meet the guideline re-
have approved its sunfish study is su are mistakes that no details about quirements for fr REVIEWED I James J. Goodyea Biologist, Section Ecological Effects	LaCrosse would never the condition of the eshwater fish acute to BY:	ated manner. It is a single sheet red at 12° C and the abbreviation of make: the attribution cannot be experiment. The submission existing. Signature: Date:	with incorrect data on it. The on ppm is listed as p.p.m. These be accepted. The paper contains
have approved its sunfish study is su are mistakes that no details about quirements for fr REVIEWED I James J. Goodyea Biologist, Section Ecological Effects	LaCrosse would never the condition of the eshwater fish acute to BY: ar ar b 1 b Branch ate and Effects Division	ated manner. It is a single sheet red at 12° C and the abbreviation of make: the attribution cannot be experiment. The submission existing. Signature: Date:	with incorrect data on it. The on ppm is listed as p.p.m. These be accepted. The paper contains does not meet the guideline re-

009901 Shaughnessy No.

Data Evaluation Record STARLICIDE

Freshwater Fish Acute Toxicity Test

GUIDELINE 1 CITATION:	NUMBER: <u>72-1</u>	yeary of the state	a a andre graphy of the andre and a second
Cope, O.B. 1965. Department of th DWRC No. 1965. fish for the chem	e Interior. Fish and in, Knittle, C.E. 19 ical 3-chloro-4-methy	Wildlife Service Circular No. 1 189. Summary of currently available (ticides of Fish and Wildlife. US 226., Wash., DC pp. 51 to 63. ilable toxicity data to freshwater Compound DRC-1339; CPTH). I Special Report Vol. 4 MRID
REASON FOR	R SUBMISSION:		
To support propo	sed registration of fe	edlot use.	
RESULTS-	Valid	Invalid	Incomplete X
GUIDELINE-	Satisfied	Partially Satisfied	Not Satisfied X
DISCUSSION:			
The paper does no	ot give any detailed in	but, instead, an more general formation about the experimen il the guideline requirements f	compilation of pesticide results. tal conditions and uses nonstandor a avian acute toxicity.
REVIEWED I	BY:		
James J. Goodyea Biologist, Section Ecological Effects Environmental Fa	11	Date:	er Boodyean
APPROVED I	3Y:		
Raymond W. Mar Head, Section 1 Ecological Effects		Signature:	, , , , , , , , , , , , , , , , , , ,
Environmental Fa	ate and Effects Divisi	on (H7507C)	

009901	
Shaughnessy	No.

Data Evaluation Record STARLICIDE

GUIDELINE NUMBER	R: <u>71-2</u>		
CITATION:			
Knittle, C.E. 1989. Summa chloro-4-methylbenzenamine Denver Wildlife Research C	Hydrochloride (Compo	und DRC-1339;	oxicity data for the chemical 3- CPTH). USDA, APHIS, T&S . 3. MRID No. 412672-02.
REASON FOR SUBMI	SSION:		
Submitted to support the re	gistration of feedlot uses	s of Starlicide.	
RESULTS- Valid	Invalid _	X	Incomplete
GUIDELINE- Satisfied	Partially	Satisfied	Not Satisfied X
DISCUSSION:			
that it wishes to register; the enough information about a because APHIS did not calchave included in this submiss toxicity. The information of application for an Experiment	nis paper does fulfil that the individual tests, becaulate a median lethal di sion, this paper does not on nonstandard species is ntal Use Permit. Some of sub-LD ₅₀ every day, as the	t requirement. Sincuse many nonst etary (LC ₅₀) in arguifulfil the guideling s of interest and of the papers calculation the papers calculation.	ion that it has about a chemical ince the reports do not contain andard animals were used and many of the eight studies that there is requirements for avian dietary could be used in evaluating an alate the number of days it take ant wanted to show that chroniced briefly.
REVIEWED BY:		,	in 1
James J. Goodyear Biologist, Section 1 Ecological Effects Branch Environmental Fate and Eff			er Beodyeon Dec 26, 1989
APPROVED BY: Raymond W. Matheny Head, Section 1 Ecological Effects Branch Environmental Fate and Eff		Signature:	19. Vailizis

