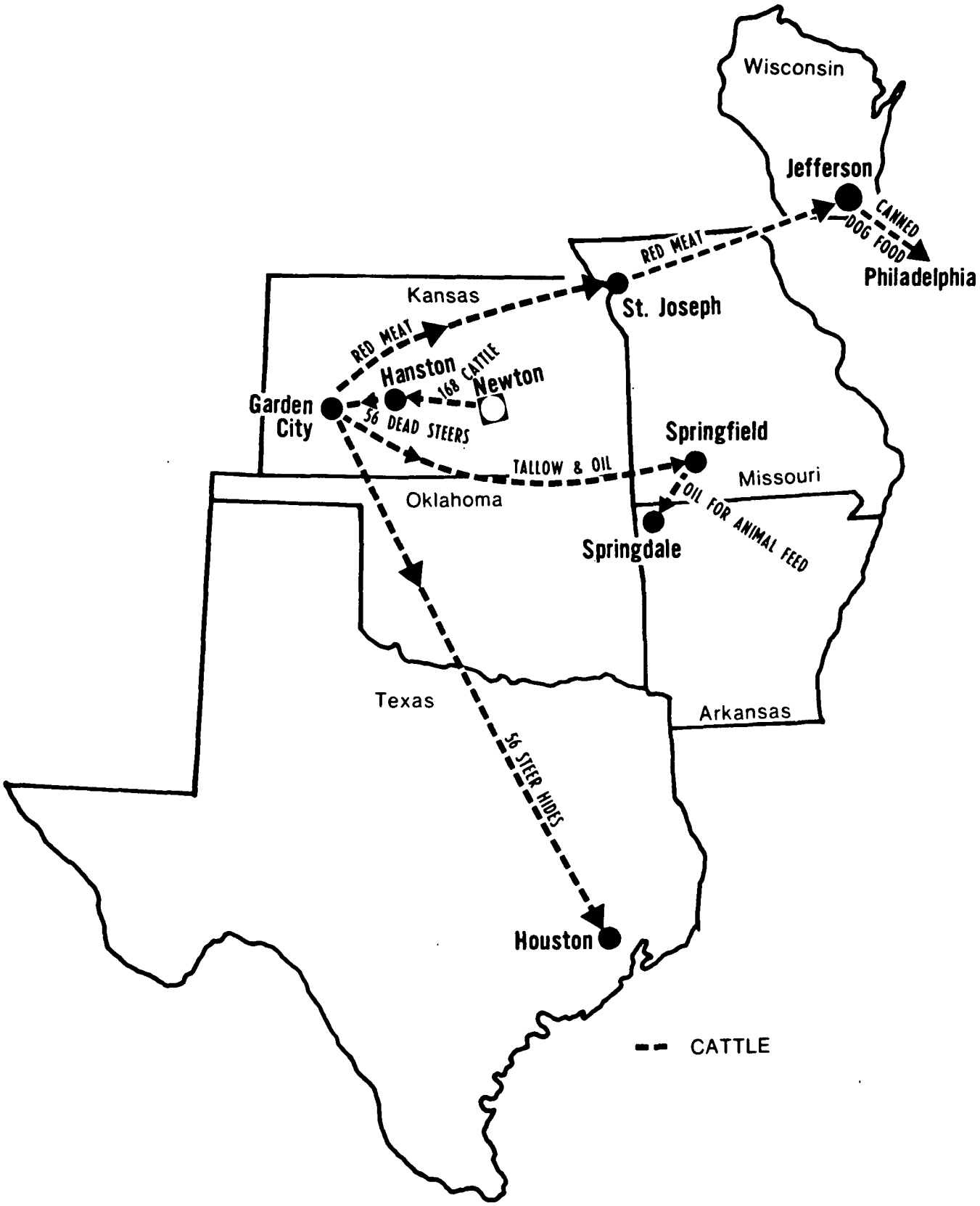
KANSAS PCB CONTAMINATED CATTLE AND SWINE

Prepared By:

U. S. Environmental Protection Agency
Region VII
324 East 11th Street
Kansas City, Missouri 64106

Distribution of PCB Contaminated Meat



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Environmental News

FOR IMMEDIATE RELEASE

MONDAY, AUGUST 20, 1979

R. Michaels
J. Wicklund
PLEASE CALL (816)374-3036

PCBs FOUND IN KANSAS CATTLE

Investigations are continuing into the death of 54 head of cattle in a Kansas feedlot.

Environmental Protection Agency, Kansas Department of Health and Environment, Food and Drug Administration, and the Animal Plant and Health Inspection Service revealed today that in May, Don Busenitz of Newton, Kansas delivered 168 head of cattle to Pawnee Valley Feedlot in Hanston, Kansas. The cattle were vaccinated, and dipped for lice and grubs, a common practice in animal feed lots. Seven days later 54 head of those cattle were dead.

The surviving animals are being held under order of the Kansas Department of Health and Environment and the Kansas Animal Board of Health. The feedlot operator and Busenitz have been ordered to hold any remaining animals or materials until investigations are complete.

Confirmed analyses of the dead animals show an extremely high concentration of polychlorinated biphenols (PCB's) in the fat. PCB's are chemicals which were used in electrical transformers to absorb heat. They do not break down in the environment and have been shown to cause cancer in test animals.

The PCB's came from waste oil used by Busenitz in animal back rubbers on his farm. Busenitz purchased the transformer oil eight years ago. EPA outlawed the production of PCB's in 1976.

Jayhawk Rendering Plant, Garden City, Kansas, where the 54 head of the Busenitz cattle were processed, has been ordered by Kansas Department of Health and Environment to hold any remaining material from the affected cattle.

more

The Food and Drug Administration has intiiated a major investigation to identify all products that may have been produced from the contaminated cattle in an effort to prevent any of the materials entering the market for human use. At this time FDA does not believe there is a significant health hazard.

Dr. Kay Q. Camin, Regional Administrator of EPA, the agency which has responsibility for keeping PCB's out of the environment, issued a warning to farmers and ranchers to be especially alert to the use of waste oil in their operations. She said, "You must be particularly careful not to use oil from electrical transformers. This oil usually contains high concentrations of PCB's." If you have any doubts about the source of your waste oil, call Environmental Protection Agency's toll free number; in Missouri (800) 892-3837, and in Iowa, Kansas, and Nebraska, (800) 821-3714; the Kansas Department of Health and Environment in Topeka, (913) 296-3821.

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S. Vainrib
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FOR IMMEDIATE RELEASE

TUESDAY, AUGUST 21, 1979

RADIO/TV PUBLIC SERVICE
ANNOUNCEMENT FROM EPA

Dr. Kathleen Q. Camin (pronounced ka-MEEN), Regional Administrator of the Environmental Protection Agency in Kansas City, warns farmers and ranchers to be alert to the use of any products containing PCBs or Polychlorinated Biphenyls. PCBs are a health hazard that have been outlawed by the EPA since 1976. Dr. Camin urges farmers and others to be especially careful not to use waste oil from electrical transformers which usually contain high levels of PCBs.

If you have any questions about the use of PCBs or the source of your waste oil, call the EPA toll-free numbers; in Missouri, call (800)892-3837; in Iowa, Kansas and Nebraska, the number is (800)821-3714. The Kansas Department of Health and Environment's number in Topeka is (913)296-3821.

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VOL. 99. NO. 287 THE KANSAS CITY STAR KANSAS CITY, FRIDAY EVENING, AUGUST 17, 1979

PCB Spreads Lethal Lode

Kansas Cattle Carried Cancer-Causing Agent

By John M. Wylie II
Star Energy/Environment Writer

An environmental nightmare has unfolded this week with the discovery that a herd of 168 cattle from near Newton, Kan., was contaminated with PCB, a deadly chemical that causes cancer and attacks the central nervous system in humans.

State and federal officials believe there is no imminent danger to the public health from those animals, but they acknowledge that herds raised on the same farm for the last seven years probably also were contaminated with PCB, or polychlorinated biphenyls. They say there's no way of knowing how serious that contamination might have been, or where contaminated meat or byproducts might have gone.

Officials say Don Busenitz, the Newton farmer who owns the herd, took the animals to the Pawnee Valley Feedlot near Hanston, Kan., in mid-May. Within a week, 54 died of unknown causes.

It wasn't until Aug. 7 that tests in Ames, Iowa, revealed that the dead animals had PCB concentrations of up to 2,200 parts a million in their fat tissues, said John Wicklund, chief of the toxic materials and pesticide branch with the Environmental Protection Agency here. That level would be fatal, Wicklund said.

By then, the 54 dead animals had been rendered. Byproducts had been shipped to Omaha for use as pet food and to Springfield, Mo., for further processing and use in poultry feed in Arkansas.

State and federal investigators stepped in, clamping a quarantine on the remaining 114 cattle, putting hold orders on the pet food and trying to piece together how huge quantities of the chemicals got into the cattle.

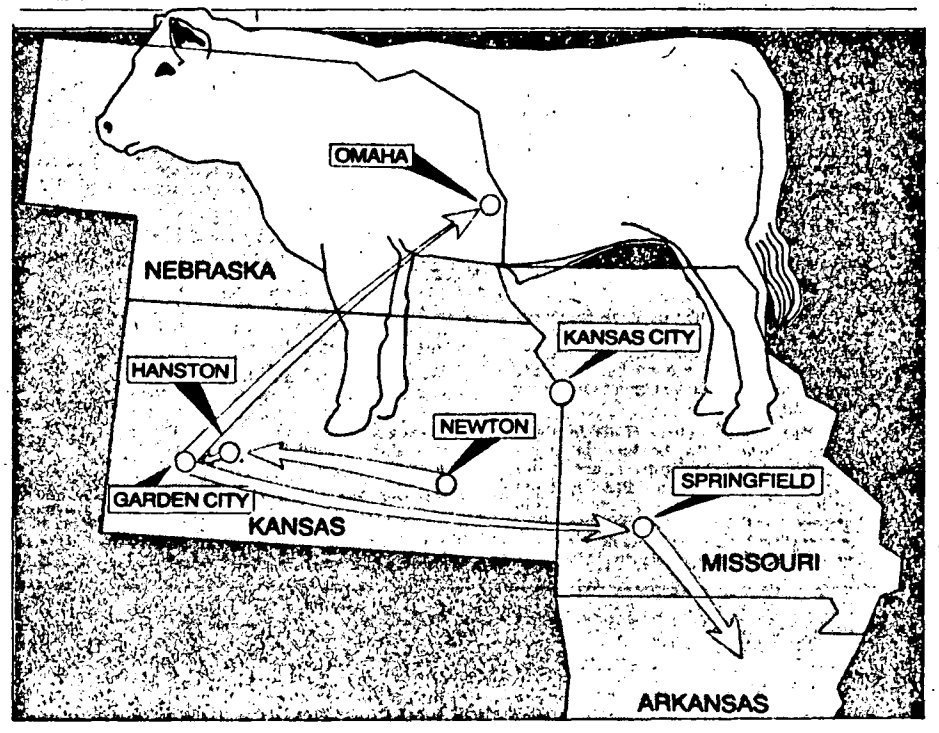
It was traced to salvaged oil Busenitz bought eight years ago to use as part of the backrub mixture put on cattle to ward off insects. Analysis indicates that the "oil" is actually a 95-percent PCB solution used in electrical transformers, Wicklund said. The PCBs were absorbed through the animal's hides. The major use for PCBs, which are no longer made because of their extreme environmental hazard, is in electrical transformers.

PCBs are both toxic in large doses and capable of causing cancer in smaller amounts. Acute symptoms include a rash called chloracne and, in larger doses, damage to the central nervous system and death. The chemicals collect in the fat of warm-blooded animals and don't break down. Thus, repeated exposure to PCBs causes an ever-increasing buildup in the body.

Wicklund said the 2,200 parts per million in the dead animal "is enough to cause trouble in absolutely anything." To put the figure in perspective, federal regulations require special disposal precautions for anything contaminated with PCBs at a level above 50 parts a million.

Initial tests on some of the live animals in the feedlot showed PCB levels of 150 to 800 parts per million, Wicklund said.

DEADLY CHEMICAL



Jim Murray/staff

Used in applying pesticides to cattle near Newton, Kan., oil containing deadly PCB was spread through the rendered meat to processing plants across the Midwest.

Veterinary advisers have told EPA and the Kansas Department of Health and Environment that the animals will never lose enough of the PCB contamination to be acceptable for slaughter or rendering.

The problem wasn't made public until today, officials acknowledged privately, because details of the problem were still very sketchy. Officials didn't want to release sketchy information and unnecessarily alarm the public.

But the situation has drawn top-level attention, including the personal involvement of Dr. Kathleen Q. Camin, EPA regional administrator, and Mel Gray, director of the environment division of the Kansas Department of Health and Environment.

Federal officials were asked if it were true that because Busenitz told investigators that he has used oil from the same shipment for the past eight years, then did it mean contaminated meat has reached dinner tables?

Assuming the oil was the same, Wicklund said: "Yes. I don't know any

☆Lethal PCB Spread by Dying Cattle

other way I could answer you."

Here's what has developed so far and where the probe will go:

Busenitz bought about 1,000 gallons of waste transformer oil eight years ago from a nearby salvage dealer. Officials say neither man had any idea the chemical was dangerous. (Many farmers often buy used oils from salvage dealers, which is then mixed with other chemicals to treat their cattle).

The transformer oil, which came in 55-gallon drums, was mixed with small amounts of lindane and toxaphene to form a backrub for the cattle on the Busenitz farm. Transformer oil containing PCBs is similar in appearance to motor oils.

This year, Busenitz shipped the herd of 168 cattle to the feedlot in May. When 54 died, they were taken to the Jayhawk Rendering Plant in Garden City. Before rendering, tissue samples were taken at the feedlot for analysis.

The analysis moved slowly, Wicklund said, from a veterinarian through Kansas State University, then to the University of Missouri and finally to the highly specialized laboratory in Ames.

Thus, it was Aug. 7 before the PCBs were found.

Meanwhile, Jayhawk had processed the dead animals, producing oil and red meat. The meat was shipped to Carnation Co., Omaha, for production of pet food.

The oil from the contaminated cattle was sent to Southwest Byproducts, Springfield, where it was further processed, then was sent into Arkansas to be used as part of a poultry feed.

EPA officials say they believe that, by the time the oils were processed, the PCB contamination had been reduced to 2 parts per million or less. That would be because the contaminated fat was repeatedly diluted with fat from uncontaminated animals during processing, officials believe.

The U.S. Food and Drug Administration is checking samples and records in Springfield, Omaha and Garden City to be certain that contaminated products aren't used as animal food.

Kansas Department of Health and Environment officials are screening Busenitz and members of his family for possible PCB contamination.

Working with EPA, they hope to find out if any other transformer oil was sold to farmers in the area for use in backrubs.

Busenitz will apparently suffer a total loss on the contaminated herd. In addition, under federal regulations he will be required to prepare proper storage for the chemicals.

Wicklund said the problem is probably the single most serious PCB case in this area's history. But the biggest part of the problem is that nobody knows how serious past contamination may have been.

"We just don't know, I'll be honest with you," Wicklund said. Busenitz, reached by telephone today, declined to discuss the case.

The Newton cattle raiser said EPA officials had asked him not to talk with anyone about the problem, adding: "I'll try to honor that request." He said it wouldn't benefit anyone if inaccurate information came out.

Warning on Oil

Dr. Kathleen Q. Camin, regional administrator of the Environmental Protection Agency here, warned farmers and ranchers today to be certain they know the origin of the oil they are using to make backrub for cattle.

"Be particularly careful not to use oil from electrical transformers, as this oil usually contains high concentrations of PCBs," Dr. Camin said.

Farmers uncertain about oil they are using may contact EPA in Kansas City or the Kansas Department of Health and Environment in Topeka for help.

Toll-free numbers for EPA are: From Missouri, 1-800-892-3837. From Kansas, Iowa or Nebraska, 1-800-821-3714.

Waste oil use blamed for deaths of cattle

A load of waste transformer oil used by Don Buesnitz, a farmer near Newton, contained Poly-Chlorinated-Byphenols, PCB, and caused the death of 54 cattle he had marketed, an investigation has revealed.

Busenitz bought the load of waste oil eight years ago and kept it on his farm until this spring when he used some of it to control flies and insects on his cattle.

When he took his herd to market a week later, 54 of the 268 cattle died.

An investigation was undertaken by the Kansas Health and Environment office and the Environmental Protection Agency into the cattle deaths and determined the cause was PCB found in the waste oil.

PCB is known to cause cancer in test animals and the EPA had earlier outlawed its use. The farmer had bought the oil before this was revealed and he didn't know what side effects it would have.

Since then five major government agencies have stepped into the case. They said that at present they feel safe to say there is no significant health hazard to people because all the animals treated by Busenitz with the waste oil were confiscated before they were shipped from the slaughter house.

The EPA isued a warning Thursday to farmers and ranchers not to use electrical transformer oil for insect control.

54 Head Lost

THE WICHITA EAGLE AND BEACON Saturday, August 18, 1979

EPA Warns of Danger to Cattle

By Our State Staff

TOPEKA — Reacting to the death of 54 cattle near Newton, the U.S. Environmental Protection Agency has warned farmers and ranchers not to treat their animals with waste oil from electrical transformers.

Federal and state officials said Friday that such oil, contaminated with polychlorinated biphenyls or PCBs, was used by Don Busenitz on his cattle as an insect repellent.

Busenitz had bought the load of waste oil eight years ago for use in a rubbing mixture to control flies and other insects on his herd.

Last spring he took a herd of his cattle to a feedlot, and soon thereafter 54 of them died. About 100 other cattle in the herd were also contaminated with PCBs and are being held in isolation on the feedlot pending a decision on their disposal.

Joseph Harkins, secretary of the Kansas Department of Health and Environment, said Friday that state animal health investigators began an investigation to determine the cause of death, but it was only last week that a national animal health laboratory in Ames, Iowa, confirmed the presence of PCBs, chemicals that have been shown to cause cancer in test animals.

PCBs, banned by the EPA in 1976, were used widely before that time in electrical transformers to hold heat.

The dead animals were sent to Jayhawk Rendering Plant in Garden City for processing, but Harkins says he thinks federal and state officials have now found them all.

"We have simply put a net out to prevent any of the materials from reaching the marketplace," Harkins said Friday.

According to an EPA spokesman, some of the contaminated meat was sold to Carnation Co. in St. Joseph, Mo. But that meat has been embargoed.

The U.S. Food and Drug Administration is conducting an investigation to identify all products that may have been produced from the cattle.

Besides the red meat sold to Carnation, oil from the fat of the cattle has been tracked through Cargill Turkey at Springdale, Ark., to Gold Kist Chickens in Fayetteville, Ark.

Harkins said none of the products were intended for human consumption. Some were designed for use in animal feeds.

Initial laboratory tests showed that the cattle died of a toxic reaction to an insecticide.

Harkins said Busenitz bought the oil from a Newton area salvage yard.

"It's a common practice to buy oil this way, because it's used in the mixture for the backrubs on the animals," Harkins explained. "It's a mixture of insecticide and oil that the feedlots and growers put together. This farmer certainly was not doing anything out of the ordinary.

THE KANSAS CITY STAR Sunday, August 19, 1979

Farmer Blames Government for Lethal PCBs in Cattle

By John M. Wylie II
Star Energy/Environment Writer

NEWTON, Kan.—Don Busenitz blames government incompetence and inaction for leaving him in the middle of a devastating situation.

Government investigators, meanwhile, are deeply concerned that the same deadly chemical blamed for wiping out a herd of Busenitz' cattle might also be in use on farms and ranches all over the Midwest.

Busenitz sent 168 cattle from his farm here to a western Kansas feedlot in May. Within a week, 54 of the cattle died mysteriously. It was three months before laboratory tests showed why: The animals had absorbed huge amounts of polychlorinated biphenyls (PCBs).

Small amounts of the chemical have been shown to cause cancer. In larger doses, PCBs cause nerve damage and even death.

The chemical can be absorbed through the skin and builds up in the fatty tissues of humans and warm-blooded animals. It does not break down, so repeated exposure would leave increasingly large amounts in the body.

PCBs were manufactured for about 30 years, primarily for use in electrical transformers, before manufacture was outlawed because of the extreme health hazard. Federal officials estimate that millions of pounds of PCBs are still in circulation, though most are sealed inside transformer equipment.

But, before there was widespread understanding of the dangers of PCBs, some used transformer oil with high levels of the chemical was packaged in drums and sold to salvage dealers. Even today, relatively few people know the difference between transformer oil, which is up to 95 percent pure PCB, and regular waste oil, which is widely used on farms.

Busenitz bought a batch of waste transformer oil eight years ago, using the substance in the back-rub solution used on cattle to ward off insects. Now he's been told this is what ruined his herd this year.

He's bitter because it took investigators three months to find out what went wrong.

"That's an awful indictment, for as many people and as much money as they've (the federal government) got," he said, taking a brief break from feeding hogs on his farm four miles southeast of Newton.

The tall, wiry farmer wears a neatly trimmed mustache. His voice dripped sarcasm as he talked about the delay:

"It's a real feather in their caps. We deserve better."

John Wicklund, the branch chief for the U.S. Environmental Protection Agency, who is helping coordinate the probe by five state and federal agencies, said tests from laboratories in Kansas, Missouri and Iowa were needed to find the problem. Such tests take time because chemicals such as PCBs are difficult to trace, Wicklund said. Veterinary medicine experts first thought the problem with the Busenitz herd involved pesticides, and those had to be ruled out with lab tests before tests for other substances could begin.

Tests made since PCBs were first found in the dead cattle have brought a stream of bad news to Busenitz. Tissues from the dead cattle had levels as high as 3,200 parts of the chemical for each million parts of fat. Anything contaminated with PCBs at levels over 50 parts per million is considered a hazardous waste. Federal regulations require special disposal techniques for such materials.

Officials believe they have tracked down all the products from the rendering of the 54 dead cattle. Materials had spread from Nebraska to Arkansas, Wicklund said, but officials believe the only material to reach livestock was mixed into a poultry feed used in Arkansas. By then, they said, the PCBs from the Busenitz cattle had been so extensively diluted by materials from uncontaminated animals that there was no longer a health threat.

The remaining 114 cattle are under quarantine at the feedlot in Hanston, Kan. Tests on them show PCB levels of from 150 to 800 parts per million. At those levels, federal officials say, the cattle will never be acceptable for slaughter or rendering.

Busenitz doesn't yet know the size of his loss or whether it will be covered by insurance. He said he doesn't want to talk much about the problem until he can consult a lawyer, but added, "Something like this is just devastating. I don't know if you can understand how devastating."

He said the containers of oil he bought had no warning that the contents were dangerous to animals. He blamed the government for not tracking down PCBs once their danger was known.

"It is the state's job, the government's job, to follow up on where all that material was when they found out it was hazardous. That's another feather in their cap. That's getting to be quite a cap," he said.

Busenitz declined to discuss details of how he used the transformer oil, but government investigators say he told them he had used the oil in back-rub since he bought it. They say this raises the possibility that some contaminated meat might have been sold to the public in past years. Busenitz said Saturday that he had never had problems with cattle before this year.

The PCB compound came to the Busenitz farm from the Sattler Repair Service and Salvage Yard in Walton, Kan., a tiny town six miles northeast of Newton.

Arthur Sattler, the spry owner of the salvage business, spent part of his 75th birthday Thursday talking to the second of three government investigators who have visited his eight-acre facility this week.

Sattler has been buying other people's cast-offs and finding new owners for them for about 25 years. His customers say he's good at it, pointing to a fat wallet that makes a bulge in the back pocket of his grimy overalls.

But the transformer oil transaction eight years ago didn't involve much money. Sattler, who frequents auctions in this part of the state, picked up the oil in one such sale. He doesn't remember where the auction was, who sold the oil or how much he paid, but he knows it didn't cost much.

"I bought that oil and was going to use it for spraying weeds. He (Busenitz) came by and wanted to buy it, so I sold it. I knew it was called transformer oil, but I didn't know another thing about it," Sattler said.

The salvage dealer didn't think anything more about the transaction until the first government investigator showed up Wednesday. Sattler still isn't sure exactly what PCBs are, but the investigators have told him they are dangerous.

When told all the cattle Busenitz had sent to the feedlot were contaminated, Sattler shook his head sadly:

"I didn't know him (Busenitz) real well. He came here and seen that oil. I didn't have no idea it would have anything to kill the cattle."

Sattler said he's never done much business in waste oils, and after this experience he said he'll never again handle such materials.

"Enough is enough," he said firmly.

But government officials are worried that other drums of PCBs might be sitting like time bombs in salvage yards such as Sattler's or on farms and ranches such as Busenitz'.

They haven't found any yet, but an intense campaign to alert farmers to the problems began Friday with calls to the Kansas Farm Bureau and other farm organizations asking them to alert members. EPA officials say the campaign will spread at least to Kansas, Missouri, Nebraska and Iowa, the four states served by the regional office in Kansas City.

Doctor Kathleen Q. Camin, EPA regional adminstrator, asked all farmers and ranchers Friday to check the oil being used in livestock back rubs. If there are any indications that transformer oil is being used, farmers should stop using it immediately and call EPA or the Kansas Department of Health and Environment in Topeka.

EPA has two toll-free lines that farmers may use to call its office in Kansas City: from Missouri, 1-800-892-3837; from Kansas, Iowa or Nebraska, 1-800-821-3714.

Topeka Capital-Journal, Saturday, August 18, 1979

Officials tracing effects of PCBs

KANSAS CITY, Mo. (AP) — Federal and state officials are trying to determine the public health impact of a cancer-causing chemical that decimated a herd of Kansas cattle last May.

Fifty-four head of cattle owned by a Newton farmer died of what was later found to be contamination from polychlorinated biphenyls, or PCBs.

The chemical is known to cause cancer in animals and attacks the central nervous system in humans.

Those cattle were melted down in Garden City and byproducts shipped to Nebraska and Missouri for processing before the cause of their death was determined earlier this month in Iowa.

Federal and state officials say there is no imminent danger to public health from the animals, but they concede that cattle raised on the farm in the last seven years probably also were contaminated.

Hutchinson News Sun., Aug. 19, 1979

Deadly chemical kills 54 cattle

NEWTON — State and federal authorities are investigating the contamination of a herd of cattle from a Newton farm that caused the death of 54 of the animals and a quarantine on the remaining 114.

The cattle, from the Don Busenitz farm near Newton, were contaminated with PCB, a deadly chemical that causes cancer and attacks the central nervous system in humans, according to a laboratory report from Ames, Iowa. The PCB, polychlorinated biphenyls, came from oil used as a backrub on the animals to ward off insects.

Busenitz took the cattle to Pawnee Valley Feedlot, near Hanston, in mid-May where within a week 54 of the animals died. Tissue samples were taken from the dead animals to determine the cause of death, but their carcasses were rendered at the Jayhawk Rendering Plant, Garden City. The byproducts were shipped to Omaha and Springfield, Mo., for further processing for use as pet food and in poultry feed.

The tissue samples went from Kansas State University to the University of Missouri to the Ames laboratory before a determination on the problem was made. Officials said there is no imminent danger to the public health from the remaining animals.

A hold order has been placed on the pet food made from the byproducts of the dead animals, according to a spokesman with the Environmental Protection Agency in Kansas City.

The case is under investigation by the EPA, the Kansas Department of Health and Environment and the U.S. Food and Drug Administration.

Authorities also acknowledged that herds raised on the Busenitz farm in the past seven years also were contaminated with PCB, and there is a possibility that contaminated meat has reached some U.S. dinner tables. However, there's no way of determining how serious that contamination may have been or where the contaminated meat or byproducts went.

The PCB-containing oil was traced to 1,000 gallons of waste transformer oil Busenitz bought eight years ago from a salvage dealer. Tests showed the oil was a 95-percent PCB solution used in electrical transformers.

Using waste oil mixed in backrubs for cattle is a common practice among farmers, according to EPA officials.

The remaining 114 cattle from the Busenitz herd probably will not be acceptable for slaughter or rendering, veterinary advisers have told EPA officials.

NEWS TRIBUNE, Jefferson City, Mo., Sunday, August 19, 1979 27

Cattle contaminated

KANSAS CITY, Mo. (UPI) — Evironmental Protection Agency officials said Friday an investigation had revealed a Kansas herd of 168 cattle was contaiminated with PCB, a deadly chemical that causes cancer and afflicts the central nervous system in humans.

Federal and state officials said, however, they did not believe there is an imminent danger to the public health from those animals.

The herd of cattle was from a farm near Newton, Kan., that was owned by Don Busenitz.

Officials said that herds from the farm for the last seven years probably also were contaminated by PCB, or polychlorinated bipheyls. They said there was no way of determining how serious that contamination might have been or where contaminated meat or byproducts might have gone.

Within a week after Busenitz took the herd to the Pawnee Valley Feedlot near Hanston, Kan., in mid-May, 54 of the animals died of unknown causes.

John Wicklund, chief of the EPA toxic materials and pesticide branch, said tests at Ames, Iowa, Aug. 7 revealed the dead animals had PCB concentration of up to 2,200 parts in a million in their fat tissue, a level that would be fatal.

Wicklund said that by the time the tests were completed, the 54 animals had been rendered and byproducts had been shipped for use as pet food and for use in poultry feed.

Federal and state investigators put a quarantine on the remaining 114 cattle and a hold order on the pet food and poultry feed.

Source of the PCB was traced to salvaged oil Busenitz bought eight years ago to use as part of a mixture put on cattle to ward off insects. Analysis indicated the "oil" was actually a 95 percent PCB solution used in electrical transformers, Wicklund said. The PCB was absorbed through the hide of the animals.

Wicklund said PCB no longer is made because of its extreme environmental hazard.

Hutchinson News Mon., Aug. 20, 1979

Questions PCB report delay

Newton farmer angry, puzzled

NEWTON — Newton farmer Don Busenitz said he is angry and puzzled over why the government took three months to determine what killed 54 of 168 cattle he had shipped to a Hanston feedlot in May.

U.S. Environmental Protection Agency laboratory testing showed that the cattle were affected by large amounts of polychlorinated biphenyls, or PCB, in their bodies.

An EPA official said the testing took a long time because the deadly chemical was hard to trace.

Authorities said they fear the chemical is being used throughout the Midwest. Busenitz used the chemical as an insect repellent on his cattle. He purchased the waste oil eight years ago and kept it on his farm in storage until this spring when used some of it for insect control. PCB has been known to cause cancer, and in large doses, causes nerve damage or death.

Officials said they believe they have accounted for all the meat products made from the 54 cattle that died.

PCB was banned from use in 1976 but Busenitz had purchased the the oil prior to the ban and didn't know its possible side effects, according to health officials.

The PCB-containing oil was traced to salvage dealer and tests show the oil was 95 percent PCB solution used in electrical transformers.

PCB is particularly dangerous because it doesn't break down in the environment.

Dr. Kay Q. Camin, regional administrator of the EPA in Kansas City, has issued a warning to farmers and ranchers to be alert to the hazards of using waste transformer oil in their livestock operations.

A toll free number of 1-800-821-3714 is available for farmers in the area for information if they have any questions about their source of waste oil.

Joseph Harkins, secretary of the Kansas Department of Health and Environment, said, "It's a common practice to buy oil this way, because it's used in the mixture for backrubs on the animals. It's a mixture of insecticide and oil that the feedlots and growers put togther. This farmer (Busenitz) was certainly not doing anything out of the ordinary."

PCB Taint Feared in 500 Hogs

Pigs Quarantined At Farm Stricken By Cattle Deaths

By Dick Haws
A Member of the Staff

Federal and state authorities confirmed Monday that the more than 500 pigs and hogs on the Newton, Kan., area farm of Donald Busenitz have been quarantined while authorities investigate the magnitude of the chemical contamination in the 168 cattle that Busenitz fed in his farm's feed lot.

The total value of the quarantined livestock is estimated at more than $100,000.

Dick Bonfy, general manager of Rodeo Meats Inc. in Arkansas City, Kan., also reported that 16 hogs bought by his company last week from Busenitz have been quarantined. The hogs have been slaughtered but the meat won't leave the packing house until authorized.

"Everybody's gonna make damn sure everything is safe," Bonfy said.

Mel Gray, director of the environmental division of the Kansas Department of Health and Environment, said the sale to Rodeo was the first of the season for Busenitz. "We caught it at the 11th hour," he added.

Tissue samples from the live and slaughtered swine are being chemically analyzed, and Gray expects the results to be known within days. "We hope this is all cleared up by the end of this week," he said.

Authorities also are analyzing the soil in Busenitz's feed lot, and Gray said he would "be surprised" if evidence of the chemical didn't turn up. He said it was highly unlikely that the chemical had spread or been carried outside the feed lot.

The swine quarantine was ordered last Thursday after authorities determined that Busenitz's cattle were contaminated with PCB, a deadly chemi-

QUARANTINE

Continued from Page 1A

cal that causes cancer and attacks the central nervous system in humans.

Fifty-four of the cattle died; the 114 remaining were quarantined. PCB concentrations in the dead cattle were found to reach 2,200 parts per million, and concentrations in the live cattle ranged from 150 to 800 parts per million. Federal regulations require special disposal precautions for any contamination above 50 parts per million.

The investigation traced the PCB contamination to salvaged transformer oil that Busenitz had bought eight years ago and has used since then as part of a "back rub" mixture to keep insects off his livestock.

Of the swine, Gray said the sows in the gestation pen on Busenitz's farm had the most contact with the mixture—although usually for only a short time. PCBs collect in fatty tissues and could be transmitted to the piglets through the sows' milk.

Authorities also have checked the silage on the farm, but have found only trace amounts of PCBs. "There are not unusual amounts there," Gray said.

As a precaution, the members of the Busenitz family are being advised to have physical checkups, but State Epidemiologist Donald Wilcox said it was "quite remote" that family members had suffered any toxicity.

