Registration Jacket 64140-1

Volume 1

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

OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

29 35 98
5-589151

May 30, 2001

McNeill River Enterprises, Inc.
750 West Dimond, Suite 203
Anchorage, AL 99515

350/38

Attention: Mr. Randal Prater

Subject: Guard Alaska Bear Repellent
EPA Reg. No. 71545-1
Review of Videotape and Newspaper Accounts
Your submission of October 22, 1999

In the above submission, you sent us a videotape of an apparently successful use of a bear deterrent and a group of newspaper accounts concerning bear attacks on humans.

Videotape The videotape appears to be the same one submitted in 1997. The formulation of the product shown in the tape would be different from the one now used in this product. We have retained the tape for our files.

Newspaper clippings We have reviewed all of the incidents of bear attacks and summarized them for future reference. These included a case in which a person saved herself from further harm thorough use the use of a pepper spray, many incidents in which firearms were used to kill or drive the bear away, and many maulings and fatalities. Some of the incidents reportedly happened so suddenly that a pepper spray probably would not have been of much use. Actions taken to ward off bears or to limit injuries suffered worked in some incidents and did not in others.

The "take-home" messages seem to be that bears attack humans for various reasons and that whether a particular defense method works depends on circumstances which may include:

- the suddenness of the encounter and the amount of time available to respond;
- the distance of separation between bear and human when the encounter occurs;
- the presence of cubs for females bears; and
- the presence of food sources and the bear's state of hunger.

Newspaper clippings-continued

Other factors influencing the outcome of bear attacks include:

- the bear's "reason" (hunger, defense, etc.) for attacking;
- the behavior of the humans in response to the bear's presence;
- the number of humans present;
- the "personality" of the bear; and
- just plain luck.

EPA contact

Thank you for sharing the videotape and newspaper clippings with us. If you have any questions about this letter, please contact me by phone (703-305-5407), fax (703-305-6596), or E-Mail (peacock.dan@epa.gov).

Sincerely,

Daniel B. Peacock, Biologist
Insecticide-Rodenticide Branch
Registration Division (7504C)

Letter location

Disk 49,A:\Capsaicin\71545-1 May 2001.wpd,May 29, 2001

IRB BRANCH REVIEW - TSS

Record Number(s)

D271026

IN 12/7/00 OUT 2/2/01

EFFICACY

FILE OR REG. NO. CORR. 293598 (71545-1)

PETITION OR EXP. PERMIT NO.

DATE DIV. RECEIVED 10/29/99

DATE OF SUBMISSION 10/22/99

DATE SUBMISSION ACCEPTED 12/7/00

TYPE PRODUCTS(S): I, D, H, F, N, RX S

DATA ACCESSION NO(S). none

PRODUCT MGR. NO. 04

PRODUCT NAME(S) GUARD ALASKA BEAR REPELLENT

COMPANY NAME McNeill River Enterprises, Inc.

SUBMISSION PURPOSE provide information on bear incidents

CHEMICAL & FORMULATION 1.34% "Capsaicin and related capsaicinoids" aerosol

Efficacy Review: GUARD ALASKA© BEAR REPELLENT, 71545-1
(also CORR. 293598)
McNeill River Enterprises, Inc.
Anchorage, AK 99515

200.0 INTRODUCTION

200.1 Uses

1.34% "Capsaicin and Related Capsaicinoids" aerosol proposed Federally registered to

be used only to deter bears which are attacking or appear likely to attack humans.

200.2 Background Information

See efficacy reviews of 8/17/98, 10/21/98, 12/10/98, 2/25/99, 4/12/99, 8/20/99, and 10/26/00 for 71545-1, as well as the efficacy review of 12/29/97 of a pre-application submission (CORR. 289443) pertaining to this product. See also EPA's letter of 9/12/00 for 71545-1. That letter includes comments about the advertising for 71745-1 which were taken from the efficacy review of 9/5/00 for 71920-1 (BearGuard, Guardian Securities, Inc.). Guardian had objected to many claims made for the Guard Alaska product.

The 71545-1 product was accepted for Federal registration on 12/22/98. Its current container label was "ACCEPTED with COMMENTS" on 2/26/99.

This review considers McNeill River's submission of 10/22/99. The submission consists of a partially hand-written (mostly printed) note plus photocopies of some 21 newspaper items related to humans' encounters with bears. The submission also includes a videotape.

This item represents the 5000th completed efficacy review "bean" of my career at EPA.

201.0 DATA SUMMARY

The videotape included with the submission of 10/22/99 appears to be a copy of a tape that McNeill River originally submitted in 1997. I have discussed that tape in prior efficacy reviews for this product, beginning with the one of 12/29/97. The tape shows a bear and a man simultaneously approaching the carcass of a bear freshly killed by the man's arrow. The man sprays an aerosol at the bear, which immediately turns tail and runs away, causing the man to remark, "He booked!"

The note hand-dated "10/22/99" (possibly by Daniel Peacock of IRB) is attributed to "Randy Prater", who is McNeill River's President. Prater remarks,

> A lot of the incidents in these articles may have had more positive outcomes if a self defense spray had been carried by the individuals. I'm a firm believer in a self defense spray, but its [sic] not "brains-in-a-can."

The newspaper items submitted are cited (as best I can from the information provided) and discussed individually below.

1. Cockerham, S. (1998) Musher shaken after bear mauls entire dog team. Fairbanks Daily News-Miner, November 15.

This item tells of a dog sled operator whose team was attacked by a grizzly bear making a fast charge. When attempting to defend his dogs, the man attracted the bear's attention and was attacked. One of his dogs bit the bear on the rear end, causing it to wheel around and enabling the man to slip away.

The man and others returned to the scene shortly thereafter and found the bear feeding on dogs. Someone shot the bear, and the man discovered that one of his dogs was still alive. Although having lost part of a leg and being badly injured in the belly, the dog recovered. The man described the mauler as "a starving winter bear" that was not ready to hibernate because it was too "skinny". The man had not previously seen bears in the area after October. The year's berry crop reportedly had been poor in that area.

2. Lewis, J. (1998) Couple, boy found drowned at Chena Lakes. Grizzly may have scared them into water, officials say. [paper not identified] "VOL. XCVI, No. 145", p. A-1 & another.

The fate of these people was attributed to a bear encounter via circumstantial evidence, which included scattered fishing gear and some bear hairs; but authorities were somewhat puzzled by what they found at the scene. The newlywed couple were found fully clothed in the water. The boy, a relative of the woman, was found before the couple were located. Reportedly, none of them knew how to swim.

3. Fischer, D. (?) Goldstream resident kills bear. [paper not identified, probably Fairbanks Daily News-Miner], pp. A-1 & A-9.

Someone named Mike Hirt shot a "20-year-old" female black bear that had been frequenting a neighborhood in the Goldstream Valley of AK. The bear had victimized several neighbors, including Hirt, previously. Hirt shot the bear from the front doorway to his house at a distance of "about eight feet". When skinned out, the bear was found to have a 5" layer of fat.

4. Kadel, S. (?) Quick-shooting jogger drives off startled bear. [paper not identified], pp. A-1 & another.

"A pistol-packing jogger" named Mike Adams fired 2 shots from a .45 caliber revolver at a bear which had approached him and has 2 dogs. Adams, who reportedly received "some scratches", thought that he had hit the bear at least once.

The article mentions other bear incidents including 2 shootings and the closing of Chena Lakes Recreation Area "in late May and early June" (of some unidentified year) due to bear sightings.

5. Medred, C. (?) Hunter recounts bear mauling. Anchorage Daily News [page not identified].

A man named Charles Garwood shot a female grizzly bear off of the back of his hunting partner Rondell Keith Rogan, whom the bear had mauled badly. The female ran off but may not have been mortally wounded. Garwood eventually shot the bear's 4 cubs as they would not leave the area despite Garwood's using snowballs, sticks, and rocks to ward them off. They were "bawling for their mother", whom Garwood and Rogan feared might return. Rogan, who did not have time to use his own weapon on the bear, was bitten on the head, the right shoulder, the right hand, and left thigh.

6. Anonymous (Associated Press). (?) Bear mauls Eagle River man. [paper & pages not identified].

A man named Blaine Smith was mauled by a brown bear that he and his wife had encountered, along with her cub, "near a salmon-rich slough" in Chugach State Park. Smith was treated for facial injuries including "a deep cut under his left eye". The injuries apparently resulted from the female's having swiped at Smith with a forepaw. Smith's wife was unhurt. The park's caretaker came to the aid after hearing the Smiths "yelling 'Hey, bear!'"

7. Anonymous. (?) Noted photographer/writer killed by bear. [paper & pages not identified].

This article reports that Japanese/American photographer Michio Hoshino was fatally mauled by a bear "as he slept on Russia's Kamchatka Peninsula." Hoshino reportedly was "sleeping in a tent by himself" while the 5 other members of his crew (for whom no injuries are mentioned) slept in a shelter.

8. Badger, T.A. (?) Bear kills Soldotna man hiking in Kenai refuge. [paper & pages not identified].

Kenneth Cates from Soldotna, AK, was found dead in the Kenai National Wildlife Refuge with no visible injury except "a single bite to the head". Those who investigated the scene presumed that a bear killed him based upon available evidence. Next to Cates's body were his ".280-caliber rifle and two spent shell casings". The investigators though that Cates might have wounded the bear. Cates had set up a cook stove and apparently was about to eat some noodles.

9. Anonymous (Associated Press). (?) Bear kills man, woman in Park off Alaska Highway. [paper not identified], pp. A-1 & A-12.

Patti McConnell, a mother of 2, and a man, Raymond Kitchen, who tried to render assistance to her were killed by a black bear in Laird River Hotsprings Provincial Park, BC. The woman's 13-year-old son Kelly and a 20-year-old man also were mauled by the bear. Another park visitor shot the bear dead.

According to her mother, the Patti McConnell was moving herself and children from Texas to Anchorage to "'make a new life for themselves'".

10. Fischer, D. (1996) Grizzly kills hiker. Man mauled in remote Gates of Arctic Park. Fairbanks Daily News-Miner, August 26. pp. A-1 and A-8.

Robert Bell of Washington, DC, was killed by a grizzly female (with a cub) when he encountered them in "dense willows about a mile from the Noatek River", AK. Bell was killed "almost instantly", but his hiking companion was not hurt. The companion and a third member of the party were able to flag down a small plane by spelling out "help" with their camping equipment on a gravel bar near the river.

A local bear expert thought that the bear had reacted typically in a situation of being suddenly startled. After dispatching Bell, the mother and cub left the area without hurting the other person, much as was the case in item "6." above. The park's superintendent thought that the hikers,

who had noisemakers and were talking, had little time to react. Having pepper spray might not have helped.

11. Anonymous (Associated Press) (1997) Bear mauls researcher. Fairbanks Daily News-Miner, May 28 26. pp. A-1 and another page.

While "counting birds in Wrangell-St. Elias National Park and Preserve", biologist Kristen Bartecchi was mauled by a brown bear which she eventually drove away "with three blasts of pepper spray". Bartecchi

> suffered puncture wounds and gashes to her head, neck, shoulder, and hip during the attack but was able to walk about one-half mile back to a road where she found her research partner.

The article does not indicate the name of the product that Bartecchi used, but it was not a U.S.-registered product as no bear pepper sprays were registered in the U.S. at that time. Bartecchi reportedly had experienced prior brushes with bears.

12. Anonymous. (?) Black bear stoned to death in Yosemite. [paper & page not indicated].

A Boy Scout troop whose leader claimed that the scouts were "merely trying to scare the bear away" stoned a 2-year-old black bear to death.

13. Anonymous (Associated Press). (?) Woman mauled by grizzly bear. [paper and page not indicated].

Jacqui Burke was mauled by a grizzly bear while working as a tree planter in northeastern British Columbia. Burke's sister came to her aid "and they managed to chase the bear away."

14. Anonymous. (?) Bear attacks make headlines. [paper and page not indicated].

This item mentions the mauling of a 16-year-old camp counselor by a black bear on Mt. Lemmons in Arizona. A camp supervisor shot the bear twice with a .44-caliber handgun. Deputies later tracked and killed the bear. The article also mentions a non-fatal mauling of a man in Glacier National Park, MT, a fatal mauling of a female backpacker in Kluane National Park, BC, and alludes to other incidents. The article predicts that

> the potential for conflicts between bears and humans will only increase.

15. Anonymous (Associated Press) (?) Grizzly kills woman. [paper and page not indicated]

A woman named Christine Courtney was killed by a 143-lb male grizzly bear, which subsequently was killed by wardens of the Kluane National Park, Yukon Territory. The woman's husband, Paul, was knocked down when he "tried to defend her" able to get away and summon help. This incident was mentioned in item "14."

16. Anonymous. (?) Bear mauls counselor in tent. [Paper and page not indicated]

This account pertains to the Arizona incident involving a 16-year-old counselor mentioned in item "14." Her name is Anna Knochel. Other counselors were not able to drive the bear away, but it fled after being shot by a camp supervisor. The attack began at 5:15 AM. Deputies tracked the bear and finished it off.

17. Anonymous. (?) ALASKA Jogger mauled by brown bear. [paper and page not indicated]

A man named Joe Houston was attacked and severely injured by a brown bear. Houston was attacked from behind at 5:30 AM while he was jogging at his place of employment, Tikchik Narrows Lodge in the Dillingham, AK, area.

18. Anonymous. (?) Grizzly shot in Eagle River. [paper and page not indicated]

An Alaska State official shot a 500-600, 15- to 20-year-old brown bear which had

> charged a man and a woman walking near the South Fork of the Eagle River.

The man who was charged had previously wounded the bear by use of a 12-gauge shotgun.

19. Anonymous (The New York Times) (?) Bear mauling raises debate. [paper not indicated] pp. A-1 & A-7.

This article uses the Courtney incident (Kluane National Park, Yukon Territory) discussed in item "15." as a point of departure for airing issues regarding the coexistence of bears and humans. Bear numbers and bear incidents reportedly have increased in the Yukon and BC. Issues raised included whether to carry firearms, whether to thin bear populations, and how to behave in the face of a bear attack. On the last point, Kluane warden Terry Skjonsberg reportedly said,

> You sort of have to use all the clues that you've got at hand. There's not a right way and a wrong way to do things there.

The Courtneys shed their backpacks and Christine Courtney "played dead" after the attack began. Paul Courtney's initial attempts at intervention involved hitting the bear with a stick. He went for help after wife told him that his efforts were not "helping things". Paul Courtney later said, "'The last thing I do is blame the bear.'"

20. Anonymous (Associated Press) (?) Hiker attacked by bear in Denali Park. [paper and page not indicated]

A 20-year-old female seasonal employee in Healy, AK, received minor injuries during an attack by a female grizzly bear while the woman was "hiking alone in the Stoney Dome area" of the park. The woman initially waved her arms a the bear, then "dropped to the fetal position" and "played dead". At that point,

> The bear then sniffed her about the head and walked away.

This incident reportedly was the parks 20th "bear-related injury" since 1949 and the first since 1988, although there had been a reported attack that ended without injury the year before the Healy hiker incident. The article claims that no human ever was killed by a bear in Denali park.

21. Anonymous (Associated Press) (?) Oklahoma man justified in shooting black bear, troopers say. [paper & pages not indicated]

After a black bear circled an Anchorage home and failed to be deterred by "several warning shots", a 74-year-old man named Harley Richardson shot the bear with a handgun, wounding it. Police arrived shortly thereafter and finished the bear off. The Richardson incident was the first black bear shooting in Anchorage for the year in which it took place, but there had been 16 black bear shootings in the city during the previous year.

In the incidents mentioned in these article, 16 humans survived attacks with or without severe injuries; 8 humans died; 12 bears were shot, 9 fatally; 1 bear was stoned to death; 9 dogs were attacked with 8 being killed. In the only case involving pepper spray, the victim apparently saved herself from further harm through use its. In many incidents, firearms were used to kill or drive the bear away. Some of the incidents reportedly happened so suddenly that a pepper spray or firearm probably would not

have been of much use. Various other actions taken to ward off bears or to limit injuries suffered worked in some incidents and did not in others.

202.0 CONCLUSIONS

The videotape that you submitted on October 22, 1999, portrays an instance of use of pepper spray that was shown on a tape that you submitted previously. It depicts an instance of apparently successful use of something could not have been the specific formulation that is now registered for 71545-1.

The newspaper accounts that you submitted on October 22, 1999, include one case in which a person saved herself from further harm through use of a pepper spray, many incidents in which firearms were used to kill or drive the bear away, and many maulings and fatalities. Some of the incidents reportedly happened so suddenly that a pepper spray probably would not have been of much use. Actions taken to ward off bears or to limit injuries suffered worked in some incidents and did not in others.

The "take-home" messages seem to be that bears attack humans for various reasons and that whether a particular defense method works depends on circumstances which may include:

- the suddenness of the encounter and the time the human has to respond;
- the distance of separation between bear and human when the encounter occurs;
- the presence of cubs for female bears;
- the presence of food sources and the bear's state of hunger;
- the bear's "reason" (hunger, defense, etc.) for attacking;
- the behavior of the humans in response to the bear's presence;
- the number of humans present;
- the "personality" of the bear; and

- just plain luck.

William W. Jacobs
Biologist
Insecticide-Rodenticide Branch
February 1, 2001

DP BARCODE: D271026

CASE: 293598 DATA PACKAGE RECORD DATE: 12/07/00
SUBMISSION: S589151 BEAN SHEET Page 1 of 1

* * * CASE/SUBMISSION INFORMATION * * *

CASE TYPE: MISCELLANEOUS ACTION: 350 GENRL CORRES REGISTRATION
RANKING : 25 POINTS ()
CHEMICALS: ** UNKNOWN **
ID#: 293598
COMPANY: MCNEIL RIVER ENTERPRISES, INC.
PRODUCT MANAGER: 04 KERRY LEIFER 703-308-8811 ROOM: CS1 4TH FL
PM TEAM REVIEWER: GERALDINE MCCANN 703-605-0716 ROOM: CM2 215
RECEIVED DATE: 10/29/99 DUE OUT DATE: 02/16/00

* * * DATA PACKAGE INFORMATION * * *

DP BARCODE: 271026 EXPEDITE: N DATE SENT: 12/07/00 DATE RET.: / /
CHEMICAL: Unknown
DP TYPE: 001
CSF: N LABEL: N

ASSIGNED TO	DATE IN	DATE OUT	
DIV : RD	/ /	/ /	ADMIN DUE DATE: 02/15/01
BRAN: IRB	/ /	/ /	NEGOT DATE: / /
SECT: PM04	/ /	/ /	PROJ DATE: / /
REVR :	12/7/00	2/1/01 RL	
CONTR:	/ /	/ /	

* * * DATA REVIEW INSTRUCTIONS * * *

Bill,
Please check these articles and video and comment as you see fit.
Thanks,
Geri

* * * DATA PACKAGE EVALUATION * * *

No evaluation is written for this data package

* * * ADDITIONAL DATA PACKAGES FOR THIS SUBMISSION * * *

DP BC	BRANCH/SECTION	DATE OUT	DUE BACK	INS	CSF	LABEL

BEAR: Shot

Continued from Page A-1

prevent the bear from coming back," she added. "We have alternatives."

Those include taking trash to local Dumpster sites more often and using rubber bullets to scare off bears, Reynolds said. "What you're after is a negative stimulus," he said. "It only takes one person with their trash out to bring a bear into the neighborhood."

Extra precaution is particularly important this year, he added.

While there's no official estimate yet, Reynolds said initial observations point to a weak or patchy berry crop this season. Other vegetation sought by bears is also sparse, he added.

"There still may be berries out there, but (based on) the looking I've done—which is just here and there—it doesn't look good," he said.

As summer fades to fall, bears are scrounging for all the calories they can find, Reynolds added. Accessible dog food bins, trash barrels and freezers will lure them to town when their normal diet proves insufficient.

The bear shot Monday had been scavenging in the neighborhood for the past week at least, neighbors say. Hirt woke up one morning to find a bag of dog food missing and the doors to the refrigerator-freezer on his porch wide open. Davis heard some noises on his porch one night and thought local children were making mischief.

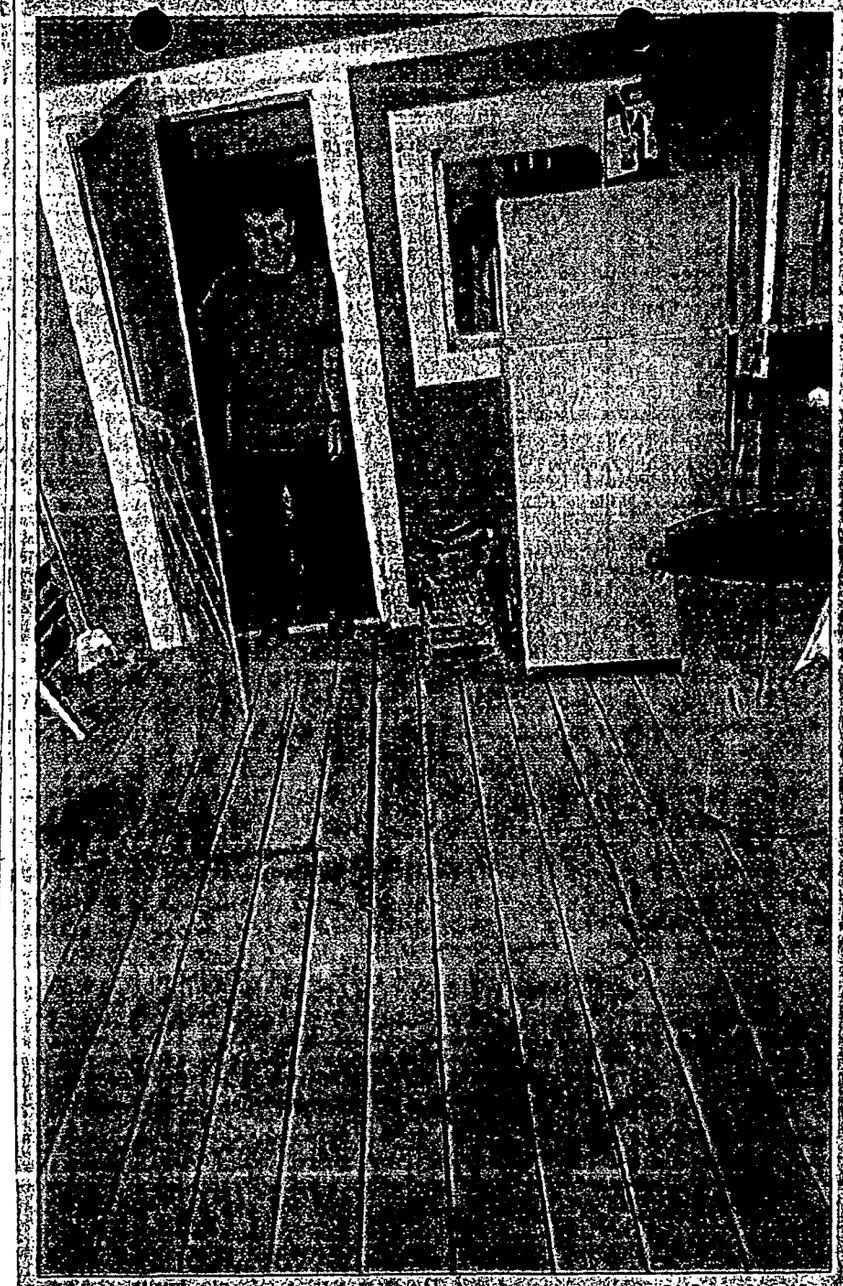
He opened the door and found himself staring at 250 pounds of bear, munching on dog biscuits. "I thought, well, this is cute," he said.

Monday night, after Davis' barrage of boots, the bear wandered through his dog lot and then investigated Hirt's porch. The sow left a pair of smudgy paw prints and a nose imprint on Hirt's picture window before rooting through his garbage pail.

Hearing a noise, Hirt opened his front door, saw the bear and grabbed his .308 rifle. "She just looked at me like, what are you doing here?" Hirt said. "She never had an ounce of concern."

He fired at the bear from about eight feet away. Biologists told him the sow weighed between 250 pounds and 300 pounds and had a 17¼-inch skull—unusually large for a sow.

Hirt, who had a hunting license and thus could keep the carcass, said he found a five-inch thick layer of fat when he skinned the bear out. "She's been eating well," he said.



Eric Engman/News-Miner

BEAR SHOT—Mike Hirt stands in the doorway from which he shot a large female black bear on his porch late Monday night. "It wasn't a good situation at all," Hirt said. The bear, which was approximately 20 years old and weighed over 250 pounds, was harassing the area, digging in garbage and stealing dog food for more than a week.

Goldstream resident kills bear

By DOUGLAS FISCHER
Staff Writer

Royal Davis had a problem near his dog lot late Monday night that was giving him a bit of a headache.

A big black bear sow had plopped herself next to his tipped-over dog food barrel. He threw four or five boots at her; they bounced off her head. He called the Alaska State Troopers; they warned him not to shoot unless she threatened.

A while later, a neighbor came face to face with the 20-year-old bear and killed it.

Encounters such as that could increase this year, says a state Department of Fish and Game biologist, as a potentially weak berry crop sends bears into the outskirts of town in search of food.

"If that happens, then it becomes more important to take steps to avoid attracting bears," said biologist Harry Reynolds. "I won't be surprised if we end up with more bear problems in the next month or six weeks."

The bear killed Monday night off Hay Way, near Sheep Creek Road in the Goldstream Valley, seemed well accustomed to humans, said both Davis and Mike Hirt, the neighbor who shot it.

But the death—and the bear's taste for a high-fat dog food diet—could have been avoided, said Jeanie Williamson, another neighbor. "It just seems people can be doing more to discourage bears from hanging about," she said.

When Williamson heard a bear was in the neighborhood she put her dog food in the house and stopped placing garbage on the porch. "I would just do things to

See BEAR, Page A-9

Musher shaken after bear mauls entire dog team

Grizzly attack

By SEAN COCKERHAM
Staff Writer

The grizzly bear charged without hesitation, slaughtering Sepp Hermann's dog team then turning its ferocious attention on the musher.

Hermann miraculously survived without a scratch, but all save one of his nine-member team died in the Wednesday attack near Wiseman.

"They trusted me," said Hermann Saturday, who is struggling to deal with the painful memory. "It was the first time I told them somewhere to go and I couldn't protect them."

Hermann, who ran the 1991 Iditarod, was training about five miles south of Wiseman for his first Yukon Quest International Sled Dog Race. He traps in the remote community about 200 miles north of Fairbanks but also resides in Fairbanks, Gold stream Valley and often spends summers in the Alaska Range.

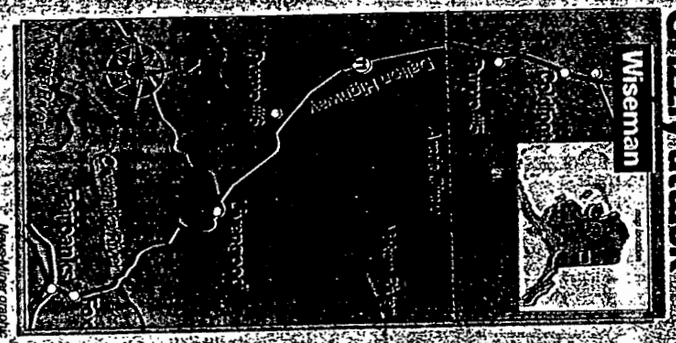
Hermann had headed up the Dalton Highway from Fairbanks Tuesday, the day before the attack because of the scarce snow around town. He was mushing up a hill about 3 p.m., when the bear came tearing down the trail at breakneck speed.

"It was very aggressive, non-stop, ran right into the team," Hermann said. "It jumped right into the team and started killing them ... there was (dogs) screaming all over the place."

Hermann said the bear went from dog to dog, pushing each down then biting it to death.

Hermann could not bring himself to flee. "I couldn't just sneak off and leave my dogs with this bear," he said.

The bear had its back to the



See BEAR, Page A-7

BEAR: Only one dog from team survives grizzly attack near Wiseman

Continued from Page A-1

dogs closest to the sled) then bit the grizzly on the rear.

"The dog paid for it with his life," he said.

That is when Hermann realized he had to do the "worst thing," escape and save his own life.

"After I saw what the bear did to the dog that bit him on the butt, I just knew," he said.

He snuck off toward the Dalton Highway, about a quarter-mile away. "Over the next 20 minutes I heard the screaming of my dogs," Hermann said.

When he retraced his steps later, Hermann found tracks showing that the bear had followed him.

"After the dogs were all dead and there was no more screaming, he remembered there was something else," he said.

But Hermann had cast aside his parka because he was too warm, and the bear apparently stopped at the dog blood-smeared garment and turned around.

Shortly after he reached the haul road, a woman from Coldfoot gave Hermann a ride into Wiseman.

"I gave a big hug to my girlfriend and kid, happy I'm still alive," he said.

Along with a few armed local residents, Hermann returned to the scene a couple of hours later.

"The bear was still there eating dogs," he said. "It was like a whole dog team, strung out all dead."

Another person, with a good, night scope, shot and killed the bear. Hermann said this was the first time he ever wanted to see a bear die.

One of his lead dogs, a three-and-a-half-year-old named Zula, heard Hermann's voice and started wagging her tail among the carnage. Her stomach had been torn open, and half a leg was ripped away, but she was alive.

"I'm so happy to have Zula, it's a reason to celebrate," he said.

Zula, who Hermann said is perhaps the fastest dog he has ever owned, is recovering and was able to eat a bit of meat on Saturday.

Hermann has trapped in the Wiseman area since 1982, but never before saw any sign of a bear after October.

"It was a starving winter bear," he said of the large but skinny grizzly. "This bear was starving."

Brain Barnes, who teaches in the biology and wildlife department at the University of Alaska Fairbanks, noted this was a very poor berry year at lower elevations.

If a bear does not have enough fat, it will keep foraging for food an extra few weeks before going into hibernation, he said.

"They need to put on some fat to be able to make it," he said. "Not a lot, but they need to put on some."

Both Hermann and five-time Iditarod champion Rick Swenson had never heard of a musher and his team being attacked by a grizzly bear, although Swenson had heard of polar bear attacks.

Swenson has known Hermann for a number of years. "He's a really good musher, a wilderness guide," Swenson said.

Hermann has mushed for 20 years and never before lost a dog. "Now I have a whole team dead, it was a good team too," he said.

The team had 500 miles of training since August. Five of the dogs in the team were leased, and four—including the team's lone survivor—were from Hermann's own kennel.

Hermann now has a total of six dogs left. Only two are leaders, and one of those is questionable, he said.

He is not ruling out the Quest, since he has put in so much logistical preparation and figures if he does not run the race this year, he never will. But he would need to obtain good dogs from other mushers.

Hermann also needs time. Sights like bloody harnesses dim his mushing zeal.

"I walked out on the trail today and saw the tracks of my dogs," he said. "I don't feel like riding or running dogs."

VOL. XCVI, No. 145 FAIRBANKS, ALASKA, WEDNESDAY, MAY 27, 1998 75 cents per copy 32 Pages

Couple, boy found drowned at Chena Lakes

Grizzly may have scared them into water, officials say

By JOLIE LEWIS
Staff Writer

A young newlywed couple and a 7-year-old boy were found drowned in a cove after a Memorial Day fishing trip at Chena Lakes. Authorities said the three may have run into the cold water after being frightened by a bear.

Two Alaska State Troopers scuba divers found the bodies of Joseph J. Muegel, 21, and Amanda C. Thomas Muegel, 18, during a Tuesday afternoon search. The body of Evan Simms, the man's 7-year-old stepbrother, was found by one of Amanda's relatives earlier in the day.

The couple had taken the boy fishing at about noon Monday and had planned to return at 4 p.m., troopers said. Their fishing gear was found scattered along a brush-covered shore in a secluded cove a short distance down a bike path from the nearest parking area.

Troopers said a grizzly sow and her cub have been sighted more than once this week at the borough-owned Chena Lakes Recreation Area. Also, a pavilion and campground in the area were damaged recently by a bear, said Karl Kassel, a park supervisor with the Fairbanks North Star Borough.

Authorities are closing a northern section of the recreation area known as River Park until further notice so state biologists can find the bear.

If the bear doesn't leave on its own, authorities will attempt to relocate it, or as a last resort may kill it. "It's evident to us this isn't a typical bear," Kassel said.

Trooper Sgt. Jim McCann said there was some evidence, such as a ripped plastic bag and a faint track nearby in the grass, that a bear had been on the bank of the lake. But he added that authorities couldn't know for certain why the three people entered the lake fully clothed.

"It's like there should be something more," he said.

Had a grizzly appeared from the dense foliage growing to within about 20 feet of the shore, Trooper Lt. Dan Hickman said it probably would have taken the group by surprise. "If a bear just lurched out of there, the first instinct is to go the opposite direction."

Troopers were contacted at about 4:45 a.m. Tuesday and responded first with a helicopter, then with a dive team.

As victims' relatives watched from the banks, two divers made several passes along the bottom of the cove, where visibility is poor, before locating Amanda Muegel's body about 20 to 30 feet from shore shortly before 2 p.m. They found Joseph Muegel's body about 10 feet farther out at 3:15 p.m.

Neither the woman nor the child knew how to swim. The

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DROWN

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cove was about 15 feet deep at its deepest part, said McCann, and hypothermia from the frigid water could have been a factor in the drownings.

No evidence of trauma was found on the bodies, and foul play is not suspected, he said. There also was no evidence that the couple had been drinking alcohol.

Troopers said it was just two weeks ago that Joseph Muegel married Amanda Thomas. Both worked at Spenard Builders Supply Inc., family members said, and Amanda was slated to graduate Tuesday night from the Career Education Center, a new program at Hutchison Career Center that allows students flexibility in learning but requires they have a steady job or be enrolled in a vocational education class.

Sam Harrel/News-Miner

BODY FOUND—The body of one of three people who drowned at Chena Lakes is pulled from the water after divers from the Alaska State Troopers found them Tuesday afternoon. Newlyweds Joseph J. Muegel, 21, and Amanda C. Thomas Muegel, 18, along with Joseph's 7-year-old stepbrother, Evan Simms, were reported overdue after they did not return from a Memorial Day fishing trip at Chena Lakes Recreation Area near North Pole. Authorities said the three may have run into the cold water after being frightened by a bear.

Hiker attacked by bear in Denali Park

The Associated Press

DENALI NATIONAL PARK— A female hiker escaped with minor injuries after being attacked by a sow grizzly in the Denali backcountry.

The 20-year-old hiker, who asked that her name be withheld until she can tell her parents about the incident, is a seasonal employee in the nearby Healy area.

Park spokeswoman Jane Tranel said the woman was hiking alone Wednesday south of the Stoney Dome area, several miles east of Eielson Visitors Center in the park, when she came upon the sow and two cubs.

As the bear came toward her, the woman waved her arms and yelled to the sow, and it hesitated for a moment. Then it started to charge. The woman dropped to the fetal position as the bear attacked. As it bit her right hand, the woman went limp and played dead. The bear then sniffed her about the head and arms and walked away.

"Fortunately it looks like she did everything right and the bear behaved properly," Tranel said. "It reacted properly to her 'being dead.' It's a happy ending and a good time to reiterate safety in the back country."

Park rangers have closed the area where the attack occurred but Tranel said there are no plans to move the bear because its behavior was considered normal. Sow grizzlies often will charge in order to protect their young.

The hiker was treated at a clinic in Healy. She suffered a puncture wound to her right hand that damaged a tendon, but doctors said it should heal within three to four weeks, Tranel said.

Tranel said this was the 20th bear-related injury in the park since 1949, and the first bear attack since 1988. Two hikers successfully fought off a bear without being injured in Denali National Park and Preserve two years ago, but Park officials logged that as an encounter. No one has been killed by a bear in Denali.

Bear mauling raises debate

The New York Times

WHITEHORSE, Yukon Territory—In the wilds of the Yukon and northern British Columbia, the dominant mammals have long been bears and humans—[illegible] the bush in about equal numbers.

The killing of an experienced backpacker by a grizzly bear in a big national park near here on July 6 has raised some questions about this coexistence—and also about the advice Canadian parks give those who encounter grizzlies.

According to rough estimates, there are 10,000 to 13,000 grizzlies in British Columbia and about 160,000 black bears. Yukon has roughly the same number.

The attack was the first fatal mauling in the history of the Kluane National Park, which is on the province's southwestern border with Alaska. Marked by a

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belt of conifers and aspens along its eastern edges, then seemingly endless ranges of snow-capped mountains stretching toward Alaska, Kluane, one of the most pristine parks in Canada, opened 24 years ago and receives some 45,000 visitors annually.

After hikers alerted them to the attack, park wardens were flown in by helicopter. They spotted a 130-pound male grizzly and the body of the backpacker he had killed, a woman from the Vancouver area, and shot and killed the bear.

To some, the woman's death shows that years of preservation policies, such allowing a more limited number of bears to be hunted, have resulted in a dangerously elevated bear population that will increasingly interact with humans. Kluane wardens note that more people, including tourists, are coming into contact with bears.

"Attack rates have increased by 25 percent since 1990," said Gary Shelton of Bella Coola, British Columbia, who teaches people who work in the bush how to survive bear attacks.

Two reasons lie behind the trend, he says: "More bears, and bears are losing their fear of people."

Gun lobbyists have joined the debate, citing the backpacker's death to support their demand to bear arms in self defense in national parks, which is now illegal.

Others argue that people hiking in bear country must accept the risks.

"Wild places are dangerous places, but that's part of their allure," said The Yukon News in an editorial.

Conservationists say a dead bear is not easily replaced. Grizzlies, found mainly in western and northern Canada, "have the lowest reproduction rate of any North American mammals," said Jillian Lynn Lawson, habitat protection coordinator for the Yukon Department of Renewable Resources, "and are now at great risk."

A female grizzly will on average produce her first litter at about age 8, and every four years afterward. If she has two cubs in each litter, she will produce eight offspring over her 20-year life span.

About half the cubs will die a natural death before they reach maturity. Half the survivors will be females. So if the mother or her offspring are killed to protect the public, the population could decline precipitously.

So great is the fear that bears will become another disappearing species that the Western Canada Wilderness Committee, a conservation group, is pressing for a ban in British Columbia on hunting black bears and grizzlies.

Canada's Parks Service suggests in a brochure entitled "You are in Bear Country" that if attacked by a grizzly, "playing dead—curling up in a ball and covering your face, neck and abdomen—may be effective."

This is exactly what Christine Courtney, 32, the woman who was killed, and her husband Paul, 31, did when a grizzly pursued them on the Slims Valley trail of the Kluane Park, about 20 miles north of Haines Junction, gateway to the park, about a two-hour drive west of Whitehorse.

The couple, who had been married for less than a year, had visited several other parks together. "It wasn't like the first bear we've ever seen," Courtney said in a telephone interview from his home in New Westminster, British Columbia. "And we've done a lot of reading about bears. We knew a bit."

They followed all the recommendations—avoiding smelly foods and cosmetics, packing out all garbage, giving bears a wide berth, never running away because bears can outrun a horse.

Courtney, a Vancouver customs broker, tried to fight off the bear with a stick after it pawed and bit his wife. The bear turned on him and bit his leg. He ducked behind a tree, and the bear renewed the assault on his wife. He again struck at the bear.

"My wife said at the time it wasn't helping things," Courtney said. "That bear had its mind set." Deciding he could not help his wife by trying to fight the bear, in desperation he rushed to the trail head for help about three miles away. On the way he met some other hikers who helped sound the alarm.

"When the bear first saw us, we were together and had our packs on," Courtney said. "We dropped our packs hoping it would distract the bear. If we'd stood our ground with our packs on, we would have looked big, and it might have been different."

But Courtney would not criticize the park's guidance about playing dead.

"I don't want to say the park should have given us different information," he said. "Let's just say grizzlies are unpredictable."

But Shelton, who teaches bear attack survival tactics, termed the advice about playing dead "dangerous in a predatory attack."

"They should have stood together with their packs on and made a lot of noise," he said.

A Kluane warden, Terry Skjonsberg, acknowledged that standing their ground was an option, saying: "You sort of have to use all the clues that you've got at hand. There's not a right way and a wrong way to do things there."

Despite the horrific experience, which he said he "relives constantly," Courtney said he does not favor killing more bears to make the parks safer for people. "The last thing I do is blame the bear."

Grizzly kills woman

The Associated Press

HAINES JUNCTION, Yukon—A grizzly bear fatally mauled a Canadian woman Saturday as she and her husband hiked in Yukon's Kluane National Park.

Christine and Paul Courtney of New Westminster, British Columbia spotted the bear as they returned from an overnight hiking trip in the park in northwest Canada, police said.

"They went off the trail approximately 30 meters in an attempt to avoid the bear, but he pursued them into the bush," said Constable Ken Alderson of the Royal Canadian Mounted Police. "He kind of walked toward them."

The couple removed their backpacks, hoping the bear would become distracted examining the packs, Alderson said.

But the grizzly ignored the packs and went after them, attacking the woman. When her husband tried to defend her, he was knocked down by the 143-pound male bear, which renewed its attack on the woman.

After the bear killed his wife, Paul Courtney made his way to a park visitor's center several miles away. Park wardens returned by helicopter to recover the body.

The wardens found the bear in the same area and killed it, Alderson said. An autopsy on the bear shed no light on why it attacked the couple.

"As far as we know it was not a diseased bear," he said, adding, "He wasn't protecting a kill."

Haines Junction is on the eastern edge of Kluane National Park, about 40 miles north of the site of the attack.

Bear mauls counselor in tent

MOUNT LEMMON, Ariz.—A bear mauled a 16-year-old camp counselor early Thursday, biting her shoulder, thigh and legs before being driven off and killed.

Anna Knochel, one of 14 counselors supervising 71 children on a 4-H Club camping outing, was in a tent alone when the attack happened about 5:15 a.m., said sheriff's Sgt. Mike O'Connor.

Other counselors tried unsuccessfully to drive the bear off by beating on the tent and screaming. The animal finally fled after an adult camp staffer shot it twice. Knochel was airlifted to the hospital. Two deputies found the animal and shot it to death.

Knochel underwent surgery at Tucson Medical Center, but her condition was not immediately available, a hospital spokesman said.

Wildlife officials say drought conditions this summer have forced animals to seek food from human sources.

ALASKA

Jogger mauled by brown bear

DILLINGHAM—A float plane pilot was hospitalized in serious condition late Tuesday after he was attacked by a brown bear earlier in the day. Joe Houston, 28, was undergoing surgery Tuesday for his injuries, according to a spokeswoman at Providence Medical Center in Anchorage. Houston was jogging at Tikchik Narrows Lodge, where he works, at about 5:30 a.m. when the brown bear attacked him from behind, according to the Alaska Department of Fish and Games. He was bitten in the leg and both shoulders and suffered a punctured lung in the attack. The bear started walking in circles when Houston began screaming and curled into a ball, according to lodge manager Bud Hodson. The bear eventually fled into the woods.

Grizzly shot in Eagle River

ANCHORAGE—A large brown bear was killed this week by a state official in Eagle River, the state Department of Fish and Game said Friday.

The male grizzly was killed by a Fish and Wildlife Protection officer late Thursday after the animal charged a man and a woman walking near the South Fork of the Eagle River.

The man, who was carrying a 12-gauge shotgun, reportedly shot and wounded the bear after it started charging. The wildlife officer later returned to the scene with the man and killed the bear.

The bear's age was estimated at 15 to 20 years and its weight at 500 to 600 pounds.

Black bear stoned to death in Yosemite

YOSEMITE NATIONAL PARK, Calif.—A black bear was stoned to death in Yosemite's high country and rangers were investigating a Boy Scout troop whose leaders said they threw rocks at the animal to scare it away. The scouts were questioned along with two of their leaders, and rangers were seeking to prove a criminal case of destruction of wildlife, acting chief ranger Don Coelho said. The 100-pound, 2-year-old bear died Monday from "blunt force trauma," and the initial investigation did not indicate that it was killed in self-defense, he said. "There does not appear to be a good reason for what they did," he said. A scout leader said Friday the troop was merely trying to scare the bear away. Yosemite wildlife biologist Steve Thompson said the leaders threw large rocks to drive the bear away from improperly stored food. At least one rock hit the bear in the head, he said.

ALASKA

The Associated Press

Woman mauled by grizzly bear

PRINCE GEORGE, British Columbia—A woman working as a tree planter was attacked by a grizzly bear Tuesday near a logging camp in northeastern British Columbia.

Jacqui Burke, 32, of Fort McMurray, Alberta, was working north of Williston Lake when the bear attacked Tuesday.

She suffered serious wounds to her leg and face before her sister showed up and they managed to chase the bear away.

Burke was taken to Prince George Regional Hospital.

Conservation officers were searching for the bear.

BEAR ATTACKS MAKE HEADLINES

With press attention focused on much of the controversy surrounding a series of ballot initiatives to restrict bear hunting, bears themselves have garnered some attention following several high-profile attacks on humans. On Arizona's Mt. Lemmon in late July, a black bear savagely mauled a 16-year-old camp counselor as she slept in her tent. The girl suffered "serious bites in her upper shoulder and upper thigh" and underwent more than 12 hours of surgery, the *Arizona Daily Star* reported. The attack ceased only after a camp supervisor, credited by deputies as saving the girl's life, retrieved a .44 Mag. handgun and shot the bear twice. Deputies tracked the wounded bear and killed it. The mauling marked the fifth incident in two months in which bears had attacked or exhibited aggressive behavior toward people in the state.

Likewise, grizzly bears, classified as threatened in some areas, are fueling debate in the northwestern U.S. and Canada on how much protection they should actually be afforded. On June 5, a man was brutally mauled by a grizzly while on a morning walk along a trail in Glacier National Park in Montana. It marked the 17th mauling in the park since 1990, only one of them fatal, according to an Associated Press (AP) report. One month later, in Kluane National Park in British Columbia near the Alaska border, a backpacker was killed after being attacked by a 130-pound bruin despite the efforts of her husband to fend the bear off with a large stick, the *Anchorage Daily News* reported. Game officials were also forced to kill a grizzly for the first time in Grand Teton National Park in Wyoming after relocation efforts failed. The bear was responsible for killing dozens of cattle in the past three years and had preyed on 10 calves in the two weeks prior to being dispatched. In both human attacks, attempts by the victims to play dead, as instructed in national parks literature, failed. Most of those interviewed in the news accounts implied the restriction on hunting had allowed grizzly populations to grow dangerously high in some locales and that because they were never hunted, the bears no longer had any fear of men. With more bears and more people visiting national parks, even park officials agree the potential for conflicts between bears and humans will only increase.

Bear mauls researcher

The Associated Press

ANCHORAGE—A biologist counting birds in Wrangell-St. Elias National Park and Preserve survived a bear attack Tuesday morning, fending off the brown bear with three blasts of pepper spray.

Kristen Bartecchi, 26, suffered puncture wounds and gashes to her head, neck, shoulder and hip during the attack but was able to walk about one-half mile back to a road where she found her research partner.

She was being treated at the Crossroads Medical Center in Glennallen Tuesday afternoon and is expected to return to work in the next several days, said William Seitz, director of the Alaska Science Center, where Bartecchi works.

Bartecchi and other biologists were about 20 miles east of Chitina and about one-half mile south of the McCarthy Road, near Billy Lake, when she w[illegible] tacked. They are counting [illegible]

See MAULING, Pa[illegible]

Fairbanks Daily News-Miner, Wednesday, May 28, 1997

MAULING: Biologist fends off bear with spray

Continued from Page A-1

to study the effects of a spruce bark beetle infestation on National Park Service lands.

The site is 185 miles east of Anchorage.

Researchers working in the park had decided not to carry firearms for bear protection, Seitz said. That policy will be reconsidered now, and the research probably will move to another spot, he said.

"We do not want to get into killing bears in defense of life and property," Seitz said, but "I would rather not have anyone lose their life studying birds."

Bartecchi's father, reached by phone in Pueblo, Colo., said his daughter is an accomplished athlete whose speed and strength may have helped save her during the attack.

A Pueblo native, Bartecchi has worked around bears in Denali National Park and Preserve on other projects and has had several close calls, Carl Bartecchi said.

"She's very savvy about bears. She's been working around bears for a long time," he said.

Bartecchi moved permanently to Alaska a year ago after several trips to the state for research work, he said. She has no fixed address because of her work during the spring and summer, he said.

National Park Service spokesman John Quinley said rangers have not been able to determine the bear's gender. It ran into the thick alder that covers the area.

"From what we know right now nobody did anything wrong. The area has a lot of bears, and it's all spruce bog and thick alders, so the visibility wasn't great," Quinley said.

He said Bartecchi's partner heard the distinctive woofing noise an agitated bear make but did not see a bear.

Grizzly kills hiker

Man mauled in remote Gates of Arctic Park

By DOUGLAS FISCHER
Staff Writer

A grizzly bear attacked and fatally mauled a 33-year-old hiker in the Gates of the Arctic National Park and Preserve Friday afternoon.

Robert Bell, of Washington, D.C., and his friend were walking through dense willows about a mile from the Noatak River in remote northwest Alaska when they surprised a grizzly sow and cub just 10 feet away.

"Nothing was done wrong," said David Mills, superintendent of the 8.5-million-acre park. "Anytime you get into thick brush and you surprise a bear, a sow with cubs will react very quickly."

Bell's hiking companion was not physically injured by the bear. He walked down to the river valley above the Arctic Circle and signalled a passing plane from Ambler Air Service as it flew overhead.

Rescuers evacuated the hikers and Bell's body Saturday. National Park Service personnel spent the day alerting other hikers and floaters in the area of the danger after temporarily closing the area to hiking and camping.

"People will continue to float down that area," he said. "We just don't want them to stop."

It was the first fatal mauling by a bear in the park's 16-year history, Mills said.

Bell and two friends, whom park officials declined to identify, were on the fifth day of a nine-day float trip down the remote Noatak River.

Camped near the river, Mills said Bell and one friend had hiked south up a ridge and were bushwhacking through brush over their heads when they apparently surprised the bear.

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Fairbanks Daily News-Miner, Monday, August 26, 1996

BEAR: Mauling

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The third person stayed behind in the camp.

"They had noisemakers, they were talking," Mills said. "Apparently, they got into very thick vegetation and before they knew it there was a sow with a cub in front of them."

The hikers had little time to react, Mills added. "Obviously it was a very protective mother whose natural instinct was to protect the cub. These things happen very fast."

Bells died almost instantly, Mills said. His companions spelled "help" with their equipment on gravel bars to attract the plane, which was dropping other campers in the park.

Mills thought an unusually strong chum salmon run this year brought more bears into the region, near the Schwatka Mountains where the Kugrak river feeds the Noatak. Grizzlies feed on salmon and average about 300 pounds in the park.

Rangers will monitor the area through the end of the season—upper stretches of the Noatak River will start to freeze in a week or two—and then again in the spring, Mills said.

Biologists said the bear reacted typically—strike fast and get out with the cub.

"That's a pretty dang close encounter," said Erich Follmann, a zoology professor at the University of Alaska Fairbanks who has studied bears in the Arctic. "It took care of what it perceived as the closest threat and then took off." Which is probably why Bell's companion escaped unscathed, both Follmann and Mills agreed.

At 10 feet, Follmann said he would expect the bear to attack rather than flee. While playing dead is often the best approach when that happens, "even a weapon would have been ineffective" in Bell's case, he added. "That's probably the worst situation—to come upon a sow with a cub at that range."

Though Friday's mauling marks at least the third time a hiker has been killed by a bear this summer, Follmann cautions against looking for trends in the accidents.

On July 5, a grizzly chased two experienced hikers off a trail in Canada's Kluane National Park, killing a woman and injuring a man. It, too, was the first fatal mauling in the park's 24-year history.

One month later, on Aug. 8, noted Fairbanks photographer Michio Hoshino was killed by a grizzly bear on Russia's Kamchatka Peninsula.

"You have three incidents," Follmann said. "One can't say they have any factor that's in common. Some years there are several (attacks), some years there are none. This is just one of those years."

Bear kills man, woman in park off Alaska Highway

Four people mauled in British Columbia

The Associated Press

LIARD RIVER, British Columbia—A Texas woman was mauled to death by a black bear in a remote northern British Columbia park as her two children watched helplessly. A man who tried to save her also died.

Hikers who witnessed the attack Thursday night threw rocks and sticks at the bear but could not stop it from mauling four people, said staff at a nearby lodge.

The black bear was shot and killed by a tourist who had rushed to get a gun.

The woman was identified Friday as Patti McConnell, 37, of Paris, Texas. She was walking through Liard River Hotsprings Provincial Park, off the Alaska Highway, with her son Kelly, 13, who was also mauled, and daughter Kristen, 7.

Royal Canadian Mounted Police said Friday night that Raymond Kitchen, 56, of Fort Nelson, British Columbia, was killed apparently while trying to save McConnell. Kitchen is believed to have been an experienced outdoorsman and hunter who was familiar with the habits of bears.

Kelly McConnell and a 20-year-old Calgary man, who was also attacked, suffered non-life-threatening injuries. They were airlifted to a hospital in Fort Nelson, 120 miles southwest of the park near the B.C.-Yukon boundary.

Kelly was later transferred to B.C. Children's Hospital in Vancouver.

The Calgary man, one of several university students conducting research in the park, suffered serious leg injuries. He was transferred to a hospital in his hometown Friday. Police said his name would not be released at his request.

Jan Reed said her daughter was planning to settle in Anchorage, and was taking her children on a meandering route from Paris through the United States and Canada.

"They were going up there to make a new life for themselves," she told the Vancouver Sun as she prepared for a trip to Vancouver to visit her grandson in the hospital.

She will then pick up her

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granddaughter, who was staying with an RCMP officer's family in Fort Nelson, and collect her daughter's remains to take back to Paris for a funeral next week.

"I think it's pretty much one of the most brutal ways to die, having your entire body ripped apart (by a bear)," said Jayme Melrose, an employee of a nearby lodge.

The attack occurred as the four campers stumbled through the brush between two hot springs in the park.

The park was evacuated and will remain closed while provincial officials and police investigate.

Jean Beitz, manager of the Liard River Lodge, said nervous campers moved indoors or left the area.

Provincial officials said it was the first fatal bear attack in British Columbia this year. Six people were injured and one person was killed by bears in the province last year, while there were 11 injuries and two deaths in 1995.

Locals said it was the first bear attack in the region in the last 10 years.

The chance of being attacked by a black bear is slight, said Matt Austin, large carnivore specialist with the provincial Environment Ministry.

He said there are two types of attacks — predatory and defensive.

Predatory attacks usually occur in remote areas where bears have little contact with people.

In those rare cases, Austin said, "a male bear will actually stalk and attack a person to feed on them as prey. And that's quite rare."

But food-conditioned bears, who rummage through garbage bins and raid picnic baskets, are accustomed to the smell of humans and won't run away. In those cases, bears will attack when they are startled or feel threatened, or when protecting cubs.

"If a bear gets the feeling that it's cornered or pressured, certainly, like any animal, they'll attack if they're backed into a corner or surprised," said conservation officer Bob Butcher.

He said bears only attack in a predatory manner if they're sick or starving or wounded.

Authorities had not determined whether the attack was predatory or defensive.

Bear kills Soldotna man hiking in Kenai refuge

By T.A. BADGER
Associated Press Writer

ANCHORAGE—A Soldotna man on a day hike outside town was killed by a bear, Alaska State Troopers said Wednesday.

Kenneth Cates, 53, was found Wednesday morning on a horse trail in a heavily wooded area of the Kenai National Wildlife Refuge, about six miles off Funny River Road.

The fatal mauling is thought to have occurred Tuesday afternoon or evening.

Cates' only visible wound was a single bite to the head, said Bruce Bartley, a spokesman for the state Division of Wildlife Conservation.

The reason for the attack wasn't known Wednesday, though Bartley said there were indications that the bear may have seen Cates as a threat.

Cates was reported overdue by his wife late Tuesday. The Civil Air Patrol began an aerial search early Wednesday, and within an hour Cates' body was found.

State and federal wildlife officials were looking for the bear involved in the attack, Bartley said. The bear is thought to be a brown bear, given the nature of the attack, but it hasn't been ruled out that it may be a black bear.

Troopers said Cates' .280-caliber rifle and two spent shell casings were found near the body, along with traces of blood that suggest that Cates may have wounded the animal.

"We don't know if one was a warning shot and one real, or if there were two real shots," Bartley said.

Samples of bear hair at the scene were also collected to compare with any bears located in the area.

Cates had apparently stopped to eat where he was attacked. He had set up a camping stove and was preparing to cook noodles.

Bartley said the scene was "remarkably undisturbed"—Cates had not been dragged or thrashed about.

Rain on Wednesday was hampering the search and making it difficult to locate tracks and reconstruct the attack.

Bartley said state biologists were using a helicopter to search for the bear. He said any bears found would be darted and radio-collared, and blood and hair samples taken.

If the bear is judged to pose a continuing threat to humans, it may be killed, Bartley said.

No bears had been found as of Wednesday afternoon. But Bartley said that on Tuesday night a U.S. Fish and Wildlife Service employee reported seeing a brown bear sow and three cubs while driving down Funny River Road, about eight miles from where Cates' body was found.

"By bear standards, that's in the vicinity,"

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BEAR: Mauling

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he said.

Bartley said the search would likely not continue for long.

"This time of year, there's a lot of movement by bears," he said. "The chances of (finding) the same bear diminish with time."

An estimated 200 to 300 brown bears live on the Kenai Peninsula.

Bartley said most bear attacks are defensive. Common attack scenarios are sows protecting cubs, bears defending food and animals responding to being surprised.

"What happens is the bear perceives a threat and moves to eliminate that threat," he said. "The fact that this guy had only one bite mark lends some credence to that theory."

Cates' death is the first fatal bear mauling since Feb. 8, 1998, when Audelio Luis Cortes, 40, was killed while working on a seismic crew in the Swanson River oil field near Kenai. Cortes also died from a single head bite.

Noted photographer/writer killed by bear

Celia Hunter photo

Michio Hoshino, a Fairbanks photographer, killed by a bear on a Russian peninsula Wednesday, sits with his wife, Naoka, and son, Shoma, 1 year, in this 1994 photo.

Michio Hoshino, a Fairbanks photographer and author whose work on Alaska wildlife brought him admiration in Alaska and his native Japan, was fatally mauled by a bear Wednesday as he slept on Russia's Kamchatka Peninsula.

Hoshino's English-language books includes "The Grizzly Bear Family Book" for children, and two photo books, "Grizzly" and "Moose." His wildlife photographs have appeared in National Geographic and have won awards in the United States and in Japan.

"He was so close to grizzlies and taking such excellent photographs. I asked him always how he could do that," said Dr. Syun Akasofu, director of the Geophysical Institute at the University of Alaska Fairbanks and a longtime friend.

"He said he breathed together with the grizzly."

PROLIFIC AUTHOR — Michio Hoshino wrote several books on Alaska wildlife, including this Japanese version.

Hoshino, 44, was killed about 4 a.m. Thursday—7 a.m. Wednesday, Alaska time—near the town of Kamchatskiy in the Russian Far East, according to a statement from the Japanese Consulate in Anchorage.

He was working as a reporter and adviser on a six-person Tokyo Broadcasting Systems crew filming a documentary about the region's bear and salmon. All of the crew were asleep at the time of the attack, with Hoshino sleeping in a tent by himself and the five others in a shelter, said Jim MacKenzie, a special assistant at the consulate.

Hunter recounts bear mauling

By CRAIG MEDRED
Anchorage Daily News

ANCHORAGE—Deer hunter Rondell Keith Rogan was sneaking along a mountainside bench high above Terror Bay on Monday when he saw the grizzly bear jump up from her bed.

He knew instantly he was way too close.

"She leaped up, looked at me and charged. There were no sounds," Rogan said Tuesday by telephone from the Kodiak hospital, where he was recovering from the attack.

Rogan tried to raise his rifle, but it was too late.

"I think she hit it with her body and pushed it to one side."

In the same motion, the bear flattened Rogan with a swat of her paw.

Then, the 42-year-old Coast Guardsman said, "she got a hold of my head."

Rogan twisted free from the bear's jaws and tried to roll onto his stomach to protect his vital organs. In the process, he was bitten in the right shoulder, the right hand and the left thigh.

"There's probably four or five bites out of my left leg, in my right shoulder and hand, and a pretty good one on my forehead," he said.

> "Before this, I was always the guy pooh-poohing being afraid of bears because they're generally pretty easy to get along with."
>
> Rondell Keith Rogan

Despite the mauling, Rogan expected to be discharged from the hospital this week without long-term difficulties.

How long it will take his psyche to recover is another question.

"Before this," Rogan said, "I was always the guy pooh-poohing being afraid of bears because they're generally pretty easy to get along with."

In eight years of hunting the mountains and valleys of Kodiak Island, Rogan said, he'd seen dozens of bears and never had a problem.

Larry Van Daele, Kodiak area wildlife biologist for the Alaska Department of Fish and Game, thinks the sow and its cubs might have been getting ready to den somewhere along the Uganik Island bench on the north side of Terror Bay about 30 miles west of the city of Kodiak.

"He (Rogan) just stumbled into her," Van Daele said. "The (hunting) partner is the real hero in this story."

The partner, Coast Guardsman Charles Garwood, a native Georgian on his first Kodiak-area deer hunt, shot the bear off Rogan's back. Garwood was about 50 yards behind Rogan when the bear attacked.

Maneuvering to avoid accidentally shooting Rogan, Garwood got into position and shot, Van Daele said. The shot knocked the bear off Rogan.

The wounded bear responded by charging Garwood.

"He shot her again as she charged, and she turned and went past him. We never saw her ... after that," Rogan said.

On Tuesday, biologists tracked a faint blood trail about a half-mile from the scene of the mauling before it faded. Van Daele doubts the bear was mortally wounded.

Still, the bear's injuries were enough to cause her to abandon her four cubs.

After the sow left Garwood patched a bleeding Rogan with game bags and sent another hunting companion down the mountain to camp to call for help on a VHF radio.

About an hour later, as Rogan and Garwood waited for rescue, the cubs returned and started bawling for their mother. Garwood tried to drive the cubs off with snowballs, then sticks and finally rocks. The cubs ignored him and made more noise.

When they kept coming closer, Van Daele said, Garwood finally shot one. That just caused the others to come even closer, and eventually he shot another. By the end, all four were dead.

"It was a mess," Rogan said. "We were worried about them calling the sow back in on us. My partner finally dispatched them because we were sure they were going to call the sow back in."

"Under the circumstances, we couldn't leave, and they wouldn't leave."

"I think the guys made the right decision," Van Daele said.

Bear mauls Eagle River man

The Associated Press

ANCHORAGE—A popular trail in Chugach State Park remained closed Sunday after a brown bear slashed the face of a hiker.

Blaine Smith, 37, was hiking with his wife on the Albert Loop Trail Saturday morning when they startled a brown bear and her cub near a salmon-rich slough.

Smith was rushed by ambulance to a hospital in Anchorage where he underwent surgery to repair a deep cut under his left eye and other facial injuries. He was discharged Saturday afternoon.

Chugach park officials said most of the trail would remain closed for at least a week.

The bear attack was the third in three years on the popular trail and the first in the Anchorage area this summer.

Not long after the couple started down the trail, Frank Quinn, the caretaker at the Eagle River Nature Center heard the couple yelling "Hey, bear!"

"They sounded like they were in trouble," Quinn said.

Quinn took off toward the couple and met them as they came back up the trail. Smith was holding a bloody shirt to his left eye. The couple told Quinn they had turned a corner on the trail and startled the two bears. The mother bear, closer to them than the cub, charged and swiped at Smith, clawing him just below his eye.

State Fish and Game officials said it appears the couple had little time to react and couldn't have prevented the attack. The state has no plans to go after the bear, which behaved as bears do when it appears their cubs or food are threatened.

Quick-shooting jogger drives off startled bear

By STEVE KADEL
Staff Writer

A pistol-packing jogger escaped with some scratches but no serious injuries Saturday morning after a bear jumped into his path near Delta Junction.

Mike Adams was near an overgrown section of trail off Jack Warren Road when a black bear appeared around a corner. The small sow seemed as surprised as Adams because it skidded to a stop and fell toward him.

"The bear was right in his face," said wildlife biologist Steve DuBois, who investigated the incident for the Alaska Department of Fish and Game.

Adams fired twice with his .45-caliber revolver and is sure he hit the animal, DuBois added, although no blood was found at the scene. Adams was unavailable for comment Monday, and details of the encounter were sketchy.

Don Bunselmeier, an Alaska State Trooper, who also investigated, said Adams was jogging with two dogs but that Adams couldn't recall if they were ahead of him or behind. The bear scam-

See JOGGER, Page A-8

Randy Hueng photo

OLD HIDE—Bob Hunter, bear sealing officer for Region Three, holds up a bear hide from an animal that was shot in defense of either life or property, in the back of the Department of Fish and Game building on College Road Monday afternoon.

JOGGER: Bear

Continued from Page A-1

paced into the woods after Adams fired and wasn't located during repeated searches Saturday and Sunday.

The sow is no longer being sought, Bunselmeier said, although officials did find its year-old cub in a tree near the spot where Adams' training run got exciting.

Bunselmeier theorized that the bear caught a scent of the dogs and was running toward them, not realizing a human being was involved. He quoted Adams as saying the bear appeared startled and slid to a stop on its hind legs, taking a half-hearted swipe at the man with its front paws.

In defense of the bear, that's probably what happened, Bunselmeier said.

DuBois said it doesn't appear the bear did anything out of the ordinary. "The thing (Adams) did right was to have the foresight to have the pistol to protect himself."

The area where Adams' encounter occurred is on a migration route for bears, said Fish and Game technician David Davenport. A grizzly killed a moose near the site four or five years ago, he said, but incidents involving bears and humans aren't common.

Saturday's was Delta Junction's first this year in which someone came face-to-face with a bear, he said.

A grizzly was killed near the town a month ago after the bear raided some livestock. And a 2½-year-old black bear was killed in late May after it kept coming around the Pogo Mine in search of food.

"There's lots of good bear habitat in the area," Davenport said, adding that bear encounters become increasingly likely as more people move into remote areas.

But even people living in cities must take precautions against bears, said Bob Hunter of Fish and Game's Fairbanks office. Bears are attracted by dog food left outside and by other food items.

"We continually try to remind people they have to keep their lawns clean," Hunter said. "Just because they live there and dogs are around, that doesn't necessarily deter bears if a food source is there. It's the same rules as when camping."

Fish and Game representatives killed a 355-pound black bear July 19 in a subdivision along the Chena River near the Riverboat Discovery launch. The bear was foraging for garbage outside a home for the second consecutive night.

Chena Lakes Recreation Area was closed in late May and early June after a bicyclist spotted an adult grizzly near the park's south entrance. It was the first time Chena Lakes had been closed due to fear about bears.

Despite that, Hunter considers this a routine summer as far as bear encounters. The situations that have occurred received lots of publicity, he said, which prompted more talk by local residents—and more calls of concern to Fish and Game.

"We did have a few incidents around town," Hunter said, "but nothing alarming."

Oklahoma man justified in shooting black bear, troopers say

The Associated Press

ANCHORAGE—A visitor from Oklahoma was justified when he shot a black bear on the Anchorage hillside earlier this week, the Alaska State Troopers say.

The animal was circling a home in that neighborhood Monday, and it refused to back off despite several warning shots, troopers said.

Harley Richardson, 74, shot the bear with a handgun after he tried to frighten it away by shooting into the air and by shooting in front of it and over its head, troopers said.

But the bear continued to wander around the house and onto a porch near a screen door and some open windows. Richardson feared the 150-pound animal would enter the dwelling, troopers said.

"The key issue is when they fired a warning shot, it did not bother the bear," trooper George Petry said. "It was a situation where the guy really didn't know what to do."

Richardson's shot wounded the 3-year-old bear. Troopers arrived a short time later and killed it.

State law allows people to shoot bears while protecting life or property.

State Fish and Game biologist Rick Sinnott said the situation did not appear to be dangerous enough to warrant the shooting. But Sinnott said he was not at the scene and did not talk to Richardson.

The bear "certainly wasn't banging on the doors and acting aggressive," Sinnott said. "It just ... was not afraid."

Sinnott said, however, he didn't want to second-guess the situation.

"No doubt they were afraid, and we'll hold that in their favor," he said.

Monday's incident was the first black bear shooting this year. Sixteen black bears were shot in Anchorage last year, more than half by private citizens.

293598

10/22/1999

Dan, I hope this helps you out. Sorry about the quality of my news article copies. A lot of the incidents in these articles may have had more positive out comes if a self defense spray had been carried by the individuals. I'm a firm believer in Guard Alaska as a self defense spray, but its not "brains-in-a-can." I practice safe travel techniques when out in the wilds and have learned how to react in bear encounters! My family also shares in this knowledge and they carry a can of Guard Alaska with them, even if they are only out berry picking. If you need any further info or just need to chat, my e-mail is vquest@mosquitonet.com

Randy Prater

~~145~~ 71545

received 10/29/1999

DAN PEACOCK 8-16-99

PLEASE CALL

Daryl Finnigan with
Health CANADA concerning
The use of Trichlorethalene
in GUARD 71545-1 Alask Bear Repellent.
His Phone # (613) 736-3515

Thanks

Randal Peter

Called Cathy Rice & asked her if phone # is good.

Z 564 243 378

US Postal Service

Receipt for Certified Mail

No Insurance Coverage Provided.

Do not use for International Mail *(See reverse)*

Sent to McNeil River	
Street & Number	
Post Office, State, & ZIP Code	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date	

32

PS Form **3800**, April 1995

Stick postage stamps to article to cover First-Class postage, certified mail fee, and charges for any selected optional services *(See front)*.

1. If you want this receipt postmarked, stick the gummed stub to the right of the return address leaving the receipt attached, and present the article at a post office service window or hand it to your rural carrier *(no extra charge)*.

2. If you do not want this receipt postmarked, stick the gummed stub to the right of the return address of the article, date, detach, and retain the receipt, and mail the article.

3. If you want a return receipt, write the certified mail number and your name and address on a return receipt card, Form 3811, and attach it to the front of the article by means of the gummed ends if space permits. Otherwise, affix to back of article. Endorse front of article **RETURN RECEIPT REQUESTED** adjacent to the number.

4. If you want delivery restricted to the addressee, or to an authorized agent of the addressee, endorse **RESTRICTED DELIVERY** on the front of the article.

5. Enter fees for the services requested in the appropriate spaces on the front of this receipt. If return receipt is requested, check the applicable blocks in item 1 of Form 3811.

6. Save this receipt and present it if you make an inquiry.

10[illegible]98-B-P005

PS Form **3800**, April 1995 *(Reverse)*

350 S-561742
38

CERTIFIED MAIL

AUG - 3 1999

McNeil River Enterprises, Inc.
750 West Dimond, Suite 203
Anchorage, AL 99515

Attention: Mr. Randal Prater

Subject: Guard Alaska Bear Repellent
EPA Reg. No. 71545-1
Review of Supplemental Product Labeling
Our telephone conversations of May 4 and 6, 1999

In our above telephone conversations, we discussed the problem of the enclosed unapproved, supplemental product labeling and offered suggestions about how to correct the text until we had the opportunity of providing you with a formal review. Our suggestions centered on deleting any text that had not been previously approved. Using our formal review below, you may use it as a basis for submitting an amendment to change the text.