009901 Shaughnessy No.

Data Evaluation Record STARLICIDE

GUIDELINE N	NUMBER: <u>71-2</u>	<u></u>	
CITATION:	y agental a language agenties	And the second s	
nonhazardous to Center. DRC No. data for the chem	ducks. Rept. to 226. in, Knittle, aical 3-chloro-4-me	Diluting DRC-1339-treated pellets Files: B(B1) and B6.3 (F9) DRC- C.E. 1989. Summary of currently a ethylbenzenamine Hydrochloride (C fe Research Center. Unpublished S	1339. USFWS, Denver Wildl. available avian chronic toxicity Compound DRC-1339; CPTH).
REASON FOR	SUBMISSION	[:	
Submitted to supp	oort the registration	on of feedlot uses of Starlicide.	
RESULTS-	Valid	Invalid X	Incomplete
GUIDELINE-	Satisfied	Partially Satisfied	Not Satisfied X
DISCUSSION:			
added in pen. The tions levels. The lethal concentrati	e subjects were for levels were too wid	on "ducks" without noting their specur reproductive adults. There were lely spaced. The registrant did not a vian dietary study. This submissionity.	n't enough ducks or concentra- attempt to calculate the median
REVIEWED E	BY:		
James J. Goodyea Biologist, Section Ecological Effects Environmental Fa	1	Signature: <u>fame</u> Date: D vision (H7507C)	r Bedyens Le 26, 1989
APPROVED I	BY:		1/4
Raymond W. Mat Head, Section 1 Ecological Effects		Signature:	9. Milyzin 12/20/89
U	ite and Effects Div	vision (H7507C)	1

009901 Shaughnessy No.

Data Evaluation Record STARLICIDE

		THE COURS						
GUIDELINE NUMBER: 71-2								
	CITATION:							
	Ford, H.S. 1967. Winter starling control in Idaho, Nevada, and Oregon. Proc. 3 rd Vertebr. Pes Contrl. Conf., San Francisco, CA pp 104-110. DWRC No. 1047. in, Knittle, C.E. 1989. Summary of currently available avian chronic toxicity data for the chemical 3-chloro-4-methylbenzenamine Hydrochloride (Compound DRC-1339; CPTH). USDA, APHIS, T&S, Denver Wildlife Research Center Unpublished Special Report. Vol. 3. MRID No. 412672-02.							
	REASON FOR	SUBMISSION:						
	Submitted to supp	oort the registration of	feedlot uses of Starlic	ide.				
	RESULTS-	Valid	Invalid X	Incomplete	Incomplete			
	GUIDELINE-	Satisfied	Partially Satisfied _	Not Satisfied _	<u>X</u>			
	DISCUSSION:							
This is the transcript of an oral presentation on Starlicide. It contains much interesting backgro material and some mention of secondary hazards, but it does not present any research evidence avian dietary toxicity. The registrant did not attempt to calculate the median lethal concentrate (LC ₅₀) for an avian dietary study. This submission does not fulfil the guideline requirements for avidetary toxicity.								
	REVIEWED B	SY:						
	James J. Goodyea Biologist, Section Ecological Effects Environmental Fa	1	Da	James Boodyson ate: 1982 26, 1989				
71	APPROVED B Raymond W. Math Head, Section 1 Ecological Effects	heny Branch	- ·	12/26/89				
	Environmental Fa	te and Effects Division	(H/50/C)	<i>'</i>				