Busenitz told officials he bought nine, 55-gallon barrels of the transformer oil from a Walton, Kan., salvage yard eight years ago.

Three of the barrels had been used in the back rub mixture; six still were full.

Authorities found that the PCB concentrations in the remaining oil ranged from about 95 percent pure PCB in one barrel (950,000 parts per million) to about 85 parts per million in another.

State and federal officials have asked all Midwestern farmers to check to make sure they aren't using transformer oil in the back rub mixtures for their livestock. So far there have been no reports of similar co tamination problems.

The PCB investigation began in mi May after Busenitz took his cattle the Pawnee Valley Feedlot, near Ha ston, Kan., where 54 died of unknov causes. On Aug. 7, tests final revealed the PCB concentrations. E then the dead cattle had been ren ered. Byproducts had been shipped t Omaha for use as pet food, and t Springfield, Mo., for further proces ing and use in poultry feed.

After the contaminated cattle wer found, state and federal officials sai they believed the public was in no im mediate danger. They acknowledge however, that livestock raised on th same farm in past years might hav been contaminated, and there is n way of determining where byproduct from those cattle have gone.

The Kansas City Times Wednesday, August 22, 1979

behind the lines

by arthur a. brisbane

Why PCB Took Time To Track

After 54 cattle keeled over dead in a Kansas feed lot, it took analysts three months to learn that the animals had been contaminated with a deadly chemical known as PCB, or polychlorinated biphenyls.

Why did it take them so long to find out?

By the time they did find out, the cattle had been rendered and shipped out to Nebraska, Missouri and Arkansas in the form of pet food and poultry feed. The Environmental Protection Agency and the Kansas Department of Health and Environment were not informed until afterward.

Is there no law preventing the marketing of products derived from animals that have died mysteriously and in large numbers, and shouldn't state and federal oversight agencies be alerted to such incidents?

Those are some of the important questions sparked by the deaths of the cattle of Don Busenitz, a Newton, Kan., farmer. Here, according to state and federal officials, are the answers, with an account of what happened and what should have happened:

The cattle died about May 17, within a week of their arrival at the feed lot near Hanston, Kan., and a private veterinarian performed an autopsy. The vet then asked for help from Dr. Harry D. Anthony, director of the Diagnostic Laboratory at Kansas State University.

Anthony suspected pesticide poisoning and informed Dr. G.D. Gurss, state livestock commissioner, and U.S. Agriculture Department officials in Topeka.

Because there was no indication of any contagious disease, the 114 surviving cattle in Busenitz's herd were not quarantined and no "hold" order was placed on the carcasses of the dead animals.

Gurss said there were no legal obligations requiring such orders.

Anthony would have begun analyzing samples from the dead cattle at his laboratory immediately, he said, but some of his equipment was not operating properly. He asked Dr. Gary Osweiler, the veterinarian attached to the Veterinary Medical Diagnostic Laboratory at the University of Missouri, to analyze the samples.

Osweiler said he began the analysis on the premise that the cattle were contaminated by a pesticide. By June 1 he had ruled out one class of pesticides and began to focus on a substance called toxaphene.

"It would be nice to say we turned all our attention to it right away," Osweiler said. Unfortunately, that was not possible. His laboratory analyzes between 1,300 and 1,400 samples yearly, with a single technician doing the actual testing. Also, the Busenitz cattle sample was from out-of-state, "and we do have in-state priorities," Osweiler said.

Tests at the laboratory repeatedly turned up evidence of a substance with some of the characteristics of toxaphene, but with some differences. By about July 17—almost two months after receiving the sample—Osweiler contacted Dr. H.A. Nelson with the National Animal Disease Center in Ames, Iowa, and asked him to look into the matter.

With the advanced equipment available to him, Nelson learned that the cattle contained enormous amounts of PCB, a chemical formerly used in electrical transformers, which causes cancer and attacks the nervous system in humans. For about eight years, Busenitz has rubbed down his animals with discarded transformer oil to keep insects off them. But by the time the trouble had been traced, the 54 dead cattle had been rendered and shipped off.

There were no laws or regulations to prevent the rendering. Because toxaphene poisoning was suspected—and toxaphene literally boils away in rendering—the state animal health and U.S. Agriculture Department officials weren't too concerned that the rendered animal products might present a health risk.

But PCB cannot be boiled away. It will break down only when incinerated at 2,200 degrees Centigrade.

Once Nelson learned of the PCB contamination, he called the EPA and the Food and Drug Administration in Kansas City and the FDA in Topeka. Federal officials notified the Kansas health and environment agency.

Fortunately, through the combined efforts of the agencies, the rendered products were tracked down and quarantined before any seriously contaminated materials could be sold to the public, the officials said. The surviving 114 Busenitz cattle were quarantined. But the question remains whether any other animals sold by Busenitz were contaminated but still had reached dinner tables in past years.

In the aftermath, EPA Regional Administrator Kathleen Q. Camin complained, "I believe that when 50 cattle die from poisoning that we should have been called."

Others called for better cooperation among government agencies.

But lurking behind the delays and confusion in the case is the simple fact that no one was looking for PCB in the cattle. There was apparently no cause for alarm. No one had ever heard of PCB contamination in cattle.

Concluded one high EPA official: "The saving grace is that this does not usually happen."

Independence Examiner August 22, 1979

Poison cattle meat 'won't hit market'

By United Press International

Fears that meat products from 55 Kansas cattle that died from PCB-poisoning will reach the market place and pose a potential danger to humans are unfounded, federal environmental officials say.

"Nothing has reached the market place from those cattle that will harm anybody," Dr. Kathleen Camin, regional administrator of the Environmental Protection Agency, said Tuesday in Kansas City.

Dr. Camin said she believed all of the products had been traced and were now under quarantine.

Authorities also said they believed there was little likelihood that other Kansas farmers may have bought the PCB-laced oil from a Walton, Kan., supplier whose sale of the poisonous petroleum has resulted in the quarantine of more than 600 head of livestock.

"We were concerned, very concerned," said Dave Wagner, director of the Environmental Protection Agency's Air and Hazardous Material Division.

"But evidently this was something like a one-shot occurance. There's no evidence he sold other PCB-contaminated oil. Mr. (Don) Busenitz just flat bought him out eight years ago."

The EPA, the Federal Drug Administration and state health officials were not aware of the PCB danger until 55 of 168 head of cattle owned by the Newton, Kan., farmer died at a Hanston, Kan., feedlot. By the time the health officials had entered the case, however, the dead cattle had been rendered at a plant in Garden City, Kan., and the byproducts had been spread to dog food and chicken and turkey feed plants in three states.

The EPA outlawed production of PCBs — polychlorinated biphenols — in 1976 after they were found to cause cancer — and in large doses — nerve damage or death in test animals.

PCBs were chemicals used in electrical transformers to absorb heat. They do not break down in the environment.

According to the EPA, the carcasses of the PCB-poisoned cattle were shipped to the Jayhawk Rendering Plant in Garden City where it was converted to oil for fowl feed and red meat for dog food.

The oil was sent to the rendering plant's parent company, Southwest By-Products in Springfield, Mo., where the EPA said it was diluted.

PCB in Cattle Prompts Quarantine in Kansas

By Daniel Cattau
World-Herald Staff Writer

The discovery of a lethal chemical in a herd of 168 cattle on a farm near Newton, Kan., has prompted state and federal officials to quarantine the farmer's cattle and examine his hogs, a federal Food and Drug Administration official in Kansas City said.

Last May, 54 cattle from the Don Busewitz farm died in the Pawnee Valley Feedlot near Newton, Kan.

Not in Omaha

Clifford Shane, regional director of the FDA, said the chemical was identified Aug. 7 at the U.S. Department of Agriculture laboratory in Ames, Iowa, as PCB, a chemical that causes cancer and attacks the central nervous system in humans.

PCB stands for polychlorinated biphenyls.

Shane said the 114 remaining cattle have been quarantined and that Busewitz's hogs are also being tested.

"There's a good chance he'll lose his entire litter," Shane said.

Orginally, it was reported that byproducts of the dead cattle had been shipped to Omaha for use as pet food.

Shane said that report is incorrect.

Pet food plants in St. Joseph, Mo., and parts of Wisconsin did receive some red meat from the contaminated cattle, Shane said, but officials had been able to determine the lots where these cattle were located and made sure none of the food from this source had reached the market.

Oil from the cattle was sold to poultry operations in Springfield, Mo., and Arkansas, he said, adding that "we're trying to deter the carryover from eggs and chickens."

'No Problems in Nebraska'

Shane said the discovery of PCBs in the herd appears to be an "isolated instance, but we have no way of determining this" immediately.

DenisBlank, chief of the Bureau of Dairy and Foods of the Nebraska Department of Agriculture, said "there are no problems with PCBs in Nebraska."

He said Kansas and federal officials would have notified Nebraska officials if there were a problem.

Shane said the chemical was traced to salvaged or used oil that was part of a backrub mixture put on cattle to fight insects.

Shane said the oil came from electrical transformers and has a high concentration of PCBs.

"Five years ago," Shane said, "the EPA (Environmental Protection Agency) banned the use of the oil in transformers."

But Busewitz bought the mixture eight years ago. Shane said the transformer oil "looks like regular oil."

The PCBs were absorbed through the hides of the animals, he said. Since PCBs do not break down, they can be passed along in cattle excrement to pasture land, then reabsorbed in higher quantities through the silage.

Shane said one dead cow had PCB concentrations of 2,200 parts per million in its fat issue. Other tests on live animals showed concentrations between 150 and 800 parts per million.

Tolerance Levels

"There are PCBs in the environment already," Shane said, adding that the federal government has set a certain allowable tolerance in some products.

For instance, Shane said, up to 1.5 parts per million are allowed for milk and dairy products and 3 parts per million (on a fat basis) for poultry.

Cattle raised on the Newton, Kan., farm also probably have been contaminated during the last seven years, according to Kansas and federal officials.

But they said they believe there is no imminent public health risk from those animals.

In order to prevent similar occurrences elsewhere, Shane urged farmers "to make certain you have a knowledge of the source of the oil that you're using on this type of backrub."

Omaha World-Herald 08-22-79

EPA discounts poison meat fears

KANSAS CITY, Mo. (UPI) — Fears that meat products from 55 Kansas cattle that died from PCB-poisoning will reach the market place and pose a potential danger to humans are unfounded, federal environmental officials say.

"Nothing has reached the market place from those cattle that will harm anybody," Dr. Kathleen Camin, regional administrator of the Environmental Protection Agency, said Tuesday.

Dr. Camin said she believed all of the products had been traced and were now under quarantine.

Authorities also said they believed there was little likelihood that other Kansas farmers may have bought the PCB laced oil from a Walton, Kan. supplier whose sale of the poisonous petroleum has resulted in the quarantine of more than 600 head of livestock.

"We were concerned, very concerned," said Dave Wagner, director of the Environmental Protection Agency's Air and Hazardous Material Division.

"But evidently this was something like a one-shot occurrence. There's no evidence he sold other PCB-contaminated oil. Mr. (Don) Busenitz just flat bought him out eight years ago."

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According to the EPA, the carcasses of the PCB-poisoned cattle were shipped to the Jayhawk Rendering Plant in Garden City where it was converted to oil for fowl feed and red meat for dog food.

The oil was sent to the rendering plant's parent company, Southwest By-Products in Springfield, Mo., where the EPA said it was diluted — thus lowering the PCBs concentration below the FDA acceptable level.

The diluted oil was then sent to Tyson Foods of Springdale, Ark., who sold the oil to Cargill Turkeys, also in Springdale. The EPA said Cargill then sold some of its oil to Gold Kist Chickens of Fayetteville, Ark.

Meanwhile, the EPA said the red meat was sold to Carnation Co. of St. Joseph, Mo., to be converted into dogfood and the hides and bones were sold to Southwest Trading Co. of Houston.

"There's a quarantine on all of the byproducts by the FDA," said an EPA spokesman. "Any that might have gotten to the market place is now being traced by the FDA.

Busenitz' remaining 113 cattle at the Hanston feedlot will remain in quarantine until which time they can be destroyed by state health authorities.

The verdict on the farmer's more than 500 pigs still remained open Tuesday. Wagner said test results on whether they also would have to be destroyed would probably be available sometime today.

The total value of the quarantined livestock was estimated at more than $100,000.

The Kansas City Times Wednesday, August 22, 1979

First Tests Show Low Toxin Level In Hog Carcasses

By Dick Haws
A Member of the Staff

The contamination of livestock on a farm near Newton, Kan., with a cancer-causing chemical may not be as extensive as feared, according to preliminary results of tests on 16 hog carcasses from the farm.

Howard Duncan, the director of the Kansas Bureau of Environmental Protection, said Tuesday that the National Animal Disease Laboratory in Ames, Iowa, had reported that a tissue analysis of the 16 hog carcasses from the Don Busenitz farm showed concentrations of the chemical PCB "too little to quantify," and that the concentrations would be reported as "less than one-half part per million."

Federal authorities have not established an allowable limit for the chemical in red meat, but in fish and poultry, the maximum concentration is five parts per million.

Duncan described the Ames report as "the first ray of sunshine" since authorities found evidence of the contamination earlier this month in 168 cattle raised in Busenitz' feedlot.

The hog carcasses, which were bought by Rodeo Meats Inc. of Arkansas City, Kan., will be analyzed by the U.S. Department of Agriculture before a decision is made on disposal of the meat.

Meanwhile, 553 live hogs remain under quarantine on Busenitz' farm while authorities await the results of tissue examinations.

Officials think there is virtually no chance that the cattle ever will be found fit for human consumption. If the preliminary tests on the hog carcasses are confirmed, however, and if the live hogs are found to have similar low levels of the chemical, they may be judged fit for consumption.

The loss of the beef is a serious financial blow for Busenitz, but it might be eased somewhat because of the Ames laboratory's interest in the animals.

Duncan said lab officials have indicated that they may want to buy some of the diseased animals for research. The case is one of the most severe instances of contamination on record.

An investigation by state and federal authorities traced the chemical contamination to salvaged transformer oil that Busenitz bought eight years ago and has used since as part of a "back-rub" mixture to keep insects off his livestock.p Busenitz told officials he bought nine, 55-gallon barrels of the transformer oil from a Walton, Kan., salvage yard.

Over the years that Buzenitz raised cattle and swine on his farm and used the oil mixture, "neither he nor his vet recalled any problems," Duncan said.

Part of the government investigation is focusing on the source of the contaminated oil. The salvage yard operator has no records, but thinks he bought it from one of two auction houses in the Wichita-Newton area.

Officials expect to go over auction house records to try to discover whether the same kind of oil was sold to anyone else, although there have been no reports from other Kansas farmers of contaminated cattle.

Busenitz had used three of the nine barrels of oil in his backrub mixture. In the six remaining barrels, PCB concentrations ranged from 85 parts per million to about 600,000 parts per million, investigators said.

Under federal regulations, a PCB concentration in excess of 50 parts per million represents a "hazardous waste" and special procedures must be used to dispose of it.

Some Fluorescent Lights Contain PCB; Danger Slight

By John M. Wylie II
Star Energy/Environment Writer

PCB—the toxic chemical that contaminated a Kansas cattle herd recently—is in the ballasts of millions of fluorescent light fixtures across America.

Although there are extremely tight controls over the handling of the chemical when it is used in large amounts in power transformers and other large equipment, there are no federal regulations on the handling of the ballasts. The larger ballasts may contain nearly a quart of PCB-material. The concentration of PCB in the ballasts varies up to 95 percent, depending on the manufacturer.

"They (ballasts) are in every building in America," said Wolfgang Brandner, a toxic materials specialist with the Environmental Protection Agency here. "We felt there was no way we could ever achieve control over those units. If a regulation is not enforceable, there is no reason for having the regulation."

Brandner said the ballasts, heavy metal pieces of electrical equipment, are so well built that they are very unlikely to break open, even if they fail and begin to smoke. Since there is no real salvage value in defective units, he said, there would be no reason for them to be broken open. As long as they remain sealed, they can—and are—disposed of with regular trash, eventually winding up in municipal landfills.

PCB, or polychlorinated biphenyl, has been made since 1929 for use in electrical equipment. It is fire resistant and very difficult to break down—which makes it perfect for cooling high-powered electrical equipment.

But it also is toxic to humans and warm-blooded animals in large doses, and can build up in the fat tissues. It has been shown to cause cancer.

A quart of high-concentration PCB-material probably would be fatal to humans, Brandner said, but federal officials believe the chances of an individual being exposed to PCB from light ballasts is very small.

Although PCB has been widely used since 1929, the dangers it poses weren't known until this decade. EPA has gradually put more and more regulations on its use, though the final ban on PCB manufacture wasn't adopted until last spring. The primary manufacturer, Monsanto Corp., stopped making PCB voluntarily in 1977.

PCB has come into the public eye again since the discovery Aug. 7 that 168 cattle from the Donald Busenitz farm near Newton, Kan., had been contaminated by the chemical.

It got into the cattle through a back-rubbing compound made with oils that turned out to contain large amounts of PCB. One barrel of oil was 95 percent pure PCB. Of the 168 cattle, 54 are dead and the remainder are under quarantine at a western Kansas feedlot. A herd of hogs on the Busenitz farm also is under quarantine until officials can determine if it, too, was contaminated. Preliminary tests showed extremely small concentrations.

State and federal officials say some of the contaminated material from rendering the dead cattle got into circulation around the Midwest, but they believe they have found and put hold orders on all material that might have been seriously contaminated. None was destined as food for humans, but much of it was to have been used as animal feed.

Mel Gray, director of the environment division of the Kansas Department of Health and Environment, said the incident at the Busenitz farm "very vividly brought to our attention the hazards involved" with PCB. But he added that he knows of no feasible way to track down all the PCB manufactured and sold before anyone realized how dangerous it was.

EPA and the state agency have asked farmers to check the oils they are using and call one of the agencies if they suspect any of the oil contains PCB. But Gray and Brandner both expressed doubt that farmers will follow the suggestion.

The only approved method for destroying old PCB is high-temperature incineration, enough to overcome its fire-retardant properties. No incinerator meets the specifications that exist, but Robert Morby of EPA here has good news on that front.

The regional office has invested $100,000 of the total $1.4 million cost of developing a mobile incinerator that can destroy PCB and other hazardous material. The idea is to move the unit to sites where there are large amounts of the waste.

Morby says officials here hope that by making the investment, the region will get high priority for use of the unit. The unit, to be completed next year, would be used under contracts between the government, the developer and those with wastes to destroy.

Until that unit, or some other system, is available and approved, liquid PCB must be stored under tight security. Solid wastes contaminated with relatively low levels of PCB may be shipped to one of seven landfills in six states: New York, Alabama, California, Nevada, Oregon and Idaho. Utilities must follow strict regulations in handling PCB. The light ballasts aren't regulated, but here's how utilities must handle larger amounts of the chemical, using the Missouri Public Service Co. system as an example:

John Gilbert, spokesman, says all units containing PCB are under a strict inventory control system "from birth to retirement" so that no PCB can inadvertently disappear.

(He notes that the number of units being used that contain PCB grows smaller each year, as older equipment is replaced with new units that use other coolants.)

If a unit on a power pole contains PCB, a warning label is posted on the unit and the power pole. Substations or other facilities where the chemical is used are fenced off and also have warnings posted. In all cases, the chemical is enclosed in the component it cools.

If units containing PCB must be carried by trucks, the trucks also bear large warning signs.

Gilbert notes that the utility has never drained such equipment for repair. Defective or worn-out transformers, capacitors and other equipment are shipped for repairs to shops operated by manufacturers. Brandner says he knows of no such shops in this area.

On rare occasions, an accident with a pole or a direct lightning strike will cause a PCB-filled unit to break open. In this case, trained utility crews will clean up the spilled oil and all the earth it contaminated. The material will be sealed in specially-designed drums for proper disposal later.

To further guard against spills, Gilbert noted, large dikes are constructed around the large transformers used in substations, so if a leak occurs the PCB will be contained where it may be cleaned up safely.

Brandner is convinced that the regulations on large amounts of PCB are enough to protect the public, because the amounts used in light ballasts is small. The PCB is also well-sealed indoors, not the case with electrical equipment that is outdoors and subject to the weather.

Besides, he notes, "there are so many of them (PCB-filled ballasts) that we don't think we can achieve control of them."

Hutchison News
August 22, 1979

Slim chance other farmers bought PCBs

KANSAS CITY, Mo. (UPI) — A federal official said Tuesday there was little likelihood other Kansas farmers may have bought PCB-laced oil from a Walton, Kan., supplier whose sale of the poisonous petroleum has resulted in the quarantine of more than 600 head of livestock.

"We were concerned, very concerned," said Dave Wagner, director of the Environmental Protection Agency's Air and Hazardous Material Division.

"But evidently this was something like a one-shot occurrence. There's no evidence he sold other PCB-contaminated oil. Mr. (Don) Busenitz just flat bought him out eight years ago."

The EPA announced over the weekend that Busenitz, a Newton, Kan., farmer, had apparently been using transformer oil containing high concentrations of PCB's on his livestock for the past eight years as an insect repellent.

The environmental agency was not aware of the problem until Busenitz delivered 168 head of cattle to a Hanston, Kan., feedlot in May. Since that delivery, 55 of the cattle have died.

Production of PCBs — polychlorinated biphenols — were outlawed by the EPA in 1976. The chemicals were previously used in electrical transformers to absorb heat. They do not break down in the environment and have been shown to cause cancer — and in large doses — nerve damage or death in test animals.

WICHITA, KANSAS 67201, THURSDAY, AUGUST 23, 197

Gentlemen's Pact Kept Infected Meat Off Table

By KAREN FREIBERG
Staff Writer

If it hadn't been for a gentlemen's agreement, 168 cattle contaminated with a cancer-causing chemical may have slipped undetected through a series of meat inspections and on to consumers' plates.

The agreement was made between Don Taylor, manager of the Pawnee Valley Feedlot at Hanston, and Larned veterinarian Dennis Huck last May when cattle started dying in droves from polychlorinated biphenyls (PCB) contamination.

PCB is a chemical used in a variety of substances. The PCB in this case came from waste oil that had been used in electrical transformers to control heat. The oil was sold by a salvage yard, mixed with insecticide and applied to cattle by Newton rancher Don Busenitz.

At the time, no one knew what had caused the deaths of 56 head of cattle from a herd of 168 that Busenitz had brought to the custom feedlot for fattening.

According to Taylor, there are no laws requiring feedlot operators, or farmers, to notify authorities when livestock die on their premises.

"We fatten about 60,000 head of cattle a year, and in that time we treat an awful lot of animals. So we are pretty familiar with diseases, and when one dies, we can usually figure out why," Taylor said.

BUT, HE SAID, even if he didn't know the cause of death, as in this case, there were no laws, outside of his own "feedlot policy," that required him to tell anyone about the deaths. Nor is there any law preventing him from selling those dead animals to a rendering plant, which is what happened with Busenitz's cattle.

"We consider it a matter of policy that if we don't know what's wrong, we call in a vet," Taylor said.

When Huck couldn't determine what killed the cattle, he started an investigation that led to tests by three diagnostic lab laboratories and took nearly three months.

Meanwhile, products from the dead cattle were being distributed to pet food dealers and poultry feeders.

According to Taylor, a "gentlemen's agreement" was made between him and Huck to hold the live cattle off the red meat market until the exact cause of death was determined. They remain off the market — in a pen at the feedlot — pending word on how they will be destroyed, since they have been determined to be "walking containers of hazardous waste," as described by one state health official.

If a veterinarian hadn't been consulted and the remaining live cattle had been sold for slaughter, the odds are against the PCB content being detected by inspectors.

ACCORDING TO Dr. John Spaulding, director of the Department of Agriculture's residue detection division, an average of about one in 30,000 cattle are tested for PCB content.

Last year, 968 cattle out of about 30 million head that were slaughtered in the United States were inspected for PCB. Of those, only one showed positive results, and Spaulding said the PCB content was in such a low level that the USDA did not investigate further.

In the first three months of this year, Spaulding said 324 cattle have been tested, all with negative results.

He said tests would have to show 3 parts per million contamination before the USDA would investigate the source of the PCB. The cattle at Pawnee Valley Feedlot are contaminated with 130 ppm to 1,100 ppm.

Spaulding said it is entirely possible, based on a statistical analysis program he heads, that 168 head of contaminated cattle could go undetected at the time of slaughter.

The contaminated meat shows no discoloration, has no unusual odor and tastes normal.

He said officials in Kansas had informed him of the contamination of the Kansas herd but that "based on what we know so far, unless we find a flood of PCB oil out there, we think the source is limited to one farm, and we've contained it."

Spaulding said he had no plans for an investigation of area slaughterhouses to check for contaminated red meat.

SPAULDING'S statement was echoed by at least two other governmental agencies — the Environmental Protection Agency and the Kansas Department of Health and Environment.

According to EPA regional director Kay Camin, there is no reason to believe that any red meat for human consumption has been contaminated because the EPA has found and embargoed all the products made from Busenitz's dead cattle.

Jim Adamson, a spokesman for the U.S. Food and Drug Administration, says his agency is less certain that all of the products have been located.

"As far as our agency is concerned, we haven't been able to trace the final destination of the animal feed yet. We will be making tests of eggs from chickens that may have eaten the contaminated feed, and there could be broilers and laying hens that will be samples also."

The fate of the 113 cattle still confined to Taylor's feedlot has not been determined. Nor has the fate of more than 550 hogs on Busenitz' farm that have been in contact with the same oil been determined.

Sixteen of the hogs were slaughtered at Rodeo Meats in Arkansas City and found to have one-half ppm contamination. Tests from the live hogs have not been returned yet.

According to Howard Duncan of the Kansas Department of Health and Environment, no tolerance limit is established for red meat, although the FDA has set a limit of 5 ppm for fish and poultry.

He said the cattle that are still alive will probably be destroyed and buried either in heavy soil, such as clay, or at a hazardous waste disposal site.

Thursday, August 23, 1979 Hutchinson, Kansas 662-3311

Newton man's hogs contain PCB

By Debra Oswalt

TOPEKA — Laboratory tests on tissue samples of hogs owned by Newton farmer Don Busenitz indicated their bodies contain the deadly chemical polychlorinated biphenys, commonly known as PCB.

Busenitz has already lost 54 cattle which died from PCB poisoning in mid-May and faces to lose 114 remaining in his herd because their bodies also contain the chemical.

Howard Duncan of the State Department of Health and Environment in Topeka said Wednesday that the carcasses of hogs owned by Busenitz and stored at an Arkansas City slaughterhouse show traces of PCB.

"The test results show that the hogs contain less that one half PCB part per million (in their fat tissues)," Duncan said.

The Food and Drug Administration sets the tolerance limits of PBC in poultry and fish. If any poultry or fish contain more than five parts PCB per million they can't be sold for human consumption. So on the surface, you would say that the hogs should be fine but the problem is there are no tolerance limits set for pork and beef," he said.

"There are all kinds of ramifications to this," he said.

He confirmed that FDA, USDA and state officials met Wednesday afternoon in a joint meeting to discuss whether the hogs can be allowed on the market.

He added that a policy concerning PBC tolerance limits might be decided at the meeting. He said there would be another meeting Friday afternoon.

Busenitz's problems began in mid-May when he shipped a herd of 168 cattle to a Hanston feedlot and within a week 54 died of an unknown cause.

It wasn't until Aug. 7, that tests at Iowa State University at Ames showed the cattle's bodies contained 2,200 parts PCB per million in their fat tissues.

Later tests showed the remaining 114 would have to be destroyed because of "excessive contamination by PCB."

However, the cattle may have to be transported to Nevada or Idaho for disposal because there are only seven landfills in the U.S. that are equipped to handle PCB waste.

Duncan said Wednesday that there was a "glimpse of hope that maybe the cattle could be used for research purposes" rather than be destroyed.

"I hope this is the case because Busenitz could recover maybe 20 percent of his losses," Duncan said.

At this point, not including the possible loss from his hogs, Busenitz could lose over $100,000 from his cattle herd. He has told reporters he doesn't know if his insurance will cover the loss.

"We have no plans to dispose of the animals right at the moment. We are presently evaluating just what the concentration of PCB is in these animals. We are leaving our options open," said Wolfgang Brandner, chief of toxic section of the Environmental Protection Agency.

"Research is certainly a possibility. Or we maybe could keep the animals on grass to lower their PCB level. But that might take two years. However, it might also be a lot cheaper than an involved disposal procedure.

"We will be meeting Friday with all parties to this problem to evaluate our findings. We'll probably reach a decision then," he said.

The problem with disposing of PCB is that it doesn't break down in the environment.

"It's a real concern. It can really put a farmer under the gun," said J.L. Sell of the Department of Animal Science at ISU.

Sell wasn't involved with the testing of the Newton cattle but is familiar with PCB and animals.

"Various species of animals absorb PCB differently and it affects them differently. In cattle, PCB collects in the fat tissues and if it collects up to a certain degree it will spread into the fatty portions of the red meat. The PCB will eventually cause nervous disorders in the cattle and death," he said.

THE WICHITA EAGLE Thursday, August 23, 1979

PCBs Contamination-Trail: From Ranch to Where?

By KAREN FREIBERG
Staff Writer

A transaction eight years ago between a Walton salvage dealer and a Newton rancher has taken on a deadly significance during the last few days — since the discovery that the transformer oil that was sold then may have caused the deaths of 55 cattle.

The transformer oil, which contained the cancer-causing chemical polychlorinated biphenyls (PCBs), was used by Don Busenitz to mix with insecticides that were applied to 168 cattle. When the cattle started dying, tests were made to determine the cause of death.

BASED ON REPORTS from various federal and state agencies, this is the chronology of events that led up to the deaths and what actions have been taken as a result of the deaths:

● Eight years ago, Don Busenitz, a Newton rancher, bought several barrels of waste oil from Sattler Salvage and Repair Co. in Walton. The oil was used for the last few years by Busenitz to help make insecticides cling to the hides of cattle.

● On May 17, 1979, Busenitz shipped 168 cattle to the Pawnee Valley Feedlot at Hanston to be fattened for slaughter.

● On May 21, 51 of the cattle died.

● A local veterinarian was called by the feedlot to determine the cause of death, but the cause could not be found. Tissue samples were sent to the diagnostic laboratory at Kansas State University, and a "gentleman's agreement" was reached between the veterinarian and the feedlot operator that the cattle would not be moved until the results were returned.

● The lab at KSU thought the deaths were caused by toxophene poisoning, which was one of the insecticides used in the cattle oilers. Technicians were not positive of this, however, so the samples were sent to the diagnostic laboratory at the University of Missouri for a second opinion.

● A backlog of work at the University of Missouri's lab put the Kansas samples on a low priority list. When tests were finally done, the results again appeared to say that the cattle died from toxophene poisoning, but there was enough uncertainty for the technicians to send the samples to the Department of Agriculture's toxicology laboratory in Ames, Iowa.

> **By the time word of the cause of death of the cattle had reached Kansas authorities in early August, the rendering plant already had processsed the carcasses and products from them were on their way to a dog food maufacturer in Omaha, Neb., an oil products dealer in Springfield, Mo., a hide dealer in Houston and a poultry firm in Arkansas.**

● The Iowa laboratory determined that the cattle died, not from toxophene poisoning, but from PCBs stress.

● Meanwhile, as the tissue samples from the dead animals were traveling from one lab to another, more animals were dying. By August 13, the death count had risen to 55 head.

● Also, before the exact cause of death was determined, the dead animals had been sold to a rendering plant in Garden City.

● By the time word of the cause of death had reached Kansas authorities in the first week of August, the rendering plant had already processed the carcasses and the products had started their way through the distribution system to a dog food manufacturer in Omaha, Neb., an oil products dealer in Springfield, Mo., a hide dealer in Houston and a poultry firm in Arkansas for mixing with chicken feed.

● Last Thursday the Environmental Protection Agency put the remaining 113 live cattle under office quarantine and several agencies began mounting investigations, including the Federal Drug Administration, the Department of Agriculture, the EPA, the Kansas Department of Health and Environment and the Kansas Department of Animal Health.

● Part of the investigation led to discovery of the fact that Busenitz' herd of more than 550 hogs also may have been in contact with the PCBs-laced oil. Sixteen of the hogs that had been slaughtered at Rodeo Meats in Arkansas City were tested for contamination and found to have less than one-half part per million PCBs. By comparison, the cattle that had died showed from 130 ppm to 1,100 ppm contamination. No official limits have been established for meat, but federal regulations prohibit selling poultry or fish with more than 5 ppm.

● The EPA gave the meat firm permission Wednesday to cut up the hog carcasses and freeze them until a decision could be made as to whether the meat could be sold or would have to be disposed of.

● Meanwhile, the 113 remaining live cattle await an unknown fate at the Hanston feedlot. Authorities have yet to determine if and how they should be disposed of.

● As of Wednesday, discrepancies existed in reports from various federal agencies concerning the whereabouts of products manufactured from the dead animals. EPA officials say they are certain all of the materials from the dead animals have been accounted for and are now embargoed from use. The FDA, however, says the final destination of the chicken feed is still in question and tests are being done on chickens that may have eaten the PCBs-contaminated feed and on eggs produced by these chickens.

● To date, no one has been able to determine how much PCBs transformer oil is in circulation or how extensively it is being used on cattle.

WICHITA BEACON Thursday, August 23, 1979

PCBs must be purged from environment

It's reassuring that none of the beef from 54 cattle that died from exposure to the killer chemical PCB found its way into the human food chain, nor is it likely that meat from another 100 contaminated animals exposed to the substance will make it to the marketplace.

But the discovery that PCBs (polychlorinated biphenyls) were responsible for the deaths within a Newton cattle herd raises many worrisome questions. The cattle were exposed to the cancer-causing agent by way of oil used in back rubs commonly set up in pastures and feedlots, to help keep flies off penned-up animals.

