

17

3921

D-4019

17

DIOXIN

MOLECULE OF DEATH

By Victor John Yannacone, Jr.
W. Keith Kavenagh
and
Margie T. Searcy

Shortly after World War II, work on phenoxy herbicides at the New York State Agricultural Station was supported in part by a grant from The Dow Chemical Co. which also supplied the chemicals.

The effectiveness of chlorophenoxy compounds such as 2,4,5-T and 2,4-D as herbicides had been first demonstrated in 1944 by the US Department of Agriculture (USDA) at Beltsville and Camp Detrick, Maryland. By 1951 tests at Camp Detrick determined that the herbicide of choice for military defoliation operations was an equal mixture of the butyl esters of 2,4-D and 2,4,5-T. The effectiveness of this formulation was established in 1959 in a large-scale test over four square miles at Fort Drum, New York. In 1961 the Department of Defense (DOD) conducted large-scale aerial application trials of the herbicide in Southeast Asia.

In December 1946, Franklin D. Jones sold to American Chemical Paint Co. a US patent for methods of killing weeds with halogenated phenoxy monocarboxylic aliphatic acids,

their esters and salts, including 2,4-D and 2,4,5-T. In May 1947, the Dow Chemical Co. brought a declaratory judgment action against American Chemical Paint Co. seeking a declaration of the invalidity of the Franklin D. Jones patent under which the American Chemical Paint Co. was making 2,4-D and 2,4,5-T. In return American Chemical sued Dow for patent infringement and sought an injunction against further sales of 2,4-D and 2,4,5-T by Dow.

Between 1940 and 1962 many of the chemical companies which eventually supplied "Agent Orange" to the military for use in Southeast Asia were experimenting with phenoxy herbicides and patenting the results of their research.

In 1952 Dow reported that its "Teron Brush Killer" was a mixture of

Victor John Yannacone, Jr., of Yannacone and Yannacone, P.C., Pathogue, New York, is managing partner of Yannacone & Associates and lead counsel for the plaintiffs in re "Agent Orange" Product Liability Litigation, MDL 381.

W. Keith Kavenagh, Ph.D., J.D., is a partner in Yannacone and Yannacone, P.C.

Margie T. Searcy is a partner in the firm of Searcy & Askew, Tuscaloosa, Alabama.

3922

D-4020

2,4-D and 2,4,5-T, clearly establishing that 2,4-D and 2,4,5-T had been combined and marketed commercially long before "Agent Orange" was formulated for the government.

When the DOD turned to the American chemical industry for defoliants suitable for use in Vietnam, the government sought an herbicide which was "immediately available in quantity" and "nontoxic to humans." Commercial mixtures of 2,4-D and 2,4,5-T were tried in field tests because the government had been assured by the manufacturers that "these chemicals have been known and used in the US for more than 15 years, and are considered safe to animals and humans...." From 1961 to 1963, Dow, Ansul, and Monsanto were the main sources of herbicides for the screening field tests.

At the "First Defoliation Conference" conducted by the DOD, Fred J. Delmore, Commanding General, US Army, Edgewood Arsenal, alerted the chemical companies in attendance—Pennsalt, General Anoline & Film Corp., Ethyl Corp., Ansul Chemical Co., The Dow Chemical Co., and Monsanto Co.—of the "need right now of chemicals that will do the job at an earlier time, and in a quicker period." General Delmore specifically charged the companies present with the "particular objective" of "mak[ing] sure it [the herbicide to be developed] is perfectly innocuous to man and animals and at the same time, will do its job."

Albert Hayward, chief of the program coordination office of Fort Dietrich, said at the conference:

"It goes without saying that the materials must be applicable by ground and air spray, that they must be logistically feasible, and that they must be *nontoxic to humans and livestock* in the area affected. Not only should these materials be nontoxic, but it seems to me that it is important that they not have any cosmetic effect. If, for example, a material had a marked red fluorescence and a number of people were obviously stained by the material, then our enemy might derive considerable propaganda value from this fact even though the individuals were not in any way injured by the material.

"In a very real sense, this program in defoliation is a little bit unique with respect to the usual military-in-

dustrial collaboration. Ordinarily, in military R&D we have a military concept that leads to the statement of a military requirement, technical characteristics, performance specifications, and other strictly delimited aspects. In this program we do not have rigidly specified characteristics. I have stated some of the broad requirements that a successful defoliating chemical should have, but within this general framework we will accept and use materials that will do a job for us. In a few years it may be that we will come up with more definite specifications but at the moment we simply solicit the assistance of you gentlemen [the defendants present] in finding materials that can be used successfully within the reasonably broad and general guidelines that General Delmore has stated and that I have repeated."

The government had not developed any chemical defoliants for use in Vietnam and had no specifications in 1964. The DOD invited the agrichemical companies to compete in the development of a fast-acting and safe herbicide and to provide the government with the specifications for procuring the herbicides they were formulating. There was "lack of the use of military specifications for [herbicide] procurement actions" until 1967 when a coordinated military specification was drawn from information supplied by the war contractors.

In March 1968, while the government was attempting to finish the fashioning of a coordinated military specification for the purchase of "Agent Orange," efforts were made "to resolve industry exceptions" to the Air Force's purchase description (not specifications), and as a result of those concerns, changes were made in the purchase description "...to more nearly reflect commercial practices in production of Orange...."

Military herbicide operations were carried out from 1962 to 1971. They were used primarily for 1) defoliation of trees and plants to improve observation and prevent ambush of friendly forces and 2) destroying food crops of hostile forces. After a relatively slow build-up from 1962 to 1965, herbicide operations increased rapidly to a peak in 1967, then declined slightly in 1968 and 1969, dropping sharply in 1970, and eventually stopping in 1971. Defense estimated that approximately 17.7 million

gallons of herbicides were sprayed during the nine-year period. The National Academy of Sciences estimated that of the 3.6 million acres sprayed, 66 percent were sprayed once, 22 percent twice, eight percent three or more times, and four percent four or more times.

Converting the millions of gallons sprayed to pounds of herbicide, the 44 million pounds of 2,4,5-T contained an estimated 368 pounds of the toxic contaminant 2,3,7,8-tetrachloro dibenzo P-dioxin (TCDD or dioxin). The National Academy of Sciences estimated that between 220 and 368 pounds of TCDD were released over South Vietnam during the period August 1965 to February 1971.

Termination of Herbicide Use

The decision on April 15, 1970 leading to the termination of all military herbicide use was caused by a fascinating interplay of diverse elements of our political fabric—scientific, regulatory, diplomatic, and legislative. These included the National Academy of Sciences (NAS), the National Cancer Institute (NCI), the National Institutes of Health (NIH), the American Association for the Advancement of Science (AAAS), a spate of independent scientists, a host of executive departments and agencies, the Departments of State, Defense, Agriculture, Interior, and Health, Education, and Welfare (HEW) (now Health and Human Services), the Air Force, the Surgeon General, the Office of the President, and Congress itself.

One of the first of many distinguished scientists to voice concern over the continued use of herbicides containing the toxic substance dioxin was Yale botanist Arthur W. Galston, at the time president-elect of the Botanical Society of America. In a 1967 article in the *New Republic*, professor Galston warned of the potential hazards of continued unbridled use of herbicides that was all too prophetic:

"We are too ignorant of the interplay of forces in ecological problems to know how far-reaching and how lasting will be the changes in ecology brought about by the widespread spraying of herbicides in Vietnam. These changes may include immediate harm to people in sprayed areas...."

The DOD was not unmindful of

the growing criticism within the scientific community of the department's use of herbicides in Vietnam. Each year the justification for continuation of Operation Ranch Hand was reviewed. In 1967, DOD contracted with Midwest Research Institute (MRI) of Kansas City, Missouri, for an in-depth assessment of the ecological effects of extensive or repeated use of herbicides. MRI concluded that the greatest short-term or long-term ecological consequence [in South Vietnam] was the "destruction of the vegetation....," the long-term effects on wildlife were unpredictable (some good, some bad), "the herbicides used [in South Vietnam]...will not persist in the soil for a long period of time..." and, finally, "...the possibility of lethal toxicity to humans...is highly unlikely and should not be a matter of deep concern...."

Both NAS and AAAS reviewed the report following its publication in December 1967 and felt that although it was a creditable review of the available scientific literature relating to herbicides and the ecological effects, most of it supported by the chemical companies which manufactured the herbicides, it was only a first step in such an investigation.

In September 1968, the State Department released an assessment of the ecological consequences of the defoliation program in South Vietnam. Tschirley, a plant ecologist, visited South Vietnam for one month and later published the results of his observations in *Science*, the journal of the AAAS, concluding:

"The defoliation has caused ecologic change, not irreversible, but recovery will take a long time.... The effect on animals is now unknown, but it does not appear to have been extreme.... There is no evidence to suggest that the herbicide used in Vietnam will cause toxicity for man or animals...."

Responsibility in Science sponsored a visit by two zoologists in March 1969. Orians and Pfeiffer published their report in 1970...."

In a February 1969 meeting of the NAS/National Research Council Committee, a "confidential" report prepared by the Bionetics Research Council (BRC) Committee (which the USDA had employed to study the mutagenic, carcinogenic, and teratogenic potential of 140 commonly used pesticides) was distributed indicating a "significant potential [for 2,4,5-T] to increase birth defects."

About four months after the NAS

committee had seen the BRC report (June or July 1969), the first reports of human birth defects allegedly attributed to the Herbicide Orange appeared in Vietnamese newspapers. They blamed the increases on the chemicals used in defoliation. There is still no scientific agreement regarding interpretation of these essentially anecdotal findings.

Mounting national concern about 2,4,5-T took on a greater sense of urgency when, in October 1969, Dr. Lee F. Dubridge, science adviser to the President, announced that there would be a partial curtailment of the use of this herbicide. Following this announcement by the Office of the President, the DOD restricted the use of Herbicide Orange to areas remote from population in South Vietnam. An NIH report that 2,4,5-T could cause malformations and stillbirths in mice prompted these actions.