1. The front panel of the blister pack bears claims which are unsupported, false or misleading. These claims (listed below) must be deleted.

   a. **"20% Ultra Hot Pepper"**

      The active ingredients in this product may only be claimed in the manner in which they are expressed on the container label's statement of ingredients.

   b. **"9 oz. UltraMag Shotgun Series"**

      All claims of net contents must be worded as the net contents information is expressed on the container label.

      There has been no demonstration that the spray pattern produced by depressing the trigger on this product's container is identical or similar to the pattern of particle dispersion produced when a shotgun is fired. We doubt that such would be the case due to differences in firing characteristics and the differences between aerosolized liquids and airborne shot.

c. "**Developed and tested in the wilds of Alaska.**"

Although you frequently have alluded to such testing in conversations and other communications with us, the only documentation of any reported use of your product that we have received is a videotape of a single use of what would have been an earlier formulation of Guard Alaska. If you want to make any claims about to your testing program on your labeling, you must document to us the procedures used in such testing and the results that were obtained.

d. "**Out sells other brands 3 to 1!**"

Even if you were able to show this statement to be true, it still could not be made on pesticide labeling because it misleadingly implies a favorable comparison with other products. Such comparisons are prohibited in 40 CFR, §156.10(a)(5)(iv). Having more sales would not necessarily make one product better than another.

e. "**No other defense spray proven as effective!**"

This statement makes a favorable comparison of product performance between Guard Alaska and every other "**defense spray**". As noted above, such statements are prohibited. We have seen no data which would support any firm conclusions about the relative effectiveness of the bear-repellent sprays that currently are registered.

f. "All pepper sprays do not have the same stopping power!"

This statement is misleading, at best.

g. "Our exclusive patent pending formula is scientifically proven the most effective.

This is another statement which favorably compares your product to all others. We are not aware of any research data that support this statement.

h. "Opens pores of the skin and cuts through mucous covering of a bears eyes for incredible stopping power."

We do not know to what extent this statement might be true. To support it, you would have to supply us with credible information which documented that bears' skin has pores, that bears' eyes have a substantial "mucous covering", that your product opens pores and cuts through such a mucous covering, and that your product stops bears in their tracks in some "incredible" way.

i. "Really stays put - does not bead-up and run off like other defense sprays."

This statement makes a favorable comparison between your product and "other defense sprays". We are not aware of any data which specifically support this claim.

2. The back panel of the blister pack bears is not acceptable for the reasons indicated below.

a. **"20% Pepper Spray"**

The active ingredients in this product may only be claimed in the manner in which they are expressed on the container label's statement of ingredients.

b. The "**DO NOT SEEK OUT ENCOUNTERS**" paragraph located near the top of the rear panel is basically acceptable for the blister-pack. However, if you do not include all elements of required labeling on the blister pack, the "**READ THIS ENTIRE LABEL BEFORE ... ENCOUNTERED**" sentence must be changed to read

READ THE ENTIRE LABEL ON THE CONTAINER IN THIS BLISTER PACK BEFORE TAKING THIS PRODUCT INTO AREAS WHERE BEARS MIGHT BE ENCOUNTERED.

c. If a "**DIRECTIONS FOR USE**" section is to be included on the blister-pack label, the entire section accepted for the container label must be used. Alternatively, the blister-pack label may refer to the "**DIRECTIONS FOR USE**" section on the container label by using a sentence such as the following:

For instructions on how to use Guard Alaska, see the DIRECTIONS FOR USE section of the label on the container in this package.

d. The allusions to "***SELF DEFENSE***" use which appear on the back panel must be deleted because they imply that the product also could be used against people. We do not permit any use-against-people claims on the labeling of animal-attack repellents which are registered under FIFRA.

e. The blister-pack label should either include all of the precautionary statements that are required to be on the container label. If all of those portions of the container's label can easily be read through the blister pack, the blister-pack label may refer the reader to the container label for a full set of precautionary statements.

If you have any questions about this letter, please contact Mr. Dan Peacock by phone (703-305-5407, by fax (703-305-6596), or by E-Mail (peacock.dan@epa.gov).

Sincerely,

DBP

Daniel B. Peacock, Biologist
Insecticide-Rodenticide Branch
Registration Division (7504C)

cc: Cathy Rice, Consultant

Lyn Frandsen (EPA Region 10)

A:\Capsaicin\71545-1 Header Card Review Aug 99.wpdAugust 2, 1999

Front

Guard Alaska
Defense Spray
[illegible] Hot Pepper

UMS9S

9 OZ.
UltraMag
Shotgun
Series

Developed and tested in the wilds of Alaska.

Out sells other brands 3 to 1!

No other defense spray proven as effective!

- All pepper sprays do not have the same stopping power!
- Our exclusive patent pending formula is scientifically proven the most effective.
- Opens pores of the skin and cuts through mucous covering of a bears eyes for incredible stopping power.
- Really stays put - does not bead-up and run off like other defense sprays.

Guard Alaska
Personal Protection Systems
McNeil River Enterprises
Anchorage, Alaska

Warning: *STRONG IRRITANT*, see additional precautions on back panel.

Guard Alaska

20% Pepper Spray

Back

WARNING: STRONG IRRITANT, CONTENTS UNDER PRESSURE!

DO NOT SEEK OUT ENCOUNTERS WITH BEARS. THIS PRODUCT IS A BEAR ATTACK REPELLENT WHICH MAY PROTECT USERS IN SOME UNEXPECTED CONFRONTATIONS WITH BEARS BUT MAY NOT BE EFFECTIVE IN ALL SITUATIONS OR PREVENT ALL INJURIES. READ THIS ENTIRE LABEL BEFORE TAKING THIS PRODUCT INTO AREAS WHERE BEARS MIGHT BE ENCOUNTERED.

DIRECTIONS FOR USE:

1. Remove the orange safety clip from the UltraMag trigger.
2. Aim at face of assailant.
3. Press down firmly, using short bursts.

For this product to be fully effective, you must engulf the assailant's face, especially the eyes, nose and mouth. This product generally has a range of up to 15-20 feet. Wind and other conditions may alter the range or effectiveness. Shield your eyes and face if you must fire into the wind. Avoid spraying into the wind if possible. Contents are dangerous and will cause pain and temporary impairment to eyes, nose, mouth and lungs. Individuals who suffer from asthma, emphysema or cardiac impairment, may have a more severe reaction. Use with caution - ***FOR SELF DEFENSE ONLY. NOT TO BE SOLD TO OR POSSESSED BY MINORS OR ANY PERSON UNDER THE AGE OF 18.*** Contents are under pressure. Do not puncture or incinerate can. Do not expose to heat, sparks, flame, or store above 120 F (50C), or in direct sunlight. Warning: This product contains a chemical known to the state of California to cause cancer. Warning: The use of this substance or device for any purpose other than self defense is a crime under the law. Contents are dangerous use with caution. ***KEEP OUT OF REACH OF CHILDREN. DO NOT CARRY OR TRANSPORT ON ANY PASSENGER AIRCRAFT.***

FIRST AID: 1. Avoid accidental contact with eyes, skin and mucous membranes. 2. In case of external contact, remove any contact lenses and contaminated clothing. 3. Flush eyes and skin thoroughly with large amounts of cold water and expose to fresh air. 4. Do not rub or apply any salves, creams, oils, or lotions. 5. Consult a physician if irritation persists. Active ingredient 20% by weight Oleoresin Capsicum in a patent applied for formula. ***Chemical Emergency Hotline: 1-800-535-5053*** Open 24 hours a day, 7 days a week.

Guard Alaska
Personal Protection Systems
McNeil River Enterprises
P.O. Box 233002
Anchorage, Alaska 99523

DAN Hoo Jadlot

DP BARCODE: D255858

CASE: 061965 DATA PACKAGE RECORD DATE: 05/06/99
SUBMISSION: S561742 BEAN SHEET Page 1 of 1

* * * CASE/SUBMISSION INFORMATION * * *

CASE TYPE: REGISTRATION ACTION: 350 GENRL CORRES REGISTRATION
RANKING : 5 POINTS ()
CHEMICALS: 070701 Capsaicin (in oleoresin of capsicum) 1.7300%

ID#: 055541-00002 COUNTER ASSAULT BEAR DETERRENT
COMPANY: 055541 BUSHWACKER BACKPACK & SUPPLY CO.
PRODUCT MANAGER: 04 TINA LEVINE 703-308-7055 ROOM: CM2 219
PM TEAM REVIEWER: GRACE ROBIOU 703-305-1016 ROOM: CM2 203
RECEIVED DATE: 04/26/99 DUE OUT DATE: 08/14/99

* * * DATA PACKAGE INFORMATION * * *

DP BARCODE: 255858 EXPEDITE: Y DATE SENT: 05/06/99 DATE RET.: / /
CHEMICAL: 070701 Capsaicin (in oleoresin of capsicum)
DP TYPE: 001
CSF: N LABEL: Y

ASSIGNED TO	DATE IN	DATE OUT	ADMIN DUE DATE: 07/15/99
DIV : RD	/ /	/ /	NEGOT DATE: / /
BRAN: IRB	/ /	/ /	PROJ DATE: / /
SECT: PM04	/ /	/ /	
REVR : [illegible]	6/6/99	6/30/99 OBJ (to 71545-U)	
CONTR:	/ /	/ /	

* * * DATA REVIEW INSTRUCTIONS * * *

Bill--

Pride's comments on Randy's supplemental product labeling.
Any comments to either?

Thanks.
Grace

* * * DATA PACKAGE EVALUATION * * *

No evaluation is written for this data package

* * * ADDITIONAL DATA PACKAGES FOR THIS SUBMISSION * * *

DP BC	BRANCH/SECTION	DATE OUT	DUE BACK	INS	CSF	LABEL

IRB BRANCH REVIEW - TSS

Record Number(s)

D255858

IN 5/6/99 OUT 6/30/99

EFFICACY

FILE OR REG. NO. 55541-2

PETITION OR EXP. PERMIT NO.

DATE DIV. RECEIVED 4/26/99

DATE OF SUBMISSION 4/21/99

DATE SUBMISSION ACCEPTED 5/6/99

TYPE PRODUCTS(S): I, D, H, F, N, RX S

DATA ACCESSION NO(S). none

PRODUCT MGR. NO. 04

PRODUCT NAME(S) COUNTER ASSAULT BEAR DETERRENT

COMPANY NAME Bushwacker Backpack & Supply Co.

SUBMISSION PURPOSE complain about competitor's labeling

CHEMICAL & FORMULATION 0.71% Capsaicin and 1.02% "Other Capsaicinoids"

aerosol

Efficacy Review: COUNTER ASSAULT BEAR DETERRENT, 55541-2
Bushwacker Backpack & Supply Co., Inc.
Missoula, MT 59801

200.0 INTRODUCTION

200.1 Uses

55541-2 is a 1.73% Capsaicin (0.71%) and Other Capsaicinoids (1.02%) aerosol Federally registered for use at unspecified sites "**only to deter bears which are attacking or appear likely to attack humans**".

200.2 Background Information

See general efficacy review of 6/17/93 for Capsaicin bear repellents, the efficacy review of 5/5/86 for Bushwacker's 55541-R, and efficacy reviews of 1/5/98, 1/26/99, and 4/22/99 for this product. See also 1998 and 1999 efficacy reviews for similar products. "Pepper spray" bear-repellent products were sold illegally, unregistered, for well over a decade; and none on them was registered in the U.S. until we accepted 55541-2 on 5/12/98 as the first Federally registered Capsaicin-based bear repellent in the U.S. The label accepted on 5/12/98 remains current.

This review discusses the submission of 4/21/99, which consists of a memorandum from Pride Johnson, Bushwacker's President, and photocopies of labeling material for the "**Guard Alaska® Defense Spray**" product, McNeill River Enterprises, Anchorage, AK. The labeling material appears to be for the cardboard portion of a blister pack in which (via silhouette) it appears that a container of the Guard Alaska product is to be packaged.

In the efficacy review of 4/22/99, I considered labeling material for Counter Assault that Bushwacker's agent, Chrisina Griffin, had supplied to us after the company's competitors had let us know that printed matter in addition to the container label accepted on 5/12/98 were accompanying Counter Assault in commerce. As detailed in my review of 4/22/98, the additional information included an information booklet, and a "bag-tag" label. According to Ms. Griffin's letter of 2/25/99, Bushwacker was selling Counter Assault in a holster. She added that,

> The information booklet, canister, and holster are wrapped together in plastic and the "bag tag" is stapled on top to hold the package together.

Johnson's letter of 4/21/99 informs us that McNeill River also was using "supplemental labeling" which, in addition to its likely illegality for being used despite not having

been reviewed or accepted by EPA, raised certain "concerns" for him in that the text on the blister pack included "erroneous marketing statements". Johnson threatens that he "may feel compelled to do the same" if EPA does not forbid his competitors from making such statements. He has made such threats before, and acting on them has gotten him into trouble.

On one level, this clearly is a case of "the pot calling the kettle black". However, Johnson is correct that no one should be making false or misleading statements on pesticide labeling and that some of the text on the Guard Alaska blister pack is highly objectionable (see "DATA SUMMARY").

Johnson wanted feedback on his letter from EPA by 5/3/99. If such timely feedback was given, it was done by someone else. I did not receive a copy of Johnson's letter to review until 5/6/99.

§2(p) of FIFRA defines "LABEL AND LABELING" as shown below.

> (p) LABEL AND LABELING.--
> (1) LABEL.-- The term "label" means the written, printed, or graphic matter on, or attached to, the pesticide or device or any of its containers or wrappers.
> (2) LABELING.-- The term "labeling" means all labels and all other written, printed, or graphic matter--
> (A) accompanying the pesticide or device at any time; or
> (B) to which reference is made on the label or in literature accompanying the pesticide or device, except to current official publications of the Environmental Protection Agency, the United States Departments of Agriculture and Interior, the Department of Health and Human Services, State experiment stations, State agricultural colleges, and other similar Federal or State institutions or agencies authorized by law to conduct research in the field of pesticides.

As text on a blister pack surrounding a Guard Alaska container, the "supplemental labeling" supplied by Johnson clearly qualifies both as a "LABEL" and as "LABELING" under the definitions quoted above.

The current accepted container label for 71545-1 was not available to me at the time of this review. The registration jacket for the product was with a contractor, and there was no copy of an accepted label for 71545-1 in

IRB's label file for Capsaicin products. I do not remember having reviewed anything other than a label that was supposed to go on the container itself, and certainly would have objected strongly to the item that Johnson copied and sent to us. As the registration number does not appear on the blister-pack label, it is conceivable that it was only used on the version of the Guard Alaska product that was marketed illegally prior to registration of the (similar) product in 1998. However, the back of the blister pack contains wording that we provided McNeill River in 1998 for incorporation into the "**DIRECTIONS FOR USE**" section of the container label for Guard Alaska. The text on the back of the blister pack also states that the product's formulation includes

> "a chemical known to the state of California to cause cancer."

201.0 DATA SUMMARY

Johnson specific objections to the Guard Alaska blister-pack label are quoted below.

> "1. Denoting 20% pepper when Active Ingredients is 1.34% MCs - the consumer may not know the difference.
> 2. Outsells other brands 3 to 1 - they do not know how much we or others sell.
> 3. Words like "scientifically proven" and "tested" - was this work validated by bear biologists and published?
> 4. Opens pores - I've been told by bear biologists, that bears do not have pores. I personally do not know one way or the other.
> 5. Refers to Passenger Aircraft. I've been told by the FAA and D.O.T. that any pepper spray over 4 oz is illegal on passenger/commercial aircraft. This also includes checked luggage. This is definitely the wrong message to be sending to consumers that fly commercially."

I find the first four items that Johnson mentions to be objectionable. The statements to which Johnson refers in those items are either false, misleading, or unproven before EPA. The reference to passenger aircraft on the blister-pack label appears in a prohibition, namely

> "***DO NOT CARRY OR TRANSPORT ON ANY PASSENGER AIRCRAFT.***"

This sentence seems to be consistent with Johnson's understanding of what he reports that "the FAA and D.O.T." told him.

Except for the name of the product and its producer, I find nothing on the front panel of the blister-pack label that is not objectionable. Under "CONCLUSIONS", I list the specific statements to which I object.

The back panel of the blister pack contains a mishmash of statements that EPA or perhaps some other regulatory agency required. The text is laid out so as to fit around the shape of the container. The "**DIRECTIONS FOR USE:**" section has a left-justified main headings and lacks the required "**USE RESTRICTIONS:**" subsection. Precautionary statements are blobbed, without heading, into the use directions section. There are some allusions to "***SELF DEFENSE***" use on the back panel which imply that the product maybe also could be used against people. We do not permit any use-against-people claims on the labels of animal-attack repellents which are registered under FIFRA.

If it has not yet occurred, McNeill Enterprises should be told in no uncertain term that its blister-pack label may not be used at this time, period. Such a label must be submitted to and accepted by IRB before it may be used. We also should send a note to Johnson thanking him for bringing this item to our attention.

I have no objections to the idea of a blister-pack label. Indeed, a blister pack would be a good thing because it would prevent shoppers from fooling around with the product while in stores, thereby wasting material and likely causing human discomfort and property damage. Why these bear-deterrent producers all came to believe that they could add assorted documents to their accepted container labels and legally market a registered product is something of a mystery, but then they are coming off of a time during which they basically were saying whatever they wanted to on the labels of the versions of their products that they sold in the U.S.

The first sentence talks about "A sophisticated dispersal system" which creates "an atomized shotgun-type blast." The second sentence uses the word "simply" with respect to firing the product at "an aggressor's face". I have generally fought against use of "simply" with respect to the use and handling of pesticides because I feel that it invites a casual attitude. (Anyone casual about an attacking bear would be unusual.) The expression "aggressor's face" implies use against species,

especially humans, not claimed on the accepted label. I feel that the paragraph would be fine if modified, by deleting or replacing a few words, to read as shown below.

202.0 CONCLUSIONS

RESPONSE TO McNEILL RIVER ENTERPRISES

We recently became aware of the label of the blister pack used to hold one container of your Guard Alaska product when it is packaged for sale. This labeling may not be used with your product at this time because you have not submitted it for our review and we have not accepted it. Had you submitted the version of the blister-pack label (copy enclosed) that we have received from another source, we would have rejected the label in its current form for the reasons indicated below.

1. The front panel of the blister pack bears claims which are unsupported, false or misleading. These claims (listed below) must be deleted.

   a. **"20% Ultra Hot Pepper"**

      The active ingredients in this product may only be claimed in the manner in which they are expressed on the container label's statement of ingredients.

   b. **"9 oz. UltraMag Shotgun Series"**

      All claims of net contents must be worded as the net contents information is expressed on the container label.

      There has been no demonstration that the spray pattern produced by depressing the trigger on this product's container is identical or similar to the pattern of particle dispersion produced when a shotgun is fired. We doubt that such would be the case due to differences in firing characteristics and the differences between aerosolized liquids and airborne shot.

   c. **"Developed and tested in the wilds of Alaska."**

      Although you frequently have alluded to such testing in conversations and other communications with us, the only documentation of any reported use of your product that we have received is a videotape of a single use of what would have been an earlier formulation of Guard Alaska. If you

want to make any claims about to your testing program on your labeling, you must document to us the procedures used in such testing and the results that were obtained.

d. "**Out sells other brands 3 to 1!**"

Even if you were able to show this statement to be true, it still could not be made on pesticide labeling because it misleadingly implies a favorable comparison with other products. Such comparisons are prohibited in 40 CFR, §156.10(a)(5)(iv). Having more sales would not necessarily make one product better than another.

e. "**No other defense spray proven as effective!**"

This statement makes a favorable comparison of product performance between Guard Alaska and every other "**defense spray**". As noted above, such statements are prohibited. We have seen no data which would support any firm conclusions about the relative effectiveness of the bear-repellent sprays that currently are registered.

f. "All pepper sprays do not have the same stopping power!"

This statement is misleading, at best.

g. "Our exclusive patent pending formula is scientifically proven the most effective.

This is another statement which favorably compares your product to all others. We are not aware of any research data that support this statement.

h. "Opens pores of the skin and cuts through mucous covering of a bears eyes for incredible stopping power."

We do not know to what extent this statement might be true. To support it, you would have to supply us with credible information which documented that bears' skin has pores, that bears' eyes have a substantial "mucous covering", that your product opens pores and cuts through such a mucous covering, and that your product stops bears in their tracks in some "incredible" way.

i. "Really stays put - does not bead-up and run off like other defense sprays."

This statement makes a favorable comparison between your product and "other defense sprays". We are not aware of any data which specifically support this claim.

2. The back panel of the blister pack bears is not acceptable for the reasons indicated below.

a. "**20% Pepper Spray**"

The active ingredients in this product may only be claimed in the manner in which they are expressed on the container label's statement of ingredients.

b. The "**DO NOT SEEK OUT ENCOUNTERS**" paragraph located near the top of the rear panel is basically acceptable for the blister-pack. However, if you do not include all elements of required labeling on the blister pack, the "**READ THIS ENTIRE LABEL BEFORE ... ENCOUNTERED**" sentence must be changed to read

READ THE ENTIRE LABEL ON THE CONTAINER IN THIS BLISTER PACK BEFORE TAKING THIS PRODUCT INTO AREAS WHERE BEARS MIGHT BE ENCOUNTERED.

c. If a "**DIRECTIONS FOR USE**" section is to be included on the blister-pack label, the entire section accepted for the container label must be used. Alternatively, the blister-pack label may refer to the "**DIRECTIONS FOR USE**" section on the container label by using a sentence such as the following:

For instructions on how to use Guard Alaska, see the DIRECTIONS FOR USE section of the label on the container in this package.

d. The allusions to "***SELF DEFENSE***" use which appear on the back panel must be deleted because they imply that the product also could be used against people. We do not permit any use-against-people claims on the labeling of animal-attack repellents which are registered under FIFRA.

e. The blister-pack label should either include all of the precautionary statements that are required to be on the container label. If all of those portions of the container's label can easily be read through the blister pack, the blister-pack label may refer the reader to the container label for a full set of precautionary statements.

[NOTE TO DAN and GRACE: I have only touched on the problems with the precautionary statements on the blister pack. I expect that you will be supplying the correct text.]

Because of the obvious benefits that the packaging arrangement would seem to provide, we feel that it would be appropriate to package containers of Guard Alaska in a blister pack. We have no objections to such packaging and suggest that you promptly prepare and submit an appropriate blister-pack label.

William W. Jacobs
Biologist
Insecticide-Rodenticide Branch
June 30, 1999

May 6, 1999

TELEPHONE MEMORANDUM

Subject: Guard Alaska Defense Spray
EPA Reg. No. 71545-1
Review of Supplemental Product Labeling (Header Card)
Telephone Conversations with Region 10 and Registrant (Mr. Randy Prater)

From: Dan Peacock, Biologist DBP
Registration Division

To: Lyn Frandsen
EPA Region 10

Lyn talked to Randy Prater, registrant of Guard Alaska, yesterday (5/5/99) and told him the same ting that I told Randy two days ago (5/4/99):

1. Sticker over header card completely and

2. Add back only exact text previously approved for the label.

We will be reviewing the Header Card formally and forwarding an copy of our comments to Region 10 when finished.

P.S. I later talked to Randy Prater at 12:30PM on May 6, 1999 and told him the same thing as I had told Lyn Frandsen of EPA Region 10.

A:\Capsaicin\71545-1 May 4 & 6, 1999 Tel calls to Reg 10 & Randy Prater.wpd

IRB BRANCH REVIEW - TSS

161/77 S-559068

Record Number(s)

D254490

IN 3/24/99 OUT 4/12/99

EFFICACY

No need for letter to registrant

FILE OR REG. NO. 71545-1

PETITION OR EXP. PERMIT NO.

DATE DIV. RECEIVED 11/20/98

DATE OF SUBMISSION 11/20/98

DATE SUBMISSION ACCEPTED 3/24/99

TYPE PRODUCTS(S): I, D, H, F, N,x R, S

DATA ACCESSION NO(S). none

PRODUCT MGR. NO. 04

PRODUCT NAME(S) GUARD ALASKA BEAR REPELLENT

COMPANY NAME McNeill Enterprises, Inc.

SUBMISSION PURPOSE spray pattern study

CHEMICAL & FORMULATION 1.34% Capsaicin and related capsaicinoids aerosol

Dan - see this.

Grace

Efficacy Review: GUARD ALASKA© BEAR REPELLENT, 71545-1
McNeill River Enterprises, Inc.
Anchorage, AK 99515

200.0 INTRODUCTION

200.1 Uses

1.34% "Capsaicin and Related Capsaicinoids" ("Made from ***20% Oleoresin of Capsicum by volume***") aerosol proposed for Federally registered to

> **"be used only to deter bears which are attacking or appear likely to attack humans."**

200.2 Background Information

See efficacy reviews of 8/17/98, 10/21/98, 12/10/98, and 2/25/99 for 71545-1, and the efficacy review of 12/29/97 of a pre-application submission (CORR. 289443) pertaining to this product. This product was accepted for Federal registration on 12/22/98.

The bean sheet which occasioned this review refers to McNeill River's submission of 11/20/98, which I previously discussed in the efficacy review of 12/10/98. The submission package appears to be the same as that which I considered in that review. Below, I repeat my assessment of the report, edited somewhat in light of results from research with other products which came to my attention after 12/10/98.

201.0 DATA SUMMARY

The report of 11/19/98 on the spray pattern of the new formulation is cited and discussed below.

Grube, W. (1998) Spray pattern associated with Guard Alaska® Bear Repellent new formulation. Unpublished report: Case-Mason Filling, Inc., Baltimore, MD. 5 pp.

The cornerstone of this document is a two-page memorandum from Wayne L. Grube of Case-Mason to Cathy Rice, an agent for McNeill River. The remaining 3 pages are those required by EPA for data submission formatting. No MRID number has been assigned to the report.

Grube set up a "Firing Range" by covering an 8' wide by 10' high portion of the wall of a building "with light gray cardboard. He also placed cardboard sheets on the ground

> "5 ft. wide by 40 ft. in length measured in 5 ft. increments."

This seems to mean that pieces of cardboard covered some or all of a 5' by 40' substrate area projecting from the wall target "along the line of fire". Non-aerosol droplets should show up well on gray cardboard.

Prior to each test of the product, Grube "carried the product" on his hip "for 4-5 minutes while walking". This procedure was followed "To simulate the actions of the hiker" so that there would be some moving of the contents of the container (which would activate the propellent somewhat) but no vigorous shaking (which a user might not have time to do if a bear were charging). In a telephone conversation of 11/9/98, I suggested to Grube that he follow a pre-use handling procedure which simulated the actions of a hiker or hunter.

Grube's first test of a unit in the "Firing Range" was facing the wall at a distance of 15'. He reports that this firing produced an oval impingement pattern on the vertical cardboard which was 5'6" high and 4' wide.

When he moved back to 20' from the vertical wall, the spray aerosolized before hitting the back wall, making "it difficult to measure the pattern as before." He then altered his protocol to

> "put walls of cardboard on either side of the firing line that were 5 ft. in height and 6 ft. apart and extended 8 ft out from the wall."

This seems to mean that he created a stall 6' wide, 8' deep, and 5' high.

When a unit was fired toward this stall (apparently from 20' from the back wall),

> "a cloud of airborne particles was evident by the naked eye and showed evidence of being deposited on both walls of the tunnel (6 ft. apart) and on the wall of the building. Small specks were deposited on white sheets of paper lining the walls."

From these descriptions, I infer that some spray reached the back wall, but that it was more noticeable on the walls of the stall (which were as close as 12' from the spray orifice).

Grube reports additional aerosolizing "Beyond 20 ft." with the spray cloud expanding with increased distance (and time) from the source. He claims that a unit can produce a visible spray cloud more than 30' from the spray orifice and that one "would feel the effects of the spray" up to

50' away from it origin. He added that the effects of wind on the spray pattern would increase with decreased droplet size and increased distance from the source. This stands to reason.

Previously, I determined that the performance described by Grube probably would be adequate to protect humans from charging bears. The more spray a bear got, the more likely that it would leave in pain. A fine mist at 20-50' might be all that it would take. Information in recent reports for other products suggests that such would be the case. Winds could affect accuracy significantly at distances greater than 20', despite cloud expansion. It seems clear from Grube's report that a bear would literally be blasted by spray once it came within 15 feet. If it took a blast to deter a bear, then users could risk "running out of bear spray before they ran out of bear" if they discharged the containers contents before the bear got close enough.

I have more confidence in Grube's assertion that a visible spray cloud can be seen 30' from the spray source than in his claim that the "effects of the spray" could be felt from 50' away. Because Grube gives only a semi-testimonial account of spray pattern at distances beyond 20', I feel that the current label's claim of "**a range of "15-20 feet (about 5-6 meters)**" probably is conservative but should not be expanded at this time.

Compared to the results reported directly by McNeill River for the old proposed formulation, the spray pattern reported by Grube seems a bit weaker. As discussed in the efficacy review of 8/17/98, the report for the old proposed formulation claimed a "minimum of 20 feet" for its distance of travel from the source and a "Coverage at 20 ft" with "a height of 48 inches and a width of 48 inches". Grube reports a somewhat taller and equally wide spray pattern at a distance of 15' compared to the 48"-diameter circle at 20' that McNeill River reported for the old formulation.

The results with the newer formulation (see also the review of 10/21/98) could be interpreted as meaning that one must wait until the bear gets closer than 20' before the new formulation could be expected to reach the animal at a level amount sufficient to repel it. If, as is likely the case, aerosolized particles effectively deter bears, the product would work beyond 20'.

In his new report on the new formulation, Grube implies that continuous spraying for 8-10 seconds exhausts the usable contents from a container. His earlier report on the new formulation indicated a "Duration of Spray" of 9-10

seconds with a container being capable of delivering 8-9 one-second bursts of firing. For this type of product, one second may be longer than is needed. In McNeill's video tape product demonstration (old formulation), a young black bear was repelled by a single blast of product that was well under a second in duration.

202.0 CONCLUSIONS

The report of November 19, 1998, on the spray pattern of the formulation for GUARD ALASKA leaves some questions unanswered. However, its author describes a readily detectable spray pattern at 15 feet from the source and reports a visible spray cloud 30 feet away from the source, with much less spray deposition at 20 feet than at 15 feet. In light of these results, the claim of effective spraying distance of 15-20 feet should be retained.

We suspect that spray range claims might become important as registrants of bear repellents seek new customers, although our regulations prohibit use of statements of comparative efficacy (or safety) in pesticide labeling. At any time, you may submit additional evidence regarding the effective range of this product. Such information might include additional spray-pattern data and/or efficacy data which indicate successful use of the product at distances equal to or greater than 20 feet. It would be of great help to us as we attempt to become more familiar with the issues associated with products of this type if you also were able to provide videotaped documentation of the results of spray-pattern or efficacy studies.

[NOTE TO GRACE ROBIOU: Check jacket (not available for this review) to see if Grube's report of 11/19/98 was covered in a letter (probably sent in December). If not, you might want to incorporate the comments under "CONCLUSIONS" into a letter sent to McNeill River.]

William W. Jacobs
Biologist
Insecticide-Rodenticide Branch
April 12, 1999

IRB BRANCH REVIEW - TSS

Record Number(s)

D253635

2/25/99 2/25/99
IN OUT

EFFICACY

FILE OR REG. NO. 71545-1

PETITION OR EXP. PERMIT NO.

DATE DIV. RECEIVED 2/24/99

DATE OF SUBMISSION 2/24/99

DATE SUBMISSION ACCEPTED 2/25/99

TYPE PRODUCTS(S): I, D, H, F, N, Rx S

DATA ACCESSION NO(S) none

PRODUCT MGR. NO. 04

PRODUCT NAME(S) GUARD ALASKA BEAR REPELLENT

COMPANY NAME McNeill River Enterprises, Inc.

SUBMISSION PURPOSE amend label

CHEMICAL & FORMULATION 1.34% Capsaicin and other Capsaicinoids aerosol

Efficacy Review: GUARD ALASKA© BEAR REPELLENT, 71545-R
McNeill River Enterprises, Inc.
Anchorage, AK 99515

200.0 INTRODUCTION

200.1 Uses

1.34% "Capsaicin and Related Capsaicinoids" ("Made from 20% Oleoresin of Capsicum") aerosol Federally registered to

"be used only to deter bears which are attacking or appear likely to attack humans."

200.2 Background Information

See efficacy reviews of 8/17/98, 10/21/98, and 12/10/98 for 71545-1 and efficacy review of 12/29/97 of a pre-application submission (CORR. 289443) pertaining to this product. This product was accepted for Federal registration on 12/22/98.

This review discusses McNeill River's submission of 2/24/99, which consists of a brief cover letter and several copies of a revised proposed label. The submission was occasioned by the dissatisfaction of Randal Prater of McNeill River with one element of text on the label accepted on 12/22/98 and with another situation which developed when an agent for McNeill put together what was to be a final printed label.

201.0 DATA SUMMARY

No efficacy data were submitted.

McNeill's letter of 2/24/99 mentions two label changes. These are discussed individually.

1. Moving and de-emphasizing the label text quoted below.

> "DO NOT SEEK OUT ENCOUNTERS WITH BEARS. THIS PRODUCT IS A BEAR ATTACK REPELLENT WHICH MAY PROTECT USERS IN SOME UNEXPECTED CONFRONTATIONS WITH BEARS BUT WHICH MAY NOT BE EFFECTIVE IN ALL SITUATIONS OR PREVENT ALL INJURIES. READ THIS ENTIRE LABEL BEFORE TAKING THIS PRODUCT INTO AREAS WHERE BEAR MIGHT BE ENCOUNTERED."

In several telephone conversations earlier this month (e.g., 2/8/99, 2/11/99, 2/16/99), Prater expressed to me his concern that we were requiring that this text be placed in a box which would "cover his bear". I was not sure what he was talking about because there was no illustration of a

bear on the draft label that I had reviewed in December of 1998. On 2/11/99, Prater FAX-ed to me a copy of a label in which the text in question appeared, below the name of the product, in dark capital letters against the background of a conspicuous white box. The bottom of the box did indeed cover the ears and some of the forehead portion of a picture that was still clearly recognizable as a bear.

Prater had no objections to the content of the paragraph but was concerned that its presence in that location would spoil the appearance of his product to some degree. I discussed possible ways around the problem with Prater and with his agent Cathy Rice (on 2/16/99).

On the proposed revised label submitted on 2/24/99, the text at issue still appears on the front panel but has been moved toward the bottom, below an abbreviated precautionary labeling box and immediately above information on the EPA establishment and registration numbers. The text also has been changed from all capital letters to mainly small letters and now appears white against a dark background. There is no box surrounding the text.

I have no objection to the shift in the text's position, although I prefer its former location. The accepted label for the only other registered capsaicinoid bear repellent (COUNTER ASSAULT, 55541-2) has similar text in a similar location, but the text is in "all-caps". I am more concerned about the proposed de-emphasis of the text by taking it out of a box with a contrasting background and shifting to mainly small letters. I feel that retaining the "all-caps" appearance would provide sufficient emphasis if there were no contrasting box to emphasize the text.

2. Replacing the existing third and fourth sentences of the "**USE RESTRICTIONS:**" subsection of the "**DIRECTIONS FOR USE**" with the following sentence:

   "Do not spray this product on tents, other objects, or on clothing since such use has no deterrent effect on bears."

   The sentences to be replaced read as shown below.

   "Do not spray this product on tents, other objects, or on clothing. Such use has no deterrent effect on bears and may attract them in some cases."

Several developments have made the "and may attract . . ." clause of the second quoted sentence on the current label a problem for Prater, who told me by telephone that he believes the rest of the text to be appropriate. That clause, which does not appear on COUNTER ASSAULT's label, was based upon anecdotes about bears showing interest in sprayed campsite articles.

The "and may attract . . ." clause seemed even more appropriate after research by Tom Smith of the U.S. Geological Survey in Alaska became known to EPA. The article cited and discussed below was provided by Tom Smith in the Fall of 1998.

5. Smith, T.S. (1998) Attraction of brown bears to red pepper spray deterrent. Wilson Society Bulletin, 26:1, 92-94.

Smith states that liquid sprays made from Oleoresin Capsicum (hereafter OC) were developed in the 1970's. (No such product was registered for use in the U.S. until 1998). Smith's study documents that brown bears are attracted to objects treated with OC sprays.

Smith's study sites were 9 locations along the Kulik River in Katmai NP, AK. The sites selected were gravel substrates located along "bear travel corridors". Smith wanted to observe responses of bears which, in the course of their normal wanderings, encountered objects treated with OC sprays. Treated areas were 1 m^2 in area. Products from 4 different manufacturers were used. (The products are not mentioned by name in the article.) Seven of the sites were treated with products claimed to be 10% OC, while 2 sites were treated with a nominally 15% OC product. Bears were observed from blinds located 10-200 m from treated substrates. Observations were made over the period from 10/25/97 through 10/27/97 from 10:00 AM to 5:00 PM.

Smith observed 13 instances of individual bears or groups of bears visiting treated sites. Some 20 bears were observed including 3 mother bears, 7 bear cubs, 3 adult male bears, and 7 other bears whose sex was not identified. These bears made a total of 40 approaches to the treated sites. Using a nominal scale of intensity of response for the 40 approaches, Smith reports the data shown below.

BEAR COHORT		INTENSITY OF REACTION			
	N	None	Slight	Moderate	High
Adult males	3	2		1	
Female w/cubs	3	2	3	1	2
Lone bears (sex not determined)	7	12	5	3	9
TOTALS	13	16	8	5	11

The specific behavioral responses observed included

> "25 bouts of sniffing, 9 pawing bouts, 10 licking bouts, 16 head rubbing bouts, and 11 bouts of bears rolling their entire body on the pepper spray. Behavioral bouts at individual treatment sites lasted of 0.1-2.5 minutes (x = 1.0 min. SD = 0.47)."

Apparently, all "**High**" intensity responses included bouts of rolling. Smith's article includes a photograph of a "Bear lying in pepper spray". Smith claimed, at other times, to have observed bears at the same loci that were treated with OC products for ">750 hours" without once seeing

> "bears rubbing their heads on the ground, pawing and licking soils, or rolling on their backs as done in the presence of red pepper spray residue, strongly suggesting that these novel behaviors stemmed directly from exposure to the red pepper spray I had deposited on soils."

Smith also claims that in each of the 16 "**No Response**" outcomes, prevailing wind speeds were in excess of 37 km/hr (about 23 mph). Smith also reports that bears continued to respond strongly to substrates that were treated 5 days earlier. Smith does not report that use of a pure Capsaicin product was associated with any "**No Response**" outcomes.

In light of his results, Smith expressed concern that test firing of cans of bear repellent might leave OC residues on objects in the campground, including the partially used spray cans. He suggested that label directions encouraging test firings might be counterproductive from a safety standpoint and run counter to the advice given to those who hike and camp in bear country (i.e., to keep food items and

"otherwise odorific articles" away from sleeping areas. He adds,

> "Given that red pepper spray residues elicit intense interest and scent rubbing in bears, it may be prudent to keep canisters which have been fired free of residues by careful cleaning or storage in locations other than sleeping areas. Given these findings, I recommend a cautious approach to use and storage of red pepper spray products in bear country.

An applicant for registration of another bear repellent product (BEAR PAUSE™ ATTACK DETERRENT, 71768-R, from ChemArmor of Missoula, MT) provided us a videotape which included some footage from Smith's research. Some brown bears did indeed rub their heads or torsos (back and front) into areas along a river bank. Although Smith attributed instances in which bears did not respond to treated substrates to high winds, ChemArmor wanted us to believe that their product did not attract bears in Smith's tests because it is made from extracted Capsaicin rather than OC.

Smith's report appeared to show that OC repellents can attract bears (supporting the "and may attract . . ." clause), but did not settle the issue of why this occurs. The published article did not establish that any particular component of the products was responsible for the attraction, although the products did all have Oleoresin of Capsicum in common. In our response to ChemArmor's application, we noted that, as their assertion that their product would not attract bears because it contained extracted Capsaicin rather than Oleoresin of Capsicum was unproven, we would require all Capsaicin-containing bear repellents to use the same two sentences (quoted above) that are on the current label for GUARD ALASKA (i.e., including the "and may attract . . ." clause).

Earlier this month, both Prater and Chuck Bartelbaugh of the Montana-based Center for Wildlife Information called me angry about some disinformation allegedly being spread by ChemArmor concerning the attractiveness of OC sprays to bears. Both Prater and Bartelbaugh criticized Smith's work as being "unscientific" and claimed to have done some experimenting of their own in which bears were not attracted. Prater claimed to have tested his product in that manner. I told them that I thought that Smith's methods, as described in his paper, were appropriate for exploratory field research and noted that his work had not isolated any causative agents. Prater was concerned that the banks of the river along which Smith's tests were run

had probably been covered with bear-landed salmon at certain times of the year, implying that there was no telling what the bears were responding to. Prater said that his testing had taken place in more upland areas in which, nevertheless, bears were common.

On 2/11/99, Smith called me to talk about the implications of his research and the current firestorm. Later that day (3:45 PM Alaska time), he "e:mailed" a note to Dan Peacock and copied me. In the note, he stated that he felt that requiring

> "'may attract' will likely do more harm than good and is certainly not warranted for untested products."

In light of recent experiences, I have come to agree with Smith's conclusions. This means that the "and may attract them in some cases" clause -- which COUNTER ASSAULT does not currently have -- should come off of GUARD ALASKA's label and those of any pending products to which it has been added. The text which remains prohibits applying the product prophylactically and, by appearing in bold type, draws attention to itself.

McNeill's combining of the two sentences into one would leave GUARD ALASKA's label with statement that is only slightly different from that on COUNTER ASSAULT's. Hopefully, we would not be inviting other applicants to craft slightly different text to serve their own purposes by allowing very similar statements for the two registered products.

The new single-sentence version puts all of the thoughts in bold type. I feel that the arrangement that McNeill has proposed is acceptable.

Smith's "e:mail" identifies, by name, the 4 products that he used in his tests. These products were: COUNTER ASSAULT, BEAR GUARD, BEAR COUNTRY ESCORTS, and FRONTIERSMAN. Neither GUARD ALASKA nor BEAR PAUSE was tested.

202.0 CONCLUSIONS

1. The proposed relocation of the "DO NOT SEEK OUT" paragraph is acceptable, but it should remain in all capital letters. Presentation in black letters on a contrasting white background is preferable because it would draw more attention to the text. Placement below the product name and above the bear's face also would be preferable, but a precedent has been established for

the text to appear toward the bottom of the front panel.

2. The registrant proposes to replace the third and fourth sentences of the "**USE RESTRICTIONS:**" subsection of the "**DIRECTIONS FOR USE**" with the following sentence:

   "Do not spray this product on tents, other objects, or on clothing since such use has no deterrent effect on bears."

   This change is acceptable. It also would be acceptable to split the new sentence into two sentences reading as shown below.

   "Do not spray this product on tents, other objects, or on clothing. Such use has no deterrent effect on bears."

William W. Jacobs
Biologist
Insecticide-Rodenticide Branch
February 25, 1999

NOV 24 1998

U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Pesticide Programs

MCNEIL RIVER ENTERPRISES, INC.
750 W. DIMOND, STE.203
ANCHORAGE, AK 99515

Report of Analysis for Compliance with PR Notice 86-5

Thank you for your transmittal of 11/20/98. Our staff has completed a preliminary analysis of the material. The results are provided as follows:

Your submittal was found to be in full compliance with the standards for submission of data contained in PR Notice 86-5. A copy of your bibliography is enclosed, annotated with Master Record ID's (MRIDs) assigned to each document submitted. Please use these numbers in all future references to these documents. Thank you for your cooperation. If you have any questions concerning this data submission, please raise them with the cognizant Product Manager, to whom the data have been released.

McNeil River Enter., Inc.
750 W. Dimond, Ste. 203
Anchorage, Alaska 99515
907-349-6868 or
1-888-419-9695
907-349-7818 fax

Manufacturers of Guard Alaska Personal Protection Systems

November 20, 1998

446990-00

Mr. Dan Peacock (CM-2 H7505C)
Office of Pesticide Programs (Team 14)
U.S. Environmental Protection Agency
401 M Street, SW
Washington, DC 20460

Reference: Guard Alaska® Bear Repellent (EPA File Symbol 71545-R)

Dear Dan:

In response to your letter dated November 5, 1998, we are submitting five copies of the revised label and three copies of the study entitled:

> Spray Pattern Associated with Guard Alaska® Bear Repellent New Formulation (revised November 19, 1998) 44699001

Please call me at 1-888-419-9695 if you have any questions or if I can be of further assistance.

Sincerely,

Randal Prater

CBR Randal Prater
President

DP BARCODE: D253635

CASE: 062589 DATA PACKAGE RECORD DATE: 02/25/99
SUBMISSION: S557330 BEAN SHEET Page 1 of 2

* * * CASE/SUBMISSION INFORMATION * * *

CASE TYPE: REGISTRATION ACTION: 300 ADMN-LBL REV AMND NO DATA
RANKING : 5 POINTS ()
CHEMICALS: 070701 Capsaicin (in oleoresin of capsicum) 1.3400%

ID#: 071545-00001 Guard Alaska Bear Repellent
COMPANY: 071545 MCNEIL RIVER ENTERPRISES, INC.
PRODUCT MANAGER: 04 TINA LEVINE 703-308-7055 ROOM: CM2 219
PM TEAM REVIEWER: DANIEL PEACOCK 703-305-5407 ROOM: CM2 221
RECEIVED DATE: 02/24/99 DUE OUT DATE: 05/25/99

* * * DATA PACKAGE INFORMATION * * *

DP BARCODE: 253635 EXPEDITE: Y DATE SENT: 02/25/99 DATE RET.: / /
CHEMICAL: 070701 Capsaicin (in oleoresin of capsicum)
TYPE: 001
CSF: N LABEL: Y

ASSIGNED TO	DATE IN	DATE OUT	ADMIN DUE DATE: 04/11/99
DIV : RD	/ /	/ /	NEGOT DATE: / /
BRAN: IRB	/ /	/ /	PROJ DATE: / /
SECT: PM04	/ /	/ /	
REVR : Cey	2/25/99	2/25/99 RL	
CONTR:	/ /	/ /	

* * * DATA REVIEW INSTRUCTIONS * * *

Bill,

Attached is the revised label. There are three changes:

1. On the Back Panel, the text, "and may attract them in some cases" has been deleted.

2. A picture of a bear has been added to the Front Panel

3. The mandatory statement, "DO NOT ... ENCOUNTERED", has been moved to the bottom of the "Front Panel".

Discussion:

At one point Randy argued that he could not fit the "Do not seek" statement on the label until I suggested that he simply lengthen the label.

Now that Randy has submitted a proposed label with the "Do not seek" statement on the Front Panel, I would suggest the following for consideration:

1. The Front Panel, if you measure within the dashed lines is about 15 sq in. Therefore, "DANGER" must be increased

* * * DATA REVIEW INSTRUCTIONS * * *

from 9 to 12 point.

2. I would tell Randy to move the "Do not seek" statement back to its prominent location, under the product name. Randy has repeatedly stated that his product is for repelling large bears, not for repelling gnats.

3. Considering that for his size of front panel (15 sq in), I think that we could make the case that the type size should at least be the minimum as the KEEP OUT OF REACH OF CHILDREN, which would be 8 pt. Currently, he has this text in 6 pt, which I feel in too small, given the seriousness of the information to be communicated.

The above increases in type size to the 1) signal word and 2) "Do not see" statements can easily be done by putting the information about establishment number and net weight on the back panel or slightly decreasing the size of the bear.

Dan
NOTE: Whatever we make Randy do, we will have to require of other bear-deterrents. That will be easy for the unregistered products. However, we will have to follow-up with Counter Assault if changes are needed. Pride never sent his final printed label so earlier this week I called and reminded him of his obligation.

Dan

* * * DATA PACKAGE EVALUATION * * *

No evaluation is written for this data package

* * * ADDITIONAL DATA PACKAGES FOR THIS SUBMISSION * * *

DP BC	BRANCH/SECTION	DATE OUT	DUE BACK	INS	CSF	LABEL

McNeil River Enter., Inc.
750 W. Dimond, Ste. 203
Anchorage, Alaska 99515
907-349-6868 or
1-888-419-9695
907-349-7818 fax

Manufacturers of Guard Alaska Personal Protection Systems

February 24, 1999

Mr. Dan Peacock (CM-2 H7505C)
Office of Pesticide Programs (Team 14)
U.S. Environmental Protection Agency
401 M Street, SW
Washington, DC 20460

Reference: Guard Alaska® Bear Repellent (EPA Reg. No. 71545-1)
Final Labels

Dear Dan:

Attached are five copies of our final printed labels - both actual size and enlarged. In response our conversations, we have made the following revisions:

1. Revised the third and fourth sentences in the use restrictions to read:
   Do not spray this product on tents, other objects, or on clothing since such use has no deterrent effect on bears.

2. Kept the "DO NOT SEEK OUT ENCOUNTERS WITH BEARS ... " language on the front panel; however, moved it from below the product name to below the KORC box.

Please call me at 1-888-419-9695 if you have any questions or if I can be of further assistance.

Sincerely,

Randal Prater
President

Z 564 243 371

US Postal Service

Receipt for Certified Mail

No Insurance Coverage Provided.

Do not use for International Mail *(See reverse)*

Sent to McNeil	
Street & Number	
Post Office, State, & ZIP Code	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date	

69

PS Form **3800**, April 1995

Stick postage stamps to article to cover First-Class postage, certified mail fee, and charges for any selected optional services *(See front).*

1. If you want this receipt postmarked, stick the gummed stub to the right of the return address leaving the receipt attached, and present the article at a post office service window or hand it to your rural carrier *(no extra charge)*.

2. If you do not want this receipt postmarked, stick the gummed stub to the right of the return address of the article, date, detach, and retain the receipt, and mail the article.

3. If you want a return receipt, write the certified mail number and your name and address on a return receipt card, Form 3811, and attach it to the front of the article by means of the gummed ends if space permits. Otherwise, affix to back of article. Endorse front of article **RETURN RECEIPT REQUESTED** adjacent to the number.

4. If you want delivery restricted to the addressee, or to an authorized agent of the addressee, endorse **RESTRICTED DELIVERY** on the front of the article.

5. Enter fees for the services requested in the appropriate spaces on the front of this receipt. If return receipt is requested, check the applicable blocks in item 1 of Form 3811.

6. Save this receipt and present it if you make an inquiry.

70

10/5[illegible]-98-B-P005

PS Form **3800**, April 1995 *(Reverse)*

346 5-564328
17

June 24, 1999

Inert ingredient information may be entitled to confidential treatment

CERTIFIED MAIL

McNeil River Enterprises, Inc.
750 West Dimond, Suite 203
Anchorage, AK 99515

Attention: Mr. Randal Prater

Subject: Guard Alaska Bear Repellent
EPA Reg. No. 71545-1
Your submissions of June 16 and 20, 1999
Your E-Mail of June 21, 1999

In your letter of the same date, you have submitted a revised Confidential Statement of Formula (CSF), dated June 20, 1999, which adds a [redacted] and an unregistered source of active ingredient. Regardless of the source, the amounts of each component in your formula will remain the same. For quality control, you receive an analysis of each batch of source material for the amount of active ingredient and analyze each lot of finished product to ensure that the amount of active ingredient in Guard Alaska Bear Repellent is within the certified limits.

For these reasons, the Agency has determined that the CSF, dated June 20, 1999, which was submitted under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, is acceptable. A copy of this CSF has been placed in our file for this product. All previous versions are obsolete.

Sincerely,

DBP

Daniel B. Peacock, Biologist
Insecticide-Rodenticide Branch
Registration Division (7504C)

C:\capsaici\71545-1 June 24.wpdJune 24, 1999

Gardalaska@aol.com on 06/21/99 01:39:14 PM

To: Dan Peacock/DC/USEPA/US@EPA
cc:
Subject: [redacted] Oleoresin Capsicum

Dan,
Each lot filled by either Case Mason Filling Inc. or Washington Labs is checked for the active ingredient by means of assaying each lot before it is shipped to us. We receive a certificate of analysis from [redacted] on the finished product. Both contract fillers will keep on file the results of each lot as well to ensure we are in the necessary perimeters. Labels are attached to the bottom of each can of product to identify each lot to the appropriate certificate of analysis.

Sincerely,
Randal Prater

Product ingredient source information may be entitled to confidential treatment

5-564328

McNeil River Enter., Inc.
750 W. Dimond, Ste. 203
Anchorage, Alaska 99515
907-349-6868 or
1-888-419-9695
907-349-7818 fax

Manufacturers of Guard Alaska Personal Protection Systems

June 21, 1999

Mr. Dan Peacock (CM-2 H7505C)
Office of Pesticide Programs (Team 14)
U.S. Environmental Protection Agency
401 M Street, SW
Washington, DC 20460

Reference: Guard Alaska® Bear Repellent (EPA Reg. No.: 71545-1)
Revised CSF - Alternative source of oleoresin of capsicum

Dear Dan:

Attached is our revised Confidential Statement of Formula (CSF). We are now listing [redacted] as an alternative source of Oleoresin of Capsicum. We are making no other changes to the CSF.

Please call me at 1-888-419-9695 if you have any questions or if I may be of further assistance.

Sincerely,

for Randal Prater
President

Product ingredient source information may be entitled to confidential treatment

McNeil River Enter., Inc.
750 W. Dimond, Ste. 203
Anchorage, Alaska 99515
907-349-6868 or
1-888-419-9695
907-349-7818 fax

Manufacturers of Guard Alaska Personal Protection Systems

345/37 5-564326
CSF superceded by CSF of 6/20/99

April 26, 1999

Mr. Dan Peacock (CM-2 H7505C)
Office of Pesticide Programs (Team 14)
U.S. Environmental Protection Agency
401 M Street, SW
Washington, DC 20460

Reference: Guard Alaska® Bear Repellent (EPA Reg. No. 71545-1)
Revised CSF - addition of second manufacturer

Dear Dan:

Attached is our revised Confidential Statement of Formula (CSF). We are now listing Washington Labs as a second producer of this product. We are making no additional changes to the CSF.

Please call me at 1-888-419-9695 if you have any questions or if I can be of further assistance.

Sincerely,

for Randal Prater
President

originally received about 5/3/99

McNeil River Enter., Inc.
750 W. Dimond, Ste. 203
Anchorage, Alaska 99515
907-349-6868 or
1-888-419-9695
907-349-7818 fax
Manufacturers of Guard Alaska Personal Protection Systems

348 5-563 25
38

(Rec'd)
Co called & told to submit alt CSFP spec. sheet/bulletin. We will send to similarity claim.
DRP

June 16, 1999

Mr. Dan Peacock (CM-2 H7505C)
Office of Pesticide Programs (Team 14)
U.S. Environmental Protection Agency
401 M Street, SW
Washington, DC 20460

Reference: Guard Alaska® Bear Repellent (EPA Reg. No. 71545-1)
Alternative source of capsaicin

Dear Dan:

At the Rodenticide meeting last week, I discussed with you Randy's desire in adding a second supplier of capsaicin. Attached are certificates of analysis from [redacted] the current supplier) and [redacted] (the proposed alternative supplier). Since both suppliers are providing [redacted] Oleoresin of Capsicum, it appears that the current CSF on file for Guard Alaska® Bear Repellent will be adequate for both sources.

Randy is very eager to have this change approved. After reviewing this information, please contact me regarding the next step. It is my belief that only a revised CSF listing the alternative supplier will be required. Please call me to discuss this matter.

Sincerely,

Catherine B. Rice
Consultant

Product ingredient source information may be entitled to confidential treatment

Pages 76-77 Product ingredient source information may be entitled to confidential treatment

Memo

To: Randy Prater, President, McNeil River Enterprises
Larry Harris and Ralph Helmrich, Washington Laboratories

From: Dan Peacock, Biologist
Insecticide-Rodenticide Branch
Registration Division

345/17 S-562362

Date: May 17, 1999

Subject: Guard Alaska Bear Repellent
EPA Reg. No. 71545-1
S-562362

Mr. Prater wanted to add a source of Capsaicin for his end-use product that was 5 times hotter (5 million Skoville Heat Units, SHUs versus 1.3 million SHUs). He needed a answer now because his filler, Washington Laboratories, was ready to fill. Since Washington Labs did a lot of filling for bear repellents in Canada using the hotter source, they recommended to Randy that he use this source rather than the approved source, which they would have to special order.

I discussed the following information with both Mr. Prater in one phone call and with Mr. Larry Harris and Ralph Helmrich in a later phone call:

A. If the source had been another 1.3 million SHU source, then he would have needed:

1. Information/Data on Source Material

   a. Specification Sheet
   b. Analysis of Sample

These were the two items listed on the bear registration kit as registration requirements for the source material. We would have to review this material before he could use it. However, I could probably review it without sending it to a chemist.

B. If the source was actually a 5 million SHU source, then he would need the following on his source and the product that he sold, as specified in the the bear repellent registration kit:

1. Information/Data on Source Material

   a. Specification Sheet
   b. Analysis of Sample

2. Information/Data on Product Sold

   a. all product specific chemistry data

   We need all of this information because the manufacturing process and CSF will change. I would have to send it to a chemist.

Conclusion:

I told all three persons that, in the short term, because of the need to fill orders fast, I would suggest using the approved source for now. If they want to use the new source, then they should send in the chemistry information. They should allow three months for review.

C:\capsaici\71545-1,May17.wpdMay 19, 1999

```
Case: 062589          PRAT - SUBMISSION SUBSYSTEM          Date: 05/19/99
                       SUBMISSION ADD/EDIT SCREEN          Time: 7:19 am
                              ] CASE INFORMATION [
CASE TYPE: REGISTRATION  ORIG ACT CD: 160 NEW PROD-"ME TOO"
071545-00001  Guard Alaska Bear Repellent
COMPANY NAME: 071545 MCNEIL RIVER ENTERPRISES, INC.
PRIME CHEM:   070701 Capsaicin (in oleoresin of capsicum)          MIX? N
STATUS: Active   REGIST:12/22/98 RU: N CRP: N EU: N FORM:       TYPE:
PM/RM:04 TINA LEVINE                                            SAFER:
                         ] PRIMARY ACTION INFORMATION [
SUBM BC:          ACT SEQ:     RESUB SEQ:   REVIEWER:          ACTION CODE:
DESC:
COMM:
                    ] SUBMISSION INPROCESSING INFORMATION [
SUBM BC: S562362 ACT SEQ:4    RESUB SEQ:0  REVIEWER:DPEACOCK ACTION CODE:345
APPLIED: 05/17/99 RECEIVED: 05/17/99 PM RECEIVED: 05/17/99 DUE OUT: 08/15/99
RELATED ID NOs:
DESC: telephone inquiries about changing source of supply (5X hotter)
                   ] SUBMISSION OUTPROCESSING INFORMATION [
CORRESP:   /  /   (  )  RESP DT: 05/17/99 (11)   75 DAY N DUE BACK:   /  /
COMM: needs more info/data on source and end-use product:see tel message

 F1  Help |     Inprocess  Outprocess  Repeat  Update Case  Back Up  Main Menu
 F10 Error|            Return to the Submission screen
```

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Case: 062589          PRAT - SUBMISSION SUBSYSTEM          Date: 05/19/99
                       SUBMISSION ADD/EDIT SCREEN          Time: 7 19 am
                              ] CASE INFORMATION [
CASE TYPE: REGISTRATION  ORIG ACT CD: 160 NEW PROD-"ME TOO"
071545-00001  Guard Alaska Bear Repellent
COMPANY NAME: 071545 MCNEIL RIVER ENTERPRISES, INC.
PRIME CHEM:   070701 Capsaicin (in oleoresin of capsicum)          MIX? N
STATUS: Active   REGIST:12/22/98 RU: N CRP: N EU: N FORM:       TYPE:
PM/RM:04 TINA LEVINE                                            SAFER:
                         ] PRIMARY ACTION INFORMATION [
SUBM BC:          ACT SEQ:     RESUB SEQ:   REVIEWER:          ACTION CODE:
DESC:
COMM:
                    ] SUBMISSION INPROCESSING INFORMATION [
SUBM BC: S562362 ACT SEQ:4    RESUB SEQ:0  REVIEWER:DPEACOCK ACTION CODE:345
APPLIED: 05/17/99 RECEIVED: 05/17/99 PM RECEIVED: 05/17/99 DUE OUT: 08/15/99
RELATED ID NOs:
DESC: telephone inquiries about changing source of supply (5X hotter)
                   ] SUBMISSION OUTPROCESSING INFORMATION [
CORRESP:   /  /   (  )  RESP DT: 05/17/99 (11)   75 DAY N DUE BACK:   /  /
COMM: needs more info/data on source and end-use product:see tel message