In this case, the oil was salvaged from old electrical transformers, evidently built before 1976, when the U.S. Environmental Protection Agency banned PCBs as a hazard to human health and to the environment. The oil in those transformers was heavily laced with PCBs — some of it consisting of up to 95 percent PCBs.

The question that must be answered now is how many such transformers were salvaged for their oil content, and how many cattlemen have bought contaminated oil and unwittingly exposed their livestock to it. In the case of the Newton herd's contamination, the exposure might have gone unnoticed, had the animals not died from the high concentrations of PCBs. And other cattle oilers on that ranch had been filled with similarly contaminated oil for the last eight years. It would be a matter of the greatest good luck if none of the beef from the animals that scratched their backs on those oilers during those years was consumed by humans.

Unfortunately, the worry doesn't stop there, since PCBs had been in wide use as a coolant, in hydraulic fluid, and in plastics, inks, preservatives and lubricants since the 1930s. So how much of the toxic matter, which tends to build up in living tissue after repeated exposure, is sprinkled throughout the countryside is all but impossible to determine.

But the EPA should be able to come up with a fairly accurate estimate of how much PCB-tainted transformer oil is still in existence. Then it should move immediately to impound the dangerous fluid and arrange for safe disposal of it. In the meantime, meat inspectors at slaughterhouses should begin checking meat for the presence of PCBs as an added safeguard.

And anyone — farmers and non-farmers alike — who may have bought salvaged transformer oil for any reason should get it out of service as quickly as possible, for their sake and the sake of anyone who is likely to come into contact with it or anything that has been directly exposed to it.

As the unfortunate incident with the Newton cattle has demonstrated, simply banning deadly toxic substances such as PCBs isn't enough; the EPA now must follow up with decisive in-field action as quickly as possible to make sure those who are unaware of the dangers of PCBs are protected.

Chance Saved Public

Feedlot Official Agreed to Delay Sale of Cattle

HANSTON, Kan. (AP)—If it hadn't been for a gentlemen's agreement, 168 head of cattle contaminated with a cancer-causing chemical might have slipped undetected through a series of meat inspections and onto consumers' plates.

The agreement was made between Don Taylor, manager of the Pawnee Valley Feedlot at Hanston, and Larned veterinarian Dennis Huck last May when cattle started dying in droves from contamination by polychlorinated biphenyls—called PCBs.

The PCBs came from waste oil that had been used as fill material in electrical transformers to control heat. The oil was sold by a salvage yard, mixed by Newton rancher Don Busenitz with insecticide and applied to cattle.

At the time no one knew what had caused the deaths of 55 head of cattle from the herd of 168 that Busenitz had taken to the feedlot for fattening.

Taylor said there are no laws requiring feedlot operators or farmers to notify authorities when livestock die on their premises.

"We fatten about 60,000 head of cattle a year, and in that time we treat an awful lot of animals. So we are pretty familiar with diseases, and when one dies we can usually figure out why."

But, Taylor said, even if he doesn't know the cause of death there are no laws requiring him to tell anyone about the deaths. Nor is there any law preventing him from selling those dead animals to a rendering plant, which is what happened with Busenitz's cattle, Taylor said.

"We consider it a matter of policy that if we don't know what's wrong, we call in a vet," he said.

When Huck couldn't determine what killed the cattle he started an investigation that led to tests by three diagnostic laboratories and took nearly three months.

Meanwhile, products from the dead cattle were being distributed to pet food dealers and poultry feeders.

According to Taylor, a gentlemen's agreement was made between himself and Huck to hold the live cattle off the meat market until the exact cause of death could be determined. They remained off the market—in a pen at the feedlot—pending word on how they would be destroyed. Since then the cattle have been determined to be walking containers of hazardous waste.

If a veterinarian hadn't been consulted and the remaining cattle hadn't been sold for slaughter the odds are against the PCB being detected by inspectors.

Last year, 968 cattle out of about 3 million that were slaughtered in the United States were inspected for PCB contamination, said Dr. John Spaulding, director of the U.S. Department of Agriculture's residue detection division.

Spaulding said it is entirely possible that 168 head of contaminated cattle could go undetected at the time of slaughter.

Hutchinson News Fri., Aug. 24, 1979

Seek burial site for contaminated cattle

TOPEKA (UPI) — State officials are searching for a possible burial site in Kansas for 113 cattle contaminated with the deadly chemical PCB.

Howard Duncan, director of the state's Environmental Sanitation Bureau, Thursday said his department hopes the Environmental Protection Agency will grant a waiver allowing the cattle, owned by Newton farmer Don Busenitz, to be buried in the state.

Without a waiver, federal regulations require the cattle to be disposed of at a Nevada industrial waste site. An Ames, Iowa, laboratory had considered using the herd as a research experiment but has since dropped those plans.

Duncan said his staff is investigating sites within 50 miles of the Pawnee Valley feedlot near Burdett, where the cattle are quarantined. They are looking for a geologically secure site with nonporous, clay soil so PCB, which don't break down in the environment, cannot seep into groundwater supplies.

The fate of the cattle, along with pigs contaminated with much smaller amounts of PCB, is in the hands of state and federal officials from several agencies, who are meeting Friday.

Officials of the state's environmental bureau, the EPA, U.S. Department of Agriculture, Food and Drug Administration, Kansas Board of Agriculture and the state Department of Animal Health were called together to discuss the problem.

Hutchinson News
Fri., Aug. 24, 1979

Electrical capacitors treated with PCB oil

MCPHERSON – At least 12 electrical capacitor banks on utility poles in or near McPherson contain oil treated with the deadly chemical polychlorinated byphenyl, commonly known as PCB, according to Don Gerard, general manager of the McPherson Board of Public Utilities.

PCB was banned from use in 1976 and has recently been in the eye of the public after a cattle herd near Newton was found to be contaminated with the chemical.

The PCB concentrates in the oil is "probably in excess of 500 parts per million," Gerard.

In compliance with recent Environmental Protection Agency orders, each of the capacitors has been marked with a yellow, stick-on label warning of the PCB content.

The EPA has ordered that any oil having a PCB concentration of 50 to 500 parts per million to be gathered, sealed in barrels and transported to seven EPA approved landfills in the U.S.

Electrical components containing the PCB will be allowed to stay in use until they wear out, according to Wolfgang Brandner, chief of the EPA toxic section in Kansas City, Mo.

As the units are taken out of service, the oil will be cautiously drained out and the unit and oil disposed of by either transporting it to an approved landfill or by high temperature incineration in special facilities now being built, Brandner said.

THE WICHITA EAGLE Friday, August 24, 1979

Quarantined Hogs Found 'Essentially Free' of PCB

By KAREN FREIBERG
Staff Writer

Test results released Thursday of hogs quarantined on a Newton farm show low-level contamination from the toxic chemical PCB — so low that one state official said he would like to see the embargo lifted and the hogs allowed to be sold.

The results conformed with earlier tests of 16 hogs that had been slaughtered from a herd of more than 550 hogs held on the farm of Don Busenitz.

"The results show that both the slaughtered hogs and the live hogs have one-half part per million PCB contamination," said Howard Duncan, director of the Kansas Department of Health and Environment's bureau of sanitation.

"That tells us the hogs were essentially free of the chemical, and, as far as our agency is concerned, release of the hogs looks favorable," Duncan said.

The hogs became suspected as carriers of the cancer-causing chemical PCB after it was learned that PCB, polychlorinated biphenyl, killed 55 of Busenitz's cattle.

PCB apparently was contained in oil that Busenitz had mixed with insecticides and applied to the cattle through backrubbers. Some of the hogs on his farm also had access to the oilers.

PCBs ARE USED in electrical transformers because of their high resistance to heat. They have been shown to cause cancer in laboratory animals.

The decision of whether to release the live hogs and the meat from the slaughtered hogs, which is stored in freezers at Rodeo Meats in Arkansas City, will be made by numerous state and federal officials.

At least five agencies are involved in the PCB controversy — the Environmental Protection Agency, the U.S. Department of Agriculture, the Food and Drug Administration, the Kansas Department of Animal Health and the KDHE.

Officials from these agencies met Wednesday and will meet again today to determine what action to take regarding the hogs and the remaining 113 head of cattle that are quarantined at the Pawnee Valley Feedlot in Hanston.

Duncan said the decisions will be tough to make because there are no legal precedents to follow. Personal judgments will be required, he said.

"The problem is there is no standard for how much PCB is acceptable in red meat. There have been levels established for fish and poultry, but unless the hogs can grow feathers or fins, that isn't any help for us," Duncan said.

The FDA has established a tolerance level of 5 parts per million PCB content in fish and poultry. The pork from Busenitz's farm contained one-tenth of that amount.

DUNCAN SAID he sees "no hope" for the remaining live cattle. An Iowa laboratory determined that 51 of the dead cattle died from PCB stress. "The lab in Ames, Iowa, says the chance of using them as research is rapidly fading on the horizon. They are steers so can't be used for breeding purposes. They have no value."

Each day the decision is delayed costs money. According to Don Taylor, manager of the custom feedlot where the cattle are quarantined, it costs about $100 a day to feed the cattle.

Agriculture officials estimated the value of Busenitz's herd at more than $100,000.

Duncan said a veterinarian has been hired to take samples from the 98 cattle that have not been tested to determine if any of the animals escaped contamination.

Duncan said he does not expect any concrete decisions at today's meeting. He said it may be Monday before any solutions can be reached.

He said well water and soil tests at the Busenitz farm have shown little or no PCB contamination, with the exception of the feedlot where the cattle had been penned.

"The water showed no detectable contamination when it came from the well, and rain water runoff from one of the hog lots was also negative," Duncan said.

Other tests showed PCB in varying amounts: .2 ppm in the ensilage, .3 ppm in one hog lot and .06 ppm in another, and 13 ppm and 9 ppm in the cattle yard.

Here Are Some Facts About PCB

By KAREN FREIBERG
Staff Writer

Although Congress decided in 1976 that the chemical that has killed 55 cattle in Kansas should be banned, it wasn't until July 1 of this year that regulations were put into effect.

Meanwhile, polychlorinated biphenyls, or PCBs, continued to be used in various things, ranging from huge electrical transformers to such household items as paints, inks and caulking compounds.

Some common questions and answers about PCBs are:

Q. What is PCB?

A. PCB is a chemical developed in 1929 that is highly resistant to heat.

Q. How are PCBs used?

A. The chemical is popular because of its high resistance to heat. It is used primarily in electrical transformers and capacitors and in heat transfer and hydraulic systems.

Q. Do household items contain PCBs?

A. About 10 percent of the PCBs produced were used in fluorescent light ballasts, a device in the fluorescent tube that stabilizes the flow of current in the light. Other uses are in paints, adhesives, caulking compounds, inks, carbonless copy paper sealants and dust control agents.

Q. Are PCBs a threat to human health?

A. PCBs are slow-acting poisons that accumulate in the body, eventually causing symptoms such as fatigue, skin disorders, numbness, reproductive failures and liver problems. They have been shown to cause cancer in laboratory animals.

Q. Have PCBs been known to cause death in humans?

A. There is no documented evidence of anyone dying in the United States from PCBs. Accidental addition of PCBs to rice oil poisoned 1,200 Japanese in 1968, resulting in birth defects and other side effects such as those mentioned earlier. The oil contained between 1,000 parts per million and 2,000 ppm.

Q. Why did the cattle that recently died from PCBs die after they entered the feedlot when they had been treated with the chemical for five months before that?

A. For the five months prior to entering the feedlot, the cattle had been absorbing the chemical through their hides as they came in contact with treated back rubbers. Since it accumulates in the system, it was this prolonged contact that allowed it to build up. It is thought that when the cattle were dipped upon entering the feedlot, a common procedure for treating new arrivals for ticks and other parasites, the animals' natural capacity to detoxify poisonous substances was lowered, adding more stress to that caused by PCBs. Only those cattle with the lowest natural reserves died. Others may have shown signs of stress but did not die.

Q. What laws govern the use of the chemical?

A. In 1976, Congress passed a bill that called for the ban of several toxic substances, including PCBs. The Environmental Protection Agency was charged with developing phase-out regulations and rules for disposal and for halting manufacture of the the product. The actual phase-out regulations, however, didn't go into effect until July 1, 1979.

Q. Does that mean PCBs were available to the public in waste products for the past three years even though the law was passed banning it in 1976?

A. Yes. Most utility companies, however, began storing the contaminated waste oil around the beginning of this year.

Q. What does it mean when the EPA says it is phasing out PCB use?

A. It means manufacture of PCBs has been stopped, but existing PCBs can still be used until the carrier becomes dysfunctional. In the case of electrical transformers, the oil must be removed and incinerated or stored at a special hazardous waste site. In the case of fluorescent lights, the EPA has determined that there is no way to control their disposal.

Q. Do utilities in Kansas still use these transformers, and is any of the oil stored in the state by utilities?

A. Yes. KG&E officials say they still have several operational PCB transformers. They also say a supply of the oil is stored in the company's main service center in Wichita that is used for maintenance on existing transformers. Other utility companies have indicated that they use PCB transformers and capacitors.

Q. How do PCBs get into food?

A. Fish absorb the chemical from contaminated water. Another example would be if cattle containing PCBs were sold to a rendering plant and their by-products were mixed with chicken feed. PCBs would be transferred to the chicken meat or eggs.

Q. What controls are placed on foods containing PCB?

A. The highest levels of PCBs are concentrated in freshwater fish, such as coho and chinook salmon from the Great Lakes, freshwater trout and catfish. For a long time, the Food and Drug Administration held that 5 ppm was an allowable level of contamination in both fish and poultry. On Tuesday, however, these limits will be reduced as follows: from 5 ppm to 2 ppm for fish, from 2.5 ppm to 1.5 ppm in dairy products, from 5 ppm to 3 ppm in poultry and from .5 ppm to .3 ppm in eggs.

Q. How much PCB-contaminated food would it be necessary to eat before a person becomes sick?

A. No one knows for sure what the danger level is. "A lot" is the common answer from officials. Because the chemical is accumulative and does not break down in the environment, the real danger to human health is eating small amounts of the chemical disguised in food over a long period of time.

Hutchinson News Sun., Aug. 26, 1979

State frees hogs for dinner table

Farmer's cattle may be destroyed

By Carol Luman

TOPEKA — State and federal officials have released "for general consumption" the carcasses of 16 hogs from the Don Busenitz farm, Newton, and have released 125 live hogs from quarantine.

The animals may be butchered and sent to dinner tables across the country.

Holds were placed on the live hogs and carcasses earlier this month after state and federal officials determined 54 cattle from the Busenitz farm had died from PCB poisoning. The PCB, polychlorinated byphenyls, are a deadly chemical that was contained in transformer oil Busenitz used as an insect repellent on livestock.

The chemical PCB does not break down and has been known to cause cancer, nerve damage and death in test animals.

Content of PCB

Joe Harkness, director of the Kansas Department of Health and Environment, Saturday said, "a second lab test at the Environmental Protection Agency laboratory confirmed the original lab test...that the content of PCB (in the hogs) was either nonexistent or so low that it was negligible."

There will be additional laboratory tests on 409 other live hogs on the Busenitz farm. "We don't expect to find any contaminated, but we feel that the lab tests need to be conducted as a precautionary matter. We expect to be releasing those animals next week," Harkness said.

However, 113 of Busenitz' cattle probably won't be so lucky. Harkness said those animals, which have been under quarantine since May, when 54 of the original herd of 167 died, "probably will have to be destroyed and disposed of."

Busenitz' loss on the cattle is expected to be about $100,000. A cost of about $100 a day has been accruing since the cattle have been quarantined at a Garden City feedlot.

However, Harkness also said Saturday that the health department has changed the quarantine order to an order of impoundment. That means the state will take over control of the animals and the expense of impounding them. He said the animals probably will have to be destroyed and it was unfair to burden the farmer and feed lot with the expense when the state has no site immediately available for disposal of the animals.

Tissue samples from the animals have been sent to the National Animal Laboratory in Ames, Iowa, for more testing before they are ordered destroyed. "We want to make absolutely certain that we are not unnecessarily destroying any animal," Harkness said. "We don't expect to

The state is considering several alternatives for disposal of the cattle. One is to ship them out of state to one of seven facilities licensed for dangerous waste disposal. The state also is considering designing and developing an in-state site for purposes of rapid disposal.

To do that, the state would have to get federal approval of the plan as well as find a location, design the facility and set up a continuous monitoring program for the site.

"We're looking for the safest and fastest ways of disposing of the animals," Harkness said.

Check family

Harkness also confirmed that his department has offered to check the Busenitz family for PCB contamination.

"We have contacted the family and offered the medical consultation of our staff and the Communicable Disease Center in Atlanta," he said. "That's being handled by one of our staff physicians and I don't know the status. I'm confident that the family will take reasonable measures to have their own safety protected."

Harkness added he didn't think the Busenitz family's health was in danger.

ST. LOUIS POST-DISPATCH Sun., August 26, 1979

Union Seeks More Protection From UE On Toxic Chemicals

By Harry Wilensky
Of the Post-Dispatch Staff

A union representing Union Electric Co. workers says it wants more protection for those who handle toxic chemicals — including PCBs — as recommended in a federal study in 1977.

The unpublicized federal study was undertaken after some UE employees whose work exposes them to toxic chemicals complained of skin irritation, dizziness and eye irritation.

The study found that the hazard level to which those workers were being exposed was well below the federal standard. The utility was meeting safety requirements in working conditions.

But because so little is known about long-term effects of exposure, the study recommended additional safeguards, some of which Union Electric has provided. However, the utility has rejected others as unnecessary.

One of the recommendations that was rejected called for annual physical tests for workers exposed to toxic chemicals.

The study has never been made public. The Post-Dispatch learned of it while looking into a PCB spill in Ballwin two weeks ago.

The union is Local 1439 of the International Brotherhood of Electrical Workers. The federal study it requested was made by the National Institute for Occupational Safety and Health.

Union spokesmen say they are preparing to ask the company to reconsider its rejection of annual physicals.

The principal toxic chemicals causing concern among workers are PCBs (polychlorinated biphenyls), which are used as coolants in transformers and condensers, and trichlorophenoxyacetic acid, which is used in spraying operations.

Of Union Electric's 5,400 employees, approximately 200 are involved with PCBs and 100 with herbicide spraying.

Exposure to oils containing PCBs occurs infrequently during maintenance of transformers and more frequently during yearly inspections. Linemen also have potential exposure when replacing a leaking condenser known as a capacitor.

Although the federal study found little evidence of danger to employees, it reported:

"Significant amounts of smearable contamination of PCBs were found on various tools and equipment and on the hands and faces of employees. In view of the inadequacy of existing knowledge of the potential toxicity of low-level exposures to PCBs, a judgment as to whether employees were being exposed to levels which may be potentially hazardous cannot be made at this time

"Since there is so little information available regarding the long-term effects of low-level exposure over a working lifetime and since PCBs may be retained in the body for years, it is advisable to reduce air concentrations to the lowest detectable levels by means of engineering controls."

The report recommended pre-employment and yearly physicals for all workers exposed to PCBs and pesticides. A spokesman for Union Electric said the recommendation was rejected because the company's physicians considered such examinations unnecessary.

Another recommendation was that the area used for overhauling transformers containing PCBs and the area used by linemen for testing oil should be strictly set apart from other areas. Union Electric since has built a separate building for these operations.

One recommendation called for an improved education program on toxicity hazards. The company said it has conducted such educational meetings.

Potentially exposed women in the work force who are of child-bearing age should be advised of the adverse effects of the chemicals on the unborn child, the report continued. It said those who bear children while working with PCBs should be counseled on the adverse effects of nursing the child.

The company said it has no women working with the toxic chemicals, so it considered this recommendation irrelevant.

Earl Schubert, a union business agent, said the IBEW plans to meet with management soon to negotiate a "safe work practice" program based on the recommendations in the federal study.

One of the major objectives will be the annual physicals, he said. He said the union was disappointed in management's initial rejection of this recommendation.

Another union objective will be improving the education program suggested by the federal experts. Workers need to be made fully aware of toxic hazards and first-aid procedures, Schubert said.

"Just what to do in handling a PCB spill should be spelled out clearly, in detail," he said. "Right now, each repair crew sort of chooses its own way of handling a cleanup."

One UE worker who asked not to be identified said he was worried about himself and his family "getting contaminated" because he had been working on cleanups of PCB spills before toxic hazards were recognized

In past years, he said, "When some of the stuff got on your clothes, you were told just to wash your hands and get your clothes washed. But for the last two years, the men have been wearing jump suits, gloves, masks — stuff that is destroyed after each job."

PCBs are fireproof as well as a good conductor and insulator. But being chemically inert, they are so stable that they persist indefinitely.

PCBs for 50 years have been used all over the world in capacitors on power lines. Only in recent years has the toxic hazard been recognized.

Union Electric gradually is phasing out its 35,000 PCB capacitors and has placed in operation 500 of a new type containing no toxic elements. But it intends to use up its remaining supply of PCB capacitors.

A capacitor consists of layers of foil immersed in a stainless steel container. Lightning striking a power line can rupture the seams of this container and spill two gallons of PCBs on the ground.

Such a spill occurred Aug. 8 on a pole at the northwestern corner of Manchester and Kehrs Mill roads in Ballwin. To clean up the spill, UE linemen removed about 100 feet of soil that might have been contaminated.

A sawdust-like substance was spread over the pavement to absorb the oily spill. All the contaminated material — dirt, oil, rags — was placed in two steel drums for shipment to a waste disposal center in Alabama.

All six of the capacitors on this pole were replaced with new units containing no PCBs.

Workers handling such cleanups carry an emergency kit. If they consider a PCB spill dangerous, they can put on disposable clothing that resembles a rain suit and includes plastic bootees.

The authors of the federal study noted that studies of occupational exposure to PCBs have been made in Japan, Sweden and Australia and said: "PCBs have not clearly been demonstrated to result in adverse human health effects with the possible exception of chloracne."

The federal study reported that UE workers using kerosene in spraying operations formerly complained of headaches, nausea, skin rash and eye irritation. These symptoms showed up when linemen were spraying without protective clothing or respirators with goggles.

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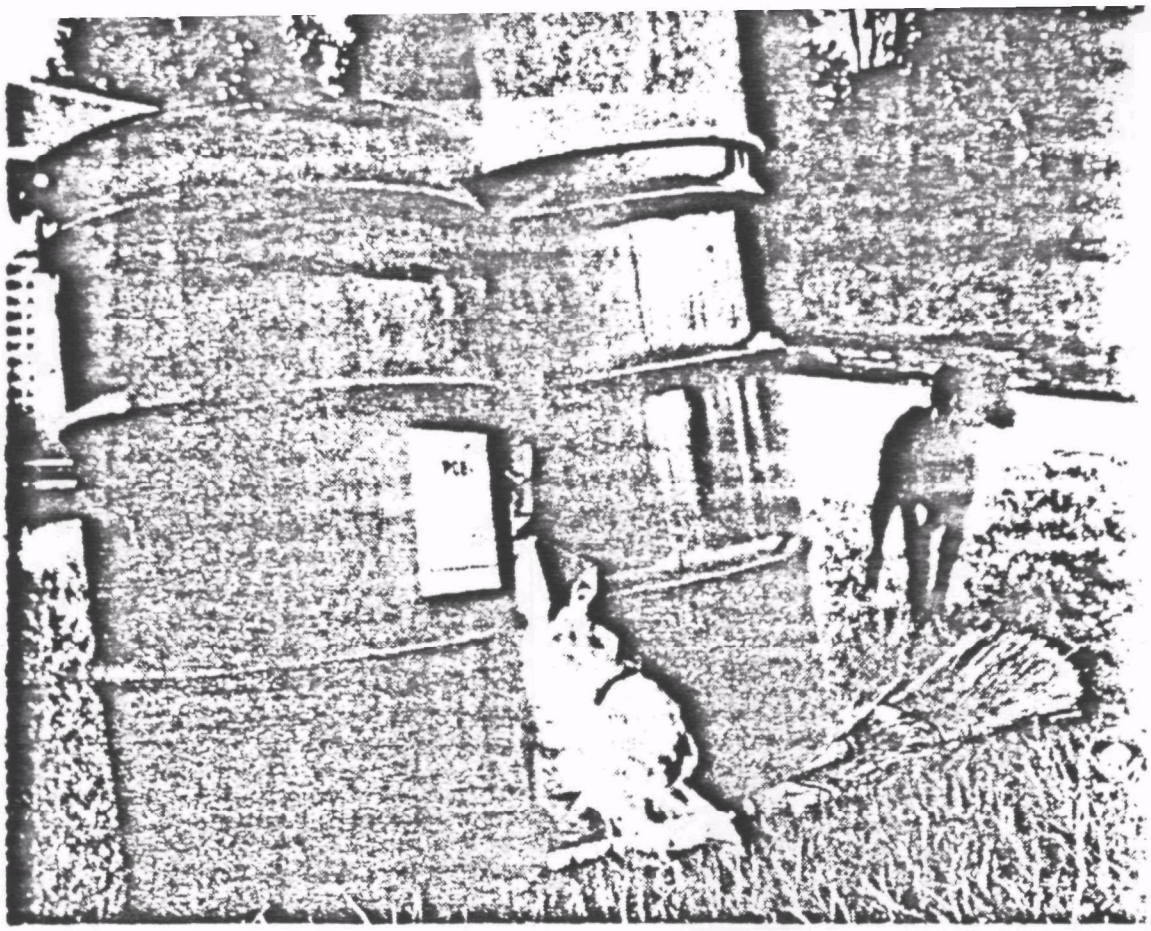


Jim Rackwitz/Post-Dispatch

Toxic Agent Drums containing dirt and other material contaminated by a PCB spill Aug. 8 at Manchester and Kehrs Mill roads await removal. Union Electric Co. crews cleaned up the ground after lightning cracked open a capacitor containing the PCBs.

"However, no employee has had any of the above symptoms since the company provided protective clothing and respirators a few years ago," the report said. "The only employee complaint since the company furnished protective clothing is that while wearing rubberized rainwear or impervious outerwear, they get hot and sweaty in the summertime."

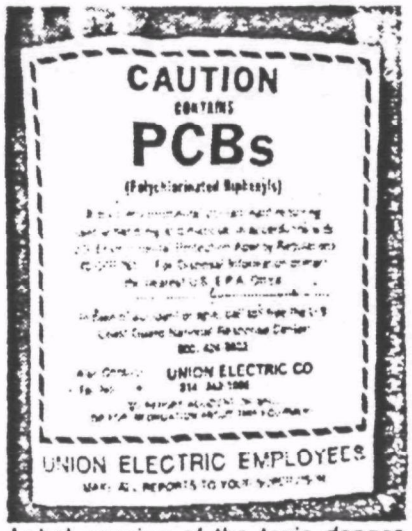
Schubert agreed with this observation, reporting that the only complaints from workers lately involved the discomfort of very hot work in the protective clothing.

A spokesman for Union Electric said: "Our workmen for many years have been handling PCBs just like oil, and there has never been any adverse reaction other than skin rash."

He said the chief concern about PCBs is not any potential effect on workers handling them but the danger of the toxic materials getting into waterways, contaminating fish and thus getting into the food chain.

Last year, a firm collecting PCB-contaminated waste from 1,800 St. Louis-area service stations and trucking companies was charged with dumping the material in a makeshift disposal site near a tributary of the Meramec River in Jefferson County.

Some of the waste seeped into the stream and killed fish, it was reported.



Label warning of the toxic danger posed by a drumful of chemicals used in electric capacitors.

PCB Tests Negative on Hogs

TOPEKA (AP)—The Newton, Kan., farmer whose hogs were quarantined after 55 of his cattle were killed by the toxic chemical PCB will be allowed to sell his hog carcasses and bring 125 hogs out of quarantine, state and federal officials decided Saturday in Topeka.

The Kansas Department of Health and Environment and the U.S. Department of Agriculture released the hog carcasses after two sets of tests showed no contamination.

Joe Harkins, secretary of the Kansas department, said he also released 125 live hogs for market which were on the Don Busenitz farm because tests showed no contamination.

The hogs became suspected as carriers of the cancer-causing chemical after it was learned that PCB, polychlorinated biphenyl, killed 55 of Busenitz' cattle. The deadly chemical was in waste oil Busenitz was using on the animals in a backrub to ward off insects.

Harkins said 400 remaining hogs will be released if the tests are negative.

Harkins said the state has received "absolutely no reports of any other farmers with problems. At this time we are very optimistic that this is a very isolated case," he added.

THE WICHITA EAGLE AND BEACON Sunday, August 26, 1979

PCB Cases Controlled, Officials Say

State and federal authorities said Saturday that the PCB poisoning in Newton is completely under control. One hundred twenty-five hogs from Don Busenitz' Newton farm and 16 frozen carcasses were released from an Arkansas City packing house after officials decided the meat was free from the cancer-causing chemical, they said.

The officials also impounded 113 of Busenitz' cattle contaminated with PCB, releasing him and the Pawnee Valley Feedlot in Hanston from further costs of paying for the animals, which had been under quarantine while the agencies studied the problem. A way to dispose of the cattle is now being sought.

Busenitz unknowingly had been using waste oil contaminated with PCB to mix with an insecticide. Busenitz bought the oil eight years ago from a Walton salvage dealer. He used the oil to make the insecticide stick to the animals' coats. Investigation began when 55 cattle died at the feedlot.

Dr. Joseph F. Harkins, secretary of the Kansas Department of Health and Environment, said tests on other hogs on Busenitz' farm will be completed soon.

Harkins also said any remaining oil will be removed from the farm and contamination cleanup completed so that Busenitz can return to normal operations on his farm.

Hutchinson News Tues., Aug. 28, 1979

Officials await PCB test results

TOPEKA, Kan. (UPI) — State officials Monday awaited laboratory results to determine whether a quarantine on hogs at a Newton farm can be totally lifted.

A total of 125 hogs owned by Don Busenitz of Newton have been freed from quarantine after tests revealed they had only minimal levels of the toxic chemical PCB in their fatty tissues.

Tissue samples on the farmer's remaining 409 hogs, held in separate pens, have been flown to an Ames, Iowa, laboratory. Howard Duncan, state environmental sanitation director, Monday said results are expected later this week.

The frozen carcasses of 16 of Busenitz' hogs, slaughtered before the animals became suspect of PCB poisoning, have been released for consumption. Tests found low or negligible levels of PCB in the meat.

The hogs had been held from sale since early August when officials discovered some of Busenitz' cattle died from massive poisoning by polychlorinated biphenyls, known as PCBs.

PCBs, banned from production by the Environmental Protection Agency in 1976, do not break down and have been known to cause cancer and nerve damage in test animals. In large doses, death can occur.

Joe Harkins, director of the Kansas Department of Health and Environment, said if the 409 untested hogs on Busenitz' farm are found to be uncontaminated, they probably will be released from quarantine this week.

"We don't expect to find any contaminated, but we feel that the lab tests need to be conducted as a precautionary matter," Harkins said.

The outlook is different for 113 of Busenitz' cattle under quarantine on a feedlot near Burdett. They are the remainder of a herd that began dying in May.

Tissue samples from the cattle have been sent to Iowa for testing to make sure all are contaminated.

However, state officials suspect the entire herd will have to be destroyed and are waiting for cost-estimates before determining how to dispose of the cattle.

Busenitz's cattle were exposed to PCBs in waste transformer oil the farmer had used in back-rubbers. If all are destroyed, the farmer stands to lose more than $100,000, plus about $100 daily costs of maintaining the cattle on the feedlot.

Harkins said the state has changed the order from a quarantine to an order of impoundment, which means the health department will pay the daily costs and will take control of the cattle. He said the state also will pay to destroy the cattle and make sure the carcasses are disposed of according to federal regulations.

Harkins confirmed the health department has offered to have the Busenitz family checked for PCB contamination, even though it did not appear the family's health was in danger.

The Kansas City Times Thursday, August 30, 1979

PCB Fears Ease

Officials Say They've Traced All Toxic Oil in Cattle Deaths

By Dick Haws
A Member of the Staff

LAWRENCE, Kan.—The investigation of Kansas' worst case of PCB contamination is drawing to a close, and officials say it was bad, but not nearly as bad as it might have been.

The final results of tests on contaminated cattle under quarantine near Newton, Kan., are expected within 10 days. The cattle that have heavy concentrations of the cancer-causing chemical probably will be shipped to a special site in Nevada for disposal, said Mel Gray, director of the environmental division of the Kansas Department of Health and Environment.

Many of the cattle have PCB concentrations of 50 to 500 parts per million, a contamination level that requires disposal at one of seven special landfills in the country. Federal authorities have not established an allowable limit for PCB in red meat, but in fish and poultry, it is five parts per million.

The source of the contamination has been traced to nine 55-gallon barrels of waste oil found on the farm of Don Busenitz, who owns the cattle. Busenitz told authorities he remembered buying as many as 15 to 20 barrels of the oil eight years ago to use in a back-rub mixture to keep insects off his livestock. Officials now speculate that the oil Busenitz used on his earlier herds was not contaminated.

"It's a possibility that we'll never be able to prove," Gray said.

The contaminated oil came to light after 54 of Busenitz's 168 cattle died earlier this summer. An investigation found a high PCB level in both the live and dead animals.

Last week the Department of Health and Environment lifted its quarantine on 125 of Busenitz's hogs after tests showed they were not contaminated. An additional 400 hogs are under quarantine while testing continues.

The toxic oil was traced to a now-defunct auction house in the central Kansas town of Walton, and authorities believe the nine barrels on Busenitz's farm represent all the contaminated oil sold by the auction house.

An analysis of the topsoil in Busenitz's feedlot showed only minimal PCB concentrations—two to four parts per million—and at a depth of 6 inches, investigators found no trace of the chemical. Authorities say they can decontaminate the feedlot by scraping off the topsoil and then burying it in a landfill.