In all probability, the "leaking" to the press of the USDA report (allegedly by a member of "Nader's Raiders," who "suggested" that the USDA was trying to "hide" the adverse report) prompted the Surgeon General of the United States to issue, on April 15, 1970, an opinion that the use of 2,4,5-T might be hazardous to "our health."



DOES YOUR CLIENT HORSE AROUND?

Whether your client rides horses, breeds them or races them, whether he has one horse or 100, you need:

"LAW FOR THE HORSE BREEDER"

By: Kenneth A. Wood, B.S., J.D.

...In your library, which covers virtually every area you will encounter in handling your clients horse matters:

- Legal Considerations In Entering The Horse Business • Insurance • Federal Income Tax •
- Liabilities of The Horseman • Syndication • Leasing Contracts • Purchases and Sales of Horses •
- Training Contracts • Federal Laws & The Horse • Industry Data •

The initial cost is \$39.50 which provides the purchaser with the approximately 700 page book which will be kept current for one full year by periodic supplements at no additional cost. Presently the cost to maintain the subscription after the one year period is \$25.00 per year.

"Law for The Horse Breeder" is \$39.50 plus \$2.50 for shipping and handling charge. California residents please add \$.90 sales tax. "Law For The Horse Breeder" is the *only* publication of its kind - order yours today.



Send your check or money order to:

WOOD PUBLICATIONS

P.O. Box 963 -Y

Rancho Santa Fe, California 92067

714/756-3382

3924

D-4022

On April 5, 1970 the Secretaries of Agriculture, HEW, and the Interior jointly announced the suspension of certain uses of 2,4,5-T. The suspension resulted from published studies indicating that 2,4,5-T was a teratogen. On the same day, the DOD suspended all use of Herbicide Orange. Dow, the primary manufacturer of 2,4,5-T and 2,4-D, stated that according to its tests (with 2,4,5-T that had been produced in accordance with production specifications) there was no indication of any fetal abnormalities. However, the Dow tests did confirm the BRC findings that when dioxin was present in quantities exceeding (then-current) production specifications, birth defects did occur.

Civilian Use of 2,4,5-T

The herbicide 2,4,5-T has been marketed as a "registered pesticide" in the United States since 1948. The USDA reported that principal domestic use in 1974 was for weed control on rights-of-way, range land and pastures, rice crops, and forests.

Since 1950 most of the chemical industry has known that large quantities of TCDD may be formed as a by-product of the 2,4,5-T manufacturing process if the manufacturing procedures were not carefully controlled. At one time, 2,4,5-T which contained between 30-40 ppm of TCDD was produced. After concern arose in 1969 about the extremely toxic effects of TCDD, manufacturing methods were changed, and by 1971 industry had reduced TCDD content in commercial samples to less than 1 ppm. Current US manufacturing specifications require 2,4,5-T presently being sold to contain less than 0.1 ppm, and several foreign countries now produce commercial 2,4,5-T containing less than 0.05 ppm of TCDD.

Herbicide 2,4,5-T has been the subject of a number of federal regulatory actions following its first registration in March 1948. Initially, regulation of 2,4,5-T came under the aegis of the USDA. Subsequently this function was transferred to the Environmental Protection Agency (EPA). On April 13, 1966 the USDA and the Food and Drug Administration (FDA) jointly announced in the *Federal Register* the abolition of the "no residue and zero tolerance" concepts

(of drug and chemical registration) as scientifically unattainable. Future registrations were to be granted on the basis of either "Negligible Residue" or "Permissible Residue." Industry was given until December 31, 1967 to comply by obtaining tolerances for residues of 2,4,5-T in all treated food, feed products, and by-products. On May 1, 1970, the EPA cancelled (among other uses) all 2,4,5-T uses on food crops intended for human consumption.

Dow and Hercules, Inc. petitioned to refer the cancellation to an advisory committee of scientists to review all relevant facts. The advisory committee met and submitted its report in May 1971, recommending: "permitted use of 2,4,5-T on forests, range land and rights-of-way providing that the limit of 0.1 ppm contamination with TCDD be set for all future production of 2,4,5-T; that all 2,4,5-T be applied no more than once a year at any one site; and that 2,4,5-T be

In addition to the exposures of American and Australian servicemen in Southeast Asia, there are also occupational accidents....

applied with proper caution so that it will not contaminate other areas where it may come into contact with humans."

The USDA published a Pesticide Registration (PR) Notice on September 28, 1970 advising of the presence of chlorodioxin contaminants (such as TCDD) in economic poisons (including herbicides and pesticides). It stated further that such contaminants in 2,4,5-T constituted a possible hazard to people since they had been found to be extremely toxic to laboratory animals. This PR advised that appropriate regulatory action would be taken under the Federal In-

secticide, Fungicide and Rodenticide Act (FIFRA) because products containing chlorodioxins were considered to be "in violation of FIFRA."

Dow promptly moved to protect one of its major markets, rice, and filed for injunctive relief in the district court in Arkansas, an area heavily involved in rice crop production. An injunction was granted in July 1972, enjoining further administrative action against 2,4,5-T. The US court of appeals for the Eighth Circuit overturned this injunction in April 1973, and the EPA proceeded with formal cancellation hearings to remove the herbicide from the market. (Dow was not the complete loser in this action: It had been successful in gaining nearly two years of delay in the suspension of the appeal.)

Extensive public hearings were held during 1974 on all uses of 2,4,5-T, including insecticides as well as herbicides containing 2,4,5-T. In June 1974, the EPA decided that it would "continue its TCDD residue monitoring" since it did not have sufficient hard evidence needed to rebut the herbicide's manufacturers and users (farm groups), and (to the shock of environmental groups) withdrew the proceedings.

Background of Dioxins

The "dioxin" of today's media accounts usually refers to the 2,3,7,8-tetrachloro isomer of p-dibenzo dioxin (TCDD). It has been called the most lethal synthetic chemical known to man, but it is only one of a group of related aromatic, tricyclic compounds. The number of chlorine atoms in the chlorinated dioxins may vary from one to eight, and more than 221 different isomeric forms of the polychlorinated dibenzo-p-dioxins (PCDDs) are possible. Because of their toxicity, few of the chlorinated dioxins have been synthesized so far and studied for their chemical and physical properties, and only the isomer with chlorines at the 2,3,7,8 position (2,3,7,8-tetrachloro dibenzo p-dioxin, the "dioxin" of the "Agent Orange" case) has even begun to be examined in detail for its toxicological effects.

Although the first chlorinated dioxin, the octa-isomer, was prepared as early as 1872 in Germany, its struc-

ture did not become clear until 1957, when the details of its synthesis were published together with that of a related compound, tetrabromo dibenzo dioxin. In both cases the laboratory workers were hospitalized. In the laboratory, the synthesis had been accomplished by halogenating (adding chlorine and bromine respectively) the dioxins. However, the chlorinated dioxins can also occur during pyrolysis of 2,4-dichlorophenol and 2,4,5-Trichlorophenol (TCP) and certain phenoxy herbicides such as 2,4,5-trichloro phenoxyacetic acid (2,4,5-T) made from TCP.

Contemporaneously with the laboratory syntheses of the chlorinated dioxins, chloracne was observed among chemical plant workers exposed to certain chlorinated chemicals (perchlorinated naphthalenes). In the 1940s chemists at the Boehringer Company in Hamburg, Germany, tested a number of chlorinated compounds that could be possible causes of chloracne and established that dibenzofurans (compounds similar to the dioxins) were active in the rabbit ear bioassay developed by Dow to protect its own workers. When Sanderman synthesized 20 grams of TCDD in studies of chlorophenols as wood preservatives, his laboratory assistant required hospital admission after developing hyperkeratosis and chloracne. Schultz at Boehringer applied a small spot of TCDD on his arm and developed the lesions which, upon biopsy, were typical of chloracne. These findings, however, were not published in the general scientific literature until 1957.

Sorge, a chemist at Boehringer, discovered that the formation of TCDD depended on the temperature of the chemical reaction and developed a low temperature procedure for the synthesis of 2,4,5-T in a closed system. The Boehringer product became more expensive to manufacture but less dangerous to handle. Although Boehringer informed other producers of the hazards of the high temperature method of TCP manufacture and in 1957 made the technology available to avoid these hazards, it was only the occurrence of serious outbreaks of chloracne that finally forced some of the American chemical companies to discontinue their high temperature production procedures and adopt the Boehringer technique. At about the same time,

Dow scientists seem to have been the first to establish the extraordinary toxicity of TCDD.

The toxic effects of TCDD, alone or in conjunction with TCP; 2,4,5-T; and related chlorophenoxy compounds, have been observed under a wide range of conditions and circumstances. In addition to the exposures of American and Australian servicemen in Southeast Asia, there are also occupational accidents: exposures from handling contaminated intermediates, such as TCP; exposures from agricultural and silvicultural applications; and exposures of individuals to contaminated products in the community. The symptomatology and effects induced by TCDD reflect a wide range of factors including dosage and duration of exposure, presence of other toxic chemicals, and the age, sex, and reproductive status of the exposed.

TCDD is peculiar among highly toxic chemicals in that death is delayed for several weeks after exposure in many animal species, including human beings. Although the actual cause of death in some animal species can be established, in many species the actual cause of death is not apparent upon autopsy or even microscopic examination of the tissues. The specific mechanism by which TCDD causes death in human beings is not yet known.

Preliminary primate studies suggest that the effects of TCDD exposure are cumulative and that the lethal dose is similar regardless of the time span over which it accumulates. The implications of this phenomenon are that the effects of dioxin exposure are cumulative—a dangerous property it shares with such well-established hazards as ionizing radiation. Such a cumulative effect is most likely attributable to "tissue imprint" irreversible effects remaining after the TCDD molecule has left the active sites in a cell. Many other toxic effects, both acute and chronic, have been observed in human beings and in other animal species.