 F1  Help |     Inprocess  Outprocess  Repeat  Update Case  Back Up  Main Menu
 F10 Error|            Return to the Submission scre
```

71545-1

Larry Harris 908-832-5333 - Wash

Ralph Helmrich
Wash Labs

IV. Data

A. Product Chemistry - Source Material (Oleoresin of Capsicum)

1. Specification Sheet

fill for Canadian
lack of settlings 5.3 mil
most of supply — India
Shuawa

2. Analysis of Sample [151B-13; OPPTS 880.1100]

[redacted]

Your source should be able to supply you with this analysis of the percentage of Capsaicin and Related Capsaicinoids, using an HPLC Method, to analyze the **source** product. Contact us if you experience difficulty in finding a laboratory to do the analysis.

[redacted]

Product Chemistry - Product to be Marketed

2 pm
I talked to Larry Harris & Ralph Helmrich & told them the same thing that I told Randy: use 1.3 million & apply for 5 million

1. Product Identity [151B-10; OPPTS 880.1100]

   Referring to a properly completed CSF form will satisfy this requirement.

2. Manufacturing Process [151B-11; OPPTS 880.1200]

   Tell us how you take the source product and make the product to be marketed.

3. Discussion of Impurities [151B-12; OPPTS 880.1400]

   Describe any impurities that are formed during the manufacturing process. If you do not expect any impurities to be formed, simply state this fact.

4. Analysis of Sample [151B-13]

   Your source should be able to supply you with this analysis of the percentage of Capsaicin and Related Capsaicinoids, using an HPLC Method, to analyze the **product to be marketed**. Contact us if you experience difficulty in finding a laboratory.

5. Physical State [151B-17(b)]

   State that product is a compressed liquid (aerosol).

6. Density [151B-17(f)]

7. pH [151B-17(I)]

Product ingredient source information may be entitled to confidential treatment

5/17/99

DAN -

Call Randy Prater
about is Capsaicin source
product.
602-278-1140.

He may need alternate
source

Bill J.

I talked to Randy Prater.
He said the new source
was [redacted]
I recommended that he use
the old source for now &
submit new product
item data for new source.
He needs to get his accounting
involved.

Product ingredient source information may be entitled to confidential treatment

pl

71545-1

Dan Peacock on 05/07/99 07:42:46 AM

300/12 5-561794

To: randy@guardalaska.com
cc: Frandsen.Lyn@EPAMAIL.EPA.GOV @ EPA, cbrice@erols.com, Tim Osag@EPA, Bill Lee/R9/USEPA/US, tatum.tyres@epa.gov, Bill Jacobs/DC/USEPA/US@EPA, Grace Robiou/DC/USEPA/US@EPA
Subject: Guard Alaska, EPA Reg. No. 71545-1, Your Header Card Faxed May 6, 1999

Randy,

I received a faxed copy of your Header Card on May 6, 1999. As Lyn Frandsen and I discussed during the past few days with you, your header card must only have the exact text as previously approved for your product to avoid potential enforcement problems.

I could not read all the words on the back of the Header Card.

On the Front Panel of the Header Card, I found the following text not previously approved:

1. UltraMag Shotgun

2. Developed and tested in the wilds of Alaska

Both of these statements appeared on a version of the Header Card that we previously received from another source and will be considered in our review of that version. When our review is complete, we will provide you with our comments.

Dan Peacock, 703-305-5407

Date May 6, 1999

To: E.P.A.

Attn: Dan Peacock

From the Fax of : GUARD ALASKA

PERSONAL PROTECTION SYSTEMS

Fax # 602-278-4850 office # 602-278-1140

Total Number of Sheets 3
(including cover sheet)

Comments: Temporary Changes to Hemmer Card

Guard Alaska®
Bear Repellent

UltraMag Shotgun

Developed and tested in the wilds of Alaska

ACTIVE INGREDIENT:

Capsaicin and Related Capsaicinoids*	1.34 %
Inert Ingredients	98.66 %
TOTAL	100.00 %

*Made from Oleoresin of Capsicum.

This product contains the toxic inert ingredient trichloroethylene

KEEP OUT OF REACH OF CHILDREN

DANGER

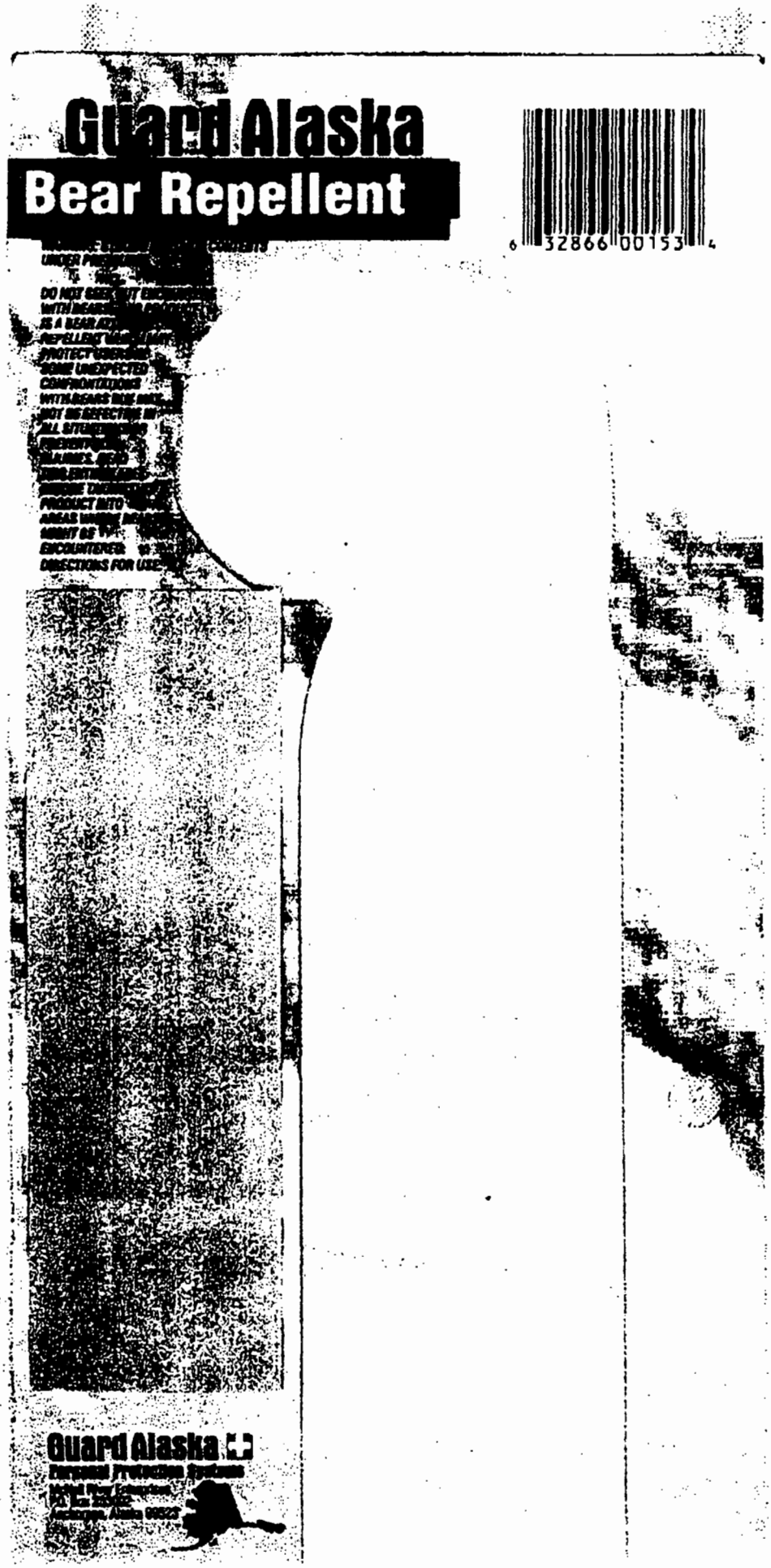
Strong, temporary irritant to eyes, nose and skin. Wash thoroughly with soap and water after handling. Do not allow children to use this product. See back panel for additional precautionary statements

DO NOT SEEK OUT ENCOUNTERS WITH BEARS. THIS PRODUCT IS A BEAR ATTACK REPELLENT WHICH MAY PROTECT USERS IN SOME UNEXPECTED CONFRONTATIONS WITH BEARS BUT MAY NOT BE EFFECTIVE IN ALL SITUATIONS OR PREVENT ALL INJURIES. READ THIS ENTIRE LABEL BEFORE TAKING THIS PRODUCT INTO AREAS WHERE BEAR MIGHT BE ENCOUNTERED

EPA Registration No. 71045-1

Net Weight: 9 Ounces

Enterprises
Alaska


Guard Alaska
Bear Repellent
6 32866 00153 4
Guard Alaska

File 55541-2

COUNTER ASSAULT®
GRIZZLY TOUGH PEPPER SPRAY

120 Industrial Court
Kalispell, MT 59901
406-257-GRIZ (4740)
Fax: 406-257-6674
email: counter@bigsky.net

DATE: April 21, 1999

TO: Dan Peacock, US EPA
Tim Osag, US EPA Region VIII
Greg Murfitt, Montana Dept of Agriculture
Tom Muhlbach, Wyoming Dept of Agriculture

FROM: Pride Johnson, President

RE: Supplemental product labeling

Attached is a photocopy of supplemental labeling on Guard Alaska's Defense Spray by McNeil River Enterprises (EPA Reg. No. 71545-1). The supplemental labeling is included in a "blister pak" packaging material. My concerns are:

1. Denoting 20% pepper when Active Ingredients is 1.34% MCs - the consumer may not know the difference.
2. Outsells other brands 3 to 1 - they do not know how much we or others sell.
3. Words like "scientifically proven" and "tested" - was this work validated by bear biologists and published?
4. Opens pores - I've been told by bear biologists, that bears do not have pores. I personally do not know one way or the other.
5. Refers to Passenger Aircraft. I've been told by the FAA & D.O.T that any pepper spray over 4 oz is illegal on passenger/commercial aircraft. This also includes checked luggage. This is definitely the wrong message to be sending to consumers that fly commercially.

I have been told by your departments that supplemental labeling of this nature is explicitly illegal and forbidden.

Please inform me by May 3, 1999 your opinions on the above supplemental labeling or enforcement action your prospective department will take. Although I do not condone misinforming the public, if my competitors can make erroneous marketing statements with impunity, I may feel compelled to do the same.

Guard Alaska
Defense Spray
2.0% Ultra Hot Pepper

UMS9S

9 OZ.
UltraMag
Shotgun
Series

Developed and tested in the wilds of Alaska.

Out sells other brands 3 to 1!

No other defense spray proven as effective!

- All pepper sprays do not have the same stopping power!
- Our exclusive patent pending formula is scientifically proven the most effective.
- Opens pores of the skin and cuts through mucous covering of a bears eyes for incredible stopping power.
- Really stays put - does not bead-up and run off like other defense sprays.

Guard Alaska
Personal Protection Systems
McNeil River Enterprises
Anchorage, Alaska

Warning: *STRONG IRRITANT*, see additional precautions on back panel.

Guard Alaska

20% Pepper Spray

6 32866 00153 4

Back

WARNING: STRONG IRRITANT. CONTENTS UNDER PRESSURE!

DO NOT SEEK OUT ENCOUNTERS WITH BEARS. THIS PRODUCT IS A BEAR ATTACK REPELLENT WHICH MAY PROTECT USERS IN SOME UNEXPECTED CONFRONTATIONS WITH BEARS BUT MAY NOT BE EFFECTIVE IN ALL SITUATIONS OR PREVENT ALL INJURIES. READ THIS ENTIRE LABEL BEFORE TAKING THIS PRODUCT INTO AREAS WHERE BEARS MIGHT BE ENCOUNTERED.

DIRECTIONS FOR USE:

1. Remove the orange safety clip from the UltraMag trigger.
2. Aim at face of assailant.
3. Press down firmly, using short bursts.

For this product to be fully effective, you must engulf the assailant's face, especially the eyes, nose and mouth. This product generally has a range of up to 15 to 20 feet. Wind and other conditions may alter the range or effectiveness. Shield your eyes and face if you must fire into the wind. Avoid spraying into the wind if possible. Contents are dangerous and will cause pain and temporary impairment to eyes, nose, mouth and lungs. Individuals who suffer from asthma, emphysema or cardiac impairment, may have a more severe reaction. Use with caution - ***FOR SELF DEFENSE ONLY. NOT TO BE SOLD TO OR POSSESSED BY MINORS OR ANY PERSON UNDER THE AGE OF 18.*** Contents are under pressure. Do not puncture or incinerate can. Do not expose to heat, spark, flame, or store above 120 F (50C), or in direct sunlight. Warning: This product contains a chemical known to the state of California to cause cancer. Warning: The use of this substance or device for any purpose other than self defense is a crime under the law. Contents are dangerous use with caution. ***KEEP OUT OF REACH OF CHILDREN. DO NOT CARRY OR TRANSPORT ON ANY PASSENGER AIRCRAFT.***

FIRST AID: 1. Avoid accidental contact with eyes, skin and mucous membranes. 2. In case of external contact, remove any contact lenses and contaminated clothing. 3. Flush eyes and skin thoroughly with large amounts of cold water and expose to fresh air. 4. Do not rub or apply any salves, creams, oils, or lotions. 5. Consult a physician if irritation persists. Active ingredient 20% by weight Oleoresin Capsicum in a patent applied for formula. ***Chemical Emergency Hotline: 1-800-535-5053*** Open 24 hours a day, 7 days a week.

Guard Alaska
Personal Protection Systems
McNeil River Enterprises
P.O. Box 233002
Anchorage, Alaska 99523

chemarmr@chemarmor.com on 05/04/99 12:56:12 PM

Please respond to chemarmr@chemarmor.com

To: Dan Peacock/DC/USEPA/US@EPA
cc: Richard Peacock/DC/USEPA/US@EPA, Tina Levine/DC/USEPA/US@EPA, Grace Robiou/DC/USEPA/US@EPA, newsmont@hotsprgs.net
Subject: Counter Assault net weight

Dear Dan;

I just received from a retailer of ours a letter that is being disseminated by Counter Assault. This letter claims that there is no difference between the 10.9 fluid oz and the 8 fluid oz. that the product claimed; that it is simply the difference between fluid(volume)and mass, and thus it is a "minor" change. This statement effectively skirts the fraudulent use of a 37% exaggeration(i.e. lie) that defrauds the public, the retailers and other competing brands of registered bear repellants, and places the blame on the U.S. EPA's interpretation. How can any agency acting under CFR or FIFRA interpret the intentional misbranding of a product with full intentions of creating an unfair market situation as "minor" and just require label changes which won't address the issue of FRAUD. If this situation were "played out on a can of beans", the product would immediately be recalled and properly addressed. Than why, when a company withholds fraudulent information from the EPA, such as the extra false claims that are on the label and advertising, and that they have fully defrauded retailers and the public with this act, that they just have to make minor changes to the label and not address the real issue. This manipulative attempt a playing down their product failure during inspection by the Bureau of Weights and Measures and not informing the retailers and distributors of their product that this gross misbranding has no impact on the sale or distribution of the product in any way. This is a gross injustice to the public, retailers and the reputable manufacturers of registered bear repellents. If nothing is done about the mass amounts of Counter Assault that has already been sold to distributors and will be marketed throughout this "bear spray season" then the law effectively has discriminated against the people it was intended to protect. In the letter from Counter Assault, Pride Johnson also states that the 3 million SHU is accurate but they are required to remove this statement. This cannot be labeled anything but fraud on the part of Counter Assault.

UDAP (Pepper Power) had several days notice before the inspection from the Bureau of Weights and Measures and placed the labels that they use on their small cans on their large cans so that they would pass inspection. They did, but I don't know what their explanation is for the products in the market place that state 15 ounces when in fact they are 9 ounce containers. The canisters in the market place labeled 9 ounce are in fact only 6 ounces, the ones labeled 12 are actually 8 and the ones labeled 15 are 9. And there are a glut of these products in the market place thanks to UDAP "dumping" product just prior to the Stop Sale. If this type of fraudulent practice

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f:\user\psps\lets99\al-9900394.ddw
bcc: TS AX OCLA Tom Smith (USGS) Peacock Hold

TL RD

MAR 25 1999

The Honorable Ted Stevens
United States Senate
Washington, DC 20510

Dear Senator Stevens:

Thank you for your letter of February 17, 1999, on behalf of your constituent, Mr. Randall G. Prater. In his February 12, 1999, letter to you, Mr. Prater raised several concerns about the registration process for his pepper-based, bear-deterrent product, Guard Alaska Bear Repellent, EPA Registration Number 71545-1, and similar products. He is concerned that pending applications may be approved more quickly than his was, that data requirements will be less stringent for the other products, and that the text of the labeling required for his product will hurt its marketability. I appreciate Mr. Prater's concerns and welcome the opportunity to clarify the issues he has raised.

Length of time required for registration

Mr. Prater describes the amount of time required to get his product registered by EPA, and is apparently concerned that EPA will move more quickly, and with less comprehensive data, in approving other products. He urges the Agency to hold new bear repellent product applications to "the same high standards as previous registrants because of the serious nature of the use of these products."

While we are always looking for ways to reduce our registration review time, Mr. Prater should be assured that EPA is holding the other bear repellent registration applications to the same standards as we did with his application. EPA took about five months to review and approve Mr. Prater's application, and expects to take about the same time to complete actions for the other two bear repellent products currently under review. (Mr. Prater's letter did not distinguish between the registration review process, which is the time from receipt of an application to actual registration of the product, and the product development process, which is the time needed to develop the data for submission to the Agency. While EPA is responsible for a timely review of a pesticide application, the registrant is responsible for timely generation of data to support that application for registration).

Data Requirements

Mr. Prater writes that an EPA official told him that it becomes easier for new applicants to receive registration "because they are permitted to submit data that was paid for by people such as myself." He is concerned that EPA may use data developed to support his product in the registration decisions on other products, despite the fact that the active ingredients differ.

It is true that prospective registrants may cite certain data that have already been developed to support their own applications. However, registrants who wish to cite these data must first offer to pay the other registrants who developed the original data. I believe it is this practice Ms. Jane Hendriques explained to Mr. Prater. In the case of bear repellents, other registrants have not requested to use Mr. Prater's data. If they had (or if others cite such data in the future), they would have to contact Mr. Prater and offer to compensate him.

In 1996 the Agency developed a "Bear Registration Kit" for all potential applicants of pepper-based bear deterrents. The requirements were the same for everyone. Each applicant had to submit its own product chemistry, acute toxicity, and efficacy data (spray pattern) and to cite a general body of efficacy data. If available, we asked each registrant to submit whatever efficacy data (e.g., video tapes) they had in their possession. To date, we have required each applicant to comply with these data requirements.

Labeling Required for Registration

In his letter, Mr. Prater objects to a labeling requirement that spraying a bear deterrent on tents, other objects, or on clothing "may attract them in some cases." He claimed that he was being unfairly singled out because the Agency had not required this statement on the only other registered bear deterrent, Counter Assault, and that "some companies were using scare tactics as well as [U.S. Geological Service researcher] Tom Smith's press release to influence the EPA's registration process." He recommended that the text about the attractiveness of bear deterrents be deleted from labeling.

The Agency required that text on Mr. Prater's product because it appeared to reflect preliminary data that we had received from Tom Smith after the registration of the first pepper spray product, Counter Assault, in May 1998 but before the registration of Mr. Prater's product, Guard Alaska in December 1998. However, another pending registrant misrepresented the text, causing unnecessary fear, confusion or anger in the minds of many registrants, dealers, and independent groups involved in bear management. Therefore, we dropped the labeling requirement for Mr. Prater's product on February 26, 1999, two days after his formal request to do so.

I hope this information is helpful. Please let me know if I can be of further assistance.

Sincerely,

Susan H. Wayland
Acting Assistant Administrator

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f:\user\psps\lets99\al-9900370.ddw
bcc: TS AX OCLA Tom Smith (USGS) Peacock Hold

RD

The Honorable Frank H. Murkowski
222 West 7th Avenue, Box 1
Anchorage, AK 99513-7570

MAR 25 1999

Dear Senator Murkowski:

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Mr. Prater describes the amount of time required to get his product registered by EPA, and is apparently concerned that EPA will move more quickly, and with less comprehensive data, in approving other products. He urges the Agency to hold new bear repellent product applications to "the same high standards as previous registrants because of the serious nature of the use of these products."

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I hope this information is helpful. Please let me know if I can be of further assistance.

Sincerely,

Susan H. Wayland
Acting Assistant Administrator

3-10-99
Don Wood
Version

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f:\user\psps\lets99\al-9900370.ddw
bcc: TS AX OCLA Peacock Hold

3-11-99
Sent note to Don Wood 8:00 am
no changes made

Senator Frank H. Murkowski

Dear Senator Murkowski:

Thank you for your letter of February 19, 1999, on behalf of one of your constituents, Mr. Randall G. Prater. In his February 12, 1999, letter to you, Mr. Prater raised several concerns about the registration process for his pepper-based, bear-deterrent product, Guard Alaska Bear Repellent, EPA Registration Number 71545-1, and similar products. He is concerned that pending applications may be approved more quickly than his was, that data requirements may differ, and the text of the labeling required for the process will hurt his product's marketability. I appreciate Mr. Prater's concerns and welcome the opportunity to clarify the issues he has raised.

Length of time required for registration

Mr. Prater describes the amount of time required to get his product registered by EPA and urges the Agency to hold new bear repellent product applications to "the same high standards as previous registrants because of the serious nature of the use of these products." Mr. Prater should be assured that EPA is holding the other bear repellent registration applications to the same standards as we did with his application. EPA took about five months to review and approve Mr. Prater's application, and expects to take about the same time to complete actions for the other two bear repellent products currently under review. (Mr. Prater's letter did not distinguish between the registration review process, which is the time from receipt of an application to actual registration of the product, and the product development process, which is the time needed to develop the data for submission to the Agency. While EPA is responsible for a timely review of a pesticide application, the registrant is responsible for timely generation of data to support that application for registration).

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In 1996 the Agency developed a "Bear Registration Kit" for all potential applicants of pepper-based bear deterrents. The requirements were the same for everyone. Each applicant had to submit its own product chemistry, acute toxicity, and efficacy data (spray pattern) and to cite a general body of efficacy data. If available, we asked each registrant to submit whatever efficacy data (e.g., video tapes) they had in their possession. To date, we have required each applicant to comply with these data requirements.

Labeling Required for Registration

In his letter, Mr. Prater objects to a requirement that his label states that spraying a bear deterrent on tents, other objects, or on clothing "may attract them in some cases." He claimed that he was being unfairly singled out because the Agency had not required this statement on the only other registered bear deterrent, Counter Assault, and that "some companies were using scare tactics as well as [U.S. Geological Service researcher] Tom Smith's press release to influence the EPA's registration process." He recommended that the text about the attractiveness of bear deterrents be deleted from labeling.

The Agency required the above text on Mr. Prater's product because it appeared to reflect preliminary data that we had received from Tom Smith after the registration of the first pepper spray product, Counter Assault, in May 1998 but before the registration of Mr. Prater's product, Guard Alaska in December 1998. However, another pending registrant misrepresented the text, causing unnecessary fear, confusion or anger in the minds of many registrants, dealers, and independent groups involved in bear management. Therefore, we dropped the labeling requirement for Mr. Prater's product on February 26, 1999, two days after his formal request to do so.

Pesticide registration is necessarily a complicated process. EPA must maintain the highest confidence that products registered by the Agency for use as pesticides are safe and that there is a reasonable certainty that the products will not cause harm to human health and the environment. EPA ensures that each registration application is treated fairly with respect to the length of the registration process, the amount of data needed to support formulations, and the labeling that is required.

I hope that you find this letter of clarification helpful. Let me know if I can be of further assistance.

3-9-99
Peacock version
sent to word
3:55 PM

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f:\user\psps\lets99\al-9900370.ddw
bcc: TS AX OCLA Peacock Hold

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Mr. Prater describes the amount of time required to get his product registered by EPA, and is apparently concerned that EPA will move more quickly, and with less comprehensive data, in approving other products. He urges the Agency to hold new bear repellent product applications to "the same high standards as previous registrants because of the serious nature of the use of these products."

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I hope this information is helpful. Please let me know if I can be of further assistance.

Sincerely,

Susan H. Wayland
Acting Assistant Administrator

71545-1

Body of Response to Randal Prater's 2/12/99 Letter to Senator Frank Murkowski

[Introduction]-Don Wood

[Body]

In Mr. Prater's February 12, 1999, letter, he raised three questions about the fairness of the registration process for his pepper-based, bear-deterrent product, Guard Alaska Bear Repellent, EPA Registration Number 71545-1 in comparison to three other similar products: one registered (Counter Assault, EPA Registration No. 55541-2) and two pending products: Bear Pause (EPA File Symbol 71768-R) and Bear Guard Bear Deterrent (EPA File Symbol 71920-R). In comparison to his competitor's products, Mr. Prater questions the fairness of the Agency's handling of his product with respect to the A) length of the registration process, B) amount of data needed for the process, and C) text of the labeling required for the process . I have discussed each of these concerns separately.

A. Length of Registration Process

Mr. Prater states that the **registration process** for Counter Assault and Guard Alaska took 4-1/2 and 2-1/2 years, respectively. For two bear-deterrent products currently under Agency review (Bear Pause and Bear Guard), he strongly recommends "... that such products be held to the same high standards as previous registrants because of the serious nature of the use of these products." Mr. Prater implies that the review process for these new products should take 2 to 4 years and that to approve products in less time would be unfair to him.

I feel that Mr. Prater has confused the time for the "registration process", the time from receipt of an application to actual registration, with the time for "product development", the amount of time needed to develop the data for submission to the Agency. The Agency has no control over the time for "product development", but does have some control over the time for the "registration process". As indicated by Table 1 below, the actual **total registration processing time** (which required up to four separate submissions and review cycles) for the first four pepper-based bear deterrents varies from **4 to 9-1/2 months**. The review of Mr. Prater's product took **5-1/2 months** and **four review cycles**. The total registration processing time would have been completed in **1(one) month**. However, his product contained an ingredient that made registration impossible until a suitable substitute could be found and reviewed.

B. Amount of Data Needed for Registration

Mr. Prater also alleges that " ... it becomes easier and quicker for new applicants to receive registration because they are permitted to submit data that was paid for by people such as myself."

Again, I feel that Mr. Prater is mistaken. In 1996 the Agency developed a "Bear Registration Kit" for all potential applicants of pepper-based bear deterrents. The requirements were the same for everyone. Each applicant had to submit its own product chemistry, acute toxicity, and efficacy data (spray pattern) and to cite a general body of efficacy data. If available, we asked each registrant to submit whatever efficacy data (e.g., video tapes) they had in their possession. To date, we have required each applicant to comply with these data requirements.

C. Labeling Required for Registration

Finally, Mr. Prater objected to a labeling requirement that spraying a bear deterrent on tents, other objects, or on clothing "may attract them in some cases." He claimed that he was being unfairly singled out because the Agency had not required this statement on the only other registered bear deterrent, Counter Assault, and "Some companies were using scare tactics as well as [U.S. Geological Service researcher] Tom Smiths Press release to influence the EPA's registration process." He recommended that the text about the attractiveness of bear deterrents be deleted from labeling.

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In summary, I think that the Agency has treated Mr. Prater fairly with respect to the length of the registration process, the amount of data needed to support his individual formulation, and the labeling required for his product. He is truly playing on a level field with respect to the issues raised in this letter. I hope that you find this letter of clarification helpful. Let me know if I can be of further assistance.

Peacock:C:\Capsaici\PraterCongressional:305-5407:3/9/99

Registration Processing Time for Bear-Deterrent Products	
Name of Product and Administrative Number	Number of Months
Counter Assault (EPA Reg. No. 55541-2)	9-1/2
Guard Alaska (EPA Reg. No. 71545-1)	5-1/2
Bear Pause (EPA File Symbol 71768-R)	8 (estimate)
Bear Guard (EPA File Symbol 71980-R)	4 (estimate)

Dan Peacock on 03/09/99 09:04:59 AM

To: Donald Wood/DC/USEPA/US@EPA
cc: Grace Robiou/DC/USEPA/US@EPA, Bill Jacobs/DC/USEPA/US@EPA
Subject: Guard Alaska, EPA Reg. No. 71545-1
Reply to 2/19/99 ltr from Senator Frank H. Murkowski

Don,

Attached is my suggested response to Senator Murkowski's letter.

Let me know if I may be of further assistance.

PraterCongressional.

Thanks,

Dan Peacock, 305-5407

Dan Peacock on 03/09/99 09:04:57 AM

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PraterCongressional.

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received Don Wood's version & sent my revisions at 3:51 PM
3/9/99

Body of Response to Randal Prater's 2/12/99 Letter to Senator Frank Murkowski

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[Body]

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Peacock:C:\Capsaici\PraterCongressional:305-5407:3/9/99

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Bear Guard (EPA File Symbol 71980-R)	4 (estimate)

This is the 2nd identical letter from Prater

Don

TO DAN PEACOCK RM 221

EPA

OFFICE OF CONGRESSIONAL AND INTERGOVERNMENTAL CORRESPONDENCE CONTROL SLIP

CONTROL NO: AL-9900394

ORIG. DUE DATE: 03/15/99

STATUS: PENDING

CORRES. DATE: 02/17/99
RECEIVED DATE: 03/01/99
ASSIGNED DATE: 03/01/99
CLOSED DATE:

FROM: STEVENS TED-R/AK
ORG: UNITED STATES SENATE
SALUTATION: DEAR SENATOR STEVENS
CONSTITUENT: PRATER,RANDAL
COMMITTEE:

TO:
TO ORG:
SUBJECT: EPA REGISTRATION PROCESS OF GUARD ALASKA BEAR REPELLENT REG. #71542-1

ASSIGNED: PREVENTION,PESTICIDE & TOXIC SUBSTANCES

COPIES OF INCOMING PROVIDED TO: OCIR/PETE PAGANO

SIGNATURE: ASSISTANT ADMINISTRATOR
INSTs: MUST BE RETURNED TO OCIR (1304) 3RD FLOOR WT, FOR REVIEW AND DISPATCHING. INCLUDE "HARD" COPY OF SIGNED REPLY FOR CONGRESSIONAL FILES (AL). DO NOT DATE LETTER.

COMMENTS:

IMS: CASSAUNDRA EADES
IMT: CASSAUNDRA EADES/DC/USEPA/US

Karlene Thomas 3/3

	Assigned	Date Assigned	Code/Status	Date Completed by Assignee	Date Returned to OCIR:
Lead	OPPTS	03/01/99	ACTION	-	-

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United States Senate
COMMITTEE ON APPROPRIATIONS
WASHINGTON, DC 20510-6025

February 17, 1999

Joseph Crapa
Associate Administrator
Environmental Protection Agency
Office of Congressional Affairs
Room 800, West Tower
Washington, D.C. 20460

Dear Mr. Crapa:

Enclosed is a copy of a letter from one of my constituents, Randal G. Prater, regarding his desire to expedite the EPA registration process of Guard Alaska Bear Repellent Reg. #71542-1.

I would appreciate it if you could look into this matter and provide me with any information upon which I may base a reply.

With best wishes,

Cordially,

Ted Stevens

TED STEVENS

Guard Alaska™
Personal Protection Systems

Corporate Headquarters
McNeil River Enterprises, Inc.
P.O. Box 233002
Anchorage, Alaska 99523

The Honorable Senator Ted Stevens

February 12, 1999

I would like to take this time to thank you for your earlier assistance in expediting the EPA registration process of Guard Alaska Bear Repellant Reg. # 71542-1. We received our registration number on December 22, 1998. As you may very well know Guard Alaska was the third product of this kind to receive such registration. The first product to receive registration was Bear Skunker, not being manufactured at this time. The second product of this nature to receive registration in May of 1998, was Counter Assault manufactured in Big Fork, Montana. The registration process is a very lengthy and expensive process. In Roy Olanders case, Bear Skunker was years of studies both in the field as well as in the laboratory to satisfy the requirements mandated by the EPA to register such a product. In Pride Johnsons case, manufacturers of Counter Assault, the registration process took four and one half years to complete before receiving there registration. In our case the lab test alone, took an eighteen month period to complete before we could submit application for registration. Unlike the registrants before me our testing went very well and was completed in a timely manner. As for our efficacy testing, it was conducted over a six year period to insure that indeed Guard Alaska Bear Repellant would save the lives of humans and prevent the useless destruction of bear by lethal means when humans and bears conflicts are encountered. Over all, the registration process took two and one half years to complete.

It has been brought to my attention the EPA is currently reviewing two new applications for registration of such products. I would like to point out that I welcome such products as a competitor in the market place, but strongly recommend that such products be held to the same high standards as previous registrants because of the serious nature of the use of these products. It has been brought to my attention these new registrants have submitted application for registration without meeting the same standards that we were held to. I have been told by Jane Henriques, that it becomes easier and quicker for new applicants to receive registration because they are permitted to submit data that was paid for by people such as myself. Keeping in mind that these new registrants have totally different formulations than any of the previously registered products. Also, one of the registrants makes claims of using a synthetic active ingredient unlike the active ingredient [Capsaicin] used in Guard Alaska Bear Repellant, and Counter Assault Bear deterrent.

Another issue I would like to bring to your attention is some very unscientific data that I believe is influencing the EPA's registration process. Tom Smith, of the U.S.G.S in Anchorage, conducted a study of four products, [Bear Pepper Sprays] one of which is currently registered by the EPA and concluded that the four products tested if used incorrectly attracted brown bears . As a result of this, the EPA has required that I must put the following language on my label. **Do not spray this product on tents, other objects, or on clothing. Such use has no deterrent effect on bears and may attract them in some cases.** This label requirement [and may attract them in some cases] is not on Counter Assaults label. My product was not used in Tom Smiths unorthadoxed field tests. This is causing confusion in the registration process. I also believe that to require either Guard Alaska Bear Repellant, our Counter Assault to put such wording [and may attract them in some cases] would cause confusion with the consumers that would purchase such EPA registered products. The label requirement,[Do not spray this product on tents, other objects, or on clothing. Such use has no deterrent effect on bears.] should make the consumer aware of the correct use of these products. Some companies are using scare tactics as well as Tom Smiths Press Release to influence the EPA's registration process. All I'm requesting is a level playing field in the registration process. Again, thank you Senator Stevens for assistance in this matter. This letter will be accompanied with some other supporting information.

Sincerely,

Randal G. Prater
President/CEO

CC: Chuck Bartlebaugh
Center for Wildlife Information

Guard Alaska®

Bear Repellent

Made in U.S.A.

DO NOT SEEK OUT ENCOUNTERS WITH BEARS. THIS PRODUCT IS A BEAR ATTACK REPELLENT WHICH MAY PROTECT USERS IN SOME UNEXPECTED CONFRONTATIONS WITH BEARS BUT MAY NOT BE EFFECTIVE IN ALL SITUATIONS OR PREVENT ALL INJURIES. READ THIS ENTIRE LABEL BEFORE TAKING THIS PRODUCT INTO AREAS WHERE BEAR MIGHT BE ENCOUNTERED.

ACTIVE INGREDIENT:

Capsicum and Related Capsaicinoids*	1.34 %
Inert Ingredients	98.66 %
TOTAL	100.00 %

* Made from Oleoresin of Capsicum.

This product contains the toxic inert ingredient, trichloroethylene.

KEEP OUT OF REACH OF CHILDREN
DANGER

Strong, temporary irritant to eyes, nose and skin. Wash thoroughly with soap and water after handling. Do not allow children to use this product. See back panel for additional precautionary statements.

EPA EST. No. 3[illegible]-MD-002 EPA Registration No.: 71545-1

Net Weight: 9 Ounces

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS & DOMESTIC ANIMALS

DANGER: May cause irreversible eye damage if sprayed in the eye. Contact through touching or rubbing the eye may result in moderate eye irritation. Avoid contact with skin or clothing. Wash thoroughly with soap and water after handling.

FIRST AID

IF IN EYES: Hold eyelids open and flush with steady, gentle stream of water for 15 minutes. Get medical attention. IF ON SKIN: Wash with plenty of soap and water. Get medical attention, if irritation persists. Notice: California has determined that a chemical contained in this product causes cancer based on tests performed on laboratory animals.

PHYSICAL OR CHEMICAL HAZARDS

Contents under pressure. Do not use or store near heat or open flame. Do not puncture or incinerate container. Exposure to temperatures above 130° F may cause bursting.

ENVIRONMENTAL HAZARDS

Do not apply directly to water. Do not contaminate water by disposing of unused material.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

USE RESTRICTIONS: This product may be used only to deter bears which are attacking or appear likely to attack humans. This product is a bear attack repellent which may protect users in some unexpected confrontations with bears but may not be effective in all situations or prevent all injuries. Do not spray this product on tents, other objects, or on clothing. Such use has no deterrent effect on bears and may attract them in some cases. Do not seek out encounters with bears or intentionally provoke them. Do not eat or allow to be eaten any food or feed materials which may become contaminated with this product.

This product has a range of 15-20 feet (about 5-6 meters). The canister empties in approximately 9 seconds.

APPLICATION DIRECTIONS: Study the procedures and directions for using this product before taking this product into bear country.

To Use: 1. Remove the orange safety clip. 2. Point spray opening at bear's face. 3. Press firmly on trigger and release spray in short bursts.

For this product to be fully effective, you must engulf the bear's face, especially the eyes, nose, and mouth. This product generally has a range of approximately 15 to 20 feet. Wind and other conditions may alter the range or effectiveness. Shield your eyes and face if you must face into the wind. Use with caution. Contents will cause pain and temporary impairment to eyes, nose, mouth, and lungs. Individuals who suffer from asthma or emphysema may have a more severe reaction.

STORAGE & DISPOSAL

STORAGE: Store only in original container in a secured area inaccessible to children and pets. Do not store above 120° F or below 32° F.

DISPOSAL: Securely wrap container in several layers of newspaper and discard in trash. Contents under pressure, do not puncture or incinerate can.

Manufactured for:
McNeil River Enterprises, Inc.
750 W Dimond, Suite 203 Anchorage, AK 99515

Chemical Emergency Hotline: 1-800-535-5058
Open 24 hours a day, 7 days a week.

Guard Alaska™
Personal Protection Systems

Corporate Headquarters
McNeil River Enterprises, Inc.
P.O. Box 233002
Anchorage, Alaska 99523

Office: (907) 349-6868
Fax: (907) 349-7818
Toll Free: (888) 419-9695

THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY HAS APPROVED GUARD ALASKA BEAR REPELLENT

Effective January 15, 1999, the United States Environmental Protection Agency has directed that any manufacturer of bear repellent spray cease selling any such products unless they have an EPA registration.

McNeil River Enterprises is pleased to announce that their Guard Alaska Ultra Mag Shotgun Series Bear Repellant is EPA registered (Number 71542-1) and available for sale.

In imposing registration requirements on bear repellents, the EPA sought to further a policy of maximizing effectiveness and minimizing risk to consumers. The EPA had concluded that using unregistered bear repellants was not only contrary to Federal Law, but in addition posed a danger to consumers due to the fact that these products would not meet the same safety, efficacy and environmental standards that a product tested and registered in accordance with EPA standards would.

In short, The EPA has essentially concluded that unregistered bear repellants could result in death or serious injury to humans, and also, the needless death of bears by lethal means.

Among other things, The EPA registration process is based upon a review of important factors furthering their policy regarding bear repellents. For example, in terms of effectiveness, spray products primarily used to deter human attacks may not have sufficient strength, amount and power for maximum deterrence against an attacking bear. The product thus must meet a fixed standard based on both field and laboratory testing. The EPA also looks at the manufacturing process. Accordingly, a manufacturer who does not use accurate and modern methods of chemical analysis to measure the actual amount of active ingredient will not be able to ensure proper product consistency and stability from lot to lot. All in all, the EPA registration process is designed to assure the efficacy of a bear repellent and consistency of product formulation.

In meeting the stringent EPA standards, the Guard Alaska Ultra Mag Shotgun Series Bear Repellant now represents the state of the art in bear defense sprays. Effective and consistent as certified by the EPA, our product can be relied upon to make a difference in an encounter with a bear.

McNeil River Enter., Inc.

Randal Prater
President
Barbara Keller
Project Manager

750 W. Dimond, Ste. 203
Anchorage, Alaska 99515
907-349-6868 or
1-888-419-9695
907-349-7818 fax

Rick Payne
National Sales Dir.

Manufacturers of Guard Alaska © Personal Protection Systems

The Truth about Pepper Sprays

In any aerosol there are three components: The active ingredient, the carrier or base, and the propellant. In Pepper spray the active ingredient is capsaicin, not oleoresin capsicum (OC). The total capsaicin in a pepper spray can be thought of as the octane rating of gasoline. It is in reality the qualitative strength rating of pepper spray. In the past Schoville Heat Units (SHU's) was a rating used as a marketing ploy to sell pepper sprays. SHU's are determined by a taste test and are not recognized by the EPA or any laboratory in the industry because of their obvious inaccuracy.

A pepper spray that reads 10%, 15%, or 20% OC tells the consumer that by volume the formula contains that respective percent of OC. The percent OC **does not** tell the consumer the qualitative strength of the active ingredient, capsaicin. Oleoresin Capsicum is tested in a laboratory using an A.O.A.C. method procedure to find the relative capsinoids that make up percent total capsaicin (see appendix A). The A.O.A.C. method for testing oleoresin capsicum is the only method recognized worldwide. The three relative capsinoids that make up the percent total capsaicin are the following: Capsaicin (%C), Dihydro-capsaicin (%DHC), and Nordihydro-capsaicin (%NDC) (see appendix B).

The carrier/base is a significantly important integrated part of the pepper spray also. Historically distilled water, vegetable oil or mineral oil has been used as a carrier for pepper sprays. It is well known in the industry that distilled water is the antidote to capsaicin. Those pepper sprays using distilled water as their carrier are usually priced very low and are found to be ineffective. Animals, as like humans, contain oils and fatty tissues on their skin and in their mucous membranes that protect us from heat burns and damage caused by the suns harmful UV rays. Vegetable oil and mineral oil do nothing more than add additional protection to the skin and mucous membranes, thus reducing the overall effectiveness of the active ingredient, capsaicin. It is also known that capsaicin is destroyed by the suns UV rays within a period of 48 hours leaving nothing more than the carrier, be it vegetable oil or mineral oil, which alone attracts all bear species.

The last component of an aerosol is the propellant. The propellant's sole purpose is to disperse both the active ingredient and the carrier. The propellant should be an environmentally safe propellant that does not contain any ozone depleting substances.

In our research we at McNeil River Enter., Inc., manufacturer of Guard Alaska © personal protection systems have found that capsaicin alone **will not** deter an aggressive animal attack or human assailant. Guard Alaska © products are unique from all other pepper sprays. Instead of the conventional carriers used, our products contain a carrier/base that removes the protective oils from the skin and mucous membranes opening the pores allowing the active ingredient capsaicin to penetrate thus increasing its overall effectiveness. Our carrier has a greater density than that of water thus allowing it to displace water. This is a desirable trait for use on an aggressive attack from a wet bear that has been fishing in Alaskan rivers, as they are well known to do.

McNeil River Enter., Inc. does not recognize SHU's, nor do we advertise SHU's on our products. The EPA requires % capsaicin total to be 1% under the pesticide/repellant act. Guard Alaska © products go over and above the EPA standard for % capsaicin total by maintaining a 1.3% capsaicin total in all our products (see appendix B).

If there are any further questions regarding this matter please feel free to contact our office using our toll free number, 1-888-419-9695.

Randal G. Prater, President

Randal G Prater

APPENDIX A

CHROMTEC

115 Lakeshore Dr. #1146
N. Palm Beach, FL 33408-3644
Tele. (561) 625-8901 Fax (561) 624-1687
E-Mail Address: Chromtec@aol.com

April 13, 1998

Barbara Keller/Cathy Rice/Randal Prater
Mc Neil River Enterprises, Inc.

Re: Summary of Tests

	% CAPSAICIN(TOTAL)	PUNGENCY	% NDC	%C	%DHC
Bear Scare:					
Sample 1	1.35	202,500	7.1	52.8	40.1
Sample 2	1.34	201,000	7.6	52.8	39.6
Sample 3	1.35	202,500	8.0	52.7	39.3
Sample 4	1.30	195,000	7.4	53.3	39.3
Sample 5	1.34	201,000	7.5	52.5	40.0

Submitted By:

Marlin Bensinger

APPENDIX B

43.1.43

AOAC Official Method 995.03
Capsaicinoids in Capsicums and Their Extractives
Liquid Chromatographic Method
First Action 1995

[Applicable for determination of 750–650000 Scoville Heat Units (SHU) of capsaicinoids in ground and crushed red pepper, chili pepper, ground cayenne pepper, ground jalapeno pepper, and red pepper oleoresins. Not applicable to chili powders or products containing oregano or thyme.]

(*Caution:* *See Appendix B*, safety notes for the safe handling of organic solvents and special chemical hazards—acetone, acetonitrile, and ethanol. See Material Safety Data Sheets, or equivalent, for each reagent. *N*-Vanillyl-*n*-nonanamide is an extreme irritant; do not inhale. Dispose of waste solvents in an appropriate manner compatible with applicable environmental rules and regulations.)

Method Performance:
See Table 995.03 for method performance data.

A. *Principle*

Test sample is extracted in warm ethanol using reflux condenser. Extract is filtered and injected into liquid chromatograph equipped with UV or fluorescence detector.

B. *Apparatus*

(a) *Liquid chromatograph (LC).*—Equipped with 1 V integrator, 20 µL sample injector, and with UV detector set at 280 nm wavelength or fluorometer with excitation 280 nm and emission 325 nm. Operating conditions: temperature, ambient (20–25°C); flow rate, 1.5 mL/min., isocratic; relative retention times: *N*-vanillyl-*n*-nonanamide, 1.00; nordihydrocapsaicin, 0.90; capsaicin, 1.00; dihydrocapsaicin, 1.58. *See* Figure 995.03 for baseline separation of major capsaicinoids.

(b) *LC column.*—Stainless, C_{18}, 150 × 4.6 mm id, packed with 5 µm particle size. Use guard column, if desired.

(c) *Reflux condenser.*

(d) *Syringe filter.*—0.45 µm.

(e) *C_{18} solid-phase extraction cartridge.*

C. *Reagents*

(a) *Ethanol.*—95% or denatured, suitable for chromatography.

(b) *Acetone.*—ACS grade.

(c) *LC mobile phase.*—Acetonitrile–water. Use LC grade solvents, or equivalent. Mix 400 mL acetonitrile with 600 mL H_2O containing 1% acetic acid (v/v). De-gas with helium or by other suitable technique.

(d) *N-Vanillyl-n-nonanamide standard solutions.*—*N*-Vanillyl-*n*-nonanamide standard, 99%, is available as synthetic capsaicin from Penta International Corp., 50 Okner Pkwy, Livingston, NJ 07039. Keep solutions out of direct sunlight. (*1*) *Standard solution A.*—0.15 mg/mL. Accurately weigh 75 mg *N*-vanillyl-*n*-nonanamide and transfer it into 500 mL volumetric flask. Dilute to volume with ethanol, and mix. Use standard solution A for analyzing all peppers except chili pepper. (*2*) *Standard solution B.*—0.015 mg/mL. Transfer 10 mL standard solution A into 100 mL volumetric flask, dilute to volume with ethanol, and mix. Use standard solution B when analyzing chili peppers.

D. *Extraction*

(a) *Ground or crushed peppers.*—Accurately weigh ca 25 g pepper into 500 mL boiling flask. Place 200 mL ethanol into same flask, add several glass beads, and attach flask to reflux condenser. Gently reflux test sample 5 h and then allow to cool. Filter 1–4 mL sample through 0.45 µm syringe filter into small glass vial. Use for LC analysis.

(b) *Red pepper oleoresins.*—Accurately weigh 1–2 g oleoresin into 50 mL volumetric flask. Increase weight of sample, if total capsaicinoid concentration is <1%.

Note: Do not allow any oleoresin to coat sides of flask.

Add 5 mL acetone, C(b), to flask and swirl contents of flask until test sample is completely dispersed (no oleoresin can coat bottom of flask when turning flask neck at 45° angle). Add five 3–5 mL portions ethanol, swirling flask during each addition. Dilute contents of flask to volume with ethanol and mix well.

Hold C_{18} solid-phase extraction cartridge over 25 mL volumetric flask or place cartridge on 10 mL glass syringe and hold over 25 mL volumetric flask. Transfer 5 mL solution from flask to cartridge or syringe. (*Note:* When using syringe, deliver solution to bottom of syringe so that sides of syringe are not coated with sample.) Pass aliquot through cartridge and collect in 25 mL flask. Wash cartridge 3 times with 5 mL ethanol, collecting washings in same flask. Dilute contents of flask to volume with ethanol and mix. Filter 1–4 mL solution through 0.45 µm syringe filter into small glass vial. Use for LC analysis.

E. *LC Determination*

Inject 20 µL standard solution B, C(d)(*2*), onto LC column, when analyzing chili peppers. When analyzing other matrices inject 20 µL

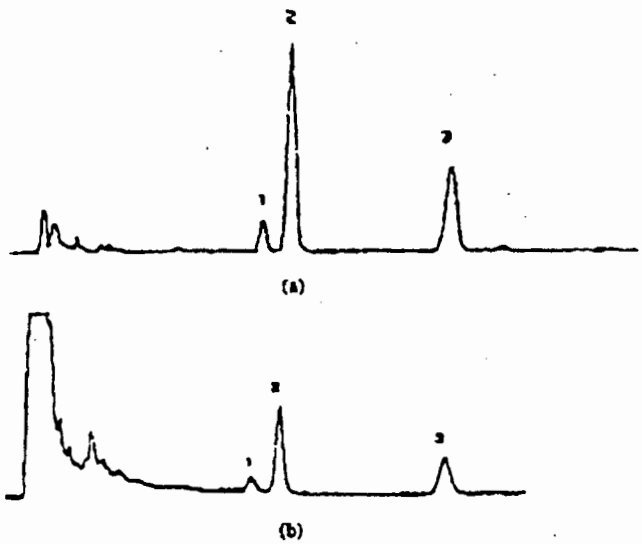

Figure 995.03—Red pepper extract analyzed by (a) fluorescence detection, and (b) UV detection. Peak 1 = nordihydrocapsaicin; peak 2 = capsaicin; peak 3 = dihydrocapsaicin

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standard solution A, C(d)(*1*). Re-inject standard solution at intervals of 6 sample injections, or less.

Inject in duplicate 20 µL test sample from D onto LC column.

After ≤30 sample injections, purge LC column 30 min with 100% acetonitrile at 1.5 mL/min flow rate. Use LC mobile phase, C(c), for further analysis.

F. Calculation

Capsaicinoids contain 3 major compounds: nordihydrocapsaicin (*N*), capsaicin (*C*), and dihydrocapsaicin (*D*). Calculate capsaicinoids as sum of these compounds [$N + C + D$: in Scoville Heat Units (SHU); 1 µg total capsaicinoids/g = ca 15 SHU], as follows:

(a) *UV detection*

(*1*) *Ground peppers and chili pepper:*

$$N = (P_N/P_S) \times (C_S/W_T) \times (200/0.98) \times 9300$$

$$C = (P_C/P_S) \times (C_S/W_T) \times (200/0.89) \times 16100$$

$$D = (P_D/P_S) \times (C_S/W_T) \times (200/0.93) \times 16100$$

where P_N, P_C, and P_D = average peak areas for nordihydrocapsaicin, capsaicin, and dihydrocapsaicin, respectively, from duplicate injections; P_S = average peak area of appropriate standard solution; C_S = concentration of standard solution, mg/mL; W_T = weight of test sample, g.

(*2*) *Red pepper oleoresins:*

$$N = (P_N/P_S) \times (C_S/W_T) \times (250/0.98) \times 9300$$

$$C = (P_C/P_S) \times (C_S/W_T) \times (250/0.89) \times 16100$$

$$D = (P_D/P_S) \times (C_S/W_T) \times (250/0.93) \times 16100$$

(b) *Fluorescence detection*

(*1*) *Ground peppers and chili pepper:*

$$N = (P_N/P_S) \times (C_S/W_T) \times (200/0.92) \times 9300$$

$$C = (P_C/P_S) \times (C_S/W_T) \times (200/0.88) \times 16100$$

$$D = (P_D/P_S) \times (C_S/W_T) \times (200/0.93) \times 16100$$

(*2*) *Red pepper oleoresins:*

$$N = (P_N/P_S) \times (C_S/W_T) \times (250/0.92) \times 9300$$

$$C = (P_C/P_S) \times (C_S/W_T) \times (250/0.88) \times 16100$$

$$D = (P_D/P_S) \times (C_S/W_T) \times (250/0.93) \times 16100$$

Reference: J. AOAC Int. (future issue).

Table 995.03 Method Performance for Determination of Capsaicinoids in Capsicums and Their Extractives by Liquid Chromatography (SHU)

Sample	Mean	N[a]	s_r	s_R	RSD_r, %	RSD_R, %	r[b]	R[c]
Chili peper	900–2750	9	40–80	100–220	3.5–4.5	9.6–11.6	110–220	280–620
Red pepper	30140–41600	11	370–840	1600–1860	1.0–2.3	4.5–5.2	1040–2350	4480–5210
Red pepper oleoresins	305890–644060	13	6770–86870	23100–86870	2.2–14.8	7.6–14.8	18960–243200	64680–243240

[a] N = No. of laboratories.

[b] $r = 2.8 \times s_r$.

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United States Department of the Interior
NATIONAL BIOLOGICAL RESOURCES DIVISION
U.S. GEOLOGICAL SURVEY
Alaska Biological Science Center
1011 E. Tudor Road
Anchorage, Alaska 99503-6619
(907) 786-3456 FAX (907) 786-3636

IN REPLY REFER TO:

February 11, 1999

Guard Alaska Personal Protection Systems
Attn: Randal Prater, Owner
3422 West Wilshire
Suite 17
Phoenix, Arizona 85009

Dear Randy,

This letter is with regard to work I published in the Wildlife Society Bulletin entitled "Attraction of brown bears to red pepper spray: caveats for use" last spring, 1998. In the article I stated that I used 4 brands of red pepper spray at concentrations of oleoresin capsicum of 10% and 15%. Guard Alaska was not among the four brands tested. No field work has been conducted by me or my colleagues with the Guard Alaska product and until that work is done conclusions about bear spray attractiveness to brown bear should not be generalized to yours, or any other untested product. Guard Alaska reports a unique formulation which means that it would have to be independently tested before anyone could answer the question as to whether it elicits attraction in bears or not. I apologize for any inconvenience this omission has caused your company.

Sincerely,

Tom S. Smith
Research Wildlife Ecologist

Subj:
Date: 2/10/99 12:08:20 PM Pacific Standard Time
From: Tom_Smith@usgs.gov (Tom Smith)
To: randy@guardalaska.com

File: rpsdeb~1.wpd (62515 bytes)
DL Time (28800 bps): < 1 minute

Randal,

I have attached some of the memos that were flying around the internet about a month ago. In the first attachment "rpsdeb~1.wpd" you'll see 4 memos. They are numbered with a bit of intro I typed in.

I received your FAX and will read it through.

I'll inquire with the DOI solicitor's office regarding your request and get back as soon as I can.

Enjoy the sun - its 10 below here right now.

Sincerely,

Tom S. Smith
Wildlife Research Ecologist
USGS - Alaska Biological Science Center
1011 East Tudor Road
Anchorage, Alaska 99503

Phone: 907-786-3456
FAX: 907-786-3636

——————— Headers ———————
Return-Path: <Tom_Smith@usgs.gov>
Received: from rly-yc04.mx.aol.com (rly-yc04.mail.aol.com [172.18.149.36]) by air-yc02.mail.aol.com (v56.26) with SMTP; Wed, 10 Feb 1999 15:08:19 -0500
Received: from smtp.tierra.net (serv04.tierranet.com [209.75.4.14])
by rly-yc04.mx.aol.com (8.8.8/8.8.5/AOL-4.0.0)
with ESMTP id PAA18161 for <gardalaska@aol.com>;
Wed, 10 Feb 1999 15:08:13 -0500 (EST)
Received: from teal.cr.usgs.gov (159.189.176.20)
by smtp.tierra.net (8.8.8/8.8.5) with SMTP id MAA01525
for <randy@guardalaska.com>; Wed, 10 Feb 1999 12:08:13 -0800 (PST)
Received: from brdsmtp2.cr.usgs.gov by teal.cr.usgs.gov (SMI-8.6/SMI-SVR4)
id NAA29755; Wed, 10 Feb 1999 13:08:21 -0700
Received: from ccMail by brdsmtp2.cr.usgs.gov
(IMA Internet Exchange 2.11 Enterprise) id 00242949; Wed, 10 Feb 1999 13:07:31 -0700
Mime-Version: 1.0
Date: Wed, 10 Feb 1999 11:05:49 -0700
Message-ID: <00242949.@usgs.gov>
From: Tom_Smith@usgs.gov (Tom Smith)
To: randy@guardalaska.com
Content-Type: multipart/mixed; boundary="IMA.Boundary.052776819"

Note #1 - produced by the EPA and widely circulated

United States Environmental Protection Agency | Prevention, Pesticides And Toxic Substances (7506C) | January 1999

EPA Questions & Answers on Bear Repellents

1. What is EPA's policy on bear repellents?

EPA's objective is to reduce the risk of death or serious injury resulting from encounters between humans and bears in the United States. EPA is working to achieve this objective by expediting the review of registration applications for bear repellents and initiating a conditional enforcement action against manufacturers of unregistered bear repellents. EPA also wants to be fair to all those who seek to market and use bear repellents by assuring that registration is available and does not create an unnecessary barrier to the market.

2. What are the dangers of using bear repellents that have not been registered by EPA?

Because unregistered bear repellents may not meet the same safety, efficacy and environmental standards that registered products do, using these products could result in death or serious injury of humans and in the needless death of bears by lethal means. For example, spray products primarily used to deter human attacks and which contain 1.5 oz of product may not have sufficient amount and power for maximum effectiveness against an attacking bear. Also, manufacturers who do not use modern methods of chemical analyses to measure the actual amount of active ingredient cannot ensure proper product consistency and stability. EPA's registration process is designed to assure efficacy of labeled use and consistency of product formulation.

3. How is EPA helping manufacturers of unregistered bear repellents through the registration process?

To assist manufacturers with the registration process, the EPA will commit to process any complete applications for registration within 60 days of receipt.

4. What is EPA doing about the unregistered bear repellents currently being sold in the U.S.?

EPA has issued a conditional Stop Sale, Use and Removal Order (SSURO) under the authority of Section 13 of the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) to manufacturers of unregistered bear-deterrent products. Under the terms of this conditional SSURO, an unregistered bear repellent product must be removed from the market if its manufacturer fails to meet any of the following conditions:

a. within 10 days of receipt of the SSURO, send a letter to EPA's Office of Pesticide Programs (OPP), including a copy of existing labeling, committing to submit a complete application for registration of the product to EPA and agreeing to place a sticker over labeling that EPA concludes could cause an unnecessary risk to users;

b. within 45 days of receipt of the SSURO, apply for a registration of its production establishment; and

c. within 90 days of receipt of the SSURO, submit a complete application for registration.

By January 15, 1999, all manufacturers of unregistered bear repellents must cease selling their products. If a manufacturer later receives a registration, it can relabel unsold product if its composition, packaging, and delivery system has not changed. Otherwise, it will have to be properly disposed of.

5. How does EPA conclude that a registered product would be effective? Have these products been tested on

bears?

The Agency has reviewed a body of data on bear repellent effectiveness over the years (which consists mainly of the results tests of products conducted on bears placed in pens) involving several products of various active ingredients and concentrations. In addition, individual registrants have submitted data on their own formulations, such as videos and data on spray duration and pattern.

6. How can one tell if a bear repellent has been registered by the EPA?

All registered pesticides have the words "EPA Reg. No." or "EPA Registration Number" followed by two numbers separated by a dash. For example, the currently registered bear deterrent products are "Counter Assault" (EPA Reg. No. 55541-2) and "Guard Alaska" (EPA Reg. No. 71545-1).

7. Will the Agency's enforcement actions after January 15, 1999 result in a shortage of bear-deterrent products this fall or next spring?

The Agency does not expect a shortage of product because there are already two registered bear-deterrent products on the market now and EPA's SSURO takes effect only if manufacturers do not agree to the registration conditions. In addition, EPA will be expediting the review of applications for new bear-deterrent products and expects two additional products to be on the market by next spring.

8. What should retailers do with existing stocks of an unregistered bear repellent product?

At this time, EPA is not asking retailers to return unsold products, however, if review of product labeling and other information reveals that the products are unsafe EPA may request that retailers return the product to the manufacturer.

9. Who can I contact for further information?

For pesticide registration questions, call Dan Peacock at 703-305-5407. For enforcement questions, call Brenda Mosley at 202-564-4174. For general questions on EPA's Pesticide Programs, call the Communications Services Branch of the Office of Pesticide Programs at 703-305-5017.

Note #2 - A widely circulated email by EPA employee George Tompkins. Obviously he is replying to Dan Peacock (above) and stating his lack of trust in the whole of pepper spray products.

_____ Reply Separator _____ Subject: Re: EPA Questions & Answers on Bear Repellents
Author: Tompkins.George@epamail.epa.gov at NBS-Internet-Gateway Date: 1/19/1999 7:38 AM

Dan,

I was happy to see that the efficacy tests were conducted on "penned" bears where the tests can and were most likely run during conditions favorable to achieving the desired results, i.e. good wind conditions, etc. However, in the wild one does not have the pleasure of being attacked by a penned, semi tamed bear. This one intends to tear you apart or eat you and most likely the wind direction is not favorable for the repellant to be directed directly into the bears face, and by the time a 15-20 mph charging, 5-900 pound grizzly bear is sprayed ,its body mass will topple over the sprayer in less than 1.5 seconds, not enough time for the product to work and deter the bear. It is this fallacy for which the majority of people out in the wilderness who have even a quarter ounce of intelligence will not willingly ever consider the use of these so called repellents because they know that their chances of survival is nil. They prefer to use a guaranteed source of protection and that is not the "registered" bear repellants. At that stage of an encounter they are not concerned about the fate of the bear, only the safety of their own skins. The EPA bear efficacy reviewers should go out in the wild next to a freshly killed field dressed elk or deer and allow a hungry and aggressive grizzly bear attack them and then use the repellant, and additionally get themselves in between a mother bear and its cub. If it deters the bear and the reviewers survive to tell

about its success for 95% or more of the time, then it will be proof enough for anyone else to follow in ther footsteps and use the product. Just to protect their skins I would suggest that they have an expert (not an EPA expert) shooter with a very heavy .375 H&H load or a 12 gauge shotgun with OOBuck or a slug there in the very close vicinity to be sure that they have some chance of surviving. Then the label can state that it is effective 95% or more of the time, if indeed the product works by itself. If it is not effective under these conditions, then it should not be registered and people should be allowed and recommended to use the effective means already known to protect them against bear or moose attacks. Bear repellants as advertised are like the old snake medicines, they do not work except under ideal conditions where the penned animal is most likely already afraid of you and wants to leave at the first sound of the aggressive motion of someone using a bear repellant device. You have to get real and try them in the real world to get any measurable success. George Tompkins (EPA)

Note #3 - My response to #2

_____ Reply Separator _____ Subject:
Re: EPA Questions & Answers on Bear Repellents
Author: Tom_Smith@usgs.gov at NBS-Internet-Gateway Date: 1/19/1999 7:38 AM

Dear George,

I read with interest your thoughts regarding red pepper spray bear deterrent and have shared in many of those at one time or another. I don't know that the EPA could have required purchasers of red pepper spray products to report all instances of use against bears but such a reporting effort would have been invaluable in building a database which would have, in turn, addressed the concerns you voiced. Fortunately, Dr. Stephen Herrero of the Univ. of Calgary, Alberta initiated an effort in 1993 to canvass parks, refuges and other areas where these sprays have been carried for a number of years. From this effort he produced a paper entitled "Field use of capsicum spray as a bear deterrent" which was presented at the 10th International Conference on Bear Research and Management. His data collection efforts revealed the following:

"We analyzed 66 cases of field use of capsicum sprays between 1984-1994. Regarding aggressive brown/grizzly bear incidents associated primarily with close range encounters, in 94% of the cases, the spray had the effect of stopping the behavior that the bear was displaying immediately prior to being sprayed. In six cases, the bear continued to act aggressively; in three of these cases the bear attacked the person spraying. In one of these 3 cases, further spraying caused the bear to stop and leave. Of the three encounters that resulted in injury to the sprayer, two involved a mother with cub(s) and the other involved a single bear. In all three injurious encounters, the bear received a substantial dose of spray to the face. While it can't be known for certain how these encounters would have ended out in the absence of spray, the use of spray appears to have prevented injury in most of this type of encounter. Regarding brown/grizzly bear incidents associated with curiosity of searching for human foods and garbage, in 100% (20/20) of the cases the spray had the effect of stopping the behavior that the bear was displaying immediately prior to being sprayed. The bear left the area in 90% of the cases."

Although not under tightly controlled conditions nor observed by scientists, these results strongly suggest that red pepper spray deterrents do indeed work. It would have been interesting to see if any difference existed between spray types but undoubtedly the data set would have been subdivided to the point of precluding any meaningful analyses.

Given Dr. Herrero's findings plus my own experiences I recommend that people purchase and carry these sprays, especially in areas where firearms are prohibited. As I see it, these sprays confer three advantages on the user:

1) they provide the person with a reason to not run, a behavior which bears will reward by chasing and attacking. Not running and holding your ground conveys a message that bears recognize, that of a co-dominant unwilling to yield. That gives them pause and buys you time.

2) the sudden and loud hissing of the spray and billowing cloud startles bears...this I have seen. You could be spraying sugar water for all it matters intially because this sound and sight is surprising. They halt and again this buys you a bit of time (at least for those encounters where you have some space between you).

3) the red pepper extract is clearly a strong irritant, as observed with penned and wild bears that have been sprayed. Dr. Herrero, myself, and many others have seen bears sprayed directly with this and they cough, wheeze, paw their eyes and nose wildly...it appears to create considerable discomfort in them.

There are certainly instances of these sprays not having yielded the desired results. However, given that they have worked, and very well on occasion, I feel is reason enough that they be made commercially available and used .

Just wanted to weigh in with these thoughts.

Tom S. Smith
Wildlife Research Ecologist
USGS - Alaska Biological Science Center 1011 East Tudor Road
Anchorage, Alaska 99503

Phone: 907-786-3456
FAX: 907-786-3636

Note #4 - Cody Dwire of ChemArmor responding mostly to note #2

-----Original Message-----
From: ChemArmor <chemarmr@chemarmor.com>
To: Tompkins.George@epamail.epa.gov <Tompkins.George@epamail.epa.gov> Date: Thursday, January 21, 1999 3:34 PM
Subject: Efficacy of Bear Repellants

>To whom it may concern,
>
>The use of bear repellants as an effective means of deterring a bear attack >has become an issue of widespread interest. The public's intense use of >areas inhabited by bears, and the obvious and documented limitations of >firearms as a means to control bear behavior has caused a surge in the use >of alternative methods of ensuring human safety in "bear country". Solid >scientific and anecdotal evidence indicates that the use of capsaicin based >sprays(CBS) illicit a strong repellency in bears as well as other

>animals(dog, moose, mountain lion, and elephant(Pachyderm, 1995, No. 20)). >The majority of the data >on the efficacy of CBS is freely available to the public under the Freedom >of Information Act, yet requires one to have an understanding of the >procurement process. For this reason, the use of CBS by the public as means
>of deterring a bear attack is highly dependent upon the advertising of >of bear repellants(BR), and has essentially been controlled by the >manufacturers and sellers of BR. Because of this, it is the fear of >agencies(NPS,FWP,USFS,USGS,..) who are in charge of bear management, that >the public develop either a "no worries" mentality, while carrying a BR, and
>do not practice proper avoidance techniques or that people revert back to a >John Wayne ideology and place their faith in a gun.
>
>Testing of repellants on bears and other animals has been studied and >documented, and indicates that CBS are an effective, reliable and >humanitarian means to deter a bear. In a study by Gary Miller(1980, M.S. >Thesis, U.M.,"Behavioral and Physiological Characteristics of Grizzly and >Polar Bears, and Their Relation to Bear Repellants") the repellency of >several CBS(dog repellants(DR)) were tested
>upon two caged grizzly bears, and two caged polar bears. The bears had been
>destined for destruction as they were problem bears and were habituated to >human presence. This type of bear presents the most danger to human safety >as they have lost their natural fear of humans. From the results of this >study, CBS appeared to have potential as a bear repellant, both as an active >and passive(emetic) repellant. Tests conducted upon 31 free ranging polar >bears indicated that capsaicin residue had potential deterrent effect upon >treated objects, such as fish oil. This effect has been further documented >in dog, beaver and bear.
>
>A more thorough investigation of CBS as a bear repellant was completed in >1981(Carrie Hunt,1981 M.S. Thesis, U.M,"Behavioral Responses of Bears to >Tests of Repellants, Deterrents, and Aversive Conditioning"). Of the 13 >black and grizzly bears(both sexes) that were sprayed, while caged, with >Halt DR, 85% were repelled, and of the 13 black and grizzly(both sexes) >sprayed, while caged, with Halt DR/Skunker(skunk oil) mix, 92% were >repelled. The test subjects were habituated bears that were destined for >destruction due to the fact of that they had killed livestock. Testing of >Halt DR upon free ranging, garbage habituated black and grizzly bears was >completed at the Sparwood Dump in B.C., Canada. Of the 21 bears sprayed >with Halt DR, 88% were repelled immediately. Also, testing of passive >repellents indicated that capsaicin residues had a deterrent effect.
>
>A study completed by Lynn Rogers(1984, Wild. Soc. Bull 12:59-61, "Reactions >to Free Ranging Black Bears to Capsaicin Spray Repellant") indicated that >CBS-DR are an effective bear repellant. Lynn Rodgers sprayed 5 garbage-fed,
>habituated black bears at a Michigan dumpsite, and each instance the bear >was repelled. The study completed by Stephen Herrero(1995, "The Field Use of
>Capsicum Spray as a Bear Deterrent") indicated that CBS are highly effective
>means at deterring bear behavior. "Regarding aggressive brown/grizzly bear >incidents associated with close range encounters, in 94%(15/16) instances, >the spray had the effect of stopping the behavior" and "in 88%(14/16) of the
>cases the bear eventually left the area." In 100% of instances associated >with black bear aggression, the CBS was effective at stopping the behavior. >These studies clearly indicate that CBS are an effective means of deterring >a bear attack.
>
>The use of firearms as an effective means of deterring a bear attack, has >been called into question by many government and private agencies, and >research suggests that a person is more likely to injure an attacking bear, >and subsequently be attacked by the bear. Forest Service agents promote the

>use of pepper spray over firearms for this reason. The U.S Fish and >Wildlife Service states that "50% of the time(with firearms) no one gets >nailed...when bear spray is used , 95% of the time no one gets nailed. The >Professional Guide Institute at Western Montana College in Dillon, MT is to >mandate the use of CBS for clients and guides, to "protest their clients and
>at the same time save the bears." As a majority of government agents and >private agencies who work in bear country choose CBS over firearms as a >means to deter bear attacks, this suggests that CBS are advantageous over >firearms.
>
>Up to 70% of the precipitating factors for aggressive acts by a bear on a >human is due to crowding of the animal(Stephen Herrero, Bear Attacks, page >228). Coupled with this phenomenon, is the fact that of bear attacks upon >hikers, 83% of these attacks occurred(Bear Attacks) where the person >observed the bear within 55 yards. Because a bear can sprint to speeds up >to 35 mph, and the fact that to mortally wound a bear one must hit it in a >small(area) arc below the chin, and that the hair on a bear acts like Kevlar
>in a bullet proof vest, the possibility, even for a seasoned war hero with a
>high caliber gun, to kill the bear in this scenario is unrealistic at best. >Besides, a majority of bear charges are bluff, and are meant to "size you >up". In this light, I feel it is not only ignorant, but ethically wrong to >utilize or promote a firearm as means to deter an aggressive bear. These >animals are highly intelligent, and if proper preventative practices are >followed, the possibility of an aggressive bear encounter are the "stuff of >grandpa's scary tales around the campfire."
>