Because of the exceedingly high contamination, the barrels and back-rubbing devices used to apply the oil to the livestock must be sent to special incineration plants that are still under construction. The contaminated items will be stored in a warehouse until an incinerator is available.

Topeka State Journal, Thursday, August 30, 1979

Soil contaminated by PCB will be buried

Topsoil in a feedlot on the Newton farm of Don Busenitz will have to be removed and buried in a landfill because of PCB contamination, Kansas Department of Health and Environment officials said today.

A topsoil analysis found PCB contamination of two to four parts per million, but there was no trace of the toxic chemical at a depth of 6 inches, officials said.

The oil drums and applicating equipment for the backrub mixture must be destroyed in special incineration plants because of their extremely high PCB contamination levels.

An investigation is nearly complete into what is being called the state's worst case of PCB contamination, officials said.

Within 10 days, officials expect final results of tests on contaminated cattle under quarantine near Newton.

Mel Gray, director of the department's division of environment, said cattle that have a heavy concentration of the cancer-causing chemical probably would be shipped to a special site in Nevada for disposal.

He said preliminary tests indicated that many of the cattle have PCB concentrations of 50 to 500 parts per million, an amount that requires disposal at one of seven special landfills in the nation.

There are no federal standards for PCB limits in red meat, but maximum allowable amounts in fish and poultry is five parts per million.

The contamination source, Gray said, has been traced to nine drums of waste oil found on the farm of Busenitz, who owns the cattle. Busenitz has said he bought the oil eight years ago to use in a backrub mixture to keep insects off his livestock.

Earlier this summer the contamination was discovered after 54 of Busenitz's 168 cattle died, and an investigation showed high amounts of PCB in both the live and dead animals. Officials speculate that oil used on earlier herds was not contaminated.

The Department of Health and Environment lifted a quarantine on 125 of Busenitz's hogs last week, but an additional 400 hogs are still quarantined as testing continues to measure possible PCB contamination.

Meanwhile, the U.S. Environmental Protection Agency in Kansas City said Wednesday it was investigating the possibility that oil spread on roads near the Johnson County landfill may have contained PCB.

Ranelle Rae, a staff attorney for the EPA, said the probe started Aug. 18 after the agency received an anonymous complaint that oil used to keep dust down on gravel roads around the landfill near Shawnee contained high levels of PCB.

She said the EPA was handling the investigation because it is concerned the chemical could be released into the environment. Gray said his agency supported the EPA in the investigation "to assure there are no hazards involved."

Contaminated Cattle May Go to Waste Site

TOPEKA (UPI) — An industrial waste disposal site near Wichita might become the burial ground for 113 cattle contaminated with the toxic chemical PCB.

Howard Duncan, state environmental sanitation director, said Thursday that the cattle probably would be shipped to the Kansas Industrial Environmental Services' waste dump at Furley to be slaughtered and buried. He said correspondence with the Environmental Protection Agency must be completed before a decision is made.

Duncan said it might be as long as 30 days before a decision can be made and the cattle destroyed.

The cattle, owned by Don Busenitz of Newton, are impounded by the state on a feed lot near Burdett. They are the remainder of a herd that began dying in May.

The cattle was exposed to polychlorinated biphenyls, PCBs, in waste electrical transformer oil that was applied to the cattle by livestock back rubbers as an insect repellent.

Busenitz' cattle and hogs have been withheld from market since early August, when officials discovered that some of his cattle died from PCB poisoning.

PCBs were banned from production by the EPA in 1976. PCBs do not break down and have been known to cause cancer and nerve damage in test animals. In large doses, the chemical can cause death.

Duncan said an Ames, Iowa, laboratory rejected an offer to use the contaminated herd for research purposes. Kansas State University was reluctant to accept a similar offer because of the problem of disposing of the hazardous waste. Because they do not deteriorate, PCBs from carcasses or manure must be prevented from seeping into water supplies from a waste disposal site.

The official said the cattle probably would be hauled live to Furley, slaughtered and buried in a trench. An EPA-approved gas collection system also would be installed to suppress the odor from the decaying carcasses.

WICHITA BEACON Thursday, August 30, 1979

Ending the PCB threat

It's good to see a government agency moving decisively in handling a contaminated herd of cattle and the remaining barrels of PCB-fouled oil that infected them with the cancer-causing agent. The Kansas Department of Health and Environment is at work on safely disposing of the condemned animals and the salvaged transformer oil, having assumed that responsibility.

It goes without saying that both the contaminated carcasses and oil should be sealed off so as not to present any risk of further exposure to people or the environment. We trust that water supplies and other potential sources of contact with the PCBs discovered on a farm near Newton will be so protected.

Something should be done to offset the losses of those who had money and time invested in the beef cattle herd that ultimately will have to be destroyed. Knowing that they did the right thing, by keeping the cattle out of the food chain after more than 50 of the animals died mysteriously, shouldn't be their only reward.

But while the Newton incident eventually may be brought to a satisfactory conclusion, there is still much cause for concern. As we said earlier, no one knows how many barrels of dangerous transformer oil brimming with PCBs were salvaged after the chemical compound was banned by the U.S. Environmental Protection Agency three years ago. There may be cattle or hogs in other parts of the state, or in other states, still scratching their backs on oilers filled with such oil. And now there are reports that oil containing PCBs may have been used in a Kansas paving operation.

There is no question that PCBs pose a serious threat to living beings: They can accumulate in tissue over an extended period and eventually spawn an outbreak of cancer, or they can, through toxic effects in extremely high levels, cause death in a matter of days or weeks.

It must be hoped the Newton contamination incident was an isolated occurrence — one that will not be repeated. But hoping isn't enough, when preventable cancer and death are the end results of inaction. The EPA should undertake a program now to track down unaccounted-for PCBs and make sure this known killer is never again set at large.

THE KANSAS CITY TIMES
Thursday, August 30, 1979

PCB May Be on Roads Near Landfill

By Liz Reardon
A Member of the Staff

Oil used on roads near the Johnson County landfill earlier this month may have contained PCB, a toxic, cancer-causing chemical linked to the contamination of a central Kansas cattle herd, Environmental Protection Agency officials here said Wednesday.

Ms. Ranelle Rae, an EPA staff attorney, confirmed that the federal agency began an investigation on Aug. 18 based on an anonymous complaint that oils used to keep dust down on gravel roads in the vicinity of the landfill contained PCB levels prohibited by federal law.

The oil apparently was applied to roads near the landfill, at 18181 W. 53rd just north of the Shawnee city limits, by a private firm, officials of the Kansas Department of Health and Environment said Wednesday. The department refused to identify the firm, and Ms. Rae declined comment on how far the EPA investigation had proceeded.

Deffenbaugh Disposal Service operates the landfill, but officials from that firm could not be contacted Wednesday.

Federal regulations prohibit the use of waste oil containing "any detectable concentration" of PCB for road oiling to control dust, Ms. Rae said.

PCB, polychlorinated biphenyl, has been used for 50 years as a fill material in electrical transformers. It is fire resistant and is commonly used to cool high-powered electrical equipment. The chemical is sometimes drained from transformers and sold as waste oil for uses such as road sealing and spraying weeds, Ms. Rae said.

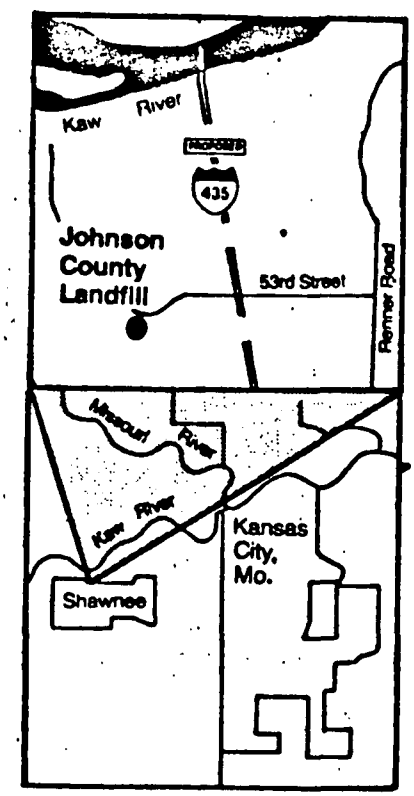
Chronic, long-term toxic effects can result when humans and warm-blooded animals are exposed to even very low concentrations of the chemical, EPA officials have said. Petroleum industry workers exposed to PCB over a period of time showed symptoms that included skin disorders, respiratory infections and impotence.

High levels of PCB were found in the bodies of 54 dead cattle owned by a Newton, Kan., farmer earlier this month. The farmer had used oils containing what were considered fatal concentrations of PCB in a back-rubbing compound on the animals. Other animals on the farm were quarantined to test for PCB levels in fat tissues.

The EPA is spearheading the investigation, Ms. Rae said, because the agency is concerned that if roads were sprayed with an oil compound containing PCB, the chemical could be released into the environment and enter the food chain. PCB is not broken down in the food chain but, instead, accumulates and can cause difficulties such as those noted in petroleum workers exposed to the chemical for long periods of time. The chemical also has been linked to reproductive failures and skin tumors in laboratory animals.

Contacted Wednesday afternoon, County Commissioner Robert Bacon said county officials had not been notified of the EPA probe. Ms. Rae said the federal agency's responsibility was to notify the state Department of Health and Environment and not directly contact local officals. Mel Gray, director of the environment division of the Health and Environment Department in Topeka, said his agency was supporting EPA efforts in the investigation "to assure there are no (health or environmental) hazards involved."

Penalties for violation of regulations involving PCB use can include a civil penalty of a $25,000 fine for each violation or a more severe criminal penalty of a $25,000 fine for each day of violation and not more than a one-year prison term, Ms. Rae said.



Robert Grace/staff

Area of PCB investigation

LANDFILL

Tests Reveal PCB in Oil Tank

By John M. Wylie II
Star Energy/Environment Writer

The toxic chemical PCB has been found in a 1,000-gallon oil tank belonging to Deffenbaugh Disposal Service in Shawnee, the Kansas Department of Health and Environment said today.

J. Howard Duncan, a key toxic-substances administrator with the department in Topeka, said one laboratory test showed the oil contained 47 parts per million polychlorinated biphenyls, or PCB. Another test showed 52 parts per million of the chemical, which is both toxic and capable of causing cancer.

A coordinated probe by the Environmental Protection Agency and the Kansas department began earlier this month after Dr. Kathleen Q. Camin, EPA regional administrator, received an anonymous telephone call charging that PCB-contaminated oil was being used to spray roads in the area of the Johnson County Landfill, 18181 W. 53rd. Deffenbaugh operates the landfill.

Duncan said the state tests raise two problems:

- Federal regulations require special disposal methods for anything contaminated with PCB above 50 parts per million. The tests leave the oil at Deffenbaugh in a gray area, Duncan said.
- It isn't clear whether the oil used on the dirt roads, which Duncan said were all on Deffenbaugh property, came from the barrel that contains PCB contamination. He said the contaminated oil was used primarily in hydraulic systems of Deffenbaugh trucks.

PCB was widely used as a coolant in transformers and other electrical equipment for almost 50 years until environmental scientists discovered it was both toxic and capable of causing cancer. Manufacture of the chemical has been banned, and federal regulations govern its disposal.

One of the properties that makes it desirable as an electrical coolant, the fact that the chemical doesn't break down, makes it environmentally dangerous because it means that the chemical builds up if it reaches the fat tissues of warm-blooded animals. Thus, repeated exposures to small amounts of the chemical can become dangerous as the chemical builds up.

Ms. Ranelle Rae, the EPA lawyer serving as spokesman for the federal probe, said oil contaminated with any amount of PCB can't be used as road spray, as a mixing agent for pesticides or herbicides, for dust control or for rust prevention.

But if the contamination is below 50 parts per million, she said, there are no special requirements for disposal. She said, however, that there are strict regulations against mixing uncontaminated oil with PCB-contaminated oil to lower the PCB concentration.

"Once you know it has PCB, you can't dilute it, period," she said.

Duncan said the contaminated oil also was linked to Radium Petroleum Co., which he described as a Deffenbaugh subsidiary and a waste-oil handler.

Records at the Missouri Secretary of State's office show Radium was incorporated in May, with Ronald D. Deffenbaugh as president and treasurer.

Deffenbaugh could not be reached for comment today on the investigation.

THE WICHITA EAGLE Friday, August 31, 1979

Leaking Transformer Drips PCB In State Health Agency Basement

Transformer Drips PCB at Health Office

By JOHN PETTERSON
Of Our Topeka Bureau

TOPEKA — While the Kansas Department of Health and Environment wrestled Thursday with the problem of cattle contaminated by PCB, the toxic substance was dripping from a transformer in the agency's basement.

Although the leak, estimated at 2 to 4 drops a week, doesn't threaten the health of departmental employes working above, state officials would like to see the problem corrected.

In fact, the Department of Administration has asked for a $100,000 appropriation to take care of things at the department's headquaters building at Forbes Field, south of the city.

RAY COCHRANE, capitol complex engineer, said that the transformer, an integral part of the building's electrical system, contains about 500 gallons of oil with high concentrations of PCB, a cancer-producing agent.

Melville Gray, director of the Division of Environment, said that such oil normally contains 300,000 to 900,000 parts per million of PCB. That would be an extremely dangerous concentration.

The state took possession of the transformer along with the rest of the building when the Air Force phased out its operations at Forbes.

The equipment was rebuilt in 1974, but the leak never was fixed. Officials asked the attorney general's office to see what it could do about getting Westinghouse, which had the contract, to return to complete the work.

Apparently, the attorney general's office was unsuccessful in getting the leak repaired.

"THIS WAS leaking before we ever knew about PCB," said John Dunnigan, a buildings and grounds division spokesman.

"We've done everything imaginable to come up with some answers. We're checking it regularly," he said.

Dunnigan and Cochrane said that the state is following procedures recommended by the Environmental Protection Agency for handling PCB. The collected wastes are placed in metal barrels and kept behind locked doors in the building.

"It's a challenge to be working with all that for a few drops a week," Cochrane said.

Officials would like to replace the inside transformer with one located on the building's grounds. That would mean removing the existing equipment. That presents another problem.

TRANSFORMERS WITH such high concentrations of PCB fall under special EPA disposal regulations.

Cochrane said that present regulations require the PCB material to be burned in a special, high-temperature furnace. The problem is that no such furnace exists.

"We've communicated with the feds so we are doing all we can do right now," Cochrane said.

Dunnigan said that arrangements have been made to collect the drops so that the oil won't spread in the transformer room.

"It was leaking and coming down the side of the transformer. Finally, I got a little plastic container and put it right underneath," he said.

THE KANSAS CITY STAR Friday, August 31, 1979

Family Exposed To PCB

Beef Is Proved Contaminated At High Level

By John M. Wylie II
Star Energy/Environment Writer

Investigators who thought a frightening PCB-contamination incident near Newton, Kan., was almost over were jolted this week with the discovery that at least one and probably four families have been eating beef heavily contaminated with the toxic, cancer-causing chemical.

Officials of the Kansas Department of Health and Environment confirmed today that laboratory tests on the fat from part of a side of beef being eaten by a Newton-area family showed PCB contamination above 1,000 parts a million.

"That's sky-high," said one official familiar with the tests.

Meat impounded from three other families hasn't yet been tested, but J. Howard Duncan, a key administrator at the Kansas department, said today, "I would like to have a twist of good luck (on those tests) but I don't believe I'm going to."

PCB, polychlorinated biphenyl, can cause cancer in small amounts and damage to the skin, liver, eyes and central nervous system in larger doses. The doses in the beef are at roughly the same level as the doses in cooking oil in Japan 10 years ago that left dozens of persons ill and deformed, many for life. Duncan said the families that were eating the tainted or possibly tainted beef are being advised on special tests they should undergo. He speculated that the reason no visible health effects were involved is that PCB concentrates in the fat, most of which was being cut off before the meat was eaten. He also said the families had not eaten very much of the meat—"apparently, they weren't very big beef eaters," he said.

The beef was sold to the four families by Don Busenitz a year ago. It was discovered this year that oil in a cattle backrubber used to control insects on the Busenitz farm near Newton was contaminated with PCB, but authorites stopped any tainted meat from the farm from reaching market.

Duncan praised Busenitz, who voluntarily told Kansas officials about the meat he had sold privately a year earlier.

"He is concerned for their health," Duncan said.

The first samples of the processed beef were flown Monday to Ames, Iowa, for analysis. Results came in Wednesday, and the order impounding all four freezers filled with beef was issued Thursday. Duncan said he would "rather not" release the names of the families involved. They and Busenitz are victims of an environmental accident they could not have controlled, he said.

The chilling discovery raises anew the fears expressed when PCB contamination was first found on the Busenitz farm—that contaminated cattle could have reached the market and been processed for the tables of unwary consumers. Now, officials know that is fact, not possibility, in at least one case.

Meanwhile, investigators are continuing to probe the presence of PCB-contaminated oil at the Johnson County landfill in Shawnee operated by Deffenbaugh Disposal Service.

There have been allegations that PCB-contaminated oil was sprayed on roads in the landfill, but so far investigators have proved only that PCB is in a 1,000-gallon tank on the landfill site.

Tests will be run soon on soil from the roads to see if it is tainted.

Duncan said his department has received calls from two lapidary dealers (rock shops) in south-central Kansas who have discovered that the oil they have used for many years to cool cutting wheels contain substantial amounts of PCB.

THE KANSAS CITY TIMES Saturday, September 1, 1979

No Ill Effects Reported From Tainted Beef

By Dick Haws
A Member of the Staff

A top official with the Kansas Department of Health and Environment sought to soothe fears Friday that five central-Kansas families faced a grave health danger from eating beef that authorities believe was contaminated with the toxic chemical PCB.

Dr. Joseph Hollowell, director of health for the Kansas Department of Health and Environment, said in Topeka that he had interviewed the families involved and none had reported the customary symptoms of PCB contamination.

"We do not believe they're in any danger from this beef," Hollowell said.

Hollowell said the family members had been advised to arrange for sending blood samples to the National Center for Disease Control in Atlanta, Ga., for analysis.

They were also being asked to undergo liver function tests at their local hospital.

"I think we may find a level of PCBs," Hollowell said, "but I'd be surprised if there was any clinical or personal health effect."

The contaminated beef has been traced to cattle owned by Donald Busenitz on Busenitz's farm near Newton in central Kansas.

Busenitz has told authorities he had two steers slaughtered last year. He kept one side of beef for his family and sold the rest to four other families who have not been identified.

After reports surfaced this summer that high levels of PCBs had been found in Busenitz' cattle, one of the families asked to have its beef analyzed.

The analysis showed the beef was contaminated with about 1,300 parts per million of PCB, a concentration far above the level allowed for human consumption.

For humans to suffer from PCB toxicity, Hollowell said, exposure would have to be at a high level for a long period of time. He said he didn't believe the consumption of the contaminated beef would bring health problems for the central Kansas families.

Authorities say the families apparently consumed the meat quite slowly because they found some of the beef still remained in the freezers, more than a year after the animals were slaughtered.

Hollowell said that none of the family members reported PCB-type symptoms. Nor did Busenitz, whom Hollowell indicated had said "he hadn't felt healthier."

The rest of the frozen beef is being analyzed and officials expect those tests to be completed in three or four days.

Authorities began investigating Busenitz' cattle earlier this summer after 54 of his herd died from unknown causes. High levels of PCBs were later found in many of the animals.

The PCBs have been traced to nine barrels of waste transformer oil that Busenitz purchased from an area junk dealer eight years ago. Busenitz used the oil to help keep insects off his cattle. Unknown to him, it also contained high levels of PCBs.

Meat, Oil Most Serious Threats

PCBs Subject of 35 Inquiries By Environmental Authorities

By Kimberly Mills
and Robert Engelman
A Member of the Staff

A deadly chemical found in a side of beef in Newton, Kan., and tentatively identified on roads in a Johnson County landfill, has been the subject of 35 investigations and inquiries in the last year by the regional office of the Environmental Protection Agency here.

The region consists of Missouri, Kansas, Iowa and Nebraska.

Some of these inquiries into local uses of the substance, actually a family of chemicals known as polychlorinated biphenyls or PCBs, apparently have been routine and have uncovered no imminent hazards.

But two EPA investigations appear substantially more serious. One involves a batch of meat apparently contaminated with a PCB-laden oil rub and the other centers on a dust-control oil used at the landfill.

EPA officials refused to reveal details of the investigations, citing exemptions under the federal Freedom of Information law. The agency has until Sept. 17 to respond to a freedom of information request recently filed on the matter.

The Occupational Safety and Health Administration has mounted two investigations of PCBs in conjunction with the EPA. OSHA officials also declined to furnish information beyond saying no imminent danger was involved in either case.

One investigation is being handled by the Kansas City area OSHA office, which covers the western three-fifths of Missouri. The other is under the supervision of the Wichita OSHA office, which covers all of Kansas.

Last week, tests on a side of beef sold by a Newton farmer to a local family showed PCB contamination above 1,000 parts per million. Federal regulations, which banned the manufacture and sale of PCBs May 31, also require special disposal methods for anything contaminated with PCBs at more than 50 parts per million. The tainted meat was prevented from reaching any other markets.

Another PCB investigation, this one within the metropolitan area, surfaced with the revelation that oil spread to control dust on roads in the Johnson County landfill may have contained the chemical. Although PCBs have been found in a 1,000-gallon oil drum owned by Deffenbaugh Disposal Service Inc. at the landfill, neither state nor EPA investigators will say whether that oil was spread on the roads.

The owners of the disposal service, also connected with a petroleum company in Kansas City, have refused to comment on the investigation.

A docket log of EPA investigations into PCBs included the names of a Lebanon, Mo., electrical cooperative and two Kansas City electrical products wholesalers. The local companies said they had been questioned by the agency about disposal of PCB-laden capacitors and fluorescent light bulb ballasts, but that no problems had surfaced.

Both companies said they no longer sell the products and don't have them in their inventories.

In Lebanon, an official of the LaClede Electric Co-op confirmed the utility was visited by EPA officials "just like all the others in this part of the state."

Don Clark, operations superintendent, said he was not sure why LaClede's name appeared alone in the EPA docket log, and insisted the utility—which covers parts of six counties around Lebanon—had had no problem disposing of power line capacitors containing PCBs.

"Several of the utilities in southern Missouri, including ours, gathered the capacitors and deposited them with the Shelby Power Corp. in Marshfield, Mo.," Clark said. "A chemical company collected them and hauled them to Utah, where they were buried in deep silos in the middle of the desert."

In the last few years, only a few PCB investigations have been conducted by OSHA, officials said, because of the "limited amount of exposure in the region that we're aware of."

The Food and Drug Administration also is involved in the Newton investigation to determine whether there was any criminal negligence. And the number of local, state and federal agencies concerning themselves with PCB indicates just how prominent a chemical it has become.

In *Malignant Neglect*, a new book describing known or suspected cancer-causing agents in the environment, PCBs are labeled "probably the most widespread chemical contaminant known to mankind," found even in animals 11,000 feet below the surface of the North Atlantic Ocean.

While the chemical just now is receiving intensive study—after being used for 50 years—much is known about its properties. And what has made it so attractive to industrialists, its indestructible nature, worries environmentalists.

PCBs, introduced for commercial use in 1929, are made by controlled chlorination of biphenyl, a derivative of benzene. Initially the clear liquid was used for transformer and capacitor fluids, but its uses expanded greatly before its major manufacturer, Monsanto, stopped production two years ago. The company made 1.4 billion pounds of PCBs over almost five decades.

Out of this, 758 million pounds still are in service, 290 million pounds are in dumps and landfills and 150 million pounds are in the soil, water and air. According to EPA calculations, 10 million pounds of PCBs contaminate the environment each year through vaporization, leaks and spills.

PCBs are used in hydraulic fluids; adhesives for making brake linings, clutch faces and grinding wheels; washable wall coverings and upholstering materials; adhesives for envelopes and tapes; coatings for ironing board covers; plastic bottles and "carbonless" carbon papers and as an additive in paints and varnishes.

Although the chemical no longer can be made or sold, and its disposal is highly regulated, experts forecast PCBs will be present for years to come in the country's waters and soils, animals, birds and people. According to the EPA, 91 percent of all Americans have detectable levels of PCBs in body tissues, with 40 percent registering at least one part per million. That level is increasing, experts say.

Since the chemical's dangers have been publicized, studies of workers exposed to it have revealed many symptoms, including a type of skin disease called chloracne, digestive disturbances, jaundice, impotence, throat and respiratory irritations and severe headaches.

The effect on 1,000 Japanese who in 1968 accidentally ate rice oil contaminated with 1,000 to 3,000 parts per million of PCBs was even more severe. They suffered chloracne, loss of hair, fatigue, nausea, deformities of joints and bone, poor development of teeth in children and stillborn children. Some died.

Inhalation through the air and absorption through the skin by workers also is possible, but "what the long-term effects are nobody knows," said Dr. Peter Baxter, an epidemiologist at the Center for Disease Control in Atlanta.

CONTINUED NEXT PAGE

Baxter said it is unlikely that people who come into contact with PCBs in greatly diluted amounts would be greatly harmed, but he said scientists are reticent to give "anyone absolute assurance about anything" that has been studied as little as PCBs.

Service and maintenance workers who handle electrical transformers or capacitors naturally would have a higher exposure, but the physical effects resulting from those contacts over a long period of time are unknown, said Dr. Trent Lewis, chief of toxicology with the National Institute of Occupational Safety and Health in Cincinnati. People who come in contact with the chemical contained in everyday products, such as flameproofed yarn or waterproofed canvas, are "pretty safe," he said.

What disturbs scientists like Baxter and Lewis is the durability of PCBs. Only two methods are viewed as feasible for destroying PCBs—burning it at a temperature between 2,000 and 3,000 degrees Fahrenheit or exposing it to ozone and ultraviolet light. Neither method is in widespread use, however.

For that reason, the government has handed down strict rules for disposing of the chemical when it no longer is needed, such as when an electrical transformer is taken out of service For transformers containing PCBs in the most dangerous classification—above 500 parts per million—the liquid must be stored at one of eight EPA-approved chemical waste landfill sites.

Three of the sites are in New York with one each in Alabama, California, Kentucky, Oregon and Idaho.

PCB Leak Stopped in Time

By John M. Wylie II
Star Energy/Environment Writer

Federal officials say leakage of toxic PCB-contaminated oil was halted here early Friday before it could pose a serious health danger.

The leak was discovered in one of 51 drums containing about 2,800 gallons of waste transformer oil aboard a trailer in the lot of Consolidated Freightways, 4207 Gardner, in the Northeast Industrial District.

PCB can attack the liver and central nervous system and has been linked to cancer. It does not break down and in warmblooded animals it collects in fatty tissues. It was used by the millions of pounds, mostly in electrical equipment, for almost 50 years before its manufacture was banned earlier this year.

Federal officials estimate that the leak here was spotted before more than a few gallons escaped. The spilled oil was confined to the truck and a patch of asphalt.

Bill Keffer of the Environmental Protection Agency, praised the work of the shipper, General Electric Co., in handling the spill.

"What impressed me was that the shipper had cleanup material packed on the truck," Keffer said. The shipment was going from a GE plant in Denver to a GE facility in Chicago.

EPA and city officials worked from late Thursday night through Friday morning making certain that the material had been isolated and that none had reached city sewer lines.

Keffer said the leak was traced to a pinhole-sized break in a seam of one drum.

The oil contained PCB at a level of 500 parts per million, just under the level at which the oil would be considered so dangerous that federal regulations would require its destruction at extremely high temperatures. Although furnaces are being designed for that task, none now exists.

At the 500-parts-per-million level, somewhat less stringent restrictions are placed on how the oil can be shipped, handled and disposed of.

Public attention was focused on PCB last month after the chemical contaminated a herd of cattle on a farm near Newton, Kan., killing one-third of the animals. The remaining animals are under quarantine at a western Kansas feedlot and eventually will be destroyed.

Meat from cattle slaughtered at the same farm last year also was found to have very high levels of the chemical.

An investigation also is under way into the discovery of PCB-contaminated oil at the Deffenbaugh Disposal Service in Johnson County.

THE KANSAS CITY TIMES Saturday, September 8, 1979

State Plans to Kill, Bury Tainted Cows by Wichita

By Dick Haws
A Member of the Staff

The Kansas Health and Environment Department recommended Friday that 112 head of cattle, contaminated with the cancer-causing chemical PCB, be buried at a certified industrial disposal site near Wichita.

The site, in northern Sedgwick County near Furley, is the only one in Kansas approved by the federal government to handle heavy contamination by PCB—polychlorinated biphenyls.

The recommendation now goes to the U.S. Environmental Protection Agency for consideration. The EPA has ultimate authority in deciding how to dispose of the animals.

The cattle were impounded by governmental authorities last month after tests showed they contained high levels of PCB. The animals have been held at a feed lot near Hanston, Kan., while officials determined the most appropriate disposal method.

The state of Kansas now is paying more than $100 a day to feed the cattle and will pay for disposing of the animals. Howard Duncan of the Health and Environment Department said the terms of the proposed agreement still were being negotiated. He declined to release any cost figures until a final agreement was made.

If the disposal plan is approved, the cattle would be trucked from Hanston to the disposal site, killed and then buried in an earthen trench. Duncan, who described the Wichita site as "well suited" to handle the contaminated animals, said he hoped a decision on disposing of the cattle could be made as early as next week.

According to federal standards, PCB concentrations between 50 parts per million and 500 parts per million must be disposed of in approved industrial waste disposal sites like the one near Wichita.

Duncan estimated that PCB concentrations in half to two-thirds of the animals would fall within the 50 to 500 range, the other animals having concentrations of less than 50 parts per million.

Whatever the level, Duncan said, the animals are not fit for human consumption and can't be rendered for use in other products.

The PCB contamination has been traced to nine 55-gallon barrels of waste oil found on the Newton-area farm of Don Busenitz. Busenitz unknowingly bought the contaminated oil from a Walton, Kan., junk dealer, and had used it as a "back rub" to keep insects off his cattle.

Washington Post Sept. 11, 1979

Toxic Chemical, Born of PCBs, Found

By Bill Richards
Washington Post Staff Writer

Federal researchers yesterday said they have discovered that a little-known but highly toxic chemical compound has contaminated fish in Lake Michigan and in several major rivers in the Northeast and Midwest.

Dr. David Stalling, a scientist with the U.S. Fish and Wildlife Service's laboratory in Columbia, Mo., said the compound, known as polychlorinated dibenzofurans (PCDF), is up to 1,000 times as toxic as PCBs, which were banned by the Environmental Protection Agency in 1976 as a hazard to humans.

A second member of the research team that found the PCDF traces in the fish said the compound can cause birth defects and is suspected to be a carcinogen.

Stalling said that PCDF had not been spotted by chemical investigators before because it is a PCB byproduct that can be detected only by the use of recently developed and highly sophisticated laboratory equipment. The compound has, in effect, quietly hitchhiked behind PCBs, he said, although it can be far more powerful.

Stalling said PCDF is released in a highly concentrated form when PCBs are heated but not totally incinerated at temperatures of more than 800 degrees centigrade. Such releases can occur, he said, during manufacturing processes using PCBs and inside electrical equipment, such as transformers and capacitors, where PCB have been widely used as lubricants and coolants.

Investigators have found traces of PCDF in smokestack emissions at power plants in Cincinnati and St. Louis, said Stalling. Those plants, he said, burn a mixture of traditional fuels and unsorted trash that apparently contained some PCBs.

Although federal law prohibits the use or manufactures of PCBs, about 70 percent of the compound that already had been produced by 1976, when the law was passed, is still in use, Stalling said.

In a presentation here at the annual meeting of the American Chemical Society, Stalling said: "The real problem from this compound is that it can be misdiagnosed and people will think that, because they have gotten rid of PCBs, they are safe, when they're not."

A federally funded team of public and private scientists discovered up to two parts per billion of PCDF contamination in fish caught in the Ohio River, the Connecticut River, the Hudson River and in Lake Michigan near Saginaw, Mich., Stalling said.

The research team found PCDF in carp, catfish, trout and salmon. In addition to Stalling, the team included Dr. Ralph Dougherty of Florida State University, Dr. Christopher Rappe of the University of Umea, Sweden, and Dr. Douglas of the EPA.

Stalling said that other researchers have determined recently that one of Japan's worst cases of mass food poisoning was probably due to PCDF contamination.

The incident, which took place in Yusho, Japan, in 1968, occurred when a batch of rice oil was contaminated with what investigators originally believed were PCBs. Several deaths, including two stillborn infants, were attributed to the contaminated rice oil. More than 100 other persons in Yoshu have since suffered chronic headaches, fatigue, weight loss and numbness in their limbs from eating the rice oil.

The Wichita Eagle
Wednesday, September 12, 1979

County Says No, EPA Says Why Not?

Contaminated Cattle Burial Site in Contention

By KAREN FREIBERG
Staff Writer

A turf battle of sorts may be developing between Sedgwick County and the Environmental Protection Agency over a disposal site for 112 head of live cattle contaminated with the cancer-causing chemical PCB.

The Kansas Department of Health and Environment would like to see the cattle buried at Kansas Industrial Environmental Services Inc., near Furley in northeast Sedgwick County. KIES is the only state-approved hazardous-waste disposal site in Kansas.

The EPA, whose job it is to approve a suitable burial plot for the cattle, is investigating the KIES site to make sure it would be safe.

That investigation brought EPA Regional Administrator Kay Camin and KDHE Director Mel Gray to Wichita Monday to discuss the matter with Sedgwick County commissioners.

The EPA is required by law to give the county 30 days notice before disposing of the cattle within the county, unless county commissioners waive that requirement.

DON GRAGG, COMMISSIONER for the first district, which includes Furley, said Camin and Gray met privately with each of the county's three commissioners. Commissioners Tom Scott and Evereuu Patrick could not be reached for comment Tuesday.