In April 1970 Senate hearings before Senator Hart, Julius Johnson, a vice-president of Dow, stated that his company had been aware since 1950 of the possibility that highly toxic acnegenic impurities were formed in TCP, when the Germans first "isolated the dioxin" as the contaminant. Since then Dow claimed to monitor

products made from TCP, such as 2,4,5-T, with the rabbit ear skin test for the toxic acnegenic agent. On the basis of such precautions, Dow asserted in a 1964 press release that its 2,4,5-T was absolutely nontoxic to humans or animals. By 1965, Dow confirmed that the toxic contaminant was TCDD, and developed a gas chromatographic technique sensitive to 1 ppm of TCDD in TCP or 2,4,5-T. Dow admitted that it treated a negative skin test as evidence of the absence of TCDD, while recognizing the insensitivity of the test concentrations of TCDD below the 1 ppm level.

Dow also admitted that it had failed to inform either the USDA or the DOD of its findings of dioxin-contaminated 2,4,5-T. It should be stressed that the USDA relied exclusively on toxicological information provided by registrants of pesticides, and was not in the practice of conducting its own research or even monitoring the published literature.

Dioxin Toxicology

The chlorinated dioxins are potent inducers of the hepatic and renal microsomal enzymes which are responsible for metabolizing foreign compounds and steroid hormones. Unlike other stimulators of mixed function oxidases, dioxin stimulates not just one enzyme in a single tissue, but a broad range of these enzymes in a variety of tissues. The chlorinated dioxins also interfere with the synthesis of the porphyrin compounds such as cytochromes and heme which are necessary for all oxygen transfer reactions in the body. TCDD is also embryotoxic and teratogenic. The chlorinated dioxins are also mutagenic in certain test systems, and inhibition of mitosis and chromosomal abnormalities have also been observed in certain organisms.

Intercalation within DNA is believed to be a possible mechanism responsible for the mutagenicity and perhaps the carcinogenicity of the PCDDs. Their carcinogenicity also may be related to changes in microsomal enzyme metabolism modifying the ability of cells to react to other carcinogens or to be protected from the direct effects of a primary toxicant.

The NCI, the National Toxicology Program, and the International Agency for Research on Cancer of

the World Health Organization all recognize the carcinogenicity of TCDD, at least in rats and mice. The animal experiment results have some similarity to the effects of ionizing radiation in that there is little organ specificity among the cancers induced. Because of the multiplicity of tumors which have been observed, it is also theorized that at low doses TCDD may be a potent promoter of carcinogenesis by other toxicants through diverse biochemical, molecular, and physiological mechanisms.

Human Exposures to Dioxin

Since 1949, there has been a series of sudden occupational exposures as a result of accidents in eight different plants involved in the manufacture of TCP. These provided early warnings as to the serious toxic effects of the TCP impurities which were later identified as dioxins, particularly TCDD and the related dibenzofurans.

From 1949, there also were a number of incidents of occupational disease involving workers handling TCP; 2,4,5-T, or related compounds contaminated with dioxins, particularly TCDD and the related dibenzofurans. Typically, the symptoms appearing after an acute exposure began with a burning sensation in the eyes, nose, and throat followed by headache, dizziness, nausea, and vomiting accompanied in some cases by diarrhea and abdominal pain. Some days later exposed individuals report itching, redness, swelling of the face, often over the eyelids, nose, and lips, sometimes accompanied by mucus membrane inflammation and hemorrhage. Hemorrhagic cystitis (bladder), pleuritis, pyelonephritis, blepharo-conjunctivitis, and other membrane inflammation of the eyes have also been reported by some victims.

A few weeks to several months after the exposure the onset of chloracne has been observed. Chloracne, however, is *not* a necessary symptom of TCDD or TCDF toxicity. Peripheral neuropathy and liver abnormalities following exposure to TCDD have been seen in people with no history of chloracne. Since most of the cases which have been reported in the medical literature were those referred to dermatologists because of chloracne, cases without obvious chloracne symptoms frequently have been overlooked.

Chloracne is characterized by inflamed nodules and pustules on the face, forearms, shoulders, neck, trunk, feet and legs, leading to the formation of comedones (blackheads) and cysts. It takes one to two months for this eruption to appear as typical chloracne with hyperpigmentation of the skin in patches where the comedones, cysts, and pustules are present. Rupture of the pustules frequently releases a foul-smelling (rancid) fatty material. The eruption itself may be quite disfiguring and often dismissed as nothing more than a "late case" of the "terminal acne" of adolescence.

Chloracne has protean manifestations ranging from chronic pustular cystic, follicular, acneiform, hyperkeratosis, and blepharoconjunctivitis, to milder reversible forms with minimal residual scarring, pitting, hyperpigmentation, depigmentation, and hypertrichosis. The chloracne is generally, but not invariably, associated with a wide range of other symptoms of multi-system disease.

Chloracne has been recognized in TCP; 2,4,5-T, or other chlorophenoxy-exposed workers, and in those involved in plant accidents with TCP or related chlorophenoxy compound.

It must be appreciated that acneiform dermatitis or chloracne has been recognized as an occupational dermatosis since the 1870s, and as such has not unnaturally attracted the professional interest of dermatologists. The possibility has to be considered that this has introduced an understandable bias in favor of overemphasis on the dermatological aspects of TCDD poisoning, and may be responsible for the failure to adequately recognize and report systemic effects in the absence of overt dermatological manifestations. Systemic disease in the absence of chloracne has, however, been reported.

Multi-system Disease

TCDD is well recognized in the clinical and toxicological literature as a potent multi-system toxicant producing a panoply of acute and delayed effects. Recognized clinical symptoms include asthenia, muscular weakness, pains in limbs and joints, insomnia, photosensitivity, nausea, vomiting, and diarrhea. Laboratory findings include abnormalities in liver function, porphyria, peripheral neuro-

pathy, elevated triglycerides and cholesterol. Psychological and personality changes have been observed, as well as an excess of deaths from coronary disease among a Dutch TCP accident clean-up crew. This multi-system disease complex is generally consistent with that recognized in preliminary surveys of Vietnam veterans, although no large-scale analysis has yet been published.

Residual chloracne or chloracneiform lesions are commonly seen in veterans, and include cystic pustules, clusters of comedones, hyperpigmentation, depigmentation, acneiform pits, and skin and eye photosensitivity. A history of alcohol intolerance is not uncommon and appears suggestive of liver dysfunction.

Within one or two months after the exposure, although the period may be as long as two years, and in some cases without any clinically manifest chloracne, other symptoms may appear, including aching muscles, mainly in the thighs, legs, and chest, with aggravation on exertion; aching joints have been reported without swelling. Fatigue, irritability, insomnia, and marked decrease in libido are also well-established symptoms among dioxin victims. These symptoms may continue for years after the exposure. Abnormal nerve conduction velocity may be present and can be detected in the sensory nerves when the condition is mild, and both sensory and motor nerves in more extensive neuropathies. The relationship of the pain to the neuropathic condition has not yet been clearly defined.

Hepatic dysfunction is often observed and is one of the symptoms common to many of the plaintiff veterans in the "Agent Orange" litigation. It may be asymptomatic, or it may contribute to the general fatigue of the victim. The clinical relationship has not been clarified. Manifest *porphyria cutanea tarda* with the symptoms of hirsutism, increased skin pigmentation, and blister formation aggravated by sun exposure is relatively uncommon, although disturbances in porphyrin metabolism can often be detected on laboratory urinalysis. Increased serum lipids, triglycerides, and cholesterol with accelerated coronary atherosclerosis and premature death from ischemic myocardial disease have also been reported after exposure to TCDD.

3927

D-4025-

Hellmann, p.21

- ¹ *Waggaman v. Forstmann*, 3807 D.C. Ct. App., 217 A.2d 310 n.1; Fed. R. Evid. 702 (1975).
- ² *Id.* at 217 A.2d 310, n.4.
- ³ *Dalmo Sales of Wheaton, Inc. v. Steinberg*, 407 A.2d 339 (1979) n.4.
- ⁴ *Reed v. State*, 9 BALT. L. REV. 146, 160 (Fall 1979).
- ⁵ *Reed v. State*, 391 A.2d 364, 422 (1978).

Yannacone, Kavenagh, Searcy, p.30

- ¹ This article has been adopted from facts alleged in the original class action complaint of the Vietnam combat veterans filed on behalf of the late Paul Reutershan in January 1979, much of which has been detailed in the investigations of retired Col. Bruce F. Meyers, U.S.M.C., former Regimental Commander of the 26th Marine Regiment at Khesanh in 1968, and at present associate dean of the University of Puget Sound Law School. (See, *Soldier of Orange: The Administrative, Diplomatic, Legislative and Litigatory Impact of Herbicide Agent Orange in South Vietnam*, 8 BOSTON COLLEGE ENVIRONMENTAL AFFAIRS LAW REVIEW 159-178 (1979).) Additional information came from the direct testimony of Dr. Susan M. Daum in the matter of *Shoecraft, et al. v. Dow*, which was settled in March 1981 for more than \$1 million, and the testimony of Dr. Samuel S. Epstein before the subcommittee on medical facilities and benefits of the Committee on Veterans' Affairs of the US House of Representatives.
- ² G.H. Pfeiffer and E.W. Orians, *MILITARY USE OF HERBICIDES IN VIETNAM*, New York: Free Press (1972), pp. 117-176.
- ³ Tschirley, *RESPONSES OF TROPICAL AND SUBTROPICAL WOODY PLANTS TO CHEMICAL TREATMENT*, Res. Rept. Ars. USDA, ARPA Order No. 424, Adv. Res. Proj. Agency USDD CR-13-67, p. 197.

