December 7, 2009

Ms. Debra Edwards, Director
Office of Pesticide Programs (OPP)
Regulatory Public Docket (7502P)
Environmental Protection Agency
1200 Pennsylvania Ave., NW
Washington, DC 20460-0001
Submitted Via Electronic Transmission: www.regulations.gov

RE: Petition requesting that the EPA suspend the registration of the chlorophacinone product, Rozol Prairie Dog Bait
Docket Identification number EPA-HQ-OPP-2009-0684

Dear Ms. Edwards,

The Public Lands Council (PLC), an association of public lands ranchers including the National Cattlemen's Beef Association, the American Sheep Industry Association, the Association of National Grasslands, and our affiliate member associations wish to comment on the petition to suspend the registration (effectively the use) of the chlorophacinone product, Rozol® Prairie Dog Bait. We appreciate the opportunity to provide the rancher's perspective regarding the black-tailed prairie dog and the management tools used to balance populations with the environment and livestock production. Our members work on private and public lands every day and, arguably, have the best knowledge of the wildlife species and habitat on that land. Black tailed prairie dog habitat stretches across many states, including Colorado, Kansas, Montana, North Dakota, Nebraska, New Mexico, Oklahoma, South Dakota, Texas, and Wyoming; with such a vast area, input from the people on the ground is vital for reviewing any management decisions being made with regard to the prairie dog.

Prairie dog populations have risen in the recent past and continue to be a challenge for range managers in balancing for a healthy and diverse ecosystem. Just recently, the U.S. Fish and Wildlife Service reported a 12 month status review (Federal Register: FWS-R6-ES-2008-0111) of the black-tailed prairie dog and concluded that the species does not warrant protection under the Endangered Species Act (ESA). The findings show that black-tailed prairie dog habitat has increased from 364,000 acres in 1961 to nearly 2.4 million acres in the most recent data (2002 to 2008). As population and habitat of the black-tailed prairie dog has increased over the past four decades the need for effective management tools has become increasingly important.

Rozol is one of the most effective tools among the limited options for range managers to use in controlling prairie dog populations. The benefits of Rozol far outweigh the risks to non-target species. We – the undersigned organizations – oppose the suspension of registering Rozol, effectively banning its use for controlling prairie dog populations.

I. Efficacy of Rozol and Zinc Phosphide (In reference to EPA's request for comparative information on the two rodenticides)

When applied properly in the active burrows of a prairie dog colony, Rozol can control upwards of 85% of the population with a single application.

1. EPA's review of the hazard components for two studies: "Field Efficacy and Hazards of Rozol Bait for Controlling Black-Tailed Prairie Dogs". EFED, EPA, September 3, 2009 – PC code: 067707.

The field efficacy study included 50 burrows and searches each of the seven days following application of Rozol and every other day for up to 25 days. Results showed a decline in burrow activity of 95%.

2. Uresk, Daniel, Rudy King, Anthony Apa, and Raymond Linder. 1986. Efficacy of Zinc Phosphide and Strychnine for Black-Tailed Prairie Dog Control. *Journal of Range Management, Vol. 39 p. 298-299.*

This study was conducted in western South Dakota and included pre-baiting before application of Zinc Phosphide and Strychnine. The use of zinc phosphide reduced burrow activity by 95% when pre-baited and an 83% reduction of activity when strychnine was applied.

While this study shows that zinc phosphide is effective, it also requires a pre-bait of the colonies. The increased requirements of multiple applications and increased likelihood of lethal doses being consumed by non-target species (discussed under II below) makes Rozol preferable for range managers when controlling prairie dogs.

II. Secondary Exposure to Non-Target Organisms: EPA Risk Assessment

Exposure of non-target species to Rozol is limited when the label guidelines (removing above-ground carcasses within 5-10 days followed by a second removal at 14-21 days post treatment) are followed. The amount of scavenged material needed to be lethal to non-target species tends to be relatively high and likely would consist of multiple feedings on exposed carcasses.

1. Ecological Risk Assessment Evaluating Expanded Uses for Rozol Black-Tailed Prairie Dog Bait (Chlorophacinone 0.005%), November 6, 2008.

Located under Risk Characterization, section 4.1.2.2 *Non-target Terrestrial Animals*, the assessment states that 'it is unlikely that most birds could eat enough Rozol bait in a single feeding to ingest an LD50 dose' (which would be a dose expected to be lethal to 50% of the population). The risk assessment shows ingestion of an LD50 dose in a single feeding for larger mammals is not likely.

2. Environmental Protection Agency Potential Risks of Nine Rodenticides to Birds & Non-target Mammals: A comparative Approach (W. Erckson & E. Urban). EPA Office of Prevention, Pesticides & Toxic Substances, July 2004.

This study included two tables which are located at the end of our comments; tables 28 and 31. The tables illustrate the comparative risks to birds and mammals for a single feeding of various rodenticides – Chlorophacinone (Rozol) and Zinc phosphide are highlighted in yellow. Basically, non-target species require a significantly higher amount of Rozol than zinc phosphide to reach a lethal amount.