During his meeting, Gragg said Camin and Gray explained some of the details of disposal of the cattle if the KIES site were chosen.

He said he also was asked to sign a document granting a waiver of the 30-day notice.

"I refused to sign it," said Gragg. "There's already much unhappiness in Furley about that place (KIES) and doing something to circumvent the public hearing process would be wrong."

GRAGG SAID THE officials "seemed concerned that if they did give the public 30 days to comment it would cost too much in terms of feeding the cattle," about $100 a day, according to one health official.

Although the EPA is technically required to give the county 30 days notice that it intends to bury the cattle in the county, Gragg says that doesn't mean very much.

He said the EPA has the final say on where the cattle will be buried, regardless of any decision made by the commission.

"They have to give us the 30-day notice and them there is nothing we can do about it," he said.

The possibility exists, however, that the EPA could reconsider a decision if public opinion is opposed to it.

LEE DEETS, MANAGER of KIES, said there would be no danger to area residents if the cattle were buried at his site.

"The soil here is tighter than concrete and there is no possibility of any chemical getting away," he said.

The cattle, which are quarantined at a Hanston feedlot in western Kansas, are owned by the state. They were impounded from Newton rancher Don Busenitz when it was learned in early August that they were contaminated with high levels of PCBs.

The cattle were evidentlly contaminated through contact with transformer oil that Busenitz had mixed with insecticide and applied to the cattle via back rubbers. Fifty-six of the 168-head herd have already died.

PCBs ARE HEAT retardent chemicals widely used in electrical transformers. They have been proven to cause cancer in laboratory animals and have been banned from production by the EPA.

Gray said his purpose in meeting with the commissioners was to "apprise them of the situation that exists and that no clear-cut decision has been made yet as to the disposal site."

He said that KIES is under investigation as a possible location.

Capacitor Explodes, Sprays PCB

By Kimberly Mills
A Member of the Staff

One of nine overhead capacitors on a power pole in Overland Park ruptured Monday afternoon, showering a small patch of roadway, sidewalk and grass with oil containing PCB, a cancer-causing chemical.

Officials from Kansas City Power & Light Co., which operates the capacitors at 95th near Bluejacket Drive, said there was no danger to nearby residents.

Utility workers spent several hours cleaning up the waste, some of the time under the observation of two employees from the Environmental Protection Agency, which regulates disposal of the chemical.

A small fire that followed the rupture, which occurred at 2:22 p.m., was extinguished quickly by a nearby resident with a garden hose.

Power company officials said they had no idea why the capacitor, a 1- by 2-foot device that moderates the flow of electricity, ruptured. Vic Poirier, a KCP&L spokesman, said it was only the second rupture of equipment containing PCB that he could recall in the last four years.

Stuart Krug, who lives in a duplex off 95th, said he was awakened by a noise like a combined sonic boom and gas explosion.

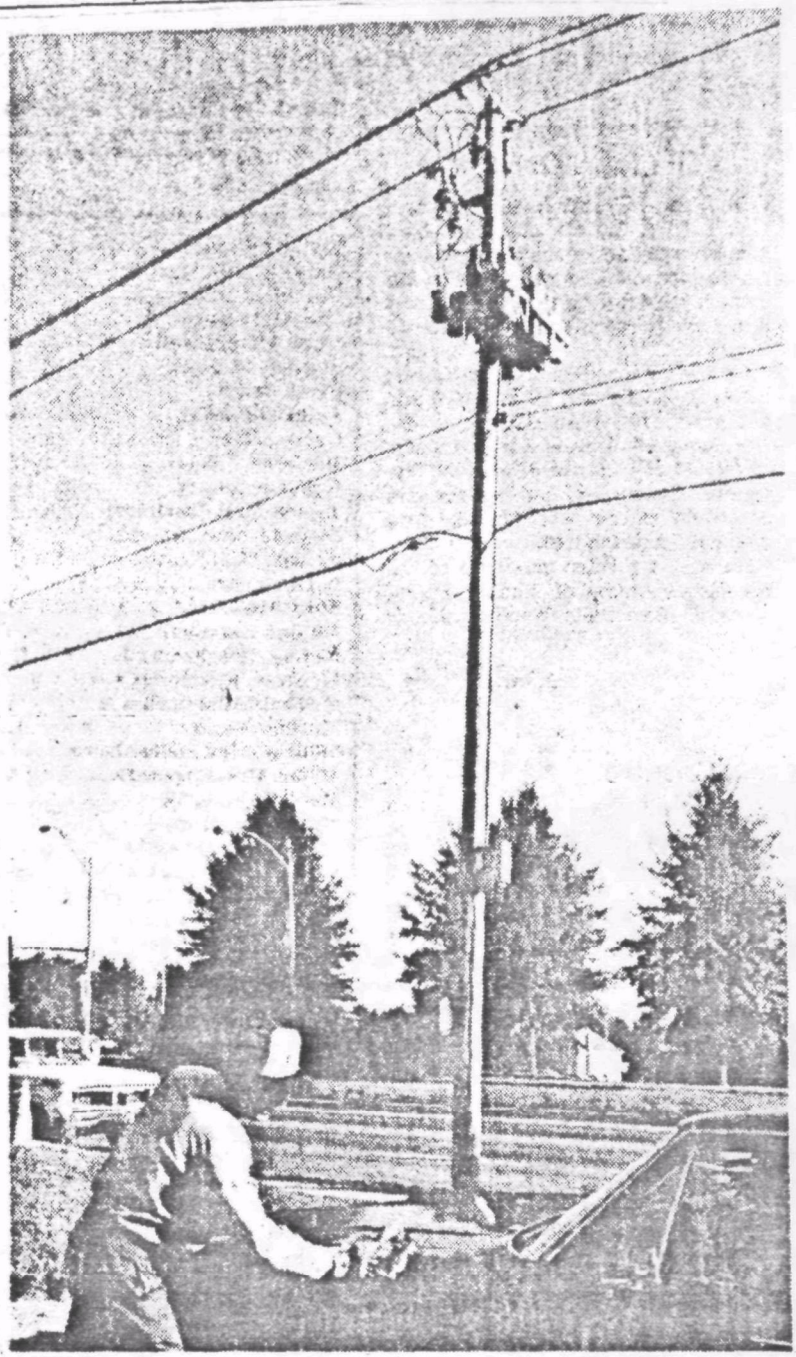
Finding the pole and grass underneath it in flames, Krug said, he put out the fire with a hose before firefighters arrived. Several hours later, KCP&L workers spread several loads of an absorbent to soak up the three spilled gallons of PCB-laden oil.

Utility officials said that several square yards of dirt and grass where the spill occurred would be dug up and hauled away in authorized disposal containers. New sod then will be planted.

PCB, which no longer can be made or sold in this country, has been used extensively in electrical transformers and capacitors, as well as in hydraulic fluids, adhesives and light ballasts.

PCB—short for polychlorinated biphenyls—has been the subject of 35 investigations in the last year by the regional EPA office here. One inquiry involves meat apparently contaminated with a PCB-laden oil rub used in Newton, Kan. Another centers on dust-control oil used at the Johnson County landfill. Neither investigation has been completed.

KCP&L is phasing out the use of equipment containing the chemical. Poirier said that very few pieces of equipment in the company's system now contained PCB.



Edward J. Hille/staff

After The Spill

A man wipes oil containing PCB from a car near 95th and Bluejacket in Overland Park. A capacitor on a utility pole at the intersection exploded Monday, spewing out the contaminated oil.

8B THE KANSAS CITY TIMES
Thursday, September 20, 1979

Dumping Site OK'd for Cattle Tainted by PCB

WICHITA (AP) — A site north of Wichita has been approved by the Environmental Protection Agency for the disposal of cattle that were contaminated with PCB, a cancer-causing substance.

Kathleen Q. Camin, regional administrator of the Environmental Protection Agency in Kansas City, said Wednesday that she had approved a site at Furley, Kan., for the disposal of 112 head of cattle contaminated with PCB.

The site, operated by the Kansas Industrial Environmental Services Inc., is a certified industrial disposal site. It is the only site in Kansas approved by the federal government to handle heavily contaminated substances containing PCB, polychlorinated biphenyls.

The cattle were impounded by authorities last month after tests showed they contained high levels of PCB. The contamination has been traced to nine 55-gallon barrels of waste oil found on the farm of Don Busenitz near Newton, Kan. He used the oil to keep insects off his cattle.

The animals have been held at a feed lot near Hanston, and the state is paying more than $100 a day to feed them.

Officials havve said the cattle are not fit for human consumption and cannot be rendered for use in other products.

Leader&Press
Thursday, September 20, 1979 5B

EPA OKs burial site for PCB-tainted cattle

KANSAS CITY (AP) — Cattle contaminated with the cancer-causing substance PCB apparently will be buried near Wichita, following approval of the site Wednesday by an Environmental Protection Agencyofficial.

Kathleen Q. Camin, regional administrator of the EPA office in Kansas City, said the site at Furley, Kan., provided more protection than agency regulations required.

The 112 head of cattle contaminated with PCB — polychlorinated biphenyls — will be buried at a certified industrial disposal site operated by the Kansas Industrial Environmental Services, Inc. in northern Sedgwick County. It is the only site in Kansas approved by the federal government to handle heavy contamination by PCB.

The cattle were impounded by governmental authorities last month after tests showed they contained high levels of PCB. The contamination has been traced to nine 55-gallon barrels of waste oil found on the rural Newton farm of Don Busenitz. He had purchased the oil as a back rub to keep insects off his cattle.

The animals have been held at a feed lot near Hanston, Kan. The state of Kansas is paying more than $100 a day to feed the cattle.

22 THE KANSAS CITY STAR
Friday, Sept. 21, 1979

Contaminated Cattle Slain

WICHITA (AP)—PCB-contaminated cattle owned by a Newton, Kan., farmer have been shot to death and buried in a south-central Kansas disposal site, state health officials say.

The deaths of the cattle brought to an end a chain of events that began last May on the farm of Don Busenitz. The events ended Thursday at the Kansas Industrial Environmental Services' hazardous waste dump near Furley in northern Sedgwick County.

The 112 cattle had been quarantined since mid-August at Pawnee Valley Feeders in western Kansas.

The animals were contaminated with high levels of PCB, a cancer-causing oillike substance formerly used in electrical transformers. The federal government banned PCB several years ago because of its extreme environmental hazard. Busenitz had used the waste transformer oil in a back-rub solution to ward off insects on the animals.

Mel Gray, deputy director of the Kansas Department of Health and Environment, said the animals were herded into a pit 10 at a time and shot in the head with rifles, then buried in a deeper adjacent pit.

United States
Environmental Protection
Agency

Region 7
324 East Eleventh St.
Kansas City, Mo. 64106

Iowa
Kansas
Missouri
Nebraska

EPA

Environmental News

FOR IMMEDIATE RELEASE — R. Michaels

WEDNESDAY, SEPTEMBER 19, 1979 — PLEASE CALL (816) 374-5894

Decision Announced in PCB Disposal

Dr. Kay Q. Camin, Regional Adminstrator of Environmental Protection Agency, Kansas City, Missouri, announced at 5:00 p.m. today two decisions involving the recent PCB incident in Kansas Those decisions will become effective on September 20.

The first decision is an order reducing the required notice period from the operators of the Kansas Industrial Environmental Services Inc., (KIES) site at Furley, Kansas, to local and State government. The order reduces from 30 to 5 days the notice required before disposal of PCBs in the site.

The concern for shortening the time period arose because of the remaining live contaminated cattle and the possible threat they pose to the environment.

The second decision is Dr. Camin's approval of the KIES site for one time disposal of PCBs.

Dr. Camin has reviewed the transcript of an informal public hearing held in Wichita Monday evening and having received no adverse comments at or since the hearing, decided on these actions.

In making the announcement, Dr. Camin said, "I have considered all facts presented to me and I have concluded that this site provides more protection than our agency's regulations require for PCB disposal."

KDHE will arrange for disposal of the cattle, back-rubber, highly contaminated soil from the farm and the contaminated meat at the KIES site.

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THE WICHITA EAGLE Thursday, September 20, 1979

PCB Contamination

Furley Site Chosen For Infected Cattle

Waste Dump Gets Waiver In 4 Areas

By KAREN FREIBERG
Staff Writer

A hazardous waste site in Sedgwick County was officially approved Wednesday as a burial site for 112 PCB contaminated cattle.

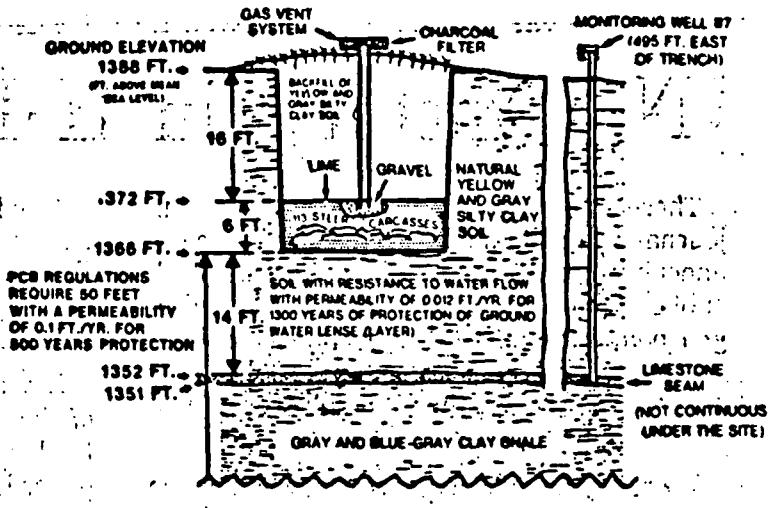
Kay Camin, regional administrator of the Environmental Protection Agency, said disposal of the cattle at Kansas Industrial Environmental Services near Furley could begin immediately as far as she is concerned.

Mel Gray, deputy director of the Kansas Department of Health and Environment, said the cattle would be moved live from a feedlot near Hanston to the Furley site "within a few days," and killed and buried there.

The cattle, which are owned by the state, were impounded from a Newton farmer in mid-August when it was learned that PCB contamination had caused the deaths of 54 of the original 168-head herd. Two more cattle have died since they were quarantined at the feedlot.

THE GOVERNMENT'S decision to deem the site safe for disposal of PCB materials came on the heels of several meetings of state, federal and county officials and one public hearing on the subject.

Camin said she received no adverse comments on using the furley site for the disposal.



PROFILE OF APPROVED DISPOSAL SITE
. . .Well would monitor any PCB leakage

"I have considered all the facts presented to me, and I have concluded this site provides more protection than our agency's regulations require for PCB disposal," said Camin.

At a meeting of Sedgwick County commissioners Wednesday morning, Camin explained four waivers of EPA regulations applied for by the operators of the Furley facility.

In approving the site, Camin said the waivers would be accepted.

ONE OF THE WAIVERS is of the requirement that 50 feet of compact earth separate the bottom of the burial plot and the first evidence of usable water.

The Furley site, according to Camin, has only 14 feet of soil between the two points. The type of soil there is so compact, however, that it would provide for many more than the 500 years of protection required by EPA rules, the administrator said. She added the Furley site is safer than required by the EPA.

The EPA also is waiving the requirement that a special collection system be installed at the juncture of the lowest strata of soil and bed rock.

Such a system would collect any leakage of PCBs that might occur, Camin said. But she said such a "leachate collection" system would not be

THE WICHITA EAGLE Thursday, September 20, 1979

PCB-Contaminated Cattle To Be Buried Near Furley

★ From Page 1D

necessary at the Furley sitebecause of a monitoring well that would warn of any leakage before it seeped that far down. She said the well could act as a collecting agent and pump out any errant PCBs before they could escape.

THE THIRD WAIVER is for a fence that would have had to be constructed around the specific burial site, which is estimated to be about 200 square feet.

Camin said that, because such a fence surrounds the entire Furley facility, a second one would not be required around the burial plot.

The fourth requirement being waived by the EPA concerns the frequency of testing surface water and monitoring wells at the site. In essence, the EPA said the current testing schedule, which complies with state rules is sufficient.

Even with the waivers, the EPA estimates the burial site would provide 7,300 years of protection before the PCBs could reach bedrock, and 1,300 years before they could hit the first evidence of usable water.

CAMIN SAID HER approval is for a one-time disposal of PCBs near Furley.Lee Deets, facility manager, has applied for a permanent PCB disposal license,but Camin said that decision would be considered later.

The county commissioners took no action on the EPA presentation Wednesday, turning down an "invitation" to waive a required five-day notice of the burial. That period ended Wednesday night.

The commissioners had no authority to prevent the cattle from being buried in the county. However, EPA regulations required a 30-day notice before the burial could take place.

Late last week, the EPA shortened that to a five-day notification because officials consider the live cattle an emergency situation.

GRAY SAID that there was a danger that the cattle may escape or more might die and the carcasses would have to be buried immediately.

He said there are other EPA-approved sites in the country, but it would cost about $75,000 to dispose of the cattle out of state compared to and estimated $15,000 near Furley.

The Furley site is the only state-approved hazardous waste disposal in Kansas. It has not been approved for disposal of toxic PCBs, an action that takes special EPA consideration.

The cattle were contaminated when transformer oil containing high levels of PCBs was mixed with insecticide and applied to the animals by Newton farmer Don Busenitz.

SIX BARRELS of this oil are stored at Furley until an incinerator can be found to burn it. EPA regulations require PCB liquids to be burned, but there are no approved commercial incinerators available in the United States.

PCBs are heat retardant chemicals widely used in electrical transformers and some household goods such as fluorescent light ballasts. They have been proven to cause cancer in laboratory animals. New production of PCBs has been banned by the EPA but those now is use are legal.

The Wichita Eagle

★ Friday, September 21, 1979 1C

PCB-Cattle Shot, Buried Near Furley

Contamination Probe Continuing

From Staff and Wire Reports

PCB-contaminated cattle were shot to death, then buried near Wichita Thursday, and federal officials are expanding their investigation of PCB contamination at meat-packing plants and feedlot operations in many Western and Midwestern states.

The deaths of the Kansas cattle brought to an end a bizarre chain of events that started last May on a Newton farm and ended within the woven-wire confines of the Kansas Industrial Environmental Services' hazardous waste disposal site near Furley in northeast Sedgwick County — the only state-approved chemical waste disposal site in Kansas.

THE CATTLE HAD been loaded into three trucks during the early morning hours from their pen at Pawnee Valley Feeders near Burdette in western Kansas. They had been quarantined at the feedlot since mid-August when it was learned they carried high levels of the deadly PCB chemical.

Mel Gray, deputy director of the Kansas Department of Health and Environment, said the animals were herded into a pit 10 at a time and shot in the head with high-powered rifles, then buried in a deeper, adjacent pit.

Department officials had at one time considered killing the animals with injections of quick-acting poison, but Gray said rifles were used instead because veterinarian consultants had told him it would be more humane.

Gray would not reveal the names of the riflemen but desribed them as "expert marksmen."

There were six veterinarians present, he said.

The animals were buried in a lime-lined pit containing three vent pipes with charcoal filters to contain noxious odors caused by the decomposing bodies.

BURIED WITH THE animals were 100 pounds of contaminated meat, two empty backrubber rollers and barnyard soil.

The rollers were from two backrubbers used by Newton farmer Don Busenitz to apply a solution of PCB-contaminated oil and insecticide to 168 cattle. Soon after the herd was moved to the feedlot, 56 of the cattle died.

Before the cause of the cattles' deaths was learned, several Newton-area residents had purchased contaminated meat from Busenitz, some of which was buried with the cattle.

In Montana, PCB contamination of hundreds of thousands of laying hens has spurred federal officials to expand their investigations of PCB contamination to meat-packing plants and feedlot operations in many Western and Midwestern states.

The problem surfaced last week when it was learned that chicken feed produced at the Pierce Packing Co. in Billings, Mont. had been accidentally contaminated with PCBs when a backup electrical transformer ruptured in June, releasing the chemical into the feed.

PCBs, SHORT FOR polychlorinated biphenyls, are heat retardant chemicals widely used in electrical transformers and other materials such as fluorescent light ballasts. The EPA has banned new production of the chemicals but is allowing use of those in existance to continue.

PCBs have been proven to cause cancer in laboratory animals.

Three major grocery store chains in Montana and northern Wyoming pulled suspect eggs from their shelves, and many farms where the contaminated feed was used voluntarily recalled their eggs.

Dr. Vernon Spear, regional head of the USDA's meat and poultry division based in Butte, said that inspections also were being carried out at 40 to 50 slaughtering facilities in Montana, Wyoming and North Dakota.

Spear said similar monitoring might be conducted at slaughtering facilities in other states if USDA "receive information that the contaminated product was shipped into those areas."

Food and Drug Administration officials said 1.9 million pounds of meat meal that may have contained PCBs has been shipped from Pierce during the last 3½ months. Shipments went to Utah, Idaho, Washington, Minnesota and North Dakota, as well as Montana.

THE KANSAS CITY STAR Monday, September 24, 1979

Horror Tale Ends at Dump

Cattle Buried, But Toxic Chemical Lives On

By Scott Kraft
Associated Press Writer

FURLEY, Kan. (AP)—An 80-acre tract of ghost land is nestled among the farms of south-central Kansas, a dumping ground for toxic wastes that will never die.

Humans will never move onto the clay tract near the tiny Sedgwick County town of Furley. It's the only state-approved hazardous waste dump in Kansas.

Last week a six-month horror story ended at the dump. It began when Newton farmer Don Busenitz rubbed oil onto the hides of his herd to keep flies away. He didn't know the oil was laced with PCB, a heat retardant used in electrical transformers. PCB has been proved to cause cancer in laboratory animals, and its production has been banned.

More than two dozen state and federal officials arrived at the dump on a gravel access road, walked past the warning signs and watched workmen kill and bury 112 cattle contaminated with PCB.

The cattle were herded into a ditch five at a time. Shots rang out as three marksmen put them to death. Workers later piled the carcasses in a lime-lined hole about the size of a living room and 19 feet deep.

Eventually, nature will turn the cattle to dust. But the two pints of PCB in those carcasses will never die.

The search for a place to dump the contaminated cattle didn't take long. There wasn't another waste disposal site within 1,200 miles that was allowed to handle material contaminated with polychlorinated biphenyls.

The 2½-year-old site, owned by Kansas Industrial Environmental Services Inc., is located on a 900-foot-deep clay bed. Its owners say the site is the safest in the Midwest.

"Those cattle don't worry me at all," site director Cliff McDaniel said as he stood over the spot where the cattle were buried.

Three vent pipes with charcoal filters to contain noxious odors were all that marked the spot. The segregated burial ground is charted precisely inside the office.

McDaniel said PCB will seep only slightly into the soil once the cattle have decomposed. "In 15 or 20 years, all we'll have is a small amount of contaminated soil," he said.

McDaniel said agricultural herbicides are the most toxic chemicals dumped here, and they are kept only in small quantities. The site is not authorized to handle radioactive waste.

The site's life as a dump is limited. Within 30 years or so, the dump will be covered with an 18-inch layer of topsoil and grass. KIES hopes to turn the site into a recreation area. Regardless, it will become state property and "no one will ever live here," McDaniel said.

Until then, though, some area farmers like Mrs. Carolyn Hill will worry. Her family's farm is adjacent to the disposal site, and she worries about the water her family drinks from their well.

She and her husband, Dennis Hill, listened to the gunfire last week as the cattle were killed.

"That gunfire didn't bother me," she said. "What bothers me is that those PCBs are over there now. Our water might be coming from under that site."

McDaniel said the Hills and other families occasionally complain about the odors that emanate from the site. He said he tries to do everything he can to alleviate the smells.

"No one really wants one of these for their next door neighbor, and you can't blame them," McDaniel said.

But he added that if society wants the fruits of an industrial society "it will have to pay the price of getting rid of what it generates to make it."

FACT SHEET

FACT SHEET - PCB CONTAMINATED CATTLE
Newton, Kansas
August 16, 1979

WHAT HAPPENED?

** May 17, 1979, Don Busenitz of Newton, Kansas took 168 head of cattle to Pawnee Valley Feedlot in Hanston, Kansas.

** Cattle were vaccinated and dipped for lice and grubs.

** May 24, 1979, feedlot records show that 54 cattle had died.

** The dead cattle were taken to Jayhawk Rendering Plant, Garden City, Kansas, and were processed.

ANALYSIS OF CATTLE

** Autopsy performed and tissue samples (fat, kidney and liver) were taken by Dr. H.D. Anthony, Kansas State University, Manhattan, Kansas.

** Backrubber oil and feed were collected at Busenitz's farm.

** On May 23, 1979, all samples were sent to Dr. Gary Osweiler, University of Missouri Veterinary Diagnostic Laboratory, Columbia, Missouri, for analysis.

** TOXAPHENE poisoning was suspected. Test proved inconclusive.

** On July 12, 1979, samples were sent to Dr. H.A. Nelson, National Veterinary Sciences Laboratory, Animal Plant and Health Inspection Service in Ames, Iowa, for confirmatory tests.

** Samples showed 2,200 parts per million (ppm) polychlorinated byphenols (PCBs) in the fat and 95 percent PCB in the backrubber oil.

** PCBs are chemicals which were used in electrical transformers to absorb heat. They do not break down in the environment and have been shown to cause cancer in test animals.

RESPONSE FROM FEDERAL AND STATE AGENCIES

** Farm, feedlot, rendering plants, and three animal feed mills were investigated by the Environmental Protection Agency (EPA), Kansas Department of Health and Environment (KDHE), Food and Drug Administration (FDA) and the Animal Plant and Health Inspection Service (APHIS).

** The source of the cattle contamination was found to be PCB oil used in the backrubber on the Busenitz farm.

INVESTIGATION REVEALS

** Busenitz had purchased oil for backrubber from Art Sattler Repair and Salvage Company, Walton, Kansas, eight years ago.

** The oil is the source of PCB contamination.

** Jayhawk Rendering Plant sold oil derived from the fat of the contaminated cattle to Southwest By-Products, Springfield, Missouri, for use in animal feed. Southwest Rendering reportedly diluted oil to less than 2 ppm (FDA standard) by using vegetable oil.

** Southwest By-Products sold the diluted oil to Tyson Foods, Springdale, Arkansas.

** Tyson Foods sold oil to Cargill Turkey, Springdale, Arkansas.

** And finally, Cargill Turkey's sold the oil to Gold Kist Chickens, Fayetteville, Arkansas.

** Jayhawk Rendering Co. sold red meat from the contaminated cattle to the Carnation Company, St. Joseph, Missouri, for use in dog food.

** Jayhawk Rendering Co. sold the hides and bones to Southwest Trading Company, Houston, Texas.

** At this time, FDA does not believe there is significant health hazard involved.

REGULATORY ACTIONS

** 112 remaining cattle at Pawnee Valley Feedlot, Hanston, Kansas, have been quarantined by Dr. Gerald D. Gurss, state veteranarian.

** No live animals are to be sold.

** No carcasses can leave the feedlot.

** A representative sample of the 534 swine on the Busenitz farm will be sampled for PCB contamination.

** Hold Order was served on Don Busenitz by KDH&E requiring him to retain all swine until samples are analyzed and show no PCB contamination.

** The remaining barrels of PCB oil on the Busenitz farm have been placed under a hold order by KDH&E.

PCB LIVESTOCK CONTAMINATION INCIDENT IN KANSAS

Early in May 1979, Don Busenitz of Newton, Kansas delivered 168 head of cattle to Pawnee Valley Feedlot near Hanston, Kansas. He had purchased those cattle from a cattle broker in Wichita, Kansas and had wintered them on his farm.

Upon delivery to the feedlot, the cattle were vaccinated and dipped for lice and grubs, a common practice in animal feedlots. Seven days later, 54 head of those cattle were dead.

Extremely complex investigatory analyses of the dead animals showed very high concentrations of polychlorinated biphenols (PCBs) in the fat. PCBs are chemicals which were used in electrical transformers to absorb heat. They do not break down in the environment and they have been shown to cause cancer in test animals. Legislation banning the production of PCBs became effective January 1, 1979.

The PCBs in this incident were traced to waste oil used by Busenitz in animal back-rubbers on his farm. He had purchased the waste oil, including 9 barrels of transformer oil, from a salvage yard in Walton, Kansas in 1972.

The U.S. Environmental Protection Agency (EPA), the Kansas Department of Health and Environment (KDHE), U.S. Food and Drug Administration (FDA), Kansas Department of Animal Health, and the U.S. Department of Agriculture's (USDA's) Animal Plant and Health Inspection Service launched a major cooperative effort to mitigate the effects of this environmental accident.

1. Issue: What happened to the 54 processed cattle which were contaminated by PCBs.

Background: They were taken to Jayhawk Rendering Plant, Garden City, Kansas. It was revealed on August 7 that they had PCB contamination in their fat as high as 2,200 parts per million (ppm). The livestock were rendered and shipped to the following locations:

The hides were shipped to the Southwest Trading Corporation, Houston, Texas.

The tallow and oil passed from Southwest By-Products, Springfield, Missouri to Tyson Foods, Springdale, Arkansas, which sold it to Cargill Turkeys, Springdale, Arkansas, which resold it to Gold Kist Chickens, Fayetteville, Arkansas.

The red meat was sold to the Carnation Company, St. Joseph, Missouri, which made it into dogfood that was sent to Jefferson, Wisconsin to be canned. About 200,000 cases of dogfood had gone to Philadelphia by the time FDA issued its hold order on August 24, when a sample revealed 5 ppm of PCB

Decision: FDA has determined that no significant health hazard exists. The dogfood is being tested lot-by-lot. As it is found uncontaminated, it is being released for sale. Final dispositions of the bones, hides, feeds, and dogfood will be made by FDA.

2. Issue: What about the 114 live cattle left at the Pawnee Valley Feedlot.

Background: On May 24, the Kansas Board of Animal Health quarantined the remaining 114 live cattle at the Pawnee Valley Feedlot. Two of the quarantined steers have since died. All live animals were sampled. USDA determined on August 23 that the level of PCB in the remaining cattle could not be reduced to an acceptable limit during their lifetime. National Veterinary Services Laboratory, Ames, Iowa, analyzed fat samples from 33 cattle showing a range of 80 to 2,200 ppm PCB.

Decision: All concerned agencies concur that the animals must be destroyed and disposed of in an EPA-approved PCB disposal site. KDHE impounded the remaining 112 cattle, therefore assuming the financial burden for holding, destruction and burial of the animals.

3. Issue: What will be the final disposition of the two additional steers that died in quarantine.

Background: On August 7 and 13, two additional head died. The first steer was buried at the feedlot. The amount of contamination is not known. The second steer was tested and found to have less than 50 ppm of PCB in its body. It was also buried at the lot.

Decision: The steers will remain buried in a marked area of the Pawnee Valley Feedlot. EPA will test the soil at this site in one year to determine if there is an environmental hazard.

4. Issue: Contaminated soil at Busenitz farm.

Background: Surface soil in the farmyard of the Busenitz farm was analyzed and found to contain from 20 to 1,000 ppm PCB. The highly contaminated areas were under the back-rubbers.

Decision: The highly contaminated soil will be removed and disposed of with the steers. The farmyard will be scraped to a depth of six inches. That soil will be buried on the farm. Evidence from Dr. Fries, USDA, suggests that the soil not contain over 5 ppm PCB, as they can be absorbed through the hooves of cattle. KDHE and EPA have agreed that to assure the safety of the farm for future use, the soil should contain no more than 1 ppm PCB. EPA will test the farmyard after scraping. EPA recommends that the location of the buried dirt and sampling results be attached to the records of the land.

5. Issue: Contaminated soil at Pawnee Valley Feedlot.

Background: The soil in the pen at the feedlot where the contaminated cattle remain was found to contain very low levels of PCB.

Decision: Soil from the affected pen will be removed and buried at the feedlot. The site will be marked.

6. Issue: What will happen to the remaining waste oil, empty barrels, and the back-rubbers from the Busenitz farm.

Background: Samples of oil from six full 55-gallon barrels, three empty 55-gallon barrels, and two back-rubbers revealed concentrations of PCBs ranging from 82 ppm to 950,000 ppm. EPA/FDA/KDHE inspectors traced the source of the waste oil to Art Sattler Repair and Salvage Company, Walton, Kansas, who purchased 9 barrels of transformer oil from a utility company in Wichita, Kansas in 1972. Busenitz purchased the entire lot of waste oil later that year.

Decision: The remaining waste oil, empty barrels, and back-rubbers were impounded by KDHE and all of it is now the property of the State of Kansas. The barrels are being stored in a concrete vault at the KIES site near Furley, Kansas until such time as the oil can be destroyed in a high temperature PCB incinerator. EPA recommends the back-rubbers be buried with the cattle.

7. Issue: What will happen to the 553 swine owned by Don Busenitz.

Background: August 20-25, swine back fat samples were taken at the Don Busenitz farm. The samples showed PCB levels of undetectable to 17 ppm PCBs.

Decision: USDA/FDA have agreed to apply FDA's tolerance for PCB residues in poultry to swine and cattle tissue found to contain detectable PCB residues. Currently, the tolerance for PCBs in poultry is 3 ppm on a fat basis. FDA would not object to applying this tolerance to swine still located at the Busenitz farm.

USDA will insure that swine over the 3 ppm level in fat do not enter food channels. USDA will also notify FDA of any findings in these swine above the 3 ppm level.

Accordingly, the swine that have already been tested and found to exceed the 3 ppm level are not suitable for use as human food and should not be so offered. If necessary, they should be destroyed and disposed of in a manner to prevent such usage.

FDA is also concerned about rendering the swine that have been exposed to PCBs. Special precautions should be taken to insure that these animals do not introduce PCB contamination into the rendering plant or that rendered by-products do not exceed FDA's tolerance of 2 ppm for PCBs in animal feed ingredients.

Earlier, authorities released 16 swine carcasses and 125 feeder pigs in which PCBs were not detected.