Motley, Middleton, p.38

- ¹ Letter from Anonymous Author to Thomas F. Mancuso in T. Mancuso, *HELP FOR THE WORKING WOUNDED* 27 (1976).
- ² See, e.g., Comment *Asbestos Litigation: The Dust Has Yet To Settle*, VII FORDHAM URBAN LAW JOURNAL, 55 (1978); Smith and Berek, *Sailing the Uncharted Seas of Asbestos Litigation Under the Longshoreman's and Harbor Worker's Compensation Act*, 22 WILLIAM AND MARY LAW REVIEW 177 (1980); Motley, *Filing Overlooked Claims for Occupational Diseases*, 13 TRIAL 36 (1977); Sweeney, *The Asbestosis Time Bomb*, 14 TRIAL 10 (1978), p. 17; Motley, *Proving the Cancer Connection in the Courtroom*, 15 TRIAL 3 (1979), p. 40; Henderson, *Product Liability Disease Litigation: Blueprint for Occupational Safety and Health*, 16 TRIAL 4 (1980), p. 25; Motley, *The Lid Comes Off*, 16 TRIAL 4 (1980), p. 21; Mehaffey, *Asbestos Related Lung Disease*, 16 THE FORUM 341 (1980); Elser, *Asbestosis: Its Impact Upon Products Liability and Workmen's Compensation*, 1975 INSURANCE LAW JOURNAL 459.
- ³ It is estimated that 67,000 persons will die of cancer during the next 30-35 years as a result of exposure to asbestos. Indeed, the asbestos disease problem has been properly characterized as epidemic in scope. NATIONAL CANCER INSTITUTE AND NATIONAL INSTITUTE OF ENVIRONMENTAL HEALTH SCIENCES, *ESTIMATES OF THE FRACTION OF CANCER INCIDENCE IN THE UNITED STATES ATTRIBUTABLE TO OCCUPATIONAL FACTORS* (Draft Summary September 11, 1978). According to estimates made by the US Department of Health, Education, and Welfare (now the Department of Health and Human Services), between 8 and 11 million workers have been exposed to asbestos in the US since the beginning of World War II. Of that total, approximately 1.5 to 2.5 million are presently employed, while the remainder—between 6.5 and 8.5 million workers—were formerly employed in environments with significant asbestos exposure, including 4.5 million who worked in shipyards during World War II. Of these workers, approximately 4 million are believed to have had heavy exposure to asbestos. Based on epidemiological studies of workers, it is estimated that 20-25 percent of heavily exposed workers die of lung cancer, 7-10 percent of pleural or peritoneal mesothelioma, and 8-9 percent of gastrointestinal cancers. These figures are probably underestimates of lifetime risks because relatively few workers have yet been followed to the end of their normal lifespan. The total fraction of heavily exposed workers likely to die of these cancers is probably between 35-44 percent. Of the 4 million heavily exposed workers, approximately 1.6 million are thus expected to die of asbestos-related cancers. Assuming that the excess risk to the 4-7 million less heavily exposed workers is one-quarter of that to the heavily exposed workers, the total number of cancers associated with asbestos in the less heavily exposed group would be expected to be about 0.55 million, raising the total to about 2.15 million. *Id.* at 1-2.
- ⁴ Catt, *Cancer Peril Probed in City Conrail Shops*, READING TIMES (Pa.), June 1, 1981, at 1, col. 4, citing NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH INTERIM REPORT OF HEALTH HAZARD EVACUATION CONSOLIDATED RAILROAD CORPORATION, HHE-81-028 (February 1981).
- ⁵ *Supra* note 1, at 29.
- ⁶ Catt, *supra* note 4, at 8, col. 5.
- ⁷ Abrams, *Asbestos Exposure May Be Tied to Three Deaths*, READING (Pa.) EAGLE, June 1, 1981, at 2, col. 2.
- ⁸ For an outstanding text on asbestos disease offering a fuller explication of these differences, see Selikoff and Lee, *ASBESTOS AND DISEASE*, Academic Press (1978), 33-50.
- ⁹ *Id.* at 16-20. Also see, *Borel v. Fibreboard Paper Products Corp.*, 493 F.2d 1076, 1083 N.3 (5th Cir. 1973).
- ¹⁰ Selikoff and Lee, *id.*, at 177. A full explication of the precise effects of asbestos upon the respiratory system is beyond the scope of this paper. The reader is generally referred to the Selikoff and Lee textbook from which most of the instant text was distilled.
- ¹¹ Selikoff and Hammond, *Asbestos Associated Disease in the United States Shipyards*, 28CA-A CANCER JOURNAL FOR CLINICIANS 37 (1978).
- ¹² Selikoff and Lee, *supra* note 8, 198-206. There exists an interesting scientific dispute regarding the significance of pleural asbestosis. Many contend that changes in the pleura are nonspecific or, if asbestos-induced, are merely benign markers indicative of prior asbestos exposure. Others contend that the pleural changes may be harbingers of cancer or may themselves impair the lung. It is of interest that in August 1981, a jury in Duval County, Florida circuit court (Jacksonville) awarded Edward Janssens and his wife a total of \$1.857 million in actual and punitive damages in what was essentially a pleural asbestosis case. Other juries have been totally unpersuaded that the condition is disabling.
- ¹³ Selikoff and Hammond, *supra* note 11; Selikoff and Lee, *supra* note 8, at 307-336. Cancers of the kidney, pancreas, and buccal cavity may also be increased among asbestos workers.
- ¹⁴ Lewinsohn, H.C., *Health Hazards Of Asbestos: A Review Of Recent Trends*, J. SOC. OCCUP. MED. 24:2 (1974).
- ¹⁵ For an excellent discussion of the relative risks of asbestos and cigarettes in lung cancer causation, see CHEST, August 1980 (special sup-

3929

D-4027

18

D-4028

3930

81

2-1-2

SCIENCE NEWS®

The Weekly Newsmagazine of Science

A Science Service Publication
Volume 141, No. 2, January 11, 1992

Alfred Scott McLaren	Publisher
Patrick Young	Editor
Laurie Jackson	Managing Editor
Vaughan	Editor
Janice Rickerich	Production/Design Director
Janet Raloff	Senior Editor
	Environment/Policy
Bruce Bower	Behavioral Sciences
Elizabeth Pennisi	Chemistry/ Materials Science
Richard Monastersky	Earth Sciences
Ron Cowen	General Science/ Space Sciences
Carol Ezzell,	Life Sciences/
Kathy A. Fackelmann	Biomedicine
Ivars Peterson	Mathematics/Physics
Larry Norland	Editorial Assistant
Karen Schmidt	Science Writer Intern
Liz Marshall	Books/Resource Manager
Donald R. Harless	Advertising/Business Manager

SCIENCE NEWS (ISSN 0036-8423) is published weekly on Saturday, except the last week in December, for \$39.50 for 1 year or \$68.00 for 2 years (foreign postage \$6.00 additional per year) by Science Service, Inc., 1719 N Street, N.W., Washington, DC 20036. Second-class postage paid at Washington, DC, and additional mailing office. POSTMASTER: Send address changes to SCIENCE NEWS, 231 West Center Street, Marion, OH 43305. Change of address: Four to six weeks' notice is required — old and new addresses, including zip codes, must be provided.

Copyright © 1992 by Science Service, Inc. Title registered as trademark U.S. and Canadian Patent Offices. Printed in U.S.A.

Editorial and Business Offices:
1719 N St., N.W., Washington, DC 20036
(202-785-2255)
Republication of any portion of SCIENCE NEWS without written permission of the publisher is prohibited.

Subscription Department:
231 West Center Street, Marion, OH 43305
For new subscriptions only, call 1-800-247-2160.
For customer service, call 1-800-347-6969.

This Week

- 20 Radio Pulses Hint at Unseen Planets
- 20 Witnessing the birth of a radio supernova
- 21 School memories endure as time goes by
- 22 Family ties heighten risk of enlarged heart
- 22 Ancient quakes signal future Northwest risk
- 23 Neural-net neighbors learn from each other
- 23 Planes: Larger role in global warming?
- 23 CF gene therapy on horizon

Research Notes

- 28 Biology
- 28 Biomedicine
- 30 Physics
- 30 Science & Society

Articles

- 24 Dioxin's Other Face

Cover: During the Vietnam war, the U.S. military sprayed millions of gallons of Agent Orange defoliant over the southeast Asian countryside and dioxin became a persistent part of that environment and its food chain. The Vietnamese are now among the most heavily exposed people on Earth. Breast-feeding infants receive particularly high doses of dioxin, which concentrates in human milk. (Photo: Arnold J. Schechter)



Departments

- 19 Letters
- 31 Books

Science Service, a nonprofit corporation founded in 1921, gratefully accepts tax-deductible contributions and bequests to assist its efforts to increase science and mathematics literacy among the young and minorities, and to advance the public understanding of science in general.

Board of Trustees — Chairman, Glenn T. Seaborg; Vice Chairman, Gerald F. Tape; Treasurer, Willis Harlow Shapley; Joseph W. Berg Jr.; Robert W. Fri; David A. Goslin; J. David Hann; Leon M. Lederman; Shirley M. Malcom; Elena O. Nightingale; Ben Patrusky; H. Guyford Stever; Sanford J. Ungar; Deborah P. Wolfe. Honorary Trustees — Edward Bliss Jr.; Bowen C. Dees; O.W. Riegel; John Troan.

President: Alfred Scott McLaren; Vice President and Business Manager: Donald R. Harless.

Letters

Radiation: Risks and regs

No one denies that hazardous radioactive wastes need to be treated with respect. But the mere tag "radioactive" does not indicate that a substance is hazardous. Naturally occurring radioactive material (NORM) is in the environment around us each day ("NORM: The New Hot Wastes," SN: 10/26/91, p.264). Human beings evolved in the presence of such radioactivity. Indeed, there is evidence that too little radiation can adversely affect human health, just as too much can.

One of the tenets of science is to measure before forming opinions. Your article is woefully lacking in measurements. Example: "The NORM-tainted fencing and soccer goalpost here emit low but measurable levels of radiation."

My body "emits low but measurable levels of radiation." So do the bricks in homes. What are the levels? That's a key fact necessary to understand the situation.

Another tenet of science: Compare measure-

ments to what you know. How about listing the radiation received in a year of playing soccer on that "tainted" field, compared with: a year of living in Denver (cosmic radiation, plus uranium/thorium in rocks); a year of living in eastern Pennsylvania (ground radon); a year of sleeping with one's spouse (carbon-14 decay); a year downwind of a coal-fired power plant (multiple radionuclides in ash); and a year working as an X-ray technician.