3. Data Evaluation Record (DER), EPA Office of Prevention, Pesticides & Toxic Substances, June 1997. Chlorophacinone: Avian and Mammalian Secondary Hazard and Target Species Residue Studies.

The mammalian study exposed ferrets for five days to rat carcasses which had been poisoned with chlorophacinone (Rozol). The results showed that 11 of the 20 ferrets died during the study – a 55% mortality rate. The avian study exposed magpies for five days to rat carcasses which had been poisoned with chlorophacinone. The results showed that none of the 20 magpies exposed to the poisoned carcasses died even after consuming major organs.

While these two examples tend to follow other studies on mortality rates for non-target species it must be noted that these were controlled studies that placed poisoned carcasses directly with the avian and mammal species for five days. It is unlikely that this would be the case out on the range due to the monitoring/removal of poisoned carcasses that takes place after application of Rozol.

III. Economic and resource impacts of prairie dogs on livestock operations with state specific examples

We have provided references and discussion of literature which outlines the damage prairie dogs can do to grasslands if not managed and the economic impact prairie dogs can have on livestock operations. We understand the federal government seeks to sustain stable populations of prairie dogs. Beyond these numbers the populations should be controlled to support all the competing uses of the land.

Black-Tailed Prairie Dog Effects on Montana's Mixed-Grass Prairie
Johnson-Nistler, C.M., Sowell, B.F., Sherwood, H.W., and C.L. Wambolt. "Black-Tailed Prairie Dog Effects on Montana's Mixed-Grass Prairie." *Journal of Range Management 57.6 (2004): 641-8.*

"Areas occupied by black-tailed prairie dogs in eastern Montana's mixed-grass prairie are characterized by a decrease in standing crop biomass, plant species richness, litter, standing crop crude protein, big sagebrush canopy cover and density, and an increase in bare ground and CP. Activities of prairie dogs in Montana result in a dramatic shift in vegetal composition in areas they occupy."

This study indicates that prairie dogs were responsible for a drop in overall plant productivity and diversity coupled with an increase in bare land. The research also illustrates the impact prairie dogs have on plant diversity and overall ecosystem health.

Prairie Dog Density and Cattle Grazing Relationships
Uresk, Daniel W., James G. MacCracken, and Aredell J. Bjugstad. 1981. Prairie dog density and cattle grazing relationships. Great Plains Wildlife Damage Control Workshop Proceedings.

Black-tail prairie dogs were more abundant in areas of southwestern South Dakota heavily grazed by cattle than in areas where cattle were excluded. Results of the study suggest that managed grazing; in combination with control programs help regulate prairie dog population increases.

An Economic Analysis of Black-Tailed Prairie Dog Control
Collins, Alan R., John P. Workman, and Daniel W. Uresk. 1984. An Economic Analysis of Black-Tailed Prairie Dog [Cynomys ludovicianus] Control. *Journal of Range Management. Vol. 37, No. 4 (Jul., 1984), pp. 358-361*

Collins et al concluded that, in the Conata Basin of South Dakota, control of black-tailed prairie dogs with zinc phosphide was not economically feasible. They assumed an annual repopulation rate of 30%, and either annual maintenance applications with zinc phosphide or a complete retreatment after the original treated area was completely re-populated with prairie dogs.

Are Livestock Weight Gains Affected by Black-Tailed Prairie Dogs?
Derner, Justin D., James K. Detling, and Michael F. Antolin. 2006. Are livestock weight gains affected by black-tailed prairie dogs? *Front Ecol Environ 2006; 4(9) 459-464*

This study (sited in Colorado) is particularly relevant in the short-grass steppe, where the area occupied by prairie dogs has increased substantially in recent years, exacerbating conflicts with livestock producers. In this study, livestock weight gains decreased linearly vs. percentage of pasture colonized by prairie dogs. This resulted in lower estimated economic returns: when 60% of the pasture was occupied by prairie dogs, the estimated value of livestock weight gain was reduced by nearly 14%.

Estimated Number and Area of Prairie Dog Colonies in Kansas in 2008
Peek, Matt, and Mike Houts. 2009. Kansas Department of Wildlife and Parks and Kansas Applied REomte Sensing Program, University of Kansas.

This study used National Agriculture Imagery Program resolution imagery to locate prairie dog colonies in Kansas. The research indicates that compared to a study done in 2000 there was a 10% decrease in the number of prairie dog colonies but an 18% increase in colony area. It also indicated that the increases took place in the western half of the state.

We thank you for the opportunity to provide our support of the continued use of Rozol Prairie Dog Bait.