8. Issue: What will be done with the processed beef contaminated by PCB which was confiscated by authorities.

Background: Four or five families in the Newton, Kansas area stated that they had purchased custom slaughtered beef from Don Busenitz during the last year. Fat samples from the remaining meat contained as much as 1,300 ppm PCB.

Decision: The beef will be barreled and buried at an approved disposal site. The families have been advised by KDHE to obtain blood and liver function tests from their family doctors. These tests will be monitored by the Center for Communicable Disease Control, Atlanta, Georgia.

9. Issue: Should any responsibility be placed on any individual or firm for the PCB incident in Kansas.

Background: The contaminated oil was purchased by Busenitz long before there was any concern about the health effects of PCBs. Laws controlling PCBs were not passed until 1976.

Decision: This series of events is being treated as an environmental accident. Our primary concern is to prevent a reoccurrence. We must prevent further release of PCBs into the environment and the food chain.

Dr. Camin, EPA Regional Administrator, announced at 5 p.m. Tuesday, September 19, her decisions involving the recent PCB incident in Kansas.

The first was an order reducing the required notice period from the operators of the Kansas Industrial Environmental Services, Inc., site at Furley, Kansas, to local and state government. The order reduced from 30 to 5 days the notice required before disposal of PCBs in the site. Concern for shortening the time period arose because the remaining live contaminated cattle might pose a threat to the environment.

The second decision was her approval of the site for one time disposal of PCBs. After reviewing the transcript of an informal public hearing held in Wichita earlier in the week and receiving no adverse comments at or after the hearing, she decided on these actions.

KDHE disposed of the cattle, back-rubbers, highly contaminated soil from the farm, and the contaminated meat at the site on September 20.

The National Cattlemens Association has invited Dr. Camin, Mel Gray of KDHE, the farmer involved in the incident, Don Busenitz of Newton, Kansas, and FDA and USDA representatives to come to Washington to discuss the problem with the idea of establishing a national interagency plan on response, should this kind of environmental accident occur again.

CHRONOLOGICAL LIST OF EVENTS

PCB CONTAMINATED KANSAS CATTLE
CHRONOLOGICAL LIST OF EVENTS

December 10, 1978 - Mr. Don Busenitz, Newton, KS, bought 168, ten month old feeder calves weighing approximately 450 pounds each. Cattle had access to two backrubbers reported to contain TOXAPHENE and LINDANE mixed in oil.

February 6, 1979 - The 168 cattle were examined by Dr. Cyril Brown, local veterinarian, Newton, KS, and appeared to be healthy.

May 17 - Mr. Busenitz deliverd 168 cattle (approximately 15 months old, 850 pounds each) to Pawnee Valley Feedlot, Hanston, Kansas.

- Cattle were vaccinated on arrival with IBR, BVO, TI-3, clostridium - sevin and leptosperosis and dipped in IMIDAN (PROLATE).

- Cattle refused to eat.

May 18 - Two cattle died.

May 20 - 14 more cattle died.

- Dr. H.D. Anthony, KSU, College of Veterinary Medicine, Manhattan, Kansas, performed autopsies and collected tissue samples (kidney, liver, fat).

May 21 - Dr. A. E. Wesley and Mr. Taylor of Pawnee Valley Feedlot collected samples at Busenitz farm - silage, grain, backrubber oil, bag salt, liquid protein.

May 23 - Dr. H.D. Anthony referred samples of kidney, liver, fat, silage and backrubber oil to Dr. Gary Osweiler, UMC, Veterinary Medicine Diagnostic Laboratory. TOXAPHENE poisoning suspected.

May 24 - Total of 54 cows have died.

- Dr. H.D. Anthony requested that Dr. Gurss, State Veterinarian, Kansas Board of Animal Health, place surviving cows under quarantine.

May 19 to June 18 - Dead cattle are collected by and taken to Jayhawk Rendering Plant, Garden City, Kansas.

June 21 - Dr. Gary Osweiler, sent written report of analysis to Dr. H.D. Anthony. Analysis thought to reveal TOXAPHENE but neither mass spectral data nor clinical diagnosis matched TOXAPHENE poisoning.

July 12 - Dr. Osweiler referred samples to Dr. H. A. Nelson, National Veterinary Services Lab, APHIS, Ames, Iowa, for confirmation of TOXAPHENE analysis.

August 6 - Dr. Nelson runs analysis on samples.

- Dr. Nelson reported results of analysis that cattle are contaminated with PCBs to the following people Dr. Shane, FDA, Topeka, KS; Dr. Swann, Federal Meat Inspection Program, Topeka, KS; Drs. Conely and Clabough, National Veterinary Services, APHIS, Topeka, KS; and Dr. Chaluox, APHIS, Deputy Administrator, Washington, D.C.

August 7 - Wolfgang Brandner, Toxics Coordinator, EPA, Region VII, notified of PCB contaminated herd of cattle by Dr. Nelson.

- Another cow died and was picked up by Jayhawk Rendering Plant, Garden City, Kansas.

Verified sample analysis revealed the following:

Sample No.	PCB Content
Liver A	82 ppm
Liver B	80 ppm
Kidney A	44 ppm
Kidney B	140 ppm
Fat #1 (5/23/79)	2,200 ppm
Fat #2 (6/1/79)	670 ppm
Silage 1	6 ppm
Silage #2	0 ppm
Backrubber Oil	Greater than 95% (analysis is identical to AROCHLOR 1260) John Wicklund and Leo Alderman notifed.

- Dr. H. D. Anthony identified the farm of origin of the contaminated cattle. EPA inspector made preparation to visit farm.

August 8 - David Ramsey, EPA Inspector, was sent to call on Mr. Don Busenitz, Newton, KS, to determine the source of the backrubber oil. Mr. Busenitz was not at home. Mr. Ramsey interviewed Mrs. Claassen, Mrs. Busenitz's mother and neighbor. She stated cows were healthy before going to feedlot. She also mentioned previous experiences with cows becoming sick from what she believed was an interaction between backrubber oil and the cattle dip.

August 9 - Mr. Brandner requested Dr. O.F. Clabough, Veterinary Services, APHIS, Topeka, KS, to extend the quarantine on the Busenitz herd issued by Dr. Gurss to include dead cattle - no carcasses were to leave the Pawnee Valley Feedlot.

- Mr. Howard Duncan, Kansas Department of Health and Environment (KDH&E) Topeka, Kansas, informed Mr. John C. Wicklund, EPA, that Jayhawk Rendering Company, Garden City, Kansas, collected the 54 dead cattle, processed them, and sold the oil to Southwest By-Products, Springfield, Missouri, for use in animal feed. Southwest By-Products diluted the oil and sold it to Tyson Foods, Arkansas, who sold it Gold Kist Chickens, Fayetteville, Arkansas.

Springdale, Arkansas, who sold it to Cargill Turkeys, Springdale,

- Ed Fry, FDA, Kansas City, MO, notified of Mr. Duncans's information.

- Tallow sample from rendering vat collected by KDH&E at Jayhawk Rendering Company, Garden City, Kansas.

August 13

- Dr. Dennis Huck, feedlot veterinarian, collected tail fat samples from 15 live cattle at Pawnee Valley Feedlot, Hanston, Kansas, and sent them to APHIS laboratory, Ames, Iowa.

- Arrangements were made for EPA and KDH&E inspectors to meet with Mr. Busenitz on his farm Tuesday morning, August 14.

- One of the contaminated cows died at Pawnee Valley Feedlot and was buried at the feedlot.

August 14

- Inspectors from FDA, EPA and KDH&E visit the Busenitz farm. Six full and three empty 55 gallon barrels of transformer oil were found on the property. Fifteen to 20 barrels were purchased by Mr. Busenitz eight years ago from Art Sattler Repair, Salvage Company, Walton, Kansas. Backrubber solution was prepared by Mr. Busenitz and is composed of 2 gallons TOXAPHENE, 1 gallon LINDANE and 33 gallons of transformer oil. FDA took samples of the backrubber oil.

- KDH&E issued a hold order to Mr. Busenitz requiring him to retain the six intact 55 gallon barrels of oil found on his farm.

- FDA reported to Leo Alderman the following:

  Records show 54 cows sent to Jayhawk Rendering from Pawnee Valley Feedlot.

  Red meat from the 54 cows was bought by Carnation, St. Joseph, MO.

  Hides and bones from the 54 cows were sent to Southwest Trading, Houston, TX.

August 15

- Dr. O.F. Clabough agrees to give a written estimation of the total PCB content of a cow.

- Dr. Cyril Brown, Newton, KS, veterinarian, collected 11 back fat biopsies from swine on the Busenitz farm and sent them to the National Veterinary Services Lab, Ames, Iowa, for analysis.

- Joint EPA, FDA meeting.

August 16

- EPA and KDHE issue joint press release to T.V., Channel 27, Topeka, Kansas, after station questions Agencies about PCB contaminated cattle.

- Mr. Brandner contacted Dr. George Fries, USDA, Beltsville, Maryland, who has been involved in the PBB cattle contamination problem in Michigan. Dr. Fries stated that PCB level in Busenitz cattle could not be reduced to acceptable limits during the lifetime of the animals. Cattle should be destroyed.

August 17 - First PCB story in Kansas City Star.

August 20 - Mary Woleske, FDA, reported preliminary analysis of Backrubber oil and oil samples from 6 full drums, 2 empty barrels.

Results of preliminary analysis were:

Full Oil Barrel #1	63%	PCB
" " " #2	85 ppm	"
" " " #3	6%	"
" " " #4	57%	"
" " " #5	59%	"
" " " #6	69%	"
Empty " " #7	54%	"
" " " #8	31%	"
Backrubber oil	63%	"
Oil from mixing barrel	59%	"

- Dr. Mel Gray, KDH&E, reported that the vat sample from Jayhawk Rendering Company contained 4.9 ppm PCB. FDA did a complete inspection of the plant.

- Mary Woleske, FDA, reported the results of the tail fat sample analysis performed by APHIS lab in Ames, Iowa. These samples were collected from live cows at Pawnee Valley Feedlot, Hanston, Kansas, on August 13, 1979.

1) 150 ppm PCBs	6) 930 ppm PCBs	11) 810 ppm PCBs
2) 800 " "	7) 1100 " "	12) 170 " "
3) 300 " "	8) 230 " "	13) 240 " "
4) 300 " "	9) 310 " "	14) 380 " "
5) 360 " "	10) 130 " "	15) 470 " "

Range 130 ppm to 1100 ppm PCBs

- Swine back fat samples received by Ames, Iowa, laboratory.

August 21 - Mr. Brandner requested that Dr. Mel Gray notify Mr. Busenitz of the analytical results of the cattle tail fat samples and of all future samples analysis involving Mr. Busenitz's livestock.

- Dr. Mel Gray requested meeting of all concerned parties (KDH&E, APHIS, FDA, USDA, and EPA) to determine what action should be taken on the contaminated cattle.

August 22 - Dr. H. D. Anthony, KSU, reported the concentration of PCB in the 16 slaughtered hogs at Rodeo Meats, Arkansas City, Kansas, was less than 0.5 ppm.

- Dr. George Fries, USDA, agreed that extensive soil sampling should be done at the Busenitz farm and at the feedlot. He stated that 5 to 10 ppm PCB in the soil of a cattle pen and any detectable PCB's in the soil of a hog lot could cause unacceptable PCB residues in the livestock.

August 23 - According to Dr. H. D. Anthony, KSU, the body composition of a cow is:

Bone	7.5%	Skin	7%
Red Meat	44.5%	Heart	0.35%
External Fat	11%	Tongue	0.25%
Internal Fat (in red meat)	3%	Liver	1%
Blood	3.5%	Internal Organs	22%

August 24 - FDA reported that PCB contaminated red meat bought by Carnation Company, St. Joseph, Missouri, for use in dog food had been transferred to the company's Jefferson, Wisconsin plant and canned. Approximately 200,000 dog food cans had gone to Carnation's distribution center in Philadelphia. FDA has issued a hold order on the shipment because a sample from one production lot contained 5 ppm PCB.

- Meeting of all involved agencies. EPA explained options for disposal of cows, waste oil, backrubbers and soil containing more than 50 ppm PCB. KDH&E will issue order to destroy remaining 113 cattle after tail fat samples have been collected from all animals. Since it will take a minimum of 30 days to locate and approve a proper cattle burial site, Kansas Animal Health Department requested removal of the cattle from the Pawnee Valley Feedlot back to the Busenitz farm. KDH&E decided to impound the surviving cattle and pay all disposal costs if the farmer agrees. FDA requested a more representative sample of the 534 hogs on the Busenitz farm be taken - particularly the brood sows need to be biopsied and their milk tested. KDH&E reported the PCB content in the 16 slaughtered hogs at Rodeo Meats to be undetectable - hold order will be rescinded. All parties agreed an early reporting system of disasters such as this one needed to be implemented and an effort should be made to educate farmers on proper oil use - County Extension Agents could assist.

August 25 - Additional fat samples collected from Swine on Busenitz farm. Samples collected from 9 feeder pigs, 12 sows, and 1 boar.

- Fat samples collected from all cattle surviving at Pawnee Valley Feedlot.

- 16 slaughtered hogs at Rodeo Meats, Arkansas City, Kansas, and 125 feeder hogs at the Busenitz farm were released from quarantine by KDH&E with USDA concurrence. PCB level in samples from these hogs was undetectable.

August 27 - Swine and cattle fat samples arrived at National Veterinary Services Laboratory, Ames, Iowa.

August 28 - KDH&E issued order to impound 113 live cattle contaminated with PCB's located at Pawnee Valley Feedlot. An impoundment order was also issued to Mr. Don Busenitz for 9 barrels of transformer oil and the soil in the cattle pen located at the Newton, Kansas farm. Impoundment transfers ownership of these items to the State.

August 29 - Dr. Robert Kloepfer, EPA Laboratory, Kansas City, Kansas, reported the following results of analysis from soil, water, and insilage from the Busenitz farm:

  - Soil under one backrubber ranged from 190 ppm to 1,000 ppm PCB.

  - Soil under the other backrubber ranged from 110 ppm to 720 ppm PCB.

  - Soil around the periphery of the cattle pen contained 20 ppm to 34 ppm PCB.

  Subsurface soil samples will have to be collected to determine extent of contamination.

- Howard Duncan, KDH&E, reported preliminary analyses of top soil from pen holding PCB contaminated cattle at Pawnee Valley Feedlot revealed a PCB concentration of less than 5 ppm. Soil from 6 inches below the surface showed no PCB concentration.

August 30 - Howard Duncan, KDH&E, reported result of analysis on cattle fat from beef sold by Mr. Busenitz to a Newton, Kansas resident last year. The PCB content was 1,300 ppm. The beef has been impounded by KDH&E along with beef from other Newton, Kansas residents who have purchased cattle from Mr. Busenitz in the past years.

September 6

-The Kansas Industrial Environmental Services (KIES) chemical waste landfill site near Furley, Kansas, was evaluated to determine its suitability for the disposal of the PCB contaminated cattle and related articles. The EPA evaluation team was lead by William J. Keffer, Chief, Support Services Branch, SVAN. Mr. Joseph Cronin, Environmental Engineer for the Kansas Department of Health and Environment also accompanied the EPA team. The evaluation considered the location, design and operation of the site.

-EPA received disposal request letter dated September 5 to Lee Deets, General Manager of KIES to Dr. Camin.

-Meeting of all agencies involved to discuss the additional test results from the hog and cattle tests. The FDA representative discussed the definition of avoidable contamination of the hogs and the full group discussed the proposed fate of all contaminated items and steers.

September 7

-The final report on the KIES site was delivered by Mr. William Keffer of EPA. He indicated that the site was well designed and well operated with a few minor concerns. He recommended that the site be approved for disposal of the PCB contaminated cattle and related items. He recommended the few minor shortcomings be addressed in the proposed permit.

September 13

-FDA notified KDH&E that the tolerance for PCB's in the poultry of 3 ppm of fat basis would be applied to the Busenitz's swine. The swine will continue to be monitored and those exceeding the tolerance level kept out of the food chain.

September 14

-Letter sent to Melville Gray, Director of Environment, from Dr. Kathleen Q. Camin concerning the recommendation for disposition of soils at the Busenitz farm and Pawnee Valley Feedlot, the backrubbers and other related items. KIES letter sent notifying the Sedgwick County Board of Commissioners of the intent to dispose of the contaminated cattle and related articles.

September 17 -Dr. Kathleen Q. Camin and other EPA staff members met with the Wichita-Sedgwick County Environmental Resources Advisory Board (ERAB) in Wichita and briefed them on the cattle contamination incident and the KIES application. ERAB endorsed the site as an appropriate disposal location and recommended it to the County Commissioners.

-A Federal Register notice was published allowing the one time disposal of contaminated cattle to be conducted with five days notice to local governments based on the environmental emergency. A public hearing was held the evening of September 17 to receive public comment and explain the nature of the emergency.

September 19 -Closing date on the comments concerning the five day notice of intent to dispose of the cattle and articles.

September 20 -Dr. Kathleen Q. Camin waived the 30 day local government notice requirement and substituted the five day notice. Further, she, by letter, approved the KIES application and waivers with special conditions concerning the contaminated cattle and related item disposal operation and site maintenance.

INTERAGENCY EFFORTS

INTERAGENCY EFFORTS
PCB CONTAMINATED CATTLE

Food and Drug Administration

..is tracing the dead animals

..is testing samples of the oil from the backrubber and from oil found in the barrels at the farm

..at this time FDA does not believe there is a significant health hazard.

Environmental Protection Agency

..will trace origin of PCB transformer oil

..assist Busenitz in complying with PCB regulations

..determine if IMIDAN (PROLATE) is registered for use as a cattle dip and was used properly at feedlot

..recommend disposal methods for PCB contaminated animals.

Kansas Department of Health and Environment

..sample rendering vats at Jayhawk Rendering Company

..collect environmental sample from Don Busenitz farm hog and cattle pens

..collect soil samples from area containing remainder of Busenitz herd at Pawnee Valley Feedlot

..sample 3 oil barrels at salvage company

..place a hold order on all swine at Busenitz farm.

APHIS and State Veterinarian

..cattle quarantined

..swine quarantined and fat biopsies collected

..estimate total PCB content of contaminated cow.

National Veterinary Sciences Laboratoary, Ames, Iowa

..PCB analysis in cattle and swine tissues, soil samples and feed samples.

..Report of analysis to be sent to EPA and FDA.

SAMPLE ANALYSES RELATED TO PCB CONTAMINATED CATTLE
FROM NEWTON, KANSAS

SAMPLE	SOURCE OF SAMPLE	DATE COLLECTED	COLLECTED BY	DATE SENT TO LAB	DATE RECEIVED BY LAB	ANALYTICAL LABORATORY	DATE ANALYSIS REPORTED	ANALYTICAL RESULTS	DATE SENT FOR CONFIRMATORY ANALYSIS	ANALYTICAL LABORATORY	DATE RESULTS REPORTED	VERIFIED ANALYTICAL RESULTS
Liver A	Dead Cattle Pawnee Valley Feedlot, Hanston, KS	5/29/79	Dr. H. D. Anthony, KSU, Vet. School Manhattan, KS	5/23/79	5/25/79	Univ. of MO Vet. Diag. Lab, Columbia, MO	6/21/79	Suspect TOXAPHENE	7/12/79	Nat. Vet. Services Lab, APHIS, Ames, Iowa	8/6&7/79	82 ppm PCB
Liver B	"	"	"	"	"	"	"	"	"	"	"	80 ppm PCB
Kidney A	"	"	"	"	"	"	"	"	"	"	"	44 ppm PCB
Kidney B	"	"	"	"	"	"	"	"	"	"	"	140 ppm PCB
Fat #1 (5/23/79)	"	"	"	"	"	"	"	"	"	"	"	2200 ppm PCB
Fat #2 (6/2/79)	"	"	"	"	"	"	"	"	"	"	"	670 ppm PCB
Silage #1	Busenitz Farm Newton, KS	5/20/79	Dr. A. E. Wesley and Mr. Taylor of Pawnee Valley Feedlot	"	"	"	"	"	"	"	"	6 ppm PCB
Silage #2	"	"	"	"	"	"	"	"	"	"	"	0 ppm PCB
Backrubber Oil	"	"	"	"	"	"	"	"	"	"	"	95% PCB (Arochlor 1260)
Fat From Rendering Vat	Jayhawk Rendering Plant, Garden City, KS	8/9/79	KDH&E	"	"	FDA, Kansas City, MO	8/20/79	4.9 ppm PCB				
Cattle Tail Fat #1	Pawnee Valley Feedlot, Hanston, Kansas	8/13/79	Dr. Dennis Huck, Feedlot Vet.	8/13/79	8/16/79	Nat. Vet. Services Lab, APHIS, Ames, Iowa	8/20/79	150 ppm PCB				
Fat #2	"	"	"	"	"	"	"	800 ppm PCB				
Fat #3	"	"	"	"	"	"	"	300 ppm PCB				
Fat #4	"	"	"	"	"	"	"	300 ppm PCB				
Fat #5	"	"	"	"	"	"	"	360 ppm PCB				
Fat #6	"	"	"	"	"	"	"	930 ppm PCB				

SAMPLE	SOURCE OF SAMPLE	DATE COLLECTED	COLLECTED BY	DATE SENT TO LAB	DATE RECEIVED BY LAB	ANALYTICAL LABORATORY	DATE ANALYSIS REPORTED	ANALYTICAL RESULTS
Fat #7	"	"	"	"	"	"	8/20/79	1100 ppm PCB
Fat #8	"	"	"	"	"	"	"	230 ppm PCB
Fat #9	"	"	"	"	"	"	"	310 ppm PCB
Fat #10	"	"	"	"	"	"	"	130 ppm PCB
Fat #11	"	"	"	"	"	"	"	810 ppm PCB
Fat #12	"	"	"	"	"	"	"	170 ppm PCB
Fat #13	"	"	"	"	"	"	"	240 ppm PCB
Fat #14	"	"	"	"	"	"	"	380 ppm PCB
Fat #15	"	"	"	"	"	"	"	470 ppm PCB
Oil From Opened 55 gal. Barrel	Busenitz Farm Newton, KS	8/14/79	David Bergeson FDA, Wichita, Kansas			FDA, Kansas City, MO	8/20/79	59% PCB
Backrubber Oil	"	"	"	"	"	"	"	63% PCB
Silage #1	"	8/15/79	Dwayne Muetting KDH&E			EPA, Kansas City, KS		0.2 ppm PCB
Silage #2	"	"	"			"	"	
Barrel Oil #1	"	"	"			FDA, Kansas City, MO	8/20/79	63% PCB
Barrel Oil #2	"	"	"			"	"	85 ppm PCB
Barrel Oil #3	"	"	"			"	"	6% PCB
Barrel Oil #4	"	"	"			"	"	57% PCB
Barrel Oil #5	"	"	"			"	"	59% PCB
Barrel Oil #6	"	"	"			"	"	60% PCB
Barrel Oil #7 (Empty)	"	"	"			"	"	54% PCB

SAMPLE	SOURCE OF SAMPLE	DATE COLLECTED	COLLECTED BY	DATE SENT TO LAB	DATE RECEIVED BY LAB	ANALYTICAL LABORATORY	DATE ANALYSIS REPORTED	ANALYTICAL RESULTS
Barrel Oil #8 (Empty)	Busenitz Farm Newton, Kansas	8/15/79	Dwayne Muetting KDH&E			FDA, Kansas City, MO	8/20/79	31% PCB
Soil - 0 ft. from West Backrubber	"	"	"			EPA, Kansas City, KS	8/28/79	1,000 ppm PCB
Soil - 5 ft. from West Backrubber	"	"	"			"	"	190 ppm PCB
Soil - 10 ft. from West Backrubber	"	"	"			"	"	190 ppm PCB
Soil - 0 ft. from East Backrubber	"	"	"			"	"	390 ppm PCB
Soil - 5 ft. from East Backrubber	"	"	"			"	"	110 ppm PCB
Soil - 10 ft. from East Backrubber	"	"	"			"	"	720 ppm PCB
Well H_2O #1	"	"	"			"	"	0
Well H_2O #2	"	"	"			"	"	0
Hog Pen H_2O Runoff	"	"	"			"	"	0
Soil from Cattle Pen, West Fence	"	"	"			"	"	34 ppm PCB
Soil from Cattle Pen, East Fence	"	"	"			"	"	20 ppm PCB
#1 Random Soil from Hog Pen	"	"	"			"	"	0.3 ppm PCB
#2 Random Soil from Hog Pen	"	"	"			"	"	0.06 ppm PCB

SAMPLE	SOURCE OF SAMPLE	DATE COLLECTED	COLLECTED BY	DATE SENT TO LAB	DATE RECEIVED BY LAB	ANALYTICAL LABORATORY	DATE ANALYSIS REPORTED	ANALYTICAL RESULTS
16 Hog Fat (Slaughtered Hogs)	Rodeo Meats Arkansas City, Kansas	8/15/79	KDH&E, Topeka, Kansas			KDH&E, Topeka, Kansas	8/22/79	Less than 0.5 ppm PCB
Back Fat #1 (Live Hogs)	Busenitz Farm Newton, Kansas	8/15/79	Dr. Cyril Brown, Newton, Kansas	8/15/79	8/20/79	Nat. Vet. Services Lab, APHIS, Ames, Iowa	8/24/79	Less than 0.5 ppm PCB
Back Fat #2 (Live Hogs)	"	"	"	"	"	"	"	"
Back Fat #3 (Live Hogs)	"	"	"	"	"	"	"	"
Back Fat #4 (Live Hogs)	"	"	"	"	"	"	"	"
Back Fat #5 (Live Hogs)	"	"	"	"	"	"	"	"
Back Fat #6 (Live Hogs)	"	"	"	"	"	"	"	"
Back Fat #7 (Live Hogs)	"	"	"	"	"	"	"	"
Back Fat #8 (Live Hogs)	"	"	"	"	"	"	"	"
Back Fat #9 (Live Hogs)	"	"	"	"	"	"	"	"
Back Fat #10 (Live Hogs)	"	"	"	"	"	"	"	"
Back Fat #11 (Live Hogs)	"	"	"	"	"	"	"	"
Oil #1	Art Sattler Repair and Salvage, Walton, KS	8/16/79	KDH&E	8/16/79	8/16/79	KDH&E Topeka, KS	8/20/79	0 ppm PCB
Oil #2	"	"	"	"	"	"	"	3 ppm PCB

SAMPLE	SOURCE OF SAMPLE	DATE COLLECTED	COLLECTED BY	DATE SENT TO LAB	DATE RECEIVED BY LAB	ANALYTICAL LABORATORY	DATE ANALYSIS REPORTED	ANALYTICAL RESULTS
Surface Soil #1 (PCB Cattle Pen)	Pawnee Valley Feedlot, Hanston, Kansas		KDH&E, Topeka, Kansas			KDH&E and EPA, Kansas City, Kansas	8/28/79	2.1 ppm PCB
Surface Soil #2 (PCB Cattle Pen)	"		"			"	"	2.7 ppm PCB
Surface Soil #3 (PCB Cattle Pen)	"		"			"	"	4.3 ppm PCB
Subsurface Soil #1 (PCB Cattle Pen)	"		"			"	"	None
Subsurface Soil #2 (PCB Cattle Pen)	"		"			"		
Subsurface Soil #3 (PCB Cattle Pen)	"		"			"		
Random Soil #1 (Cattle Pen)	"		"			"		
Random Soil #2 (Cattle Pen)	"		"			"		
Feeder Pig Fat #1	Busenitz Farm Newton, Kansas	8/25/79	KDH&E	8/25/79	8/25/79	Nat. Vet. Services Lab APHIS, Ames, Iowa	8/31/79	3.2 ppm PCB
Feeder Pig Fat #2	"	"	"	"	"	"	"	<0.5 ppm PCB
Feeder Pig Fat #3	"	"	"	"	"	"	9/5/79	<0.5 ppm PCB
Feeder Pig Fat #4	"	"	"	"	"	"	"	1.0 ppm PCB

SAMPLE	SOURCE OF SAMPLE	DATE COLLECTED	COLLECTED BY	DATE SENT TO LAB	DATE RECEIVED BY LAB	ANALYTICAL LABORATORY	DATE ANALYSIS REPORTED	ANALYTICAL RESULTS
Feeder Pig Fat #5	Busenitz Farm Newton, KS	8/25/79	KDH&E	8/25/79	8/25/79	Nat. Vet. Services Lab APHIS, Ames, Iowa	9/5/79	Insufficient Sample
Feeder Pig Fat #6	"	"	"	"	"	"	8/31/79	2.6 ppm PCB
Feeder Pig Fat #7	"	"	"	"	"	"	9/5/79	4.0 ppm PCB
Feeder Pig Fat #8	"	"	"	"	"	"	8/31/79	2.3 ppm PCB
Feeder Pig Fat #9	"	"	"	"	"	"	"	2.0 ppm PCB
Sow Fat #1	"	"	"	"	"	"	9/5/79	3.4 ppm PCB
Sow Fat #2	"	"	"	"	"	"	"	1.4 ppm PCB
Sow Fat #3	"	"	"	"	"	"	"	4.0 ppm PCB
Sow Fat #4	"	"	"	"	"	"	"	1.3 ppm PCB
Sow Fat #5	"	"	"	"	"	"	"	4.0 ppm PCB
Sow Fat #6	"	"	"	"	"	"	8/31/79	9.0 ppm PCB
Sow Fat #7	"	"	"	"	"	"	"	2.6 ppm PCB
Sow Fat #8	"	"	"	"	"	"	"	3.0 ppm PCB
Sow Fat #9	"	"	"	"	"	"	9/5/79	17 ppm PCB
Sow Fat #10	"	"	"	"	"	"	"	13 ppm PCB
Sow Fat #11	"	"	"	"	"	"	"	3.0 ppm PCB
Sow Fat #12	"	"	"	"	"	"	"	11 ppm PCB
Boar Fat #1	"	"	"	"	"	"	"	Insufficient Sample
Dog Food	Carnation Co. St. Joseph, MO		FDA			FDA, Kansas City, MO		5 ppm PCB

SAMPLE	SOURCE OF SAMPLE	DATE COLLECTED	COLLECTED BY	DATE SENT TO LAB	DATE RECEIVED BY LAB	ANALYTICAL LABORATORY	DATE ANALYSIS REPORTED	ANALYTICAL RESULTS
Freezer Beef	Busenitz Neighbor #1 Newton, KS	8/23/79	KDH&E	8/23/79	8/23/79	Nat. Vet. Services Lab, APHIS, Ames, Iowa	8/29/79	1300 ppm PCB
Freezer Beef	Busenitz Neighbor #2 Newton, KS	"	"	"	"	"		
Freezer Beef	Busenitz Neighbor #3 Newton, KS	"	"	"	"	"		
Freezer Beef	Busenitz Neighbor #4 Newton, KS	"	"	"	"	"		
Soil #1 West Oiler 0-3 inch depth	Cattle Pen Busenitz Farm Newton, KS	8/30/79	KDH&E	8/30/79	8/30/79	EPA, Kansas City, KS		33 ppm PCB
Soil #2 West Oiler 3-6 inch depth	"	"	"	"	"	"		34 ppm PCB
Soil #3 West Oiler 6-12 inch depth	"	"	"	"	"	"		.98 ppm PCB
Soil #4 East Side of Pen - 0-3 - inch depth	"	"	"	"	"	"		11 ppm PCB
Soil #5 East Side of Pen - 3-6 inch depth	"	"	"	"	"	"		2.1 ppm PCB
Soil #6 East Side of Pen - 6-12 inch depth	"	"	"	"	"	"		.12 ppm PCB

SAMPLE	SOURCE OF SAMPLE	DATE COLLECTED	COLLECTED BY	DATE SENT TO LAB	DATE RECEIVED BY LAB	ANALYTICAL LABORATORY	DATE ANALYSIS REPORTED	ANALYTICAL RESULTS
Steer #1 Tail Fat	Pawnee Valley Feedlot, Hanston, Kansas	8/25/79	KDH&E	8/25/79	8/25/79	Nat. Vet. Services Lab, APHIS, Ames Iowa	9/14/79	150 ppm PCB's
Steer #2	"	"	"	"	"	"	"	800
Steer #3	"	"	"	"	"	"	"	300
Steer #4	"	"	"	"	"	"	"	300
Steer #5	"	"	"	"	"	"	"	360
Steer #6	"	"	"	"	"	"	"	930
Steer #7	"	"	"	"	"	"	"	1,100
Steer #8	"	"	"	"	"	"	"	230
Steer #9	"	"	"	"	"	"	"	310
Steer #10	"	"	"	"	"	"	"	130
Steer #11	"	"	"	"	"	"	"	810
Steer #12	"	"	"	"	"	"	"	170
Steer #13	"	"	"	"	"	"	"	240
Steer #14	"	"	"	"	"	"	"	380
Steer #15	"	"	"	"	"	"	"	470
Steer #16	"	"	"	"	"	"	"	1,500
Steer #17	"	"	"	"	"	"	"	320
Steer #18	"	"	"	"	"	"	"	830
Steer #19	"	"	"	"	"	"	"	590
Steer #20	"	"	"	"	"	"	"	410
Steer #21	"	"	"	"	"	"	"	300
Steer #22	"	"	"	"	"	"	"	510
Steer #23	"	"	"	"	"	"	"	700