Given those data, your readers can decide whether NORM justifies "a comprehensive federal policy with supporting regulation."

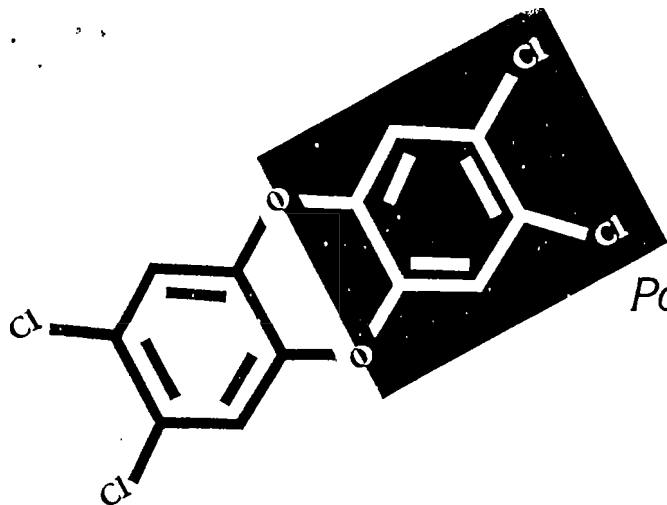
Stephen Fleming
Franklin, Tenn.

We never meant to suggest that soccer goalposts emitting "measurable" radiation represent a hazard to young athletes. Indeed, as we noted in the article, the State of Louisiana has deemed that such recycled pipes don't constitute a health hazard — so long as their ends are sealed shut to prevent the inhalation of any scaly particles that come loose. The pipe essentially shields the public, so that externally measured radiation

typically runs only to 25 to 50 microrems per hour ($\mu\text{r/hr}$). However, inhalation of the scale inside such pipes — emitting hundreds of thousands of $\mu\text{r/hr}$ — could pose a hazard. And according to L. Hall Bohlinger of Louisiana's Department of Environmental Quality, "even at [external readings of] 25 $\mu\text{r/hr}$, [the radiation associated with that pipe scale] is much higher than you'd want to fall out on the ground."

Your comments on comparing NORM-contaminated pipes with other ubiquitous sources of low-level radiation appear to miss the point of the regulators quoted in our article. The regulators did not conclude that very low levels of radioactivity necessarily pose a health threat. Rather, they argued that it's inconsistent to let one industry treat its NORM-tainted wastes like common commercial refuse while requiring another industry (e.g., electric utilities) to pay the high costs of monitoring and managing similarly low-level wastes as federally regulated "radioactive wastes." The state officials merely ask for uniformity in the regulations and legal liabilities borne by all industries generating low-level wastes.

— J. Raloff



Dioxin's Other Face

Portrait of an "environmental hormone"

By KAREN F. SCHMIDT

When a villain starts looking like a friend, it's time to look again. Take TCDD, the most notorious and potent member of the dioxin family. Once demonized as "the most toxic synthetic chemical known to man" because of its exquisitely lethal effect on guinea pigs, TCDD now appears "no more risky than spending a week sunbathing," as a recent New York Times article put it.

In 1983, scares over TCDD forced several thousand residents of Times Beach, Mo., to permanently flee their tainted community. But "given what we now know about this chemical's toxicity and its effects on human health, it looks as though the [Times Beach] evacuation was unnecessary," Vernon N. Houk — the scientist at the Centers for Disease Control who originally spearheaded the evacuation — acknowledged, according to the Times article last August.

Most dioxin researchers now suspect that only very high doses of TCDD — as occur accidentally or in certain occupational settings — may increase the risk of cancer in humans. But that redefinition does not necessarily imply that the chemical is harmless at lower doses.

Indeed, this near-ubiquitous contaminant — a by-product of the paper, wood and herbicide industries and of the incineration of organic solvents — is gaining a new and nasty reputation among toxicologists: as an "environmental hormone" that subtly disrupts normal physiology in ways not completely understood. More potent than some of the body's natural chemical messengers, TCDD suppresses the immune system of mice at least 100 times more effectively than corticosterone, a hormone known for that effect, dioxin researchers say. In fact, increasing evidence suggests that TCDD's ability to mess with the immune system — not its carcinogenicity — may represent its greatest threat to public health.

All this flip-flopping on the chemical's toxicity may puzzle the public, but it has proved no less confusing to dioxin researchers. TCDD's toxic deeds result from a perplexing web

of interactions. Unlike most toxicants, dioxin causes an array of biological responses that vary widely according to tissue. For example, TCDD may goad one cell type to reproduce wildly and cause another to deviate from its normal path toward specialization.

Different animal species also vary in their responsiveness to dioxin. It takes several thousand times more TCDD to kill a hamster than it does to kill a guinea pig. Yet the hardy hamster is quite susceptible to TCDD's triggering of increased cellular levels of a P450 enzyme — a protein catalyst that plays a role in detoxifying certain chemicals within the body and rendering others more toxic.

Unfortunately, epidemiologic studies have done little to resolve toxicologists' muddy understanding of dioxin's human hazards. For instance, such studies rarely turn up consistent adverse effects among humans exposed to dioxin — with the exception of chloracne, the disfiguring skin eruptions associated with acute TCDD exposures.

Consider studies of U.S. troops potentially exposed to Agent Orange, a TCDD-tainted herbicide, while serving in Vietnam. An Air Force study of veterans who had participated in the Ranch Hand defoliation program found indications that these men faced an increased — though statistically insignificant — risk of skin, genito-urinary and oropharyngeal cancers and a tendency to develop underactive thyroids and diabetes (SN: 3/3/84, p.132). Another study found an increased incidence of high blood pressure, benign fatty tumors, sensitivity to light, and depression among these veterans and miscarriages among their wives (SN: 11/19/88, p.325). A third study found that Vietnam veterans suffer higher-than-normal rates of non-Hodgkins lymphoma, a deadly cancer of the lymph nodes, but it failed to tie the disease to Agent Orange exposure (SN: 4/14/90, p.236).

"If you think of TCDD as a hormone, it makes it easier to understand these very big differences," asserts Linda S. Birnbaum, director of environmental toxicology at the Environmental Protection Agency's Health Effects Research Labora-

tory in Research Triangle Park, N.C. A single hormone can induce an array of effects in different tissues and species, she explains.

The environmental hormone theory also helps explain why dioxin appears to induce a variety of cancers rather than a single hallmark type — such as the rare form of cancer, called mesothelioma, that signals asbestos exposure. Unlike most carcinogens, TCDD does not directly damage DNA in a target organ, notes George W. Lucier of the National Institute of Environmental Health Sciences in Research Triangle Park. However, he explains, dioxin clearly enhances abnormal cell growth and appears to cause cancer by amplifying the diverse activities of other carcinogens.

Two recent epidemiologic studies support the human carcinogenicity of TCDD, at least at fairly high doses. In one, researchers at the National Institute for Occupational Safety and Health examined health records for workers exposed to TCDD at a dozen chemical plants. Overall, the 5,172 workers appeared 15 percent more likely to die from cancer than the general population, Marilyn A. Fingerhut and her co-workers reported in the Jan. 24, 1991 NEW ENGLAND JOURNAL OF MEDICINE. However, records on the 1,520 workers whose exposures began at least 20 years ago — when plant dioxin levels were typically much higher than today — showed nine times the normal rate for one particular cancer, soft-tissue sarcoma.

A similar study of 1,583 pesticide-plant workers in Germany showed that, compared with the general population, TCDD-exposed workers experienced a 24 percent higher rate of death from all cancers. Among workers with more than 20 years' exposure, the cancer death rate increased to 87 percent above normal, according to Alfred Manz and his co-workers at the Center for Chemical Workers' Health in Hamburg. However, they reported in the Oct. 19, 1991 LANCET, the increases were not linked to any one

partic
On
Birnl
dose
to ca
very
sure
heal
diffi

I
ble
rea
In i
in
atte
TC
im
als
to
ob

lie
un
26
st
de
er
in
k
v
c
r
a

t
t
t

3932

D-4030

particular type of cancer.

On the basis of these and other studies, Birnbaum says, "I really feel that high-dose exposure to dioxin has the potential to cause cancer." However, she adds, "I'm very concerned that much lower exposure to dioxin may result in adverse health effects that are very subtle and difficult to detect."

In an effort to update federal regulatory guidelines for human exposures to dioxin — now considered a "probable human carcinogen" — EPA has begun reassessing the scientific data on dioxin. In its draft version of this document, due in June, EPA will focus much greater attention on toxicological data revealing TCDD's reproductive, developmental and immunotoxic effects. This document will also establish TCDD as the first pollutant to be regulated on the basis of toxicity observed at the cellular level.

Now that most dioxin researchers believe a single fundamental mechanism underlies all of TCDD's effects (see box, p. 26), toxicologists such as Lucier can construct a unifying mathematical model to describe how dioxin triggers biological effects in cells and organisms. Others, including Birnbaum and Nancy I. Kerkvliet of Oregon State University in Corvallis, will help flesh out the model by collecting specific data on the dose-response relationships between TCDD and its array of biological effects.

"Dioxin is no more and no less potent than it ever was," Kerkvliet says. "But understanding the mechanism can now help us better estimate the human risk."

So far, studies in mice suggest that dioxin's immunotoxic punch occurs in extremely low doses and may well be more important than cancer in determining dioxin's primary health risk, adds Birnbaum. At least in animals, some suppression of immunity consistently occurs at TCDD doses lower than or equal to those required for triggering increased production of a P450 enzyme — previously considered a liver cell's most sensitive response. In fact, Birnbaum's

preliminary unpublished data suggest that immunotoxicity in mice could be occurring at TCDD doses $\frac{1}{15}$ of that needed to boost levels of this enzyme, she says.

Even though scientists continue to debate whether an excess of this P450 enzyme causes any adverse health effects, "few people will contend that suppression of the immune system is not an adverse health effect," she observes.