009901 Shaughnessy No.

Data Evaluation Record STARLICIDE

009901 Shaughnessy No.

Data Evaluation Record STARLICIDE

GUIDELINE N	UMBER: <u>71-2</u>			s.			
CITATION:							
Peoples, S.A. and J.P. Henry. 1964. The use of toxicants in starling control. Joint Prog. Rept., Univ. Calif. Agric. Expt. Sta., USFWS, Wash., DC and Calif. Dept. Agric. pp 15-16. DWRC No. 5123. in, Knittle, C.E. 1989. Summary of currently available avian chronic toxicity data for the chemical 3-chloro-4-methylbenzenamine Hydrochloride (Compound DRC-1339; CPTH). USDA, APHIS, T&S, Denver Wildlife Research Center. Unpublished Special Report. Vol. 3. MRID No. 412672-02.							
REASON FOR	SUBMISSION:						
Submitted to supp	ort the registration of fe	edlot use:	of Sta	rlicide.			
RESULTS-	Valid	Invalid _	X		Incomplete		
GUIDELINE-	Satisfied	Partially	Satisfie	d	Not Satisfied X		
DISCUSSION:							
did not attempt to		ethal conc	entratio	n (LC ₅₀) for an	Starlings. The registrant avian dietary study. The city.		
REVIEWED B	Y:						
James J. Goodyear Biologist, Section 1 Ecological Effects Branch Environmental Fate and Effects Division (H7507C) Signature: famer Broodyear Date: fee 26, 1989							
APPROVED B Raymond W. Math Head, Section 1 Ecological Effects Environmental Fac	neny		ignatur	e: <u>ng,</u> Date:	//utungn 2/26/89		

009901 Shaughnessy No.

Data Evaluation Record STARLICIDE

GUIDELINE N	IUMBER: <u>71-2</u>		,
CITATION:	Alexandra and Al		The transmission of the tr
pp. DWRC No. 16 data for the chem	ech. Rept. No. 2, We 0091. <i>in</i> , Knittle, C. ical 3-chloro-4-meth	ork unit DF-102.2. USFWS, De E. 1989. Summary of currently ylbenzenamine Hydrochloride (y of DRC-1339 to unmated and enver Wildl. Research Center. 3 y available avian chronic toxicity (Compound DRC-1339; CPTH). Special Report. Vol. 3. MRID
REASON FOR	SUBMISSION:		
Submitted to supp	ort the registration	of feedlot uses of Starlicide.	
RESULTS-	Valid	Invalid X	Incomplete
GUIDELINE-	Satisfied	Partially Satisfied	Not Satisfied X
DISCUSSION:			
some of which hat and then killed the	ched. The daily feed ir offspring. The reg avian dietary study.	ding of sub-LD ₅₀ doses of Starligistrant did not attempt to calcul	They produced clutches of eggs, icide eventually killed the adults late the median lethal concentral the guideline requirements for
REVIEWED B	BY:		
James J. Goodyea Biologist, Section Ecological Effects Environmental Fa	1	Date:	Der 26, 1989
APPROVED B		a /b	ig. Vailings
Raymond W. Mat Head, Section 1	heny	Signature:	J. marks
Ecological Effects	Branch te and Effects Divis	Date: ion (H7507C)	12/26/89

009901 Shaughnessy No.

Data Evaluation Record STARLICIDE

GUIDELINE NUMBER: 71-2	,					
CITATION:	The state of the s	and the state of t				
Schafer, E.W., Jr. and D.J. Cunningham. 1965. The chronic toxicity of DRC-1339 to starlings. Rept. to File:B(P9) DRC-1339. USFWS, Denver Wildl. Research center. 3 pp. DWRC No. 2420. in, Knittle, C.E. 1989. Summary of currently available avian chronic toxicity data for the chemical 3-chloro-4-methylbenzenamine Hydrochloride (Compound DRC-1339; CPTH). USDA, APHIS, T&S, Denver Wildlife Research Center. Unpublished Special Report. Vol. 3. MRID No. 412672-02.						
REASON FOR SUBMISSION:						
Submitted to support the registration of feed	lot uses of Starlicide.					
RESULTS- Valid In	nvalid X	ncomplete				
GUIDELINE- Satisfied P	artially Satisfied l	Not Satisfied X				
DISCUSSION:						
The study used adult Starlings, a nonstandard species, in feeding tests to determine the "Average death time" for six concentration levels. Each level was only 50% of the next highest level. Two of the six levels induced emesis, therefore, there were only four effective levels. The registrant did not attemp to calculate the median lethal concentration (LC ₅₀) for an avian dietary study. The submission does not fulfil the guideline requirements for avian dietary toxicity.						
REVIEWED BY:		,				
James J. Goodyear Biologist, Section 1 Ecological Effects Branch Environmental Fate and Effects Division (H7	Signature: <u>fames</u> Date: <u>Dec</u> 7507C)					
APPROVED BY: Raymond W. Matheny Head, Section 1 Ecological Effects Branch Environmental Fate and Effects Division (H	Signature:	Vaitings 12/26/83				