SAMPLE	SOURCE OF SAMPLE	DATE COLLECTED	COLLECTED BY	DATE SENT TO LAB	DATE RECEIVED BY LAB	ANALYTICAL LABORATORY	DATE ANALYSIS REPORTED	ANALYTICAL RESULTS
Steer #24	"	"	"	"	"	"	"	630 ppm PCB's
Steer #25	"	"	"	"	"	"	"	740
Steer #26	"	"	"	"	"	"	"	310
Steer #27	"	"	"	"	"	"	"	600
Steer #28	"	"	"	"	"	"	"	100
Steer #29	"	"	"	"	"	"	"	400
Steer #30	"	"	"	"	"	"	"	460
Steer #31	"	"	"	"	"	"	"	950
Steer #32	"	"	"	"	"	"	"	450
Steer #33	"	"	"	"	"	"	"	370
Steer #34	"	"	"	"	"	"	"	750
Steer #35	"	"	"	"	"	"	"	260
Steer #36	"	"	"	"	"	"	"	510
Steer #37	"	"	"	"	"	"	"	470
Steer #38	"	"	"	"	"	"	"	80
Steer #39	"	"	"	"	"	"	"	600
Steer #40	"	"	"	"	"	"	"	160
Steer #41	"	"	"	"	"	"	"	390
Steer #42	"	"	"	"	"	"	"	2,200
Steer #43	"	"	"	"	"	"	"	100
Steer #44	"	"	"	"	"	"	"	570
Steer #45	"	"	"	"	"	"	"	80
Steer #46	"	"	"	"	"	"	"	340
Steer #47	"	"	"	"	"	"	"	560
Steer #48	"	"	"	"	"	"	"	240

SAMPLE	SOURCE OF SAMPLE	DATE COLLECTED	COLLECTED BY	DATE SENT TO LAB	DATE RECEIVED BY LAB	ANALYTICAL LABORATORY	DATE ANALYSIS REPORTED	ANALYTICAL RESULTS
Steer #49	"	"	"	"	"	"	"	590 ppm PCB's
Steer #50	"	"	"	"	"	"	"	520
Steer #51	"	"	"	"	"	"	"	160
Steer #52	"	"	"	"	"	"	"	120
Steer #53	"	"	"	"	"	"	"	460
Steer #54	"	"	"	"	"	"	"	410
Steer #55	"	"	"	"	"	"	"	300
Steer #56	"	"	"	"	"	"	"	250
Steer #57	"	"	"	"	"	"	"	430
Steer #58	"	"	"	"	"	"	"	220
Steer #59	"	"	"	"	"	"	"	140
Steer #60	"	"	"	"	"	"	"	800
Steer #61	"	"	"	"	"	"	"	620
Steer #62	"	"	"	"	"	"	"	310
Steer #63	"	"	"	"	"	"	"	800
Steer #64	"	"	"	"	"	"	"	100
Steer #65	"	"	"	"	"	"	"	610
Steer #66	"	"	"	"	"	"	"	150
Steer #67	"	"	"	"	"	"	"	230
Steer #68	"	"	"	"	"	"	"	810
Steer #69	"	"	"	"	"	"	"	550
Steer #70	"	"	"	"	"	"	"	930
Steer #71	"	"	"	"	"	"	"	260 (Died - Buried at Feedlot)
Steer #72	"	"	"	"	"	"	"	670

SAMPLE	SOURCE OF SAMPLE	DATE COLLECTED	COLLECTED BY	DATE SENT TO LAB	DATE RECEIVED BY LAB	ANALYTICAL LABORATORY	DATE ANALYSIS REPORTED	ANALYTICAL RESULTS
Steer #73	"	"	"	"	"	"	"	1,300 ppm PCB's
Steer #74	"	"	"	"	"	"	"	190
Steer #75	"	"	"	"	"	"	"	600
Steer #76	"	"	"	"	"	"	"	490
Steer #77	"	"	"	"	"	"	"	70
Steer #78	"	"	"	"	"	"	"	320
Steer #79	"	"	"	"	"	"	"	350
Steer #80	"	"	"	"	"	"	"	110
Steer #81	"	"	"	"	"	"	"	290
Steer #82	"	"	"	"	"	"	"	560
Steer #83	"	"	"	"	"	"	"	990
Steer #84	"	"	"	"	"	"	"	950
Steer #85	"	"	"	"	"	"	"	360
Steer #86	"	"	"	"	"	"	"	1,000
Steer #87	"	"	"	"	"	"	"	440
Steer #88	"	"	"	"	"	"	"	300
Steer #89	"	"	"	"	"	"	"	520
Steer #90	"	"	"	"	"	"	"	270
Steer #91	"	"	"	"	"	"	"	310
Steer #92	"	"	"	"	"	"	"	830
Steer #93	"	"	"	"	"	"	"	790
Steer #94	"	"	"	"	"	"	"	190
Steer #95	"	"	"	"	"	"	"	150
Steer #96	"	"	"	"	"	"	"	850

SAMPLE	SOURCE OF SAMPLE	DATE COLLECTED	COLLECTED BY	DATE SENT TO LAB	DATE RECEIVED BY LAB	ANALYTICAL LABORATORY	DATE ANALYSIS REPORTED	ANALYTICAL RESULTS
Steer #97	"	"	"	"	"	"	"	250 ppm PCB's
Steer #98	"	"	"	"	"	"	"	210
Steer #99	"	"	"	"	"	"	"	400
Steer #100	"	"	"	"	"	"	"	200
Steer #101	"	"	"	"	"	"	"	290
Steer #102	"	"	"	"	"	"	"	140
Steer #103	"	"	"	"	"	"	"	80
Steer #104	"	"	"	"	"	"	"	630
Steer #105	"	"	"	"	"	"	"	620
Steer #106	"	"	"	"	"	"	"	170
Steer #107	"	"	"	"	"	"	"	500
Steer #108	"	"	"	"	"	"	"	120
Steer #109	"	"	"	"	"	"	"	480
Steer #110	"	"	"	"	"	"	"	490
Steer #111	"	"	"	"	"	"	"	240
Steer #112	"	"	"	"	"	"	"	440
Steer #113	"	"	"	"	"	"		

PCB's Liquid and Barrel Storage and Disposal

Problem: Disposal of barrels containing from 85 ppm to 63 percent PCB liquids, one empty barrel, and two back-rub devices.

Background: The barrels are the property of Mr. Don Busnitz, a farmer in Newton, Kansas. The barrels and PCB liquids are in a machine shed on his farm. Mr. Busnitz has limited resources. The barrels must be handled under the requirements of 40 CFR Part 761, Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions, FR May 31, 1979, Vol. 44, No. 106. At the meeting called by the Kansas Department of Health and Environment (KDHE), a number of questions concerning the disposition of the barrels was posed. The following section attempts to answer these questions.

Discussion:

1. The oil is not impounded. Can EPA do so? Answer, no. The controlling regulations place restrictions on use, manufacturing, processing, and distribution and disposition of PCBs, PCB Containers, PCB Articles, PCB Items, etc. The regulations provide for proper storage and disposition of the defined material without controls over the material unless it is improperly stored or disposed. The barrels and the oil are the property of Mr. Busnitz and can be stored properly at a reasonable cost to him.

2. Where could the oil be impounded? The only ability to impound the material would result from a court action to enjoin Mr. Busnitz from removal or other disposition. This would probably require an allegation that he would improperly dispose of it if the court restraint were not granted.

3. Could the KIES site be approved and used to impound the liquid waste oil? As long as the Annex III, Section 761.42, requirements on Storage for Disposal of PCB's and PCB Containers are met, KIES or any other location meeting the requirements could be utilized. If Mr. Busnitz chooses to meet these requirements, then he can continue to store them until a disposal site can be located and he can arrange for proper disposal.

4. Could EPA explore the possibility of disposal in the Mobile Rotary Kiln Incinerator scheduled to burn the dioxin wastes at Verona, Missouri, in 1981? We could explore the possibility, however, we anticipate other incinerators will be available for this purpose prior to that time and the addition of this waste to that already complicated and difficult incineration procedure would be a significant burden.

5. Will EPA pay for storage and/or disposal of the barrels and/or liquids? Answer, no. The Agency does not have funds available for such storage or disposal. We can offer technical assistance and work with Mr. Busnitz and KDHE to minimize the cost of storage and disposal.

The alternatives for disposition of the barrels and PCB liquids appear limited to incineration in an approved facility. None are available at the present time although several applications are under review in Regional Offices around the nation. Storage of the barrels and PCB liquids is the only short-term alternative. Storage can be accomplished by contracting with a proper facility (KIES or an electric utility) or construction of a proper facility on Mr. Busnitz's farm.

Recommendations:

Storage of the barrels and back-rub devices containing PCBs must comply with Annex III, Sec. 761.42 Storage for Disposal. If the PCB liquids contain PCBs between the concentrations of 50 ppm and 500 ppm then they can be disposed of in an approved chemical waste landfill (sec. 761.10(a)). If the PCB liquids contain greater than 500 ppm of PCBs then they must be disposed of in an approved incinerator (Sec. 761.10(a)). Assuming that we have barrels in each category, Mr. Busnitz should contract for disposal of the barrel containing PCBs at a concentration of less than 500 ppm. He should construct a proper storage facility for storage of the barrel(s) containing PCBs at a concentration of greater than 500 ppm until an approved incinerator is available. Storage of the barrels by Mr. Busnitz will have to meet the requirements of Annex III, Sec. 761.42 Storage for Disposal, however, locations meeting the requirements of this Annex are available in Kansas (Kansas Industrial Environmental Services, etc.)

When an approved incinerator is available, then Mr. Busnitz should contract with them or through his storage contractor for disposal of the barrels containing PCBs at a concentration of 500 ppm or greater.

PCB's Cattle and Soil Disposal

Problem: Disposal of 113 PCB contaminated cattle, dead cattle and soil from the area of the back-rub device, and possibly other contaminated soil or inert materials.

Background: The contaminated cattle are the property of Mr. Don Busnitz, a farmer in Newton, Kansas. The cattle are currently located at Pawnee Valley Feedlot near Hanston, Kansas. Mr. Busnitz has limited resources. The cattle must be handled under the requirements of 40 CFR Part 761, Polychlorinated Biphenyls (PCBS) Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions, FR May 31, 1979, Vol. 44, No. 106. At the meeting called by the Kansas Department of Health and Environment (KDHE), a number of questions concerning the disposition of the cattle were raised. The following section attempts to answer these questions:

Discussion:
Annex II of 40 CFR Part 761 provides the requirements for Chemical Waste Landfills which control the disposal of PCB Articles, PCB Items, PCB Containers, and PCB liquids contaminated between 50 and 500 ppm concentrations. Annex II requires that the Regional Administrator approve such facilities and that the facilities meet the requirements of the regulation. A waiver provision (Sec. 761.41(c)(4)) allows consideration and approval of waivers of the requirements where unreasonable risk of injury to health or the environment from PCBs will not result. Annex II requires the following considerations:

(1) Soils,
(2) Synthetic membrane liners,
(3) hydrogologic conditions,
(4) Flood protection,
(5) Topography,
(6) Monitoring systems - Surface water, groundwater monitoring wells and water analysis,
(7) Leachate collection,
(8) Chemical waste landfill operations - An operation plan, a prohibition on ignitable waste disposal, and records, and
(9) Supporting facilities - Security fence, roads and absence of safety problems or spills

Annex II calls for the development of an initial report by the owner or operator of the facility, submission of other information required by the Regional Administrator, and approval by the Regional Administrator with additional requirements if necessary. The approval shall further designate the persons who own and operate the landfill.

Chemical Waste Landfills approved for disposal of PCBs and PCB Items (such as the contaminated cattle and soil) are listed on the attached pages. Only one application has been received by Region VII, that of the Kansas Industrial Environmental Services, Inc., located near

Furley, Kansas. This facility has received the tentative approval of the KDHE and is under final review by the Regional Office. The public notice comment period and possible public hearing will be necessary before final action on their application can be completed.

Thus, three alternatives are apparent:

(1) Contract transportation and disposal at an approved chemical waste landfill (nearest location is Beatty, Nevada, or Livingston, Alabama), or

(2) Continue to feed the cattle until the KIES application is acted upon and if approved request them to take the wastes, or

(3) Develop a one-time use site near the feedlot.

The questions posed by the KDHE and the answers are as follows:

(1) What are EPA's capabilities in meeting the requirements? EPA must review an application from an owner and operator and approve or disapprove the site.

(2) Can the Regional Administrator grant an exemption or waiver to Annex II? Where evidence or other information indicates that the waiver is warranted and will not result in risk to health or the environment.

(3) How fast can EPA act? The Regional Office can assist to a limited degree in the perfection of an application developed by the owner and operator of a site. In addition, the Regional Administrator, at her discretion, may waive the public notice, comment and public hearing recommendations.

Recommendations:

Given the location of the feedlot in the semi-arid area in Southwestern Kansas, where the depth to groundwater can be a considerable distance, a facility (existing landfill or new site) should be able to be located which would provide excellent protection of the health and environment from PCBs. If such a site is located, then the KDHE will have to issue a permit for a landfill if a new site or a special waste disposal approval to an existing site. The Regional Office will cooperate with the KDHE in the determination of the reasonable considerations from Annex II which must be required. Such a site should be able to meet the soils and flood protection requirements with a minimum of earth work. The

site should be selected to meet the hydrogeologic and topographic requirements. The need for monitoring (surface and groundwater) and leachate collection deserve careful scrutiny due to their cost and natural conditions. Development of the operation plan will have to be accomplished by the owner and operator. The supporting facilities and marking of the facility will have to be examined on the actual site. The burial of cattle with the strong possibility of gas generation must be considered and the long-term maintenance and monitoring of the site must be considered as additional requirements. If such a cooperative activity were undertaken by September 1, 1979, the approval by the Regional Office could be completed in 30 days providing the process proceeded smoothly, the site was properly located, and the discretionary actions are effected.

APPROVED PCB
DISPOSAL SITES

HAVE ANY DISPOSAL SITES BEEN APPROVED FOR PCBs? WHERE ARE THEY?

Yes, eight chemical waste landfill sites have been approved. No incinerator sites have yet been approved, but three sites are currently being considered.

The landfill locations are as follows:

1. Facility: General Electric Co., Silicone Products Division. Facility Address: 260 Hudson River Rd., Waterford, New York 12189. Facility Telephone Number (518) 237-3330. Type of Facility Approved: Incinerator. Type of PCB Waste Handled: Approval allows G.E. to incinerate only those PCB wastes which are generated on site, i.e., G. E. can not accept PCBs for incineration from any other company or any other G.E. facility. Expiration Date of Approval: September 1, 1981. EPA Regional Office Contact: Wayne Pierre. EPA Telephone Number: (212) 264-0505.

2. Facility: Newco Chemical Waste Systems, Inc. Facility Address: 4526 Royal Avenue, Niagara Falls, New York 14330. Facility Telephone Number: (716) 278-1811. Type of Facility Approved: Chemical Waste Landfill. Type of PCB Waste Handled: Capacitors (small and large); Properly drained transformers: Contaminated soil, dirt, rags, and other debris; Dredge spoils; Municipal sludges; and Properly drained containers (drums). Expirationd Date of Approval: August 18, 1981. EPA Regional Office Contact: Wayne Pierre. EPA Telephone Number: (212) 264-0505.

3. Facility: SCA Chemical Services, Inc. Facility Address: 1550 Balmer Rd., Model City, New York 14107. Facility Telephone Number: (716) 754-8231. Type of Facility Approved: Chemical Waste Landfill. Type of PCB Waste Handled: Capacitors (small and large); Properly drained transformers; Contaminated soil, dirt, rags, and other debris; Dredge spoils; Municipal sludges; and Properly drained containers (drums). Expiration Date of Approval: October 2, 1981.

4. Facility: Chemical Waste Management Facility Address: 2131 Kingston Court, S.E., Suite 112, Marrietta, GA 30067 Facility Telephone Number: (404) 952-0444. (Site located in Livingstone, Alabama) Type of Facility Approved:
Chemical Waste Landfill. Type of PCB Waste Handled: Capacitors (small and large): Properly drained transformers; Contaminated soils, dirt, rags, and other debris; Dredge spoils; Municipal sludges; and Properly drained containers (drums). Expiration Date of Approval: Open-ended. EPA Regional Office Contact: Mr. James Scarbrough. EPA Telephone Number (404) 881-3016.

5. Facility: Casmalia Disposal. Facility Address: 539 Ysidro Rd., P.O. Box 5275, Santa Barbara, California 93108-main office (site located near Casmalia in Santa Barbara County). Facility Telephone Number: (805) 969-4703. Type of Facility Approved:

Chemical Waste Landfill. Type of PCB Waste Handled: Capacitors (small and large): Properly drained transformers; Contaminated soil, dirt, rags and other debris; Dredge spoils; Muncipal sludges; and Properly drained containers (drums). Expiration Date of Approval: Open-ended. EPA Regional Office Contact: Raymond Seid, EPA Telephone Number: (414) 556-3450.

6. Facility: Nuclear Engineering Co., Inc. Facility Address: 9200 Shelbyville Rd., Suite 526, P.O. Box 7246, Louisville, Kentucky 40207, main office (site located near Beatty, Nev. in Nye County). Facility Telephone Number: (502) 426-7160. Type of Facility Approved: Chemical Waste Landfill. Type of PCB Waste Handled: Capacitors (small and large); Properly drained transformers; Contaminated soil, dirt, rags and other debris; Dredge spoils; Municipal sludges; and Properly drained containers (drums). Expiration Date of Approval: Open-ended. EPA Regional Office Contact: Raymond Seid. EPA Telephone Number: (415) 556-3450.

7. Facility: Chem-Nuclear Systems, Inc. Facility Address: P.O. Box 1269, Portland, Oregon 97205 main office (Site located in Arlington, Oregon). Facility Telephone Number: (503) 223-1912. Type of facility Approved: Chemical Waste Landfill. Type of PCB Waste Handled: Capacitors (small and large): Properly drained transformers; Contaminated soil, dirt, rags, asphalt, and other debris; and Properly drained containers (drums). Expiraation Date of Approval: January 1, 1980. EPA Regional Office Contact: Mr. Roger Fuentes. EPA Telephone Number: (206) 442-1260.

8. Facility: Wes-Con., Inc. Facility Address: P. O. Box 393 Grand View, Idaho 83624.
. Facility Telephone Number: (208) 834-83624. Type of Facility Approved: Disposal in Missile Silos. Type of PCB Waste Handled: Capacitors (small and large); Properly drained transformers; Contaminated soil, dirt, rags, asphalt, and other debris; and Properly drained containers (drums). Expiration Date of Approval: January 1, 1980. EPA Regional Office Contact: Mr. Rogers Fuentes. EPA Telephone Number: (206) 442-1260.

CAN A COMMON CARRIER (E.G., TRUCK LINE) TRANSPORT PCBs FOR A COMPANY TO A DISPOSAL FACILITY IF THE TRANSPORT IS NOT WITHIN THE INDUSTRY?

If the common carrier complies with the Hazardous Materials requirements set by the Department of Transportation, and the vehicle is properly and visibly labeled on its exterior with a PCB label it can be used to transport PCBs to a disposal site.

PCB CONTAMINATED CATTLE AND SOIL TRANSPORTATION, STORAGE AND DISPOSAL COST ESTIMATES

FIRM NAME	LOCATION OF SITE	DISPOSAL COST ESTIMATE	TRANSPORTATION COST ESTIMATE	LIME OR MISCELLANEOUS COSTS	ESTIMATED TOTAL COSTS EXCLUDING LABOR FOR PREPARATION
Newco Chemical Waste Systems, Inc.	Niagara Falls, New York	$30,000 ($60/drum)	$12,150 (1,350 miles) ($2.25/load-mile) (4 trucks)	-	$42,150*
SCA Chemical Services, Inc.	Model City, New York	$37,300 ($11/ft^3)	$12,150 (1,350 miles) ($2.25/load-mile) (4 trucks)	-	$49,450 (Cattle could be shipped to site)
Chemical Waste Management	Livingston, Alabama	$31,000 ($8.16/ft^3)	$9,000 (1,000 miles) ($2.24/load-mile) (4 trucks)	$100	$40,100*
Casmalia Disposal	Casmalia, California	$12,500 ($150/ton)	$11,700 (1,300 miles) ($2.24/load-mile) (4 trucks)	-	$24,200*

* Containers, about 500, are required also.

FIRM NAME	LOCATION OF SITE	DISPOSAL COST ESTIMATE	TRANSPORTATION COST ESTIMATE	LIME OR MISCELLANEOUS COSTS	ESTIMATED TOTAL COSTS EXCLUDING LABOR FOR PREPARATION
Nuclear Engineering Company	Beatty, Nevada	$15,000	$10,400 (~1,300 miles) ($2.00/load-mile) (4 trucks)	$100	$25,500*
Chem-Nuclear Systems, Inc.	Arlington, Oregon	- (They cannot accept PCB wastes from as far east as Kansas.)	-		
Wes-Con, Inc.	Grand View, Idaho	$10,000 ($.06/lb. or $120/ton)	** ~$10,000 (~1,150 miles) (4 trucks)		$10,000*** or ~$20,000 (Cattle could be shiped live to the site.)

* Containers, about 500, are required also.

** Cattle can be transported live to the site in cattle semi-trailers.

*** Plus transport (live) costs, plus clearance by the governor of Idaho is required.

USDA LETTER

UNITED STATES DEPARTMENT OF AGRICULTURE
SCIENCE AND EDUCATION ADMINISTRATION

AGRICULTURAL RESEARCH
NORTHEASTERN REGION
BELTSVILLE AGRICULTURAL RESEARCH CENTER
BELTSVILLE, MARYLAND 20705

August 23, 1979

Dr. Wolfgang Brandner
Toxic Substances & Pesticide Branch
Environmental Protection Agency, Region 7
324 East 11th
Kansas City, Missouri 64106

Dear Dr. Brandner:

This is to confirm our recent phone conversations concerning the PCB contaminated cattle. I am enclosing copies of the references cited in this letter so that my assumptions and conclusions can be checked if desired.

Information on the half-life of PCB in cattle is limited to lactating dairy cattle. In our studies with 9 lactating cows (J. Agr. Food Chem. 21:117, 1973) the average half-life was 70 days. The half-life was measured during the first 60 days after exposure ended. We followed ther residue level in 2 of these cows for a year (Environ. Health Perspect. 23:43, 1978) The half-life was 85 days in both milk fat and body fat.

It would require about 9 to 10 half-lives for an animal with 800 - 1000 ppm residue in fat to decline to an assumed 1.5 ppm tolerance. Thus, even using the values for lactating cows, it would require 2 to 3 years for the animals to be marketable.

However, lactation is the major route of PCB excretion from animals. Therefore, the animals with which you are concerned can be expected to have half-lives that are much longer than half-lives for lactating cows. Regardless of what this precise half-life is, it is reasonable to assume that these animals would not be marketable within any realistic time.

In general, the concentration of halogenated hydrocarbons, including PCB, is quite uniform throughout the fat of the animal body. For any given tissue the concentration in the whole tissue is inversely proportional to the fat content. This is illustrated in some of the enclosed publications (Environ. Health Perspect. 23:43, 1978 and J. Animal Sci. 45:1160, 1977). Therefore, one can calculate the approximate PCB concentration in the entire animal body by making a reasonable assumption about the amount of fat in the animal body.

The research on animal body composition was reviewed in 1955 (J. Dairy Sci. 38:1344, 1955). The composition data was obtained from analysis of the total animal carcass after the gastro-intestinal tract contents

were removed. The average percent fat of 139 beef animals was 16%. As you can well understand, the percent fat in an individual animal can vary a great deal depending upon the age and how well the animal was fed. I have discussed the condition of the animals in Kansas with Dr. Anthony of Kansas State University. We concluded that there is no basis for using an assumption about fat content other than average (16%).

I calculated the concentration of PCB in the total body for the two animals at the extremes in concentration. I am using the metric system ease of calculation. The average animal weighs about 400 kg. The GI-tract contents, water and undigested feed, accounts for about 10% of the live animal weight. Thus, the empty body will weigh about 360 kg. The total fat in the body is about 58 kg. The amount of PCB in animal #10 with 130 ppm in fat is approximately 7500 milligram (58 kg x 130 mg/kg). The concentration in the total animal will be 18.8 ppm (7500 mg/400 kg). The analogus calculation the animal with the highest residue (#7 1100 ppm) would give 158 ppm.

An animal containing 50 ppm in a total body would contain approximately 20,000 mg of PCB (50 mg/kg x 400 kg). This is equivalent to approximately 345 ppm in the fat (20,000 mg/58 kg).

From these calculations it is apparent that the average of the herd, assuming that the 15 animals sampled were representative, is somewhat above the 50 ppm limit. About half of the animals fall within the limit while several animals are close and a few are well above it.

Since my discussions with you I have done a little more digging concerning the half-life of chlorinated hydrocarbons non-lactating animals. I did find one study in which heptaclor residues were followed for 530 days on a presumably clean diet (J. Animal Sci. 33:177, 1971). The results were somewhat erratic. One group of animals actually increased in residue concentration, while 3 of the groups declined significantly. An important factor in the decline appears to be the great increase in body weight that occurred. This, of course, would dilute the residue. I also obtained some data on Michigan animals exposed to PBB. These are condemned animals that are being held in a clean environment pending burial or incineration. While 12 of the 17 animals did show declines in residue concentration, some animals showed no decline or an increase even after one year.

I conclude that there is a chance that some of the animals 350-500 ppm range could drop below 350 ppm in 6 months to a year if the animals were fed well enough to maintain or increase weight. The higher level animals with residues above 500 ppm do not show promise of dropping below 350-ppm in a reasonable length of time.

There is a final matter that is of some concern if the farmer decides to return to livestock production. The farm environment may be contaminated at a level that could lead to contamination of subsequent animals brought to the farm. I have had extensive experience with a number of Michigan farms that have residual contamination of polybrominated biphenyl. From our experience, I conclude that a dirt lot with soil concentrations of PCB above 5 ppm could pose the possibility that animals raised on these lots would pick up enough PCB to produce residues that would exceed regulatory

guidelines (assuming 1.5 ppm). Hogs are much more serious consideration than cattle. From our experience it is very likely that hogs exposed to dirt lots above 1 ppm could have unacceptable PCB residues. Therefore, I feel that it is important that a good environmental sampling program be carried out on this farm before attempting to return to livestock production. It could also be important to sample those areas where the waste oil had been used and could have been introduced into the feed or the feed-handling systems.

I hope this letter has answered most of your questions and that it will help you in the difficult decesions ahead. Do not hesitate to call me if you have further questions.

Sincerely yours,

George F Fries

GEORGE F. FRIES, Animal Scientist
Pesticide Degradation Laboratory
Agricultural Environmental
Quality Institute

Enclosure

EPA-ARHM/RL
AUG 27 1979
Region VII

Changes in polyborminated biphenyl concentration in body of non-lactating cows held in a clean environment (Michigan Department of Agriculture data).

Animal number	Days in clean environment	Initial, ppb	Final, ppb
1	55	26	20
2	77	33	29
3	104	44	46
4	137	54	91
5	166	21	46
6	240	660	200
7	271	140	120
8	272	57	26
9	278	26	25
10	280	120	81
11	307	100	51
12	313	45	64
13	314	55	38
14	325	52	62
15	340	27	42
16	351	190	110
17	354	46	43

FDA Tolerance

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FM FDA/KAN-DO/J A ADAMSOM/DISTRICT DIRECTOR/HFR-7100
TO NR-1/KANSAS STATE DEPARTMENT OF HEALTH AND ENVIRONMENT/
ATTN: MELVILLE GRAY/DIR AND CHIEF ENG DIV OF ENVIRONMENT
BT

WE HAVE BEEN IN CONTACT WITH OUR HEADQUARTERS OFFICES REGARDING THE DISPOSITION OF SWINE AT THE BUSENITZ FARM. WE HAVE DETERMINED THAT USDA'S FOOD SAFETY AND QUALITY SERVICE HAS BEEN APPLYING FDA'S TOLERANCE FOR PCB RESIDUES IN POULTRY TO SWINE AND CATTLE TISSUE FOUND TO CONTAIN DETECTABLE PCB RESIDUES. CURRENTLY THE TOLERANCE FOR PCB'S IN POULTRY IS 3 PPM ON A FAT BASIS. FDA WOULD NOT OBJECT TO APPLYING THIS TOLERANCE TO SWINE STILL LOCATED AT THE BUSENITZ FARM.

WE HAVE BEEN ASSURED THAT USDA/FSQS WILL TAKE APPROPRIATE STEPS TO INSURE THAT SWINE OVER THE 3 PPM LEVEL IN PAT DO NOT ENTER FOOD CHANNELS. FSQS WILL ALSO NOTIFY FDA OF ANY FINDINGS IN THESE SWINE ABOVE THE 3 PPM LEVEL.

ACCORDINGLY, THE SWINE THAT HAVE ALREADY BEEN TESTED AND FOUND TO EXCEED THE 3 PPM LEVEL ARE NOT SUITABLE FOR USE AS HUMAN FOOD AND SHOULD NOT BE SO OFFERED. IF NECESSARY, THEY SHOULD BE DESTROYED AND DISPOSED OF IN A MANNER TO PREVENT SUCH USAGE.

FDA IS ALSO CONCERNED ABOUT RENDERING THE SWINE THAT HAVE BEEN EXPOSED TO PCB'S. SPECIAL PRECAUTIONS SHOULD BE TAKEN TO INSURE THAT THESE ANIMALS DO NOT INTRODUCE PCB CONTAMINATION INTO THE RENDERING PLANT OR THAT RENDERED BY-PRODUCTS DO NOT EXCEED FDA'S TOLERANCE OF 2 PPM FOR PCB'S IN ANIMAL FEED INGREDIENTS.
GR:240/JAA/MEC
BT

NNNN
050873 ACPT

FR Notice

40 CFR Part 761

[FRL 1325-1; OTS/62002(PCB/RR-2)]

Polychlorinated Biphenyls (PCB's); Disposal Requirements

AGENCY: Environmental Protection Agency (EPA).

ACTION: Immediately Effective Amendment to Final Rule Applicable to Chemical Waste landfill in Sedgwick County, Kansas.

SUMMARY: The final PCB regulation (44 FR 31514, May 31, 1979) requires that thirty days written notice be provided to applicable state and local jurisdictions before a PCB chemical waste landfill is first used for disposal of PCBs. The proposed amendment, which is being made immediately effective, allows the Regional Administrator to shorten the notice period to five days to allow expedited approval of one chemical waste landfill. The amendment is applicable solely to one facility in Sedgwick County, Kansas. Although the amendment is immediately effective, the Regional Administrator will not exercise her discretion under the amendment until an informal hearing is held on the amendment in Sedgwick County on September 17, 1979.

DATES: Written comments are being received by the Regional Office until the close of business on September 19, 1979. Pursuant to Section 6(d)(2)(B) of the Toxic Substances Control Act (TSCA), an informal hearing will be held by the EPA Regional Office in Sedgwick County, Kansas on September 17, 1979. Persons are being allowed to appear at the hearing without prior notification to the Regional Office. This notice is being published in a newspaper of general circulation in Sedgwick County.

ADDRESSES: Send comments to Dr. Kathleen Q. Camin, Regional Administrator, U.S. Environmental Protection Agency, 324 East 11th Street, Kansas City, Missouri 64106, Attn: Sedgwick County PCB Chemical Waste Landfill Application. Comments may also be submitted at the hearing on September 17, 1979. The hearing will be held on September 17, 1979 at 7:30 pm at the City Commission Chambers, City Hall, 455 North Main Street, Wichita, Kansas.

FOR FURTHER INFORMATION CONTACT: David Wagoner, Director, Air and Hazardous Materials Division, U.S. Environmental Protection Agency, 324 East 11th Street, Kansas City, Missouri 64106. Information may also be obtained by calling Mr. Wagoner at 816-374-5971.

SUPPLEMENTARY INFORMATION: On May 31, 1979, EPA published its final regulation for PCBs (44 FR 31514) pursuant to Section 6(e) of TSCA. The regulation establishes requirements for disposal facilities for PCBs. See § 761.10 (44 FR at 31545-48) and Annexes I and II (44 FR at 31551-55). Section 761.10(f)(1)(i) (44 FR at 31547) requires the operator of a disposal facility to give written notice to applicable state and local jurisdictions "at least thirty (30) days before a facility is first used for disposal of PCBs required by these regulations . . . ."

EPA has been engaged in the approval of PCB disposal facilities since 1978 under the present regulation and its predecessor (43 FR 7150, February 17, 1978). It has become apparent that the previously-mentioned thirty day notice requirement should be reduced in the case of the pending application of a chemical waste landfill in Sedgwick County, Kansas. Approximately one hundred head of cattle in the State of Kansas have been found to be contaminated with PCBs and have been condemned by the State. However, because of the PCB levels in the cattle when they are destroyed, they can only be disposed of in a chemical waste landfill approved for PCB disposal under EPA's regulations.[1] The only close landfill that would otherwise be suitable for such disposal has not yet been approved by EPA and under the present regulations cannot be approved until the county has received thirty days notice. If the State must wait 30 days to dispose of the cattle, serious injury to health or the environment may occur. Some of the condemned cattle have already died. Additional cattle may die. If these carcasses of the PCB-contaminated cattle are not properly disposed of, the carcasses may become a source of disease. In addition, the live PCB-contaminated cattle are producing waste which may also contain PCBs. Accordingly, EPA has determined that permitting the Regional Administrator to reduce the thirty day notice requirement to five days in the previously-discussed situation meets the criteria of Section 6(d)(2)(A)(i) of TSCA. A thirty day delay in disposal of the PCB-contaiminated cattle would cause an "unreasonable risk of serious or widespread injury to health or the environment" (Section 6(d)(2)(A)(i)(I)). Similarly, the decision to make the rule effective immediately for the Sedgwick County facility "is necessary to protect the public interest . . . " (Section 6(d)(2)(A)(i)(II)) by avoiding delay in disposal.[2] EPA did not anticipate a situation such as this when it included the thirty day notice provision.

Although the amendment is effective immediately, the Regional Administrator will not exercise her discretion to shorten the notice period until after completion of the informal hearing on the amendment in Sedgwick County on September 17, 1979 and the close of the comment period on September 19, 1979. If after the hearing and reviewing any written comments, EPA believes this amendment is inappropriate, the rule will be revoked.