To study TCDD's immunotoxicity, researchers generally use mice, whose immune systems model those of humans. In one typical test, EPA toxicologists exposed mice to TCDD, then injected them with a harmless, antibody-stimulating agent — red blood cells from sheep. An animal's ability to produce antibodies serves as one useful measure of its immunological health. Compared with normal mice, the TCDD-treated animals produced fewer antibodies to the sheep blood cells, Birnbaum says.

EPA researchers have also measured how well TCDD-treated mice respond to viral infections, such as influenza. Mice pretreated with dioxin readily die after exposure to a quantity of virus that rarely kills healthy mice, Gary R. Burleson of EPA's Research Triangle Park facility and his co-workers reported in the November 1990 JOURNAL OF TOXICOLOGY AND ENVIRONMENTAL HEALTH. Birnbaum's team is now trying to determine the dose-response relationships of these immunosuppressive effects.

Because "there are so many ways to cause immune suppression," Birnbaum explains, scientists can only speculate as to how TCDD weakens immunity. Indeed, she notes, "there could be multiple mechanisms."

At a minimum, TCDD probably interferes with the normal influences of hormones on the immune system, Kerkvliet posits. She says that it appears TCDD can combine with a particular type of receptor protein inside a cell's fluid interior, and then inappropriately turn on specific genes. Some of the victimized cells may

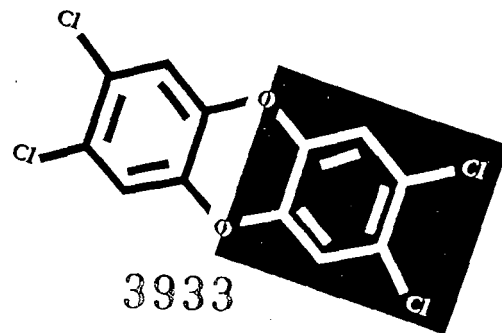
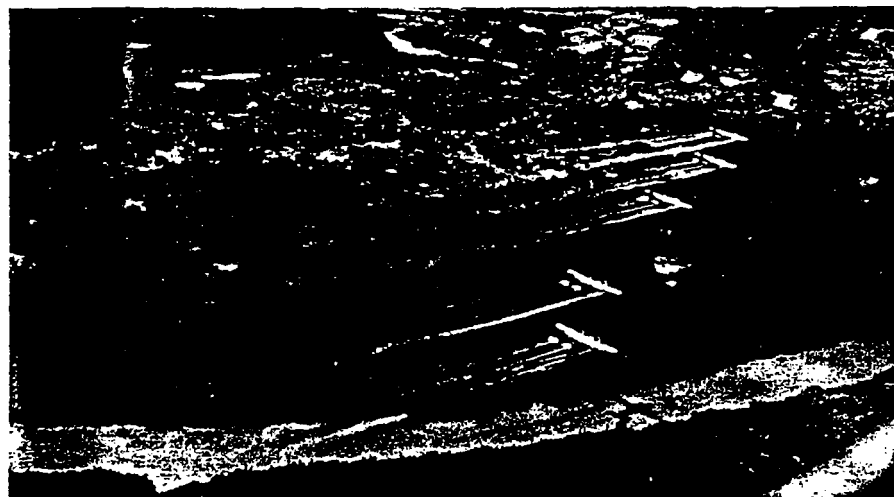
reside in glandular tissues, such as the thymus, where hormones influencing immunity are produced.

Dioxin also appears to act directly on the immune system, says Kerkvliet, who studies TCDD's effects on a group of white blood cells called T-lymphocytes. She and her co-workers were initially confounded when they observed that although TCDD boosts production of T-lymphocytes — which referee the total immune response — it still causes an overall decline in the mouse immune system's ability to fight foreign substances, be they viruses or pollutants.

"We think TCDD is turning on certain T-helper cells inappropriately, which then makes the overall immune response suppressed," Kerkvliet now says. This idea fits with a new hypothesis that not all of the specialized T-lymphocytes called T-helper cells "help" strengthen the immune response; some may actually inhibit it, she notes.

For the most part, Kerkvliet believes that dioxin initiates its direct immunotoxic effects by binding to the dioxin protein receptor — perhaps in the bone marrow, where white blood cells are produced — and by toying with the normal functioning of genes. Recently, her research group studied how TCDD affects a mouse's production of cytotoxic T-lymphocytes, which destroy cells infected with viral invaders.

The team compared responses in TCDD-treated mice with normal and defective dioxin receptors, and found significantly greater immune suppression in the mice with normal receptors. They also compared the responses of these mice to a variety of polychlorinated biphenyls (PCBs), chemical relatives of dioxin. Immunity suppression indeed correlated with each chemical's ability to bind to the protein receptor, Kerkvliet's group reported in the April 1990 FUNDAMENTAL AND APPLIED TOXICOLOGY. These findings suggest that dioxin's protein receptor plays an important role in its immunotoxicity, they say.



During the Vietnam war, the U.S. military dumped millions of gallons of TCDD-tainted Agent Orange over South Vietnam. Veterans who participated in this defoliation program, called Operation Ranch Hand, have experienced a variety of health problems that might be related to dioxin exposure.

D-4031

Given the complexity of the immune system, however, not all dioxin researchers are ready to settle on a single receptor-based mechanism to describe all of TCDD's immunosuppressive effects.

Michael P. Holsapple of the Medical College of Virginia/Virginia Commonwealth University in Richmond has also observed that "when we give dioxin to animals or white blood cells, we see problems with their immune function." However, he adds, "the immune system is probably just a microcosm of the whole complex story for dioxin." He suspects that TCDD may employ different routes of attack depending on the conditions of exposure, he says.

For instance, his team compared the effects of acute versus chronic TCDD exposures on the ability of mice to produce antibodies to sheep red blood cells.

After a single acute dose, mice with normal dioxin receptors suffered greater immune suppression than mice who had defective receptors. However, when mice received this same amount of TCDD over a two-week period, both mouse strains showed similar immunosuppressive responses, he and his colleagues report in the January 1992 *TOXICOLOGY AND PHARMACOLOGY*. Holsapple now theorizes that TCDD's mechanisms may not always involve the receptors and may differ at high and low doses.

Throughout the developed world, humans already experience chronic low-dose exposures to dioxins, primarily through their diet (SN: 7/13/85, p.26). Holsapple and his co-workers suspect that people "exposed to low doses over an extended period of time (i.e. months to years) may be at increased risk to immunotoxic effects by these chemicals

through additional and presently unidentified mechanisms."

One such mechanism can be inferred from developing research in the field of endocrinology, Holsapple says. Scientists had assumed that, much like dioxin, all steroid hormones act exclusively through an intracellular protein receptor that helps it target a particular gene (SN: 8/10/91, p.85). But Holsapple points to new evidence suggesting that some steroid hormones — including progesterone, estrogen and testosterone — can also bind to other receptors on the outside of a cell membrane, where they can regulate the flow of salts into and out of a cell. TCDD might also tinker with a cell's physiology through such a mechanism, he suggests.

Dioxin's Cellular Siege

Dioxin may cause everything from immune suppression and liver tumors to cleft palate in mice, but all of these adverse effects begin with the same initial cellular changes, most dioxin toxicologists now believe.

This "new" view — the impetus behind the Environmental Protection Agency's (EPA) current reassessment of dioxin's risks — actually traces back to 1976. That year scientists reported discovering that TCDD — the most toxic and best studied of the 75 dioxin species — binds with a receptor protein residing in the cells it invades. Only recently, however, did a group of 38 international dioxin experts unanimously conclude that *every one* of TCDD's myriad effects appears to begin with the compound's binding to this receptor — a mechanism resembling that of the body's own steroid hormones.

"Those biological responses [to TCDD] that have been examined in great detail have all been shown to involve this receptor," says EPA toxicologist Linda S. Birnbaum, one of the scientists who reached agreement at the dioxin conference held at Cold Spring Harbor Laboratory (N.Y.) in late 1990. She says EPA hopes to base a new assessment of human health risks from dioxin — and new regulations — on the recently recognized universality of this receptor in TCDD's effects.

In the 15 years since scientists first realized that dioxin binds to a receptor, called aryl hydrocarbon (Ah), they have developed a detailed picture of how TCDD acts on individual cells. For example, the Ah receptor actually com-

prises several proteins that cluster together in the liquid interior of most cells in the body. Once dioxin seeps into a cell and links up with these proteins, the TCDD-protein complex can enter the cell's nucleus and cause trouble by meddling with the on-off switches of genes.

Cells of some tissues, such as the liver, team with Ah receptor proteins, while others may contain only a few. Why our cells should produce such receptors for dioxin remains a mystery.

Perhaps the body produces a hormone that normally operates through the Ah receptor, speculates Thomas A. Gasiewicz of the University of Rochester (N.Y.) School of Medicine. As scientists come to understand the similar and overlapping actions of our natural chemical messengers — hormones and neurotransmitters — with toxicants and drugs, traditional definitions are blurring, he says.

"Just because a compound binds to a receptor doesn't mean it's necessarily going to be toxic," Gasiewicz observes. Any natural hormone that binds to the Ah receptor probably plays a healthy role in regulating cell growth, he says. Even steroids — vitally important hormones that act through protein receptors — can turn "toxic" when their levels get out of whack, he adds. For instance, excess estrogen can lead to cancer.

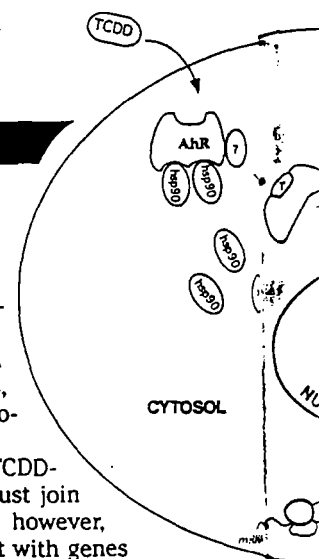
Scientists have no clues as to the identity of the hormone that normally binds to the Ah receptor, but they assume it physically resembles TCDD, for which there's a perfect docking site on one protein subunit of the Ah recep-

tor. Once TCDD enters the cell, it binds with the receptor and evicts other subunits, called heat shock protein 90.