009901 Shaughnessy No.

Data Evaluation Record STARLICIDE

GUIDELINE N	NUMBER: <u>71-2</u>		
CITATION:			
DRC-1339 to star 102.2. USFWS, E Summary of curre amine Hydrochlor	lings, pheasants, pig Denver Wildl. Resear ntly available avian ide (Compound DRO	geons, and Bobwhite quail. Te rch Center. 9 pp. DWRC No chronic toxicity data for the cl	er. 1970. The chronic toxicity of ch Rept. No. 18, Work Unit DF-10. 10107. in, Knittle, C.E. 1989. hemical 3-chloro-4-methylbenzens, T&S, Denver Wildlife Research 192.
REASON FOR	SUBMISSION:		
Submitted to supp	ort the registration	of feedlot uses of Starlicide.	
RESULTS-	Valid	Invalid X	Incomplete
GUIDELINE-	Satisfied	Partially Satisfied	Not Satisfied X
DISCUSSION:			
diets with varying birds were adults, study had enough higher level and registrant did not	concentrations of St there were no replication levels of concentrations there was no raw cattempt to calculate	tarlicide. Their average "time t cates, the groups did not conta tion of Starlicide, the levels we data presented that could be	I were divided into groups and fed to death" was recorded. All of the in enough birds, only the Starling ere only 10% to 50% of the next used to calculate an LC ₅₀ . The n (LC ₅₀) for an avian dietary study. dietary toxicity.
REVIEWED E	BY:		
James J. Goodyea Biologist, Section Ecological Effects Environmental Fa	1 ,	Date:_	nor Bedgar Dec 22, 1989
APPROVED E	BY:		1 1
Raymond W. Mat Head, Section 1 Ecological Effects	•	Signature: Date:	3. g. Vaiturs 12/26/89

009901	
Shaughnessy	No.

Data Evaluation Record STARLICIDE

GUIDELINE N	NUMBER: <u>71-2</u>		
CITATION:			
3-chloro-4-methylt 12280. in, Knittl chemical 3-chloro-	benzenamine HCl to bir le, C.E. 1989. Summa 4-methylbenzenamine H	ds. Arch. Environm. Cont try of currently available a Hydrochloride (Compound	yer. 1977. The chronic toxicity of am. Toxicol. 6:241-248. DWRC No. avian chronic toxicity data for the DRC-1339; CPTH). USDA, APHIS, t. Vol. 3. MRID No. 412672-02.
REASON FOR	SUBMISSION:		
Submitted to supp	oort the registration of	feedlot uses of Starlicide.	
RESULTS-	Valid	Invalid X	Incomplete
GUIDELINE-	Satisfied	Partially Satisfied	Not SatisfiedX
DISCUSSION:		•	
mitted as "The ch Tech Rept. No. 18 That study was rej- were divided into to death" was rec- contain enough bi 50% of the next h LC ₅₀ ." In this paper 30-day subacute L day LC ₅₀ was 1.0 pless than 100 ppm which EEB could is since they print the	aronic toxicity of DRC B, Work Unit DF-102.2. ected because, "In separagroups and fed diets worded. All of the bird rds, only the Starling staigher level and there we they calculated Kanega C ₅₀ ." They say that, "T ppm. The 28-day LC ₅₀ ." They do not say ho make a calculation. The	2-1339 to starlings, pheasa DWRC No. 10107." and rate studies, Starlings, pheatith varying concentrations is were adults, there were tudy had enough concentrations as no raw data presented as Index of Chronicity, "the The 30-day LC ₅₀ for the for coturnix was 18 ppm we these figures were obtately haven't abandoned their	by the same authors that was sub- ants, pigeons, and Bobwhite quail. reviewed as part of this submission. asants, pigeons, and Bobwhite quail of Starlicide. Their average "time on replicates, the groups did not ation levels, the levels were 10% to that could be used to calculate an e ratio of the acute oral LD ₅₀ to the the starling was 4.7 ppm and the 90- The 30-day LC ₅₀ for pigeons was ined and present no raw data from r "Average Days to Death" criterion ission does not fulfil the guideline
REVIEWED B	BY:		
James J. Goodyea Biologist, Section		Signature:	mer Boodyson
Ecological Effects		Date:	Dec 22, 1989
Environmental Fa	te and Effects Division	(H7507C)	,
APPROVED B	BY:		1/4
Raymond W. Mat	heny	Signature:	ng. Vallego
Head, Section 1 Ecological Effects	Rranch	Date:	12/21/49
•	ite and Effects Division		100