EPA plans to grant interim approval to the Sedgwick County facility solely for disposal of the PCB-contaminated animals, waste and related contaminated items. Subsequently, EPA plans to hold a public comment period in the EPA Region for the full approval of the Sedgwick County facility.

September 14, 1979.

Steven D. Jellinek,

Assistant Administrator for Toxic Substances.

Pursuant to the Toxic Substances Control Act, 15 U.S.C. 2605 and pursuant to authority delegated in the Background section of the preamble to the Final PCB regulation (44 FR 31514, May 31, 1979), 40 CFR Part 761 is amended by adding a new (f)(1)(iii) to read as follows:

§ 761.10 disposal requirements.

* * * * *

(f)(1) . . .

(iii) The Regional Administrator may reduce the notice period required by § 761.10(f)(1)(i) from thirty days to a period of no less than five days in order to expedite interim approval of the chemical waste landfill located in Sedgwick County, Kansas.

[FR Doc. 79-29112 Filed 9-18-79; 8:45 am]

BILLING CODE 6560-01-M

[1] The PCB-Contaminated cattle are subject to TSCA because they are no longer being held "for use as a food . . ." under Section 3(2)(B)(vi).

[2] Written notice of the pending PCB chemical waste landfill application in Sedgwick County is deemed to have begun on the date when the written notice was delivered to the Board of Commissioners by the applicant for the PCB chemical waste landfill.

KANSAS INDUSTRIAL ENVIRONMENTAL SERVICES, Inc.

September 14, 1979

Board of County Commission
Sedgwick County, Kansas
525 North Main, Suite 320
Wichita, Kansas 67204

Re: Notification of Intent

Gentlemen:

At the request of the Kansas Department of Health and Environment, Topeka, Kansas, we have made application with the U.S. Environmental Protection Agency, Kansas City, Kansas, to receive and provide disposal for cattle and other articles which have become contaminated with the chemical, Polychlorinated Biphenyl.

As you are aware, our facility is located approximately twelve miles Northeast of Wichita and is the only licensed disposal operation within the state. Our facility has been inspected and approved by numerous Federal, State, and Local regulatory agencies, as well as private industries and organizations. It is physically and environmentally sound and utilizes methods which are approved and applied according to the current state of the art. We are confident in our ability and take pride in the leadership we have taken in a field which is somewhat controversial at times but is and will continue to be a much needed industry for our area.

Federal regulations require that local jurisdictions must be notified prior to the disposal of articles contaminated with PCB's. It is currently my understanding that due to the nature of the project a shorter notification period may be given. The Kansas Department of Health & Environment have researched the various aspects of the project and requested that we proceed as expeditiously as possible. This letter should serve to advise the commission of our intent to provide our service to the State of Kansas concerning this project.

This is an unfortunate situation which occurred through the mis-application of chemicals during agriculture. All viable alternatives have been researched and ultimately led to our firm and its capabilities. We cannot change what occurred and can only hope that similar situations can be avoided in the future.

PLANT LOCATION
8300 North 127th Street East / Wichita, Kansas / 316/744-1286 • MAILING ADDRESS P.O. Box 745 / Wichita, Kansas 67201

Should you have any questions regarding this notice or the project, please feel free to contact me at any time.

Sincerely,

Lee Deets, General Manager

LD/js
cc: Mr. Tom Scott - Commissioner, 2nd District
Chairman of the Board
Mr. Don Gragg - Commissioner, 1st District
Mr. Everett Patrick - Commissioner, 3rd District
Mr. Mel Gray, P.E., Director - Division of Environment
Environmental Protection Agency, Kansas City, Missouri

Waiver

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VII
324 EAST ELEVENTH STREET
KANSAS CITY, MISSOURI - 64106

September 20, 1979

Mr. Lee Deets
General Manager
Kansas Industrial Environmental Services, Inc.
P.O. Box 745
Wichita, Kansas 67201

Dear Mr. Deets:

Pursuant to Section 6(c) of the Toxic Substances Control Act (Public Law 94-469), regulations were promulgated in Title 40 of the Code of Federal Regulations, Part 761 (Vol. 44, No. 106, May 31, 1979) setting forth the requirements for the formal approval of chemical waste landfills for the disposal of polychlorinated biphenyls (PCBs). These regulations prohibit the disposal of PCBs at any site not approved by the Environmental Protection Agency (EPA). These regulations also require that the owner and/or operator of a chemical waste landfill planned for the disposal of PCBs submit information in accordance with 40 CFR Part 761.41 Chemical Waste Landfill to the Regional Administrator for review.

In accordance with the above-referenced regulations, by letter dated September 5, 1979, Kansas Industrial Environmental Services, Inc., (KIES) made application to Region VII for the disposal of PCBs on a one-time basis in the southerly 20 feet of trench D-23 at a chemical waste landfill located in the North 1/2 of the Southwest 1/4 of Section 26, Township 25S, Range 2E Sedgwick County, Kansas.

The EPA, Region VII office has reviewed the application with its supporting documentation. In addition a site visit and evaluation were made on September 6, 1979.

On the basis of the Region VII review, the proposed landfill will meet the requirements for a chemical waste landfill as mentioned in

40 CFR Part 761.41(b) when constructed and operated in accordance with the conditions enclosed with this approval except for the following:

1. Hydrologic Conditions, Section 761.41(b)(3). The bottom of the landfill liner system or natural in-place soil barrier shall be at least 50 feet from the historical high water table.

2. Monitoring Systems, Section 761.41(b)(6). Sampling frequency for monitoring ground and surface water quality shall be monthly for chlorinated organics, specific conductance, pH and PCBs during disposal operations and shall be bi-annually (once every six months) after final closure of the disposal area.

3. Leachate Collection, Section 761.41(b)(7). A leachate collection and monitoring system shall be installed above the landfill and leachate shall be monitored monthly for quantity and quality of leachate produced.

4. Supporting Facilities, Section 761.41(b)(9). A six foot woven wire mesh fence shall be provided around the perimeter of the site to prevent unauthorized persons and animals from entering.

The hydrologic, leachate collection and supporting facility requirements are hereby waived for the reasons given in the enclosed technical review. Part of the monitoring system requirement is waived; however, additional analyses and the frequency of these analyses are specified in the enclosed conditions for site approval. I have determined that waiving these requirements will not present an unreasonable risk of injury to health or the environment from PCBs.

Accordingly, the southerly 20 feet of trench D-23 at the Kansas Industrial Environmental Services, Inc., chemical landfill located near Furley, Kansas, is hereby approved (subject to the enclosed conditions) for the one-time disposal of the following items:

a. One hundred twelve head of live cattle of approximately 1,000 pounds each contaminated with PCB accumulations in their tissue.

b. Two carcasses of above mentioned animals which have died.

c. One lot of processed beef, approximately 400 pounds, contaminated with PCBs.

d. Two cattle back rubbers.

e. One lot of soil suspected of being contaminated with PCB material, the quantity could possibly be as much as 800 cubic yards.

Kansas Industrial Environmental Services, Inc., Furley, Kansas is the owner and operator of this PCB approved chemical waste landfill which will be utilized on a one-time basis for the disposal of the referenced items. In the event there is a transfer of the property, you should ensure that the conditions of Section 761.41(c)(7) are met.

If you have any questions about this approval, please contact Mr. Robert L. Morby, Chief, Hazardous Materials Branch at (816) 374-3307.

Sincerely yours,

Kathleen Q. Camin, Ph.D.
Regional Administrator

Enclosures

TECHNICAL AND OPERATIONAL REQUIREMENTS

Disposal of PCB Contaminated Cattle and Related Items
at Kansas Industrial Environmental Services, Inc.
Hazardous Waste Disposal Site
Furley, Kansas
September 18, 1979

This document sets forth the requirements and conditions that must be met for EPA Region VII approval for PCB waste disposal of cattle and related items at the Kansas Industrial Environmental Services, Inc. disposal site identified as the southerly 20 feet of Trench D-23 located in the North 1/2 of the Southwest 1/4 of Section 26, Township 25 S, Range 2 E, Sedgwick County, Kansas. The report is divided into Parts A, B and C. Part A addresses the technical requirements set forth in Section 761.41 (b) and includes a determination as to whether each specific requirement has been met. Part B addresses waivers granted for specific technical requirements not met in Part A along with the rationale for granting the waiver. Part C sets forth special conditions that must be met for the one-time disposal of the PCB contaminated cattle and related PCB contaminated items.

Part A: Technical Requirements

The Environmental Protection Agency, Region VII has determined that the Kansas Industrial Environmental Services, Inc., PCB disposal site identified as the North 1/2 of the Southwest 1/4 of Section 26, Township 25 S, Range 2 E, Sedgwick County, Kansas has met the technical requirements set forth in Section 761.41(b) of Title 40 unless otherwise indicated. Requirements not met are addressed in the waiver section, Part B.

1. Soils (Section 761.41(b)(1))

   Requirement - The landfill site shall be located in thick, relatively impermeable formations such as large-area clay pans. Where this is not possible, the soil shall have a high clay and silt content with the following parameters:

   a. In-place soil thickness, 4 feet or compacted soil liner thickness, 3 feet;

   b. Permeability (cm/sec), equal to or less than 1×10^{-7};

   c. Percent soil passing No. 200 Sieve, > 30;

   d. Liquid Limit, > 30; and

   e. Plasticity Index > 15.

   Determination - This requirement has been met since the site is located in an area that is underlain by about 75 feet of soil that consists primarily of clay and silt. The soil permeability in typical test holes in the

vicinity of the proposed PCB disposal area is less than 1×10^{-8} cm/sec.; numerous soil samples exhibit permeabilities less than 1×10^{-9} cm/sec. The percent of soil passing the No. 200 sieve for typical test holes ranged from a low of 83 percent to 96 percent. The liquid limit values for typical test holes ranged from a low of 30 to a high of 52. The plasticity index values ranged from a low of 10 to a high of 28. The plasticity index on nine samples averaged 20 with only one sample value below 15.

2. Synthetic Membrane Liners (Section 761.41(b)(2))

Requirement - Synthetic membrane liners shall be used when, in the judgment of EPA, the hydrologic or geologic conditions at the landfill require such a liner in order to provide at least a permeability equivalent to the soils in (1.) above.

Determination - A synthetic membrane liner is not necessary since the site is located in an area where the thickness and quality exceeds that specified in requirement one (1) above.

3. Hydrologic Conditions (Section 761.41(b)(3))

Requirement - The bottom of the landfill shall be above the historical high groundwater table as provided below. Floodplains, shorelands, and groundwater recharge areas shall be avoided. There shall be no hydraulic connection between the site and standing or flowing surface water. The site shall have monitoring wells and leachate collection. The bottom of the landfill liner system or natural in-place soil barrier shall be at least fifty feet from the historical high water table.

Determination - This requirement has been partially met. The site is not located in a flood plain, shoreland or ground water recharge area. The area surrounding the test site is described in Bulletin 176 of the State Geological Survey of Kansas as being the most difficult area in Sedgwick County in which to obtain a ground water supply. Wells yielding more than a few gallons per minute were not observed. On-site test borings confirm and expand on the data in Bulletin 176. Small perched water lenses occur at various depths below the surface. These lenses are approximately 0.5 to 1.0 foot in thickness and do not have known hydraulic connections to flowing surface or ground water. The only limited source of water, which is used for sanitary purposes and fire protection is from a limestone seam approximately 70 to 115 feet below the surface in the Wellington formation. The soil thickness from the bottom of the excavated trenches to the perched water lenses in the vicinity of the proposed PCB disposal area is approximately 14 feet.

Using the known soil permeabilities of 1×10^{-8} to 1×10^{-9} cm/sec. calculations indicate that the site has a minimum of 1300 years of protection to the unused perched water lenses. The in-situ soil thickness and permeabilities to the water currently used for sanitary purposes provides a minimum protection of 60 feet of 1×10^{-8} cm/sec. or the equivalent of 5800 years.

Calculations for the minimum protection required by the regulation indicate that the 50 feet of 1×10^{-7} cm/sec. soil will provide a minimum of 500 years protection.

Since the trench bottom is less than 50 feet from the perched lenses, a waiver is required for a fifty foot separation between the bottom of the trench and the historical high water table. This hydrologic waiver request is addressed under Part B.

4. Flood Protection (Section 761.41(b)(4))

   Requirement - If the landfill is above the 100-year floodwater elevation the operators shall provide diversion structures capable of diverting all of the surface water runoff from a 24-hour, 25-year storm.

   Determination - This requirement has been met. The disposal site is located above the 100-year floodwater elevation; it would not be subject to flooding from stream overflow. The retention ponds and bypass channels were designed to accomodate two 10-year frequency storms back to back. This would be the equivalent of 12" of water in a 24-hour period or 4" more water than the runoff expected from a 100-year frequency storm.

5. Topography (Section 761.41 (b)(5))

   Requirement - The landfill site shall be located in an area of low to moderate relief to minimize erosion and to help prevent landslides or slumping.

   Determination - This requirement has been met.

6. Monitoring Systems (Section 761.41(b)(6))

   (a) Water Sampling

      (1) Baseline Data (Section 761.41(b)(6)(i)(a))

   Requirement - Ground and surface water from the disposal site shall be sampled for baseline data purposes.

   Determination - This requirement has been met since baseline surface water and ground water data is available.

      (2) Monthly Sampling (Section 761.41(b)(6)(i)(b))

   Requirement - Defined surface water courses shall be sampled at least monthly when the landfill is being used for PCB disposal operations.

Determination - This requirement has been met since no surface water leaves the site without sampling and analysis followed by evaluation for acceptability for discharge.

(3) Sampling After Closure (Section 761.41(b)(6)(i)(c))

Requirement - Defined surface water courses shall be sampled for a specified length of time at a frequency of at least every six months after final closure of the PCB disposal site.

Determination - This requirement has been met since no surface water leaves the site and the main drainage pond without sampling, analysis and evaluation for acceptability for discharge as required by the KDHE permit.

(b) Ground Water Monitoring Wells

(1) Monitoring Wells (Section 761.41(b)(6)(ii)(a))

Requirement - Three ground water monitoring wells shall be provided equally spaced on a line through the center of the disposal site from the area of highest water table elevation to area of lowest water table elevation.

Determination - This requirement has been met. Ten monitoring wells meeting the construction specifications are located on site. Three of these wells, Wells 6,7, and 10 are located to the east of the proposed burial site and in the direction the perched ground water would travel if it moves.

(2) Monitor Well Construction (Section 761.41(b)(6)(ii)(b))

Requirement - Monitor wells shall be cased and the annular space cemented with portland cement to prevent percolation of surface water into the well bore.

Determination - This requirement has been met.

(c) Water Analysis (Section 761.41(b)(6)(iii))

Requirement - Water samples must be analyzed for PCBs, pH, specific conductance, and total chlorinated organics. Data and records shall be maintained as required in Annex VI 761.45(d)(1).

Determination - The KDHE permit requires the storm drainage pond water and the 10 monitoring wells on and around the facility be sampled and tested for PCBs annually. The 10 monitoring wells are sampled and analyzed for specific conductance and pH quarterly, In addition, background data on chlorinated organics, PCBs, pH and specific conductance has been developed over the past three years, thus, alleviating the need for background sampling.

7. Leachate Collection (Section 761.41(b)(7))

Requirement - A leachate collection and monitoring system shall be installed above the landfill and leachate monitored monthly for quantity and quality of leachate produced.

Determination - The leachate collection requirements are waived as is discussed in Part B.

8. Chemical Waste Landfill Operations (Section 761.41(b)(8))

(a) PCB Handling (Section 761.41(b)(8)(i))

Requirement - PCBs and PCB Items shall be placed in a landfill in a manner that will prevent damage to containers or articles. Other wastes placed in the landfill that are not chemically compatible with PCBs and PCB Items including organic solvents shall be segregated from the PCBs throughout the waste handling and disposal process.

Determination - These requirements will be met as described in Special Conditions 1,2,3,9, and 10 in Part C.

(b) Operations Plan (Section 761.41(b)(8)(ii))

Requirement - An operations plan shall be submitted to EPA for approval.

Determination - Such a plan has been submitted by the applicant Kansas Industrial Environmental Services, Inc., and is hereby approved.

(c) Ignitable Wastes (Section 761.41(b)(8)(iii))

Requirement - Ignitable wastes shall not be disposed of in chemical waste landfills. Liquid ignitable wastes are wastes that have a flash point less than 60 degrees C. (140 degrees F)

Determination - This requirement has been met. The KDHE limits the materials handled and disposed of at this site. Ignitable wastes are not allowed or admitted for disposal.

(d) Records Maintenance (Section 761.41(b)(8)(iv))

Requirement - Records shall be maintained for all PCB disposal operations and must include three-dimensional burial coordinates. Additional records must be maintained as required in Annex VI-761.45(d)(1).

Determination - This requirement has been met in accordance with records maintained in accordance with the KDHE Permit 193 operating requirements.

9. Supporting Facilities (Section 761.41(b)(9))

(a) Fencing (761.41(b)(9)(i))

Requirement - A six foot woven wire fence shall be provided around the perimeter of the site to prevent unauthorized persons and animals from entering it.

Determination - This requirement has been partially met. A waiver addressing this requirement is discussed under Part B.

(b) Road Maintenance (761.41(b)(9)(ii))

Requirement - Access and on-site roads shall be maintained in a safe manner.

Determination - This requirement has been met.

(c) Site Operations (761.41(b)(9)(iii))

Requirement - The site shall be operated and maintained in a safe manner.

Determination - This requirement has been met.

Part B: Waivers of Specific Technical Requirements

The following technical requirements under Section 761.41(b) are hereby waived.

(1) Hydrologic Conditions (natural in-place soil barrier shall be at least 50 feet from the historical high water table requirement only). Because of the fine grained soil at the site, the protection to the perched water lenses, from infiltrated water reaching the bottom of the trench is significantly greater than the regulations specify. The regulations specify the equivalent minimum protection of 500 years. This site will provide the equivalent of 1300 years of protection to the perched water lenses because of the extremely low permeability of the soil. The site will provide the equivalent minimum protection of 5,800 years to the water used on the site for sanitary purposes.

(2) Monitoring Systems (Monthly sampling of total chlorinated organics requirement only). The monitoring requirements according to the regulations are apparently designed to provide information in those instances where PCBs are disposed of in conjunction with other chlorinated organics. Since no other chlorinated organics are being disposed of, it appears unnecessary to analyze for chlorinated organics monthly during disposal operations. However, special conditions requiring limited long-term monitoring for total chlorinated organics have been specified in Part C, Special Conditions.

(3) Leachate Collection. Leachate collection is required for chemical waste landfills. As explained in (1) above, the separation from perched lenses of ground water is greater than that required in terms of the time for water to permeate from the trench to the lenses. In addition, the ground water in the perched lenses is not usable and lime will be added to the trench to assure degradation of the organic material without formation of acids which could assist the mobility of the PCBs. Further, a venting system will be installed to allow gases from degradation to escape without damaging the integrity of the cover material and ten monitoring wells are in place to detect movement of the PCBs, however, remote that may be. The nearest of these wells, Well 7, is 495 feet from the proposed trench. The trench will receive for a one-time disposal a limited quantity of PCB contaminated materials. It will be covered by a minimum of five feet of 1×10^{-8} cm/sec. permeability clay over a thickness of perhaps six feet of animals, meat and back rubbers which should degrade to a very thin lense of material. Site maintenance will be required as the cover settles to prevent moisture infiltration. It will be as specified in Part C, Special Conditions.

(4) Supporting Facilities (fencing requirement only). A six foot woven wire fence is not provided around the specific PCB disposal area. However, such a fence is located around the KIES facility. An electronic gate controls access by the public. The existing and complete site fencing will control access and meet the regulation requirement.

Part C: Special Conditions

(1) Disposal of PCBs is restricted to the southerly 20 feet of Trench D-23, located in the North 1/2 of the Southwest 1/4, Section 26, T25S, R2E, Sedgwick Co., Kansas.

(2) The designated portion of the south end of the site, Trench D-23, is to be operated for the one-time disposal of the PCB wastes as identified in the September 5, 1979 letter from Lee Deets to Dr. Kathleen Q. Camin, Regional Administrator.

(3) Disposal of the cattle requires that approximately a six inch layer of lime be placed in the trench bottom prior to deposition of the cattle. The sides and top of the filled trench will receive an additional layer of lime to form a complete layer surrounding the cows and articles prior to backfilling with clay.

(4) Gas vents, two inch diameter PVC pipe or equivalent, with charcoal filters are required to scrub the exhaust gases of decomposition. These vents shall be provided and placed from the top of the disposed material to the surface of the cover. Crushed limestone is to be placed on top of cattle to form a gas collection conduit and mechanism to allow the decomposition

gases to enter the gas venting tubing. The vents shall be maintained and charcoal replenished as often as necessary until degradation is judged complete or for a minimum of two years. The vents and tubing shall then be removed and the holes backfilled with clay which has a permeability equal to or less than the cover material (1×10^{-8} cm/sec.).

(5) Wells 6,7 and 10, and the main drainage pond, shall be sampled and analyzed for PCBs and chlorinated organics during the month of disposal and every six months thereafter on a schedule compatible with the KDHE permit special conditions for environmental monitoring. The specific conductance and pH sampling and analysis shall be conducted in accordance with the requirements of the KDHE permit number 193. Prior to obtaining a sample from each well, the well shall be pumped to remove the volume of liquid initially contained in the well. This volume of water shall be handled such that it does not enter Trench D-23 and does not violate applicable state or Federal discharge standards.

(6) Sampling methods and analytical procedures for the parameters specified in Special Condition 5 shall be as described in 40 CFR Part 136 as amended in 41 FR 52779 on December 1, 1976. In addition, any laboratory performing chemical tests for the operator of the disposal site shall be participating in EPA's Quality Assurance Program for analytical quality control.

(7) All monitoring results obtained in compliance with these Special Conditions shall be submitted bi-annually to the Hazardous Materials Branch, EPA Region VII, 324 East 11th Street, Kansas City, Missouri 64106.

(8) The approved trench shall be maintained in a manner which prevents ponding of rainfall, uneven settling, cracking or other condition which could admit surface water to the burial zone. Seeding shall be carried out to minimize infiltration or water erosion as soon as feasible.

(9) The applicable provisions of the KDHE Permit Number 193 shall be adhered to and become conditions of this approval as well. Any deviation from those conditions regarding PCBs shall be reported to the Regional Administrator immediately, including a finding of PCBs or chlorinated organics in the monitoring wells or main drainage pond.

(10) An impermeable dike of the natural clay soils of at least ten feet in width shall be maintained between any other wastes disposed of in the south end of Trench D-23. Further, no wastes chemically compatible with PCBs or soluble in or by PCBs shall be disposed of in the south end of Trench D-23 (or in adjacent trenches) within 50 feet of the approved disposal area.

(11) The backfilling of the approved trench shall be conducted with lifts of soil two feet or less in thickness. The soil shall be compacted as much as practicable to minimize settlement. The final cover shall overlap the edges of the trench in such a manner to minimize cracking of the cover soil along the edge of the trench walls. This may be accomplished

with a two or three feet overlap of the top edges of the trench with the in-place soil.

(12) Approval of the above described site will continue until January 1, 1980, unless otherwise extended or modified.

(13) Access to the disposal site during normal working hours for the purpose of EPA inspections and sampling conducted pursuant to Section 11 of the Toxic Substances Control Act shall not be denied.

NOTICE

Pursuant to section 15(1) and 16(a) of TSCA, (15 USCA SS 2614 and 2615(a)) the recipient hereof is advised that penalties not to exceed $25,000 per day may be admininstratively assessed for any failure to comply with requirements of this document imposed by the authority of, or the regulations prescribed pursuant to, section 6(e) of the Toxic Substances Control Act (15 USCA S 2605(e)).

PUBLIC AND MEDIA
CONTACTS

PUBLIC INQUIRIES

NEWS MEDIA

Approximately 50 calls from various media including:

The New York Times
Kansas City Star/Times
Wichita Eagle/Beacon
Omaha World Journal
Television stations in Wichita, Topeka, and Springfield
Radio stations in Wichita, Manhattan, and Omaha

FARMERS - 1

Concern re purchase of surplus World War II oil and possibility PCB content.

CONSUMERS - 8

Concerning pet food manufactured in Omaha.

Chickens purchased from and processed by Hudson Food, Rogers, Arkansas.

Possibility of meats containing PCB's sold in Kansas City, Kansas area.

Re Blue Ribbon Quality Meat Company and Rodeo meats sold by them.

INDUSTRY - 11

Danters to employees of aircraft parts manufacturer using transformer oil as coolant in machine shop.

Transformer oil used at radar site in Olathe, Kansas.

Oil from R & K Manufacturing Company used in running engine lathes.

Request for general information on PCB's from owner of construction business.

Privately owned machine shop operator has been using transformer oil.

Destruction of elevator -- concern about workers and oil used in operation of electrical machinery.

Effects on persons cleaning transformers.

OUTLINE - 4

If transformer oil gets into streams, is water contaminated?

Holder of mortgage on parcel of land from which an oil had been cleaned concerned about earth contamination.

Auctioneer concerned about identifying transformer oil. Concern re some PCB oil might be included in farm sales he conducts.

NEWS MEDIA INQUIRIES ABOUT PCB CONTAMINATED CATTLE
August 20-23, 1979

MEDIA	REPORTER	TELEPHONE NUMBER
Garden City Telegram Garden City, Kansas	George Pyle	(316) 275-7105
St. Louis Post Dispatch St. Louis, Missouri	Harry Wilensky	(314) 621-1111 Ext. 229
Hutchinson News Hutchinson, Kansas	Randy Atwood	
Missouri Ruralist Fayetteville, Missouri	Hank Ernst	(816) 248-3338
Lawrence World-Journal Lawrence, Kansas	Jeff Collins	(913) 843-1000
Doane Agricultural Service St. Louis, Missouri	Wayne Ritchie	(314) 968-1000
Kansas Farm Bureau Topeka, Kansas	John Schlagick	(913) 537-2261 Ext. 120
Successful Farming Des Moines, Iowa	Bill Miller	(515) 284-2802
United Press International Kansas City, Missouri	Bob Inderman	(816) 677-1212
KSAC - Kansas Extension Service Radio Manhattan, Kansas	Sam Brownback	(913) 532-5851
KAKE T.V. News Wichita, Kansas	Terry Atherton	(316) 943-4221
KARD Channel 13 T.V. News Wichita, Kansas	Porter Versselt	(316) 265-5631
Wichita Eagle Wichita, Kansas	Karen Freiberg	(316) 268-6467
Kansas City Star Kansas City, Missouri	John Wylie	(816) 234-4428
Kansas City Times Kansas City, Missouri	Art Brisbane	(816) 234-4333

MEDIA	REPORTER	TELEHONE NUMBER
Food Chemical News Washington, D.C.	Patti Mitchell	(202) 783-7472
McPherson Daily Sentinal McPherson, Kansas	Allen Montgomery	(316) 241-2422
Omaha World-Herald Omaha, Nebraska	Dan Cattau	(402) 444-1000 Ext. 356
Wichita Beacon Wichita, Kansas	Mike Berry	(316) 268-6581
Kansas Information Network Network (Radio) Topeka, Kansas	Joei Bore	(316) 943-6181
New York Times New York City, New York	Donald McNeil	
KTSB - Channel 27 T.V. News Topeka, Kansas		
Kansas City Times Lawrence, Kansas	Dick Howes	(913) 843-1611
Wichita Beacon Wichita, Kansas	Martin Donsky	(316) 268-6390
KYTV Springfield, Missouri	Joyce Reed	(417) 866-2766
KRNY Radio Kearney, Nebraska	Jim Garfield	(308) 234-1977
Chemical Regulation Reporter Washington, D.C.	Ms. Worobec	(202) 452-4583

Half of these reporters called daily for latest information.

ADDENDUM - PUBLIC INVOLVEMENT ACTIVITIES

The Public Involvement Staff made personal contacts with:

Farm Publications

Business Farmer - Scottsbluff, Neb.
Capper's Weekly Topeka, Kan.
Doane's Agricultural Report - St. Louis, Mo.
Farmland News - Kansas City, Mo.
High Plains Journal - Dodge City, Kan.
Kansas Farmer - Topeka, Kan.
Missouri Ruralist - Fayette, Mo.
Nebraska Farmer - Lincoln, Neb.
Successful Farming - Des Moines, Iowa
Today's Farmer - Columbia, Mo.
Wallace's Farmer - Des Moines, Iowa

Farm Bureaus

Iowa Farm Bureau Spokesman
Kansas Farm Bureau News
Missouri Farm Bureau News
Nebraska Agriculture

Farm-Rural Magazines

Farm Weekly - Sioux City, Iowa
Iowa/Farm Business Des Moines, Iowa

USDA Cooperative Extension Service

Kansas
Missouri
Iowa
Nebraska

Agricultural Departments

University of Missouri - Columbia
Iowa State University

Radio

Wichita

KAKE
KARD
KBUL
KFDI
KFH
KICT
KLEO
KMUW
KWBB
Kansas Information Service

Radio

Kansas City

KFIX
KCMO
KMBZ
KMBR
WHB
KCUR
KCEZ

Television

Wichita

KPTS-TV
KTVH-TV
KAKE-TV
KARD-TV

Kansas City

KCMO-TV
WDAF-TV
KMBC-TV

Newspapers

Kansas City Times
Kansas City Star
Associated Press
United Press International
Newton Kansan
Emporia Gazette
McPherson Sentinal
Garden City Telegram

Public Service Announcement

Sent to all radio stations in region.

News Release

Sent to all media in region.

State Public Information Offices

All four state Public Information Offices were notified.

CONTACTS

PCB CONTAMINATED CATTLE
CONTACT LIST

Owner of Cattle

Donald Busenitz
Newton, Kansas
316/283-6713

EPA

Dr. Kathleen Q. Camin
Regional Administrator
324 E. 11th Street
Kansas City, Missouri
816/374-5493

John C. Wicklund
Chief, Toxics and Pesticides Branch
Air and Hazardous Materials Division
324 E. 11th Street
Kansas City, Missouri
816/374-3036

Wolfgang Brandner
Toxics Coordinator
324 E. 11th Street
Kansas City, Missouri
816/374-3036

FDA

Cliff Shane
Regional Food & Drug Director
1009 Cherry Street
Kansas City, Missouri
816/374-5521

Jim Adamson
District Director
1009 Cherry Street
Kansas City, Missouri
816/374-5521

Mary Woleske
Acting Director of Investigations
1009 Cherry Street
Kansas City, Missouri
816/374-5623 (FTS 758-5723)

KDH&E

Melville Gray, Director
Division of Environment
Forbes Field
Topeka, Kansas
913/862-9360, Ext. 283

Howard Duncan, Director
Bureau of Environmental Sanitation
Forbes Field
Topeka, Kansas
913/862-9360, Ext. 290

USDA

Dr. George Fries
Pesticide Residue Laboratory
Beltsville, Maryland
FTS 344-3076

USDA/APHIS

Dr. O. F. Clabough
District Veterinarian
P.O. Box 1518
Topeka, Kansas
FTS 752-2760

Dr. H. A. Nelson
National Veterinary Services Lab
P.O. Box 844
Ames, Iowa
FTS 862-8521

Kansas Animal Health Service

Dr. Gerald D. Gurss
Livestock Commissioner
535 Kansas Avenue, 7th Floor
Topeka, Kansas
FTS 757-2326

Kansas State University

Dr. H. D. Anthony
College of Veterinary Medicine
Manhattan, Kansas
913/532-5650

University of Missouri

Dr. Gary Oswieler
Veterinary Diagnostic Laboratory
Columbia, Missouri
314/882-6811

Principles

Pawnee Valley Feedlot
Burdett, Kansas
316/525-6271
Mr. Taylor - Manager

Dr. Dennis Huck
Larned, Kansas
316/285-3153

Dr. A. E. Wesley
Assaria, Kansas
913/664-4241

Principles

Jayhawk Rendering Plant
Garden City, Kansas
316/276-7618

Southwest By-Products
Springfield, Missouri
417/833-1214

Control Action Division

Hal Snyder or Lucy Sibold
Office of Toxic Substances
EPA - Headquarters
401 M Street, S.W.
Washington, D.C.
FTS 755-1188

RECORD OF COMMUNICATION

☒ PHONE CALL ☐ DISCUSSION ☐ FIELD TRIP ☐ CONFERENCE
☐ OTHER (SPECIFY)

(Record of item checked above)

TO: Wolfgang Brandner
EPA 816-374-3036
K.C., MO.

FROM: Dave Vietti and Bob Kloepfer
SVAN
EPA, K.C., MO. 816-374-4285

DATE 10-17-79

TIME

SUBJECT
RESULTS OF ANALYSIS OF BUSENITZ FARM SOIL

SUMMARY OF COMMUNICATION

6 soil samples were collected by Dave Vietti and Wolfgang Brandner on September 20, 1979, from the excavated area of the Don Busenitz cattle pen in Newton, KS.

Sample No.	Description	AROCHLOR 1242	AROCHLOR 1260	TOTAL PCB
EV 4301	N.W. corner		177 ppm	→
EV 4302	S.W. corner		43 ppm	→
EV 4303	N.E. corner		32 ppm	→
EV 4304	S.E. corner		7 ppm	→
EV 4305	under east backrubber		38 ppm	→
EV 4306	under west backrubber	8.3 ppm	5.5 ppm	13.8 ppm

CONCLUSIONS, ACTION TAKEN OR REQUIRED

INFORMATION COPIES
TO: Don Busenitz, John Wicklund, Bob Morby, Mel Gray

EPA Form 1300-6 (7-72) REPLACES EPA HQ FORM 5300-3 WHICH MAY BE USED UNTIL SUPPLY IS EXHAUSTED.