>The survival of the grizzly bear in Canada and the lower 48 is a question >which remains in all bear managers minds. At the present time, if changes >are not made in the mentality of the public, the extinction of the Grizzly >bear is eminent within 10 years(Stephen Herrero). The biggest threat to >bear survival is not habitat encroachment per se, but the mind-set of the >public. Because of this, it is not only now in EPA's ballpark to properly >address the issues associated with bear repellants in an informed, ethical >and meaningful way, but to take part in a movement to protect the bear from >extinction. I will provide all documentation to verify my claims I have >made in this letter, as well provide contacts to government agents/agencies >who manage the bear. Please address any comments and questions to
>cody@chemarmor.com
>
>Best Regards,

>Cody Dwire
>Chemist, B.S.
>ChemArmor
>

FRANK H. MURKOWSKI
ALASKA

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February 19, 1999

Julie Anderson
Congressional Liaison Division
Environmental Protection Agency
8th Floor, West Tower
401 M Street, SW
Washington, DC 20460

Dear Ms. Anderson:

I am sending the enclosed correspondence from my constituent, Randal G. Prater, for appropriate referral and handling. As indicated in the letter, Mr. Prater, manufacturer of the Guard Alaska Bear Repellant, Reg. #71542-1, asks for parity in the registration process for new repellant products. Please inquire in that regard and respond by letter to my **Anchorage office.**

Thank you for your assistance.

Sincerely,

Frank H. Murkowski
United States Senator

Enclosure
cc: Randal G. Prater
McNeil River Enterprises, Inc.
P.O.Box 233002
Anchorage, AK 99523

Guard Alaska™
Personal Protection Systems

Corporate Headquarters
McNeil River Enterprises, Inc.
P.O. Box 233002
Anchorage, Alaska 99523

could have been registered in 1 mo except for present of agree dy.

Registration Processing Time	
Counter Assault 55541-2	7-24-97 (10 m) reg 5-12-98 3 kg
71545-1 Guard Alaska	7-13-98 4 cy. reg 12/22/98 5 mo
71768-R	9-8-98 5-8-99

The Honorable Senator Frank Murkowski

February 12, 1999

4 1/2 yr Counter Assault

I would like to take this time to thank you for your earlier assistance in expediting the EPA registration process of Guard Alaska Bear Repellant Reg. # 71542-1. We received our registration number on December 22, 1998. As you may very well know Guard Alaska was the third product of this kind to receive such registration. The first product to receive registration was Bear Skunker, not being manufactured at this time. The second product of this nature to receive registration in May of 1998, was Counter Assault manufactured in Big Fork, Montana. The registration process is a very lengthy and expensive process. In Roy Olanders case, Bear Skunker was years of studies both in the field as well as in the laboratory to satisfy the requirements mandated by the EPA to register such a product. In Pride Johnsons case, manufacturers of Counter Assault, the registration process took four and one half years to complete before receiving there registration. In our case the lab test alone, took an eighteen month period to complete before we could submit application for registration. Unlike the registrants before me our testing went very well and was completed in a timely manner. As for our efficacy testing, it was conducted over a six year period to insure that indeed Guard Alaska Bear Repellant would save the lives of humans and prevent the useless destruction of bear by lethal means when humans and bears conflicts are encountered. Over all, the registration process took two and one half years to complete.

9 1/2 mo (4 subm)

2 1/2 years Bear Guard

5 mo

It has been brought to my attention the EPA is currently reviewing two new applications for registration of such products. I would like to point out that I welcome such products as a competitor in the market place, but strongly recommend that such products be held to the same high standards as previous registrants because of the serious nature of the use of these products. It has been brought to my attention these new registrants have submitted application for registration without meeting the same standards that we were held to. I have been told by Jane Henriques, that it becomes easier and quicker for new applicants to receive registration because they are permitted to submit data that was paid for by people such as myself. Keeping in mind that these new registrants have totally different formulations than any of the previously registered products. Also, one of the registrants makes claims of using a synthetic active ingredient unlike the active ingredient [Capsaicin] used in Guard Alaska Bear Repellant, and Counter Assault Bear deterrent.

wrong

He changed his form.

no

Another issue I would like to bring to your attention is some very unscientific data that I believe is influencing the EPA's registration process. Tom Smith, of the U.S.G.S in Anchorage, conducted a study of four products, [Bear Pepper Sprays] one of which is currently registered by the EPA and concluded that the four products tested if used incorrectly attracted brown bears . As a result of this, the EPA has required that I must put the following language on my label. **Do not spray this product on tents, other objects, or on clothing. Such use has no deterrent effect on bears and may attract them in some cases.** This label requirement [and may attract them in some cases] is not on Counter Assaults label. My product was not used in Tom Smiths unorthadoxed field tests. This is causing confusion in the registration process. I also believe that to require either Guard Alaska Bear Repellant, our Counter Assault to put such wording [and may attract them in some cases] would cause confusion with the consumers that would purchase such EPA registered products. The label requirement,[Do not spray this product on tents, other objects, or on clothing. Such use has no deterrent effect on bears.] should make the consumer aware of the correct use of these products. Some companies are using scare tactics as well as Tom Smiths Press Release to influence the EPA's registration process. All I'm requesting is a level playing field in the registration process. Again, thank you Senator Murkowski for assistance in this matter. This letter will be accompanied with some other supporting information.

Sincerely,

Randal G. Prater
President/CEO

CC: Chuck Bartlebaugh
Center for Wildlife Information

Guard Alaska®

Bear Repellent

Made in U.S.A.

DO NOT SEEK OUT ENCOUNTERS WITH BEARS. THIS PRODUCT IS A BEAR ATTACK REPELLENT WHICH MAY PROTECT USERS IN SOME UNEXPECTED CONFRONTATIONS WITH BEARS BUT MAY NOT BE EFFECTIVE IN ALL SITUATIONS OR PREVENT ALL INJURIES. READ THIS ENTIRE LABEL BEFORE TAKING THIS PRODUCT INTO AREAS WHERE BEAR MIGHT BE ENCOUNTERED.

ACTIVE INGREDIENT:	
Capsaicin and Related Capsaicinoids*	1.34 %
Inert Ingredients	98.66 %
TOTAL	100.00 %

* Made from Oleoresin of Capsicum.

This product contains the toxic inert ingredient, trichloroethylene.

KEEP OUT OF REACH OF CHILDREN
DANGER

Strong, temporarily irritant to eyes, nose and skin. Wash thoroughly with soap and water after handling. Do not allow children to use this product. See back panel for additional precautionary statements.

EPA EST. No. 36213-MD-002 EPA Registration No.: 71545-1

Net Weight: 9 Ounces

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS & DOMESTIC ANIMALS

DANGER: May cause irreversible eye damage if sprayed in the eye. Contact through touching or rubbing the eye may result in moderate eye irritation. Avoid contact with skin or clothing. Wash thoroughly with soap and water after handling.

FIRST AID

IF IN EYES: Hold eyelids open and flush with steady, gentle stream of water for 15 minutes. Get medical attention. IF ON SKIN: Wash with plenty of soap and water. Get medical attention, if irritation persists. Notice: California has determined that a chemical contained in this product causes cancer based on tests performed on laboratory animals.

PHYSICAL OR CHEMICAL HAZARDS

Contents under pressure. Do not use or store near heat or open flame. Do not puncture or incinerate container. Exposure to temperatures above 130° F may cause bursting.

ENVIRONMENTAL HAZARDS

Do not apply directly to water. Do not contaminate water by disposing of unused material.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

USE RESTRICTIONS: This product may be used only to deter bears which are attacking or appear likely to attack humans. This product is a bear attack repellent which may protect users in some unexpected confrontations with bears but may not be effective in all situations or prevent all injuries. Do not spray this product on tents, other objects, or on clothing. Such use has no deterrent effect on bears and may attract them in some cases. Do not seek out encounters with bears or intentionally provoke them. Do not eat or allow to be eaten any food or feed materials which may become contaminated with this product.

This product has a range of 15-20 feet (about 5-6 meters). The canister empties in approximately 9 seconds.

APPLICATION DIRECTIONS: Study the procedures and directions for using this product before taking this product into bear country.

To Use: 1. Remove the orange safety clip. 2. Point spray opening at bear's face. 3. Press firmly on trigger and release spray in short bursts.

For this product to be fully effective, you must engulf the bear's face, especially the eyes, nose, and mouth. This product generally has a range of approximately 15 to 20 feet. Wind and other conditions may alter the range or effectiveness. Shield your eyes and face if you must face into the wind. Use with caution. Contents will cause pain and temporary impairment to eyes, nose, mouth, and lungs. Individuals who suffer from asthma or emphysema may have a more severe reaction.

STORAGE & DISPOSAL

STORAGE: Store only in original container in a secured area inaccessible to children and pets. Do not store above 120° F or below 32° F.

DISPOSAL: Securely wrap container in several layers of newspaper and discard in trash. Contents under pressure, do not puncture or incinerate can.

Manufactured for:
McNeil River Enterprises, Inc.
750 W Dimond, Suite 203 Anchorage, AK 99515

Chemical Emergency Hotline: 1-800-535-5053
Open 24 hours a day, 7 days a week.

Guard Alaska™
Personal Protection Systems

Corporate Headquarters
McNeil River Enterprises, Inc.
P.O. Box 233002
Anchorage, Alaska 99523

Office: (907) 349-6868
Fax: (907) 349-7818
Toll Free: (888) 419-9695

THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY HAS APPROVED GUARD ALASKA BEAR REPELLENT

Effective January 15, 1999, the United States Environmental Protection Agency has directed that any manufacturer of bear repellent spray cease selling any such products unless they have an EPA registration.

McNeil River Enterprises is pleased to announce that their Guard Alaska Ultra Mag Shotgun Series Bear Repellant is EPA registered (Number 71542-1) and available for sale.

In imposing registration requirements on bear repellents, the EPA sought to further a policy of maximizing effectiveness and minimizing risk to consumers. The EPA had concluded that using unregistered bear repellants was not only contrary to Federal Law, but in addition posed a danger to consumers due to the fact that these products would not meet the same safety, efficacy and environmental standards that a product tested and registered in accordance with EPA standards would.

In short, The EPA has essentially concluded that unregistered bear repellants could result in death or serious injury to humans, and also, the needless death of bears by lethal means.

Among other things, The EPA registration process is based upon a review of important factors furthering their policy regarding bear repellents. For example, in terms of effectiveness, spray products primarily used to deter human attacks may not have sufficient strength, amount and power for maximum deterrence against an attacking bear. The product thus must meet a fixed standard based on both field and laboratory testing. The EPA also looks at the manufacturing process. Accordingly, a manufacturer who does not use accurate and modern methods of chemical analysis to measure the actual amount of active ingredient will not be able to ensure proper product consistency and stability from lot to lot. All in all, the EPA registration process is designed to assure the efficacy of a bear repellent and consistency of product formulation.

In meeting the stringent EPA standards, the Guard Alaska Ultra Mag Shotgun Series Bear Repellant now represents the state of the art in bear defense sprays. Effective and consistent as certified by the EPA, our product can be relied upon to make a difference in an encounter with a bear.

McNeil River Enter., Inc.

Randal Prater
President
Barbara Keller
Project Manager

750 W. Dimond, Ste. 203
Anchorage, Alaska 99515
907-349-6868 or
1-888-419-9695
907-349-7818 fax

Rick Payne
National Sales Dir.

Manufacturers of Guard Alaska © Personal Protection Systems

The Truth about Pepper Sprays

In any aerosol there are three components: The active ingredient, the carrier or base, and the propellant. In Pepper spray the active ingredient is capsaicin, not oleoresin capsicum (OC). The total capsaicin in a pepper spray can be thought of as the octane rating of gasoline. It is in reality the qualitative strength rating of pepper spray. In the past Schoville Heat Units (SHU's) was a rating used as a marketing ploy to sell pepper sprays. SHU's are determined by a taste test and are not recognized by the EPA or any laboratory in the industry because of their obvious inaccuracy.

A pepper spray that reads 10%, 15%, or 20% OC tells the consumer that by volume the formula contains that respective percent of OC. The percent OC **does not** tell the consumer the qualitative strength of the active ingredient, capsaicin. Oleoresin Capsicum is tested in a laboratory using an A.O.A.C. method procedure to find the relative capsinoids that make up percent total capsaicin (see appendix A). The A.O.A.C. method for testing oleoresin capsicum is the only method recognized worldwide. The three relative capsinoids that make up the percent total capsaicin are the following: Capsaicin (%C), Dihydro-capsaicin (%DHC), and Nordihydro-capsaicin (%NDC) (see appendix B).

The carrier/base is a significantly important integrated part of the pepper spray also. Historically distilled water, vegetable oil or mineral oil has been used as a carrier for pepper sprays. It is well known in the industry that distilled water is the antidote to capsaicin. Those pepper sprays using distilled water as their carrier are usually priced very low and are found to be ineffective. Animals, as like humans, contain oils and fatty tissues on their skin and in their mucous membranes that protect us from heat burns and damage caused by the suns harmful UV rays. Vegetable oil and mineral oil do nothing more than add additional protection to the skin and mucous membranes, thus reducing the overall effectiveness of the active ingredient, capsaicin. It is also known that capsaicin is destroyed by the suns UV rays within a period of 48 hours leaving nothing more than the carrier, be it vegetable oil or mineral oil, which alone attracts all bear species.

The last component of an aerosol is the propellant. The propellant's sole purpose is to disperse both the active ingredient and the carrier. The propellant should be an environmentally safe propellant that does not contain any ozone depleting substances.

In our research we at McNeil River Enter., Inc., manufacturer of Guard Alaska © personal protection systems have found that capsaicin alone **will not** deter an aggressive animal attack or human assailant. Guard Alaska © products are unique from all other pepper sprays. Instead of the conventional carriers used, our products contain a carrier/base that removes the protective oils from the skin and mucous membranes opening the pores allowing the active ingredient capsaicin to penetrate thus increasing its overall effectiveness. Our carrier has a greater density than that of water thus allowing it to displace water. This is a desirable trait for use on an aggressive attack from a wet bear that has been fishing in Alaskan rivers, as they are well known to do.

McNeil River Enter., Inc. does not recognize SHU's, nor do we advertise SHU's on our products. The EPA requires % capsaicin total to be 1% under the pesticide/repellant act. Guard Alaska © products go over and above the EPA standard for % capsaicin total by maintaining a 1.3% capsaicin total in all our products (see appendix B).

If there are any further questions regarding this matter please feel free to contact our office using our toll free number, 1-888-419-9695.

Randal G. Prater, President

Randal G Prater

APPENDIX A

CHROMTEC

115 Lakeshore Dr. #1146
N. Palm Beach, FL 33408-3644
Tele. (561) 625-8901 Fax (561) 624-1687
E-Mail Address: Chromtec@aol.com

April 13, 1998

Barbara Keller/Cathy Rice/Randal Prater
Mc Neil River Enterprises, Inc.

Re: Summary of Tests

Bear Scare:	% CAPSAICIN(TOTAL)	PUNGENCY	% NDC	%C	%DHC
Sample 1	1.35	202,500	7.1	52.8	40.1
Sample 2	1.34	201,000	7.6	52.8	39.6
Sample 3	1.35	202,500	8.0	52.7	39.3
Sample 4	1.30	195,000	7.4	53.3	39.3
Sample 5	1.34	201,000	7.5	52.5	40.0

Submitted By:

Marlin Bensinger

APPENDIX B

43.1.43

AOAC Official Method 995.03
Capsaicinoids in Capsicums and Their Extractives
Liquid Chromatographic Method
First Action 1995

[Applicable for determination of 750–650000 Scoville Heat Units (SHU) of capsaicinoids in ground and crushed red pepper, chili pepper, ground cayenne pepper, ground jalapeno pepper, and red pepper oleoresins. Not applicable to chili powders or products containing oregano or thyme.]

(*Caution: See Appendix B*, safety notes for the safe handling of organic solvents and special chemical hazards–acetone, acetonitrile, and ethanol. See Material Safety Data Sheets, or equivalent, for each reagent. *N*-Vanillyl-*n*-nonanamide is an extreme irritant; do not inhale. Dispose of waste solvents in an appropriate manner compatible with applicable environmental rules and regulations.)

Method Performance:
See Table 995.03 for method performance data.

A. *Principle*

Test sample is extracted in warm ethanol using reflux condenser. Extract is filtered and injected into liquid chromatograph equipped with UV or fluorescence detector.

B. *Apparatus*

(a) *Liquid chromatograph (LC).*—Equipped with 1 V integrator, 20 µL sample injector, and with UV detector set at 280 nm wavelength or fluorometer with excitation 280 nm and emission 325 nm. Operating conditions: temperature, ambient (20–25°C); flow rate, 1.5 mL/min., isocratic; relative retention times: *N*-vanillyl-*n*-nonanamide, 1.00; nordihydrocapsaicin, 0.90; capsaicin, 1.00; dihydrocapsaicin, 1.58. *See* Figure 995.03 for baseline separation of major capsaicinoids.

(b) *LC column.*—Stainless, C_{18}, 150 × 4.6 mm id. packed with 5 µm particle size. Use guard column, if desired.

(c) *Reflux condenser.*

(d) *Syringe filter.*—0.45 µm.

(e) *C_{18} solid-phase extraction cartridge.*

C. *Reagents*

(a) *Ethanol.*—95% or denatured, suitable for chromatography.

(b) *Acetone.*—ACS grade.

(c) *LC mobile phase.*—Acetonitrile–water. Use LC grade solvents, or equivalent. Mix 400 mL acetonitrile with 600 mL H_2O containing 1% acetic acid (v/v). De-gas with helium or by other suitable technique.

(d) *N-Vanillyl-n-nonanamide standard solutions.*—*N*-Vanillyl-*n*-nonanamide standard, 99%, is available as synthetic capsaicin from Penta International Corp., 50 Okner Pkwy, Livingston, NJ 07039. Keep solutions out of direct sunlight. (*1*) *Standard solution A.*—0.15 mg/mL. Accurately weigh 75 mg *N*-vanillyl-*n*-nonanamide and transfer it into 500 mL volumetric flask. Dilute to volume with ethanol, and mix. Use standard solution A for analyzing all peppers except chili pepper. (*2*) *Standard solution B.*—0.015 mg/mL. Transfer 10 mL standard solution A into 100 mL volumetric flask, dilute to volume with ethanol, and mix. Use standard solution B when analyzing chili peppers.

D. *Extraction*

(a) *Ground or crushed peppers.*—Accurately weigh ca 25 g pepper into 500 mL boiling flask. Place 200 mL ethanol into same flask, add several glass beads, and attach flask to reflux condenser. Gently reflux test sample 5 h and then allow to cool. Filter 1–4 mL sample through 0.45 µm syringe filter into small glass vial. Use for LC analysis.

(b) *Red pepper oleoresins.*—Accurately weigh 1–2 g oleoresin into 50 mL volumetric flask. Increase weight of sample, if total capsaicinoid concentration is <1%.

Note: Do not allow any oleoresin to coat sides of flask.

Add 5 mL acetone, C(b), to flask and swirl contents of flask until test sample is completely dispersed (no oleoresin can coat bottom of flask when turning flask neck at 45° angle). Add five 3–5 mL portions ethanol, swirling flask during each addition. Dilute contents of flask to volume with ethanol and mix well.

Hold C_{18} solid-phase extraction cartridge over 25 mL volumetric flask or place cartridge on 10 mL glass syringe and hold over 25 mL volumetric flask. Transfer 5 mL solution from flask to cartridge or syringe. (*Note*: When using syringe, deliver solution to bottom of syringe so that sides of syringe are not coated with sample.) Pass aliquot through cartridge and collect in 25 mL flask. Wash cartridge 3 times with 5 mL ethanol, collecting washings in same flask. Dilute contents of flask to volume with ethanol and mix. Filter 1–4 mL solution through 0.45 µm syringe filter into small glass vial. Use for LC analysis.

E. *LC Determination*

Inject 20 µL standard solution B, C(d)(*2*), onto LC column, when analyzing chili peppers. When analyzing other matrices inject 20 µL

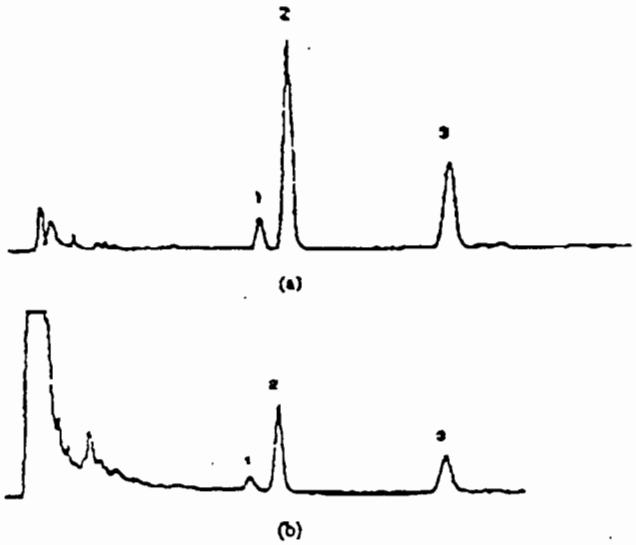

Figure 995.03—Red pepper extract analyzed by (a) fluorescence detection, and (b) UV detection. Peak 1 = nordihydrocapsaicin; peak 2 = capsaicin; peak 3 = dihydrocapsaicin

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standard solution A. C(d)(*1*). Re-inject standard solution at intervals of 6 sample injections, or less.

Inject in duplicate 20 µL test sample from D onto LC column.

After ≤30 sample injections, purge LC column 30 min with 100% acetonitrile at 1.5 mL/min flow rate. Use LC mobile phase, C(c), for further analysis.

F. Calculation

Capsaicinoids contain 3 major compounds: nordihydrocapsaicin (*N*), capsaicin (*C*), and dihydrocapsaicin (*D*). Calculate capsaicinoids as sum of these compounds [$N + C + D$; in Scoville Heat Units (SHU); 1 µg total capsaicinoids/g = ca 15 SHU], as follows:

(a) *UV detection*

(*1*) *Ground peppers and chili pepper:*

$$N = (P_N/P_S) \times (C_S/W_T) \times (200/0.98) \times 9300$$

$$C = (P_C/P_S) \times (C_S/W_T) \times (200/0.89) \times 16100$$

$$D = (P_D/P_S) \times (C_S/W_T) \times (200/0.93) \times 16100$$

where P_N, P_C, and P_D = average peak areas for nordihydrocapsaicin, capsaicin, and dihydrocapsaicin, respectively, from duplicate injections; P_S = average peak area of appropriate standard solution; C_S = concentration of standard solution, mg/mL; W_T = weight of test sample, g.

(*2*) *Red pepper oleoresins:*

$$N = (P_N/P_S) \times (C_S/W_T) \times (250/0.98) \times 9300$$

$$C = (P_C/P_S) \times (C_S/W_T) \times (250/0.89) \times 16100$$

$$D = (P_D/P_S) \times (C_S/W_T) \times (250/0.93) \times 16100$$

(b) *Fluorescence detection*

(*1*) *Ground peppers and chili pepper:*

$$N = (P_N/P_S) \times (C_S/W_T) \times (200/0.92) \times 9300$$

$$C = (P_C/P_S) \times (C_S/W_T) \times (200/0.88) \times 16100$$

$$D = (P_D/P_S) \times (C_S/W_T) \times (200/0.93) \times 16100$$

(*2*) *Red pepper oleoresins:*

$$N = (P_N/P_S) \times (C_S/W_T) \times (250/0.92) \times 9300$$

$$C = (P_C/P_S) \times (C_S/W_T) \times (250/0.88) \times 16100$$

$$D = (P_D/P_S) \times (C_S/W_T) \times (250/0.93) \times 16100$$

Reference: J. AOAC Int. (future issue).

Table 995.03 Method Performance for Determination of Capsaicinoids in Capsicums and Their Extractives by Liquid Chromatography (SHU)

Sample	Mean	N[a]	s_r	s_R	RSD_r, %	RSD_R, %	r[b]	R[c]
Chili peper	900–2750	9	40–80	100–220	3.5–4.5	9.6–11.6	110–220	280–620
Red pepper	30140–41600	11	370–840	1600–1860	1.0–2.3	4.5–5.2	1040–2350	4480–5210
Red pepper oleoresins	305690–644060	13	6770–86870	23100–86870	2.2–14.8	7.6–14.8	18960–243200	64680–243240

[a] N = No. of laboratories.

[b] $r = 2.8 \times s_r$

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United States Department of the Interior
NATIONAL BIOLOGICAL RESOURCES DIVISION
U.S. GEOLOGICAL SURVEY
Alaska Biological Science Center
1011 E. Tudor Road
Anchorage, Alaska 99503-6619
(907) 786-3456 FAX (907) 786-3636

IN REPLY REFER TO:

February 11, 1999

Guard Alaska Personal Protection Systems
Attn: Randal Prater, Owner
3422 West Wilshire
Suite 17
Phoenix, Arizona 85009

Dear Randy,

This letter is with regard to work I published in the Wildlife Society Bulletin entitled "Attraction of brown bears to red pepper spray: caveats for use" last spring, 1998. In the article I stated that I used 4 brands of red pepper spray at concentrations of oleoresin capsicum of 10% and 15%. Guard Alaska was not among the four brands tested. No field work has been conducted by me or my colleagues with the Guard Alaska product and until that work is done conclusions about bear spray attractiveness to brown bear should not be generalized to yours, or any other untested product. Guard Alaska reports a unique formulation which means that it would have to be independently tested before anyone could answer the question as to whether it elicits attraction in bears or not. I apologize for any inconvenience this omission has caused your company.

Sincerely,

Tom S. Smith

Tom S. Smith
Research Wildlife Ecologist

Subj:
Date: 2/10/99 12:08:20 PM Pacific Standard Time
From: Tom_Smith@usgs.gov (Tom Smith)
To: randy@guardalaska.com

File: rpsdeb~1.wpd (62515 bytes)
DL Time (28800 bps): < 1 minute

Randal,

I have attached some of the memos that were flying around the internet about a month ago. In the first attachment "rpsdeb~1.wpd" you'll see 4 memos. They are numbered with a bit of intro I typed in.

I received your FAX and will read it through.

I'll inquire with the DOI solicitor's office regarding your request and get back as soon as I can.

Enjoy the sun - its 10 below here right now.

Sincerely,

Tom S. Smith
Wildlife Research Ecologist
USGS - Alaska Biological Science Center
1011 East Tudor Road
Anchorage, Alaska 99503

Phone: 907-786-3456
FAX: 907-786-3636

———— Headers ————

Return-Path: <Tom_Smith@usgs.gov>
Received: from rly-yc04.mx.aol.com (rly-yc04.mail.aol.com [172.18.149.36]) by air-yc02.mail.aol.com (v56.26) with SMTP; Wed, 10 Feb 1999 15:08:19 -0500
Received: from smtp.tierra.net (serv04.tierranet.com [209.75.4.14])
by rly-yc04.mx.aol.com (8.8.8/8.8.5/AOL-4.0.0)
with ESMTP id PAA18161 for <gardalaska@aol.com>;
Wed, 10 Feb 1999 15:08:13 -0500 (EST)
Received: from teal.cr.usgs.gov (159.189.176.20)
by smtp.tierra.net (8.8.8/8.8.5) with SMTP id MAA01525
for <randy@guardalaska.com>; Wed, 10 Feb 1999 12:08:13 -0800 (PST)
Received: from brdsmtp2.cr.usgs.gov by teal.cr.usgs.gov (SMI-8.6/SMI-SVR4)
id NAA29755; Wed, 10 Feb 1999 13:08:21 -0700
Received: from ccMail by brdsmtp2.cr.usgs.gov
(IMA Internet Exchange 2.11 Enterprise) id 00242949; Wed, 10 Feb 1999 13:07:31 -0700
Mime-Version: 1.0
Date: Wed, 10 Feb 1999 11:05:49 -0700
Message-ID: <00242949.@usgs.gov>
From: Tom_Smith@usgs.gov (Tom Smith)
To: randy@guardalaska.com
Content-Type: multipart/mixed; boundary="IMA.Boundary.052776819"

Note #1 - produced by the EPA and widely circulated

United States Environmental Protection Agency | Prevention, Pesticides And Toxic Substances (7506C) | January 1999

EPA Questions & Answers on Bear Repellents

1. What is EPA's policy on bear repellents?

EPA's objective is to reduce the risk of death or serious injury resulting from encounters between humans and bears in the United States. EPA is working to achieve this objective by expediting the review of registration applications for bear repellents and initiating a conditional enforcement action against manufacturers of unregistered bear repellents. EPA also wants to be fair to all those who seek to market and use bear repellents by assuring that registration is available and does not create an unnecessary barrier to the market.

2. What are the dangers of using bear repellents that have not been registered by EPA?

Because unregistered bear repellents may not meet the same safety, efficacy and environmental standards that registered products do, using these products could result in death or serious injury of humans and in the needless death of bears by lethal means. For example, spray products primarily used to deter human attacks and which contain 1.5 oz of product may not have sufficient amount and power for maximum effectiveness against an attacking bear. Also, manufacturers who do not use modern methods of chemical analyses to measure the actual amount of active ingredient cannot ensure proper product consistency and stability. EPA's registration process is designed to assure efficacy of labeled use and consistency of product formulation.

3. How is EPA helping manufacturers of unregistered bear repellents through the registration process?

To assist manufacturers with the registration process, the EPA will commit to process any complete applications for registration within 60 days of receipt.

4. What is EPA doing about the unregistered bear repellents currently being sold in the U.S.?

EPA has issued a conditional Stop Sale, Use and Removal Order (SSURO) under the authority of Section 13 of the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) to manufacturers of unregistered bear-deterrent products. Under the terms of this conditional SSURO, an unregistered bear repellent product must be removed from the market if its manufacturer fails to meet any of the following conditions:

a. within 10 days of receipt of the SSURO, send a letter to EPA's Office of Pesticide Programs (OPP), including a copy of existing labeling, committing to submit a complete application for registration of the product to EPA and agreeing to place a sticker over labeling that EPA concludes could cause an unnecessary risk to users;

b. within 45 days of receipt of the SSURO, apply for a registration of its production establishment; and

c. within 90 days of receipt of the SSURO, submit a complete application for registration.

By January 15, 1999, all manufacturers of unregistered bear repellents must cease selling their products. If a manufacturer later receives a registration, it can relabel unsold product if its composition, packaging, and delivery system has not changed. Otherwise, it will have to be properly disposed of.

5. How does EPA conclude that a registered product would be effective? Have these products been tested on

bears?

The Agency has reviewed a body of data on bear repellent effectiveness over the years (which consists mainly of the results tests of products conducted on bears placed in pens) involving several products of various active ingredients and concentrations. In addition, individual registrants have submitted data on their own formulations, such as videos and data on spray duration and pattern.

6. How can one tell if a bear repellent has been registered by the EPA?

All registered pesticides have the words "EPA Reg. No." or "EPA Registration Number" followed by two numbers separated by a dash. For example, the currently registered bear deterrent products are "Counter Assault" (EPA Reg. No. 55541-2) and "Guard Alaska" (EPA Reg. No. 71545-1).

7. Will the Agency's enforcement actions after January 15, 1999 result in a shortage of bear-deterrent products this fall or next spring?

The Agency does not expect a shortage of product because there are already two registered bear-deterrent products on the market now and EPA's SSURO takes effect only if manufacturers do not agree to the registration conditions. In addition, EPA will be expediting the review of applications for new bear-deterrent products and expects two additional products to be on the market by next spring.

8. What should retailers do with existing stocks of an unregistered bear repellent product?

At this time, EPA is not asking retailers to return unsold products, however, if review of product labeling and other information reveals that the products are unsafe EPA may request that retailers return the product to the manufacturer.

9. Who can I contact for further information?

For pesticide registration questions, call Dan Peacock at 703-305-5407. For enforcement questions, call Brenda Mosley at 202-564-4174. For general questions on EPA's Pesticide Programs, call the Communications Services Branch of the Office of Pesticide Programs at 703-305-5017.

Note #2 - A widely circulated email by EPA employee George Tompkins. Obviously he is replying to Dan Peacock (above) and stating his lack of trust in the whole of pepper spray products.

_____ Reply Separator _____ Subject: Re: EPA Questions & Answers on Bear Repellents
Author: Tompkins.George@epamail.epa.gov at NBS-Internet-Gateway Date: 1/19/1999 7:38 AM

Dan,

I was happy to see that the efficacy tests were conducted on "penned" bears where the tests can and were most likely run during conditions favorable to achieving the desired results, i.e. good wind conditions, etc. However, in the wild one does not have the pleasure of being attacked by a penned, semi tamed bear. This one intends to tear you apart or eat you and most likely the wind direction is not favorable for the repellant to be directed directly into the bears face, and by the time a 15-20 mph charging, 5-900 pound grizzly bear is sprayed ,its body mass will topple over the sprayer in less than 1.5 seconds, not enough time for the product to work and deter the bear. It is this fallacy for which the majority of people out in the wilderness who have even a quarter ounce of intelligence will not willingly ever consider the use of these so called repellents because they know that their chances of survival is nil. They prefer to use a guaranteed source of protection and that is not the "registered" bear repellants. At that stage of an encounter they are not concerned about the fate of the bear, only the safety of their own skins. The EPA bear efficacy reviewers should go out in the wild next to a freshly killed field dressed elk or deer and allow a hungry and aggressive grizzly bear attack them and then use the repellant, and additionally get themselves in between a mother bear and its cub. If it deters the bear and the reviewers survive to tell

about its success for 95% or more of the time, then it will be proof enough for anyone else to follow in ther footsteps and use the product. Just to protect their skins I would suggest that they have an expert (not an EPA expert) shooter with a very heavy .375 H&H load or a 12 gauge shotgun with OOBuck or a slug there in the very close vicinity to be sure that they have some chance of surviving. Then the label can state that it is effective 95% or more of the time, if indeed the product works by itself. If it is not effective under these conditions, then it should not be registered and people should be allowed and recommended to use the effective means already known to protect them against bear or moose attacks. Bear repellants as advertised are like the old snake medicines, they do not work except under ideal conditions where the penned animal is most likely already afraid of you and wants to leave at the first sound of the aggressive motion of someone using a bear repellant device. You have to get real and try them in the real world to get any measurable success. George Tompkins (EPA)

Note #3 - My response to #2

_____ Reply Separator _____ Subject: Re: EPA Questions & Answers on Bear Repellents
Author: Tom_Smith@usgs.gov at NBS-Internet-Gateway Date: 1/19/1999 7:38 AM

Dear George,

I read with interest your thoughts regarding red pepper spray bear deterrent and have shared in many of those at one time or another. I don't know that the EPA could have required purchasers of red pepper spray products to report all instances of use against bears but such a reporting effort would have been invaluable in building a database which would have, in turn, addressed the concerns you voiced. Fortunately, Dr. Stephen Herrero of the Univ. of Calgary, Alberta initiated an effort in 1993 to canvass parks, refuges and other areas where these sprays have been carried for a number of years. From this effort he produced a paper entitled "Field use of capsicum spray as a bear deterrent" which was presented at the 10th International Conference on Bear Research and Management. His data collection efforts revealed the following:

"We analyzed 66 cases of field use of capsicum sprays between 1984-1994. Regarding aggressive brown/grizzly bear incidents associated primarily with close range encounters, in 94% of the cases, the spray had the effect of stopping the behavior that the bear was displaying immediately prior to being sprayed. In six cases, the bear continued to act aggressively; in three of these cases the bear attacked the person spraying. In one of these 3 cases, further spraying caused the bear to stop and leave. Of the three encounters that resulted in injury to the sprayer, two involved a mother with cub(s) and the other involved a single bear. In all three injurious encounters, the bear received a substantial dose of spray to the face. While it can't be known for certain how these encounters would have ended out in the absence of spray, the use of spray appears to have prevented injury in most of this type of encounter. Regarding brown/grizzly bear incidents associated with curiosity of searching for human foods and garbage, in 100% (20/20) of the cases the spray had the effect of stopping the behavior that the bear was displaying immediately prior to being sprayed. The bear left the area in 90% of the cases."

Although not under tightly controlled conditions nor observed by scientists, these results strongly suggest that red pepper spray deterrents do indeed work. It would have been interesting to see if any difference existed between spray types but undoubtedly the data set would have been subdivided to the point of precluding any meaningful analyses.

Given Dr. Herrero's findings plus my own experiences I recommend that people purchase and carry these sprays, especially in areas where firearms are prohibited. As I see it, these sprays confer three advantages on the user:

1) they provide the person with a reason to not run, a behavior which bears will reward by chasing and attacking. Not running and holding your ground conveys a message that bears recognize, that of a co-dominant unwilling to yield. That gives them pause and buys you time.

2) the sudden and loud hissing of the spray and billowing cloud startles bears...this I have seen. You could be spraying sugar water for all it matters intially because this sound and sight is surprising. They halt and again this buys you a bit of time (at least for those encounters where you have some space between you).

3) the red pepper extract is clearly a strong irritant, as observed with penned and wild bears that have been sprayed. Dr. Herrero, myself, and many others have seen bears sprayed directly with this and they cough, wheeze, paw their eyes and nose wildly...it appears to create considerable discomfort in them.

There are certainly instances of these sprays not having yielded the desired results. However, given that they have worked, and very well on occasion, I feel is reason enough that they be made commercially available and used .

Just wanted to weigh in with these thoughts.

Tom S. Smith
Wildlife Research Ecologist
USGS - Alaska Biological Science Center 1011 East Tudor Road
Anchorage, Alaska 99503

Phone: 907-786-3456
FAX: 907-786-3636

Note #4 - Cody Dwire of ChemArmor responding mostly to note #2

-----Original Message-----
From: ChemArmor <chemarmr@chemarmor.com>
To: Tompkins.George@epamail.epa.gov <Tompkins.George@epamail.epa.gov> Date: Thursday, January 21, 1999 3:34 PM
Subject: Efficacy of Bear Repellants

>To whom it may concern,
>
>The use of bear repellants as an effective means of deterring a bear attack >has become an issue of widespread interest. The public's intense use of >areas inhabited by bears, and the obvious and documented limitations of >firearms as a means to control bear behavior has caused a surge in the use >of alternative methods of ensuring human safety in "bear country". Solid >scientific and anecdotal evidence indicates that the use of capsaicin based >sprays(CBS) illicit a strong repellency in bears as well as other

>animals(dog, moose, mountain lion, and elephant(Pachyderm, 1995, No. 20)). >The majority of the data >on the efficacy of CBS is freely available to the public under the Freedom >of Information Act, yet requires one to have an understanding of the >procurement process. For this reason, the use of CBS by the public as means
>of deterring a bear attack is highly dependent upon the advertising of >of bear repellants(BR), and has essentially been controlled by the >manufacturers and sellers of BR. Because of this, it is the fear of >agencies(NPS,FWP,USFS,USGS,..) who are in charge of bear management, that >the public develop either a "no worries" mentality, while carrying a BR, and
>do not practice proper avoidance techniques or that people revert back to a >John Wayne ideology and place their faith in a gun.
>
>Testing of repellants on bears and other animals has been studied and >documented, and indicates that CBS are an effective, reliable and >humanitarian means to deter a bear. In a study by Gary Miller(1980, M.S. >Thesis, U.M.,"Behavioral and Physiological Characteristics of Grizzly and >Polar Bears, and Their Relation to Bear Repellants") the repellency of >several CBS(dog repellants(DR)) were tested
>upon two caged grizzly bears, and two caged polar bears. The bears had been
>destined for destruction as they were problem bears and were habituated to >human presence. This type of bear presents the most danger to human safety >as they have lost their natural fear of humans. From the results of this >study, CBS appeared to have potential as a bear repellant, both as an active >and passive(emetic) repellant. Tests conducted upon 31 free ranging polar >bears indicated that capsaicin residue had potential deterrent effect upon >treated objects, such as fish oil. This effect has been further documented >in dog, beaver and bear.
>
>A more thorough investigation of CBS as a bear repellant was completed in >1981(Carrie Hunt,1981 M.S. Thesis, U.M,"Behavioral Responses of Bears to >Tests of Repellants, Deterrents, and Aversive Conditioning"). Of the 13 >black and grizzly bears(both sexes) that were sprayed, while caged, with >Halt DR, 85% were repelled, and of the 13 black and grizzly(both sexes) >sprayed, while caged, with Halt DR/Skunker(skunk oil) mix, 92% were >repelled. The test subjects were habituated bears that were destined for >destruction due to the fact of that they had killed livestock. Testing of >Halt DR upon free ranging, garbage habituated black and grizzly bears was >completed at the Sparwood Dump in B.C., Canada. Of the 21 bears sprayed >with Halt DR, 88% were repelled immediately. Also, testing of passive >repellents indicated that capsaicin residues had a deterrent effect.
>
>A study completed by Lynn Rogers(1984, Wild. Soc. Bull 12:59-61, "Reactions >to Free Ranging Black Bears to Capsaicin Spray Repellant") indicated that >CBS-DR are an effective bear repellant. Lynn Rodgers sprayed 5 garbage-fed,
>habituated black bears at a Michigan dumpsite, and each instance the bear >was repelled. The study completed by Stephen Herrero(1995, "The Field Use of
>Capsicum Spray as a Bear Deterrent") indicated that CBS are highly effective
>means at deterring bear behavior. "Regarding aggressive brown/grizzly bear >incidents associated with close range encounters, in 94%(15/16) instances, >the spray had the effect of stopping the behavior" and "in 88%(14/16) of the
>cases the bear eventually left the area." In 100% of instances associated >with black bear aggression, the CBS was effective at stopping the behavior. >These studies clearly indicate that CBS are an effective means of deterring >a bear attack.
>
>The use of firearms as an effective means of deterring a bear attack, has >been called into question by many government and private agencies, and >research suggests that a person is more likely to injure an attacking bear, >and subsequently be attacked by the bear. Forest Service agents promote the

>use of pepper spray over firearms for this reason. The U.S Fish and >Wildlife Service states that "50% of the time(with firearms) no one gets >nailed...when bear spray is used , 95% of the time no one gets nailed. The >Professional Guide Institute at Western Montana College in Dillon, MT is to >mandate the use of CBS for clients and guides, to "protest their clients and
>at the same time save the bears." As a majority of government agents and >private agencies who work in bear country choose CBS over firearms as a >means to deter bear attacks, this suggests that CBS are advantageous over >firearms.
>
>Up to 70% of the precipitating factors for aggressive acts by a bear on a >human is due to crowding of the animal(Stephen Herrero, Bear Attacks, page >228). Coupled with this phenomenon, is the fact that of bear attacks upon >hikers, 83% of these attacks occurred(Bear Attacks) where the person >observed the bear within 55 yards. Because a bear can sprint to speeds up >to 35 mph, and the fact that to mortally wound a bear one must hit it in a >small(area) arc below the chin, and that the hair on a bear acts like Kevlar
>in a bullet proof vest, the possibility, even for a seasoned war hero with a
>high caliber gun, to kill the bear in this scenario is unrealistic at best. >Besides, a majority of bear charges are bluff, and are meant to "size you >up". In this light, I feel it is not only ignorant, but ethically wrong to >utilize or promote a firearm as means to deter an aggressive bear. These >animals are highly intelligent, and if proper preventative practices are >followed, the possibility of an aggressive bear encounter are the "stuff of >grandpa's scary tales around the campfire."
>
>The survival of the grizzly bear in Canada and the lower 48 is a question >which remains in all bear managers minds. At the present time, if changes >are not made in the mentality of the public, the extinction of the Grizzly >bear is eminent within 10 years(Stephen Herrero). The biggest threat to >bear survival is not habitat encroachment per se, but the mind-set of the >public. Because of this, it is not only now in EPA's ballpark to properly >address the issues associated with bear repellants in an informed, ethical >and meaningful way, but to take part in a movement to protect the bear from >extinction. I will provide all documentation to verify my claims I have >made in this letter, as well provide contacts to government agents/agencies >who manage the bear. Please address any comments and questions to >cody@chemarmor.com
>
>Best Regards,
>
>Cody Dwire
>Chemist, B.S.
>ChemArmor
>

71545-1

cbrice@erols.com on 02/25/99 09:00:17 AM

To: peacock.dan
cc:
Subject: 71545-1 - Guard Alaska

Dear Dan:

I just wanted to send you a reminder that I need the DERs for the state registrations. I think DERs were written on:

- acute tox studies (only 2)
- product chemistry
- efficacy ????

Also, I will need any documentation within the EPA files regarding the [redacted]/trichloroethylene substitution.

I will be out of town next week, so I can either pick them up the 2nd week of March or they can be mailed to me at : [redacted]
McLean, VA 22101

Thanks,
Cathy Rice

Inert ingredient information may be entitled to confidential treatment

Personal privacy information

71545-1

Dan Peacock on 02/24/99 02:42:18 PM

To: Bill Jacobs/DC/USEPA/US@EPA
cc:
Subject: Guard Alaska Label

Bill,

I have the Guard Alaska label. It looks OK to me. They put the "Do not seek" statement on the Front Panel directly under the KORC box. In the kit we said that the "Do not seek" statement must be "in a prominent place (e.g., front panel below product's name) on the label".

Since they were able to get the text on the Front Panel, they could still get it under the product name by moving the rest of the text and the figure down. If we wanted to fight them, we would have to argue that the location that they selected on the front panel was not prominent enough and that we were requiring everyone to put it in the same place. We can talk.

We need to send this out tomorrow.

Dan

Dan Peacock on 12/17/98 12:31:06 PM

To: Grace Robiou/DC/USEPA/US@EPA
cc: Tina Levine/DC/USEPA/US@EPA, Kerry Leifer/DC/USEPA/US@EPA
Subject: Possible List 2 Inerts Not Banned by Clean Air Act that may be Substitutes for the List 1Trichloroethylene

Grace,

RD is trying to find substitutes for the List 1 Inert, Trichloroethylene, which McNeil River Enterprises had proposed as a substitute for the Ozone-Depleting Substance, [redacted] One appproach is to examine the List 2 Inerts List and eliminate those that the Clear Air Act has banned for their ozone-depleting potential. The List 2 Ingredients are on the EPA Intranet (www.epa.gov/opprd001/inerts/). You can find a list of ozone-depleting substances at www.epa.gov/spdpublc/ods.html).

Dan

Inert ingredient information may be entitled to confidential treatment

Dan Peacock on 12/17/98 12:09:39 PM

To: James Beech@EPA
cc: Grace Robiou/DC/USEPA/US@EPA, Tina Levine/DC/USEPA/US@EPA, Kerry Leifer/DC/USEPA/US@EPA
Subject: List of Products Formerly Containing Trichloroethylene

Jim,

RD is trying to assist a registrant in obtaining possible substitutes for trichloroethylene, TCE, (active code 81202), a List 1 Inert that currently is in no active product as an intentionally added ingredient. The company wants to use the substitute in a pending bear-deterrent product (71545-R).

Is it possible to obtain a list of products that formerly had this ingredient as an inert?

We could then request the registration jackets and determine their substitutes for TCE.

I will not be in the office Friday, December 18. However, you can contact Ms. Grace Robiou (305-1016) in the Insecticide-Rodenticide Branch if you have questions.

Thank you,

Dan Peacock, 305-5407

Dan Peacock on 12/17/98 12:41:15 PM

To: Grace Robiou/DC/USEPA/US@EPA
cc:
Subject: List of Substitutes for Trichloroethylene (TCE)

Grace,

Since so many of the chemicals have names that are similar, I would suggest making a table with the List 2 Inerts, giving the chemical names in one column, the CAS Register Number in a separate columen, and a third column indicating if the substance is an ozone-depleting substance or not:

List 2 Inert Ingredients		
Chemical Name	CAS Registry Number	Ozone-Depleting Substance

Dan

Dan Peacock on 12/17/98 12:45:02 PM

To: Kerry Leifer/DC/USEPA/US@EPA
cc: Grace Robiou/DC/USEPA/US@EPA, Tina Levine/DC/USEPA/US@EPA
Subject: List 2 Inerts

Kerry,

Could you provide Grace Robiou (305-1016) a table (electronic version) of List 2 inerts and their CAS Numbers ASAP!

Thank you,

Dan

71545-R

Dan Peacock on 12/14/98 02:19:47 PM

To: Grace Robiou/DC/USEPA/US@EPA
cc: Tina Levine/DC/USEPA/US@EPA
Subject: Guard Alaska, 71545-R, Draft Letter

Grace,

Attached is an electronic copy of a draft letter for Guard Alaska.

71545-R121498

If Tina is able to review it before I go home today, I can send it out today. If not, you can use this copy to make changes and return it to Tina for signature and sending out tomorrow.

If you are the one to send it tomorrow, you also need to fax copies to:

1. Randal Prater (Fax 602-278-4850; Tel 602-278-1140)

2. Cathy Rice (Fax 847-7408; Tel 847-7407

Thank You,

Dan

Put 1 inert!

cbrice@erols.com on 11/10/98 04:32:44 PM

To: peacock.dan
cc:
Subject: 71545-R

Dear Dan:
On November 9, McNeil River Enterprise received Region 10's Stop Sale, Use, or Removal Order. To be in compliance with this order, McNeil River Enterprises had to:
1. within 10 days, submit to you copies of their current label
2. within 45 days, submit to EPA an application for registration for a pesticide-producing establishment.

McNeil River is currently using Case-Mason Filling as their manufacturer. It is my understanding Case-Mason's EPA Establishment number is 36213-MD-002.

I am under the impression that the labels and Establishement Number information wa sent to via overnight mail. It should have arrived today. Upon receipt of this information, McNeil River should be in compliance with Region 10's Stop Sale, Use, or Removal Order. Based on this order, they can continue to sell their product through January 15, 1999.

Please verify that McNeil River is in compliance with this order.

McNeil River is hoping to submit the spray pattern information either the end of this week or early next.

Thanks,
Cathy Rice
703-847-7407

Z 487 320 829

US Postal Service

Receipt for Certified Mail

No Insurance Coverage Provided.

Do not use for International Mail *(See reverse)*

Sent to Prater	
Street & Number	
Post Office, State, & ZIP Code	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date	

154

PS Form **3800**, April 1995

Stick postage stamps to article to cover First-Class postage, certified mail fee, and charges for any selected optional services *(See front).*

1. If you want this receipt postmarked, stick the gummed stub to the right of the return address leaving the receipt attached, and present the article at a post office service window or hand it to your rural carrier *(no extra charge).*

2. If you do not want this receipt postmarked, stick the gummed stub to the right of the return address of the article, date, detach, and retain the receipt, and mail the article.

3. If you want a return receipt, write the certified mail number and your name and address on a return receipt card, Form 3811, and attach it to the front of the article by means of the gummed ends if space permits. Otherwise, affix to back of article. Endorse front of article **RETURN RECEIPT REQUESTED** adjacent to the number.

4. If you want delivery restricted to the addressee, or to an authorized agent of the addressee, endorse **RESTRICTED DELIVERY** on the front of the article.

5. Enter fees for the services requested in the appropriate spaces on the front of this receipt. If return receipt is requested, check the applicable blocks in item 1 of Form 3811.

6. Save this receipt and present it if you make an inquiry.

102595-98-M-0548

PS Form **3800**, April 1995 *(Reverse)*

S-557330

CERTIFIED MAIL

FEB 26 1999

McNeil River Enterprises, Inc.
750 West Dimond, Suite 203
Anchorage, AK 99515

Attention: Mr. Randal Prater

Subject: Guard Alaska Bear Repellent
EPA File Symbol 71545-R
Your submission of February 24, 1999

The labeling submitted with the above letter is acceptable, provided that you submit one (1) copy of final printed labeling with the following changes before you release the product for shipment:

1. To insure that the relocated statement, "DO NOT ... BE ENCOUNTERED" is still conspicuous to users, be sure that the text is in all capital letters, in 8 point type, and on a contrasting background. Black letters on a white background would be preferable.

2. While the preferred location for the "DO NOT ... ENCOUNTERED" text would have been immediately below the product name, the location chosen is acceptable.

3. The signal word, "DANGER" must be in 12 point type.

This registration will be subject to cancellation in accordance with FIFRA sec. 6(e) if you do not comply with these conditions. Your release for shipment of the product bearing the amended labeling constitutes acceptance of these conditions.

A stamped copy of the labeling is enclosed for your records.

Sincerely,

DBP

Daniel B. Peacock, Biologist
Insecticide-Rodenticide Branch
Registration Division (7504C)

Enclosures: 1. Stamped Label
2. Type Size Requirement

Peacock:C:\Capsaicin\71545-1.Feb:2/25/99:305-5407

cc Cathy Rice

ACCEPTED
with COMMENTS
in EPA Letter Dated:

FEB 26 1999

Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended for the pesticide registered under EPA Reg. No. 71545-1

Guard Alaska®

Bear Repellent

Made in U.S.A.

ACTIVE INGREDIENT:

Capsaicin and Related Capsaicinoids*	1.34 %
Inert Ingredients	98.66 %
TOTAL	100.00 %

* Made from Oleoresin of Capsicum.

This product contains the toxic inert ingredient, trichloroethylene.

KEEP OUT OF REACH OF CHILDREN
DANGER

Strong, temporary irritant to eyes, nose and skin. Wash thoroughly with soap and water after handling. Do not allow children to use this product. See back panel for additional precautionary statements.

Do not seek out encounters with bears. This product is a bear attack repellent which may protect users in some unexpected confrontations with bears but may not be effective in all situations or prevent all injuries. Read this entire label before taking this product into areas where bear might be encountered.

EPA EST. No. 36213-MD-002 EPA Registration No.: 71545-1

Net Weight: 9 Ounces

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS & DOMESTIC ANIMALS

DANGER: May cause irreversible eye damage if sprayed in the eye. Contact through touching or rubbing the eye may result in moderate eye irritation. Avoid contact with skin or clothing. Wash thoroughly with soap and water after handling.

FIRST AID

IF IN EYES: Hold eyelids open and flush with steady, gentle stream of water for 15 minutes. Get medical attention. **IF ON SKIN:** Wash with plenty of soap and water. Get medical attention, if irritation persists. **Notice:** California has determined that a chemical contained in this product causes cancer based on tests performed on laboratory animals.

PHYSICAL OR CHEMICAL HAZARDS

Contents under pressure. Do not use or store near heat or open flame. Do not puncture or incinerate container. Exposure to temperatures above 130° F may cause bursting.

ENVIRONMENTAL HAZARDS

Do not apply directly to water. Do not contaminate water by disposing of unused material.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

USE RESTRICTIONS: This product may be used only to deter bears which are attacking or appear likely to attack humans. This product is a bear attack repellent which may protect users in some unexpected confrontations with bears but may not be effective in all situations or prevent all injuries. **Do not spray this product on tents, other objects, or on clothing since such use has no deterrent effect on bears. Do not seek out encounters with bears or intentionally provoke them.** Do not eat or allow to be eaten any food or feed materials which may become contaminated with this product.

This product has a range of 15-20 feet (about 5-6 meters). The canister empties in approximately 9 seconds.

APPLICATION DIRECTIONS: Study the procedures and directions for using this product before taking this product into bear country.

To Use: 1. Remove the orange safety clip. 2. Point spray opening at bear's face. 3. Press firmly on trigger and release spray in short bursts.

For this product to be fully effective, you must engulf the bear's face, especially the eyes, nose, and mouth. This product generally has a range of approximately 15 to 20 feet. Wind and other conditions may alter the range or effectiveness. Shield your eyes and face if you must face into the wind. Use with caution. Contents will cause pain and temporary impairment to eyes, nose, mouth, and lungs. Individuals who suffer from asthma or emphysema may have a more severe reaction.

STORAGE & DISPOSAL

STORAGE: Store only in original container in a secured area inaccessible to children and pets. Do not store above 120° F or below 32° F.
DISPOSAL: Securely wrap container in several layers of newspaper and discard in trash. Contents under pressure, do not puncture or incinerate can.

Manufactured for:
McNeil River Enterprises, Inc.
750 W Dimond, Suite 203 Anchorage, AK 99515

Chemical Emergency Hotline: 1-800-535-5053
Open 24 hours a day, 7 days a week.

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Guard Alaska®

Bear Repellent

Made in U.S.A.

ACTIVE INGREDIENT:
Capsaicin and Related Capsaicinoids* ..... 1.34 %
Inert Ingredients ..... 98.66 %
TOTAL ..... 100.00 %

* Made from Oleoresin of Capsicum.

This product contains the toxic inert ingredient, trichloroethylene.

KEEP OUT OF REACH OF CHILDREN
DANGER

Strong, temporary irritant to eyes, nose and skin. Wash thoroughly with soap and water after handling. Do not allow children to use this product. See back panel for additional precautionary statements.

Do not seek out encounters with bears. This product is a bear attack repellent which may protect users in some unexpected confrontations with bears but may not be effective in all situations or prevent all injuries. Read this entire label before taking this product into areas where bear might be encountered.

EPA EST. No: 36213-MD-002 EPA Registration No.: 71545-1

Net Weight: 9 Ounces

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS & DOMESTIC ANIMALS

DANGER: May cause irreversible eye damage if sprayed in the eye. Contact through touching or rubbing the eye may result in moderate eye irritation. Avoid contact with skin or clothing. Wash thoroughly with soap and water after handling.

FIRST AID

IF IN EYES: Hold eyelids open and flush with steady, gentle stream of water for 15 minutes. Get medical attention. **IF ON SKIN:** Wash with plenty of soap and water. Get medical attention, if irritation persists. Notice: California has determined that a chemical contained in this product causes cancer based on tests performed on laboratory animals.

PHYSICAL OR CHEMICAL HAZARDS

Contents under pressure. Do not use or store near heat or open flame. Do not puncture or incinerate container. Exposure to temperatures above 130° F may cause bursting.

ENVIRONMENTAL HAZARDS

Do not apply directly to water. Do not contaminate water by disposing of unused material.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

USE RESTRICTIONS: This product may be used only to deter bears which are attacking or appear likely to attack humans. This product is a bear attack repellent which may protect users in some unexpected confrontations with bears but may not be effective in all situations or prevent all injuries. Do not spray this product on tents, other objects, or on clothing since such use has no deterrent effect on bears. Do not seek out encounters with bears or intentionally provoke them. Do not eat or allow to be eaten any food or food materials which may become contaminated with this product.

This product has a range of 15-20 feet (about 5-6 meters). The canister empties in approximately 9 seconds.

APPLICATION DIRECTIONS: Study the procedures and directions for using this product before taking this product into bear country.

To Use: 1. Remove the orange safety clip. 2. Point spray opening at bear's face. 3. Press firmly on trigger and release spray in short bursts.

For this product to be fully effective, you must engulf the bear's face, especially the eyes, nose, and mouth. This product generally has a range of approximately 15 to 20 feet. Wind and other conditions may alter the range or effectiveness. Shield your eyes and face if you must face into the wind. Use with caution. Contents will cause pain and temporary impairment to eyes, nose, mouth, and lungs; individuals who suffer from asthma or emphysema may have a more severe reaction.

STORAGE & DISPOSAL

STORAGE: Store only in original container in a secured area inaccessible to children and pets. Do not store above 120° F or below 32° F.
DISPOSAL: Securely wrap container in several layers of newspaper and discard in trash. Contents under pressure, do not puncture or incinerate can.

Manufactured for:
McNeil River Enterprises, Inc.
750 W Dimond, Suite 203 Anchorage, AK 99515
Chemical Emergency Hotline: 1-800-535-5053
Open 24 hours a day, 7 days a week

actual size
(Do not stamp because it is hard to read; stamp endorsed version)
DMP
2/25/99

P 065 163 572

UNITED STATES POSTAL SERVICE

Receipt for Certified Mail

No Insurance Coverage Provided
Do not use for International Mail
(See Reverse)

Sent to McNeil River	
Street and No.	
P.O., State and ZIP Code	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date	

PS Form 3800, June 1991

Fold at line over top of envelope to the right of the return address

CERTIFIED

P 065 163 572

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MAIL

STICK POSTAGE STAMPS TO ARTICLE TO COVER FIRST CLASS POSTAGE, CERTIFIED MAIL FEE, AND CHARGES FOR ANY SELECTED OPTIONAL SERVICES (see front).

1. If you want this receipt postmarked, stick the gummed stub to the right of the return address leaving the receipt attached and present the article at a post office service window or hand it to your rural carrier (no extra charge).

2. If you do not want this receipt postmarked, stick the gummed stub to the right of the return address of the article, date, detach and retain the receipt, and mail the article.

3. If you want a return receipt, write the certified mail number and your name and address on a return receipt card, Form 3811, and attach it to the front of the article by means of the gummed ends if space permits. Otherwise, affix to back of article. Endorse front of article **RETURN RECEIPT REQUESTED** adjacent to the number.

4. If you want delivery restricted to the addressee, or to an authorized agent of the addressee, endorse **RESTRICTED DELIVERY** on the front of the article.

5. Enter fees for the services requested in the appropriate spaces on the front of this receipt. If return receipt is requested, check the applicable blocks in item 1 of Form 3811.

6. Save this receipt and present it if you make inquiry.

U.S. G[illegible]1991—302-916

PS Form 3800, June 1991 (Reverse)

161/18 S-553633

U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Pesticide Programs
Registration Division (H7505C)
401 "M" St., S.W.
Washington, D.C. 20460

NOTICE OF PESTICIDE:
_x_ Registration
____ Reregistration

(under FIFRA, as amended)

EPA Reg. Number:	Date of Issuance:
71545-1	DEC 22 1998

Term of Issuance:
Conditional (until December 22, 2000)

Name of Pesticide Product:
Guard Alaska Bear Repellent

Name and Address of Registrant (include ZIP Code):

McNeil River Enterprises, Inc.
750 West Dimond, Suite 203
Anchorage, AK 99515

Attention: Mr. Randal Prater

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered for two years, in accordance with FIFRA sec. 3(c)(7)(A), provided that you:

A. Make the labeling changes listed below before you release the product for shipment:

1. Add the phrase "EPA Registration No. "71545-1".

Signature of Approving Official:

Daniel B. Peacock, Biologist
Insecticide-Rodenticide Branch
Registration Division (7505C)

Date: DEC 22 1998

EPA Form 8570-6

2. Modify the precautionary statements on the Front Panel to read:

KEEP OUT OF REACH OF CHILDREN
DANGER
Strong, temporary irritant to eyes, nose, and skin. Wash throughly with soap and water after handling. Do not allow children to use this product.

See Back Panel for additional precautionary statements.

3. Submit two (2) copies of your final printed labeling before you release the product for shipment. Refer to the A-79 enclosure for a further description of final printed labeling.

B. Respond to a Data Call-In (DCI) for Trichloroethylene (TCE), which will be issued shortly, within 90 days of receipt, in one of the following three ways:

1. request a waiver of the data because of the unique nature of this use pattern (This request will be reviewed and may or may not be granted.);

2. reformulate the product without TCE (For this option, we will shortly supply you, for further evaluation by your filler, with a list of potential List 2 and 3 inert ingredients that are not ozone-depleting substances and that have high flash points.); or

3. submit or cite the data requested by the DCI.

C. Satisfy the Data Call-In (DCI) within two years of issuance of this Conditional Notice of Registration.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA sec. 6(e). Your release for shipment of the product constitutes acceptance of these conditions.

A stamped copy of the label is enclosed for your records.

Enclosures: 1. Stamped Label
2. A-79 Enclosure

Peacock:Disk20:A:\Capsaicin\71545-R.NOT:305-5407:12/22/98

Guard Alaska® Bear Repellent

DO NOT SEEK OUT ENCOUNTERS WITH BEARS. THIS PRODUCT IS A BEAR ATTACK REPELLENT WHICH MAY PROTECT USERS IN SOME UNEXPECTED CONFRONTATIONS WITH BEARS BUT MAY NOT BE EFFECTIVE IN ALL SITUATIONS OR PREVENT ALL INJURIES. READ THIS ENTRE LABEL BEFORE TAKING THIS PRODUCT INTO AREAS WHERE BEAR MIGHT BE ENCOUNTERED.

ACTIVE INGREDIENT:

Capsaicin and Related Capsaicinoids*	1.34%
INERT INGREDIENTS	98.66 %
TOTAL	100 %

* Made from Oleoresin of Capsicum

This product contains the toxic inert ingredient, trichloroethylene.

KEEP OUT OF REACH OF CHILDREN

WARNING: Strong, temporary irritant to eyes, nose, and skin. Wash throughly with soap and water after handling. Do not allow children to use this product.

See back panel for additional precautionary statements.

Manufactured for:
McNeil River Enterprises, Inc.
750 W Dimond, Suite 203
Anchorage, AK 99515
Chemical Emergency Hotline: 1-800-535-5053
Open 24 hours a day, 7 days a week.
EPA EST. No. 36213-MD-002 EPA Reg. No.: 71545-1
NET CONTENTS: 9 ounces

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS & DOMESTIC ANIMALS

DANGER: May cause irreversible eye damage if sprayed in the eye. Contact through touching or rubbing the eye may result in moderate eye irritation. Avoid contact with skin or clothing. Wash throughly with soap and water after handling.

FIRST AID

IF IN EYES: Hold eyelids open and flush with steady, gentle stream of water for 15 minutes. Get medical attention.
IF ON SKIN: Wash with plenty of soap and water. Get medical attention, if irritation persists.
Notice: California has determined that a chemical contained in this product causes cancer based on tests performed on laboratory animals.

PHYSICAL OR CHEMICAL HAZARDS

Contents under pressure. Do not use or store near heat or open flame. Do not puncture or incinerate container. Exposure to temperatures above 130 Deg F may cause bursting.

ENVIRONMENTAL HAZARDS

Do not apply directly to water. Do not contaminate water by disposing of unused material.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

USE RESTRICTIONS: This product may be used only to deter bears which are attacking or appear likely to attack humans. This product is a bear attack repellent which may protect users in some unexpected confrontations with bears but may not be effective in all situations or prevent all injuries. **Do not spray this product on tents, other objects, or on clothing.** Such use has no deterrent effect on bears and may attract them in some cases. **Do not seek out encounters with bears or intentionally provoke them.** Do not eat or allow to be eaten any food or feed materials which may become contaminated with this product.

This product has a range of 15-20 feet (about 5-6 meters). The canister empties in approximately 9 seconds.

APPLICATION DIRECTIONS: Study the procedures and directions for using this product before taking this product into bear country.

To Use

1. Remove the orange safety clip.
2. Point spray opening at bear's face.
3. Press firmly on trigger and release spray in short bursts.

For this product to be fully effective, you must engulf the bear's face, especially the eyes, nose, and mouth. This product generally has a range of approximately 15 to 20 feet. Wind and other conditions may alter the range or effectiveness. Shield your eyes and face if you must face into the wind. Use with caution. Contents will cause pain and temporary impairment to eyes, nose, mouth, and lungs. Individuals who suffer from asthrfia or emphysema may have a more severe reaction.

STORAGE & DISPOSAL

STORAGE: Store only in original container in a secured area inaccessible to children and pets. Do not store above 120°F or below 32°F.
DISPOSAL: Securely wrap container in several layers of newspaper and discard in trash. Contents under pressure, do not puncture or incinerate can.

ACCEPTED
with COMMENTS
in EPA Letter Dated:
DEC 22 1998
Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 71545-1

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McNeil River Enter., Inc.
750 W. Dimond, Ste. 203
Anchorage, Alaska 99515
907-349-6868 or
1-888-419-9695
907-349-7818 fax

FAX
602-278-4850

Manufacturers of Guard Alaska Personal Protection Systems

December 21, 1998

Mr. Dan Peacock (CM-2 H7505C)
Office of Pesticide Programs (Team 14)
U.S. Environmental Protection Agency
401 M Street, SW
Washington, DC 20460

Reference: Guard Alaska® Bear Repellent (EPA File Symbol 71545-R)

Dear Dan:

In response to your letter dated December 21, 1998, we have revised our precautionary statements and spray pattern effectiveness claims. Attached are five copies of our revised label that reflect these revisions.

As a condition of our registration we are willing to address the Data Call-In (DCI) issues mentioned on page 4 of your December 21, 1998 letter. We look forward to receiving a list of potential inert ingredient substitutes that are not ozone-depleting and that have high flash points.

Please call me at 1-888-419-9695 if you have any questions or if I can be of further assistance.

Sincerely,

for Randal Prater
President

P 065 163 575

Receipt for Certified Mail

No Insurance Coverage Provided
Do not use for International Mail
(See Reverse)

UNITED STATES POSTAL SERVICE

Sent to McNeil River Ent	
Street and No	
P.O , State and ZIP Code	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, and Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date	

PS Form 3800, June 1991

166

STICK POSTAGE STAMPS TO ARTICLE TO COVER FIRST CLASS POSTAGE, CERTIFIED MAIL FEE, AND CHARGES FOR ANY SELECTED OPTIONAL SERVICES (see front).

1. If you want this receipt postmarked, stick the gummed stub to the right of the return address leaving the receipt attached and present the article at a post office service window or hand it to your rural carrier (no extra charge).

2. If you do not want this receipt postmarked, stick the gummed stub to the right of the return address of the article, date, detach and retain the receipt, and mail the article.

3. If you want a return receipt, write the certified mail number and your name and address on a return receipt card, Form 3811, and attach it to the front of the article by means of the gummed ends if space permits. Otherwise, affix to back of article. Endorse front of article **RETURN RECEIPT REQUESTED** adjacent to the number.

4. If you want delivery restricted to the addressee, or to an authorized agent of the addressee, endorse **RESTRICTED DELIVERY** on the front of the article.

5. Enter fees for the services requested in the appropriate spaces on the front of this receipt. If return receipt is requested, check the applicable blocks in item 1 of Form 3811.

6. Save this receipt and present it if you make inquiry.

☆ U.S. GPO: 1991—302-916

PS Form 3800, June 1991 (Reverse)

161 5-550214
13

December 21, 1998

161 5-55147
13

CERTIFIED MAIL

McNeil River Enterprises, Inc.
750 West Dimond, Suite 203
Anchorage, AK 99515

Attention: Mr. Randal Prater

Subject: Guard Alaska Bear Repellent
EPA File Symbol 71545-R
Our meeting of October 5, 1998
Your submissions of October 13 and November 20, 1998

In the above submissions, you submitted a revised Confidential Statement of Formula (CSF), label, and additional information to support your revised formula and spray pattern. We have reviewed this material and have the following comments on the data, labeling, and conditions of registration:

I. Review of Data

A. Chemistry

We have reviewed the information supporting the revised formula and found it acceptable. The revised Confidential Statement of Formula (CSF) dated October 13, 1998, is acceptable, and a copy has been placed in our files. All other versions are obsolete.

However, you will need to change the ingredient statement to indicate that the formula contains a List 1 inert ingredient. Also, see "III. Conditions of Registration" below.

B. Toxicology

The data previously submitted for your original formula are acceptable for your revised formula. However, you need to revise your precautionary statements to reflect the difference in hazard of spraying the product directly in the eyes and of rubbing your eyes. In addition, you need to add language regarding the potential carcinogenic effects of one of your ingredients.

C. Effectiveness

1. The new report on the spray pattern of the new proposed formulation for GUARD ALASKA leaves some questions unanswered, but its author describes a readily detectable spray pattern at 15 feet from the source and reports a visible spray cloud 30 feet away from the source, but with much less deposition at 20 feet than at 15 feet. In light of these results, we feel that the claim of effective spraying distance should be modified from 20 feet to 15-20 feet.

2. We suspect that spray range claims might become important as registrants of bear repellents seek new customers, although our regulations prohibit use of statements of comparative efficacy (or safety) in pesticide labeling. You may submit, at any time, additional evidence regarding the effective range of this product. Such information might include additional spray-pattern data and/or efficacy data which indicate successful use of the product at distances equal to or greater than 20 feet. It would be of great help to us as we attempt to become more familiar with the issues associated with products of this type if you also were able to provide videotaped documentation of the results of spray-pattern or efficacy studies.

II. Review of Labeling

1. Revise your Ingredient Statement as follows:

ACTIVE INGREDIENT	
Capsaicin and Related Capsaicinoids*.....	1.34%
INERT INGREDIENTS	98. 66%
TOTAL	100.00%

*Made from Oleoresin of Capsicum

This product contains the toxic inert ingredient, trichloroethylene. [Must be in same type size as the rest of the ingredient statement.]

Note that the asterisked item under the statement of ingredients needed to be changed from

*Made from ***20% Oleoresin of Capsicum by volume***

to

*Made from Oleoresin of Capsicum.

This change is needed to ensure that those who read the label are not misled into believing that the concentration of "Capsaicin and Related Capsaicinoids" in and the effectiveness of bear repellents are directly related to the percent of Oleoresin of

Capsicum in the product. Such may not always be the case. You may make a truthful and not misleading statement to the effect that the "Capsaicin and Related Capsaicinoids" used in your product are in the form of Oleoresin of Capsicum.

3. Revise your "Precautionary Statements" as follows:

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS & DOMESTIC ANIMALS

DANGER
May cause irreversible eye damage if sprayed in the eye. Contact through touching or rubbing the eye may result in moderate eye irritation. Avoid contact with skin or clothing. Wash thoroughly with soap and water after handling.

FIRST AID [or STATEMENT OF PRACTICAL TREATMENT]

IF IN EYES: Hold eyelids open and flush with steady, gentle stream of water for 15 minutes. Get medical attention.

IF ON SKIN: Wash with plenty of soap and water. Get medical attention, if irritation persists.

Notice: California has determined that a chemical contained in this product causes cancer based on tests performed on laboratory animals.

PHYSICAL OR CHEMICAL HAZARDS

Contents under pressure. Do not use or store near heat or open flame. Do not puncture or incinerate container. Exposure to temperatures above 130 Deg F may cause bursting.

ENVIRONMENTAL HAZARDS

Do not apply directly to water. Do not contaminate water by disposing of unused material.

2. Revise the "**DIRECTIONS FOR USE**" portion of the label submitted on November 20, 1998 to reflect the change in the claim of effective distance. The changes needed are indicated below.

   a. Change the first sentence of the second paragraph of the "**USE RESTRICTIONS:**" to read

This product has a range of 15-20 feet (about 5-6 meters).

b. Change the second sentence of the last paragraph of "**APPLICATION DIRECTIONS:**" to read

This product generally has a range of 15 to 20 feet.

III. Conditions of Registration

TCE is a List 1 inert ingredient because of its cancer-producing potential. For such products, the Agency's inerts policy requires submission of considerable data through a Data Call-In (DCI). At this time we have no data in our files on TCE because TCE was removed as a purposefully added inert ingredient from all pesticide products. This pending registration constitutes a request to add a List 1 inert. Therefore, you will need to address the DCI as a condition of your registration.

If you are willing to make the labeling changes above and respond to the DCI when received, we are willing to grant you a conditional registration for a period of two years. During that period you will need to respond to and satisfy a Data Call-In (DCI), which will be issued shortly, in one of the following three ways:

1. request a waiver of the data because of the unique nature of this use pattern (This request will be reviewed and may or may not be granted.);

2. reformulate the product without TCE (For this option, we will shortly supply you, for further evaluation by your filler, with a list of potential List 2 and 3 inert ingredients that are not ozone-depleting substances and that have high flash points.); or

3. submit or cite the data requested by the DCI.

If you have questions about this letter, you may reach me by phone (703-305-5407, fax (703-305-6596), or E-Mail (peacock.dan@epamail.epa.gov).

Sincerely,

DBP

Daniel B. Peacock, Biologist
Insecticide-Rodenticide Branch
Registration Division (7504C)

cc: Region 10 (Lyn Frandsen)

Peacock:Disk 20:A:\Capsaicin\71545-R122198:305-5407:12/21/98

STATEMENT OF NO DATA CONFIDENTIALITY CLAIM

No claim of confidentiality is made for any information contained in this study on the basis of its falling within the scope of FIFRA §10(d)(1)(A), (B), or (C).

Company: **McNeil River Enterprises, Inc.**

Company Agent: **Randal Prater** Date: 11-20-98

Title: **President** Signature: Randal Prater, CBR

GOOD LABORATORY PRACTICE STATEMENT

This information was prepared as part of an in-house evaluation of Guard Alaska® Bear Repellent's spray pattern; it highlights the EPA requested information.

This study does not meet the requirements for 40 CFR Part 160.

Submitter Arthur R

Sponsor Randal Pratt CBC

Study Director Wayne Grude CBC

CASE-MASON FILLING, INC.
715 S. HAVEN STREET
BALTIMORE, MD 21224

TELEPHONE: 410-342-6100

DATE: November 19, 1998

FROM: Wayen L. Grube, Sr.

TO: Cathy Rice

FAX NO: 703-847-7408

SPRAY TEST

Test conducted outdoors.
Ambient Temperature 61°F November 19, 1998.
Light wind from the Southwest @ 3-5 MPH.

FIRING RANGE

The Firing Range was set up against the wall of the building. On the wall of the building an area was covered 8 ft. wide by 10 ft. high with light gray cardboard. On the ground along the line of fire, cardboard sheets were laid down 5 ft. wide by 40 ft. in length measured in 5 ft. increments.

MEASURE THE PATTERN

In order to measure the pattern of the product we first fired it at 15 ft. from the exhaust point of the unit to the wall. At this distance the area covered on the wall was oval in shape being 5 ft. 6 in. in height by 4 ft. in width.

At 20 ft. the nature of the product caused it to become aerosolized (breaking up into small particles and becoming airborne) and made it difficult to measure the pattern as before. As a result we put walls of cardboard on either side of the firing line that were 5 ft. in height, 6 ft. apart and extended 8 ft. out from the wall. The unit when sprayed then became a cloud of airborne particles which was evident by the naked eye and showed evidence of being deposited on both walls of the tunnel (6 ft. apart) and on the wall of the building. Small specks were deposited on white sheets of paper lining the walls.

Continuation

Beyond 20 ft., a cloud of aerosolized particles was visible to the naked eye. Since the cloud had continued to expand and disperse within the area only small patterns were visible on the white paper that was taped to the card.

To stimulate the actions of the hiker and/or camper I carried the unit on my hip for 4-5 minutes while walking prior to activating it.

NOTE -

The very nature of this product (i.e., the fact of aerosolizing the active ingredients into minuscule particulates to enable it to enter both the respiratory system or the eyes of the bear) make it increasingly harder to have visual proof of the spray pattern at greater the distance from the unit. If one was to stand up to 50 ft. from the unit and have it sprayed at them they would feel the effects of the spray. Visually you are able to see evidence of the material in the air as it disperses at distances of up to 30 ft.

Due to the nature of the product it is directly effected by the wind. The greater the distance from the unit the smaller their particle size thus allowing it to be influenced by air movement.

The duration of the spray is 8-10 seconds.

PRECAUTIONARY STATEMENT

HAZARDS TO HUMANS & DOMESTIC ANIMALS

CAUTION: This product contains a chemical believed to cause cancer. Causes moderate eye irritation. Avoid contact with eyes, skin, or clothing. Wash throughly with soap and water after handling.

ENVIRONMENTAL HAZARDS

Do not apply directly to water. Do not contaminate water by disposing of unused material.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

USE RESTRICTIONS: This product may be used only to deter bears which are attacking or appear likely to attack humans. This product is a bear attack repellent which may protect users in some unexpected confrontations with bears but may not be effective in all situations or prevent all injuries. **Do not spray this product on tents, other objects, or on clothing.** Such use has no deterrent effect on bears and may attract them in some cases. **Do not seek out encounters with bears or intentionally provoke them.** Do not eat or allow to be eaten any food or feed materials which may become contaminated with this product.

This product has a range of up to 20 feet (6 meters). The canister empties in approximately 9 seconds.

APPLICATION DIRECTIONS: Study the procedures and directions for using this product before taking this product into bear country.

To Use

1. Remove the orange safety clip.
2. Point spray opening at bear's face.
3. Press Firmly on trigger and release spray in short bursts.

For this product to be fully effective, you must engulf the bear's face, especially the eyes, nose, and mouth. This product generally has a range of approximately 20 feet. Wind and other conditions may alter the range or effectiveness. Shield your eyes and face if you must face into the wind. Use with caution. Contents will cause pain and temporary impairment to eyes, nose, mouth, and lungs. Individuals who suffer from asthma or emphysema may have a more severe reaction.

STORAGE & DISPOSAL

STORAGE: Store only in original container in a secured area inaccessible to children and pets. Do not store above 120°F or below 32°F.

DISPOSAL: Securely wrap container in several layers of newspaper and discard in trash. Contents under pressure, do not puncture or incinerate can.

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Guard Alaska®
Bear Repellent

DO SEEK OUT ENCOUNTERS WITH BEARS. THIS PRODUCT IS A BEAR ATTACK REPELLENT WHICH MAY PROTECT USERS IN SOME UNEXPECTED CONFRONTATIONS WITH BEARS BUT MAY NOT BE EFFECTIVE IN ALL SITUATIONS OR PREVENT ALL INJURIES. READ THIS ENTRE LABEL BEFORE TAKING THIS PRODUCT INTO AREAS WHERE BEAR MIGHT BE ENCOUNTERED.

ACTIVE INGREDIENT:

Capsaicin and Related Capsaicinoids*	1.34%
INERT INGREDIENTS	98.66 %
TOTAL	100 %

* Made from ***20% Oleoresin of Capsicum by volume***

KEEP OUT OF REACH OF CHILDREN

CAUTION: Strong, temporary irritant to eyes, nose, and skin. Wash throughly with soap and water after handling. Do not allow children to use this product.

FIRST AID

IF IN EYES: Flush with plenty of water. Call a physician if irritation persists.
IF ON SKIN: Wash with Plenty of soap and water. Get medical attention of irritation persists.

Manufactured for:
McNeil River Enterprises, Inc.
750 W Dimond, Suite 203
Anchorage, AK 99515
Chemical Emergency Hotline: 1-800-535-5053
Open 24 hours a day, 7 days a week.

EPA EST. No. 36213-MD-002 EPA File Symbol: 71545-R
NET CONTENTS: 9 ounces

Note from DSM: I think that this statement should be deleted because it is misleading. The "20%" has no meaning.

can claim ingredient (important if true is Right) but not [ ]

PRECAUTIONARY STATEMENT

HAZARDS TO HUMANS & DOMESTIC ANIMALS

CAUTION: This product contains a chemical believed to cause cancer. Causes moderate eye irritation. Avoid contact with eyes, skin or clothing. Wash throughly with soap and water after handling.

ENVIRONMENTAL HAZARDS

Do not apply directly to water. Do not contaminate water by disposing of unused material.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

USE RESTRICTIONS: This product is a bear attack repellent which may protect users in some unexpected confrontations with bears but may not be effective in all situations or prevent all injuries. When used properly, this product is effective on all species of bears.

DIRECTIONS:

1. Remove the orange safety clip.
2. Aim at the bear's face.
3 Press down firmly, using short bursts.

For this product to be fully effective, you must engulf the bear's face, especially the eyes, nose, and mouth. This product generally has a range of approximately 25 to 30 feet. Wind and other conditions may alter the range or effectiveness. Shield your eyes and face if you must fire into the wind. Contents will cause pain and temporary impairment to eyes, nose, mouth and lungs. Individuals who suffer from asthma or emphysema may have a more severe reaction. Use with caution.

STORAGE & DISPOSAL

STORAGE: Store only in original container in a secured area inaccessible to children and pets. Do not store above 120° F or below 32° F.
DISPOSAL: Securely wrap container in several layers of newspaper and discard in trash. Contents under pressure, do not puncture or incinerate can.

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Guard Alaska© Bear Repellent

DO NOT SEEK OUT ENCOUNTERS WITH BEARS. THIS PRODUCT IS A BEAR ATTACK REPELLENT WHICH MAY PROTECT USERS IN SOME UNEXPECTED CONFRONTATIONS WITH BEARS BUT MAY NOT BE EFFECTIVE IN ALL SITUATIONS OR PREVENT ALL INJURIES. READ THIS ENTIRE LABEL BEFORE TAKING THIS PRODUCT INTO AREAS WHERE BEAR MIGHT BE ENCOUNTERED.

ACTIVE INGREDIENT:	
Capsaicin and Related Capsaicinoids*	1.34 %
INERT INGREDIENTS	98.66 %
TOTAL	100 %

* Made from ***20% Oleoresin of Capsicum by volume*** — misleading efficacy statement should not appear on label

KEEP OUT OF REACH OF CHILDREN

CAUTION: Strong, temporary irritatant to eyes, nose, and skin. Wash throughly with soap and water after handling. Do not allow children to use this product.

FIRST AID

IF IN EYES: Flush with plenty of water. Call a physician if irritation persists.
IF ON SKIN: Wash with plenty of soap and water. Get medical attention if irritation persists.

Manufactured for:
McNeil River Enterprises, Inc.
750 W Dimond, Suite 203
Anchorage, AK 99515
Chemical Emergency Hotline: 1-800-535-5053.
Open 24 hours a day, 7 days a week.
EPA EST. No. 36213-MD-002 EPA File Symbol: 71545-R
NET WEIGHT: 9 ounces

label received 10-14-98 submitted with 10-13-98 letter

DATE O 04 Nov 1998

SUBJECT: **EP [x] MP [ ] PRODUCT CHEMISTRY REVIEW**
DP BARCODE No.:D250331REG./File Symbol No.: 71545-R
PRODUCT NAME Guard Alaska Bear Repellent
COMPANY McNeil River Enterprises, Inc.

AS

FROM: Alfred Smith, Chemist
Technical Review Branch/RD (7505C)

TO: Daniel Peacock, PM Team 04
Insecticide Branch/RD (7505C)

INTRODUCTION

The Applicant has submitted a revised Confidential Statement of Formula (CSF, EPA Form 8570-4, dated 10-13-98)for the End-Use Product (EP), Guard Alaska Bear Repellent. The revision consists of a substitution of an inert ingredient used as a propellent. (See Confidential Appendix for a discussion of the substitution.)

FINDINGS

1. The substituted inert ingredient is cleared for food use in formulated products.(See the Confidential Appendix for identity.)

2. The inert ingredient trichloroethylene is a List I inert ingredient. However, the inert ingredient is cleared for food use in formulated products.

CONCLUSIONS

TRB/RD has no objections to the registration of the EP. However, the Label Ingredient statement may need to be changed to include the List I inert as a footnote.

CONFIDENTIAL APPENDIX

EP [x] MP [ ] PRODUCT CHEMISTRY REVIEW

BARCODE No.: D250331 **REG./File Symbol No.:** 71545-R
PRODUCT NAME: Guard Alaska Bear Repellent
Reviewer: Alfred Smith **Company:** McNeil River Enterprises, Inc.

The inert ingredient [redacted], has been substituted for an inert ingredient that was not cleared for food use in formulated products. The inert ingredient [redacted] is to be used as the propellant in the product and is cleared for food use in formulated products.

The inert ingredient [redacted] is acceptable.

Inert ingredient information may be entitled to confidential treatment

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

OFFICE OF
PREVENTION, PESTICIDES
AND
TOXIC SUBSTANCES

November 25, 1998

MEMORANDUM

EPA File Symbol: 71545-R GUARD ALASKA® BEAR REPELLENT
DP Barcode: D250333
Case No: 062589

From: Byron T. Backus, Ph.D., Toxicologist
Technical Review Branch
Registration Division (7505C)

Byron T. Backus
11/25/98
JCR

To: Dan Peacock/Tina Levine, PM 04
Insecticide-Rodenticide Branch
Registration Division (7505C)

Registrant: McNeil River Enterprises, Inc.

ACTION REQUESTED: "As agreed to at our 10/5/98 meeting, the registrant has submitted a revised CSF (with change in solvent) and label...

"We need a formal review of the change in formula to determine:

1) If the 2 formulas are substantially similar.

2) Is any additional chemistry data needed before registration.

3) Are any labeling changes needed?
[I know that we have to provide the precautionary statements and the California statement about TCE]..."

BACKGROUND: The active ingredient in this formulation is Capsaicin and Related Capsaicinoids, with a label declaration of 1.34% (and the remaining 98.66% consisting of "Inert" ingredients). According to the label, the product is "made from 20% Oleoresin of Capsicum by volume." The product is a bear attack repellent, and the label includes the claim "This product generally has a range of approximately 25 to 30 feet."

COMMENTS AND RECOMMENDATIONS: The acute toxicological properties of the active ingredient, capsaicin (and related capsaicinoids) are relatively well defined. The propellent in this formulation adds to the eye irritation potential, and the indications are (from the claim of a range of approximately 25 to 30 feet) that eye exposure could be traumatic simply from the force of this formulation hitting the eye. On the basis of potential eye irritation effects, as well as the lack of an eye irritation study, it is recommended that the signal word be DANGER (indicating a toxicity category I hazard potential by the eye exposure route, rather than III). The proposed product label indicates a toxicity category III hazard potential in terms of dermal irritation effects; otherwise, the product could be considered to be in toxicity category IV, and would be classified as a nonsensitizer. On this basis, the formulation would have the following acute toxicity profile.

Acute oral LD50	IV	(Cited)
Acute dermal LD50	IV	(Cited)
Acute inhalation LC50	IV	(Cited)
Primary eye irritation	I	(Cited)
Primary dermal irritation	III	(Cited)
Dermal sensitization	No	(Cited

Based on this toxicity profile, the product would have the following precautionary labeling, as obtained from the Label Review System:

Date: 11/25/98 LABEL REVIEW SYSTEM

ID #: 071545-00001 Guard Alaska Bear Repellent

RESTRICTED USE CLASSIFICATION RECOMMENDED:

Due to eye irritation toxicity category.

The PM Team should decide if restricted use classification is necessary or if alternative labeling will allay the requirement for restricted use classification.

3

SIGNAL WORD: DANGER PELIGRO

PRECAUTIONARY STATEMENTS:

Corrosive. Causes irreversible eye damage. Do not get in eyes or on clothing. Avoid contact with skin. Wear long-sleeved shirt and long pants, socks and shoes, goggles or face shield and chemical resistant gloves (such as Nitrile, Butyl, Neoprene, and/or Barrier Laminate). Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove contaminated clothing and wash clothing before reuse.

STATEMENT OF PRACTICAL TREATMENT (SOPT):

IF SWALLOWED: Call a physician or Poison Control Center. Do not induce vomiting. Drink promptly a large quantity of milk, egg whites, gelatin solution, or if these are not available, drink large quantities of water. Avoid alcohol.

IF ON SKIN: Wash with plenty of soap and water. Get medical attention, if irritiation persists.

IF IN EYES: Hold eyelids open and flush with steady, gentle stream of water for 15 minutes. Get medical attention.

NOTE TO PHYSICIAN:

The proposed label should contain a Note to Physicians. Some suggested types of information include the following:

- technical information on symptomatology;
- use of supportive treatments to maintain life functions;
- medicine that will counteract the specific physiological effects of the pesticide;
- company telephone number to specific medical personnel who can provide specialized medical advice.

Probable mucosal damage may contraindicate the use of gastric lavage.

It is noted that much of the above labeling is based on the assumption that this test material would be corrosive by the eye exposure route, when in fact for this case the eye damage would actually be a result of trauma. Because of these considerations, we could accept something like the following:

SIGNAL WORD: DANGER PELIGRO

PRECAUTIONARY STATEMENTS:

May cause irreversible eye damage. Do not spray in eyes. Avoid contact with skin or clothing. Wash thoroughly with soap and water after handling.

STATEMENT OF PRACTICAL TREATMENT (SOPT):

IF IN EYES: Hold eyelids open and flush with steady, gentle stream of water for 15 minutes. Get medical attention.

IF ON SKIN: Wash with plenty of soap and water. Get medical attention, if irritiation persists.

The language regarding potential carcinogenic effects should be in accordance with California Proposition 65.

IRB BRANCH REVIEW - TSS

Record Number(s)

D251104

IN 11/23/98 OUT 12/10/98

EFFICACY

FILE OR REG. NO. 71545-R

PETITION OR EXP. PERMIT NO.

DATE DIV. RECEIVED 11/20/98

DATE OF SUBMISSION 11/20/98

DATE SUBMISSION ACCEPTED 11/23/98

TYPE PRODUCTS(S): I, D, H, F, N, R_K S

DATA ACCESSION NO(S). none

PRODUCT MGR. NO. 04

PRODUCT NAME(S) GUARD ALASKA BEAR REPELLENT

COMPANY NAME McNeill River Enterprises, Inc.

SUBMISSION PURPOSE registration

CHEMICAL & FORMULATION 1.34% Capsaicin and Related Capsaicinoids

aerosol

Efficacy Review: GUARD ALASKA© BEAR REPELLENT, 71545-R
McNeill River Enterprises, Inc.
Anchorage, AK 99515

200.0 INTRODUCTION

200.1 Uses

1.34% "Capsaicin and Related Capsaicinoids" ("Made from ***20% Oleoresin of Capsicum by volume***"). aerosol proposed for Federal registration as a "bear attack repellent" to protect humans from attacks by bears.

200.2 Background Information

See efficacy reviews of 8/17/98 and 10/21/98 for 71545-R and efficacy review of 12/29/97 of a pre-application submission (CORR. 289443) pertaining to this product.

This review discusses McNeill River's submission of 11/20/98, which consists of a brief cover letter, a report on the spray pattern of the product's new formulation, and a revised proposed label. After the efficacy review of 8/17/98 was completed, EPA learned that the "**Dilutant; Solvent**" intended for use in this product was considered to be an ozone-depleter and, consequently, would have to be replaced. That was the purpose for altering the proposed formulation. New information on spray pattern was required to assess whether the new propellent would disperse the product appropriately. The spray pattern study discussed in the efficacy review of 10/21/98 was judged to be inadequate, in part because the procedures followed were not explained adequately.

201.0 DATA SUMMARY

According to a revised proposed CSF dated "10-13-98", the new "**Dilutant; Solvent**" (Trichloroethylene) would replace the old one [redacted] at the same nominal concentration [redacted] The concentrations claimed for other ingredients are not affected by this substitution. Assuming that the inferences previously drawn concerning the product's effectiveness were appropriate and that there is nothing "chemical" about the substitution that would make the product less aversive to bears, the adequacy of the spray

Inert ingredient information may be entitled to confidential treatment

pattern associated with the new formulation would be the key to determining whether it would be expected to be effective.

The new report on the spray pattern of the new formulation is cited and discussed below.

Grube, W. (1998) Spray pattern associated with Guard Alaska® Bear Repellent new formulation. Unpublished report: Case-Mason Filling, Inc., Baltimore, MD. 5 pp.

The cornerstone of this document is a two-page memorandum from Wayne L. Grube of Case-Mason to a Cathy Rice, who is either an employee of or a consultant for McNeill River. The remaining 3 pages are those required by EPA for data submission formatting. No MRID number has been assigned to the report as yet.

Grube set up a "Firing Range" by covering an 8' wide by 10' high portion of the wall of a building "with light gray cardboard. He also placed cardboard sheets on the ground

> "5 ft. wide by 40 ft. in length measured in 5 ft. increments."

This seems to mean that pieces of cardboard covered some or all of a 5' by 40' substrate area projecting from the wall target "along the line of fire". Non-aerosol droplets should show up well on gray cardboard.

Prior to each test of the product, Grube "carried the product" on his hip "for 4-5 minutes while walking". This procedure was followed "To simulate the actions of the hiker" so that there would be some moving of the contents of the container (which would activate the propellent somewhat) but no vigorous shaking (which a user might not have time to do if a bear were charging). In a telephone conversation of 11/9/98, I suggested to Grube that he follow a pre-use handling procedure which simulated the actions of a hiker or hunter.

Grube's first test of a unit in the "Firing Range" was facing the wall at a distance of 15'. He reports that this

firing produced an oval impingement pattern on the vertical cardboard which was 5'6" high and 4' wide.

When he moved back to 20' from the vertical wall, the spray aerosolized before hitting the back wall, making "it difficult to measure the pattern as before." He then altered his protocol to

> "put walls of cardboard on either side of the firing line that were 5 ft. in height and 6 ft. apart and extended 8 ft out from the wall."

This seems to mean that he created a stall 6' wide, 8' deep, and 5' high.

When a unit was fired toward this stall (apparently from 20' from the back wall),

> "a cloud of airborne particles was evident by the naked eye and showed evidence of being deposited on both walls of the tunnel (6 ft. apart) and on the wall of the building. Small specks were deposited on white sheets of paper lining the walls."

From these descriptions, I infer that some spray reached the back wall, but that it was more noticeable on the walls of the stall (which were as close as 12' from the spray orifice).

Grube reports additional aerosolizing "Beyond 20 ft." with the spray cloud expanding with increased distance (and time) from the source. He claims that a unit can produce a visible spray cloud more than 30' from the spray orifice and that one "would feel the effects of the spray" up to 50' away from it origin. He added that the effects of wind on the spray pattern would increase with decreased droplet size and increased distance from the source. This stands to reason.

The question with which EPA must grapple is whether the performance described by Grube would be adequate to protect humans from charging bears. The more spray a bear got, the more likely that it would leave in pain. If a fine mist at

20-50' were all it took, this product would be fine. The problem is that I do not know for sure that such is the case. It does seem clear from Grube's report that a bear would literally be blasted by spray once it came within 15 feet. If it took a blast to deter a bear, then users could risk "running out of bear spray before they ran out of bear" if they discharged the containers contents before the bear got close enough.

I have more confidence in Grube's assertion that a visible spray cloud can be seen 30' from the spray source than that the "effects of the spray" could be felt from 50' away. In light of this information and its semi-testimonial quality, I feel that the proposed label's claim of "**a range of up to 20 feet (6 meters)**" should not be expanded.

However, compared to the results reported directly by McNeill River for the old proposed formulation, the spray pattern reported by Grube seems a bit weaker. As discussed in the efficacy review of 8/17/98, the report for the old proposed formulation claimed a "minimum of 20 feet" for its distance of travel from the source and a "Coverage at 20 ft" with "a height of 48 inches and a width of 48 inches". Grube reports a somewhat taller and equally wide spray pattern at a distance of 15' compared to the 48"-diameter circle at 20' that McNeill River reported for the old formulation.

The results with the new formulation (see also the review of 10/21/98) could be interpreted as meaning that one must wait until the bear gets closer than 20' before the new formulation could be expected to reach the animal at a level amount sufficient to repel it. If aerosolized particles effectively deter bears, the product might work at and beyond 20'. Maybe the claim should be "**15-20 feet (about 5-6 meters)**".

In his new report on the new formulation, Grube implies that continuous spraying for 8-10 seconds exhausts the usable contents from a container. His earlier report on the new formulation indicated a "Duration of Spray" of 9-10 seconds with a container being capable of delivering 8-9 one-second bursts of firing. For this type of product, one

second may be longer than is needed. In McNeill's video tape product demonstration (old formulation), a young black bear was repelled by a single blast of product that was well under a second in duration.

(In a telephone conversation on 10/15/98, Randall Prater of McNeill River told me that it takes more than Capsaicin to make a pepper spray effective. He claimed that the old solvent used in the product cuts through bears' mucous membranes (which he claimed are particularly a problem with black bears) and that Trichloroethane could be expected to do the same. Use of such an ingredient, he said, is essential to making pepper sprays work against bears. He claimed that the product used most often in the case-history compilation by Herrero and Higgins (see prior efficacy reviews) lacks the type of ingredient necessary to make it work against black bears. This, he adds, is why those authors report less success in using pepper sprays against black bears than against the larger brown bears. We should keep this argument in mind as more information on bear repellents becomes available. If it bears out, we should require that Trichloroethylene be listed as an active ingredient.)

The "**DIRECTIONS FOR USE**" on the revised proposed label submitted on 11/20/98 seem to be consistent with those which I prescribed in the efficacy reviews of 8/17/98 and 10/21/98. There are a few slight differences in wording which do not strike me as being important. I feel that the proposed directions, as modified by our earlier comments, are appropriate, except that the claim of a range of 20' probably should be modified as discussed above.

Two other use- and efficacy-related label statements should be adjusted slightly (see "CONCLUSIONS").

202.0 CONCLUSIONS

1. The new report on the spray pattern of the new proposed formulation for GUARD ALASKA leaves some questions unanswered, but its author describes a readily detectable spray pattern at 15 feet from the source and reports a visible spray cloud 30 feet away from the

source, but with much less deposition at 20 feet than at 15 feet. In light of these results, we feel that the claim of effective spraying distance should be modified from 20 feet to 15-20 feet.

We suspect that spray range claims might become important as registrants of bear repellents seek new customers, although our regulations prohibit use of statements of comparative efficacy (or safety) in pesticide labeling. You may submit, at any time, additional evidence regarding the effective range of this product. Such information might include additional spray-pattern data and/or efficacy data which indicate successful use of the product at distances equal to or greater than 20 feet. It would be of great help to us as we attempt to become more familiar with the issues associated with products of this type if you also were able to provide videotaped documentation of the results of spray-pattern or efficacy studies.

2. Revise the "**DIRECTIONS FOR USE**" portion of the label submitted on November 20, 1998 to reflect the change in the claim of effective distance. The changes needed are indicated below.

   a. Change the first sentence of the second paragraph of the "**USE RESTRICTIONS:**" to read

      This product has a range of 15-20 feet (about 5-6 meters).

   b. Change the second sentence of the last paragraph of "**APPLICATION DIRECTIONS:**" to read

      This product generally has a range of 15 to 20 feet.

3. In the third sentence of the cautionary paragraph directly under the name of the product on the main label panel, change "ENTRE" to "ENTIRE".

4. Change the asterisked item under the statement of ingredients from

   *Made from ***20% Oleoresin of Capsicum by volume***

   to

   *Made from Oleoresin of Capsicum.

   This change is needed to ensure that those who read the label are not misled into believing that the concentration of "Capsaicin and Related Capsaicinoids" in and the effectiveness of bear repellents are directly related to the percent of Oleoresin of Capsicum in the product. Such may not always be the case. You may make a truthful and not misleading statement to the effect that the "Capsaicin and Related Capsaicinoids" used in your product are in the form of Oleoresin of Capsicum.

William W. Jacobs
Biologist
Insecticide-Rodenticide Branch
December 10, 1998

8384

DP BARCODE: D250333

CASE: 062589 DATA PACKAGE RECORD DATE: 10/15/98
SUBMISSION: S550214 BEAN SHEET Page 1 of 1

* * * CASE/SUBMISSION INFORMATION * * *

CASE TYPE: REGISTRATION ACTION: 161 RESB NEW PROD-"ME TOO"
RANKING : 5 POINTS ()
CHEMICALS: 070701 Capsaicin (in oleoresin of capsicum) 1.3400%

ID#: 071545-R Guard Alaska Bear Repellent
COMPANY: 071545 MCNEIL RIVER ENTERPRISES, INC.
PRODUCT MANAGER: 04 TINA LEVINE 703-308-7055 ROOM: CM2 219
PM TEAM REVIEWER: DANIEL PEACOCK 703-305-5407 ROOM: CM2 221
RECEIVED DATE: 10/13/98 DUE OUT DATE: 01/11/99

* * * DATA PACKAGE INFORMATION * * *

DP BARCODE: 250333 EXPEDITE: Y DATE SENT: 10/15/98 DATE RET.: / /
CHEMICAL: 070701 Capsaicin (in oleoresin of capsicum)
DP TYPE: 001
CSF: Y LABEL: Y

ASSIGNED TO	DATE IN	DATE OUT	ADMIN DUE DATE: 11/29/98
DIV : RD	/ /	/ /	NEGOT DATE: 12/5/98
BRAN: TRB	/ /	/ /	PROJ DATE: / /
SECT: TOX	/ /	/ /	
REVR :	/ /	/ /	
CONTR:	/ /	/ /	

* * * DATA REVIEW INSTRUCTIONS * * *

John Redden,

As agreed to at our 10/5/98 meeting, the registrant has submitted a revised CSF (with change in solvent) and label. The co sent MSDS for the 2 solvents.

We need a formal review of the change in formula to determine:

1. if the 2 formulas are substantially similar
2. is any additional chemistry data needed before registration
3. are any labeling changes needed?

[I know that we have to provide the precautionary statements and the California statement about TCE.]

We said that we would commit to a 45 da review.

Dan

* * * DATA PACKAGE EVALUATION * * *

No evaluation is written for this data package

DP BARCODE: D250333

CASE: 062589 DATA PACKAGE RECORD (CONTINUED) DATE: 10/15/98
SUBMISSION: S550214 BEAN SHEET

* * * ADDITIONAL DATA PACKAGES FOR THIS SUBMISSION * * *

DP BC	BRANCH/SECTION	DATE OUT	DUE BACK	INS	CSF	LABEL
250331	TRB/CHEM	10/15/98	11/29/98	Y	Y	Y

DP BARCODE: D251104

CASE: 062589 DATA PACKAGE RECORD DATE: 11/23/98
SUBMISSION: S551747 BEAN SHEET Page 1 of 1

* * * CASE/SUBMISSION INFORMATION * * *

CASE TYPE: REGISTRATION ACTION: 161 RESB NEW PROD-"ME TOO"
RANKING : 5 POINTS ()
CHEMICALS: 070701 Capsaicin (in oleoresin of capsicum) 1.3400%

ID#: 071545-R Guard Alaska Bear Repellent
COMPANY: 071545 MCNEIL RIVER ENTERPRISES, INC.
PRODUCT MANAGER: 04 TINA LEVINE 703-308-7055 ROOM: CM2 219
PM TEAM REVIEWER: GRACE ROBIOU 703-305-1016 ROOM: CM2 203
RECEIVED DATE: 11/20/98 DUE OUT DATE: 02/18/99

* * * DATA PACKAGE INFORMATION * * *

DP BARCODE: 251104 EXPEDITE: Y DATE SENT: 11/23/98 DATE RET.: / /
CHEMICAL: 070701 Capsaicin (in oleoresin of capsicum)
DP TYPE: 001
CSF: N LABEL: Y

ASSIGNED TO	DATE IN	DATE OUT	ADMIN DUE DATE: 01/07/99
DIV : RD	/ /	/ /	NEGOT DATE: / /
BRAN: IRB	/ /	/ /	PROJ DATE: / /
SECT: PM04	/ /	/ /	
REVR : clay	11/23/98	12/10/98 RL	
CONTR:	/ /	/ /	

* * * DATA REVIEW INSTRUCTIONS * * *

Bill--

(spray pattern; ozone concerns)

Please review for efficacy. Expedite if possible. Stop sale, use, or removal Order was issued recently in November.

Thank you!
Grace

* * * DATA PACKAGE EVALUATION * * *

No evaluation is written for this data package

* * * ADDITIONAL DATA PACKAGES FOR THIS SUBMISSION * * *

DP BC	BRANCH/SECTION	DATE OUT	DUE BACK	INS	CSF	LABEL

8384

DP BARCODE: D250331

CASE: 062589 DATA PACKAGE RECORD DATE: 10/15/98
SUBMISSION: S550214 BEAN SHEET Page 1 of 1

* * * CASE/SUBMISSION INFORMATION * * *

CASE TYPE: REGISTRATION ACTION: 161 RESB NEW PROD-"ME TOO"
RANKING : 5 POINTS ()
CHEMICALS: 070701 Capsaicin (in oleoresin of capsicum) 1.3400%

ID#: 071545-R Guard Alaska Bear Repellent
COMPANY: 071545 MCNEIL RIVER ENTERPRISES, INC.
PRODUCT MANAGER: 04 TINA LEVINE 703-308-7055 ROOM: CM2 219
PM TEAM REVIEWER: DANIEL PEACOCK 703-305-5407 ROOM: CM2 221
RECEIVED DATE: 10/13/98 DUE OUT DATE: 01/11/99

* * * DATA PACKAGE INFORMATION * * *

DP BARCODE: 250331 EXPEDITE: Y DATE SENT: 10/15/98 DATE RET.: / /
CHEMICAL: 070701 Capsaicin (in oleoresin of capsicum)
DP TYPE: 001
CSF: Y LABEL: Y

ASSIGNED TO	DATE IN	DATE OUT	ADMIN DUE DATE: 11/29/98
DIV : RD	/ /	/ /	NEGOT DATE: / /
BRAN: TRB	/ /	/ /	PROJ DATE: / /
SECT: CHEM	/ /	/ /	
REVR :	/ /	/ /	
CONTR:	/ /	/ /	

* * * DATA REVIEW INSTRUCTIONS * * *

Chemist (AL Smith)

As agreed to at our 10/5/98 meeting, the registrant has submitted a revised CSF (with change in solvent) and label. The co sent MSDS for the 2 solvents.

We need a formal review of the change in formula to determine:

1. if the the 2 formulas are substantially similar

2. is any additional chemistry data needed before registration.

3. are any labeling changes needed?

Daniel Peacock
pm-04

We said that we would commit to a 45 day review.

Dan Peacock, 305-5407

* * * DATA PACKAGE EVALUATION * * *

No evaluation is written for this data package

DP BARCODE: D250331

CASE: 062589 DATA PACKAGE RECORD (CONTINUED) DATE: 10/15/98
SUBMISSION: S550214 BEAN SHEET

* * * ADDITIONAL DATA PACKAGES FOR THIS SUBMISSION * * *

DP BC	BRANCH/SECTION	DATE OUT	DUE BACK	INS	CSF	LABEL

Grace: send to Bell today

S 551747

McNeil River Enter., Inc.
750 W. Dimond, Ste. 203
Anchorage, Alaska 99515
907-349-6868 or
1-888-419-9695
907-349-7818 fax

Manufacturers of Guard Alaska Personal Protection Systems

November 20, 1998

Mr. Dan Peacock (CM-2 H7505C)
Office of Pesticide Programs (Team 14)
U.S. Environmental Protection Agency
401 M Street, SW
Washington, DC 20460

Reference: Guard Alaska® Bear Repellent (EPA File Symbol 71545-R)

Dear Dan:

In response to your letter dated November 5, 1998, we are submitting five copies of the revised label and three copies of the study entitled:

> Spray Pattern Associated with Guard Alaska® Bear Repellent New Formulation (revised November 19, 1998)

Please call me at 1-888-419-9695 if you have any questions or if I can be of further assistance.

Sincerely,

Randal Prater

CBR Randal Prater
President

McNeil River Enter., Inc.
750 W. Dimond, Ste. 203
Anchorage, Alaska 99515
907-349-6868 or
1-888-419-9695
907-349-7818 fax

Manufacturers of Guard Alaska Personal Protection Systems

October 13, 1998

Mr. Dan Peacock (CM-2 H7505C)
Office of Pesticide Programs (Team 14)
U.S. Environmental Protection Agency
401 M Street, SW
Washington, DC 20460

Reference: Guard Alaska® Bear Repellent (EPA File Symbol 71545-R)
Response to October 5, 1998 meeting

Dear Dan:

In response to our October 5, 1998 meeting, we are submitted a revised Confidential Statement of Formula and five copies of the revised label. Also attached are copies of the Material Safety Data Sheets for [redacted] and trichloroethylene.

Please call me at 1-888-419-9695 if you have any questions or if I can be of further assistance.

Sincerely,

Randal Prater

CBR Randal Prater
President

Inert ingredient information may be entitled to confidential treatment

letter OK'ing sale of Guard Alaska for 45 days

U.S. ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF REGULATORY ENFORCEMENT
401 M STREET S.W. (MAIL CODE -2241A)
WASHINGTON, DC 20460

FAX NUMBER: (202) 564-0011

CONFIRM (202) 564-2220 OR 564-2225

TODAY'S DATE: 12/7/98

PLEASE DELIVER TO: Randal Prater

FAX NUMBER(S) TO: 602-278-4850

FAX FROM:
- ☐ ERIC SCHAEFFER, DIRECTOR, ORE
- ☐ CONNIE MUSGROVE, DEPUTY DIRECTOR, ORE
- ☐ _____

COMMENTS:

☐ URGENT ☐ CONTAINS CONFIDENTIAL INFORMATION
☐ PLEASE DELIVER ASAP ☐ PLEASE CALL TO CONFIRM FAX

NUMBER OF PAGES INCLUDING COVER SHEET: 4 pgs

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

DEC 7 1998

ASSISTANT ADMINISTRATOR
FOR ENFORCEMENT AND
COMPLIANCE ASSURANCE

Randal G. Prater
McNeil River Enterprises
750 West Diamond, Suite 203
Anchorage, AK 99515

Dear Mr. Prater:

You have contacted our office in an effort to determine if some discretion can be used in your unique circumstances that would allow you to sell products that are otherwise prohibited under the Clean Air Act (CAA) and the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA). EPA is committed to the vigilant enforcement of laws intended to protect the health and well being of our citizens, and considers the threat to public health that is associated with the use of ozone-depleting substances to be significant. However, EPA is also committed to fair and reasonable implementation of those laws, and is especially concerned that small businesses not be unnecessarily threatened by the implementation of those laws. As you may know, EPA recognizes that small businesses face economic challenges that are different and often greater than those of large businesses. Therefore, we seek to work with the small business community to ensure that both the economy and the environment will benefit from our efforts.

EPA has considered all of the facts in this matter, including the limited nature of the relief you have requested, the size of your business, the nature and likely use of your product, and the cooperation you have exhibited since EPA's first contact with you. Based on these unique circumstances, we have decided to grant your request. You may continue to sell existing stocks of Guard Alaska Defense Spray.

On November 3, 1998, you were issued a Stop Sale, Use or Removal Order (SSURO) by the U. S. Environmental Protection Agency (EPA) Region 10 pertaining to a pesticide product called Guard Alaska Defense Spray. This product had not been submitted for review and approval under EPA's pesticide registration process as required for all such products which make pesticidal claims. In response to your recent inquiries on the use of existing stocks, this letter amends EPA's November 3, 1998 SSURO to clarify conditions for sale, distribution or otherwise disposal of existing stocks. Compliance with the Order and the following conditions in this amendment will prevent further enforcement proceedings with

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regard to pesticide registration and unauthorized use of an ozone depleting substance.

(1) The total number of containers remaining at the time of receipt of this letter must be inventoried and reported to Marie Jennings, US EPA, Region X, 1200 Sixth Avenue, Seattle, WA 98101 and Charles Garlow, US EPA, Mail Code 2242A, 401 M St., S.W., Washington, D.C. 20460.

(2) The final date for completing all transactions with the existing stock is extended until 45 days from the date of this letter.

(3) The total number of remaining containers at the end of 45 days must be inventoried and reported to EPA Region 10, and may not thereafter be sold, but rather must be delivered to the Alaska EPA office to be held in their custody until environmentally safe disposal or reclamation/recycling can be arranged. That address is:

Alaska Operations Office, US EPA
Federal Building, Room 537
222 West 7th Ave #19
Anchorage, AK 99513-7588

(4) All of the conditions of the order dated November 3, 1998 remain in effect unless expressly addressed in this letter. Other than this unique circumstance regarding Guard Alaska Defense Spray, subject to these conditions as enumerated above, no other illegal products may be sold in the future.

Please call Lyn Frandsen in the EPA Region 10 office, at 206-553-4768, if there are any further questions regarding the conditions of the Stop Sale Order.

Sincerely,

Steven A. Herman
Assistant Administrator

cc: Karen Brown, Small Business Ombudsman, OP, HQ EPA
Jeannette L. Brown, Director, Office of Small and Disadvantaged Business Utilization
Eric Schaeffer, Director, Office of Regulatory Enforcement, OECA
Chuck Findlay, Deputy Regional Administrator, Region X

bcc: Lyn Frandsen, Region 10
Marie Jennings, Region 10
Bruce Buckheit, ORE
Jesse Baskerville, ORE
Elliott Gilberg, OC
Charlie Garlow, AED
Dan Peacock, OPP
Dawn Banks, OC
Cindy Newberg, SPD, OAR
Caroline Petti, OA

Dan Peacock on 11/19/98 03:18:53 PM

To: Charlie Garlow@EPA
cc: Lyn Frandsen/R10/USEPA/US@EPA
Subject: Re: Status Letter -Reply

Charlier,

I forwarded your message to Lyn Frandsen in Region 10. I look forward to working with Region 10 and your good offices.

Dan Peacock, 703-305-5407

11/23/98 1pm
I sent Charlie Garlow & Cary Secrest a phone message, thanking him for the E-mail & asking to be kept informed stop

Charlie Garlow@EPA on 11/19/98 03:01:03 PM

To: Dawn Banks-Waller@EPA, NEWBERG.CINDY, Peacock.Dan, Cary Secrest@EPA
cc: FRANDSEN.LYN, PETTI.CAROLINE
Subject: PEPPER SPRAY BEAR REPELLENT -Forwarded -Forwarded -Reply

---

Dan, and others,
Thanks for including me in the loop on these questions. Initially, let me say that I have not sent any written communications to Mr. Prater. I did speak to him and told him that selling this product would be illegal under the CAA. He agreed not to sell it until he got a final answer from EPA on the topic. He has asked that EPA send him some kind of written response saying that he can, or can not, sell his existing stock of illegal bear spray. I have not been delegated the authority to permit illegal conduct by any party, large or small. Steve Herman, AA for OECA, is delegated that authority. My initial analysis is that this situation does not fit OECA's policy on No Action Assurances. However, since there are certain equities in this case, and it involves a small business, I have suggested that the matter be elevated through our chain.
So, more specifically, my answer to the questions below are:
(1) Yes, we can waive requirements, but these circumstances do not neatly match the guidance OECA has on this topic. That is not, of course, the final word. Steve Herman can make a decision that is an exception to that guidance.
(2) If EPA determines that the cans can not be sold, what can he do with them? I have recommended that the cans be sent to EPA's Alaska office to be held in custody until we decide what is the best way to destroy the product in a fashion that will not add to the destruction of the ozone layer.
(3) I have recommended that a letter be sent from our Division Director for the division within the Office of Compliance part of OECA charged with responsibility in this area, if Steve Herman does not want to sign a No Action Assurance.
(4) Mr. Prater is correct about CFC 113, as I understand it, but the rationale is that CFC 113 is no longer being manufactured, so the supplies of the same are rapidly disappearing. Thus, although it is theoretically possible that someone could sell CFC 113 in bear spray, no one will actually manufacture it. We might change the rules to prohibit this sale, but it would be a useless exercise.
(5) It is my understanding that the parties that assured Mr. Prater that use of HCFCs in this product was permissible is now well aware of the error of his ways. We are not currently planning to sue this party.

If answer to selling existing stocks is "No", (Bruce C. Buckheit) will send a letter to McNeil River Enterprises.

Best regards,
Charlie

>>> <Peacock.Dan@epamail.epa.gov> 11/18/98 10:57am >>>
Charlie,

These are questions should have been directed to the Air

Enforcement
Division, which handles enforcement under the Clear Air Act (CAA), rather than
to the Toxics and Pesticides Enforcement Division, which handles enforcement
under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA).

Please send me a copy of your responses and a copy of any communications
with Mr. Randy Prater, registrant of the unregistered bear deterrent, Guard
Alaska so that I can place them in the administrative record for this pending
product. Likewise, if I have any communications that deal with CAA issues, I
will send you a copy of them. In this way, we will all stay a little less frustrated.

Thanks,

Dan Peacock, 703-305-5407

---------- Forwarded by Dan Peacock/DC/USEPA/US on 11/18/98 10:51 AM

Brenda Mosley@EPA on 11/18/98 09:21:42 AM

To: PEACOCK.DAN
cc:
Subject: PEPPER SPRAY BEAR REPELLANT -Forwarded -Forwarded

Date: Fri, 13 Nov 1998 10:19:33 -0500
From: JESSE BASKERVILLE
<BASKERVILLE.JESSE@EPAMAIL.EPA.GOV>
To: MOSLEY.BRENDA@EPAMAIL.EPA.GOV
Cc: STUBBS.GERALD@EPAMAIL.EPA.GOV
Subject: PEPPER SPRAY BEAR REPELLANT -Forwarded
Mime-Version: 1.0
Content-Type: multipart/mixed; boundary="=_16417FCD.08692779"

Did we issue a stop sale on the product identified in the attached? how do we respond?

Date: Thu, 12 Nov 1998 17:14:27 -0500
From: CAROLINE PETTI <PETTI.CAROLINE@EPAMAIL.EPA.GOV>
To:

BASKERVILLE.JESSE@EPAMAIL.EPA.GOV,BUCKHEIT.BRUCE@EPAMAIL.EPA.GOV,
HUFFORD.DRUSILLA@EPAMAIL.EPA.GOV
Cc: SCHNEIDER.MARGARET@EPAMAIL.EPA.GOV
Subject: PEPPER SPRAY BEAR REPELLANT
Mime-Version: 1.0
Content-Type: text/plain
Content-Disposition: inline

The day before yesterday, a Mr. Prater called the Administrator's office concerned about a situation that it appears he now finds himself in. Apparently he has manufactured something called "Guard Alaska" pepper spray bear repellant that he only recently found contains ozone-depleting [redacted] He's been advised verbally by EPA enforcement personnel that he'd be in violation of the Clean Air Act if he sells the product. He's got 1000 cans of the product and says these are worth about $25,000. He says he needs the money to manufacture a more environmentally-friendly replacement product and he's looking for authorization to sell the 1000 cans so he can do so.

I'm told that staff are examining Mr. Prater's issues but anything you can do to encourage a quick and appropriate resolution would be appreciated. Some of the issues seem to be:

1) Does EPA have the ability to waive it's requirements and do Mr. Prater's circumstances meet the criteria for doing so?

2) If we can't waive the requirements or it's not appropriate in Mr. Prater's instance, what should Mr. Prater do with the 1000 cans?

3) What is the best way to communicate this information in a timely fashion to Mr. Prater?

4) Mr. Prater is asserting that EPA continues to allow CFC 113 in pepper spray; he says CFC 113 is a much more powerful ozone-depleter than [redacted] Is Mr. Prater correct? If so, what is the rationale?

Inert ingredient information may be entitled to confidential treatment

5) Mr. Prater maintains that he got the [redacted] from a company who represented that it had been approved for use by EPA. Does this need to be corrected?

I appreicate you assistance on this. As you know, there seems to be increasing interest in EPA's approach to regulating bear repellant. See recent Washinton Post article: "Makers of Repellants Find EPA Rules Hard to Bear."

Charlie Garlow@EPA on 11/19/98 02:19:19 PM

To: Dawn Banks-Waller@EPA, NEWBERG.CINDY, Peacock.Dan, Cary Secrest@EPA
cc: Mario Jorquera@EPA
Subject: Status Letter -Reply

Dan,
I agree with you and Caroline Petti of the 12th floor that, in the future, we should coordinate any responses to any FIFRA applicants regarding bear repellant/spray to ensure that there are no problems on the Clean Air Act side with CFCs or HCFCs.
I would like to begin that coordination by ensuring that we do not say that it is okay to continue to sell the existing product which is an unregistered pesticide under FIFRA, as I understand it, and an illegal product under the Clean Air Act, until such time that someone, who is delegated the authority to do so, authorizes the sale. For us, that is Steve Herman, AA for OECA. That includes the people in Region 10. Could you forward this message to them, since you seem to know who the right people are?

Thanks,
Charlie

>>> <Peacock.Dan@epamail.epa.gov> 11/18/98 03:48pm >>>
Mr. Randy Prater's consultant, Cathy Rive, sent us a revised E-Mail (11/18/98)
earlier today that superseded the one dated 11/10/98. He needed a reply today
because, tomorrow, he needs to document for his dealers the status of his old
and new formulas or risk severe loss of business or bankruptcy I tried to
reach you, but you will be out of the office until tomorrow. Also, I could not
reach anyone by hitting "0".

(See attached file: 71545-R.NOV18.wpd)

In the future Caroline Petti has requested that we coordinate our responses to
McNeil River Enterprises (or future applicants under FIFRA for bear deterrents)
to improve consistent, completeness and accuracy. This is fine with me. Is it
OK with you?

Dan Peacock, 305-5407

Dan Peacock on 11/18/98 01:00:36 PM

To: Lyn Frandsen/R10/USEPA/US@EPA
cc:
Subject: Status Letter

Lyn,

Randy needs this status letter to document this PM to his distributors the status of the old and new formulas so that they do not drop him. Since his E-Mail said that he would not sell the old formula until the CAA enforcement OK'ed. I see no problem with sending out the letter.

I do not want to put the guy out of business just because we did not give him a timely reply.

Please review ASAP and give any comments.

Dan
Dan

Dan Peacock on 11/16/98 11:23:44 AM

To: Lyn Frandsen/R10/USEPA/US@EPA, Garlow.Charlie@EPAMAIL.EPA.GOV @ EPA
cc:
Subject: 71545-R

Charlie and Lyn,

Please review the E-mail submitted by Randal Prater's consultant, Cathy Rice, for Guard Alaska Bear Repellent (below) and my DRAFT letter (attached).

Please provide any comments as soon as you can (but no later than Wed, 8AM).

71545-R.NOV.

Thank you,

Dan Peacock, 703-305-5407

---------- Forwarded by Dan Peacock/DC/USEPA/US on 11/16/98 09:25 AM ----------

cbrice@erols.com on 11/10/98 04:32:44 PM

To: peacock.dan
cc:
Subject: 71545-R

Dear Dan:
On November 9, McNeil River Enterprise received Region 10's Stop Sale, Use, or Removal Order. To be in compliance with this order, McNeil River Enterprises had to:
1. within 10 days, submit to you copies of their current label
2. within 45 days, submit to EPA an application for registration for a pesticide-producing establishment.

McNeil River is currently using Case-Mason Filling as their manufacturer. It is my understanding Case-Mason's EPA Establishment number is 36213-MD-002.

I am under the impression that the labels and Establishement Number information wa sent to via overnight mail. It should have arrived today. Upon receipt of this information, McNeil River should be in compliance with Region 10's Stop Sale, Use, or Removal Order. Based on this order, they can continue to sell their product through January 15, 1999.

Please verify that McNeil River is in compliance with this order.

McNeil River is hoping to submit the spray pattern information either

the end of this week or early next.

Thanks,
Cathy Rice
703-847-7407

CERTIFIED MAIL

McNeil River Enterprises, Inc.
750 West Dimond, Suite 203
Anchorage, AK 99515

Attention: Mr. Randal Prater

Subject: Guard Alaska Bear Repellent
EPA File Symbol 71545-R
Your E-Mail of November 10, 1998
Case-Mason Filling's letter of November 9, 1998

In the above E-Mail message, you requested that we confirm McNeil River Enterprise's compliance with Region 10's Stop Sale, Use, or Removal Order and their ability to sell unregistered product containing a banned Class II Ozone-depleting substance through January 15, 1999.

To continue selling your existing unregistered product until January 15, 1999, under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), Region 10's order required that you take the following two actions:

1. within 10 days, submit an exact copy of your current label and

2. within 45 days, submit an application of pesticide-producing establishment.

On November 12, 1998, we received a letter from Case-Mason Filling, with a copy of your label and their pesticide establishment number (36213-MD-002). We have reviewed both the label and the establishment number and found them acceptable.. You need make no changes in the text.

While Guard Alaska is in compliance with Region 10's Stop Sale under FIFRA, you are still in violation of the Clean Air Act (CAA), as indicated in our August 26, 1998, letter. Do not sell this product without the permission of the Air Enforcement Division of the Office of Regulatory Enforcement. Mr. Charlie Garlow (202-564-1088) is your contact there.

We also note that we are in the final stages of reviewing your revised formula for Guard Alaska. In a few weeks we hope to make a decision about the registration of this

product, given the information and data already submitted.

If you have questions about this letter, you may reach me by phone (703-305-5407, fax (703-305-6596), or E-Mail (peacock.dan@epamail.epa.gov).

Sincerely,

Daniel B. Peacock, Biologist
Insecticide-Rodenticide Branch
Registration Division (7504C)

Peacock:Disk 19:A:\Capsaicin\71545-R.Nov:703-305-5407:11/16/98

Dan Peacock on 11/18/98 10:57:53 AM

To: Charlie Garlow@EPA
cc: Lyn Frandsen/R10/USEPA/US@EPA, Caroline Petti/DC/USEPA/US@EPA
Subject: PEPPER SPRAY BEAR REPELLENT -Forwarded -Forwarded

Charlie,

These are questions should have been directed to the Air Enforcement Division, which handles enforcement under the Clear Air Act (CAA), rather than to the Toxics and Pesticides Enforcement Division, which handles enforcement under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA).

Please send me a copy of your responses and a copy of any communications with Mr. Randy Prater, registrant of the unregistered bear deterrent, Guard Alaska so that I can place them in the administrative record for this pending product. Likewise, if I have any communications that deal with CAA issues, I will send you a copy of them. In this way, we will all stay a little less frustrated.

Thanks,

Dan Peacock, 703-305-5407

---------- Forwarded by Dan Peacock/DC/USEPA/US on 11/18/98 10:51 AM ----------

Brenda Mosley@EPA on 11/18/98 09:21:42 AM

To: PEACOCK.DAN
cc:
Subject: PEPPER SPRAY BEAR REPELLANT -Forwarded -Forwarded

Date: Fri, 13 Nov 1998 10:19:33 -0500
From: JESSE BASKERVILLE <BASKERVILLE.JESSE@EPAMAIL.EPA.GOV>
To: MOSLEY.BRENDA@EPAMAIL.EPA.GOV
Cc: STUBBS.GERALD@EPAMAIL.EPA.GOV
Subject: PEPPER SPRAY BEAR REPELLANT -Forwarded
Mime-Version: 1.0
Content-Type: multipart/mixed; boundary="=_16417FCD.08692779"

Did we issue a stop sale on the product identified in the attached? how do we respond?

Date: Thu, 12 Nov 1998 17:14:27 -0500
From: CAROLINE PETTI <PETTI.CAROLINE@EPAMAIL.EPA.GOV>
To: BASKERVILLE.JESSE@EPAMAIL.EPA.GOV,BUCKHEIT.BRUCE@EPAMAIL.EPA.GOV, HUFFORD.DRUSILLA@EPAMAIL.EPA.GOV
Cc: SCHNEIDER.MARGARET@EPAMAIL.EPA.GOV
Subject: PEPPER SPRAY BEAR REPELLANT
Mime-Version: 1.0

Inert ingredient information may be entitled to confidential treatment

Content-Type: text/plain
Content-Disposition: inline

The day before yesterday, a Mr. Prater called the Administrator's office concerned about a situation that it appears
he now finds himself in. Apparently he has manufactured something called "Guard Alaska" pepper spray bear
repellant that he only recently found contains ozone-depleting [redacted] He's been advised verbally by
EPA enforcement personnel that he'd be in violation of the Clean Air Act if he sells the product. He's got 1000 cans
of the product and says these are worth about $25,000. He says he needs the money to manufacture a more
environmentally-friendly replacement product and he's looking for authorization to sell the 1000 cans so he can do
so.

I'm told that staff are examining Mr. Prater's issues but anything you can do to encourage a quick and appropriate
resolution would be appreciated. Some of the issues seem to be:

1) Does EPA have the ability to waive it's requirements and do Mr. Prater's circumstances meet the criteria for
doing so?

2) If we can't waive the requirements or it's not appropriate in Mr. Prater's instance, what should Mr. Prater do with
the 1000 cans?

3) What is the best way to communicate this information in a timely fashion to Mr. Prater?

4) Mr. Prater is asserting that EPA continues to allow CFC 113 in pepper spray; he says CFC 113 is a much more
powerful ozone-depleter than [redacted] Is Mr. Prater correct? If so, what is the rationale?

5) Mr. Prater maintains that he got the [redacted] from a company who represented that it had been approved for
use by EPA. Does this need to be corrected?

I appreicate you assistance on this. As you know, there seems to be increasing interest in EPA's approach to
regulating bear repellant. See recent Washinton Post article: "Makers of Repellants Find EPA Rules Hard to Bear."

Brenda Mosley@EPA on 11/18/98 09:21:42 AM

To: PEACOCK.DAN
cc:
Subject: PEPPER SPRAY BEAR REPELLANT -Forwarded -Forwarded

Date: Fri, 13 Nov 1998 10:19:33 -0500
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To: MOSLEY.BRENDA@EPAMAIL.EPA.GOV
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Mime-Version: 1.0
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To: BASKERVILLE.JESSE@EPAMAIL.EPA.GOV,BUCKHEIT.BRUCE@EPAMAIL.EPA.GOV, HUFFORD.DRUSILLA@EPAMAIL.EPA.GOV
Cc: SCHNEIDER.MARGARET@EPAMAIL.EPA.GOV
Subject: PEPPER SPRAY BEAR REPELLANT
Mime-Version: 1.0
Content-Type: text/plain
Content-Disposition: inline

The day before yesterday, a Mr. Prater called the Administrator's office concerned about a situation that it appears he now finds himself in. Apparently he has manufactured something called "Guard Alaska" pepper spray bear repellant that he only recently found contains ozone-depleting [redacted] He's been advised verbally by EPA enforcement personnel that he'd be in violation of the Clean Air Act if he sells the product. He's got 1000 cans of the product and says these are worth about $25,000. He says he needs the money to manufacture a more environmentally-friendly replacement product and he's looking for authorization to sell the 1000 cans so he can do so.

I'm told that staff are examining Mr. Prater's issues but anything you can do to encourage a quick and appropriate resolution would be appreciated. Some of the issues seem to be:

1) Does EPA have the ability to waive it's requirements and do Mr. Prater's circumstances meet the criteria for doing so?

Inert ingredient information may be entitled to confidential treatment

2) If we can't waive the requirements or it's not appropriate in Mr. Prater's instance, what should Mr. Prater do with
the 1000 cans?

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powerful ozone-depleter than [redacted] Is Mr. Prater correct? If so, what is the rationale?

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use by EPA. Does this need to be corrected?

I appreicate you assistance on this. As you know, there seems to be increasing interest in EPA's approach to
regulating bear repellant. See recent Washinton Post article: "Makers of Repellants Find EPA Rules Hard to Bear."

Inert ingredient information may be entitled to confidential treatment

Dan Peacock on 11/16/98 09:41:38 AM

To: Caroline Petti/DC/USEPA/US@EPA
cc:
Subject: Guard Alaska StopSale

Caroline,

I believe that I sent you the wrong attachment. The following are the correct ones. Sorry for the error.

bear.ssu bearssu2.w

Dan Peacock

FRANDSEN.LYN
11/03/98 04:18 PM

To: Peacock.Dan
cc:
Subject: Bear Repellent Stop Sale, Use or Removal Orders (SSURO's) -Reply

---

Attached is the SSURO issued to McNeil River Enterprises for their product Guard Alaska Defense Spray. It was signed today and will go out today or tmorrow. I talked to Randy Prater last week and he is aware of the SSURO.

- BEAR.SSU

- BEARSSU2.WPD

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, Washington 98101

Reply To
Attn Of: ECO-084

Randal Prater
McNeil River Enterprises
750 West Dimond, Suite 203
Anchorage, AK 99515

Dear Mr. Prater:

Enclosed is an Agency Stop Sale, Use or Removal Order (SSURO) effective January 15, 1999 if the conditions of the order are met. If the conditions of the order are not met it becomes effective immediately. This order is for all Guard Alaska Defense Spray product which is under the control, ownership or custody of McNeil River Enterprises Inc.

We have reason to believe the above pesticide is not registered with the Environmental Protection Agency (EPA) and is therefore in violation of Section 12(a)(1)(A) of the Federal Insecticide, Fungicide and Rodenticide Act(FIFRA). Section 12(a)(1)(A) states in part that it is unlawful for any person to distribute or sell any pesticide that is not registered with EPA.

Any violation of the terms or provisions of this Order may result in the imposition of civil or criminal penalties as prescribed in Section 14 of FIFRA.

If you have any questions regarding the SSURO please contact Lyn Frandsen at (206) 553-4768.

Sincerely

Marie Jennings, Manager
Pesticides Unit

Enclosure

Printed on Recycled Paper

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY

TO:
MCNEIL RIVER ENTERPRISES, INC
ANCHORAGE, ALASKA

STOP SALE, USE, OR REMOVAL ORDER

A. INTRODUCTION

1. The United States Environmental Protection Agency (EPA) is authorized under section 13(a) of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) , as amended, 7 U.S.C. § 136k(a), to issue orders prohibiting the sale, use, or removal of any pesticide whenever there is reason to believe that the pesticide is in violation of any provision of FIFRA.

2. The Unit Manager of the Pesticides Unit has been duly delegated the authority to issue such orders.

3. Section 12(a)(1)(A) of FIFRA, 7 U.S.C. § 136j(a)(1)(A), provides that it shall be unlawful for any person in any State to distribute or sell to any person any pesticide that is not registered under section 3 of FIFRA, 7 U.S.C. § 136a.

4. FIFRA defines a pesticide as "any substance or mixture of substances intended for preventing, **repelling**, or mitigating any pest." The labeling of the McNeil River Enterprises Inc. product Guard Alaska Defense Spray, claims to repel bear attacks, therefore the product is a pesticide and must be registered with EPA pursuant to section 3 of FIFRA.

5. McNeil River Enterprises Inc. is headquartered at 750 West Dimond, Suite 203, Anchorage, Alaska.

B. ORDER

EPA hereby orders McNeil River Enterprises Inc. to stop the sale, use or removal of the Guard Alaska Defense Spray product immediately unless the following conditions are met:

1. Within **10 calender days** of this notice McNeil River Enterprises Inc. Must submit a letter to the U.S. EPA, Office of Pesticide Programs, Registration Division, with an exact copy of the current label for your product. This labeling will be reviewed by EPA for possible safety concerns. If the Agency determines that the labeling of the product poses an unreasonable risk then EPA reserves the right to immediately remove the product from the channels of trade.

You should submit this information to Mr. Daniel B. Peacock at the address indicated below:

Mr. Daniel B. Peacock
Mail Stop 7504C
Registration Division, Insecticide-Rodenticide Branch
U.S. EPA
401 M Street, SW
Washington, DC 20460

2. Within **45 days of receipt** of this notice you must submit to U.S. EPA an application for registration of pesticide-producing establishments. The application form, EPA Form 3540-8 may be obtained from U.S. EPA, Region 10. Please contact Chad Schulze at (206) 553-0505. If the facility that will produce your product is registered with EPA please provide us with the name and address of the facility and the EPA establishment registration number.

If the above conditions and sequential time frames are met, you may continue to sell and distribute your Guard Alaska Defense Spray product until January 15, 1999. No further sale or distribution of this product may occur after this date unless the product has been registered with the U.S. EPA. Should you decide not to pursue registration of this product or should you fail to meet any conditions listed above, this SSURO becomes effective immediately.

_____
Date

_____
Marie Jennings, Manager
Pesticides Unit

Dan Peacock on 11/09/98 09:07:27 AM

To: Garlow.Charlie@EPAMAIL.EPA.GOV @ EPA
cc:
Subject: Guard Alaska

Mr. Garlow,

Please take a look at my 11/5/98 E-Mail and give me a call this AM, if possible. I would appreciate it greatly.

Thank you,

Dan Peacock, 703-305-5407

Dan Peacock on 11/05/98 08:10:07 AM

Randy Prater

Ohio 740-884-4576

202-564-1088

To: Garlow.Charlie@EPAMAIL.EPA.GOV @ EPA
cc:
Subject: Status of Enforcement Action Against Guard Alaska, EPA File Symbol 71545-R, Under FIFRA & CAA

1069 $\times \frac{9\,oz\ can}{16\,oz} \times .55 =$ 330 lb

Charles,

The purpose of this memorandum is 1) to inform you of the action that EPA has taken under FIFRA against the unregistered bear deterrent, Guard Alaska, 2) to inform you of the status of Mr. Prater to find an acceptable replacement formula and register this product under FIFRA, and 3) to inquire about the status of any enforcement action that EPA anticipates under the CAA.
We had previously informed Mr. Randal Prater that he would have to comply with both enforcement actions. Now that we had issued our enforcement action under FIFRA, it now seems appropriate to exchange information.

1. Status of Enforcement Action Under FIFRA (Conditional Stop Sale)

On November 3, 1998, Region 10 issued a conditional Stop Sale to McNeil River Enterprises for their product, Guard Alaska.

bearssu2.w bear.ssu

One of the major provisions is that Guard Alaska can be sold until January 15, 1999.

2. Status of Replacement Formula

McNeil River Enterprises is actively trying to obtain a replacement formula. We have had one meeting by phone with Mr. Prater and his consultant, Ms. Cathy Rice and are currently reviewing the acceptability of the new formula. We are hopeful that we will approve a replacement formula by the end of December 1998.

3. Status of Enforcement Action Under CCA

Mr. Prater had sent me a copy of his September 11, 1998, letter to you. On September 24, 1998, I left you a message, saying that I was available to discuss the letter if you wished. I had not received any communications from you as yet.

330 lb

Considering the small amount of product left and considering that regulations under the CCA allow use of a far worst ozone-depleting substance (CFC-113) for bear deterrent products, I would recommend considering a similar phase-out date (1/15/99 or slightly over 2 months) for sale of product by McNeil Enterprises. Let me know if you would like to discuss this or any other question involving this product. Also, I would greatly appreciate it if you could provide me with a copy of any letters or enforcement actions sent to McNeil River.

Call me anytime about this matter.

Dan Peacock, 703-305-5407

Pages 225-226 Product ingredient source information may be entitled to confidential treatment

Charlie Garlow
tel 202-564-1088
left message 9/24/98 saying that I was available to discuss letter of 9/11/98 if needed

McNeil River Enter., Inc.
750 W. Dimond, Ste. 203
Anchorage, Alaska 99515
Phone: (907) 349-6868
Fax: (907) 349-7818
1-888-419-9695

Manufacturers of Guard Alaska © Personal Protection Systems

September 11, 1998

Charlie Garlow
USEPA
Office of Enforcement
Ph: (202) 564-1088
Fax: (202) 564-0068

Dear Mr. Garlow,

In December of 1995 I contacted Wayne Grube of Case Mason Filling, Inc. Baltimore, Maryland. I submitted a starter formula to Mr. Grube presented to me by Howser Chemical from Colorado. Upon receival of my formula he informed me that the formula would not work. I stated to Mr. Grube that I needed a formula that was environmentally safe, non-flammable, and with a density greater than that of water. With the knowledge of my formula prerequisitions Mr. Grube made the formula currently being used and sent me samples to test on bear species. After testing, I was impressed with the efficacy of the formulation on all species of bear including wet bears.

After being assured that the formula was environmentally safe, non-flammable and had a greater density than water I placed orders with Case-Mason Filling, Inc. as shown in the table below:

Table A:

	# of units purchased	Dates shipped
9 oz. cans	1,873	4/22/96
9 oz. cans	932	4/9/97
9 oz. cans	3,168	4/30/98
3.5 oz. cans	1,328	11/14/96
1.5 oz. cans	1,598	11/14/96

The following table shows McNeil River Enter., Inc. current inventory:

Table B:

	# of units left containing Forane 141-B	# of units containing Forane 141-B sold
9 oz. cans	1069	4904
3.5 oz. cans	396	932
1.5 oz. cans	960	638

In early November of 1996, I was contacted by the United States Postal Service inquiring if I produced smaller units of pepper spray that could be utilized as dog repellant for postal letter carriers since the larger 9 oz. units were working so well on bear species. I was informed by the U.S.P.S. that the current E.P.A. registered dog repellant ***HALT II*** was not effective on aggressive dog attacks. At that time I placed an order for both 3.5 oz. and 1.5 oz. versions, as shown in the table A.

It was not until May 21, 1996 that I became aware of the components of my formulation when Mr. Wayne Grube of Case-Mason Filling, Inc. supplied me with a letter stating the breakdown of the fomula, see attached letter dated 5/21/96.