009901 Shaughnessy No.

Data Evaluation Record STARLICIDE

GUIDELINE NUMBER: 71-1						
CITATION:						
in, Knittle, C.E. 1989. Summary of chemical 3-chloro-4-methylbenzenamine S&T, Denver Wildlife Research Center	hydrochloride (Compound DF	RC-1339; CPTH). USDA, APHIS,				
REASON FOR SUBMISSION- 1	Γο support proposed registrati	ion of feedlot use.				
RESULTS- Valid	Invalid X	Incomplete				
GUIDELINE- Satisfied	Partially Satisfied	Not Satisfied X				
DISCUSSION:						
This paper is a list of LD ₅₀ s that were taken from a series of research reports done by the Denver Wildlife Research Center. FIFRA requires that a registrant inform EPA of any adverse information that it has about a chemical that it wishes to register; this paper does fulfil that requirement. Since the reports do not contain enough information about the individual tests and because many nonstandard animals were used (ususally without identifying them to species by scientific name), this paper does not fulfil the guideline requirements for a avian acute toxicity. The information on nonstandard species is of interest and could be used in evaluating an application for an Experimental Use Permit. The individual papers are reviewed briefly.						
REVIEWED BY:						
James J. Goodyear Biologist, Section 1 Ecological Effects Branch Environmental Fate and Effects Division	Date:	Mer Steadyear Pec 22, 1989				
APPROVED BY: Raymond W. Matheny Head, Section 1 Ecological Effects Branch Environmental Fate and Effects Divisi	Signature: Date: on (H7507C)	Gra. Vaiturn 12/21/89				

009901 Shaughnessy No.

Data Evaluation Record STARLICIDE

CITATION:						
Schafer, E.W. 1972. The acute oral wild birds. Toxicology and applied 1989. Summary of currently availab methylbenzenamine hydrochloride (Wildlife Research Center. Unpublis	C No. 12266. in, Knittle, C.E. ata for the chemical 3-chloro-4-					
REASON FOR SUBMISSION	FOR SUBMISSION- To support proposed registration of feedlot use.					
RESULTS- Valid	Invalid X	Incomplete				
GUIDELINE- Satisfied	Partially Satisfied	Not Satisfied X				
DISCUSSION:						
(DRC 1347) and rejected as invalid	This submission is not a study by a summary of other studies. It was submitted in support of CPT DRC 1347) and rejected as invalid in April 1988. Nonstandard species were used, the details of the procedures were not given and there was no raw data. The paper does not meet the guideline requirements for avian acute toxicity.					
REVIEWED BY:		·				
James J. Goodyear	Signatura: La	ner Beodrean				
Biologist, Section 1 Ecological Effects Branch Environmental Fate and Effects Div	Date:	ner Boodypan Dec 22, 1889				
Ecological Effects Branch	ision (H7507C)					
Ecological Effects Branch Environmental Fate and Effects Div	ision (H7507C)	Dec 22, 1889				