Sincerely,

American Sheep Industry Association
Association of National Grasslands
Colorado Cattlemen's Association
Kansas Livestock Association
National Cattlemen's Beef Association
North Dakota Stockmen's Association
Oklahoma Cattlemen's Association
Public Lands Council
South Dakota Cattlemen's Association
Texas Cattle Feeders Association
Wyoming Stock Growers Association

Table 28. Comparative Risk to Birds From a Single Feeding of Rodenticide, Based on the Amount of Bait Needed to Ingest an LD50 Dose (i.e., a dose lethal to 50% of the individuals in a population)

Rodenticide	mg ai/kg in bait	LD50[a] (mg ai/kg)	25-g passerine			100-g non-passerine			1000-g non-passerine		
			bait (g)	% of daily food intake[b]	no. bait pellets[c]	bait (g)	% of daily food intake	no. bait pellets	bait (g)	% of daily food intake	no. bait pellets
Second-generation anticoagulants											
Brodifacoum	50	0.26	0.13	2.1	0.6	0.52	5.4	2.6	5.2	9.6	26
Difethialone	25	0.26	0.26	4.3	1.3	1.04	10.8	5.2	10.4	19.3	52
Bromadiolone	50	138	69	>100	345	276	>100	1380	2760	>100	>1000
First-generation anticoagulants											
Chlorophacinone	50	258	129	>100	645	516	>100	2580	5160	>100	>1000
Chlorophacinone	100	258	64.5	>100	322	258	>100	1290	2580	>100	>1000
Diphacinone	50	>400	200	>100	1000	800	>100	4000	8000	>100	>1000
Diphacinone	100	>400	100	>100	500	400	>100	2000	4000	>100	>1000
Warfarin	250	620	62	>100	310	248	>100	1240	2480	>100	>1000
Others (non-anticoagulants)											
Bromethalin	100	4.6	1.2	18.8	6	4.6	47.9	23	46	85.3	230
Zinc phosphide	20,000	12.9	0.02	0.3	<0.1	0.07	0.7	0.3	0.7	1.2	3.2
Cholecalciferol	750	>600	20	>100	100	80	>100	400	800	>100	4000

[a] the LD50 values used in the calculations are from northern bobwhite or mallard acute-oral toxicity studies required by the Agency to support pesticide registration (see Tables 3, 4, and 5); ">" values are assumed to be "=" values for the calculations

[b] food ingestion rates (g dry matter per day) are based on the allometric equations of Nagy 1987 (cited in EPA 1993): 6.1 g for a 25-g passerine, 9.6 g for a 100-g non-passerine, and 53.9 g for a 1000-g non-passerine

[c] assuming a bait pellet weighs 0.2 g (information provided by Syngenta Crop Protection, Inc., Greensboro, NC)

Table 31. Comparative Risk to Mammals From a Single Feeding of Rodenticide, Based on the Amount of Bait Needed to Ingest an LD50 Dose (i.e., a dose lethal to 50% of the individuals in a population)

Rodenticide	mg ai/kg in bait	LD50[a] (mg ai/kg)	25-g rodent			100-g rodent			1000-g mammal		
			bait (g)	% of daily food intake[b]	no. bait pellets[c]	bait (g)	% of daily food intake	no. bait pellets	bait (g)	% of daily food intake	no. bait pellets
Second-generation anticoagulants											
Brodifacoum	50	0.4	0.2	5.2	1	0.8	9.6	4	8	11.6	40
Difethialone	25	0.55	0.56	14.7	2.8	2.2	26.5	11	22	32	110
Bromadiolone	50	0.7	0.35	9.2	1.8	1.4	16.2	7	14	20.4	70
First-generation anticoagulants											
Chlorophacinone	50	6.2	3.1	81.6	15.5	12.4	>100	62	124	>100	620
Chlorophacinone	100	6.2	1.6	42	8	6.2	74.7	31	62	90.2	310
Diphacinone	50	2.3	1.2	31.6	6	4.6	55.4	23	46	67	230
Diphacinone	100	2.3	0.6	15.8	3	2.3	27.7	11.5	23	33.5	115
Warfarin	250	3	0.3	7.9	1.5	1.2	14.5	6	12	17.5	60
Others (non-anticoagulants)											
Bromethalin	100	9.9	2.5	65.8	12.5	9.9	119	49.5	99	>100	495
Zinc phosphide	20,000	21	0.03	0.7	0.13	0.1	1.2	0.5	1	1.5	5
Cholecalciferol	750	42	1.4	36.8	7	5.6	67.5	28	56	81.5	280

[a] the LD50 values used in the calculations are from laboratory rat or mouse acute-oral toxicity studies required by the Agency to support pesticide registration (see Tables 6, 7, and 8); the tabulated value is provided as an average if the LD50 differed between male and female

[b] food ingestion rates (g dry matter per day) are based on the allometric equations of Nagy 1987 (cited in EPA 1993): 3.8 g for a 25-g rodent, 8.3 g for a 100-g rodent, and 68.7 g for a 1000-g mammal

[c] assuming a bait pellet weighs 0.2 g (information provided by Syngenta Crop Protection, Inc., Greensboro, NC)

Interpretations of Tables 28 & 31:

Low numbers mean less bait is required, higher toxicity and higher risk (i.e. "bad").
Higher numbers mean more bait is required, lower toxicity and lower risk (i.e. "good").

Source: EPA Potential Risks of Nine Rodenticides to Birds & Non-target Mammals: A Comparative Approach (W. Erckson & E. Urban). EPA Office of Prevention, Pesticides & Toxic Substances, July 2004.