Product ingredient source information may be entitled to confidential treatment

Inert ingredient information may be entitled to confidential treatment

McNeil River Enter., Inc. requested, both on 10/14/96 and 6/18/98, for assurance that the new formulation was environmentally safe and that the use of all components, including [redacted] was safe and accepted by EPA standards. I was assured verbally via phone per Wayne Grube that we would have no problem acquiring our EPA registration.

Case-Mason Filling, Inc. supplied me with a letter dated 9/11/98 stating that Freon TF was being used in other bear repellants, but due to both the cost and the fact that Freon TF was being phased out, Case-Mason on behalf of McNeil River Enter., Inc. contacted [redacted] for an alternate solvent. Katie George and Ed Mark, both representatives of [redacted] stated that [redacted] could be used as an alternate for Freon TF in an aerosol Bear Spray according to the Federal Register, see attached Case-Mason letter dating 9/11/98.

Also, as shown on Fax from Cathy Rice dated 9/1/98, Mr. Mark said that [redacted] falls into the CFC-113 bear repellent exemption and to further support his stand he referred to a statement made by Nina Bonalicki (with the USEPA) at the CFC Alternative's Conference when she indicated that HCFC's could be substituted for CFC's because they were more environmentally friendly.

In May of 1996, Dan Peacock of the EPA, put me in contact with Roy Olander concerning a product called, ***Bear Skunker***, for the possibility of manufacturing of the EPA registered product. When I looked into the components of the product it was discovered that it contained class three poisons, was highly flammable and when burned it released deadly gases into the atmosphere. After declining to manufacture this product due to it's obvious liabilities, I decided to continue testing on my current formulation and manufacture my own formula of pepper spray. Shortly after, Dan inquired of the formulation. After requesting a breakdown of my formula, on May 21, 1996 Case-Mason Filling, Inc. supplied me with the letter stating the components of the formula. At this time Dan Peacock was aware of the formulation. Dan Peacock received the formulation of Guard Alaska © repellent a second time per our phone conversation in December of 1997. He then replied with the 2/4/98 letter stating that we would receive EPA registration for our product if we supplied the following information:

1. product chemistry on source Capsaicin
2. product chemistry on end-use product
3. acute toxicity data (2 studies) on end-use product
4. efficacy data on end-use product

McNeil River Enter.,Inc. has just been notified by [redacted] that the exemption for CFC-113 being used in bear repellents was not carried forward to include [redacted]. We have since then been looking for a replacement, see letter from [redacted] dated 9/11/98. We would like to request permission to sell remaining inventory as part of the phase out procedure to keep us from going into bankruptcy as the company holds only $3,827.71 in our account as of today. Regardless, we will not manufacture any more product containing [redacted] due to it's ozone depleting characteristics.

The following table provides phone #'s to all contacts referenced in this letter:

Individual	Company	Telephone #
Wayne Grube	Case Mason Filling, Inc.	(410) 342-6100
[redacted]		
Cathy Rice	EPA Registration Project Manager	(703) 847-7407
Dan Peacock	EPA	(703) 305-6596

If the need for any additional information arises, please contact me at the number's listed.
Cell phone: (509) 990-5608 Office: (907) 349-6868

Sincerely,

Randal G. Prater, President

Dan Peacock on 11/18/98 03:48:52 PM

To: Charlie Garlow@EPA
cc:
Subject: Status Letter

Mr. Randy Prater's consultant, Cathy Rive, sent us a revised E-Mail (11/18/98) earlier today that superseded the one dated 11/10/98. He needed a reply today because, tomorrow, he needs to document for his dealers the status of his old and new formulas or risk severe loss of business or bankruptcy I tried to reach you, but you will be out of the office until tomorrow. Also, I could not reach anyone by hitting "0".

71545-R.NOV18.

In the future Caroline Petti has requested that we coordinate our responses to McNeil River Enterprises (or future applicants under FIFRA for bear deterrents) to improve consistent, completeness and accuracy. This is fine with me. Is it OK with you?

Dan Peacock, 305-5407

FRANDSEN.LYN
11/18/98 04:06 PM

To: Peacock.Dan
cc:
Subject: Re: Status Letter -Reply -Reply

Your letter looks fine. We would concur.

Z 459 758 581

US Postal Service

Receipt for Certified Mail

No Insurance Coverage Provided.

Do not use for International Mail *(See reverse)*

Sent to McNeil River Ent	
Street & Number	
Post Office, State, & ZIP Code	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date	

231

PS Form 3800, April 1995

Stick postage stamps to article to cover First-Class postage, certified mail fee, and charges for any selected optional services *(See front)*.

1. If you want this receipt postmarked, stick the gummed stub to the right of the return address leaving the receipt attached, and present the article at a post office service window or hand it to your rural carrier *(no extra charge)*.

2. If you do not want this receipt postmarked, stick the gummed stub to the right of the return address of the article, date, detach, and retain the receipt, and mail the article.

3. If you want a return receipt, write the certified mail number and your name and address on a return receipt card, Form 3811, and attach it to the front of the article by means of the gummed ends if space permits. Otherwise, affix to back of article. Endorse front of article **RETURN RECEIPT REQUESTED** adjacent to the number.

232

4. If you want delivery restricted to the addressee, or to an authorized agent of the addressee, endorse **RESTRICTED DELIVERY** on the front of the article.

5. Enter fees for the services requested in the appropriate spaces on the front of this receipt. If return receipt is requested, check the applicable blocks in item 1 of Form 3811.

6. Save this receipt and present it if you make an inquiry.

102595-97-B-0145

PS Form **3800**, April 1995 *(Reverse)*

November 18, 1998

161/38 5-551928
5-551929
161/38 5-551930
161/38

CERTIFIED MAIL

McNeil River Enterprises, Inc.
750 West Dimond, Suite 203
Anchorage, AK 99515

Attention: Mr. Randal Prater

Subject: Guard Alaska Bear Repellent
EPA File Symbol 71545-R
Your E-Mails of November 10 and 18, 1998
Case-Mason Filling's letter of November 9, 1998

In your communication of November 18, 1998, you indicated that you would no longer sell the old formula of this product until its status under the Clean Air Act (CAA) had been clarified. However, you wanted to confirm McNeil River Enterprise's compliance with Region 10's Stop Sale, Use, or Removal Order under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and the status of our review of your new formula for this pending product.

To continue selling your existing unregistered product until January 15, 1999, under FIFRA, Region 10's order required that you take the following two actions:

1. within 10 days, submit an exact copy of your current label and
2. within 45 days, submit an application of pesticide-producing establishment.

On November 12, 1998, we received a letter from Case-Mason Filling, with a copy of your label and their pesticide establishment number (36213-MD-002). We have reviewed both the label and the establishment number and found them to be acceptable.. You need make no changes in the text.

We are in the final stages of reviewing your revised formula for Guard Alaska. After receiving and reviewing your revised data on spray pattern and duration and any final labeling changes, we will be able to make a decision about the registration of this product.

If you have questions about this letter, you may reach me by phone (703-305-5407, fax (703-305-6596), or E-Mail (peacock.dan@epamail.epa.gov).

Sincerely,

DBP

Daniel B. Peacock, Biologist
Insecticide-Rodenticide Branch
Registration Division (7504C)

Peacock:Disk 19:A:\Capsaicin\71545-R.Nov18:703-305-5407:11/18/98

Distributed by McNeil River Enterprises Inc.
P.O. Box 84051 Fairbanks, Alaska 99708 Phone (907) 455-7915 Fax (907) 456-7915
CHEMICAL EMERGENCY NUMBER 1-800-535-5053 24 Hrs. per day, 7 days per week
Tony Stone Images/Stephen Krasemann

SIMPLE TO USE
SHOTGUN BLAST PATTERN
RANGE 6 TO 8 M (20 TO 28 FEET)
NON-TOXIC
NONFLAMMABLE
NO PERMANENT DAMAGE

DIRECTIONS OF USE:

1. Shake prior to use.
2. Aim at face and eyes of aggressor.
3. Press tab using short bursts.

TERMS AND CONDITIONS OF SALE DISCLAIMER OF WARRANTIES

This product is expressively sold in lieu of all warranties, expressed or implied. The implied warranties of merchantability and fitness for a particular purpose are hereby expressed disclaimed. Seller shall not be liable for injury, loss or damage, direct or consequential, arising out of use of, or inability to use this product. All sales are made on the condition that McNeil River Enterprises Inc. will not be held liable for any damage resulting from its use. No changes may be made in the forgoing except by written agreement from McNeil River Enterprises Inc. an Alaskan Corp.

CAUTION:

ASTHMATICS and CONTACT LENS WEARERS, strong irritant affecting eyes, skin and respiratory areas. KEEP OUT OF REACH OF CHILDREN. Avoid contact with skin. If contact is made, wash affected areas with soap and cold water. Contents under pressure. Do not store above 120 degrees Fahrenheit nor below 32 degrees Fahrenheit. Active Ingredient: 20% Oleoresin Capsicum in a non-toxic solution. Net weight 9 ounces.

Use of this product for any purpose other than self defense may be a criminal offense. Before using, check guidelines with your state or local police departments.

GUARD ALASKA©

MCNEIL RIVER DEFENSE SPRAYS

AN ALASKAN CORPORATION

CASE-MASON FILLING, INC.

November 9, 1998

Mr. Daniel Peacock
Mail Stop 7504C
Registration Division, Insecticide Branch
USEPA
401 M Street, SW
Washington, D.C. 20460

Mr. Peacock,

Enclosed is 1 label of Bear Spray for McNeil River Enterpises.

Our EPA registration number for our location at 715 S. Haven Street, Baltimore, Maryland 21224 is as follows:

36213-MD-002

Should you require any additional information, do not hesitate to contact me at 410-342-6100; Monday thru Friday; during the hours of 8:00 A.M. - 4:30 P.M.

Regards,

Donna Craig

Donna Craig;
Admin. Ass't.

816 Pulaski Highway
P. O. Box 230
Joppa, Maryland 21085-0230
410-679-8900
410-679-3560 (fax)

9101 M Yellow Brick Road
Baltimore, Maryland 21237
410-687-0007
410-687-0096 (fax)

FROM:
715 S. Haven Street
Baltimore, Maryland 21224
410-342-6100
410-675-1636 (fax)

cbrice@erols.com on 11/18/98 11:29:16 AM

To: *peacock.dan*
cc:
Subject: EPA File Symbol 71545-R

Dear Dan:
I just spoke with Randy regarding our conversation earlier today.

He is no longer selling the old formula and will continue not to sell it until he has clarification from the CAA people.

What he is requesting is a letter regarding the Region 10 stop sale order and the revised formula (CSF submitted 10-13-98). Therefore, the CAA problems should not be an issue.

Cathy Rice
703-847-7407

cbrice@erols.com on 11/10/98 04:32:44 PM

To: peacock.dan
cc:
Subject: 71545-R

Dear Dan:
On November 9, McNeil River Enterprise received Region 10's Stop Sale, Use, or Removal Order. To be in compliance with this order, McNeil River Enterprises had to:
1. within 10 days, submit to you copies of their current label
2. within 45 days, submit to EPA an application for registration for a pesticide-producing establishment.

McNeil River is currently using Case-Mason Filling as their manufacturer. It is my understanding Case-Mason's EPA Establishment number is 36213-MD-002.

I am under the impression that the labels and Establishement Number information wa sent to via overnight mail. It should have arrived today. Upon receipt of this information, McNeil River should be in compliance with Region 10's Stop Sale, Use, or Removal Order. Based on this order, they can continue to sell their product through January 15, 1999.

Please verify that McNeil River is in compliance with this order.

McNeil River is hoping to submit the spray pattern information either the end of this week or early next.

Thanks,
Cathy Rice
703-847-7407

Dan Peacock on 11/16/98 09:13:38 AM

To: Petti.Caroline@EPAMAIL.EPA.GOV @ EPA
cc:
Subject: Status of Enforcement Action Against Guard Alaska, EPA File Symbol 71545-R, Under FIFRA & CAA

Caroline,

The Agency has been trying for 5 years to get sellers of bear deterrent products to apply for the registration of their products. In 1996 I developed a special "Bear-Deterrent Registration Kit" that made registration of such products as easy as it could be made. In May 1998, we finally registered the first product (Counter Assault) to be marketed. It contained Capsaicin (active ingredient in hot peppers). As expected, this first registration triggered a push by other sellers to develop data for their products and to submit applications for registration under FIFRA and a push to take enforcement action against unregistered products. [A similar effort in 1993 had failed, in part, because at the time there were no registered products. At the time, the Agency was accused of trying to kill people by stop saling these products.]

On 7/9/98 Mr. Randy Prater submitted an application to register a product called Guard Alaska (EPA File Symbol 71545-R) under FIFRA. Like other sellers of bear deterrent products, he had been illegally selling his products for a number of years. We were set to register the product in August when we discovered that the formula contained a Class II Ozone-depleting substance, banned since 1/1/94. On 8/26/98, we told Mr. Prater, among other things, that his product was subject to enforcement actions:

1) under FIFRA for nonregistration and

2) under CCA for containing a banned ozone-depleting substance

In this letter, we suggested to Mr. Prater that he contact the enforcement and "attempt to negotiate a phase out of product with this formula. In addition, you should be aware that the product may be subject at any time to OECA action under FIFRA due to non-registration."

On 9/11/98, Mr. Randy Practer had sent Mr. Garlow a letter requesting permission to sell their existing stocks of Guard Alaska Bear Repellent, which contained a Class II Ozoning-depleting substance. When Mr. Garlow failed to provide Mr. Prater a written reply, Mr. Prater called me because to facilitate a reply to his letter. On 11/5/98, I sent this E-Mail to Mr. Garlow (564-1088) in the Air Enforcement Division of the Office of Regulatory Enforcement explaining the action that Region 10 was taking against Guard Alaska under FIFRA and suggesting that they consider doing the same sort of thing under the CAA.

Last week (I think 11/10/98) I talked to Mr. Garlow, who said that they would NOT authorize Mr. Prater to phase out his product under CCA unless doing so would produce an environmental benefit. He promised to call Mr. Prater and explain this position to him.

I am assuming that after Mr. Prater heard from Mr. Garlow and then called the Administrator's office.

If I can be of further help, let me know.

Dan Peacock, 703-305-5407

---------- Forwarded by Dan Peacock/DC/USEPA/US on 11/16/98 06:02 AM ----------

Dan Peacock on 11/05/98 08:10:07 AM

Dan Peacock on 11/5/98 1:07 PM

To: Garlow.Charlie@EPAMAIL.EPA.GOV @ EPA
cc:
Subject: Status of Enforcement Action Against Guard Alaska, EPA File Symbol 71545-R, Under FIFRA & CAA

Charles,

The purpose of this memorandum is 1) to inform you of the action that EPA has taken under FIFRA against the unregistered bean deterrent, Guard Alaska, 2) to inform you of the status of Mr. Prater to find an acceptable replacement formula and register this product under FIFRA, and 3) to inquire about the status of any enforcement action that EPA anticipates under the CAA.
We had previously informed Mr. Randal Prater that he would have to comply with both enforcement actions. Now that we had issued our enforcement action under FIFRA, it now seems appropriate to exchange information.

1. Status of Enforcement Action Under FIFRA (Conditional Stop Sale)

On November 3, 1998, Region 10 issued a conditional Stop Sale to McNeil River Enterprises for their product, Guard Alaska.

One of the major provisions is that Guard Alaska can be sold until January 15, 1999.

2. Status of Replacement Formula

McNeil River Enterprises is actively trying to obtain a replacement formula. We have had one meeting by phone with Mr. Prater and his consultant, Ms. Cathy Rice and are currently reviewing the acceptability of the new formula. We are hopeful that we will approve a replacement formula by the end of December 1998.

3. Status of Enforcement Action Under CCA

Mr. Prater had sent me a copy of his September 11, 1998, letter to you. On September 24, 1998, I left you a message, saying that I was available to discuss the letter if you wished. I had not received any communications from you as yet.

Considering the small amount of product left and considering that regulations under the CCA allow use of a far worst ozone-depleting substance (CFC-113) for bean deterrent products, I would recommend considering a similar phase-out date (1/15/99 or slightly over 2 months) for sale of product by McNeil Enterprises. Let me know if you would like to discuss this or any other question involving this product. Also, I would greatly appreciate it if you could provide me with a copy of any letters or enforcement actions sent to McNeil River.

Call me anytime about this matter.

Dan Peacock, 703-305-5407

Z 095 557 679

US Postal Service

Receipt for Certified Mail

No Insurance Coverage Provided.

Do not use for International Mail *(See reverse)*

Sent to McNeil River	
Street & Number	
Post Office, State, & ZIP Code	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date	

240

PS Form 3800, April 1995

Stick postage stamps to article to cover First-Class postage, certified mail fee, and charges for any selected optional services *(See front)*.

1. If you want this receipt postmarked, stick the gummed stub to the right of the return address leaving the receipt attached, and present the article at a post office service window or hand it to your rural carrier *(no extra charge)*.

2. If you do not want this receipt postmarked, stick the gummed stub to the right of the return address of the article, date, detach, and retain the receipt, and mail the article.

3. If you want a return receipt, write the certified mail number and your name and address on a return receipt card, Form 3811, and attach it to the front of the article by means of the gummed ends if space permits. Otherwise, affix to back of article. Endorse front of article **RETURN RECEIPT REQUESTED** adjacent to the number.

4. If you want delivery restricted to the addressee, or to an authorized agent of the addressee, endorse **RESTRICTED DELIVERY** on the front of the article.

5. Enter fees for the services requested in the appropriate spaces on the front of this receipt. If return receipt is requested, check the applicable blocks in item 1 of Form 3811.

6. Save this receipt and present it if you make an inquiry.

C2595-97-B-0145

PS Form 3800, April 1995 *(Reverse)*

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5.550417 161/11

NOV 5 98

CERTIFIED MAIL (Z-095-557-679)

McNeil River Enterprises, Inc.
750 West Dimond, Suite 203
Anchorage, AK 99515

Attention: Mr. Randal Prater

Subject: Guard Alaska Bear Repellent
EPA File Symbol 71545-R
Your submission of October 20, 1998

In the above letter, you submitted data (MRID No. 446758-01) concerning the spray pattern of your product using the revised formula. We have provided our comments on these data and your labeling below.

1. The new report on the spray pattern of the new proposed formulation for GUARD ALASKA includes little detail on the test methods used and did not indicate what, if any, spray pattern was apparent at the 25' to 30' distance which you propose to claim for this product. The research apparently was conducted before we got in contact with you and before you could have gotten into contact with Mr. Grube on October 15, 1998. **Taken in its best possible light, the report by Mr. Grube would support a claim of effective spray distance of 5' to 14'.** We doubt that such a claim would provide much assurance to potential users and suspect that your product probably can do better.

   The comments in our letter of August 26, 1998, on the reporting of your study of the spray pattern of the old formulation generally apply to Mr. Grube's report. His report does not indicate how all of the tests were designed or how the effective distance and dimensions of the spray pattern were determined. While mentioning that wind bends the spray cloud, Mr. Grube did not report on the ambient wind conditions at the time of testing or whether wind might have affected any of the results reported.

   As the results reported by Mr. Grube suggest less effective range for the new formulation than for the old one (for which we also had a videotape of an effective use), we cannot determine that an effective spray cloud is cast by the new formulation when it is fired.

   By reportedly not shaking the product before use, Mr. Grube may not have activated the propellent sufficiently. Although a user confronted with a bear would not have time to shake a container vigorously prior to use (as with a can of spray paint), the user is likely to have moved the container somewhat rapidly in readying it for use and to have been moving it occasionally or steadily for some time while engaged in various other activities (e.g.,

hunting, hiking) in bear country. A fair test of container spray patterns probably should involve having the person doing the firing carry the container in the manner of a hiker for at least a few minutes and to ready it for use by going through the motions that a hiker or hunter would go through. The spray pattern shown by a container thus prepared might be as close as we could get to being realistic.

2. As was noted in our letter of August 26, 1998, revise the "**DIRECTIONS FOR USE**" portion of the label to read as indicated below.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

USE RESTRICTIONS: This product may be used only to deter bears which are attacking or appear likely to attack humans. This product may not be effective on all situations or prevent all injuries. **Do not spray this product on tents, other objects, or on clothing.** Such use has no deterrent effect on bears and may attract them in some cases. **Do not seek out encounters with bears or intentionally provoke them.** Do not eat or allow to be eaten any food or feed materials which may have become contaminated with this product.

This product has a range of up to 20 feet (6 meters). The canister empties in approximately 9 seconds.

APPLICATION DIRECTIONS: Study the procedures and directions for using this product before taking this product into bear country.

To use

1. Remove the orange safety clip.
2. Point spray opening at bear's face.
3. Press firmly on trigger and release spray in short bursts

For this product to be fully effective, you must engulf the bear's face, especially the eyes, nose, and mouth. This product generally has a range of approximately 20 feet. Wind and other conditions may alter the range or effectiveness. Shield your eyes and face if you must face into the wind. Use with caution. Contents will cause pain and temporary impairment to eyes, nose, mouth and lungs. Individuals who suffer from asthma or emphysema may have a more severe reaction.

Note that the 20' claim included in these directions was based on the spray-pattern information supplied for the old proposed formulation. The results

Comments on use directions sent 11/5/98

Is your RETURN ADDRESS completed on the reverse side?

SENDER:

- Complete items 1 and/or 2 for additional services.
- Complete items 3, and 4a & b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

1. ☑ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

McNeil River
750 W. Dimond Suite 203
Anchorage, AK 99515

Rick E. Bayne

4a. Article Number

Z-095-557-679

4b. Service Type

☐ Registered ☐ Insured
☑ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

7. Date of Delivery

12 9

5. Signature (Addressee)

6. Signature (Agent)

8. Addressee's Address (Only if requested and fee is paid)

OPR/RD/IRB/D Peacock
71545-R

PS Form 3811, December 1991 ☆U.S. GPO: 1992—323-402 DOMESTIC RETURN RECEIPT

Thank you for using Return Receipt Service.

UNITED STATES POSTAL SERVICE

Official Business

PENALTY FOR PRIVATE
USE TO AVOID PAYMENT
OF POSTAGE, $300

U.S. MAIL

Print your name, address and ZIP Code here

EPA
Reg. Div (7504C)
WASH DC 20460

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currently available for the new proposed formulation suggest that the effective range is more limited. We suggest that your new spray-pattern tests assess the shape of the spray cloud at various distances from the user (who should discharge the product horizontally under low-wind conditions). One of those distances should be 20'. The effective range claim must be supported by spray-pattern data. A claim of 20' is not supported by data received to date for the new proposed formulation. Your proposed claim of 25'-30' is not supported by any reports received to date for any GUARD ALASKA formulation.

Please note that we are also currently reviewing your revised formula and will have additional labeling comments. If you have questions about this letter, you may reach me by phone (703-305-5407, fax (703-305-6596), or E-Mail (peacock.dan@epamail.epa.gov).

Sincerely,

DBP

Daniel B. Peacock, Biologist
Insecticide-Rodenticide Branch
Registration Division (7504C)

cc: Cathy Rice

Peacock:Disk 18:A:\Capsaicin\71545-R.Nov:305-5407:11/5/98

IRB BRANCH REVIEW - TSS

Record Number(s)

D250419

IN 10/20/98 OUT 10/21/98

EFFICACY

FILE OR REG. NO. 71545-R

PETITION OR EXP. PERMIT NO.

DATE DIV. RECEIVED 10/20/98

DATE OF SUBMISSION 10/20/98

DATE SUBMISSION ACCEPTED 10/20/98

TYPE PRODUCTS(S): I, D, H, F, N, R, x S

DATA ACCESSION NO(S). none (yet)

PRODUCT MGR. NO. 04

PRODUCT NAME(S) GUARD ALASKA BEAR REPELLENT

COMPANY NAME McNeill River Enterprises, Inc.

SUBMISSION PURPOSE document spray pattern of new formulation

CHEMICAL & FORMULATION 1.34% "Capsaicin and Related Capsaicinoids" aerosol

Efficacy Review: GUARD ALASKA© BEAR REPELLENT, 71545-R
McNeill River Enterprises, Inc.
Anchorage, AK 99515

200.0 INTRODUCTION

200.1 Uses

1.34% "Capsaicin and Related Capsaicinoids" ("Made from ***20% Oleoresin of Capsicum by volume***") aerosol proposed for Federal registration as a "bear attack repellent" to protect humans from attacks by bears.

200.2 Background Information

See efficacy review of 8/17/98 got 71545-R and efficacy review of 12/29/97 of a pre-application submission (CORR. 289443) pertaining to this product.

This review discusses portions of McNeill River's submission of 10/20/98, which consists of a brief cover letter and copies of a report on the spray pattern of the product's new formulation. After the efficacy review of 8/17/98 was completed, EPA learned that the "**Dilutant; Solvent**" intended for use in this product was considered to be an ozone-depleter and, consequently, would have to be replaced. That was the purpose for altering the proposed formulation. New information on spray pattern was required to assess whether the new propellent would disperse the product appropriately.

This review also mentions items included in McNeill River's submission of 10/13/98. These items include a revised proposed Confidential Statement of Formula (CSF) and a revised proposed label.

201.0 DATA SUMMARY

According to the revised proposed CSF dated "10-13-98", the new "**Dilutant; Solvent**" (Trichloroethylene) would replace the old one [redacted] at the same nominal concentration [redacted] The concentrations claimed for other ingredients are not affected by this substitution. Assuming that the inferences previously drawn concerning the product's effectiveness were appropriate and that there is nothing

Inert ingredient information may be entitled to confidential treatment

"chemical" about the substitution that would make the product less aversive to bears, the adequacy of the spray pattern associated with the new formulation would be the key to determining whether it would be expected to be effective.

The report on the spray pattern of the new formulation is cited and discussed below.

Grube, W. (1998) Spray pattern associated with Guard Alaska® Bear Repellent new formulation. Unpublished report: Case-Mason Filling, Inc., Baltimore, MD. 4 pp.

The cornerstone of this document is a one-page memorandum from Wayne L. Grube of Case Mason to a Cathy Rice, who is either an employee of or a consultant for McNeill River. The remaining 3 pages are those required by EPA for data submission formatting. No MRID number has been assigned to the report as yet.

The entire body of the memo's text is quoted immediately below.

"Unit was maintained at 70° F 4 hours prior to use. The unit was not shaken prior to being expelled.

Duration of Spray 9 - 10 seconds

1 second bursts 8 - 9

Length of Spray (Outside Temperature 72°F)
Initially 14.5 ft.(Beginning of spray)
Ending at 12.5 ft.

Area of Coverage (Unit was held at 5ft. [sic] off the ground)
At a distance of 11 ft. there is an area 53" Wide and 64" High oval in shape, with the highest concentration of product at the center of the oval covering an area of 27" in diameter.

Note, the composition of the spray is streamlike with a shotgun pattern that is directly affected by the wind causing stream of product to bend with the wind.

Above specifications in accordance with Randal [sic] Prater request. Please note, as of this date we have not heard from Bill Jordan".

Compared to the results reported directly by McNeill River for the old proposed formulation, the spray cloud reported by Grube seems a bit wider in cross-section and not to have traveled as far through the air. As discussed in the efficacy review of 8/17/98, the report for the old proposed formulation claimed a "minimum of 20 feet" for its distance of travel from the source and a "Coverage at 20 ft" with "a height of 48 inches and a width of 48 inches". Grube reports a somewhat wider spray pattern at a distance of 5' off the ground compared to the 48"-diameter circle at 20' that McNeill River reported for the old formulation.

These results could be interpreted as meaning that one must wait until the bear gets much closer than 20' before the new formulation could be expected to reach the animal at a level amount sufficient to repel it. Grube did not indicate what the spray pattern was like at the maximum distance claimed (14.5'), but that distance is more than 5' short of the 20' distance at which McNeill River reported a 48"-diameter pattern for the old formulation. Grube measured the spray pattern 5' from the container, with gravity perhaps adding to the amount of material reaching the ground. Clearly, it would be better if the product showed a wide pattern of dispersal at a 20' distance than at 5' as reported by Grube.

McNeill River's accounts of tests of the old formulation indicated that 9 seconds of continuous firing emptied the container but that a container produced 15 one-second bursts of material if fired periodically. The results reported by Grube in these regards seem to me to make more sense.

As there are no descriptions of testing and measuring equipment and only very sketchy details of test procedures, Grube's report comes short of what we like to see and clearly seems to warrant the non-GLP claim made for it. Grube indicates that he did not shake containers prior to firing them. If he had, the product may have shot out a bit farther. The big question is:

> "How much pre-use shaking would be representative for a bear repellent?"

Under conditions of use, one would expect that a person who encountered a bear would not have a lot of time to shake up the container before using it. Certainly, spray-paint-can directions ("Shake well before using") could not be followed. However, there would be some, perhaps frantic, movement of the container before its firing; and the person using it would likely have been engaged in some prior physical activities (e.g., hiking, climbing, hunting) which would have jostled the container at least periodically (the container being kept handy on the person). Consequently, testing under a no shake condition might be inappropriate to the use situation and unfair to the product. Conversely, it would be irresponsible for us to register this product if its containers do not seem to be truly "loaded for bear".

Grube mentions that wind affects the shape of GUARD ALASKA's spray cloud (not surprising) but does not indicate what the ambient wind conditions were at the time of testing.

The "Bill Jordan" mentioned in Grube's memo probably was me rather than the actual "Bill Jordan" who works for OPP. My notes show that I took a voice mail message from Grube on 10/8/98 (a Thursday before what was, for me, 4-day weekend). I did not return that call, and received additional voice mail messages from Grube and Randall Prater of McNeill River on 10/15/98. I called Prater first, then Grube. (The calls were made in the afternoon because we had a big meeting about bear repellents in the morning.) I had a long conversation with Prater about the spray pattern (he claimed 25-30" distance with a 5"

vertical pattern) and other matters. I then called Grube. The woman who answered said that Grube could not take my call right then and that he would be out on 10/16/98. I believe that I mentioned to her that I had talked to Prater earlier. Grube reportedly ran the spray-pattern test on 10/15/98, so it might have been completed by the time that the calls were made.

In our telephone conversation on 10/15/98, Prater told me that it takes more than Capsaicin to make a pepper spray effective. He claimed that the old solvent used in the product cuts through bears' mucous membranes (which he claimed are particularly a problem with black bears) and that Trichloroethane could be expected to do the same. Use of such an ingredient, he said, is essential to making pepper sprays work against bears. He claimed that the product used most often in the case-history compilation by Herrero and Higgins (see prior efficacy reviews) lacks the type of ingredient necessary to make it work against black bears. This, he adds, is why those authors report less success in using pepper sprays against black bears than against the larger brown bears. We should keep this argument in mind as more information on bear repellents becomes available. If it bears out, we should require that Trichloroethylene be listed as an active ingredient.

The revised proposed label submitted on 10/13/98 seems to be identical in claims and "**DIRECTIONS FOR USE**" to the label upon which I commented extensively in the efficacy review of 8/17/98. Those comments were relayed to McNeill River via EPA's letter of 8/26/98, but the applicant seems to have ignored them. I feel that the comments were appropriate and stand by them, except for the claim of a range of 20', which Grube's results do not support. (McNeill River still proposes a 25'-30' effective range. We accepted a 30' claim for the Counter Assault product, 55541-2, registered earlier this year.) The label that McNeill River submitted on 10/13/98 fails to tell users not to make prophylactic applications to campsite articles and their clothing and claims the product to be "effective against all species of bears." (While this last claim might well be true, I doubt that any of the bear repellents has been tested "against all species of bears". I do not

recall any data involving polar bears, for example.) See efficacy review of 8/17/98 for elaboration of these points.

202.0 CONCLUSIONS

1. The new report on the spray pattern of the new proposed formulation for GUARD ALASKA includes little detail on the test methods used and did not indicate what, if any, spray pattern was apparent at the 25' to 30' distance which you propose to claim for this product. The research apparently was conducted before we got in contact with you and before you could have gotten into contact with Mr. Grube on October 15, 1998. Taken in its best possible light, the report by Mr. Grube would support a claim of effective spray distance of 5' to 14'. We doubt that such a claim would provide much assurance to potential users and suspect that your product probably can do better.

   The comments in our letter of August 26, 1998, on the reporting of your study of the spray pattern of the old formulation generally apply to Mr. Grube's report. His report does not indicate how all of the tests were designed or how the effective distance and dimensions of the spray pattern were determined. While mentioning that wind bends the spray cloud, Mr. Grube did not report on the ambient wind conditions at the time of testing or whether wind might have affected any of the results reported.

   As the results reported by Mr. Grube suggest less effective range for the new formulation than for the old one (for which we also had a videotape of an effective use), we cannot determine that an effective spray cloud is cast by the new formulation when it is fired.

   By reportedly not shaking the product before use, Mr. Grube may not have activated the propellent sufficiently. Although a user confronted with a bear would not have time to shake a container vigorously prior to use (as with a can of spray paint), the user is likely to have moved the container somewhat rapidly

in readying it for use and to have been moving it occasionally or steadily for some time while engaged in various other activities (e.g., hunting, hiking) in bear country. A fair test of container spray patterns probably should involve having the person doing the firing carry the container in the manner of a hiker for at least a few minutes and to ready it for use by going through the motions that a hiker or hunter would go through. The spray pattern shown by a container thus prepared might be as close as we could get to being realistic.

2. As was noted in our letter of August 26, 1998, revise the "**DIRECTIONS FOR USE**" portion of the label to read as indicated below.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

USE RESTRICTIONS: This product may be used only to deter bears which are attacking or appear likely to attack humans. This product may not be effective on all situations or prevent all injuries. **Do not spray this product on tents, other objects, or on clothing.** Such use has no deterrent effect on bears and may attract them in some cases. **Do not seek out encounters with bears or intentionally provoke them.** Do not eat or allow to be eaten any food or feed materials which may have become contaminated with this product.

This product has a range of up to 20 feet (6 meters). The canister empties in approximately 9 seconds.

APPLICATION DIRECTIONS: Study the procedures and directions for using this product before taking this product into bear country.

To use

1. Remove the orange safety clip.
2. Point spray opening at bear's face.
3. Press firmly on trigger and release spray in short bursts

For this product to be fully effective, you must engulf the bear's face, especially the eyes, nose, and mouth. This product generally has a range of approximately 20 feet. Wind and other conditions may alter the range or effectiveness. Shield your eyes and face if you must face into the wind. Use with caution. Contents will cause pain and temporary impairment to eyes, nose, mouth and lungs. Individuals who suffer from asthma or emphysema may have a more severe reaction.

Note that the 20' claim included in these directions was based on the spray-pattern information supplied for the old proposed formulation. The results currently available for the new proposed formulation suggest that the effective range is more limited. We suggest that your new spray-pattern tests assess the shape of the spray cloud at various distances from the user (who should discharge the product horizontally under low-wind conditions). One of those distances should be 20'. The effective range claim must be supported by spray-pattern data. A claim of 20' is not supported by data received to date for the new proposed formulation. Your proposed claim of 25'-30' is not supported by any reports received to date for any GUARD ALASKA formulation.

William W. Jacobs
Biologist
Insecticide-Rodenticide Branch
October 21, 1998

MRID # 446758-01 Bill

DP BARCODE: D250419

CASE: 062589 DATA PACKAGE RECORD DATE: 10/20/98
SUBMISSION: S550417 BEAN SHEET Page 1 of 1

* * * CASE/SUBMISSION INFORMATION * * *

CASE TYPE: REGISTRATION ACTION: 161 RESB NEW PROD-"ME TOO"
RANKING : 5 POINTS ()
CHEMICALS: 070701 Capsaicin (in oleoresin of capsicum) 1.3400%

ID#: 071545-R Guard Alaska Bear Repellent
COMPANY: 071545 MCNEIL RIVER ENTERPRISES, INC.
PRODUCT MANAGER: [illegible] 703-[illegible]-7055 ROOM: CM2 219
FM TEAM REVIEWER: DANIEL PEACOCK 703-305-5407 ROOM: CM2 221
RECEIVED DATE: 10/20/98 DUE OUT DATE: 01/18/99

* * * DATA PACKAGE INFORMATION * * *

DP BARCODE: 250419 EXPEDITE: Y DATE SENT: 10/20/98 DATE RET.: / /
CHEMICAL: 070701 Capsaicin (in oleoresin of capsicum)
DP TYPE: 001
CSF: N LABEL: N

ASIGNED TO	DATE IN	DATE OUT	ADMIN DUE DATE: 12/04/98
DIV : BD	/ /	/ /	NEGOT DATE: / /
BRAN: IRB	/ /	/ /	PROJ DATE: / /
SECT: PM04	/ /	/ /	
REVR : [illegible]	[illegible]	[illegible]	OBJ Date/Initial
CONTR:	/ /	/ /	

* * * DATA REVIEW INSTRUCTIONS * * *

Bill,

Attached is information about the spray pattern and duration of the revised formula.

If you need more information from me, I have the jacket.

If you need more information from the registrant, let me know and I will call him.

Thanks,

Dan Peacock,

* * * DATA PACKAGE EVALUATION * * *

No evaluation is written for this data package

* * * ADDITIONAL DATA PACKAGES FOR THIS SUBMISSION * * *

DP BC	BRANCH/SECTION	DATE OUT	DUE BACK	INS	CSF	LABEL

Bill Jacobs
Copy

McNeil River Enter., Inc.
750 W. Dimond, Ste. 203
Anchorage, Alaska 99515
907-349-6868 or
1-888-419-9695
907-349-7818 fax

Manufacturers of Guard Alaska Personal Protection Systems

[Note: I sent 3 copies + cover letter thru in processing to get MRIP II]

October 20, 1998

Mr. Dan Peacock (CM-2 H7505C)
Office of Pesticide Programs (Team 14)
U.S. Environmental Protection Agency
401 M Street, SW
Washington, DC 20460

Reference: Guard Alaska® Bear Repellent (EPA File Symbol 71545-R)

Dear Dan:

In response to our October 5, 1998 meeting, we are submitting three copies of the study entitled:

Spray Pattern Associated with Guard Alaska® Bear Repellent New Formulation.

Please call me at 1-888-419-9695 if you have any questions or if I can be of further assistance.

Sincerely,

Randal Prater
CBR

Randal Prater
President

received by RD
OCT 20 1998

Deborah McCall 10/07/98 07:28 AM

10/7/98 Note to file
Need to
correct meeting
notes

To: Dan Peacock/DC/USEPA/US@EPA
cc: Deborah McCall/DC/USEPA/US@EPA, Al Smith/DC/USEPA/US@EPA, John Redden/DC/USEPA/US@EPA, Dan Peacock/DC/USEPA/US@EPA
Subject: Re: Record of Meeting (10/5/98, 3PM, Guard Alaska)

Dan
the notes look OK with these minor changes
1 - correct the name of the branch to Technical Review Branch (TRB)
2 - I indicated the cancer statement similar to CA's would be acceptable.

Debbie

Dan Peacock on 10/06/98 09:52:36 AM

To: Deborah McCall/DC/USEPA/US@EPA, Al Smith/DC/USEPA/US@EPA, John Redden/DC/USEPA/US@EPA, Dan Peacock/DC/USEPA/US@EPA

cc:

Subject: Record of Meeting (10/5/98, 3PM, Guard Alaska)

Attached is my Record of Meeting for your information and correction.

Thank you for your 71545-R Oct Meetin presence at this productive meeting.

Dan Peacock, 305-5407

RECORD OF MEETING[1]
October 5, 1998
3PM, Room 250, CM-2

Attendees
Deborah McCall, Chief, Technical Support Branch (TSB)
John Redden, Team Leader, TSB
Al Smith, Chemist, TSB
Dan Peacock, Biologist, Insecticide-Rodenticide Branch (IRB)
Cathy Rice, Consultant for McNeil River Enterprises, Anchorage, Alaska
Randy Prater, President, McNeil River Enterprises (by phone, 509-990-5608)

Subject: Guard Alaska
EPA File Symbol 71545-R
Substitution of Trichloroethylene for [redacted]

Summary of Meeting:

At the above time and place, the above people discussed the substitution of Trichloroethylene (TCE) for the solvent, [redacted] which the Clean Air Act (CAA) banned as a bear deterrent on January 1, 1994. The group agreed on the following points:

1. This substitution would be acceptable because the exposure of users to TCE would be low (only when attacked by a bear, an infrequent event) and because the presence of TCE is essential to efficacy and safety (non-flammability).

2. The label must contain a label statement under the ingredient statement identifying the cancer potential of TCE. One possible statement would be:

   This product contains Trichloroethylene (TCE), a possible cancer agent..[2]

3. The applicant needs to submit a revised Confidential Statement of Formula (CSF) showing the proposed formula change.

---

[1]Dan Peacock wrote this Record of Meeting and circulated it to EPA participants for their information and correction.

[2]Note: In December 1997, I had occasion to research the cancer status of TCE because it was an impurity in selected Rotenone products. At that time Tim Cogliano of the Office of Research and Development, who was the Agency's key person for tracking the cancer potential of TCE and responsible for updating EPA's Integrated Risk Information System (IRIS), said that the EPA removed its TCE entry in IRIS because the **Agency could not decide if TCE was a probable (B2) or possible (C) cancer agent. He said that EPA hoped to have a new cancer assessment for TCE in 1998. I will ask Tom for an update on TCE's status to guide us in the correct wording for Guard Alaska's label.**

Inert ingredient information may be entitled to confidential treatment

4. A TSB chemist and acute toxicologist will formally review the similarity of the new and old formulas within 45 days of receipt.

5. The registrants will submit data on the duration of spray and pattern of spray (height and width) at different distances. Bill Jacobs, who will review the data, can advise by phone the one gathering the data. Once received, the Insecticide-Rodenticide Branch will commit to reviewing these data within 45 days of receipt.

Peacock:Disk 18:A:\Capsaici\71545-R Oct Meeting:305-5407:10/6/98

509-996-5608 DAN

List of Background Documents for 3 PM, Monday, Oct. 5, 1998, Meeting on the Possibility of Substituting "Trichloroethylene" for [redacted] a Banned Ozone Depleting Substance, and the Data Requirements for the Substitution -- Daniel B. Peacock, 305-5407	
1	9/28/98 E-Mail request from Cathy Rice, the registrant's consultant
2	9/29/98 request from Dan Peacock to Air Program about suitability of TCE
3	9/29/98 reply from Melissa Payna of Air Program
4	Substitutes for CFC-113 and other Class I Ozone Depletors
5	9/11/98 letter from filler (Ed Mark) about suitability of TCE
6	Calandar Text for Meeting

Peacock:Disk 18:A:\capsaici\71545-R Meeting:305-5407:10/1/98

Inert ingredient information may be entitled to confidential treatment

1

cbrice@erols.com on 09/28/98 04:36:28 PM

To: peacock.dan
cc:
Subject: 71545-R

Dear Dan:

I am requesting a meeting with you to discuss the possible [redacted] substitutes. If possible, I would like to meet on either Wednesday, September 30 or Monday, October 5. Please let me know when it is convenient.

Sincerely,
Cathy Rice
703-847-7407

Inert ingredient information may be entitled to confidential treatment

(2)

Dan Peacock on 09/29/98 12:38:23 PM

To: Payne.Melissa@EPAMAIL.EPA.GOV @ EPA
cc:
Subject: Use of Trichoroethylene in an Aerosol Bear Deterrent

Next Monday EPA will be meeting with a company that is thinking about using "trichloroethylene" in an aerosol bear deterrent. Its purpose in the formulation is to act as a diluent and solvent for the active ingredient. There is also an approved propellent in the formula. Originally, the company had proposed [redacted] for the product, but the CCA prohibits all non-essential uses of this ingredent.

Does the CCA allow the use of TCE in an aerosol bear detterent?

Dan Peacock, 305-5407

Inert ingredient information may be entitled to confidential treatment

(3)

Melissa Payne
09/29/98 04:05 PM

To: Peacock.Dan
cc:
Subject: Use of Trichoroethylene in an Aerosol Bear Deterrent -Reply

---

TCE is allowed for use as an aerosol propellant--please refer to
http://www.epa.gov/ozone/title6/snap/lists/aerosol.pdf
for a complete list of ODS replacements.

>>> <Peacock.Dan@epamail.epa.gov> 09/29/98 12:38pm >>>
Next Monday EPA will be meeting with a company that is thinking about using "trichloroethylene" in an aerosol bear deterrent. Its purpose in the formulation is to act as a diluent and solvent for the active ingredient. There is also an approved propellent in the formula. Originally, the company had proposed [redacted] for the product, but the CCA prohibits all non-essential uses of this ingredent.

Does the CCA allow the use of TCE in an aerosol bear detterent?

Dan Peacock, 305-5407

(4)

EPA United States Environmental Protection Agency

Substitute Aerosol Solvents as of May 22, 1998

① where meeting
② who will be patched in by phone
③ Mark
④ Randy

Ozone Protection Hotline (800) 296-1996

Substitutes are reviewed on the basis of ozone depletion potential, global warming potential, toxicity, flammability, and exposure potential. Lists of acceptable and unacceptable substitutes are updated several times each year. A chronological list of SNAP updates is available from the hotline. If your browser is unable to display tables, please call the hotline for a free paper copy.

Note: SNAP Notices and Final Rules published in the Federal Register take precedence over all information on the web site.

~~will label~~
1) will put anything on label
2)

① need new & old CSF
② add label
③ spray pattern

Acceptable Substitutes for CFC-11, CFC-113, and Methyl Chloroform (class I ODS)	
Substitutes	**Comments**
C5-C20 Petroleum hydrocarbons	Petroleum hydrocarbons are flammable. Use with the necessary precautions. Pesticide aerosols must adhere to FIFRA standards.
Chlorinated solvents (trichloroethylene, perchloroethylene, methylene chloride)	Extensive regulations under other statutes govern use of these chemicals, including VOC standards, workplace standards, waste management standards, and pesticide formulation and handling standards. Should be used only for products where nonflammability is a critical feature.
Oxygenated organic solvents (esters, ethers, alcohols, ketones)	These substitutes are flammable. Use with the necessary precautions.
Terpenes	These substitutes are flammable. Use with the necessary precautions.
Water-based formulations	
Trans-1,2-dichloroethylene	The OSHA set exposure limit is 200 ppm.
Hydrofluoroether (HFE): C4F9OCH3 (methoxynonafluorobutane, iso and	

(methoxynonafluorobutane, iso and normal)	
HCFC-141b and its blends	**Note: All aerosol solvent uses of HCFC-141b, either by itself or blended with other compounds, were prohibited as of January 1, 1994 under Section 610 (d) of the Clean Air Act. Limited exemptions exist. These are described in the section on aerosol substitutes in 59 FR 13044.**

Substitutes for HCFC-141b (a class II ODS)	
Substitutes	**Comments**
C5-C20 Petroleum hydrocarbons	Petroleum hydrocarbons are flammable. Use with the necessary precautions. Pesticide aerosols must adhere to FIFRA standards.
Chlorinated solvents (trichloroethylene, perchloroethylene, methylene chloride)	Extensive regulations under other statutes govern use of these chemicals, including VOC standards, workplace standards, waste management standards, and pesticide formulation and handling standards. Should be used only for products where nonflammability is a critical feature.
Oxygenated organic solvents (esters, ethers, alcohols, ketones)	These substitutes are flammable. Use with the necessary precautions.
Terpenes	These substitutes are flammable. Use with the necessary precautions.
Water-based formulations	
Trans-1,2-dichloroethylene	The OSHA set exposure limit is 200 ppm.
Hydrofluoroether (HFE): C4F9OCH3 (methoxynonafluorobutane, iso and normal)	

Substitutes for CFC-11, CFC-113, and Methyl Chloroform (class I ODS), and HCFC-141b (a class II ODS) that are Acceptable Subject to Use Conditions	
Substitutes	**Conditions**
Monochlorotoluene / benzotrifluorides	Subject to a 50 ppm workplace standard for monochlorotoluenes and a 25 ppm standard for benzotrifluorides.

Substitutes for CFC-11, CFC-113, and Methyl Chloroform (class I ODS), and HCFC-141b (a class II ODS) that are Acceptable Subject to Narrowed Use Limits		
Substitutes	**Narrowed Uses**	**Comments**
Perfluorocarbons	Acceptable only where reasonable efforts have been made to ascertain that other alternatives are not technically feasible due to performance or safety requirements.	PFCs have extremely long atmospheric lifetimes and high GWPs. This decision reflects these concerns and is patterned after the SNAP decision on PFCs in the solvent cleaning sector.
Perfluoropolyethers	Acceptable only where reasonable efforts have been made to ascertain that other alternatives are not technically feasible due to performance or safety requirements.	PFPEs have similar global warming profile to the PFCs, and the SNAP decision on PFPEs parallels that for PFCs in the solvent cleaning sector.

Lists of Substitutes by End-Use

SNAP Ozone Depletion Home Ozone Science Other Regu-lations Comments

Written by EPA's Stratospheric Protection Division

Last updated on May 22, 1998
http://www.epa.gov/ozone/title6/snap/lists/aerosolv.html

Pages 270-271 Product ingredient source information may be entitled to confidential treatment

CaLANdar Weekly Appt's

Daniel (Dan) Peacock | **Printed: 9/29/98** | **Week: 10/5/98 -10/5/98** | **Page: 1**

6

October 1998						
su	mo	tu	we	th	fr	sa
				1	2	3
4	[5]	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

November 1998						
su	mo	tu	we	th	fr	sa
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

December 1998						
su	mo	tu	we	th	fr	sa
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

12 **Columbus Day** **11** **Veterans Day** **25** **Christmas Day**

MON. Monday, Oct 05, 1998

-7...8...9...10..11..12..1...2...3...4...5...6...7+

From - Until	Description	By	RSVP
>10:00AM-11:00AM	RM 201 IRB BRANCH MEETING	LCOLE	?
People:	TLEVINE DDANIEL MMAUTZ PSCHROED THARRIS LCOLE		
	DMCNEILL TTAYLOR GTOMPKIN ACAICEDO PPERREAU BJACOBS		
.12:00PM-12:30PM	CHANGED: Rodenticide Stakeholders Planning Session, SRRD Conference rm B	SJENNING	?
Guests:	BJACOBS DPEACOCK JBLONDEL JREDDEN SJENNING		
> 1:30PM- 3:00PM	Rodenticide Stakeholders Planning Session, SRRD Conference rm B	SJENNING	Y
Guests:	BJACOBS DDEZIEL DPEACOCK JBLONDEL JREDDEN SJENNING		
> 3:00PM- 4:00PM	71545-R, [redacted] to trichloroethylene	DPEACOCK	*
	Background: The Air and Radiation Program found the use of [redacted] in a bear deterrent unacceptable under the Clean Air Act (CAA) because EPA banned all non-essential uses of Class II Ozone Depleting Substances on January 1, 1994:		
	Purpose of Meeting:		
	1. Can trichloroethylene substitute for [redacted] under FIFRA? [I will check to to insure acceptability of this use under CCA.]		
	2. What are the data requirements (Will new skin & eye tests be needed?)		
People:	JREDDEN ASMITH DMCCALL		

Inert ingredient information may be entitled to confidential treatment

Is your RETURN ADDRESS completed on the reverse side?

SENDER:

- Complete items 1 and/or 2 for additional services.
- Complete items 3, 4a, and 4b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "*Return Receipt Requested*" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

1. ☑ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

McNeil River Ent
750 W. Dimond
Suite 203
Anchorage, AK
99515

4a. Article Number

2-459-758-583

4b. Service Type

☐ Registered ☑ Certified
☐ Express Mail ☐ Insured
☐ Return Receipt for Merchandise ☐ COD

7. Date of Delivery

9-28-98

5. Received By: *(Print Name)*

6. Signature: *(Addressee or Agent)*

X [signature]

8. Addressee's Address *(Only if requested and fee is paid)*

CPP/
/RD/IRB/Peacock
71545-R

273

PS Form **3811**, December 1994 102595-97-B-0179 Domestic Return Receipt

Thank you for using Return Receipt Service.

UNITED STATES POSTAL SERVICE

First-Class Mail
Postage & Fees Paid
USPS
Permit No. G-10

• Print your name, address, and ZIP Code in this box •

EPA
Reg Div (7504C)
WASH DC 20460

Z 459 758 583

US Postal Service

Receipt for Certified Mail

No Insurance Coverage Provided.

Do not use for International Mail *(See reverse)*

Sent to McNeil River	
Street & Number	
Post Office, State, & ZIP Code	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date	

275

PS Form 3800, April 1985

Stick postage stamps to article to cover First-Class postage, certified mail fee, and charges for any selected optional services *(See front).*

1. If you want this receipt postmarked, stick the gummed stub to the right of the return address leaving the receipt attached, and present the article at a post office service window or hand it to your rural carrier *(no extra charge).*

2. If you do not want this receipt postmarked, stick the gummed stub to the right of the return address of the article, date, detach, and retain the receipt, and mail the article.

3. If you want a return receipt, write the certified mail number and your name and address on a return receipt card, Form 3811, and attach it to the front of the article by means of the gummed ends if space permits. Otherwise, affix to back of article. Endorse front of article **RETURN RECEIPT REQUESTED** adjacent to the number.

4. If you want delivery restricted to the addressee, or to an authorized agent of the addressee, endorse **RESTRICTED DELIVERY** on the front of the article.

5. Enter fees for the services requested in the appropriate spaces on the front of this receipt. If return receipt is requested, check the applicable blocks in item 1 of Form 3811.

6. Save this receipt and present it if you make an inquiry.

102595-97-B-0145

PS Form 3800, April 1995 *(Reverse)*

276

161 5 3 48967
11

CERTIFIED MAIL

McNeil River Enterprises, Inc.
750 West Dimond, Suite 203
Anchorage, AK 99515

SEP 23

Attention: Mr. Randal Prater

Subject: Guard Alaska Bear Repellent
EPA File Symbol 71545-R
Your submission of September 16, 1998
Our letter of August 26, 1998

In our last letter, we explained that could not register this product because it contained an inert ingredient, [redacted] a Class II Ozone Depleting Substance, for which the Clean Air Act (CAA) had banned non-essential uses (including bear deterrents) on January 1, 1994. In our letter we promised to assist you in determining the acceptability of a substitute for this ingredient under CAA and the data requirements under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) before you initiated further testing.

In response to our letter, you have proposed substituting the ingredient, "trichloroethane" for [redacted] We referred your request to EPA's Stratospheric Protection Division in the Office of Air and Radiation. According to Ms. Melissa Payne (202-564-9738), trichloroethane, or methyl chloroform, is a Class I Ozone Depleting Substance. Like [redacted] CCA has banned its use as a bear deterrent. Therefore, we may not consider its use in Guard Alaska under FIFRA.

In the future, before submitting a substitute ingredient, you should consider first contacting Ms. Payne to determine its acceptability under CCA. That approach would streamline your search for an alternative ingredient.

If you have questions about this letter, you may reach me by phone (703-305-5407, fax (703-305-6596), or E-Mail (peacock.dan@epamail.epa.gov).

Sincerely,

DBP

Daniel B. Peacock, Biologist
Insecticide-Rodenticide Branch
Registration Division (7504C)

Peacock:Disk 18:A:\Capsaicin\71545-R.Sep:703-305-5407:9/23/98

Inert ingredient information may be entitled to confidential treatment

EPA United States Environmental Protection Agency

Ozone-Depleting Substances

As defined in section 602 of the Clean Air Act, a class I substance is any chemical with an ozone-depleting potential of 0.2 or greater. Class II substances (below the Class I list) include all of the HCFCs. These compounds are numbered according to the ASHRAE Standard 34 scheme.

Text versions of these tables for browsers that can't display formatted tables

ODPs, GWPs and CAS Numbers of Class I Ozone Depleting Substances

	Chemical Name	ODP	GWP	CAS Number
Group I (from section 602 of the CAA)				
CFC-11	Trichlorofluoromethane	1.0	4000	75-69-4
CFC-12	Dichlorodifluoromethane	1.0	8500	75-71-8
CFC-113	1,1,1-Trichlorotrifluoroethane	0.8	5000	354-58-5
	1,1,2-Trichlorotrifluoroethane	0.8		76-13-1
CFC-114	Dichlorotetrafluoroethane	1.0	9300	76-14-2
CFC-115	Monochloropentafluoroethane	0.6	9300	76-15-3
Group II (from section 602 of the CAA)				
Halon 1211	Bromochlorodifluoromethane	3.0		353-59-3
Halon 1301	Bromotrifluoromethane	10.0	5600	75-63-8
Halon 2402	Dibromotetrafluoroethane	6.0		124-73-2
Group III (from section 602 of the CAA)				
CFC-13	Chlorotrifluoromethane	1.0	11,700	75-72-9
CFC-111	Pentachlorofluoroethane	1.0		354-56-3
CFC-112	Tetrachlorodifluoroethane	1.0		76-12-0
CFC-211	Heptachlorofluoropropane	1.0		422-78-6
CFC-212	Hexachlorodifluoropropane	1.0		3182-26-1
CFC-213	Pentachlorotrifluoropropane	1.0		2354-06-5
CFC-214	Tetrachlorotetrafluoropropane	1.0		29255-31-0
CFC-215	Trichloropentafluoropropane	1.0		1599-41-3
CFC-216	Dichlorohexafluoropropane	1.0		661-97-2
CFC-217	Chloroheptafluoropropane	1.0		422-86-6
Group IV (from section 602 of the CAA)				
CC14	Carbon tetrachloride	1.1	1400	56-23-5
Group V (from section 602 of the CAA)				
Methyl Chloroform	1,1,1-trichloroethane	0.1	110	71-55-6
Group VI (listed in the Accelerated Phaseout Final Rule)				
CH3Br	Methyl bromide	0.7		74-83-9

	ODP
Group VII (listed in the Accelerated Phaseout Final Rule)	
CHFBr2	1.0
CHF2Br(HBFC-22B1)	0.74
CH2FBr	0.73
C2HFBr4	0.3 - 0.8
C2HF2Br3	0.5 - 1.8
C2HF3Br2	0.4 - 1.6
C2HF4Br	0.7 - 1.2
C2H2FBr3	0.1 - 1.1
C2H2F2Br2	0.2 - 1.5
C2H2F3Br	0.7 - 1.6
C2H3FBr2	0.1 - 1.7
C2H3F2Br	0.2 - 1.1
C2H4 Br	0.07 - 0.1
C3HFBr6	0.3 - 1.5
C3HF2Br5	0.2 - 1.9
C3HF3Br4	0.3 - 1.8
C3HF4Br3	0.5 - 2.2
C3HF5Br2	0.9 - 2.0
C3HF6Br	0.7 - 3.3
C3H2FBr5	0.1 - 1.9
C3H2F2Br4	0.2 - 2.1
C3H2F3Br3	0.2 - 5.6
C3H2F4Br2	0.3 - 7.5
C3H2F5Br	0.9 - 1.4
C3H3FBr4	0.08 - 1.9
C3H3F2Br3	0.1 - 3.1
C3H3F3Br2	0.1 - 2.5
C3H3F4Br	0.3 - 4.4
C3H4FBr3	0.03 - 0.3
C3H4F2Br2	0.1 - 1.0
C3H4F3Br	0.07 - 0.8
C3H5FBr2	0.04 - 0.4
C3H5F2Br	0.07 - 0.8
C3H6FBr	0.02 - 0.7

ODPs, GWPs and CAS Numbers of Class II Ozone Depleting Substances

Note: Only commonly used HCFCs are listed below. However, all HCFCs are included in Class II, and all are covered by the accelerated phaseout. The full list of Class II substances is available in section 602 of the Clean Air Act.

	Chemical Name	ODP	GWP	CAS Number
HCFC-22	chlorodifluoromethane	0.05	1700	75-45-6
HCFC-123	2,2-dichloro-1,1,1-trifluoroethane	0.02	93	306-83-2
HCFC-124	2-chloro-1,1,1,2-tetrafluoroethane	0.02	480	2837-89-0
HCFC-141b	1,1-dichloro-1-fluoroethane	0.1	630	1717-00-6
HCFC-142b	1-chloro-1,1-difluoroethane	0.06	2000	75-68-3

Written by EPA's Stratospheric Protection Division

Last modified on October 12, 1995
http://www.epa.gov/ozone/ods.html

Trichloroethane

Melissa Payne
09/22/98 12:31 PM

To: Peacock.Dan
cc:
Subject: Guard Alaska bear repellent -Reply

Dan,
Trichloroethane, or methyl chloroform, is a Class I substance that is subject to the non-essential products ban of
Section 610 of the Clean Air Act. The only exception for use of Class I substances in bear repellents is addressed in
40 CFR Section 82.66 (2)(xi) and states that the only allowable product is as follows-- "Red pepper bear repellent
sprays which contain CFC-113 as a solvent, but which contain no other CFCs." As such, any Class I compound
other than CFC-113 is subject to the ban for this end-use.

Please feel free to contact me if you have any further questions.

Melissa Payne
Stratospheric Protection Division
Environmental Protection Agency
202-564-9738

>>> <Peacock.Dan@epamail.epa.gov> 09/17/98 03:59pm >>>
What is the status of the use of "trichloroethane" in an aerosol bear deterrent product under the Clean Air Act? May it be used? Are any regulatory actions anticipated.

Thank you,

Dan Peacock, 703-305-5407
---------- Forwarded by Dan Peacock/DC/USEPA/US on 09/17/98 04:02 PM ----------

cbrice@erols.com on 09/16/98 09:15:50 AM

To: peacock.dan
cc:
Subject: Guard Alaska bear repellent

Dear Dan:

Randal would like to substitute trichloroethane for the [redacted] It is

Inert ingredient information may be entitled to confidential treatment

my understanding that trichloroethane is already on the inerts list. If he makes this substitution (1:1), what additional tests, if any, would be required?

He wanted to have the answer about testing before he trys to re-formulate. He has not yet tried to re-formulate so we do not know if this is really a viable option, but on paper this works.

Cathy

Product ingredient source information may be entitled to confidential treatment

Inert ingredient information may be entitled to confidential treatment

Dan Peacock on 08/26/98 11:05:37 AM

To: cbrice@erols.com
cc: Dan Peacock/DC/USEPA/US@EPA
Subject: Guard Alaska Bear Repellent, EPA File Symbol 71545-R, 8/26/98 Letter

Cathy,

The good news is that we have finished our review and attached our response.

71545-R.AUG.

The bad news is that his proposed formula contains an ozone depleting ingredient, which was banned for all but "excepted" (not including bear deterrents) uses on 1/1/94. Since that date, anyone marketing a bear-deterrent product with this ingredient would be in violation with the Clean Air Act and subject to enforcement action at any time.

Mr. Prater needs to contact the Clean Air portion of the Office of Enforcement Compliance Assurance (OECA) as soon as possible, hopefully to set up a phase out of this formula. [Of course, the FIFRA portion of OECA and OPP is working on its policy to encourage the use of registered products. Guard Alaska would be subject to the enforcement policy is decided there.]

+ add, hand chem. data

Unfortunately, we cannot register this product until the registrant submits a revised formula, additional acute toxicity data, and new pattern /duration data.

The reason that no one discovered its ozone-depleting nature sooner is that Mr. Prater used a trade name on his CSF that was not recognized by any one or in our chemical data base as belonging to an [redacted] The chemist recognized that the ingredient as new, and I discovered that it was an [redacted] through a French document found on the internet.

Call me if you have questions or you want to pick up your copy of the letter in person.

Thanks,

Dan Peacock, 703-305-5407

Z 099 613 525

US Postal Service

Receipt for Certified Mail

No Insurance Coverage Provided.

Do not use for International Mail *(See reverse)*

Sent to McNeiler River Est	
Street & Number	
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Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date	

285

PS Form 3800, April 1995

Stick postage stamps to article to cover First-Class postage, certified mail fee, and charges for any selected optional services *(See front).*

1. If you want this receipt postmarked, stick the gummed stub to the right of the return address leaving the receipt attached, and present the article at a post office service window or hand it to your rural carrier *(no extra charge).*

2. If you do not want this receipt postmarked, stick the gummed stub to the right of the return address of the article, date, detach, and retain the receipt, and mail the article.

3. If you want a return receipt, write the certified mail number and your name and address on a return receipt card, Form 3811, and attach it to the front of the article by means of the gummed ends if space permits. Otherwise, affix to back of article. Endorse front of article **RETURN RECEIPT REQUESTED** adjacent to the number.

4. If you want delivery restricted to the addressee, or to an authorized agent of the addressee, endorse **RESTRICTED DELIVERY** on the front of the article.

5. Enter fees for the services requested in the appropriate spaces on the front of this receipt. If return receipt is requested, check the applicable blocks in item 1 of Form 3811.

6. Save this receipt and present it if you make an inquiry.

102595-97-B-0145

286

PS Form **3800**, April 1995 *(Reverse)*

AUG 26 1998

CERTIFIED MAIL (2-099-613-5251)

5-546102 160/13
5-546806 161/13
5-547533 161/13

McNeil River Enterprises, Inc.
750 West Dimond, Suite 203
Anchorage, AK 99515

Attention: Mr. Randal Prater

Subject: Guard Alaska Bear Repellent
EPA File Symbol 71545-R
Your application of July 9, 1998
Your submissions of August 4 and 19, 1998
Our letter of July 27, 1998, and Telephone Call of August 19, 1998

We have received the above application and additional submissions for this application to register a bear-deterrent product containing the active ingredients, Capsaicin and Related Capsaicinoids. We have completed our review, which has been summarized below.

I. Forms

A. Application Form

This was acceptable.

B. Certification Form

Note that Block 2 is not applicable to this product as the actives in this product are not "exclusive-use". There is no need to resubmit this form.

C. Confidential Statement of Formula (CSF)

1. Your product contains an inert ingredient, [redacted] It is also known as [redacted] It comprises [redacted] of your formula and does not occur in any registered product.

2. According to section 602 of the Clean Air Act, the Agency has classified this ingredient as a Class II Ozone-Depleting Substances. See attached documents.

3. Although the total production of this ingredient will not stop until January 1, 2003, the Agency issued a Proposed Rule in the Federal Register (58 FR 50464) on September 27, 1993, proposing to ban all nonessential uses of all Class II Ozone-

Inert ingredient information may be entitled to confidential treatment

Depleting Substances. The Agency received public comments and held a public hearing. **No one requested that its use in bear deterrents be considered to be essential.** The Final Rule (58 FR 69638), issued on December 30, 1993, banned the use of this ingredient in bear deterrent products. Therefore, your product, if sold with this ingredient since January 1, 1994, has been in violation of the Clean Air Act.

4. Because the Clean Air Act has banned this ingredient for this use, the following consequences result:

   a. We cannot register a product under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) for a use that the Clean Air Act has banned.

   b. You will have to contact our Office of Enforcement and Compliance Assurance (OECA) and attempt to negotiate a phase out of product with this formula. In addition, you should be aware that the product may be subject at any time to OECA action under FIFRA due to non-registration.

   c. To register a product under FIFRA, you will need to revise your formula to include only ingredients allowed by the Clean Air Act. We can assist you in this effort if you need additional help. A change in the formula would require you to submit a revised CSF, revised label, and the following data:

      1. Product Specific Chemistry Data
      2. Acute Toxicity Data (unless substantially similar to your prior formula) Note: Once you have determined your new formula, we can advise you if you need to submit new data or simply to cite previously submitted data.
      3. Data on duration and pattern of spray

II. Data

A. Chemistry Data

With the exception of the one inert, all the chemistry data were acceptable.

B. Acute Toxicity Data

The data were acceptable.

C. Effectiveness Data

1. The various efficacy related items submitted and cited in your 1997 submissions as well as those of July 9, 1998, and August 4, 1998, suggest to us that this product has some value as a bear deterrent. Assuming it to have been the product used in the

videotaped incident, GUARD ALASKA was shown to be successful in one instance in which a young black bear was repelled from the vicinity of the carcass of a freshly shot black bear. While that use situation was not typical of the types of encounters (unprovoked) for which this product is to be used, that the bear left quickly and reportedly permanently in response to a blast of the product that was less than a second in duration is positive information concerning GUARD ALASKA. No additional product efficacy data are required at this time. Should additional product performance information (positive or negative) become available for this product, submit it for our review.

2. Your report on the spray pattern of GUARD ALASKA was too sketchy to be of much value. The report does not indicate how the tests were designed or how the effective distance and dimensions of the spray cloud were determined. When you redo your spray pattern data for your revised formula, be sure to supply this information as well as information on ambient wind conditions.

3. The videotaped incident suggests that this product casts an effective spray cloud for the original formula.

III. Labeling

A. Precautionary Labeling

We will provide you this information if your revised formula is substantially similar to the original one or after review of new acute toxicity data.

B. Use Directions

1. Revise the "**DIRECTIONS FOR USE**" portion of the label to read as indicated below.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

USE RESTRICTIONS: This product may be used only to deter bears which are attacking or appear likely to attack humans. This product may not be effective on all situations or prevent all injuries. **Do not spray this product on tents, other objects, or on clothing.** Such use has no deterrent effect on bears and may attract them in some cases. **Do not seek out encounters with bears or intentionally provoke them.** Do not eat or allow to be eaten any food or feed materials which may have become contaminated

Is your RETURN ADDRESS completed on the reverse side?

SENDER:

- Complete items 1 and/or 2 for additional services.
- Complete items 3, and 4a & b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

1. ☒ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

McNeil River Enterprises Inc.
750 West Dimond
Suite 203
Anchorage, AK 99515

4a. Article Number
Z-099-613-525

4b. Service Type
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

7. Date of Delivery
31 [illegible]

5. Signature (Addressee)
[illegible]

6. Signature (Agent)

8. Addressee's Address (Only if requested and fee is paid)
OPR/RD/DRB/
Peacock 290 [illegible]-R

PS Form 3811, December 1991 ☆ U.S.G.P.O.: 1992-307-530 **DOMESTIC RETURN RECEIPT**

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EPA, Reg. Div (7504C)
WASH DC 20460

291

with this product.

This product has a range of up to 20 feet (6 meters). The canister empties in approximately 9 seconds.

APPLICATION DIRECTIONS: Study the procedures and directions for using this product before taking this product into bear country.

To use

1. Remove the orange safety clip.
2. Point spray opening at bear's face.
3. Press firmly on trigger and release spray in short bursts