The remaining TCDD-receptor complex must join yet another protein, however, before it can interact with genes in the cell's DNA, Gasiewicz reported in the March 19, 1991 *BIOCHEMISTRY*. This additional protein, called the Ah receptor transforming protein (Art), does not directly bind to TCDD, he found, but instead seems to enable the whole complex to hook up with DNA. Gasiewicz now theorizes that Art, which may vary slightly in structure according to the tissue, might steer the complex to act on certain genes.

To get at those genes, the TCDD-receptor complex must first enter the cell's nucleus. Although it's not clear just which events occur in the liquid cytosol surrounding the nucleus, Oliver Hankinson of the University of California, Los Angeles, has found a protein that must join the complex before the ensemble can gain passage into the cell's center. This protein bears a basic helix-loop-helix structural motif common to DNA-binding proteins, Hankinson reported in the May 17, 1991 *SCIENCE*. In fact, he told *SCIENCE NEWS*, it may be the same Art protein that Gasiewicz discovered.

Although they are still identifying the receptor's protein players, Gasiewicz and Hankinson know that it takes at least two proteins and TCDD to create a



3934

D-4032

In mice, it takes far smaller quantities of TCDD to suppress immunity than it does to unleash most of TCDD's other toxic effects. And white blood cells in both mice and humans respond similarly to TCDD. But to date, there's little evidence to suggest that low-dose exposures to TCDD suppress immunity in humans. Birnbaum, Kerkvliet and Holsapple contend that studies of dioxin-exposed humans have asked the wrong questions.

"If I were to take mice and ask the same [research] questions that are routinely asked of the populations at Times Beach, or in the Ranch Hand study, I would come up with a very nebulous picture [of TCDD's immunotoxicity]," says Holsapple. "But when we ask different questions [in mice], we can certainly show very

strong effects on the immune response."

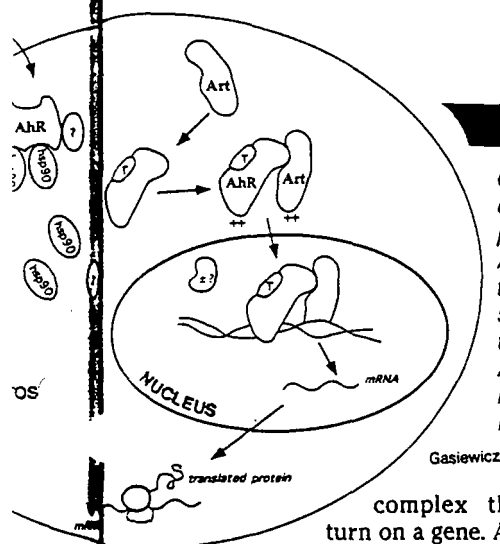
Birnbaum is now calling for a study that will determine how well TCDD-exposed people mount an antibody response to a novel antigen. Perhaps a new flu vaccine — one that uses an influenza strain that hasn't previously infected humans — can serve the function of the sheep red blood cells given to laboratory mice, she says.

But Kerkvliet says EPA shouldn't hold its breath waiting for the definitive epidemiologic study. It would be next to impossible to prove beyond a doubt that dioxin causes immune suppression in humans, she asserts. Unlike sheltered laboratory mice, people come in contact with many immunity-altering forces — such as stress, drugs and disease. Regulators should therefore base their limits for safe exposures to dioxin on animal models and on our developing scientific

understanding of TCDD's mechanisms of action, she says.

Kerkvliet suspects that most Americans — who harbor about 30 parts per trillion (ppt) of dioxins in their blood, including about 7 ppt of TCDD — fall below the range of dioxin exposures that can jeopardize immunity. However, she adds, populations that commonly receive higher doses, such as nursing infants (SN: 4/26/86, p.264), chemical workers and people who consume large quantities of fish, could conceivably experience compromised immunity.

"The fact that you can't clearly show the effects in humans in no way lessens the fact that dioxin is an extremely potent chemical in animals — potent in terms of immunotoxicity, potent in terms of promoting cancer," says Kerkvliet. "I simply don't believe that humans represent some unique species." □



Once TCDD (T) seeps into a cell, it binds to an aryl hydrocarbon receptor (AhR) and kicks off the heat-shock protein (hsp90) subunits. The complex then joins an Ah-receptor-transforming protein (Art) and passes into the nucleus, where the ensemble binds to DNA and switches a gene on or off. Unidentified "mystery proteins" (?) may also participate throughout this process. An activated gene triggers production of messenger RNA (mRNA), the instructions that a cell then uses to build a specific protein, such as a P450 enzyme.

Gasiewicz

complex that can turn on a gene. And once that complex binds to DNA, it can activate a gene and thereby cause the cell to produce excessive quantities of a certain protein. Theoretically, dioxin could also turn some genes off, which can also cause ill effects.

Unlike the steroid hormones, which degrade in a few hours, TCDD molecules require seven years to reduce their concentration by half. Because of TCDD's long half-life, it appears that the body cannot regulate this process and the gene's "switch can be turned on for inappropriately long periods of time," Gasiewicz points out. Thus, one TCDD molecule can continuously disrupt normal cell physiology.

In developing a model to explain dioxin's cellular actions, scientists have primarily studied how TCDD turns on a gene for a P450 enzyme. While this specific enzyme normally helps the body excrete toxic substances, it sometimes renders them more potent instead. Though scientists don't know if increased levels of P450 enzymes contribute to any of dioxin's toxic effects, they do know that the TCDD-receptor complex probably flips the P450 gene switch by a mechanism that applies to many other genes as well.

"We're beginning to know the beginning of the story, which is how the receptor activates genes," says Hankinson. "And to some degree we understand the end product [why animals get cancer and why they die]. The real black box is which genes are turned on and how they relate to the biological effects of dioxin."

Recently, William F. Greenlee and his colleagues at Purdue University in West Lafayette, Ind. found several new genes targeted by the TCDD-receptor complex. In the Oct. 18, 1991 SCIENCE, they describe identifying two dioxin-responsive genes in human skin cells. The first directs the production of plasminogen activator inhibitor-2, a protein that functions in embryonic development, wound healing, inflammation and cancer. The second gene contains the code enabling a cell to produce cytokine interleukin 1-beta, a protein involved in inflammation and immune responses.

These are the first genetic targets of dioxin to be discovered since the P450 gene, and Greenlee says "these [new] genes are likely to play an important role in the toxicity of TCDD." He says they could plausibly be involved in chloracne — the hallmark skin reaction that usually signals acute human exposure to dioxin. These findings lend

credence to a unifying mechanism for all of dioxin's diverse effects, Greenlee says.

"If you look at the broad range of events, it all comes back to a very generic process," he says.

Making the leap from a generic cellular mechanism to guidelines for human exposure — as EPA proposes to do — could prove tricky, however. Some toxicologists argue that receptor involvement implies a certain rate-limiting event — perhaps a minimum number of TCDD molecules needed to bind — before a cell or animal responds with a measurable change in its physiology. This in turn suggests that a "threshold" concentration may exist, below which dioxin causes little or no harm (SN: 5/18/91, p.308).

However, scientists should not assume a safe threshold exists, argues George W. Lucier of the National Institute of Environmental Health Sciences in Research Triangle Park, N.C. To date, his research team has found no predictable, consistent pattern in the dose-response relationships for a number of dioxin's toxic effects — nor evidence of any thresholds.

"My data might not prove that a threshold doesn't exist," Lucier concludes, "but there's also no evidence to support that one does exist."

Still, which ever way the chips fall, Lucier says he's pleased that EPA is finally attempting to incorporate recent research findings into an updated view of dioxin's human toxicity.

"A lot of dollars are spent doing mechanistic research," he comments. "There are thousands of papers on dioxin. We ought to be able to use some of that information in the risk assessment process." — K. Schmidt

3335

D-4033

Unraveling the details of beta decay

Many radioactive atoms decay by emitting beta particles, or electrons, thereby transforming themselves into new elements. For each atomic isotope, these beta particles emerge from nuclei with a characteristic distribution, or spectrum, of energies. Theorist Steven E. Koonin of the California Institute of Technology in Pasadena has now shown that electrons surrounding an atomic nucleus have a discernible but hitherto overlooked effect on a given radioactive isotope's beta-decay spectrum. Reporting in the Dec. 12 *NATURE*, he notes that this newly identified quantum-mechanical effect would typically produce a sequence of minute oscillations that slightly distort a low-energy beta-particle spectrum.

The existence of this quantum effect and the "fine structure" it produces in a spectrum may have important consequences in the search for heavy neutrinos (SN: 4/27/91, p.260). Each beta decay produces not only an electron but also an invisible neutrino, and researchers have long relied on measurements of beta-decay spectra for information about the accompanying neutrinos. Koonin cautions that the presence of fine structure could change the interpretation of certain experiments designed to search for heavy neutrinos.

This characteristic spectral fingerprint may also serve as a means of gleaning information about the chemical, or electronic, environment surrounding an atomic nucleus, Koonin suggests. For example, he says, by precisely measuring the shape and size of the fine-structure spectrum resulting from tritium (a radioactive hydrogen isotope) embedded in a crystal, researchers could map the location of hydrogen in solids.

Recipe for liquid-nitrogen SQUID

SQUIDs, or superconducting quantum interference devices, are extremely sensitive, ring-shaped detectors of magnetic fields. However, the rings typically consist of materials that become superconducting only when cooled to 4.2 kelvins, the temperature of liquid helium, and this requirement limits the applications of SQUID technology.

Researchers at Biomagnetic Technologies, Inc., in San Diego have now fabricated SQUIDs from ceramic copper-oxide materials that superconduct at 77 kelvins, the temperature of liquid nitrogen. Although several other groups have constructed such "high-temperature" SQUIDs, the Biomagnetic Technologies team has developed a practical manufacturing process that significantly reduces the electrical noise that interfered with the performance of earlier devices.