009901 Shaughnessy No.

Data Evaluation Record STARLICIDE

Avian Acute Toxicity Test

	GUIDELINE NUMBER: 71-1					
CITATION: Schafer, E.W. and D.J. Cunningham. 1966. Annual Progress Report, Wildlife Research Wo Denver Wildlife Research Center, Chemical and Physical Methods of controlling damage of DWRC No. 11058. in, Knittle, C.E. 1989. Summary of currently available avian single-dLD ₅₀ data for the chemical 3-chloro-4-methylbenzenamine hydrochloride (Compound DF CPTH). USDA, APHIS, S&T, Denver Wildlife Research Center. Unpublished Special Report.						
	REASON FOR	SUBMISSION- To s	upport pro	oposed registra	ation of feedlot use.	
	RESULTS-	Valid	Invalid _	X	Incomplete	
	GUIDELINE-	Satisfied	Partially	Satisfied	Not SatisfiedX	
	DISCUSSION:					
This paper recounts studies on the toxicity of St winged blackbirds (Agelaius phoeniceus), pigeons Grackels and rabbits. A section on dietary toxici experiments done in treating roosts, pastures, feedl with Starlicide to poison crows. It does not give requirement on the avain acut toxicity of Starlicide				crows, House to starlings w s etc. There is	finches (Carpodacus mexicanus), as included. It also reports some a report on the treatment of eggs	
	REVIEWED B	Y:				
	James J. Goodyea: Biologist, Section Ecological Effects Environmental Fa	1		ignature:Date:	mer Beodylar Dec 22, 1889	
	APPROVED B	SY:			·	
B	Raymond W. Mat Head, Section 1 Ecological Effects	Branch			12-22-89	
	Environmental Fa	te and Effects Division	(H7507C)			

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Data Evaluation Record STARLICIDE

GUIDELINE NUMBER: 71-1		
CITATION:	· · · · · · · · · · · · · · · · · · ·	
Schafer, E.W. and D.J. Cunningham. 196 B(P9) DRC-1339. from Denver Wildlife 1989. Summary of currently available a methylbenzenamine hydrochloride (Con Wildlife Research Center. Unpublished	e Research Center files. DRW vian single-dose oral LD ₅₀ dat apound DRC-1339; CPTH).	C No. 2780. in, Knittle, C.E. a for the chemical 3-chloro-4-
REASON FOR SUBMISSION- TO	support proposed registration	n of feedlot use.
RESULTS- Valid	Invalid X	Incomplete
GUIDELINE- Satisfied	Partially Satisfied	Not Satisfied X
DISCUSSION:		
Grackles and House finches (Carpodace details of the experiment are not given the guideline requirement for avian acust	including the dose levels), the	
REVIEWED BY:		
James J. Goodyear Biologist, Section 1 Ecological Effects Branch Environmental Fate and Effects Division	Signature: <u>fame</u> Date: <u>f</u> n (H7507C)	n Scodyear ec 22, 1989
APPROVED BY:	6	/ 9
Raymond W. Matheny	Signature:	lingle here
Head, Section 1 Ecological Effects Branch	Date:	V -
Environmental Fate and Effects Division		<u> </u>

009901 Shaughnessy No.

Data Evaluation Record STARLICIDE

	un (DED				
GUIDELINE N	TUMBER: 71-1	•		<u> </u>	
CITATION:					
hazard potential of Contam. Toxicol. available avian sing	f 998 chemicals to 12:355-382. DW gle-dose oral LD ₅₀ (1339; CPTH). USI	one or more spec RC No. 12445. lata for the chem	cies of wild and do in, Knittle, C.E. ical 3-chloro-4-me	te oral toxicity, repelle omestic birds. Arch. E 1989. Summary of ethylbenzenamine hydro Research Center. Unp	nvironm. currently ochloride
REASON FOR	SUBMISSION	- To support pro	posed registratio	n of feedlot use.	
RESULTS-	Valid	Invalid _	X	Incomplete	
GUIDELINE-	Satisfied	Partially	Satisfied	Not Satisfied	<u>X</u>
DISCUSSION:					
not given. There was reviewe	vas no raw data an d and ruled to be	d the procedures "invalid" in April	were not in according 1988 when it was	nethods for the relevant dance with the guideling s submitted to support dements for avian acute	nes. This the regi-
REVIEWED B	Y:				
James J. Goodyea Biologist, Section Ecological Effects Environmental Fa	1,	S ision (H7507C)	ignature:	ner Goodge	<u></u>
APPROVED B	SY:				
Raymond W. Mat Head, Section 1 Ecological Effects Environmental Fa			ignature:	12-22-89	