For this product to be fully effective, you must engulf the bear's face, especially the eyes, nose, and mouth. This product generally has a range of approximately 20 feet. Wind and other conditions may alter the range or effectiveness. Shield your eyes and face if you must face into the wind. Use with caution. Contents will cause pain and temporary impairment to eyes, nose, mouth and lungs. Individuals who suffer from asthma or emphysema may have a more severe reaction.

2. We may have additional labeling comments after reviewing the data on your new formula.

If you have questions about the history of the ban of [redacted] call Ms. Cindy Newberg at 202-564-9729. She should also be able to provide you a contact in OECA.

If you have questions about this letter, you may reach me by phone (703-305-5407, fax (703-305-6596), or E-Mail (peacock.dan@epamail.epa.gov).

Sincerely,

DBP

Daniel B. Peacock, Biologist
Insecticide-Rodenticide Branch
Registration Division (7504C)

Enclosures: 1. Ozone-Depleting Substances
2. Ozone-Depletion Glossary

Peacock:Disk 18:A:\Capsaicin\71545-R.Aug:703-305-5407:8/25/98

Inert ingredient information may be entitled to confidential treatment

AUG 26 1998

CERTIFIED MAIL

McNeil River Enterprises, Inc.
750 West Dimond, Suite 203
Anchorage, AK 99515

Attention: Mr. Randal Prater

Subject: Guard Alaska Bear Repellent
EPA File Symbol 71545-R
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Your submissions of August 4 and 19, 1998
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   c. To register a product under FIFRA, you will need to revise your formula to include only ingredients allowed by the Clean Air Act. We can assist you in this effort if you need additional help. A change in the formula would require you to submit a revised CSF, revised label, and the following data:

      1. Product Specific Chemistry Data
      2. Acute Toxicity Data (unless substantially similar to your prior formula) Note: Once you have determined your new formula, we can advise you if you need to submit new data or simply to cite previously submitted data.
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This product has a range of up to 20 feet (6 meters). The canister empties in approximately 9 seconds.

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3. Press firmly on trigger and release spray in short bursts

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If you have questions about this letter, you may reach me by phone (703-305-5407, fax (703-305-6596), or E-Mail (peacock.dan@epamail.epa.gov).

Sincerely,

Daniel B. Peacock, Biologist
Insecticide-Rodenticide Branch
Registration Division (7504C)

Enclosures: 1. Ozone-Depleting Substances
2. Ozone-Depletion Glossary

Peacock:Disk 18:A:\Capsaicin\71545-R.Aug:703-305-5407:8/25/98

Inert ingredient information may be entitled to confidential treatment

EPA United States Environmental Protection Agency

Ozone-Depleting Substances

As defined in section 602 of the Clean Air Act, a class I substance is any chemical with an ozone-depleting potential of 0.2 or greater. Class II substances (below the Class I list) include all of the HCFCs. These compounds are numbered according to the ASHRAE Standard 34 scheme.

Text versions of these tables for browsers that can't display formatted tables

ODPs, GWPs and CAS Numbers of Class I Ozone Depleting Substances

	Chemical Name	ODP	GWP	CAS Number
Group I (from section 602 of the CAA)				
CFC-11	Trichlorofluoromethane	1.0	4000	75-69-4
CFC-12	Dichlorodifluoromethane	1.0	8500	75-71-8
CFC-113	1,1,1-Trichlorotrifluoroethane	0.8	5000	354-58-5
	1,1,2-Trichlorotrifluoroethane	0.8		76-13-1
CFC-114	Dichlorotetrafluoroethane	1.0	9300	76-14-2
CFC-115	Monochloropentafluoroethane	0.6	9300	76-15-3
Group II (from section 602 of the CAA)				
Halon 1211	Bromochlorodifluoromethane	3.0		353-59-3
Halon 1301	Bromotrifluoromethane	10.0	5600	75-63-8
Halon 2402	Dibromotetrafluoroethane	6.0		124-73-2
Group III (from section 602 of the CAA)				
CFC-13	Chlorotrifluoromethane	1.0	11,700	75-72-9
CFC-111	Pentachlorofluoroethane	1.0		354-56-3
CFC-112	Tetrachlorodifluoroethane	1.0		76-12-0
CFC-211	Heptachlorofluoropropane	1.0		422-78-6
CFC-212	Hexachlorodifluoropropane	1.0		3182-26-1
CFC-213	Pentachlorotrifluoropropane	1.0		2354-06-5
CFC-214	Tetrachlorotetrafluoropropane	1.0		29255-31-0
CFC-215	Trichloropentafluoropropane	1.0		1599-41-3
CFC-216	Dichlorohexafluoropropane	1.0		661-97-2
CFC-217	Chloroheptafluoropropane	1.0		422-86-6
Group IV (from section 602 of the CAA)				
CC14	Carbon tetrachloride	1.1	1400	56-23-5
Group V (from section 602 of the CAA)				
Methyl Chloroform	1,1,1-trichloroethane	0.1	110	71-55-6
Group VI (listed in the Accelerated Phaseout Final Rule)				
CH3Br	Methyl bromide	0.7		74-83-9

Group VII (listed in the Accelerated Phaseout Final Rule)	ODP
CHFBr2	1.0
CHF2Br(HBFC-22B1)	0.74
CH2FBr	0.73
C2HFBr4	0.3 - 0.8
C2HF2Br3	0.5 - 1.8
C2HF3Br2	0.4 - 1.6
C2HF4Br	0.7 - 1.2
C2H2FBr3	0.1 - 1.1
C2H2F2Br2	0.2 - 1.5
C2H2F3Br	0.7 - 1.6
C2H3FBr2	0.1 - 1.7
C2H3F2Br	0.2 - 1.1
C2H4 Br	0.07 - 0.1
C3HFBr6	0.3 - 1.5
C3HF2Br5	0.2 - 1.9
C3HF3Br4	0.3 - 1.8
C3HF4Br3	0.5 - 2.2
C3HF5Br2	0.9 - 2.0
C3HF6Br	0.7 - 3.3
C3H2FBr5	0.1 - 1.9
C3H2F2Br4	0.2 - 2.1
C3H2F3Br3	0.2 - 5.6
C3H2F4Br2	0.3 - 7.5
C3H2F5Br	0.9 - 1.4
C3H3FBr4	0.08 - 1.9
C3H3F2Br3	0.1 - 3.1
C3H3F3Br2	0.1 - 2.5
C3H3F4Br	0.3 - 4.4
C3H4FBr3	0.03 - 0.3
C3H4F2Br2	0.1 - 1.0
C3H4F3Br	0.07 - 0.8
C3H5FBr2	0.04 - 0.4
C3H5F2Br	0.07 - 0.8
C3H6FBr	0.02 - 0.7

ODPs, GWPs and CAS Numbers of Class II Ozone Depleting Substances

Note: Only commonly used HCFCs are listed below. However, all HCFCs are included in Class II, and all are covered by the accelerated phaseout. The full list of Class II substances is available in section 602 of the Clean Air Act.

	Chemical Name	ODP	GWP	CAS Number
HCFC-22	chlorodifluoromethane	0.05	1700	75-45-6
HCFC-123	2,2-dichloro-1,1,1-trifluoroethane	0.02	93	306-83-2
HCFC-124	2-chloro-1,1,1,2-tetrafluoroethane	0.02	480	2837-89-0
HCFC-141b	**1,1-dichloro-1-fluoroethane**	0.1	630	**1717-00-6**
HCFC-142b	1-chloro-1,1-difluoroethane	0.06	2000	75-68-3

Written by EPA's Stratospheric Protection Division

Last modified on October 12, 1995
http://www.epa.gov/ozone/ods.html

EPA Home Page

(1) Search on: "Nonessential Products Ban"
http://www.epa.gov/spdpublic/...
(2) select first entry
Ozone Protection Regulations: Nonessential Products Ban

EPA United States Environmental Protection Agency

Ozone Depletion Glossary

In order to understand information about ozone depletion, it is important to know several terms and acronyms. We've listed them below.

---

1) Aerosol: small droplet or particle suspended in the atmosphere, typically containing sulfur

Aerosols are emitted naturally (e.g., in volcanic eruptions) and as the result of human activities (e.g., by burning fossil fuels). There is no connection between particulate aerosols and pressurized products also called aerosols (see below).

2) Aerosol: a product that relies on a pressurized gas to propel substances out of a container

Consumer aerosol products in the US have not used ozone-depleting substances (ODS) since the late 1970s because of voluntary switching followed by federal regulation. The Clean Air Act and EPA regulations further restricted the use of ODS for non-consumer products. All consumer products, and most other aerosol products, now use propellants that do not deplete the ozone layer, such as hydrocarbons and compressed gases.

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Carbon Tetrachloride (CCl_4): a compound consisting of one carbon atom and four chlorine atoms

Carbon tetrachloride was widely used as a raw material in many industrial uses, including the production of CFCs, and as a solvent. Solvent use ended when it was discovered to be carcinogenic. It is also used as a catalyst to deliver chlorine ions to certain processes. Its ozone depletion potential is 1.2.

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Chlorofluorocarbon (CFC): a compound consisting of chlorine, fluorine, and carbon

CFCs are very stable in the troposphere. They are broken down by strong ultraviolet light in the stratosphere and release chlorine atoms that then deplete the ozone layer. CFCs are commonly used as refrigerants, solvents, and foam blowing agents. The most common CFCs are CFC-11, CFC-12, CFC-113, CFC-114, and CFC-115. The ozone depletion

potential (ODP) for each CFC is, respectively, 1, 1, 0.8, 1, and 0.6. A table of all ozone-depleting substances shows their ODPs, GWPs, and CAS numbers. CFCs are numbered according to a standard scheme. The National Oceanic and Atmospheric Administration provides more detailed information about HCFCs on their web site (including graphs of their abundance in the atmosphere).

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Class I Substance: one of several groups of chemicals with an ozone-depletion potential of 0.2 or higher

Class I substances listed in the CAA include CFCs, halons, carbon tetrachloride, and methyl chloroform. EPA later added HBFCs and methyl bromide to the list by regulation. A table of class I substances shows their ODPs, GWPs, and CAS numbers.

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Class II Substance: a chemical with an ozone-depletion potential of less than 0.2

Currently, all of the HCFCs are class II substances. Lists of class II substances with their ODPs, GWPs, and CAS numbers are available.

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Clean Air Act (CAA): law amended by Congress in 1990

Title VI of the CAA directs EPA to protect the ozone layer through several regulatory and voluntary programs. Sections within Title VI cover production of ozone-depleting substances (ODS), the recycling and handling of ODS, the evaluation of substitutes, and efforts to educate the public.

Return to Previous Page

Column Ozone: ozone between the Earth's surface and outer space

Ozone levels can be described in several ways. One of the most common measures is how much ozone is in a vertical column of air. The dobson unit is a measure of column ozone. Other measures include partial pressure, number density, and

concentration of ozone, and can represent either column ozone or the amount of ozone at a particular altitude.

Return to Previous Page

Dobson Unit (DU): a measurement of column ozone levels

If 100 DU of ozone were brought to the Earth's surface, it would form a layer 1 millimeter thick. In the tropics, ozone levels are typically between 250 and 300 DU year-round. In temperate regions, seasonal variations can produce large swings in ozone levels. For instance, measurements in Leningrad have recorded ozone levels as high as 475 DU and as low as 300 DU. These variations occur even in the absence of ozone depletion, but they are well understood. Ozone depletion refers to reductions in ozone below normal levels after accounting for seasonal cycles and other natural effects. For a graphical explanation, see NASA's TOMS site.

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Federal Register (FR): the daily publication containing all federal government actions

The Federal Register is the formal method of communication for any Notice, Notice of Proposed Rulemaking (NPRM), or Final Rulemaking (FRM) issued by the US government. Once published in the FR, rules are collected in the Code of Federal Regulations. The FR is available at many libraries. FR cites ares similar in form to 11 FR 12345, where 11 is a number corresponding to the year (e.g., 62 is 1997) and 12345 represents the page number (pages are numbered continuously through the year; the first page published in each year is page number 1). Thus, a Notice whose cite is 62 FR 10700 was published beginning at page 10700 in 1997. It is usually helpful to obtain the date as well, since it is difficult to guess the date solely on the page number.

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Global Warming Potential: a number that refers to the amount of global warming caused by a substance

The GWP is the ratio of the warming caused by a substance to the warming caused by a similar mass of carbon dioxide. Thus, the GWP of CO2 is defined to be 1.0 . CFC-12 has a GWP of 8,500, while CFC-11 has a GWP of 5,000. Various HCFCs and HFCs have GWPs ranging from 93 to 12,100. Water, a substitute in numerous end-uses, has a GWP of 0. A table of all ozone-depleting substances shows their ODPs,

GWPs, and CAS numbers.

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Halon: a compound consisting of bromine, fluorine, and carbon

The halons are used as fire extinguishing agents, both in built-in systems and in handheld portable fire extinguishers. Halon production in the U.S. ended on 12/31/93 because they contribute to ozone depletion. They cause ozone depletion because they contain bromine. Bromine is many times more effective at destroying ozone than chlorine. At the time the current U.S. tax code was adopted, the ozone depletion potentials of halon 1301 and halon 1211 were observed to be 10 and 3, respectively. These values are used for tax calculations. Recent scientific studies, however, indicate that the ODPs are at least 13 and 4, respectively. Note: technically, all compounds containing carbon and fluorine and/or chlorine are halons, but in the context of the Clean Air Act, "halon" means a fire extinguishing agent as described above. A table of class I substances shows their ODPs, GWPs, and CAS numbers. Halons are numbered according to a standard scheme. The National Oceanic and Atmospheric Administration provides more detailed information about HCFCs on their web site.

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Hydrobromofluorocarbon (HBFC): a compound consisting of hydrogen, bromine, fluorine, and carbon

Although they were not originally regulated under the Clean Air Act, subsequent regulation added HBFCs to the list of class I substances. A table of class I substances shows their ODPs, GWPs, and CAS numbers.

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Hydrocarbon (HC): a compound consisting of carbon and hydrogen

Hydrocarbons include methane, ethane, propane, cyclopropane, butane, and cyclopentane. Although they are highly flammable, HCs may offer advantages as ODS substitutes because they are inexpensive to produce and they have zero ozone depletion potential, very low global warming potential (GWP), and low toxicity. HCs are numbered according to a standard scheme.

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Hydrochlorofluorocarbon (HCFC): a compound consisting of hydrogen, chlorine, fluorine, and carbon

The HCFCs are one class of chemicals being used to replace the CFCs. They contain chlorine and thus deplete stratospheric ozone, but to a much lesser extent than CFCs. HCFCs have ozone depletion potentials (ODPs) ranging from 0.01 to 0.1. Production of HCFCs with the highest ODPs will be phased out first, followed by other HCFCs. A table of ozone-depleting substances shows their ODPs, GWPs, and CAS numbers. HCFCs are numbered according to a standard scheme. The National Oceanic and Atmospheric Administration provides more detailed information about HCFCs on their web site.

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Hydrofluorocarbon (HFC): a compound consisting of hydrogen, fluorine, and carbon

The HFCs are a class of replacements for CFCs. Because they do not contain chlorine or bromine, they do not deplete the ozone layer. All HFCs have an ozone depletion potential of 0. Some HFCs have high GWPs. HFCs are numbered according to a standard scheme. The National Oceanic and Atmospheric Administration provides more detailed information about HFCs on their web site.

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Methyl Bromide (CH3Br): a compound consisting of carbon, hydrogen, and bromine

Methyl Bromide's chemical formula is CH3BR. An effective pesticide, this compound is used to fumigate soil and many agricultural products. Because it contains bromine, it depletes stratospheric ozone and has an ozone depletion potential of 0.6. Production of methyl bromide will end in the U.S. on 12/31/2000. Much more information is available.

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Methyl Chloroform (CH3CCl3): a compound consisting of carbon, hydrogen, and chlorine

Methyl chloroform is used as an industrial solvent. Its ozone depletion potential is 0.11.

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Montreal Protocol: the international treaty governing the protection of stratospheric ozone

The Montreal Protocol on Substances That Deplete the Ozone Layer and its amendments control the phaseout of ODS production and use. Under the MP, several international organizations report on the science of ozone depletion, implement projects to help move away from ODS, and provide a forum for policy discussions. In addition, the Multilateral Fund provides resources to developing nations to promote the transition to ozone-safe technologies. The full text of the MP is available online and it is part of the OzonAction Information Clearinghouse database.

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Nanometer: a distance of one billionth of a meter

The nanometer, or nm, is a common unit used to describe wavelengths of light or other electromagnetic radiation such as UV. For example, green light has wavelengths of about 500-550 nm, while violet light has wavelengths of about 400-450 nm. One billionth is a tiny number. One foot is about one billionth the distance of 48 round-trips between Los Angeles and Washington, DC.

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Ozone: a gas composed of three atoms of oxygen

Ozone is a bluish gas that is harmful to breathe. Nearly 90% of the Earth's ozone is in the stratosphere and is referred to as the ozone layer. Ozone absorbs a band of ultraviolet radiation called UVB that is particularly harmful to living organisms. The ozone layer prevents most UVB from reaching the ground.

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Ozone-Depleting Substance(s) (ODS): a compound that contributes to stratospheric ozone depletion

ODS include CFCs, HCFCs, halons, methyl bromide, carbon tetrachloride, and methyl chloroform. ODS are generally very stable in the troposphere and only degrade under intense ultraviolet light in the stratosphere. When they break down, they release chlorine or bromine atoms, which then deplete ozone. A detailed list of class I and class II substances with their ODPs, GWPs, and CAS numbers are available.

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Ozone Depletion: Chemical destruction of the stratospheric ozone layer beyond natural reactions

Stratospheric ozone is constantly being created and destroyed through natural cycles. Various ozone-depleting substances (ODS), however, accelerate the destruction processes, resulting in lower than normal ozone levels. The science page offers much more detail on the science of ozone depletion.

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Ozone Depletion Potential (ODP): a number that refers to the amount of ozone depletion caused by a substance

The ODP is the ratio of the impact on ozone of a chemical compared to the impact of a similar mass of CFC-11. Thus, the ODP of CFC-11 is defined to be 1.0. Other CFCs and HCFCs have ODPs that range from 0.01 to 1.0. The halons have ODPs ranging up to 10. Carbon tetrachloride has an ODP of 1.2, and methyl chloroform's ODP is 0.11. HFCs have zero ODP because they do not contain chlorine.

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Ozone layer: the region of the stratosphere containing the bulk of atmospheric ozone

The ozone layer lies approximately 15-40 kilometers (10-25 miles) above the Earth's surface, in the stratosphere. Depletion of this layer by ODS will lead to higher UVB levels, which in turn will cause increased skin cancers and cataracts and potential damage to some marine organisms, plants, and plastics. The science page offers much more detail on the science of ozone depletion.

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Perfluorocarbon (PFC): a compound consisting of carbon and fluorine

PFCs have extremely high global warming potentials (GWPs) and very long lifetimes. They do not deplete stratospheric ozone, but EPA is concerned about their impact on global warming.

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Stratosphere: the region of the atmosphere above the troposphere

The stratosphere extends from about 10km to about 50km in altitude. Commercial airlines fly in the lower stratosphere. The stratosphere gets warmer at higher altitudes. In fact, this warming is caused by ozone absorbing ultraviolet radiation. Warm air remains in the upper stratosphere, and cool air remains lower, so there is much less vertical mixing in this region than in the troposphere.

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Troposphere: the region of the atmosphere closest to the Earth

The troposphere extends from the surface up to about 10 km in altitude, although this height varies with latitude. Almost all weather takes place in the troposphere. Mt. Everest, the highest mountain on Earth, is only 8.8 km high. Temperatures decrease with altitude in the troposphere. As warm air rises, it cools, falling back to Earth. This process, known as convection, means there are huge air movements that mix the troposphere very efficiently.

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UV: ultraviolet radiation

Ultraviolet radiation is a portion of the electromagnetic spectrum with wavelengths shorter than visible light. The sun produces UV, which is commonly split into three bands: UVA, UVB, and UVC. UVA is not absorbed by ozone. UVB is mostly absorbed by ozone, although some reaches the Earth. UVC is completely absorbed by ozone and normal oxygen. NASA provides more information on their web site.

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UVA: a band of ultraviolet radiation with wavelengths from 320-400 nanometers produced by the Sun

UVA is not absorbed by ozone. This band of radiation has wavelengths just shorter than visible violet light. NASA provides more information on their web site.

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UVB: a band of ultraviolet radiation with wavelengths from 280-320 nanometers produced by the Sun

UVB is a kind of ultraviolet light from the sun (and sun lamps) that has several harmful effects.particularly effective at damaging DNA. It is a cause of melanoma and other types of skin cancer. It has also been linked to damage to some materials, crops, and marine organisms. The ozone layer protects the Earth against most UVB coming from the sun. It is always important to protect oneself against UVB, even in the absence of ozone depletion, by wearing hats, sunglasses, and sunscreen. However, these precautions will become more important as ozone depletion worsens. NASA provides more information on their web site.

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UVC: a band of ultraviolet radiation with wavelengths shorter than 280 nanometers

UVC is extremely dangerous, but it is completely absorbed by ozone and normal oxygen (O2). NASA provides more information on their web site.

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Ozone Depletion Home Ozone Science Regulations Comments

Written by EPA's Stratospheric Protection Division

Last updated on June 12, 1998
http://www.epa.gov/ozone/defns.html

PRECAUTIONARY STATEMENT

HAZARDS TO HUMANS & DOMESTIC ANIMALS

Causes moderate eye irritation. Avoid contact with eyes, skin or clothing. Wash throughly with soap and water after handling.

ENVIRONMENTAL HAZARDS

Do not apply directly to water. Do not contaminate water by disposing of unused material.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

USE RESTRICTIONS: This product is a bear attack repellent which may protect users in some unexpected confrontations with bears but may not be effective in all situations or prevent all injuries. When used properly, this product is effective on all species of bears.

DIRECTIONS:

1. Remove the orange safety clip.
2. Aim at the bear's face.
3. Press down firmly, using short bursts.

For this product to be fully effective, you must engulf the bear's face, especially the eyes, nose, and mouth. This product generally has a range of approximately 25 to 30 feet. Wind and other conditions may alter the range or effectiveness. Shield your eyes and face if you must fire into the wind. Contents will cause pain and temporary impairment to eyes, nose, mouth and lungs. Individuals who suffer from asthma or emphysema may have a more severe reaction. Use with caution.

STORAGE & DISPOSAL

STORAGE: Store only in original container in a secured area inaccessible to children and pets. Do not store above 120° F or below 32° F.

DISPOSAL: Securely wrap container in several layers of newspaper and discard in trash. Contents under pressure, do not puncture or incinerate can.

309

Guard Alaska© Bear Repellent

DO NOT SEEK OUT ENCOUNTERS WITH BEARS. THIS PRODUCT IS A BEAR ATTACK REPELLENT WHICH MAY PROTECT USERS IN SOME UNEXPECTED CONFRONTATIONS WITH BEARS BUT MAY NOT BE EFFECTIVE IN ALL SITUATIONS OR PREVENT ALL INJURIES. READ THIS ENTIRE LABEL BEFORE TAKING THIS PRODUCT INTO AREAS WHERE BEAR MIGHT BE ENCOUNTERED.

ACTIVE INGREDIENT:	
Capsaicin and Related Capsaicinoids*	1.34 %
INERT INGREDIENTS	98.66 %
TOTAL	100 %

* Made from ***20% Oleoresin of Capsicum by volume***

KEEP OUT OF REACH OF CHILDREN

CAUTION: Strong, temporary irritatant to eyes, nose, and skin. Wash throughly with soap and water after handling. Do not allow children to use this product.

FIRST AID

IF IN EYES: Flush with plenty of water. Call a physician if irritation persists.
IF ON SKIN: Wash with plenty of soap and water. Get medical attention if irritation persists.

Manufactured for:

McNeil River Enterprises, Inc.

750 W Dimond, Suite 203
Anchorage, AK 99515

Chemical Emergency Hotline: 1-800-535-5053.
Open 24 hours a day, 7 days a week.

EPA EST. No. 36213-MD-002 EPA File Symbol: 71545-R

NET WEIGHT: 9 ounces

55541-2
5-12-98

Only registered bear product with Capsaicin

Counter Assault Bear Deterrent

To Deter Bears from Attacking Humans

Active Ingredient	
Capsaicin and related capsaicinoids	1.73%
Inert Ingredients	98.27%
TOTAL	100.00%

*Includes 0.71% Capsaicin and 1.02% other capsaicinoids
Derived from Oleoresin of Capsicum

KEEP OUT OF REACH OF CHILDREN

DANGER

DO NOT SEEK OUT ENCOUNTERS WITH BEARS. THIS PRODUCT IS A BEAR ATTACK DETERRENT WHICH MAY PROTECT USERS IN SOME UNEXPECTED CONFRONTATIONS WITH BEARS BUT MAY NOT BE EFFECTIVE IN ALL SITUATIONS OR PREVENT ALL INJURIES. READ THIS ENTIRE LABEL BEFORE TAKING THIS PRODUCT INTO AREAS WHERE BEARS MIGHT BE ENCOUNTERED. SEE SIDE PANELS FOR ADDITIONAL PRECAUTIONARY STATEMENTS.

Manufactured by:
Bushwacker Backpack and Supply Co. Inc.
P.O. Box 2377
Bigfork MT 59911
1-800-695-3394
(406) 837-2526

ACCEPTED
with COMMENTS
in EPA Letter Dated:
MAY 12 1998
Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 55541-2

NET CONTENTS: 10.9 fl. oz.

EPA Reg. No.:55541-

EPA Est. No.:

Counter Assault Bear Deterrent

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

DANGER. May cause irreversible eye damage if sprayed in the eye. Contact through touching or rubbing the eye may result in substantial but temporary eye injury. Strongly irritating to nose and skin. Do not get in eyes, on skin, or on clothing. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash clothing before reuse.

FIRST AID

IF IN EYES: Hold eyelids open and flush with steady, gentle stream of water for 15 minutes.

PHYSICAL OR CHEMICAL HAZARDS

Extremely flammable. Contents under pressure. Keep away from fire, sparks, and heated surfaces. Do not puncture or incinerate container. Exposure to temperatures above 130° degrees F may cause bursting.

DIRECTIONS FOR USE:

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

USE RESTRICTIONS: This product may be used only to deter bears which are attacking or appear likely to attack humans. Do not spray this product on objects, tents, or humans; such use has no deterrent effect on bears. Do not seek out encounters with bears or intentionally provoke them. Keep safety clip in place except when practicing with or using the product. Do not eat or allow to be eaten any food or feed materials which may have become contaminated with this product.

This product has a range of up to 30 feet (9 meters). The canister empties in approximately 7 seconds.

APPLICATION DIRECTIONS: Special procedures must be followed to arm the container, apply the product, and restore the safety clip to disarm the container. Before taking this product into bear country, read the directions below and familiarize yourself with these procedures. If you test-fire this container, make sure that the wind is at your back and depress actuator tab for no more than half a second. Do not test fire in areas inhabited by bears. If test fired, clean nozzle and can with soap and water to remove residue from can. If you have not used this product before, you should obtain a **Counter Assault** training can and practice with it until you can perform these activities quickly and accurately.

TO ARM: This product is designed for one hand operation. Place forefinger through hole in handle with thumb on orange safety clip tab. With thumb, pull safety clip straight back and off (fig. 1). Depress actuator tab for burst of spray (fig. 2).

fig. 1

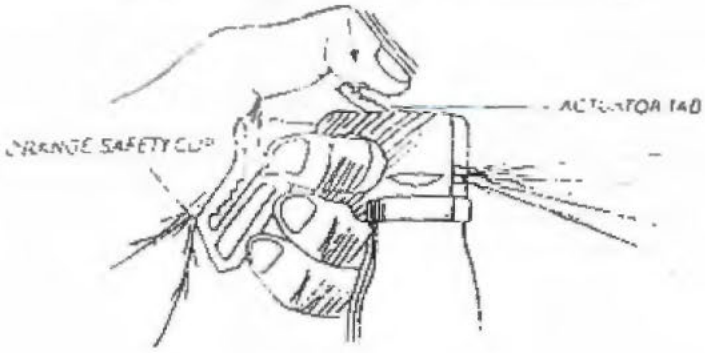

fig. 2

Aim at face and eyes of bear. Press trigger for 3 seconds, in order to create a barrier of spray between you and the bear. Stop to evaluate the impact of wind and other factors and adjust your aim if needed before spraying again.

TO DISARM: Replace orange safety clip by pushing firmly with thumb until audible "snap" is heard (fig. 3)

"SNAP" ORANGE SAFETY CLIP IN PLACE

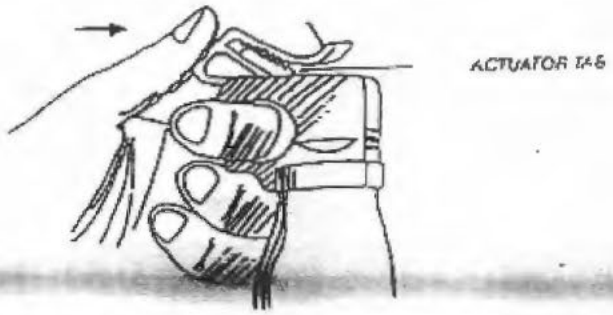

fig. 3

Check to see if safety is completely in place. No gap should be visible between actuator handle and safety clip.

STORAGE AND DISPOSAL

STORAGE: STORE IN A COOL, DRY PLACE INACCESSIBLE TO CHILDREN. Do not store in places where the temperature is above 120° F or below 32° F.

DISPOSAL: When container is empty, press valve to release all pressure. Securely wrap original container in several layers of newspaper and discard in trash. DO NOT INCINERATE OR PUNCTURE.

Made in the U.S.A.

US ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF PESTICIDES PROGRAMS
REGISTRATION DIVISION (TS-767)
WASHINGTON, DC 20460

55541-2 | MAY 12 1998

TERM OF ISSUANCE

NOTICE OF PESTICIDE: ☐ REGISTRATION ☐ REREGISTRATION

(Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended)

NAME OF PESTICIDE PRODUCT

Counter Assault Bear Deterrent

NAME AND ADDRESS OF REGISTRANT *(Include ZIP code)*

Bushwacker Backpack and Supply Co. Inc.
P.O. Box 2377
Bigfork, MT 59911

NOTE: Changes in labeling formula differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above U.S. EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby Registered/Reregistered under the Federal Insecticide, Fungicide, and Rodenticide Act.

A copy of the labeling accepted in connection with this Registration/Reregistration is returned herewith.

Registration is in no way to be construed as an indorsement or approval of this product by this Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is registered in accordance with FIFRA sec. 3(c)(5) provided that you:

A. Make the labeling changes listed below before you release the product for shipment:

1. Add the phrase, "EPA Registration No. 55541-2" to your label.
2. Under "FIRST AID", add this 2nd sentence: "Get medical attention."
3. Under use directions, change "TO ARM" to "TO ARM AND APPLY".

B. Submit one copy of your final printed labeling before you release the product for shipment. Refer to the A-79 Enclosure for a further description of final printed labeling.

This registration will be subject to cancellation in accordance with FIFRA sec. 6(e) if you do not comply with these conditions. Your release for shipment of the product constitutes acceptance of these conditions.

☑ ATTACHMENT IS APPLICABLE

SIGNATURE OF APPROVING OFFICIAL | DATE

EPA Form 8570-6 (Rev. 5-76)

This registration will be subject to cancellation in accordance with FIFRA sec. 6(e) if you do not comply with these conditions. Your release for shipment of the product constitutes acceptance of these conditions.

A stamped copy of the label is enclosed for your records.

Sincerely,

DBP

Daniel B. Peacock, Biologist
Insecticide-Rodenticide Branch
Registration Division (7504C)

Enclosures: 1) Stamped label
2) A-79 Enclosure

Peacock WP#16:A:\Capsaicin\55541-2.NOT:305-5407:5/11/98

jacket copy
71545-R

Melissa Payne
08/20/98 09:46 AM

SNAP

To: PEACOCK.DAN
cc:
Subject: 141b

specific user :
under snap

Dan,
I did some research, and [redacted] is actually not allowed for use either as a solvent or an aerosol under Section 612 of
the Clean Air Act. This information can be found on the Stratospheric Protection Division's homepage under
Regulations (I believe that the issue is addressed in the Mar. 1994 reg). On the other hand, CFC-113 can still be used
in bear repellants, due to certain exemptions. If the submitting company has any questions, please feel free to
forward my number on to them.

Substitutes & Analysis & Review Branch

"SNAP" Branch
out 8/21/98
in 8/24/98

-Melissa
Melissa Payne
Stratospheric Protection Division
Environmental Protection Agency
202-564-9738

Ben Deangelo 202-564-9295
Program Implementation Br
overall production

8/21/98 out
8/24/98 in

Tom Lance (564-9185)

Jeff Koten Branch chief
564-0135

Inert ingredient information may be entitled to confidential treatment

jacket copy
71545-R

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

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

August 20, 1998

MEMORANDUM

SUBJECT: Review of Request for Clearance of New Inert: [redacted]
Guard Alaska, 71545-R

FROM: Kerry B. Leifer, Inerts Team Leader
Minor Use, Inerts, and Emergency Response Branch
Registration Division

TO: Daniel Peacock, PM Team 4
Insecticide Branch
Registration Division

Based on a review of the information provided for [redacted] it has been determined that the use of this chemical as a new inert ingredient would be acceptable even though it [redacted] This approval for the use of [redacted] applies solely to its use in EPA File Symbol 071545-R, Guard Alaska Bear Repellent.

Inert ingredient information may be entitled to confidential treatment

Recycled/Recyclable • Printed with Vegetable Oil Based Inks on 100% Recycled Paper (40% Postconsumer)

Solvent

Ester alcoylique C7-9 benzylique
Ester, acide hexanédroïque
1,2 Éthanédiol
Éthanoate de butyle
Éthanoate de n-propyle
Éthanol
Éther acétate méthylique du propylène glycol
Éther diméthylique
Éther du propylène glycol TPM
Éther méthylique du propylène glycol
Éther méthylique du tripropylène glycol
Éther mono butylique de l'éthylène glycol
Éther monométhylique du dipropylène glycol
Éthoxydiglycol
Éthoxylate de phénol alcoylique
3-Éthoxy
Éthyl Carbinol
2-Éthyle hexanol
Éthylène glycol
Éthylène glycol inhibé
2,2 Éthylènedioxyéthanol
Exameen 2125,3500,3580 (ammonium quaternaire) n°10

F

Flexol EP8 (huile de fève de soya époxydé) n°33
Fluorure de sodium
Fluosilicate de sodium
Flux de galvanisation
Forane 141B (HCFC) n°21
Formate de sodium
Formaldéhyde
Formaline

G

Gel de silice
Gluconate de sodium
Glycols
Glycérine

H

Heptane
2-Heptanone
Hexafluosilicate de sodium
Hexaméthaphosphate de sodium
Hexaméthylènetétramine
Hexane
Hexone
Hexylène glycol
Hi-sils (oxyde de silice) n°27
**** Hi-sols 1510 n°07***
Huile de base 50 n°29
Huile de copra (noix de coco)

1995

[redacted]

Evaluates the carcinogenic risk to humans posed by occupational exposure to mists and vapours from strong inorganic acids and by other industrial chemicals. The volume features six monographs covering occupational exposures to mists and vapours from sulfuric acid and other strong inorganic acids; sulfur dioxide and some sulfites, bisulfites, and metabisulfites; hydrochloric acid; diethyl sulfate; diisopropyl sulfate, and 1,3-butadiene.

In the first and most extensive monograph, evaluations draw upon numerous studies of occupational exposures in industries where the use of strong inorganic acids is particularly heavy. These include the manufacture of isopropanol, synthetic ethanol, phosphate fertilizers, lead batteries, soap and detergents, sulfuric acid, and nitric acid, and industries involving pickling and other acid treatment of metals. Studies of occupational exposure have demonstrated an excess of nasal sinus cancer, laryngeal cancer, and lung cancer. In all studies considered, sulfuric acid mists were the most common exposure. On the basis of these data, the monograph concludes that occupational exposure to strong-inorganic-acid mists containing sulfuric acid is carcinogenic to humans.

Concerning the other industrial chemicals evaluated in this volume, 1,3-butadiene and diethyl sulfate were classified as probably carcinogenic to humans. Diisopropyl sulfate was classified as possibly carcinogenic to humans. Sulfur dioxide, sulfites, bisulfites, metabisulfites, and hydrochloric acid could not be classified on the basis of currently available data.

Partially Halogenated Chlorofluorocarbons (Ethane Derivatives)

Environmental Health Criteria, No. 139
1992, 130 pages [E, with summaries in F, S]
ISBN 92 4 157139 X; order no. 1160139
Sw.fr. 29.-/US $26.10; in developing countries: Sw.fr. 20.30

1-800-

Evaluates the environmental behaviour, toxicity, and ozone-depleting and global-warming potentials of six partially halogenated ethane derivatives selected as candidates to replace the fifteen fully halogenated chlorofluorocarbons that are being phased out in line with the provisions of the Montreal Protocol on Substances that Deplete the Ozone Layer. The compounds considered are 1,1-dichloro-1-fluoroethane (HCFC 141b), 1-chloro1,1-difluoroethane (HCFC 142b), 1,2-dichloro-1,1-difluoroethane (HCFC 132b), 1-chloro-2,2,2-trifluoroethane (HCFC 133a), 1,1-dichloro-2,2,2-trifluoroethane (HCFC 123), and 1-chloro-1,2,2,2-tetrafluoroethane (HCFC 124).

All compounds were judged to have ozone-depleting and global-warming potentials considerably lower than those of CFC 11, the fully halogenated chlorofluorocarbon with the highest ozone-depleting and global-warming potential. Estimated atmospheric lifetimes range from 1.6 years for HCFC 123 to 19.1 years for HCFC 142b.

Because studies of HCFC 132b and HCFC 133a have documented a number of toxic effects, these compounds could not be recommended as substitutes. Since the toxicity of HCFC 142b is low and the ozone-depleting and global-warming potentials are lower than those of the fully halogenated chlorofluorocarbons, the report concludes that HCFC 142b can be considered as a transient substitute for the chlorofluorocarbons included in the Montreal Protocol. In view of the paucity of toxicological data on HCFC 141b, HCFC 123, and HCFC 125, no evaluation of their potential effects on human health could be made.

RA-565.A1 E63#126

Partially Halogenated Chlorofluorocarbons (Methane Derivatives)

1-800-688-9889

Environmental Health Criteria, No. 126
1991, 97 pages [E, with summaries in F, S]
ISBN 92 4 157126 8; Order no. 1160126
Sw.fr. 21.-/US $18.90; in developing countries: Sw.fr. 14.70

1-800-896 1996

Jeff Cohen 202-564-0135 Sue Sanderback voice mail Ben Deangelo 202-564-9295

Bill Thomas not in this ate Stratospheric Protection Division 202-565-2665 Gen'l 564-9101

Inert ingredient information may be entitled to confidential treatment

Evaluates the risks to human health and the environment posed by two partially halogenated chlorofluorocarbons: dichlorofluoromethane (HCFC 21) and chlorodifluoromethane (HCFC 22). These two methane derivatives were selected for evaluation because of their potential use as substitutes for those fully halogenated chlorofluorocarbons that are being phased out as a result of the 1987 Montreal Protocol on Substances that Deplete the Ozone Layer. The evaluation is intended to assist industry in its urgent search for acceptable substitute chemicals, most notably for use as refrigerants, as propellants in aerosols, and as blowing agents for the production of polystyrene. While data on human toxicity are thoroughly reviewed, the greatest challenge is to find the most accurate models for predicting levels of release to the environment and estimating the potential of these chemicals to deplete the ozone layer.

Because HCFC 21 is no longer produced for any commercial purposes, most data assessed come from studies of HCFC 22. Current environmental levels of both chemicals are judged to be extremely low and highly unlikely to cause direct effects on human health. A review of models for estimating atmospheric residence times and routes of transport to the stratosphere concludes that the ozone-depleting potential of both chemicals is considerably lower than that of the fully halogenated chlorofluorocarbons. While HCFC 21 has the advantage of a much shorter tropospheric lifetime, studies have linked exposure to liver damage. Concerning the toxicity of HCFC 22, evidence from the vast majority of studies is reassuring. The report concludes that HCFC 22 is an acceptable transient substitute for the chlorofluorocarbons included in the Montreal Protocol. HCFC 21 could not be recommended due to its potential toxic effects on the liver.

Permethrin

Environmental Health Criteria, No. 94
1990, 125 pages [E]
ISBN 92 4 154294 2; Order no. 1160094
Sw.fr. 24.-/US $21.60; in developing countries: Sw.fr. 16.80

Evaluates the design and findings of over 250 studies concerned with the effects on human health and the environment posed by permethrin, a photostable synthetic pyrethroid insecticide marketed since 1977. Because of its strong repellent properties and effectiveness as a stomach and contact insecticide, perme-thrin is widely used in the protection of several agricultural crops, in the control of insects in households and on cattle, in aerial application for forest pest control, as a fog in mushroom houses, and as a wood preservative. Public health applications include the disinsection of aircraft, treatment of mosquito nets, and human lice control.

In view of the uses of permethrin and its photostable properties, a section devoted to sources of human exposure concentrates on the large number of studies investigating residues in fruits, vegetables, dairy milk, and grains. Findings from laboratory studies, indicating that permethrin is highly toxic to certain beneficial insects and natural enemies of pests, are contrasted with field investigations demonstrating the transitory nature of most toxic and repellent effects on non-target species.

The most extensive section reviews the findings of experimental studies conducted to assess toxicity. Particular attention is given to differences in study design, dose, and mode of administration that can affect the validity of findings when extrapolated to humans. The final section draws upon a limited number of occupational and clinical studies to evaluate direct evidence of adverse effects on health.

On the basis of this review, the book concludes that most toxic effects are transitory, that the likelihood of carcinogenic effects in humans is extremely low or non-existent, and that permethrin, when used as recommended, is not likely to present a hazard to the general public, exposed workers, or the environment.

Peroxisome Proliferation and Its Role in Carcinogenesis

FACSIMILE COVER PAGE

8-19-98

To : Dan Peacock
From : Catherine B. Rice
Sent : 8/19/98 at 9:30:36 AM
Pages : 7 (including Cover)
Subject FW:

Dear Dan:

Attached is the MSDS on [redacted]

Please call me if you have any questions at 703-847-7407.

Sincerely,
Cathy Rice

No info in MSDS on this chemicals ozone-depleting potential of this ingredient

Thesis 8/19/98
submission

Rec
8-19-98
submission

Inert ingredient information may be entitled to confidential treatment

Pages 321-326 Product ingredient source information may be entitled to confidential treatment

DP BARCODE: D248598

(NEED BY MONDAY 8/24/98)

CASE: 062589 DATA PACKAGE RECORD DATE: 08/19/98
SUBMISSION: S547533 BEAN SHEET Page 1 of 2

* * * CASE/SUBMISSION INFORMATION * * *

CASE TYPE: REGISTRATION ACTION: 161 RESB NEW PROD-"ME TOO"
RANKING : 5 POINTS ()
CHEMICALS: 070701 Capsaicin (in oleoresin of capsicum) 1.3400%

ID#: 071545-R Guard Alaska Bear Repellent
COMPANY: 071545 MCNEIL RIVER ENTERPRISES, INC.
PRODUCT MANAGER: 04 TINA LEVINE 703-308-7055 ROOM: CM2 219
PM TEAM REVIEWER: DANIEL PEACOCK 703-305-5407 ROOM: CM2 221
RECEIVED DATE: 08/19/98 DUE OUT DATE: 11/17/98

* * * DATA PACKAGE INFORMATION * * *

DP BARCODE: 248598 EXPEDITE: Y DATE SENT: 08/19/98 DATE RET.: 8/20/98
CHEMICAL: 070701 Capsaicin (in oleoresin of capsicum)
DP TYPE: 001
CSF: Y LABEL: Y

ASSIGNED TO	DATE IN	DATE OUT	ADMIN DUE DATE: 10/03/98
DIV : RD	/ /	/ /	NEGOT DATE: / /
BRAN: MUIERB	/ /	/ /	PROJ DATE: / /
SECT: PM05	/ /	/ /	
REVR : KLEIFER	/ /	/ /	
CONTR:	/ /	/ /	

* * * DATA REVIEW INSTRUCTIONS * * *

Kerry Leifer,

Subject: Clearance of New Inert: [redacted]
Guard Alaska, 71545-R

Kerry,

Please review this new inert ingredient that has been proposed for this bear-deterrent product. I need an expedite because they Agency will issue a public notice on its new policy for encouraging the use of registered bear-deterrent products. We need to be able to decide Monday (8/24) if this will be registered.

Here are the documents for review:

1. MSDS (requested by chemist in 7/30/98 review by Al Smith)
2. copy of chemist review of 7/30/98
3. Summary of WHO publication (EHC 126) I got this off internet
4. Copy of WHO publication (EHC 126) which summarized information on [redacted] (1991). I got this from

Inert ingredient information may be entitled to confidential treatment

* * * DATA REVIEW INSTRUCTIONS * * *

the EPA library.
5. CSF
6. Label

I will be out thur (8/20) and in 8/21 (Friday). Please call if you have questions.

I need to know:

1. if the inert can be clear for this non-food use
2. if any additional data are needed
3. if there are any restriction on this use

[According to Melissa Payne (202-564-9738), she thinks that [redacted] is scheduled for phase out 1/1/2003, but she does not have any objection to its use in the interim. She will check on this initial view and get back to me by Friday.]

Dan Peacock, 305-5407

* * * DATA PACKAGE EVALUATION * * *

No evaluation is written for this data package

* * * ADDITIONAL DATA PACKAGES FOR THIS SUBMISSION * * *

DP BC	BRANCH/SECTION	DATE OUT	DUE BACK	INS	CSF	LABEL

Inert ingredient information may be entitled to confidential treatment

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

OFFICE OF PREVENTION,
PESTICIDES AND TOXIC SUBSTANCES

03/AUG/1998

MEMORANDUM

Subject: EPA Reg. No: 71545-R Guard Alaska Bear Repellent
DP Barcodes: D247869
Case No: 062589

From: Masih Hashim, Toxicologist MH
Technical Review Branch SCR
Registration Division (7505C)

To: Daniel Peacock, PM Team 04
Insecticide Rodenticide Branch
Registration Division (7505C)

Applicant: McNeil River Enterprises
750 West Diamond, Suite 203
Anchorage, AK 99515

FORMULATION FROM LABEL:

Active Ingredient(s):	% by wt.
Capsaicin	1.34
Inert Ingredient(s	98.66
Total:	100.00

Note: This memorandum supersedes the previous one issued on July 28, 1998.

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

OFFICE OF PREVENTION,
PESTICIDES AND TOXIC SUBSTANCES

03/AUG/1998

MEMORANDUM

Subject: EPA Reg. No: 71545-R Guard Alaska Bear Repellent
DP Barcodes: D247869
Case No: 062589

From: Masih Hashim, Toxicologist
Technical Review Branch
Registration Division (7505C)

To: Daniel Peacock, PM Team 04
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Applicant: McNeil River Enterprises
750 West Diamond, Suite 203
Anchorage, AK 99515

FORMULATION FROM LABEL:

Active Ingredient(s):	% by wt.
Capsaicin	1.34
Inert Ingredient(s	98.66
Total:	100.00

Note: This memorandum supersede the previous one issued on July 28, 1998.

BACKGROUND: McNeil River Enterprises has submitted an eye irritation study and a dermal irritation study in support of registration for Guard Alaska Bear Repellent, File Symbol 71545-R. These studies were conducted at the MB Research Laboratories, Spinnerstown, PA, with the MRID numbers 445998-08 and 445998-09. According to Appendix B of the Capsicum Registration Eligibility Decision (RED) document[a] acute toxicology for oral, dermal, inhalation, and dermal sensitization has been waived. Additional information provided by the PM Team 04 (D241274 and D241288 dated 1-20-98) has been reviewed in revising this memo.

RECOMMENDATIONS: Each of the two studies is acceptable in accordance with the Sub-Division F guidelines. However, based on the potential for physical and chemical hazard of the product (memo 1-20-98) we revise and classify the product into category I for eye toxicity.

The tox profile for the File Symbol # 71545-R is as follows:

acute oral toxicity	-	waived- a, 152-10 (McNeil River Document)
acute dermal toxicity	-	waived- a, 152-11
acute inhalation toxicity	-	waived- a, 152-12
primary eye irritation	I	acceptable
primary skin irritation	IV	acceptable
dermal sensitization	-	waived- a, 152-15

LABELING:

ID #: 071545-00001 Guard Alaska Bear Repellent

RESTRICTED USE CLASSIFICATION RECOMMENDED:

Due to eye irritation toxicity category.

The PM Team should decide if restricted use classification is necessary or if alternative labeling will allay the requirement for restricted use classification.

SIGNAL WORD: DANGER PELIGRO

PRECAUTIONARY STATEMENTS:

Corrosive. Causes irreversible eye damage. Do not get in eyes or on clothing. Wear long-sleeved shirt and long pants, socks and shoes and goggles or face shield. Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove contaminated clothing and wash clothing before reuse.

STATEMENT OF PRACTICAL TREATMENT (SOPT):

IF SWALLOWED: Call a physician or Poison Control Center. Do not induce vomiting. Drink promptly a large quantity of milk, egg whites, gelatin solution, or if these are not available, drink large quantities of water. Avoid alcohol.

IF IN EYES: Hold eyelids open and flush with steady, gentle stream of water for 15 minutes. Get medical attention.

NOTE TO PHYSICIAN:

The proposed label should contain a Note to Physicians. Some suggested types of information include the following:

- technical information on symptomatology;
- use of supportive treatments to maintain life functions;
- medicine that will counteract the specific physiological effects of the pesticide;
- company telephone number to specific medical personnel who can provide specialized medical advice.

Probable mucosal damage may contraindicate the use of gastric lavage.

DATA REVIEW FOR PRIMARY EYE IRRITATION TESTING (§81-4, 870.2400)

Product Manager: 04
MRID No.: 445998-08

Reviewer: M Hashim
Study Completion Date: 7-1-98
Project No.: MB 98-6784.04

Testing Facility: MB Research
Author: D Cerven

Quality Assurance (40 CFR §160.12): Included

Test Material: Guard Alaska, Lot #0638560
Dosage: 0.1 mL (undiluted)
Species: Rabbits; Albino, New Zealand White
Age: Adult
Weight: 2.0-2.7 kg
Source: Ace Animals, Boyertown, PA

Conclusion:

1. **Toxicity Category:** III (changfed to category I)
2. **Classification**: Acceptable

Procedure (Deviations from §81-4): None

Observations	Number "positive"/number tested									
	Hours				Days					
	1	24	48	72	4	7	10	14	17	21
	Unwashed eyes									
Corneal Opacity	0/6	1/6	0/6	0/6	0/6	0/6	-	-	-	-
Iritis	4/6	1/6	0/6	0/6	0/6	0/6	-	-	-	-
Conjunctivae:										
Redness	6/6	5/6	2/6	0/6	0/6	0/6	-	-	-	-
Chemosis	6/6	3/6	0/6	0/6	0/6	0/6	-	-	-	-
Discharge	6/6	6/6	1/6	0/6	0/6	0/6	-	-	-	-

Summary: The eye irritation cleared before the 7th day. The test article is a mild irritant at category III.

Diarrhea was noted in one animals, it may not be related to the test, sometimes it is due to mild coccidial infection.

5

DATA REVIEW FOR PRIMARY DERMAL IRRITATION TESTING (§81-5, 870.2500)

Product Manager: 04
MRID No.: 445998-09

Reviewer: M Hashim
Study Completion Date: 7-2-98
Study No.: Mb 98-6784.03

Testing Facility: MB Research Labs
Author: L Kieffer

Quality Assurance (40 CFR §160.12): Included

Test Material: Guard Alaska Bear Repellent
Dosage: 0.5 mL
Species: Rabbits: Albino, New Zealand White
Age: Adult
Weight: 2.2-2.3 kg
Source: Ace Animals, Boyerstown, PA

Conclusion:

1. **Toxicity Category:**
2. **Classification**: Acceptable

Procedure (Deviations from §81-5): None

Results: PDIS = 0.59.
Special Comments: Slight erythema was seen up to 48 hrs, then none to well defined erythema from 3-7 days, clearing by 14th day. Edema was generally slight through day 7, clearing by day 14. The test article was **Slight irritant** at 72 hrs.

ACUTE TOX ONE-LINERS

1. **DP BARCODE:** D247869
2. **PC CODE(s):** 070701
3. **CURRENT DATE:** July 27, 1998
4. **TEST MATERIAL:** Guard Alaska Bear Repellent

Capsaicin 1.34 %

Study/Species/Lab Study #/Date	MRID	Results	Tox Cat.	Core Grade
eye irritation study/rabbit/ MB Research/MB 98-6784.03/ 7-2-98	445998-09	severe ocular irritant	I	A
primary dermal irritation/ rabbit/ MB Research/ MB 98-6784.03/ 7-2-98	445998-09	mild irritant	IV	A

Core Grade Key: A =Acceptable, S = Supplementary, U = Unacceptable, V = Self Validated

Author: Dan Peacock at DCOPP2
Date: 7/30/1998 1:00 PM
Priority: Normal
Receipt Requested
TO: Masih Hashim
CC: JOHN REDDEN
CC: Dan Peacock
CC: TINA LEVINE at X400
Subject: Pre Labeling for Guard Alaska Bear Repellent, 71545-R

---------- Message Contents ----------

Masih,

Thank you for your quick review of the acute toxicity data (MRID No. 445998-08 & -09) for this product.

I have returned the package to you so that you could adjust the precautionary labeling to reflect the fact that the product is "DANGER" because of the physical damage that would be assumed to occur if the test had been run according to the standard EPA guideline protocol (81-4), which requires aerosol products like this one to be sprayed directly into the eyes at 10 cm.

Bear-Attack products like Guard Alaska (71545-R) and Counter Assault (55541-2) are capable of projecting a stream of product 20 to 30 feet away. The pressure needed to produce such distances will readily blow paper away. Therefore, registrants of these types of products will concede the physical damage and test the product for its chemical irritation only.

On May 12, 1998, IRB registered a similar bear-attack product (Counter Assault, 55541-2) containing the same active in Guard Alaska, Capsaicin. As you can see from the toxicity study and the label, we:

1. assigned the signal word, "DANGER" to that product and

2. described the physical and chemical hazards of the product separately.

I would like you to revise your suggested precautionary statements to reflect the special situation for this product, which was done for the earlier product.

Thank you again for your quick review. If you have any questions, please contact me.

Dan Peacock, 305-5407

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

OFFICE OF PREVENTION,
PESTICIDES AND TOXIC SUBSTANCES

28/JUL/1998

MEMORANDUM

Subject: EPA Reg. No: 71545-R Guard Alaska Bear Repellent
DP Barcodes: D247869
Case No: 062589

From: Masih Hashim, Toxicologist MH
Technical Review Branch JCR
Registration Division (7505C)

To: Daniel Peacock, PM Team 04
Insecticide Rodenticide Branch
Registration Division (7505C)

Applicant: McNeil River Enterprises
750 West Diamond, Suite 203
Anchorage, AK 99515

FORMULATION FROM LABEL:

Active Ingredient(s):	% by wt.
Capsaicin	1.34
Inert Ingredient(s	98.66
Total:	100.00

BACKGROUND: McNeil River Enterprises has submitted an eye irritation study and a dermal irritation study in support of registration for Guard Alaska Bear Repellent, File Symbol 71545-R. These studies were conducted at the MB Research Laboratories, Spinnerstown, PA, with the MRID numbers 445998-08 and 445998-09. According to Appendix B of the Capsicum Registration Eligibility Decision (RED) document" acute toxicology for oral, dermal, inhalation, and dermal sensitization has been waived.

RECOMMENDATIONS: Each of the two studies is acceptable in accordance with the Sub-Division F guidelines. The tox profile for the File Symbol # 71545-R is as follows:

acute oral toxicity	-	waived- a, 152-10 (McNeil River Document)
acute dermal toxicity	-	waived- a, 152-11
acute inhalation toxicity	-	waived- a, 152-12
primary eye irritation	III	acceptable
primary skin irritation	IV	acceptable
dermal sensitization	-	waived- a, 152-15

LABELING:

ID #: 071545-00001 Guard Alaska Bear Repellent

SIGNAL WORD: CAUTION

PRECAUTIONARY STATEMENTS:

Causes moderate eye irritation. Avoid contact with eyes or clothing. Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.

STATEMENT OF PRACTICAL TREATMENT (SOPT):

IF IN EYES: Flush eyes with plenty of water. Call a physician if irritation persists.

3

DATA REVIEW FOR PRIMARY EYE IRRITATION TESTING (§81-4, 870.2400)

Product Manager: 04
MRID No.: 445998-08

Reviewer: M Hashim
Study Completion Date: 7-1-98
Project No.: MB 98-6784.04

Testing Facility: MB Research
Author: D Cerven

Quality Assurance (40 CFR §160.12): Included

Test Material: Guard Alaska, Lot #0638560
Dosage: 0.1 mL (undiluted)
Species: Rabbits; Albino, New Zealand White
Age: Adult
Weight: 2.0-2.7 kg
Source: Ace Animals, Boyertown, PA

Conclusion:

1. **Toxicity Category:** III
2. **Classification**: Acceptable

Procedure (Deviations from §81-4): None

Observations	Number "positive"/number tested									
	Hours				Days					
	1	24	48	72	4	7	10	14	17	21
	Unwashed eyes									
Corneal Opacity	0/6	1/6	0/6	0/6	0/6	0/6	-	-	-	-
Iritis	4/6	1/6	0/6	0/6	0/6	0/6	-	-	-	-
Conjunctivae:										
Redness	6/6	5/6	2/6	0/6	0/6	0/6	-	-	-	-
Chemosis	6/6	3/6	0/6	0/6	0/6	0/6	-	-	-	-
Discharge	6/6	6/6	1/6	0/6	0/6	0/6	-	-	-	-

Summary: The eye irritation cleared before the 7th day. The test article is a mild irritant at category III.

Diarrhea was noted in one animals, it may not be related to the test, sometimes it is due to mild coccidial infection.

DATA REVIEW FOR PRIMARY DERMAL IRRITATION TESTING (§81-5, 870.2500)

Product Manager: 04
MRID No.: 445998-09

Reviewer: M Hashim
Study Completion Date: 7-2-98
Study No.: Mb 98-6784 03

Testing Facility: MB Research Labs
Author: L Kieffer

Quality Assurance (40 CFR §160.12): Included

Test Material: Guard Alaska Bear Repellent
Dosage: 0.5 mL
Species: Rabbits, Albino, New Zealand White
Age: Adult
Weight: 2.2-2.3 kg
Source: Ace Animals, Boyerstown, PA

Conclusion:

1. **Toxicity Category:**
2. **Classification:** Acceptable

Procedure (Deviations from §81-5): None

Results: PDS = 0.59.
Special Comments: Slight erythema was seen up to 48 hrs, then none to well defined erythema from 3-7 days, clearing by 14th day. Edema was generally slight through day 7, clearing by day 14. The test article was **Slight irritant** at 72 hrs.

5

ACUTE TOX ONE-LINERS

1. **DP BARCODE:** D247869
2. **PC CODE(s):** 070701
3. **CURRENT DATE:** July 27, 1998
4. **TEST MATERIAL:** Guard Alaska Bear Repellent

Capsaicin 1.34 %

Study/Species/Lab Study #/Date	MRID	Results	Tox Cat.	Core Grade
eye irritation study/rabbit/ MB Research/MB 98-6784.03/ 7-2-98	445998-09	mild ocular irritant	III	A
primary dermal irritation/ rabbit/ MB Research/ MB 98-6784.03/ 7-2-98	445998-09	mild irritant	IV	A

Core Grade Key: A =Acceptable, S = Supplementary, U = Unacceptable, V = Self Validated

DATE O 30 July 1998

SUBJECT: **EP [x] MP [ ] PRODUCT CHEMISTRY REVIEW**
DP BARCODE No.: D247868 **REG./File Symbol No.:** 71545-R
PROUCT NAME Guard Alaska Bear Repellent
COMPANY McNeil River Enterprises, Inc.

as

FROM: Alfred Smith, Chemist
Technical Review Branch/RD (7505C)

TO: Daniel Peacock, PM Team 04
Insecticide Branch/RD (7505C)

INTRODUCTION

The Applicant requests that the End-Use Product (EP), Guard Alaska Bear Repellent, be registered. Product Chemistry studies and Labelling are submitted in support of the registration.

FINDINGS

The Label meets the requirements of 40 CFR 156.10 with respect to the Ingredient statement and the Storage and Disposal statements.

The product chemistry studies satisfy the requirements of 40 CFR 158.155 - 158.190 for the EP.

An inert ingredient in the EP is not cleared for use in formulated products. (See the Confidential Appendix for the identity of the inert ingredient.)

CONCLUSIONS

The inert ingredient discussed above must be cleared for use in the formulated product. The Applicant must provide the chemical identity of the components of the inert ingredient, the percentage composition of each component, the CAS Registry Number, and Material Safety Data Sheets (MSDS). The supplier may contact the EPA directly referencing the File Symbol or EPA Registration Number in the response.

EP [x] MP [ ] PRODUCT CHEMISTRY REVIEW

1. DP BARCODE No.: D247868 2. Reg./File Symbol No.: 71545-R

3. Registration [x] 4. Reregistration [ ], Rereg Case No._____

5. Product Name: Guard Alaska Bear Repellent

6. Pesticide Type: Fungicide [ ] Herbicide [ ]
Insecticide [ ] Rodenticide [ ] Antimicrobial [ ]
Plant Growth Regulator [ ] Others: Repellent

7. Uses: Food [ ] Non food use [x]

8. Type of Submission: New [x] Resubmission [ ] Amendment [ ]
"ME-TOO" [ ] Alternate Formulation [ ] Repack [ ]
Experimental Use Permit [ ] Other (Specify)_____

9. If "Me-TOO" Registration, this product is [ ] is not [ ]
similar or substantially similar to EPA's Reg. No.:_____,

If not, comment in Confidential Appendix A on the differences between the registered and the new source where significant.

CONFIDENTIAL STATEMENT OF FORMULA, DATED 07/ 09/1998 :

10. Type of formulation and the sources of active ingredients:

a. Non integrated formulation system.....[ ]

b. Are all technical grade active ingredients used registered? • yes [ ] • no [ ]

c. Integrated formulation system..... .....[ ]

11. Composition: The nominal concentrations (NC) of the active ingredients and the upper and lower certified limits (UCL & LCL) are as follows:

Active ingredient(s)	% by weight NC	UCL	LCL
Oleoresin of Capsicum*	20	21	19
*Capsaicin and Related Capsaicinoids	1.34	1.41	1.27

12. The calculated NCs, based on the pure active ingredients (PAI), are identical to those on the label:

• yes [x] • no [ ]

13. The certified limits are within the standard limits as per 40CFR§158.175 or are adequately explained if different:

• yes [x] • no [ ]

14. Clearance of intentionally added ingredients in the formulation for the intended use:

a. Formulation intended for food use under 40CFR§180.1001:

• yes [ ] • no [ ] • Some are cleared, others are not [ ]

• Cleared under list: • c [ ] • d [ ] • e [ ]

b. Formulation intended for non-food use:

• yes [ ] • no [ ] • Some are cleared, others are not [x]

15. For products produced by an integrated formulation system:

- All impurities of toxicological significance have an UCL:

  • yes [ ] • no [ ] • not applicable [x]

- All other impurities > 0.1% associated with the active ingredient in the product are reported at their nominal concentrations:

  • yes [ ] • no [ ] • not applicable [x]

PRODUCT LABEL, EPA RECEIVED 07/ 13/1998 :

16. The active ingredients statement (chemical identities, nominal concentrations) is consistent with the CSF • yes [x] • no [ ]

17. The formulation contains one of the following:

- 10% or more of a petroleum distillate: • yes [ ] •no [x]
- 1% or more of methyl alcohol: • yes [ ] •no [x]
- sodium nitrite at any level: • yes [ ] •no [x]

- a toxic List 1 inert at any level: • yes [ ] •no [x]
- arsenic in any form: • yes [ ] •no [x]

18. If yes to any of the above, does the inert ingredients statement contains a footnote indicating this?

• yes [ ] • no [ ] • not applicable [ ]

19. The appropriate physical and chemical hazards statement regarding flammability or explosive characteristics of the product are given on the label:

• yes [ ] • no [ ] • not applicable [x]

20. The storage and disposal instructions for the pesticide and container are in compliance with PR Notice 84-1 for household use products or PR Notice 83-3 for all other uses:

• yes [x] • no [ ]

PRODUCT CHEMISTRY DATA (SERIES 830.0000)

21. Chemical IDs/Manufacture/ Analytical Information		Data Required Fulfilled	MRID No.
830.1550	Chemical Identity	Y	44599801
830.1600 830.1650	Starting Materials Formulation Process	Y	" "
830.1670	Discussion of Impurities	Y	44599802
830.1700	Preliminary Analysis	Y	44599803
830.1750	Certified Limits	Y	CSF
830.1800	Enforcement Analytical Method	Y	44599804

PRODUCT CHEMISTRY DATA (SERIES 830.0000)

24. Physical/Chemical Properties	Data Required Fulfilled	Value or Qualitative Description	MRID No.
830.6303 Physical State	Y	Liquid	44599805
830.7300 Density/Bulk Density	Y	1.167 (24 C)	" "
830.7000 pH of Product	Y	4.84	" "
830.6315 Flash Point	NA		
830.6315 Flame Extension	NA		
830.6316 Explodability	NA		
830.6317 Storage Stability	Y	None noted	44599807
830.7100 Viscosity	Y	14.2 mPa	44599805
830.6319 Miscibility (With Hydrocarbon solvents)	NA		
830.6320 Corrosion Characteristics	Y	None noted	44599807
830.6321 Dielectric Breakdown Voltage	NA		

Explanations: Y = The Requirements Were Fulfilled; N = The Requirements Were Not Fulfilled; NA = Not Applicable; G = Data Gap; U = Requires Upgrading; I = Incomplete or In Progress; W = Waived.

CONFIDENTIAL APPENDIX

EP [x] MP [ ] PRODUCT CHEMISTRY REVIEW

BARCODE No.: D247868 **REG./File Symbol No.:** 71545-R
PRODUCT NAME: Guard Alaska Bear Repellent
Reviewer: Alfred Smith **Company:** McNeil River Enterprises, Inc.

The inert ingredient, [redacted] is not cleared for use in formulated products. The Applicant should submit information on the chemical identity of the components of the ingredient along with each CAS Number and percentage composition. This inert ingredient comprises [redacted] of the formulated product.

Inert ingredient information may be entitled to confidential treatment

IRB BRANCH REVIEW - TSS

Record Number(s)

D247871
D248196

7/27/98
8/6/98 8/17/98
IN OUT

EFFICACY

FILE OR REG. NO. 71545-R

PETITION OR EXP. PERMIT NO.

DATE DIV. RECEIVED 7/13/98, 8/5/98

DATE OF SUBMISSION 7/9/98, 8/4/98

DATE SUBMISSION ACCEPTED 7/23/98, 8/6/98

TYPE PRODUCTS(S): I, D, H, F, N, R, S

DATA ACCESSION NO(S). none

PRODUCT MGR. NO. 04

PRODUCT NAME(S) GUARD ALASKA BEAR REPELLENT

COMPANY NAME McNeill River Enterprises, Inc.

SUBMISSION PURPOSE registration

CHEMICAL & FORMULATION 1.34% Capsaicin and other Capsaicinoids aerosol

Efficacy Review: GUARD ALASKA® BEAR REPELLENT, 71545 R
McNeill River Enterprises, Inc.
Anchorage, AK 99515

200.0 INTRODUCTION

200.1 Uses

1.34% "Capsaicin and Related Capsaicinoids" ("Made from ***20% Oleoresin of Capsicum by volume***") aerosol proposed for Federal registration as a "bear attack repellent" to protect humans from attacks by bears.

200.2 Background Information

See efficacy review of 12/29/97 of a pre-application submission (CORR. 289443) pertaining to this product.

This review discusses portions of McNeill River's submission of 7/9/98, which was their initial application for registration of this product. The only items in that submission which relate to efficacy are the brief cover letter, a reference to materials submitted in 1997, the Confidential Statement of Formula (CSF), and the proposed label.

This review also discusses McNeill River's submission of 8/4/98 which includes a report on the spray pattern produced by this product. That submission was requested of McNeill River via EPA's letter of 7/27/98. IRB staffer Daniel Peacock has had many less formal contacts with the GUARD ALASKA people. These contacts have been for the purpose of providing information that would elicit rapid and appropriate submissions by the applicant.

Like dog-attack repellents, bear-attack repellents are considered to be pesticides. Because unmitigated attacks by bears could result in severe injury including loss of human life, repelling attacking bears is considered to be a public-health use pattern which must be supported by efficacy data.

Due to unfortunate events and circumstances detailed in my review of 12/29/97, unregistered bear-attack repellents have been sold illegally in the U.S. for roughly two decades. An enforcement action against at least one such product was

initiated in 1993 by the Alaska Department of Natural Resources. After EPA and a some Congress people became involved, the Agency gave bear repellents an official wink (*a la* "enforcement discretion") for a period of one year to permit the products to stay on the market while their producers attempted to get them registered. That year was up in 1994; but only two bear repellents have been registered in the U.S. -- one *Capsicum*-based product and a product claimed to smell like the odor of a scenting skunk.

Unregistered bear-repellent products should be registered or removed from the market. The unregistered products are poorly labeled in several ways. We also have recently learned that prophylactic applications (i.e., superstitious misuse) of Capsaicin products to campsite items (tents, tarps, bedding etc.) and clothing sometimes attract bears, even to the point of enticing them to roll on the treated articles. As such behavior is opposite to what is desired for a bear repellent, it is important that labels for bear-attack repellents prohibit prophylactic applications and to indicate why they are a really bad idea. Through the registration process, we can make sure that labels for these products bear appropriate text which indicates that product effectiveness is situation-specific.

One of the submissions discussed in the efficacy review of 12/29/97 consisted of a short letter and a videotape which, among other things, demonstrated a single use of the GUARD ALASKA product. The second submission included a report which summarized results of field trials of Capsaicin-based bear repellents. I have placed a copy of the efficacy review of 12/29/97 in the jacket for 71545-R.

201.0 DATA SUMMARY

The CSF included with the application of 7/9/98 describes a liquid aerosol formulation that is nominally 20% "Oleoresin of Capsicum" and, as a result, 1.34% "Capsaicin and Related Compounds". At such a claimed level of active ingredients, this product should be very irritating to the eyes and perhaps other sensitive epithelial tissues. For personal protection from the bear and the product, the user's aim must be true and not directed into strong headwinds.

The report "Spray Pattern Associated with Guard Alaska® Bear Repellent" was prepared by the applicant. No MRID number has been assigned to the report at this time. The entire body of the report's text is quoted immediately below.

> "Spray Distance - minimum of 20 feet
> Coverage at 20 ft - aerosol was detected with a height of 48 inches and a width of 48 inches
>
> When the trigger was continuously engaged, the canister took 9 seconds to exhaust. Instead of using all the material at once, it is recommended that the user use a series of short bursts. The canister emits 15 1-second bursts.
>
> Test material - Guard Alaska® Bear Repellent 9 oz. canister"

As there are no descriptions of testing and measuring equipment and only very sketchy details of test procedures, this report basically is a glorified testimonial. Whether an amount of product that evacuates in 9 seconds could be stretched into 15 one-second bursts is not clear to me, and I would have no way to verify the assertion without doing my own tests. I suspect that users would point the spray opening at the charging bear and depress the trigger until the bear broke off its attack, the quantity of product was exhausted, or the bear's continued attack had precluded further product use. The amount of time could exceed one second but would not have to.

The spray stream emitted from the GUARD ALASKA container used in the videotape was "wide" (according to my notes from December, 1997) and sufficient to drive a young black bear away from a site where another bear, perhaps its sibling, had been killed. Judging from the tape, the spray stream was fired for about 0.3 seconds. (I tried to determine the spraying time from on 8/7/98. My first attempt at timing seemed to be very inaccurate [0.67 sec]. The other three were closer to reality [0.28, 0.28, and 0.31 sec], but the actual use was so quick that timing it was difficult.) The bottom line is that a one-second spray burst would have been more than enough to drive this bear away.

The use of the product depicted on the videotape is discussed in detail in the efficacy review of 12/29/97. Although the use situation (a human-created interaction with one young bear over the carcass of another) would not be representative of all possible uses of the product, it clearly shows a successful use of the product. The other efficacy information discussed in the efficacy review of 12/29/97 supports the general notion that Capsaicin-based aerosol products can be effective bear deterrents, although not in all situations. The author of the summary report speculated that most of the products used were 10% Oleoresin Capsicum (OC) formulations (1/2 the strength claimed for GUARD ALASKA). Due to the problem of variable "hotness", the functional strength of *Capsicum* preparations is only roughly correlated with OC concentration.

Because of its relevance to the labeling of these products, I have inserted (below) the discussion of the summary paper from the efficacy review of 12/29/97. This report also lacks and MRID number.

Herrero, S. and Higgins, A. (in press) Field use of capsicum spray as a bear deterrent. Int. Conf. Bear Res. and Manage. 10.000.000

This 5-page report attempts to summarize and draw inferences from "66 cases of field use of capsicum sprays". Fifty of these cases involved use of the Counter Assault product of the Bushwacker Backpack and Supply Co., Missoula, MT. The authors assumed that most or all of the products used

> "likely contained 10% capsicum extract as their active ingredient."

The cases occurred primarily in Canada and Alaska. All sales of capsicum based bear repellents in the U.S. would have been illegal during the time period covered by this report.

Thirty-six of the cases involved brown bears, while the remaining 30 involved black bears. The authors summarize the results of the incidents according to the type of bear involved and its apparent pre application behavior. They also attempted to correlate outcomes with degrees of reported exposure of the bears to repellents, but concluded that no clear links were evident.

Below, I present tables constructed from the results discussed by the authors in paragraph form.

BROWN BEARS ACTING AGGRESSIVELY

EVENT	# OF CASES	% OF TOTAL
All such incidents	16	100%
Bear charged people	14	88%
Only one bear seen	6	38%
Female with cubs seen	10	62%
Adult male bear involved	1	6%
Bear stopped aggressive behavior	15	94%
Bear continued aggressiveness	1	6%
Initially repelled bears subsequently resumed aggressive behavior	5	31%
Bear left area after spraying	14	88%
Person left area after bear was sprayed	2	12%
Person doing spraying was hospitalized	3	19%

The incidents of brown bears leaving include some in which it took 2 or 3 sprayings to drive them away. One of the 3 hospitalizations was for more than 24 hours.

BROWN BEARS ACTING CURIOUSLY OR SEARCHING FOR PEOPLE'S FOOD OR GARBAGE

EVENT	# OF CASES	% OF TOTAL
All such incidents	20	100%
Bear not aggressive prior to being sprayed	16	80%
Bear aggressive prior to being sprayed (but aggression was associated with getting a person's food)	4	20%
Only one bear seen	16	80%
Sibling group seen	4	20%
Bears were subadults	17	85%
Bear stopped undesirable behavior immediately after spraying	20	100%
