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PRODUCT MANAGER NO. W. Miller (16)

PRODUCT NAME(S) SLD's for Artic Fox

COMPANY NAME USDI, FWS

SUBMISSION PURPOSE Registrant response to previous reviews.

SHAUGHNESSEY NO.	CHEMICAL, & FORMULATION	% A.I.

EEB REVIEW

100.0 Submission Purpose and Label Information

100.1 Submission Purpose:

The U.S. Fish an Wildlife Service has submitted some modifications to their study protocol for their pending request for an EUP to evaluate the use of 1080 Single Dose Baits to eradicate Artic Fox from islands in the Aleution chain. The objective in eradicating the foxes is to allow recolinization if the islands by the endangered Aleation Canada Goose.

100.2 Purposed Modifications

1. Increase active ingredient (1080) per SPB from 3 mg to 4 mg.

2. Delete from the formulation Rhodamine B.

Also, in addition to these two modifications FWS states the following, apparently in response to question raised in correspondence from EPA:

> Your questions regarding the details and adequacy of sampling and survey procedures for the various avian components came as a surprise considering the advanced stage of this project. The first pretreatment data set has already been obtained (in June-July 1985 under extremely harsh conditions). Refuge and Endangered Species staff in Region 7 have expended considerable effort, using proven techniques, on the design of this study and have developed what we believe to be the best possible approaches to determine short-and long-term impacts on the various test populations within the fiscal and manpower contraints associated with work at this remote locations.
>
> If EPA wishes to suggest specific changes to our experimental design (described in full detail in our addendum forwarded to EPA on May 21, 1985), please advise as soon as possible to that we can determine their feasibility.

101.0 Hazard Assessment

101.1 Discussion

The request to increase the percent active from 3 mg to 4 mg is indicated to be based on preliminary data from concentration effect bioassays. Apparently 4 foxes were each fed on SDB containing three different amounts of 1080. Results showed 0/1 dead at 3 mg, 2/2 dead at 4 mg, and 1/1 dead at 5 mg. We agree these results raise questions with the earlier requested 1080 concentration in SDB's of 3 mg, however, we question the adequacy of using only 2 individual animals to conclude 4 mgs is sufficient for the proposed program. A minimum of 5 animals with all dyeing is necessary to give a high probability that the dosage tested is just greater than the LD_{50}. Consider the object of this program is to kill all foxes, it would seem these trials would be designed to provide results which would at least indicate with a relative high probability the dosage was equal to or greater than an LD_{99}.

The increase in dosage, while it may increase risk to individual animals, potential long-term impacts to non-target populations directly from the toxicant do not appear high. As indicated in the Original review of this proposed EUP, the major point in assessing hazard from this proposed EUP is the limited area treated, and that following removal of the fox with two applications, additional applications will not be made. Under these conditions if a population(s) of nontargets were reduced or even eliminated they should recover through natural production and/or by pioneering individuals from other nearby islands.

The second proposed modification, deleting Rhodamine B from the formulation is indicated to be based on their belief that bait taken by non-target species will be minimized if the red color is eliminated, in that SDBs would be highly visible on snow during the winter baiting period. They further indicate that the short-term dye marker is not essential to the development of data on exposure of target and nontarget species to 1080-treated SDB's. They indicate that they intend to collect all available target and non-target carcasses found immediately posttreatment for laboratory analysis of 1080 residues from which they believe will show whether or not the animal was killed by 1080.

The argument given for this modification appears reasonable. However, in the absences of data to support the theory it's difficult to evaluate. We suggest that FWS may want to consider designing a study to evaluate this theory if thy believe it will minimize bait acceptance by avian species.

FWS's response to questions regarding the details and adequacy of sampling procedures appears to circumvent the question. We will not reitirate them here, however, we still have reservations on whether the proposed sampling will be sufficient to evaluate the effect of the control program. (For specific questions and recommendations see EEB Review 7-30-85).

103.0 Conclusion

EEB has reviewed the U.S. Fish and Wildlife Service's proposed modification for their EUP to evaluate 1080 SDB's to eradicate Artic Fox from Kiska Island and conclude they do not appear to significantly affect potential impacts to non-target populations.

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