009901 Shaughnessy No.

Data Evaluation Record STARLICIDE

GUIDELINE NU	MBER: <u>71-1</u>				
CITATION:					
Various Authors. 196 through 537, 539 thro available avian single-d (Compound DRC-1339 Special Report. Vol. 2	ugh 541 and 547 t lose oral LD ₅₀ data for CPTH). USDA, A	hrough 553 in, Ki or the chemical 3-	nittle, C.E. 198 chloro-4-methyll	 Summary of cur benzenamine hydroch 	rrently Noride
REASON FOR SU	JBMISSION- To	support proposed	registration of	feedlot use.	
RESULTS- Va	lid	Invalid X	· · · · · · · · · · · · · · · · · · ·	Incomplete	
GUIDELINE- Sat	isfied	Partially Satisfi	ed	Not Satisfied X	· · · · ·
DISCUSSION- Co	ntains data sheets	without explana	tions.		
REVIEWED BY:					
James J. Goodyear		Signatu	re: James	Bookson	
Biologist, Section 1	1		Data Da	122 1989	
Ecological Effects Bra Environmental Fate an		(H7507C)	Date: FRE	22,000	
APPROVED BY:			~	44	
Raymond W. Matheny		Signatu	re:	feture	
Head, Section 1	mah		Date: 12 ~	1-22-89	
Ecological Effects Bra Environmental Fate an			Date		

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Data Evaluation Record STARLICIDE

	GUIDELINE N	IUMBER: <u>71-1</u>				v •
	CITATION:					
	Denver Wildlife R Document No. 110 LD ₅₀ data for the	D.J. Cunningham. 196 Research Center, Chem 064. <i>in</i> , Knittle, C.E. 1 e chemical 3-chloro-4- APHIS, S&T, Denver W	ical and Physic 989. Summary methylbenzena	cal Methods of c of currently ava mine hydrochlori	ontrolling damage ilable avian single de (Compound D	by birdsdose oral ORC-1339;
	REASON FOR	SUBMISSION- To	support propo	sed registration o	of feedlot use.	
	RESULTS-	Valid	Invalid>	<u> </u>	Incomplete	
	GUIDELINE-	Satisfied	Partially Sat	isfied	Not Satisfied	_X
	DISCUSSION:					
	subjects, including Guinea pig, mice, s the later species at birds to assess the Mourning doves, C winged teal, Malla Only one of these it to meet a guide reported, including	ns brief reports of the reg Red-winged blackbirds sheep, cats, rabbits, chief re probably the laborate hazard to nontarget specific duck, Pin-tail duck, birds is of a standard seline requirement. Sever g observations on second they do not meet the grant of the property	ds (Agelaius pheckens and dogs ory species). To pecies, including the quail, Black of Cooper's haw species and not eral cattle feed dary hazards.	toeniceus), Starling (DWRCD does not be acute LC ₅₀ was go Starlings, red-verbilled magpie, Black and the Sparrough detailed lot and turkey factors.	ngs (Sturnus vulga ot identify animals is determined for a vinged blackbirds, ue jay, House spar ow hawk (Americal information was gi rm baiting experime of use when DWI	to species, variety of pheasants, row, Blue- n kestrel). iven about nents were
	REVIEWED B	Y:				
	James J. Goodyea Biologist, Section Ecological Effects Environmental Fa	1			er Boodyes	
	APPROVED B	BY:		^	•	
Son	Raymond W. Mat Head, Section 1 Ecological Effects Environmental Fa			ature:	Me22-89	

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Shaughnessy	No.