Bear left area immediately after spraying	18	90%
Bear that had left returned subsequently	2	10%
Bear did not appear to receive substantial dose in face	8	40%
Sound of spray discharge & spray appeared to drive bear off	3	15%

BLACK BEARS ACTING AGGRESSIVELY

EVENT	# OF CASES	% OF TOTAL
All such incidents	4	100%
Bear charged people	2	50%
Bear vocalized aggressively, then approached	1	25%
Bear exhibited predatory behavior	1	25%
Only one bear involved	1	25%
One or 2 bears involved	3	75%
Bears possibly courting	1	6%
Spray changed bear's behavior	4	100%
Bear left area after spraying	0	0%
Bear shot dead after spraying	1	25%
Bear left after shotgun was fired	1	25%
Person left area after bear was sprayed	2	50%
Bear followed person leaving area	1	25%
People injured	0	0%

The person that was followed by a black bear from the area where the encounter took place reportedly was able make it back to camp "only after firing a bear banger."

BLACK BEARS ACTING CURIOUSLY OR SEARCHING FOR PEOPLE'S FOOD OR GARBAGE

EVENT	# OF CASES	% OF TOTAL
All such incidents	26	100%
Bear not aggressive prior to being sprayed	22	85%
Bear aggressive prior to being sprayed (but aggression was associated with getting a person's food or garbage)	4	15%
Only one bear seen	24	92%
Female with cubs seen	2	8%
Bears were subadults	17	85%
Spray apparently changed bear's behavior	19	73%
Spray elicited varied and unclear responses	5	19%
Bear showed no apparent response to spray	2	8%
Bear left area after spraying	14	54%
Bear that had left returned subsequently	6	23%
Bear appeared to receive substantial facial exposure	13	50%
Bear did not leave or returned despite apparently substantial dose in face	8	31%

The results shown above suggest that black bears were less likely to respond as intended to the products used than were brown bears (presumably including grizzlies and Kodiak's). However, brown bears were responsible for the serious injuries that were reported. The authors caution that they have no knowledge of how any of the reported encounters would have ended if the spray had not been used and note that charges without attacks are common for black bears in the absence of spray.

The authors report that wind, rain, and interference adversely affected results in 9 of the 66 cases (14%). Crosswinds and vegetation led to misses; headwinds to

autoexposure of applicators; and rain to rapid run-off of applied material. Applying into a headwind caused applicators to be exposed to the product. Spray canisters did not work appropriately in 2 additional incidents (3% of the total). Canisters reportedly had ranges of about 6 m (probably reported as 20'), with accuracy being enhanced within 3 m (10').

The authors conclude that while capsicum sprays appear to have value in deterring bears,

> "Carrying bear spray is not a substitute for the normal precautions when traveling or camping in bear country."

Product labels should reflect this sentiment and should indicate the conditions that might affect efficacy.

The items discussed above and the 15-20-year-old studies of Hunt, Jonkel and others indicate that Capsaicin-based bear repellents have some value in deterring bear attacks. The concentration of active ingredient, amount of product in a container, spray pattern, and conditions under which the product is used might affect the outcome. Controlled efficacy tests would be the best way to isolate variables, but such tests are difficult to orchestrate. However, decades of illegal U.S. use and perhaps legal Canadian use have led to the creation of a significant anecdotal use history. At this point, there are reasons to believe that products in the 10-20% OC range would repel attacking or curious bears in many situations.

The proposed label submitted on 7/9/98, seems to show some effects of past interactions between McNeill River and Dan Peacock. The label does not caution users about prophylactic applications and claims the product to be "effective against all species of bears." While this last claim might well be true, I doubt that any of the bear repellents has been tested "against all species of bears". I do not recall any data involving polar bears, for example. In past considerations of claims and use cautions for the COUNTER ASSAULT bear repellent (55541-2), I considered labeling issues that are

common to the Capsaicin-based bear repellents. The labeling comments under "CONCLUSIONS" borrow from comments that I previously made for the COUNTER ASSAULT product as well as from the label proposed for the GUARD ALASKA product.

202.0 CONCLUSIONS

1. The various efficacy related items submitted and cited in your 1997 submissions as well as those of July 9, 1998, and August 4, 1998, suggest to us that this product has some value as a bear deterrent. Assuming it to have been the product used in the videotaped incident, GUARD ALASKA was shown to be successful in one instance in which a young black bear was repelled from the vicinity of the carcass of a freshly shot black bear. While that use situation was not typical of the types of encounters (unprovoked) for which this product is to be used, that the bear left quickly and reportedly permanently in response to a blast of the product that was less than a second in duration is positive information concerning GUARD ALASKA. No additional product efficacy data are required at this time. Should additional product performance information (positive or negative) become available for this product, submit it for our review.

2. Your report on the spray pattern of GUARD ALASKA was too sketchy to be of much value. The report does not indicate how the tests were designed or how the effective distance and dimensions of the spray cloud were determined. You must supply this information as well as information on ambient wind conditions. Because the videotaped incident suggests that this product casts an effective spray cloud, these additional details on the spray pattern may be supplied as a condition registration rather than as a prerequisite to registration. For labeling purposes (see below), we have assumed the information reported to be correct.

3. Revise the "**DIRECTIONS FOR USE**" portion of the label to read as indicated below.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

USE RESTRICTIONS: This product may be used only to deter bears which are attacking or appear likely to attack humans. This product may not be effective on all situations or prevent all injuries. **Do not spray this product on tents, other objects, or on clothing.** Such use has no deterrent effect on bears and may attract them in some cases. **Do not seek out encounters with bears or intentionally provoke them.** Do not eat or allow to be eaten any food or feed materials which may have become contaminated with this product.

This product has a range of up to 20 feet (6 meters). The canister empties in approximately 9 seconds.

APPLICATION DIRECTIONS: Study the procedures and directions for using this product before taking this product into bear country.

To use

1. Remove the orange safety clip.
2. Point spray opening at bear's face.
3. Press firmly on trigger and release spray in short bursts

For this product to be fully effective, you must engulf the bear's face, especially the eyes, nose, and mouth. This product generally has a range of approximately 20 feet. Wind and other conditions may alter the range or effectiveness. Shield your eyes and face if you must face into the wind. Use with caution. Contents will cause pain and temporary impairment to eyes, nose, mouth and lungs. Individuals who suffer

from asthma or emphysema may have a more severe reaction.

William W. Jacobs
Biologist
Insecticide-Rodenticide Branch
August 17, 1998

DP BARCODE: D248196

CASE: 062589 DATA PACKAGE RECORD DATE: 08/06/98
SUBMISSION: S546806 BEAN SHEET Page 1 of 1

* * * CASE/SUBMISSION INFORMATION * * *

CASE TYPE: REGISTRATION ACTION: 161 RESB NEW PROD-"ME TOO"
RANKING : 5 POINTS ()
CHEMICALS: 070701 Capsaicin (in oleoresin of capsicum) 1.3400%

ID#: 071545-R Guard Alaska Bear Repellent
COMPANY: 071545 MCNEIL RIVER ENTERPRISES, INC.
PRODUCT MANAGER: 04 TINA LEVINE 703-308-7055 ROOM: CM2 219
PM TEAM REVIEWER: DANIEL PEACOCK 703-305-5407 ROOM: CM2 221
RECEIVED DATE: 08/05/98 DUE OUT DATE: 11/03/98

* * * DATA PACKAGE INFORMATION * * *

DP BARCODE: 248196 EXPEDITE: Y DATE SENT: 08/06/98 DATE RET.: / /
CHEMICAL: 070701 Capsaicin (in oleoresin of capsicum)
DP TYPE: 001
CSF: N LABEL: N

ASSIGNED TO	DATE IN	DATE OUT	ADMIN DUE DATE: 09/20/98
DIV : RD	/ /	/ /	NEGOT DATE: / /
BRAN: IRB	/ /	/ /	PROJ DATE: / /
SECT: PM04	/ /	/ /	
REVR : [illegible]	8/10/98	8/17/98 RL	
CONTR:	/ /	/ /	

* * * DATA REVIEW INSTRUCTIONS * * *

Bill

Please review.

Dan

* * * DATA PACKAGE EVALUATION * * *

No evaluation is written for this data package

* * * ADDITIONAL DATA PACKAGES FOR THIS SUBMISSION * * *

DP BC	BRANCH/SECTION	DATE OUT	DUE BACK	INS	CSF	LABEL

1. Product Name Guard Alaska© Bear Repellent	2. EPA Reg. No. 71545-R	3. Formulator's Exemption Selected _ Yes X No	4. Page 1 of 9
5. Applicant's Name and Address: NcNeil River Enterprises, Inc. 750 W. Dimond, Suite 203 Anchorage, AK 99153	6. Date of Initial Submission to the USEPA July 13, 1998	7. Name of Active Ingredient(s): Capsacin, Dihydrocapsaicin, and Nordihydrocapsaicin	
8. 40 CFR Part 158 DATA REQUIREMENTS	9. SOURCE OF DATA SATISFYING REQUIREMENT		

8a. Guideline Reference Number	8b. Name of Test	9a. Submitted by Applicant	9b. Date Submitted	9f. N.A. or waiver	10. MRID Number	11. Result	12. Location in submission Tab Number
151-10	Product Identity	X	7/13/98		CSF		1
151-11	Formulating Process Formulating Process for McNeil River Enterprises, Inc. Products: Guard Alaska© Bear Repellent and Dog Repellent. W Grube. July 3, 1998. Case-Mason Filling, Inc. 3 pp. and 3 confidential pp.	X	7/13/98				2
151-12	Formation of Impurities Formation of Impurities for Guard Alaska© Bear Repellent. July 8, 1998. McNeil River Enterprises, Inc. 3 pp. and 2 confidential pp.	X	7/13/98				3
151-13	Preliminary Analysis Preliminary Analysis of Guard Alaska© Bear Repellent. M. Bensinger. April 13, 1998. Chromtec. 4 pp.	X	7/13/98				4
151-15	Certified Limits	X	7/13/98		CSF		5
151-16	Analytical Method AOAC Official Method 95.03: Capsaicinoids in Capsicums and Their Extractives. 1996. AOAC International. 4 pp.	X	7/13/98				6

Revised August 4, 1998

1. Product Name Guard Alaska© Bear Repellent	2. EPA Reg. No. 71545-R	3. Formulator's Exemption Selected _ Yes X No	4. Page 2 of 9
5. Applicant's Name and Address: NcNeil River Enterprises, Inc. 750 W. Dimond, Suite 203 Anchorage, AK 99153	6. Date of Initial Submission to the USEPA July 13, 1998	7. Name of Active Ingredient(s): Capsacin, Dihydrocapsaicin, and Nordihydrocapsaicin	
8. 40 CFR Part 158 DATA REQUIREMENTS	9. SOURCE OF DATA SATISFYING REQUIREMENT		

8a. Guideline Reference Number	8b. Name of Test	9a. Submitted by Applicant	9b. Date Submitted	9f. N.A. or waiver	10. MRID Number	11. Result	12. Location in submission Tab Number
	PHYSICAL AND CHEMICAL PROPERTIES						
151-17a	Color Physical and Chemical Characteristics of Guard Alaska: Color, Physical State, Odor, pH, Viscosity, and Relative Density. D.J. Sinning. May 7, 1998. Case Consulting Laboratories, Inc. 7 pp.	X	7/13/98			Red-brown	7
	Preliminary Analysis on Guard Alaska© Bear Repellent from Samples Received from MB Research and Case Consulting. M. Bensinger. May 31, 1998. Chromtec. 4 pp.	X	7/13/98				8
151-17b	Physical State Physical and Chemical Characteristics of Guard Alaska: Color, Physical State, Odor, pH, Viscosity, and Relative Density. D.J. Sinning. May 7, 1998. Case Consulting Laboratories, Inc. 7 pp.	X	7/13/98			Liquid	9
	Preliminary Analysis on Guard Alaska© Bear Repellent from Samples Received from MB Research and Case Consulting. M. Bensinger. May 31, 1998. Chromtec. 4 pp.	X	7/13/98				

1. Product Name Guard Alaska® Bear Repellent	2. EPA Reg. No. 71545-R	3. Formulator's Exemption Selected _ Yes X No	4. Page 3 of 9
5. Applicant's Name and Address: NcNeil River Enterprises, Inc. 750 W. Dimond, Suite 203 Anchorage, AK 99153	6. Date of Initial Submission to the USEPA July 13, 1998	7. Name of Active Ingredient(s): Capsacin, Dihydrocapsaicin, and Nordihydrocapsaicin	
8. 40 CFR Part 158 DATA REQUIREMENTS	9. SOURCE OF DATA SATISFYING REQUIREMENT		

8a. Guideline Reference Number	8b. Name of Test	9a. Submitted by Applicant	9b. Date Submitted	9f. N.A. or waiver	10. MRID Number	11. Result	12. Location in submission Tab Number
	PHYSICAL AND CHEMICAL PROPERTIES (continued)						
151-17c	Odor Physical and Chemical Characteristics of Guard Alaska: Color, Physical State, Odor, pH, Viscosity, and Relative Density. D.J. Sinning. May 7, 1998. Case Consulting Laboratories, Inc. 7 pp. Preliminary Analysis on Guard Alaska® Bear Repellent from Samples Received from MB Research and Case Consulting. M. Bensinger. May 31, 1998. Chromtec. 4 pp.	X X	7/13/98 7/13/98			Tobacco-like	10
151-17f	Relative Density Physical and Chemical Characteristics of Guard Alaska: Color, Physical State, Odor, pH, Viscosity, and Relative Density. D.J. Sinning. May 7, 1998. Case Consulting Laboratories, Inc. 7 pp. Preliminary Analysis on Guard Alaska® Bear Repellent from Samples Received from MB Research and Case Consulting. M. Bensinger. May 31, 1998. Chromtec. 4 pp.	X X	7/13/98 7/13/98			1.167	11

1. Product Name Guard Alaska© Bear Repellent	2. EPA Reg. No. 71545-R	3. Formulator's Exemption Selected _ Yes X No	4. Page 4 of 9
5. Applicant's Name and Address: NcNeil River Enterprises, Inc. 750 W. Dimond, Suite 203 Anchorage, AK 99153	6. Date of Initial Submission to the USEPA July 13, 1998	7. Name of Active Ingredient(s): Capsacin, Dihydrocapsaicin, and Nordihydrocapsaicin	
8. 40 CFR Part 158 DATA REQUIREMENTS	9. SOURCE OF DATA SATISFYING REQUIREMENT		

8a. Guideline Reference Number	8b. Name of Test	9a. Submitted by Applicant	9b. Date Submitted	9f. N.A. or waiver	10. MRID Number	11. Result	12. Location in submission Tab Number
	PHYSICAL AND CHEMICAL PROPERTIES (continued)						
151-17i	pH Physical and Chemical Characteristics of Guard Alaska: Color, Physical State, Odor, pH, Viscosity, and Relative Density. D.J. Sinning. May 7, 1998. Case Consulting Laboratories, Inc. 7 pp. Preliminary Analysis on Guard Alaska© Bear Repellent from Samples Received from MB Research and Case Consulting. M. Bensinger. May 31, 1998. Chromtec. 4 pp.	X X	7/13/98 7/13/98			4.84	12
151-17k	Flammability	X	7/13/98	waiver			13
151-17	Explodability	X	7/13/98	waiver			14
151-17l	Storage Stability Storage Stablity and Corrosion Characteristics for Guard Alaska© Bear Repellent T=0. M. Bensinger. May 11, 1998. Chromtec. 4 pp.	X	7/13/98			pending	15 16

1. Product Name Guard Alaska® Bear Repellent	2. EPA Reg. No. 71545-R	3. Formulator's Exemption Selected _ Yes X No	4. Page 5 of 9
5. Applicant's Name and Address: NeNeil River Enterprises, Inc. 750 W. Dimond, Suite 203 Anchorage, AK 99153	6. Date of Initial Submission to the USEPA July 13, 1998	7. Name of Active Ingredient(s): Capsacin, Dihydrocapsaicin, and Nordihydrocapsaicin	
8. 40 CFR Part 158 DATA REQUIREMENTS	9. SOURCE OF DATA SATISFYING REQUIREMENT		

8a. Guideline Reference Number	8b. Name of Test	9a. Submitted by Applicant	9b. Date Submitted	9f. N.A. or waiver	10. MRID Number	11. Result	12. Location in submission Tab Number
	PHYSICAL AND CHEMICAL PROPERTIES (continued)						
151-17m	Viscosity Physical and Chemical Characteristics of Guard Alaska: Color, Physical State, Odor, pH, Viscosity, and Relative Density. D.J. Sinning. May 7, 1998. Case Consulting Laboratories, Inc. 7 pp. Preliminary Analysis on Guard Alaska® Bear Repellent from Samples Received from MB Research and Case Consulting. M. Bensinger. May 31, 1998. Chromtec. 4 pp.	X X	7/13/98 7/13/98			14.2 mPa•s	17
151-17n	Miscibility	X	7/13/98	waiver			18
151-17o	Corrosion Characteristics Storage Stablity and Corrosion Characteristics for Guard Alaska® Bear Repellent T=0. M. Bensinger. May 11, 1998. Chromtec. 4 pp.	X	7/13/98			pending	19
151-17	Dielectric Breakdown Voltage	X	7/13/98	waiver			20

1. Product Name Guard Alaska© Bear Repellent	2. EPA Reg. No. 71545-R	3. Formulator's Exemption Selected _ Yes X No	4. Page 6 of 9
5. Applicant's Name and Address: NeNeil River Enterprises, Inc. 750 W. Dimond, Suite 203 Anchorage, AK 99153	6. Date of Initial Submission to the USEPA July 13, 1998	7. Name of Active Ingredient(s): Capsacin, Dihydrocapsaicin, and Nordihydrocapsaicin	
8. 40 CFR Part 158 DATA REQUIREMENTS	9. SOURCE OF DATA SATISFYING REQUIREMENT		

8a. Guideline Reference Number	8b. Name of Test	9a. Submitted by Applicant	9b. Date Submitted	9f. N.A. or waiver	10. MRID Number	11. Result	12. Location in submission Tab Number
	TOXICOLOGY						
Acute Testing							
152-10	Acute oral toxicity	X	7/13/98	waiver			21
152-11	Acute dermal toxicity	X	7/13/98	waiver			22
152-12	Acute inhalation	X	7/13/98	waiver			23
152-13	Primary eye irritation Primary Eye Irritation/Corrosion in Rabbits. D.R. Cerven. July 1, 1998. MB Research. 12 pp. Preliminary Analysis on Guard Alaska© Bear Repellent from Samples Received from MB Research and Case Consulting. M. Bensinger. May 31, 1998. Chromtec. 4 pp.	X X	7/13/98 7/13/98			Produced irritation & corneal involvement which cleared by day 7	24 25
152-14	Primary dermal irritation Primary Dermal Irritation in Rabbits. L.A. Kieffer. July 2, 1998. MB Research. 11 pp. Preliminary Analysis on Guard Alaska© Bear Repellent from Samples Received from MB Research and Case Consulting. M. Bensinger. May 31, 1998. Chromtec. 4 pp.	X X	7/13/98 7/13/98			Caused very slight to well defined irritation, clearing by day 14	26 27

1. Product Name Guard Alaska® Bear Repellent	2. EPA Reg. No. 71545-R	3. Formulator's Exemption Selected _ Yes X No	4. Page 7 of 9
5. Applicant's Name and Address: NcNeil River Enterprises, Inc. 750 W. Dimond, Suite 203 Anchorage, AK 99153	6. Date of Initial Submission to the USEPA July 13, 1998	7. Name of Active Ingredient(s): Capsacin, Dihydrocapsaicin, and Nordihydrocapsaicin	
8. 40 CFR Part 158 DATA REQUIREMENTS	9. SOURCE OF DATA SATISFYING REQUIREMENT		

8a. Guideline Reference Number	8b. Name of Test	9a. Submitted by Applicant	9b. Date Submitted	9f. N.A. or waiver	10. MRID Number	11. Result	12. Location in submission Tab Number
	TOXICOLOGY (continued)						
Acute Testing							
152-15	Dermal sensitization	X	7/13/98	waiver			28
152-16	Hypersensitivity	X	7/13/98	waiver			29
152-18	Immunotoxicity	X	7/13/98	waiver			30

1. Product Name Guard Alaska® Bear Repellent	2. EPA Reg. No. 71545-R	3. Formulator's Exemption Selected _ Yes X No	4. Page 8 of 9
5. Applicant's Name and Address: NcNeil River Enterprises, Inc. 750 W. Dimond, Suite 203 Anchorage, AK 99153	6. Date of Initial Submission to the USEPA July 13, 1998	7. Name of Active Ingredient(s): Capsacin, Dihydrocapsaicin, and Nordihydrocapsaicin	
8. 40 CFR Part 158 DATA REQUIREMENTS	9. SOURCE OF DATA SATISFYING REQUIREMENT		

8a. Guideline Reference Number	8b. Name of Test	9a. Submitted by Applicant	9b. Date Submitted	9f. N.A. or waiver	10. MRID Number	11. Result	12. Location in submission Tab Number
	WILDLIFE AND AQUATIC ORGANISMS						
Avian and Mammalian Testing							
154-6	Avian Acute Oral	X	7/13/98	waiver			31
154-7	Avian Dietary	X	7/13/98	waiver			31
Aquatic Organism Testing							
154-8	Freshwater Fish LC_{50}	X	7/13/98	waiver			31
154-9	Freshwater Invertebrate LC_{50}	X	7/13/98	waiver			31

1. Product Name Guard Alaska® Bear Repellent	2. EPA Reg. No. 71545-R	3. Formulator's Exemption Selected _ Yes X No	4. Page 9 of 9
5. Applicant's Name and Address: McNeil River Enterprises, Inc. 750 W. Dimond, Suite 203 Anchorage, AK 99153	6. Date of Initial Submission to the USEPA July 13, 1998	7. Name of Active Ingredient(s): Capsacin, Dihydrocapsaicin, and Nordihydrocapsaicin	
8. 40 CFR Part 158 DATA REQUIREMENTS	9. SOURCE OF DATA SATISFYING REQUIREMENT		

8a. Guideline Reference Number	8b. Name of Test	9a. Submitted by Applicant	9b. Date Submitted	9f. N.A. or waiver	10. MRID Number	11. Result	12. Location in submission Tab Number
	PRODUCT PERFORMANCE						
96-6					427676-06		
96-6					00145063		
96-6					Accession No. 254706		
96-6					Accession No. 250625		
96-6	Video	X	12/16/97		none assigned		32
	Spray Pattern Effectiveness Spray Pattern Associated with Guard Alaska® Bear Repellent. August 4, 1998. McNeil River Enterprises. 4 pp.	X	8/5/98				

96-50-9

370

McNeil River Enter., Inc.
750 W. Dimond, Ste. 203
Anchorage, Alaska 99515
907-349-6868 or
1-888-419-9695
907-349-7818 fax

Manufacturers of Guard Alaska Personal Protection Systems

Rec'd 8/4/98

August 4, 1998

Mr. Dan Peacock (CM-2 H7505C)
Office of Pesticide Programs (Team 14)
U.S. Environmental Protection Agency
401 M Street, SW
Washington, DC 20460

Reference: Guard Alaska® Bear Repellent (EPA File Symbol 71545-R)

Dear Dan:

In response to your letter dated July 27, 1998, we are submitted three copies of the study entitled:

Spray Pattern Associated with Guard Alaska® Bear Repellent.

Also attached is a revised copy of the data matrix that references the four bear deterrent studies by appropriate MRID/Accession numbers.

Please call me at 1-888-419-9695 if you have any questions or if I can be of further assistance.

Sincerely,

for Randal Prater
President

IRB BRANCH REVIEW - TSS

Record Number(s)

D241689

D241695

IN 12/18/97 OUT 12/29/97

EFFICACY

FILE OR REG. NO. CORR. 289443

PETITION OR EXP. PERMIT NO.

DATE DIV. RECEIVED 12/17/97, 12/18/97

DATE OF SUBMISSION 12/16/97, 12/18/97

DATE SUBMISSION ACCEPTED 12/18/97

TYPE PRODUCTS(S): I, D, H, F, N, R, S

DATA ACCESSION NO(S). none

PRODUCT MGR. NO. 04

PRODUCT NAME(S) GUARD ALASKA PEPPER SPRAY

COMPANY NAME Guard Alaska

SUBMISSION PURPOSE Provide information pertaining to product not (yet?) proposed for registration

CHEMICAL & FORMULATION 20%(?) Oleoresin Capsicum (?) aerosol

Efficacy Review: GUARD ALASKA PEPPER SPRAY, CORR. 289443
Guard Alaska
New Boston, MI 48164

200.0 INTRODUCTION

200.1 Uses

A 20% Oleoresin Capsicum (?) aerosol which someday might be proposed for Federal registration as a deterrent against attacks by bears on humans.

200.2 Background Information

Like dog-attack repellents, bear-attack repellents are considered to be pesticides. Because unmitigated attacks by bears could result in severe injury including loss of human life, repelling attacking bears is considered to be a public-health use pattern which must be supported by efficacy data. We in IRB have conveyed such information to all who have inquired about bear repellents. We began to receive such inquiries in the early 1980's, primarily from entities which had or sought to develop bear repellents. In 1986 and 1987, PM Team 16 discussed and prepared lists of data requirements for registering a Capsaicin-based bear-attack repellent in the U.S.

In 1993, an employee of the Alaska Department of Natural Resources found one or more unregistered bear repellent products being offered for sale and had a stop-sale and removal order issued. The matter quickly became political and was handled poorly by EPA from informational and enforcement standpoints. Using a policy akin to "enforcement discretion", EPA decided to permit bear repellents to be sold for a year while registrations were being applied for and obtained. That year was up in 1994. To date, there has been only one bear repellent registered in the U.S. -- a product which is claimed to smell like the odor emitted by a scenting skunk. That product (49088-1) was registered on 2/16/95.

Two submissions have been made for GUARD ALASKA PEPPER SPRAY. The first of these was a mailing of 12/16/97 from Joe Prater of Guard Alaska. The mailing consists of a short letter and a videotape. To the letter routed to me, Daniel Peacock of IRB has appended a copy of a short note and a list of data requirements that he sent to Randy Prater of Guard Alaska and/or McNeil River Enterprises, Inc., on 12/17/97. The second submission is a FAX of 12/17/97 from Randy Prater to Peacock. The FAX includes a report of a field trial of a bear repellent. With that submission, Peacock routed to me several items pertaining to bear repellents that he "downloaded off the internet".

201.0 DATA SUMMARY

The videotape lasts more than 1/2 hour, but most of it deals with the stalking, shooting (with bow and arrow), and subsequent tracking and skinning of a black bear. In the course of the activities prior to skinning, a second bear became involved. Its interest in the carcass of the slain bear caused a problem for the hunters.

After waiting a while and discussing the matter, the hunters eventually drove the bear away with a single use of a product which they called "Alaska Guard Bear Repellent" and "Pepper Guard Spray 20% from Guard Alaska". The one-shot use of product occurred from a distance of perhaps 10-15 feet. The spray pattern was visible and appeared to widen somewhat on its way to the bear. Virtually immediately after the spray reached the bear, the animal pivoted and sprinted away. One of the hunters commented, "He booked!" The hunter added, "Yum! I got a little of that myself!" The same hunter also observed that "sound, pepper, everything else" seemed to contribute to the effectiveness of the product use.

The interaction between the hunter and the bear was actually provoked by the humans. The bear did not appear to be acting aggressively to the people but rather was interested in the same carcass that they were interested in. The hunter who did most of the talking ultimately theorized that the live bear was young (about 4 years old) and probably a sibling of the fallen animal. Based upon earlier observations, one of the hunters had theorized that the live bear was "a horny male".

The product successfully drove the live bear away, but the hunters had to do a number of things to set up a situation in which they could spray that bear. One of the things that they did was to drag the dead bear out of the brush into a more open area where the spray would not be deflected by vegetation and other objects. The man with the spray can then set up near the carcass and eventually was able to spray the live bear as it approached cautiously.

After the live bear was repelled, the hunters skinned the carcass and demonstrated where the arrow had hit and why the wound had been fatal. The hunter who did most of the talking said that they had remained in the area for 2 or 3 hours without seeing the live bear after it was repelled. The hunter claimed that the product used had "more ingredient" than other bear repellents and added that the

> "stuff works pretty good, especially if you don't like packin' a handgun."

The report included with Randy Prater's FAX of 12/17/97 is a pre-print of the document cited below.

Herrero, S. and Higgins, A. (in press) Field use of capsicum spray as a bear deterrent. Int. Conf. Bear Res. and Manage. 10.000.000

This 5-page report attempts to summarize and draw inferences from "66 cases of field use of capsicum sprays". Fifty of these cases involved use of the Counter Assault product of the Bushwacker Backpack and Supply Co., Missoula, MT. The authors assumed that most or all of the products used

> "likely contained 10% capsicum extract as their active ingredient."

The cases occurred primarily in Canada and Alaska. All sales of capsicum-based bear repellents in the U.S. would have been illegal.

Thirty-six of the cases involved brown bears, while the remaining 30 involved black bears. The authors summarize the results of the incidents according to the type of bear involved and its apparent pre-application behavior. They also attempted to correlate outcomes with degrees of reported exposure of the bears to repellents, but concluded that no clear links were evident.

Below, I present tables constructed from the results discussed by the authors in paragraph form.

BROWN BEARS ACTING AGGRESSIVELY

EVENT	# OF CASES	% OF TOTAL
All such incidents	16	100%
Bear charged people	14	88%
Only one bear seen	6	38%
Female with cubs seen	10	62%
Adult male bear involved	1	6%
Bear stopped aggressive behavior	15	94%
Bear continued aggressiveness	1	6%
Initially repelled bears subsequently resumed aggressive behavior	5	31%
Bear left area after spraying	14	88%
Person left area after bear was sprayed	2	12%
Person doing spraying was hospitalized	3	19%

The incidents of brown bears leaving include some in which it took 2 or 3 sprayings to drive them away. One of the 3 hospitalizations was for more than 24 hours.

BROWN BEARS ACTING CURIOUSLY OR SEARCHING FOR PEOPLE'S FOOD OR GARBAGE

EVENT	# OF CASES	% OF TOTAL
All such incidents	20	100%
Bear not aggressive prior to being sprayed	16	80%
Bear aggressive prior to being sprayed (but aggression was associated with getting a person's food)	4	20%
Only one bear seen	16	80%
Sibling group seen	4	20%
Bears were subadults	17	85%
Bear stopped undesirable behavior immediately after spraying	20	100%
Bear left area immediately after spraying	18	90%
Bear that had left returned subsequently	2	10%
Bear did not appear to receive substantial dose in face	8	40%
Sound of spray discharge & spray appeared to drive bear off	3	15%

BLACK BEARS ACTING AGGRESSIVELY

EVENT	# OF CASES	% OF TOTAL
All such incidents	4	100%
Bear charged people	2	50%
Bear vocalized aggressively, then approached	1	25%
Bear exhibited predatory behavior	1	25%
Only one bear involved	1	25%
One or 2 bears involved	3	75%
Bears possibly courting	1	6%
Spray changed bear's behavior	4	100%
Bear left area after spraying	0	0%
Bear shot dead after spraying	1	25%
Bear left after shotgun was fired	1	25%
Person left area after bear was sprayed	2	50%
Bear followed person leaving area	1	25%
People injured	0	0%

The person that was followed by a black bear from the area where the encounter took place reportedly was able make it back to camp "only after firing a bear banger."

BLACK BEARS ACTING CURIOUSLY OR SEARCHING FOR PEOPLE'S FOOD OR GARBAGE

EVENT	# OF CASES	% OF TOTAL
All such incidents	26	100%
Bear not aggressive prior to being sprayed	22	85%
Bear aggressive prior to being sprayed (but aggression was associated with getting a person's food or garbage)	4	15%
Only one bear seen	24	92%
Female with cubs seen	2	8%
Bears were subadults	17	85%
Spray apparently changed bear's behavior	19	73%
Spray elicited varied and unclear responses	5	19%
Bear showed no apparent response to spray	2	8%
Bear left area after spraying	14	54%
Bear that had left returned subsequently	6	23%
Bear appeared to receive substantial facial exposure	13	50%
Bear did not leave or returned despite apparently substantial dose in face	8	31%

The results shown above suggest that black bears were less likely to respond as intended to the products used than were brown bears (presumably including grizzlies and Kodiak's). However, brown bears were responsible for the serious injuries that were reported. The authors caution that they have no knowledge of how any of the reported encounters would have ended if the spray had not been used and note that charges without attacks are common for black bears in the absence of spray.

The authors report that wind, rain, and interference adversely affected results in 9 of the 66 cases (14%). Crosswinds and vegetation led to misses; headwinds to autoexosure of applicators; and rain to rapid run-off of applied material. Applying into a headwind caused applicators to be exposed to the product. Spray canisters did not work appropriately in 2 additional incidents (3% of

the total). Canisters reportedly had ranges of about 6 m (probably reported as 20'), with accuracy being enhanced within 3 m (10').

The authors conclude that while capsicum sprays appear to have value in deterring bears,

> "Carrying bear spray is not a substitute for the normal precautions when traveling or camping in bear country."

Product labels should reflect this sentiment and should indicate the conditions that might affect efficacy. Such labels would reflect these issues if we could ever get the products registered.

The information from the internet was mainly about bears and what precautions to take when traveling and camping in bear country. Most of the concerns dealt with protecting foods and dissociating food and non human odors (e.g., perfumes, cooking smells) from humans so as not to attract bears to living examples of Homo sapiens.

There were some discussions of encounters with bears and a couple of mentionings of bear repellents. One such mentioning is quoted below.

> **"- Backcountry travelers who feel uncomfortable in grizzly country can carry pepper spray for use in the event of a chance encounter with a bear. These sprays are non-lethal irritants and have proven effective in the field at repelling grizzlies."**
>
> [National Wildlife Federation "FACT SHEET", p. 2.]

The author (identified only by an e:mail address) of a 6-page item entitled "**Backpacking in Bear Country**" devotes 6 paragraphs to "**Pepper Spray**". The text is rather "folksy":

> **"Pepper spray is becoming popular as a bear repellent. Those designed for bears are basically like the small cans sold for personal protection in the city, only much larger. The small cans probably don't have nearly enough in them to be real effective, but the large cans are really substantial. I read a story about a couple of bow hunters who used pepper spray in a grizzly attack and they ran out of pepper before they ran out of bear! If I'm hunting in grizzly country, or backpacking without a rifle, I carry a large can of pepper spray."**

The author goes on to name a personal favorite product called "**Frontiersman by Sabre**" which, it is claimed: (1) "**weighs 15 ounces including the can**"; (2) "**holds 454 grams of 15% water-based Oleoresin Capsicum**"; (3) is reminiscent "**of a small fire extinguisher**"; (4) comes with "**a great holster**" that fits on a belt; (5) "**has a quick access Velcro flap**"; and "**costs about $25.**" Obviously, claims (1) and (2) cannot both be true. The author sees formulation strength as an advantage for his preferred product:

> "**Pepper spray comes in different strengths ranging from less than 10% to at least 15%. I go with the highest concentration I can get. Why do I carry 15%? Because I couldn't find 16%!**"

The author states that he believes water-based sprays are better than oil-based sprays because they clean up more easily. The only draw back to the preferred product is said to be that the applied material comes out as "**a fog spray**" rather than as "**a more direct stream**" which the author feels would be more effective if circumstances required that the product be discharged into a headwind.

Collectively, the items and issues discussed above indicate that bear repellents must be registered in the U.S. and that they appear to have some value in deterring bear attacks. In addition, the materials reviewed indicate that concentration of active ingredient, amount of product in a container, spray pattern, and conditions under which the product is used might affect the outcome. Controlled efficacy tests would be the best way to isolate variables, but such tests are difficult to orchestrate; and decades of illegal U.S. use and perhaps legal Canadian use have led to the creation of a significant anecdotal use history.

Although it is possibly the case that at least one effective formulation in an appropriate amount in a user-appropriate container has been developed without any government input, the need for registration is inescapable. How the active-ingredient strengths have been established for the capsicum-based products is a mystery to us at this point. With other capsicum products, we have detected considerable uncertainty in this area. Therefore, all the talk about 15% being better than 10% might be truer in abstraction than in the actual performances of products variously label as to Oleoresin Capsicum content.

Having seen no specific information on the product that is the subject of this review, I cannot comment on its adequacy.

202.0 CONCLUSIONS

If we require Guard Alaska to establish the formulation that was used in the product used in the videotape and to propose that formulation for registration, we could use the tape, the anecdotal material provided by Guard Alaska, and the old Hunt, Jonkel, etc. material (which may or may not be compensable) to support claims that this product has some value as a bear repellent. Clearly, there is enough information available to indicate that the pepper sprays are far from foolproof in addition to being better than nothing.

For this product, however, we have seen no application, no proposed label, and no product chemistry information. In this context, Guard Alaska's alleged concern about other companies obtaining me-too registrations seems incongruous.

William W. Jacobs
Biologist
Insecticide-Rodenticide Branch
December 29, 1997

DP BARCODE: D247869

CASE: 062589 DATA PACKAGE RECORD DATE: 07/27/98
SUBMISSION: S546102 BEAN SHEET Page 1 of 1

* * * CASE/SUBMISSION INFORMATION * * *

CASE TYPE: REGISTRATION ACTION: 160 NEW PROD-"ME TOO"
RANKING : 0 POINTS ()
CHEMICALS: 070701 Capsaicin (in oleoresin of capsicum) 1.3400%

ID#: 071545-R Guard Alaska Bear Repellent
COMPANY: 071545 MCNEIL RIVER ENTERPRISES, INC.
PRODUCT MANAGER: 04 TINA LEVINE 703-308-7055 ROOM: CM2 219
PM TEAM REVIEWER: DANIEL PEACOCK 703-305-5407 ROOM: CM2 221
RECEIVED DATE: 07/13/98 DUE OUT DATE: 10/11/98

* * * DATA PACKAGE INFORMATION * * *

DP BARCODE: 247869 EXPEDITE: Y DATE SENT: 07/23/98 DATE RET.: / /
CHEMICAL: 070701 Capsaicin (in oleoresin of capsicum)
DP TYPE: 001
CSF: Y LABEL: Y

ASSIGNED TO	DATE IN	DATE OUT	ADMIN DUE DATE: 09/06/98
DIV : RD	/ /	/ /	NEGOT DATE: / /
BRAN: TRB	/ /	/ /	PROJ DATE: / /
SECT: TOX	/ /	/ /	
REVR :	/ /	/ /	
CONTR:	/ /	/ /	

* * * DATA REVIEW INSTRUCTIONS * * *

Toxicologist,

Please review the 2 acute toxicity tests for this new bear repellent:

MRID Nos. 445998-08 & -09

Please will be requesting an expedite of these tests. We will ask that the data be completed by 8/17/98.

Thank you,

Dan Peacock, 305-5407

* * * DATA PACKAGE EVALUATION * * *

No evaluation is written for this data package

* * * ADDITIONAL DATA PACKAGES FOR THIS SUBMISSION * * *

DP BC	BRANCH/SECTION	DATE OUT	DUE BACK	INS	CSF	LABEL
247868	TRB/CHEM	07/23/98	09/06/98	Y	Y	Y
247871	IRB/PM04	07/23/98	09/06/98	Y	Y	Y

#8069

DP PERSONEL: DP247668

CASE: 062-[illegible] DATA PACKAGE RECORD DATE: 07/27/95
SUBMISSION: 35260[illegible] DATA SHEET Page 1 of 1

* * * CASE/SUBMISSION INFORMATION * * *

CASE TYPE: REGISTRATION ACTION: 150 NEW PROD-"RE DOP"
PRIORITY : 0 POINTS (0)
CHEMICAL: 070701 Capsaicin (an oleoresin of capsicum) 1.[illegible]%

ID#: 071545-R Guard Alaska Bear Repellent
COMPANY: 071545 MCNEIL RIVER ENTERPRISES, INC
PRODUCT MANAGER: 02 TIMA DAVIS 703-305-7055 ROOM: CM2 209
PM TEAM REVIEWER: DANIEL PEACOCK 703-305-5407 ROOM: CM2 221
RECEIVED DATE: 07/12/95 DUE OUT DATE: 10/10/95

* * * DATA PACKAGE INFORMATION * * *

DP PACKAGE: 247668 PRIORITY: Y DATE SENT: 07/23/95 DATE REC'D: / /
CHEMICAL: 070701 Capsaicin (an oleoresin of capsicum)
DP TYPE: CHE
CHP: Y DATAB: Y

ASSIGNED TO	DATE IN	DATE OUT	OTHER DATE DUE: 09/06/95
DRV : PD	/ /	/ /	CHECK DATE: / /
BEAN: BEA	/ /	/ /	BROW DATE: / /
SHEN: CHEM	/ /	/ /	
EFGW :	/ /	/ /	
CHEMR:	/ /	/ /	

* * * DATA REVIEW INSTRUCTIONS * * *

Chemist,

Please review the product chemistry data for this new bear repellent:

DEPD Doc. 425598-00 thru -07

We will be requesting an expedite for this action. We would like the review to be completed by 8/17/95.

Thank you,

Dan Peacock, 305-5407

* * * DATA PACKAGE EVALUATION * * *

No evaluation is written for this data package

* * * ADDITIONAL DATA PACKAGES FOR THIS SUBMISSION * * *

DP PC	BRANCH/SECTION	DATE OUT	DUE BACK	RCS	CHP	DATAB
247669	DRB/BOX	07/23/95	09/05/95	Y	Y	Y
247671	DRB/PMDS	07/23/95	09/05/95	Y	Y	Y

DP BARCODE: D247871

CASE: 062589 DATA PACKAGE RECORD DATE: 07/27/98
SUBMISSION: S546102 BEAN SHEET Page 1 of 1

* * * CASE/SUBMISSION INFORMATION * * *

CASE TYPE: REGISTRATION ACTION: 160 NEW PROD-"ME TOO"
RANKING : 0 POINTS ()
CHEMICALS: 070701 Capsaicin (in oleoresin of capsicum) 1.3400%

ID#: 071545-R Guard Alaska Bear Repellent
COMPANY: 071545 MCNEIL RIVER ENTERPRISES, INC.
PRODUCT MANAGER: 04 TINA LEVINE 703-308-7055 ROOM: CM2 219
PM TEAM REVIEWER: DANIEL PEACOCK 703-305-5407 ROOM: CM2 221
RECEIVED DATE: 07/13/98 DUE OUT DATE: 10/11/98

* * * DATA PACKAGE INFORMATION * * *

DP BARCODE: 247871 EXPEDITE: Y DATE SENT: 07/23/98 DATE RET.: / /
CHEMICAL: 070701 Capsaicin (in oleoresin of capsicum)
DP TYPE: 001
CSF: Y LABEL: Y

ASSIGNED TO	DATE IN	DATE OUT	ADMIN DUE DATE: 09/06/98
DIV : RD	/ /	/ /	NEGOT DATE: / /
BRAN: IRB	/ /	/ /	PROJ DATE: / /
SECT: PM04	/ /	/ /	
REVR : cy	7/23/98	8/17/98 RL	
CONTR:	/ /	/ /	

* * * DATA REVIEW INSTRUCTIONS * * *

Bill,

Please review the label for this product. I think that you have already viewed the video for this product but I am sending it anyway.

Dan Peacock, 305-5407

I am asking for a review by 8/17/98, if possible.

* * * DATA PACKAGE EVALUATION * * *

No evaluation is written for this data package

* * * ADDITIONAL DATA PACKAGES FOR THIS SUBMISSION * * *

DP BC	BRANCH/SECTION	DATE OUT	DUE BACK	INS	CSF	LABEL
247868	TRB/CHEM	07/23/98	09/06/98	Y	Y	Y
247869	TRB/TOX	07/23/98	09/06/98	Y	Y	Y

Z 099 613 523

US Postal Service

Receipt for Certified Mail

No Insurance Coverage Provided.

Do not use for International Mail *(See reverse)*

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Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to Whom & Date Delivered	
Return Receipt Showing to Whom, Date, & Addressee's Address	
TOTAL Postage & Fees	$
Postmark or Date	

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PS Form 3800, April 1995

Stick postage stamps to article to cover First-Class postage, certified mail fee, and charges for any selected optional services *(See front)*.

1. If you want this receipt postmarked, stick the gummed stub to the right of the return address leaving the receipt attached, and present the article at a post office service window or hand it to your rural carrier *(no extra charge)*.

2. If you do not want this receipt postmarked, stick the gummed stub to the right of the return address of the article, date, detach, and retain the receipt, and mail the article.

3. If you want a return receipt, write the certified mail number and your name and address on a return receipt card, Form 3811, and attach it to the front of the article by means of the gummed ends if space permits. Otherwise, affix to back of article. Endorse front of article **RETURN RECEIPT REQUESTED** adjacent to the number.

4. If you want delivery restricted to the addressee, or to an authorized agent of the addressee, endorse **RESTRICTED DELIVERY** on the front of the article.

5. Enter fees for the services requested in the appropriate spaces on the front of this receipt. If return receipt is requested, check the applicable blocks in Item 1 of Form 3811.

6. Save this receipt and present it if you make an inquiry.

102595-97-B-0145

3885

PS Form **3800**, April 1995 *(Reverse)*

JUL 27

CERTIFIED MAIL

McNeil River Enterprises, Inc.
750 West Dimond, Suite 203
Anchorage, AK 99515

on 7/27/98
lh

Attention: Mr. Randal Prater

Subject: Guard Alaska Bear Repellent
EPA File Symbol 71545-R
Your application of July 9, 1998

We have received the above application and assigned MRID numbers to the data. Today we have sent the data and label to the chemist, toxicologist, and vertebrate biologist for review. However, in screening the application for completeness, we were unable to locate the information about the pattern and duration of spray, material that was outlined in the "Aerosol Bear-Attack Repellents Containing 1.0% Capsaicin - List of Requirements for Registration", which was previously sent to you. In that document, we outlined the effectiveness requirements as follows:

C. Effectiveness Data

The EPA has effectiveness data in its files that should cover the bear-deterrent and dog-attack uses. For the bear-deterrent use, your "List of Data Requirements" (Data Matrix) should list:

1. MRID No. 427676-06
2. MRID No. 00145063
3. Accession No. 254706
4. Accession No. 250625 ...

For the bear use, you also must submit data on the **spray pattern** associated with containers of this product. The data should verify the **distances** over which the spray travels and the **width** and **height** of the spray pattern. The data should be developed for containers removed and fired at the speed likely to be used by someone who has been surprised and charged by a bear, rather than by someone who had the time to shake the container vigorously for several seconds. Spray patterns should be **determined over time** so that users can be informed **how many seconds of effective spraying** a given container would afford them.

United States Postal Service

Official Business

U.S. MAIL

PENALTY FOR PRIVATE
USE, $300

Print your name, address and ZIP Code here

EPA
Reg. Div (7504C)
WASH DC 20460

387

SENDER:

- Complete items 1 and/or 2 for additic
- Complete items 3, and 4a & b.
- Print your name and address on the ı ı form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece next to the article number.

I also wish to receive the following services (for an extra fee):

1. ☑ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

McNeil River Ent.
750 W. Dimond
Suite 203
Anchorage, AK 99515

4a. Article Number

Z-099-613-523

4b. Service Type

☐ Registered ☐ Insured
☑ Certified ☐ COD
☐ Express Mail ☐ Return Receipt for Merchandise

7. Date of Delivery

5. Signature (Addressee)

6. Signature (Agent)

8. Addressee's Address (Only if requested and fee is paid)

OPD/RD/IRB/
71545-R Peacock

PS Form 3811, October 1990 ★U.S. GPO: 1990—273-861 **DOMESTIC RETURN RECEIPT**

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A quick response will help us to avoid delays in the review process. If you have questions about this letter, you may reach me by phone (703-305-5407, fax (703-305-6596), or E-Mail (peacock.dan@epamail.epa.gov).

Sincerely,

Daniel B. Peacock, Biologist
Insecticide-Rodenticide Branch
Registration Division (7504C)

Peacock:Disk 17:A:\Capsaicin\71545-R.Jul:703-305-5407:7/27/98

E mail Cathy Fire

JUL 21 1998

U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Pesticide Programs

MCNEIL RIVER ENTERPRISES, INC.
750 W. DIMOND, STE.203
ANCHORAGE, AK 99515

Report of Analysis for Compliance with PR Notice 86-5

Thank you for your transmittal of 07/13/98. Our staff has completed a preliminary analysis of the material. The results are provided as follows:

Your submittal was found to be in full compliance with the standards for submission of data contained in PR Notice 86-5. A copy of your bibliography is enclosed, annotated with Master Record ID's (MRIDs) assigned to each document submitted. Please use these numbers in all future references to these documents. Thank you for your cooperation. If you have any questions concerning this data submission, please raise them with the cognizant Product Manager, to whom the data have been released.

FRONT END PROCESSING APPLICATION INFORMATION CHECK

PM 04

EPA COMPANY NUMBER 11545-R

EPA REGISTRATION NUMBER STATUS (For Amendments) Active _____ Cancelled _____

Not in REFS _____

"ME-TOO" CITED PRODUCT STATUS Active _____ Cancelled _____

Not in REFS _____

PRAT RECORD CREATED Yes - 1/3/96

FRONT END PROCESSING FORM TO FILE ROOM

DATE 7-13-98

FILE NUMBER 71545-R

_____ No Data - File Room "Make Ready for _____"
(PM or Individual)

✓ Data - File Room "Assign Jacket to Shelf"

_____ Rejected - File Room "Assign Jacket to Rejected Shelf"

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

06/13/98

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

McNeil River Enterprises, Inc.
750 W Dimond, Suite 203
Anchorage, AK 99515

PRODUCT NAME: Guard Alaska Bear Repellent
COMPANY NAME: McNeil River Enterprises, Inc.
OPP IDENTIFICATION NUMBER: 257630
EPA FILE SYMBOL: 71545-R
EPA RECEIPT DATE: 07/09/98

SUBJECT: RECEIPT OF APPLICATION FOR A NEW REGISTRATION

DEAR REGISTRANT:

The office of Pesticides Programs has received your application for a new registration and it passed an administrative screen for completeness.

Please note that this is only a notification of receipt of your application. This is only the first step in the application process, and does NOT constitute approval.

If you have any questions, please contact Rodenticide/Insecticide Branch, at (703)-305-5404.

Sincerely,

Front End Processing Staff
Information Resources & Services Division
Information Services Branch

Guard Alaska© Bear Repellent

Table of Contents

Guideline Reference	Test Description	Tab Number	Source
	Product Chemistry		
151-10	Product Identity ..... ADMIN	1	Confidential Statement of Formula
151-11	Formulating Process ... 44599801 ...	2	Case-Mason Filling
151-12	Formation of Impurities . 44599802 ..	3	McNeil River Enterprises
151-13	Preliminary Analysis ... 44599803 ..	4	Chromtec
151-15	Certified Limits ..... ADMIN	5	Confidential Statement of Formula
151-16	Analytical Method ... 44599804	6	AOAC International
	Physical and Chemical Characteristics		
151-17a	Color 44599805	7	Case Consulting
	.....	8	Chromtec
151-17b	Physical State	9	Case Consulting, Chromtec
151-17c	Odor	10	Case Consulting, Chromtec
151-17f	Relative Density	11	Case Consulting, Chromtec
151-17i	pH	12	Case Consulting, Chromtec
151-17k	Flammability .... ADMIN	13	waiver
151-17	Explodability ... ADMIN	14	waiver
151-17l	Storage Stability ... 44599807	15	pending
	.....	16	Chromtec
151-17m	Viscosity ..... ADMIN	17	Case Consulting, Chromtec
151-17n	Miscibility ..... ADMIN	18	waiver
151-17o	Corrosion Characteristics .. ADMIN ...	19	Chromtec, pending
151-17	Dielectric Breakdown Voltage .. ADMIN .	20	waiver
	Toxicology		
Acute Toxicology			
152-10	Acute Oral Toxicity .... ADMIN	21	waiver
152-11	Acute Dermal Toxicity ... ADMIN	22	waiver
152-12	Acute Inhalation Toxicity . ADMIN	23	waiver
152-13	Primary Eye Irritation ... 44599808 .	24	MB Research
	.....	25	Chromtec
152-14	Primary Dermal Irritation . 44599809 .	26	MB Research
	.....	27	Chromtec
152-15	Dermal Sensitization .... ADMIN	28	waiver
152-16	Hypersensitivity ..... ADMIN	29	waiver
152-18	Immunotoxicity ..... ADMIN	30	waiver

44599806 Preliminary Analysis on Guard Alaska Bear Repellent.....
From Samples Received from MB Research + Case Consulting.

Guard Alaska© Bear Repellent

Table of Contents

Guideline Reference	Test Description	Tab Number	Source
	Ecological Effects		
154-	Avian Acute Oral, Avian Dietary. Freshwater Fish, and Freshwater Invertebrate ..... ADMIN	31	waiver
	Product Performance		
96-6	Video	32	McNeil River Enterprises

1. Product Name Guard Alaska® Bear Repellent	2. EPA Reg. No. 71545-R	3. Formulator's Exemption Selected _ Yes X No	4. Page 1 of 9
5. Applicant's Name and Address: McNeil River Enterprises, Inc. 750 W. Dimond, Suite 203 Anchorage, AK 99153	6. Date of Initial Registration with the USEPA July 9, 1998	7. Name of Active Ingredient(s): Capsacin, Dihydrocapsaicin, and Nordihydrocapsaicin	
8. 40 CFR Part 158 DATA REQUIREMENTS	9. SOURCE OF DATA SATISFYING REQUIREMENT		

8a. Guideline Reference Number	8b. Name of Test	9a. Submitted by Applicant	9b. Date Submitted	9f. N.A. or waiver	10. MRID Number	11. Result	12. Location in submission Tab Number
151-10	Product Identity	X			CSF		1
151-11	Formulating Process Formulating Process for McNeil River Enterprises, Inc. Products: Guard Alaska® Bear Repellent and Dog Repellent. W Grube. July 3, 1998. Case-Mason Filling, Inc. 3 pp. and 3 confidential pp.	X					2
151-12	Formation of Impurities Formation of Impurities for Guard Alaska® Bear Repellent. July 8, 1998. McNeil River Enterprises, Inc. 3 pp. and 2 confidential pp.	X					3
151-13	Preliminary Analysis Preliminary Analysis of Guard Alaska® Bear Repellent. M. Bensinger. April 13, 1998. Chromtec. 4 pp.	X					4
151-15	Certified Limits	X			CSF		5
151-16	Analytical Method AOAC Official Method 95.03: Capsaicinoids in Capsicums and Their Extractives. 1996. AOAC International. 4 pp.	X					6

1. Product Name Guard Alaska® Bear Repellent	2. EPA Reg. No. 71545-R	3. Formulator's Exemption Selected _ Yes X No	4. Page 2 of 9
5. Applicant's Name and Address: NeNeil River Enterprises, Inc. 750 W. Dimond, Suite 203 Anchorage, AK 99153	6. Date of Initial Registration with the USEPA July 9, 1998	7. Name of Active Ingredient(s): Capsacin, Dihydrocapsaicin, and Nordihydrocapsaicin	
8. 40 CFR Part 158 DATA REQUIREMENTS	9. SOURCE OF DATA SATISFYING REQUIREMENT		

8a. Guideline Reference Number	8b. Name of Test	9a. Submitted by Applicant	9b. Date Submitted	9f. N.A. or waiver	10. MRID Number	11. Result	12. Location in submission Tab Number
	PHYSICAL AND CHEMICAL PROPERTIES						
151-17a	Color Physical and Chemical Characteristics of Guard Alaska: Color, Physical State, Odor, pH, Viscosity, and Relative Density. D.J. Sinning. May 7, 1998. Case Consulting Laboratories, Inc. 7 pp.	X				Red-brown	7
	Preliminary Analysis on Guard Alaska® Bear Repellent from Samples Received from MB Research and Case Consulting. M. Bensinger. May 31, 1998. Chromtec. 4 pp.	X					8
151-17b	Physical State Physical and Chemical Characteristics of Guard Alaska: Color, Physical State, Odor, pH, Viscosity, and Relative Density. D.J. Sinning. May 7, 1998. Case Consulting Laboratories, Inc. 7 pp.	X				Liquid	9
	Preliminary Analysis on Guard Alaska® Bear Repellent from Samples Received from MB Research and Case Consulting. M. Bensinger. May 31, 1998. Chromtec. 4 pp.	X					

1. Product Name Guard Alaska© Bear Repellent	2. EPA Reg. No. 71545-R	3. Formulator's Exemption Selected _ Yes X No	4. Page 3 of 9
5. Applicant's Name and Address: NcNeil River Enterprises, Inc. 750 W. Dimond, Suite 203 Anchorage, AK 99153	6. Date of Initial Registration with the USEPA July 9, 1998	7. Name of Active Ingredient(s): Capsacin, Dihydrocapsaicin, and Nordihydrocapsaicin	
8. 40 CFR Part 158 DATA REQUIREMENTS	9. SOURCE OF DATA SATISFYING REQUIREMENT		

8a. Guideline Reference Number	8b. Name of Test	9a. Submitted by Applicant	9b. Date Submitted	9f. N.A. or waiver	10. MRID Number	11. Result	12. Location in submission Tab Number
	PHYSICAL AND CHEMICAL PROPERTIES (continued)						
151-17e	Odor Physical and Chemical Characteristics of Guard Alaska: Color, Physical State, Odor, pH, Viscosity, and Relative Density. D.J. Sinning. May 7, 1998. Case Consulting Laboratories, Inc. 7 pp. Preliminary Analysis on Guard Alaska© Bear Repellent from Samples Received from MB Research and Case Consulting. M. Bensinger. May 31, 1998. Chromtec. 4 pp.	X X				Tobacco-like	10
151-17f	Relative Density Physical and Chemical Characteristics of Guard Alaska: Color, Physical State, Odor, pH, Viscosity, and Relative Density. D.J. Sinning. May 7, 1998. Case Consulting Laboratories, Inc. 7 pp. Preliminary Analysis on Guard Alaska© Bear Repellent from Samples Received from MB Research and Case Consulting. M. Bensinger. May 31, 1998. Chromtec. 4 pp.	X X				1.167	11

1. Product Name Guard Alaska® Bear Repellent	2. EPA Reg. No. 71545-R	3. Formulator's Exemption Selected _ Yes X No	4. Page 4 of 9
5. Applicant's Name and Address: NcNeil River Enterprises, Inc. 750 W. Dimond, Suite 203 Anchorage, AK 99153	6. Date of Initial Registration with the USEPA July 9, 1998	7. Name of Active Ingredient(s): Capsacin, Dihydrocapsaicin, and Nordihydrocapsaicin	
8. 40 CFR Part 158 DATA REQUIREMENTS	9. SOURCE OF DATA SATISFYING REQUIREMENT		

8a. Guideline Reference Number	8b. Name of Test	9a. Submitted by Applicant	9b. Date Submitted	9f. N.A. or waiver	10. MRID Number	11. Result	12. Location in submission Tab Number
	PHYSICAL AND CHEMICAL PROPERTIES (continued)						
151-17i	pH Physical and Chemical Characteristics of Guard Alaska: Color, Physical State, Odor, pH, Viscosity, and Relative Density. D.J. Sinning. May 7, 1998. Case Consulting Laboratories, Inc. 7 pp. Preliminary Analysis on Guard Alaska® Bear Repellent from Samples Received from MB Research and Case Consulting. M. Bensinger. May 31, 1998. Chromtec. 4 pp.	X X				4.84	12
151-17k	Flammability	X		waiver			13
151-17	Explodability	X		waiver			14
151-17l	Storage Stability Storage Stablity and Corrosion Characteristics for Guard Alaska® Bear Repellent T=0. M. Bensinger. May 11, 1998. Chromtec. 4 pp.	X				pending	15 16

1. Product Name Guard Alaska® Bear Repellent	2. EPA Reg. No. 71545-R	3. Formulator's Exemption Selected Yes X No	4. Page 5 of 9
5. Applicant's Name and Address: McNeil River Enterprises, Inc. 750 W. Dimond, Suite 203 Anchorage, AK 99153	6. Date of Initial Registration with the USEPA July 9, 1998	7. Name of Active Ingredient(s): Capsaicin, Dihydrocapsaicin, and Nordihydrocapsaicin	
8. 40 CFR Part 158 DATA REQUIREMENTS	9. SOURCE OF DATA SATISFYING REQUIREMENT		

8a. Guideline Reference Number	8b. Name of Test	9a. Submitted by Applicant	9b. Date Submitted	9c. N.A. or waiver	10. MRID Number	11. Result	12. Location in submission Tab Number
	PHYSICAL AND CHEMICAL PROPERTIES (continued)						
151-17m	Viscosity Physical and Chemical Characteristics of Guard Alaska: Color, Physical State, Odor, pH, Viscosity, and Relative Density. D.J. Spurling. May 7, 1998. Case Consulting Laboratories, Inc. 7 pp. Preliminary Analysis on Guard Alaska® Bear Repellent from Samples Received from MR Research and Case Consulting. M. Bensinger. May 31, 1998. Chromtec. 4 pp.	X X				14.3 mPas	17
151-17n	Miscibility	X		Waiver			18
151-17o	Corrosion Characteristics Storage Stability and Corrosion Characteristics for Guard Alaska® Bear Repellent 1-0. M. Bensinger. May 11, 1998. Chromtec. 4 pp.	X				pending	19
151-17	Dielectric Breakdown Voltage	X		Waiver			20

1. Product Name Guard Alaska® Bear Repellent	2. EPA Reg. No. 71545-R	3. Formulator's Exemption Selected _ Yes X No	4. Page 6 of 9
5. Applicant's Name and Address: NcNeil River Enterprises, Inc. 750 W. Dimond, Suite 203 Anchorage, AK 99153	6. Date of Initial Registration with the USEPA July 9, 1998	7. Name of Active Ingredient(s): Capsacin, Dihydrocapsaicin, and Nordihydrocapsaicin	
8. 40 CFR Part 158 DATA REQUIREMENTS	9. SOURCE OF DATA SATISFYING REQUIREMENT		

8a. Guideline Reference Number	8b. Name of Test	9a. Submitted by Applicant	9b. Date Submitted	9f. N.A. or waiver	10. MRID Number	11. Result	12. Location in submission Tab Number
	TOXICOLOGY						
Acute Testing							
152-10	Acute oral toxicity	X		waiver			21
152-11	Acute dermal toxicity	X		waiver			22
152-12	Acute inhalation	X		waiver			23
152-13	Primary eye irritation Primary Eye Irritation/Corrosion in Rabbits. D.R. Cerven. July 1, 1998. MB Research. 12 pp. Preliminary Analysis on Guard Alaska® Bear Repellent from Samples Received from MB Research and Case Consulting. M. Bensinger. May 31, 1998. Chromtec. 4 pp.	X X				Produced irritation & corneal involvement which cleared by day 7	24 25
152-14	Primary dermal irritation Primary Dermal Irritation in Rabbits. L.A. Kieffer. July 2, 1998. MB Research. 11 pp. Preliminary Analysis on Guard Alaska® Bear Repellent from Samples Received from MB Research and Case Consulting. M. Bensinger. May 31, 1998. Chromtec. 4 pp.	X X				Caused very slight to well defined irritation, clearing by day 14	26 27

1. Product Name Guard Alaska® Bear Repellent	2. EPA Reg. No. 71545-R	3. Formulator's Exemption Selected _ Yes X No	4. Page 7 of 9
5. Applicant's Name and Address: NcNeil River Enterprises, Inc. 750 W. Dimond, Suite 203 Anchorage, AK 99153	6. Date of Initial Registration with the USEPA July 9, 1998	7. Name of Active Ingredient(s): Capsacin, Dihydrocapsaicin, and Nordihydrocapsaicin	

8. 40 CFR Part 158 DATA REQUIREMENTS	9. SOURCE OF DATA SATISFYING REQUIREMENT						
8a. Guideline Reference Number	8b. Name of Test	9a. Submitted by Applicant	9b. Date Submitted	9f. N.A. or waiver	10. MRID Number	11. Result	12. Location in submission Tab Number
	TOXICOLOGY (continued)						
Acute Testing							
152-15	Dermal sensitization	X		waiver			28
152-16	Hypersensitivity	X		waiver			29
152-18	Immunotoxicity	X		waiver			30

1. Product Name Guard Alaska® Bear Repellent	2. EPA Reg. No. 71545-R	3. Formulator's Exemption Selected _ Yes X No	4. Page 8 of 9
5. Applicant's Name and Address: NcNeil River Enterprises, Inc. 750 W. Dimond, Suite 203 Anchorage, AK 99153	6. Date of Initial Registration with the USEPA July 9, 1998	7. Name of Active Ingredient(s): Capsacin, Dihydrocapsaicin, and Nordihydrocapsaicin	

8. 40 CFR Part 158 DATA REQUIREMENTS	9. SOURCE OF DATA SATISFYING REQUIREMENT						
8a. Guideline Reference Number	8b. Name of Test	9a. Submitted by Applicant	9b. Date Submitted	9f. N.A. or waiver	10. MRID Number	11. Result	12. Location in submission Tab Number
	WILDLIFE AND AQUATIC ORGANISMS						
Avian and Mammalian Testing							
154-6	Avian Acute Oral	X		waiver			31
154-7	Avian Dietary	X		waiver			31
Aquatic Organism Testing							
154-8	Freshwater Fish LC_{50}	X		waiver			31
154-9	Freshwater Invertebrate LC_{50}	X		waiver			31

1. Product Name Guard Alaska® Bear Repellent	2. EPA Reg. No. 71545-R	3. Formulator's Exemption Selected _ Yes X No	4. Page 9 of 9
5. Applicant's Name and Address: NcNeil River Enterprises, Inc. 750 W. Dimond, Suite 203 Anchorage, AK 99153	6. Date of Initial Registration with the USEPA July 9, 1998	7. Name of Active Ingredient(s): Capsacin, Dihydrocapsaicin, and Nordihydrocapsaicin	
8. 40 CFR Part 158 DATA REQUIREMENTS	9. SOURCE OF DATA SATISFYING REQUIREMENT		

8a. Guideline Reference Number	8b. Name of Test	9a. Submitted by Applicant	9b. Date Submitted	9f. N.A. or waiver	10. MRID Number	11. Result	12. Location in submission Tab Number
	PRODUCT PERFORMANCE						
96-6	Video	X			none assigned		32

EPA

United States
Environmental Protection Agency
Washington, DC 20460

Form Approved
OMB No. 2070-0060
Approval Expires 05-31-95

Certification with Respect to Citation of Data

Applicants Name and Address	EPA File Symbol/Registration Number 71545-R
McNeil River Enterprises, Inc. 750 W Dimond, Suite 203 Anchorage, AK 99515	Product Name Guard Alaska^{C} Bear Repellent
	Date of Application July 9, 1998

NOTE: If your product is a 100% repackaging of another EPA-registered product that you purchase, and is labeled for the same uses, you do not need to submit this form. You must submit the Formulator's Exemption Statement (EPA Form 8570-27).

1. This application is supported by all data submitted or cited in the application. In addition, if cite-all options are indicated, this application is supported by all data in the Agency's files that concern the properties or effects of this product that is identical or substantially similar and that is one of the types of data that would be required to be submitted if this application sought the initial registration of a product of identical or similar composition and intended uses under the data requirements in effect on the date of approval of this application. (Check the appropriate boxes, in items 2 and 3, or 4 below that pertain to your application.)

2. I certify that, for each study cited in support of this application for registration that is an exclusive use study.

   |x| I am the original submitter*; or

   | | I have obtained the written permission of the original submitter for _____ (insert name of chemical), which is _____ (insert names of companies) (for multiple chemicals link the companies who are original data submitters with the appropriate chemical name) to cite that study*

3. I certify that, for each study cited in support of this application for registration that is not an exclusive use study;

   a. |x| I am the original data submitter*; or

   | | I have obtained the written permission of the original data submitter for _____ (insert name of chemical), which is _____ (insert names of companies) (for multiple chemicals link the companies who are original data submitters with the appropriate chemical name) to cite that study*; or

   b. | | I have notified in writing the companies _____ (insert names of companies) for _____ (insert name of chemical) that have submitted data I have cited to support this application and have offered to: (a) Pay compensation for those data in accordance with section 3(c)(1)(F) and 3(c)(2)(D) of the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA); and (b) Commence negotiations to determine which data are subject to the compensation requirement of FIFRA and the amount and terms of compensation due, if any. The companies I have notified are:

   Companies _____ (insert names of companies) for _____ (insert name of chemical) (for multiple chemicals link the companies who are original data submitters with the appropriate chemical name) listed on the Pesticide Data Submitters List for all active ingredients contained in my product (cite-all method or cite-all option under Selective Method*). (Also, sign the General Offer Statement below.)
   Companies _____ (insert names of companies) for _____ (insert name of chemical) (for multiple chemicals link the companies who are original data submitters with the appropriate chemical name) that have submitted the studies which I have cited (Selective method*).

4. |x| I certify that for each study cited in support of this application I am not required to offer data compensation or obtain written permission because all time periods for exclusive use and data compensation have expired.

* A Data Matrix identifying these studies is attached. (Note: a Data Matrix is not required under the cite-all method)

Signature	Name and Title	Date
Randal Prater	Randal Prater, President	7-9-98

General Offer to Pay: I hereby offer and agree to pay compensation to other persons, with regard to the approval of this application, to the extent required.

Signature	Name and Title	Date

EPA Form 8570-29 (Rev. 5-94) Electronic and Paper versions acceptable.
Previous editions are obsolete.

★ U.S. GPO: 1995-386-820/20404

Paperwork Reduction Act Notice

The public reporting burden for this collection of information is estimated to average 2.5 hours per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining needed data, and completing and reviewing this application form. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to: Chief, Information Policy Branch, 2136, U.S. Environmental Protection Agency, 401 M Street, S. W., Washington, DC 20460; and to Office of Management and Budget, Paperwork Reduction Project (2070-0055), Washington, DC 20503, marked "Attention Desk Officer for EPA."

McNeil River Enter., Inc.

Randal Prater
President
Barbara Keller
Project Manager

750 W. Dimond, Ste. 203
Anchorage, Alaska 99515
907-349-6868 or
1-888-419-9695
907-349-7818 fax

Rick Payne
National Sales Dir.

Manufacturers of Guard Alaska Personal Protection Systems

July 9, 1998

Mr. Dan Peacock (CM-2 H7505C)
Office of Pesticide Programs (Team 14)
U.S. Environmental Protection Agency
401 M Street, SW
Washington, DC 20460

Reference: New Product Registration
Guard Alaska® Bear Repellent
(EPA File Symbol 71545-BR

Dear Mr. Peacock:

McNeil River Enterprises, Inc. is respectfully submitting a new product application package for the above-mentioned end-use product. The active ingredients in this product are capsaicin and its related capsaicinoids. Because the properties of these active ingredients are known and the percent of actives are low, we are requesting that these products be approved in a timely manner.

Please call me at 1-888-419-9695 if you have any questions or if I may be of further assistance.

Sincerely,

Randal G Prater

Randal Prater
President

NFT

B

Please read instructions on reverse before completing form.

Form Approved. OMB No. 2070-0060. Approval expires 05-31-98

EPA

United States
Environmental Protection Agency
Washington, DC 20460

[XX] Registration
[ ] Amendment
[ ] Other

OPP Identifier Number: 257630

Application for Pesticide - Section I

1. Company/Product Number: 71545-R	2. EPA Product Manager: ~~Dan Peacock~~	3. Proposed Classification: [X] None [ ] Restricted
4. Company/Product (Name): Guard Alaska^c Bear Repellent	PM#: ~~14~~ 04	
5. Name and Address of Applicant *(Include ZIP Code)*: McNeil River Enterprises, Inc. 750 W Dimond, Suite 203 Anchorage, AK 99515 [ ] *Check if this is a new address*	6. **Expedited Review.** In accordance with FIFRA Section 3(c)(3)(b)(i), my product is similar or identical in composition and labeling to: EPA Reg. No. _____ Product Name _____	

Section - II

[ ] Amendment - Explain below.
[ ] Resubmission in response to Agency letter dated _____
[ ] Notification - Explain below.
[ ] Final printed labels in response to Agency letter dated _____
[ ] "Me Too" Application.
[ ] Other - Explain below.

Explanation: Use additional page(s) if necessary. (For section I and Section II.)

Section - III

1. Material This Product Will Be Packaged In:

Child-Resistant Packaging	Unit Packaging	Water Soluble Packaging	2. Type of Container
[ ] Yes* [X] No	[ ] Yes [X] No	[ ] Yes [X] No	[XX] Metal [ ] Plastic [ ] Glass [ ] Paper [ ] Other (Specify) _____
Certification must be submitted	If "Yes" Unit Packaging wgt. / No. per container	If "Yes" Package wgt / No. per container	

3. Location of Net Contents Information	4. Size(s) Retail Container	5. Location of Label Directions
[X] Label [ ] Container	9 oz	[X] On Label [ ] On Labeling accompanying product

6. Manner in Which Label Is Affixed to Product: [XX] Lithograph [ ] Paper glued [ ] Stenciled [ ] Other - pressure sensitive

Section - IV

1. Contact Point *(Complete items directly below for identification of individual to be contacted, if necessary, to process this application.)*

Name	Title	Telephone No. (Include Area Code)
Catherine Rice	Consultant	703-847-7407

Certification

I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.

6. Date Application Received (Stamped)

2. Signature	3. Title	
Randal Prater	President	
4. Typed Name: Randal Prater	5. Date: 7-9-98	

EPA Form 8570-1 (Rev. 8-94) Previous editions are obsolete. White - EPA File Copy (original) Yellow - Applicant Copy

PAPERWORK REDUCTION ACT NOTICE and INSTRUCTIONS

PAPERWORK REDUCTION ACT NOTICE: Public reporting burden for this collection of information is estimated to average 0.85 hour per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Chief, Information Policy Branch, (2136), U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460.

INSTRUCTIONS: This form is to be used for all applications for new registration, end use reregistration, amendment, resubmission, to applications for notifications, final printed labeling, reregistration, etc. In order to process an application for a new registration submitted on this form, the *following material must accompany the application:*

1. Certification with Respect to Citation of Data (EPA Form 8570-29). [If not exempted by 40 CFR 152.81 (b) (4)];
2. Confidential Statement of Formula (EPA Form 8570-4);
3. Formulator's Exemption Statement (EPA Form 8570-27);
4. Five copies of draft labeling;
5. Three copies of any data submitted;
6. Authorization letter where applicable;
7. Matrices where applicable.

Submission of Labeling - Labeling should first be submitted in the form of draft labels with all applications for new registration. Such draft labels may be in the form of typed label text on 8.5 x 11 inch paper for submission or a mockup of the proposed label. If prepared for mockup, it should be constructed in a way as to facilitate storage in an 8.5 x 11 inch file. Mockup labels significantly smaller than 8.5 x 11 inches should be mounted on 8.5 x 11 inch paper for submission.
Submission of Data - Data submitted in support of this application must be submitted in accordance with PR Notice 86-5.

SPECIFIC INSTRUCTIONS: Please read the instructions listed below before completing this application. First determine the type of registration action, listed in Block A, for which you are submitting this application. For applications submitted in connection with New Registration actions, Sections I, III, and IV must be completed by the applicant. For applications submitted in connection with amended reregistration actions, resubmissions, notifications, reregistrations, etc., Sections I, II, and IV must be completed by the applicant.
Block A - Check the appropriate action for which you are submitting this form.

SECTION I - This section must be completed, as applicable, for all registration actions.

1. Company/Product Number - Insert your Company Number, if one has been assigned by EPA. This number may have been assigned to you as a basic registrant, a distributor, or as an establishment. If your product is registered, insert the Product Number.
2. EPA Product Manager - If known, fill in the name and PM number of the EPA Product Manager.
3. Proposed Classification - Specify the proposed classification of this product.
4. Product Name - Enter the complete product name of this pesticide as it will appear on the label. The name must be specific to this product only. Duplication of names is not permitted among products of the same company. Do not include any brand name or company line designations.
5. Name and Address of Applicant - The name of the firm or person and address shown in your application is the person or firm to whom the registration will be issued. If you are acting in behalf of another party, you must submit authorization from that party to act for them in registration matters. An applicant not residing in the United States must have an authorized agent residing in the United States to act for them in all registration matters. The name and complete mailing address of such an agent must accompany this application.
6. Expedited Review - FIFRA section 3 (c) 3 (B) provides for expedited review of applications for registration, or amendments to existing registrations that are similar or identical to other pesticide products that are currently registered with the EPA. In order for your application to be eligible for expedited review, you must provide us with the EPA Registration Number and product name of the product you believe is similar to or identical to your product. The product must be similar or identical in both formulation and labeled uses.

SECTION II - This section must be completed for all applications submitted to amend the registration only of a currently registered product (Amendment), for a resubmission in response to an Agency letter, for notifications to the Agency, for the submission of final printed labeling, for reregistration and for any other action that pertains to a specific EPA-registered product. This section is not to be used for a new application for registration.

1. Subject of submission - Check the applicable block and provide the Agency letter date if appropriate. Provide a brief explanation of the purpose(s) for the submission, such as "the addition of a site, pest or crop (specify)"; "amend the Confidential Statement of Formula by..."; "reregistration submission"; "general label revision of use directions." Attach a separate page if additional space is needed.

SECTION III (Packaging and Container Information) - This Section must be completed for all applications submitted in connection with new registration or applicable amendments.

1. Type of Packaging - Check the appropriate block if your product will be packaged in the indicated packaging types. Indicate the size of the individual packets and number per retail container.
2. Type of Retail Container - Indicate type of container in which product will be marketed.
3. Location of Net Contents - Indicate the location of the net contents information for your product.
4. Size(s) of Retail Container - Specify the net contents of all retail containers for your product.
5. Location of Use Directions - Indicate the location of the use directions for your product.
6. Manner in which label is affixed to product - Indicated the method product label is attached to retail container.

SECTION IV (Contact Point) - This Section must be completed for all applications for Registration actions, i.e., new products registration, resubmission, "me-too," reregistration, etc.

1-5. Self-explanatory.
6. EPA Use Only.