Data Evaluation Record STARLICIDE

GUIDELINE I	NUMBER: <u>71-1</u>	_	
CITATION:			ing near the property of the p
Work Unit, Denv by birds. Docume dose oral LD ₅₀ da	er Wildlife Researd nt No. 11059. <i>in</i> , lata for the chemical	ch Center, Chemical and Physic Knittle, C.E. 1989. Summary I 3-chloro-4-methylbenzenamine	Progress Report, Wildlife Research cal Methods of controlling damage of currently available avian single-e hydrochloride (Compound DRC-nter. Unpublished Special Report.
REASON FOR	R SUBMISSION	- To support proposed registra	ation of feedlot use.
RESULTS-	Valid	Invalid X	Incomplete
GUIDELINE-	Satisfied	Partially Satisfied	Not Satisfied X
DISCUSSION:			
turkeys, and spa experiments done	rrow hawks (i.e., 1 on secondary haz	the American kestrel, Falco s	arlings (Sturnus vulgaris), domestic parverius). It also reports some vaneus) and American kestrels. It quirement.
REVIEWED I	BY:		
James J. Goodyes Biologist, Section Ecological Effect Environmental F	1 1 .	Signature:	per 22, 1989
APPROVED I	BY:		
Raymond W. Ma Head, Section 1		Signature:	2-22-81
Ecological Effect Environmental F	s Branch ate and Effects Div		12-22 0:

	0099	01	
Shau	ghne	SSV	No.

Data Evaluation Record STARLICIDE

GUIDELINE N	UMBER: <u>71-1</u>	_	
CITATION:		And the state of t	
Wildlife Mngt. 30:2 avian single-dose o	249-253. DWRC I ral LD ₅₀ data for CPTH). USDA,	No. 12035. in, Knittle, C.E. 198 the chemical 3-chloro-4-methyl	ity of DRC-1339 to Starlings. J. 89. Summary of currently available benzenamine hydrochloride (Comfe Research Center. Unpublished
REASON FOR	SUBMISSION	I- To support proposed registra	ation of feedlot use.
RESULTS-	Valid	Invalid X	Incomplete
GUIDELINE-	Satisfied	Partially Satisfied	Not Satisfied X
DISCUSSION:			
guideline requirem few birds per level, observing the birds	ents for avian act no replicated leve for only seven da	ute toxicity because of a lack o els, failure to mention in number sys instead of 14, no control leve	vels. The study does not fulfil the f details about the experiment, too ers the concentrations of each level, el, use of a nonstandard species and species and on secondary poisoning
REVIEWED B	Y:		
James J. Goodyean Biologist, Section Ecological Effects Environmental Fat	1 Branch	Date:	Dec 22, 1989
APPROVED B Raymond W. Matl Head, Section 1 Ecological Effects Environmental Fat	neny Branch	Signature: Date: vision (H7507C)	Den flefare 12-22-84

009901	
Shaughnessy	No.

Data Evaluation Record STARLICIDE

GUIDELINE NUMBER: 71-1		
CITATION:	ya da kaniga da kabupaten kanan kanan	and a strong and
Matteson, R.E. 1978. Acute oral toxici Damage Report No. 84. Project No. 903 Knittle, C.E. 1989. Summary of currently 3-chloro-4-methylbenzenamine hydrochlor Denver Wildlife Research Center. Unput	 Denver Wildlife Researd vavailable avian single-dose ide (Compound DRC-1339) 	ch Center. DWRC No. 84. in, coral LD ₅₀ data for the chemical CPTH). USDA, APHIS, S&T,
REASON FOR SUBMISSION- To	support proposed registrati	on of feedlot use.
RESULTS- Valid	Invalid X	Incomplete
GUIDELINE- Satisfied	Partially Satisfied	Not Satisfied X
DISCUSSION:		
When DWRC biologist found that the man bait and the size of the pellets without protential of the changed formulation." Camg/l, 2 @ 10.0 mg/l and 2 @ 3.16 mg/l. insufficient numbers of subjects in an instfulfil the guideline requirements for aviar	rior notice to DWRC, they ardinals were gavaged with of Since other details were no ufficient number of concentrations.	decided to "appraise the hazard loses of Starlicide: 1 bird @ 31.6 of given and since there were an
REVIEWED BY:		
James J. Goodyear Biologist, Section 1 Ecological Effects Branch Environmental Fate and Effects Division	Date:	one 22,1989
APPROVED BY:		