"These [low-noise] SQUIDs are sensitive enough for many of the applications presently possible only with liquid helium devices," Mark S. Dilorio and his co-workers report in the Dec. 19/26 *NATURE*.

Switching to a laser record

A year ago, Lester F. Eastman and his collaborators at Cornell University surprised the scientific community by reporting that they had built a laser that could turn on and off 15 billion times a second (15 gigahertz). Using a tiny, newly designed and fabricated "strained quantum well" laser, the Cornell scientists have now pushed the rate up to a breathtaking 28 gigahertz, the fastest ever for any laser. Theorists had doubted that quantum well lasers would ever approach such rates.

The Cornell laser consists of several extremely thin layers of indium gallium arsenide separated by gallium arsenide barriers. These layers — no more than 40 atoms thick — serve as quantum wells, which confine electrons within their boundaries. The laser appears to owe its superior switching rate to the presence of indium atoms, which distort, or strain, the orderly gallium arsenide crystal structure.

Dioxin cleanup: Status and options

Dioxins — toxic by-products of waste incineration and several industrial processes involving chlorine — are nearly ubiquitous throughout the industrial world, mostly in small quantities (see story, p.24). However, some 100 waste sites in the United States alone "contain serious dioxin contamination," according to a report released last month by the congressional Office of Technology Assessment. Of the 500,000 metric tons of these wastes reported to EPA, more than 98 percent consist of tainted soil — mostly from facilities that produced chlorophenols, chlorobenzenes and chlorophenoxyl pesticides.

To date, high-temperature incineration remains the only effective technology for destroying dioxin in soil, according to the OTA report. Indeed, with properly managed incineration, "one can be assured that dioxins will be broken down" into nontoxic by-products, the report says. But this technology, requiring temperatures in excess of 1,200°C, has proved expensive, currently costing an estimated \$1,200 per ton of treated wastes. And even after a dioxin destruction technique has won government approval, obtaining a permit to use it at a particular waste site can take more than a year. The result, OTA notes: "Sites with dioxin-contaminated soil have been studied for a long time, but no actual cleanup work has begun."

The OTA report highlights several promising alternatives to incineration. Base-catalyzed decomposition, for instance, uses hydrogen and temperatures of just 250°C to 350°C to remove dioxin's chlorine atoms — and toxicity. Price: \$250 to \$500 per ton of wastes. Thermal gas-phase dechlorination uses temperatures at or above 850°C to encourage hydrogen reactions with organic chemicals such as dioxin — probably at a cost of \$350 to \$500 per ton. However, OTA observes, "In light of the relatively small number of contaminated sites, there appears to be little incentive for the private sector to [commercialize such] new technologies for destroying dioxin in soil."

Women on the verge of an athletic showdown

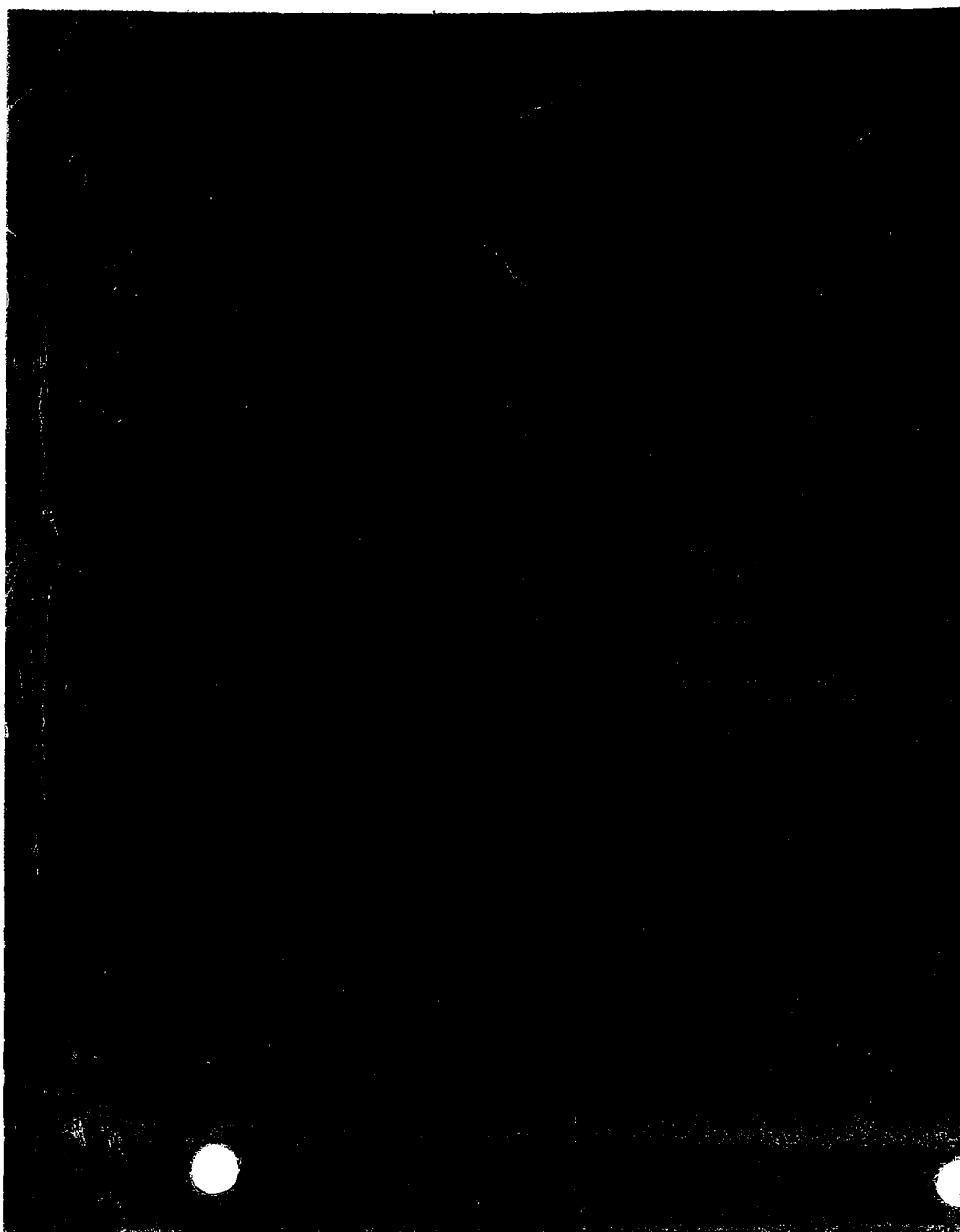
The same year Roger Bannister ran the first 4-minute mile, Diane Leather became the first woman to run the 5-minute mile. If the two had raced against each other in 1954, Leather would have finished 320 meters behind Bannister. Today, Paula Ivan, the women's champion 1-mile runner, would finish only 180 meters behind men's champion Steve Cram.

Female track athletes are improving their performances at faster rates than men and, if the trend continues, should be running marathons as fast as men by 1998, says Brian J. Whipp, a physiologist at the University of California, Los Angeles. He and UCLA co-worker Susan A. Ward predict that women will catch up with men in most track events by early next century.

Whipp and Ward plotted the mean running velocity of world champion runners over the past 100 years for men and the past 70 years for women. They expected that improvements in mean running velocity would show signs of leveling off as athletes approached physiological limits. "To our complete surprise, we found there were no limits evident," Whipp says. Women appeared to be increasing their top speeds at twice the rate of men, the researchers report in the Jan. 2 *NATURE*.

Advances in running shoes, tracks, training and sports nutrition all contribute to faster running speeds, Whipp suspects. And an ever-expanding pool of athletes — broadening fastest among women — heightens the chance that those genetically best suited to an event will join the race, he adds.

But so far, explanations for the findings remain pure speculation, Whipp laments. He hopes physiological studies of champions will bring further enlightenment. And while he can't predict whether women will actually *outrun* men, he says there's no hint that their progress will slow.



CANADA TRIP/BETTS/DOCUMENT
MOYER V DOW

3933

10-4036

8333

D-4036

MEMO ON CANADA TRIP
MOYER V DOW



JOHN A. BETTS
ATTORNEY AT LAW
P.O. BOX 35
RAINIER, WASHINGTON 98576

Phone 206-458-7327

NOTICE OF FACSIMILIE TRANSMISSION

DATE 2/26/92
SENDER'S FILE SYMBOLS MOYER V. DOW
REFERENCE MEMO ON JERRY WHITE
DOCUMENTS TO RICHARD SCHULER
DOCUMENTS FROM JOHN BETTS
NUMBER OF PAGES INCLUDING COVER SHEET 4
REMARKS:
FAX TO: 407-684-9683

3939

D-4637

MOYER FILE MEMORANDUM

TO: RICHARD SCHULER

FROM: JOHN BETTS

SUBJECT: TELEPHONE CONFERENCES WITH ATTORNEY JERRY WHITE OF FREDERICTON, NEW BRUNSWICK, CANADA (506-459-7399) ON 2/19, 2/21, 2/22, AND 2/25/92

DATE: FEBRUARY 25, 1992

This will probably be the most productive contacts we have had to date. Jerry White is co-counsel with Bill Richards (lead attorney) representing some 225 powerline employees in Canada in a case against Dow for 2,4-D and 2,4,5-T exposure along the powerline right of ways between the years 1955 and 1965. This was a ten year spraying program using Dow herbicides of 24D only or 245T only, then both in combination. The concentrations were apparently so heavy that some of these plaintiff's had died while spraying, some on their way home, some died in their yards after they got home, mostly young people and several dying from heart attacks for no apparent reason other than this deadly toxic exposure.

I know I haven't even touched the beginning of this, but with the several telephone conferences I have had with Jerry to date he has advised me of the following:

1. He is in possession of some 150,000 to 160,000 pages of documents already stored in his computer indexes which are over 1,500 pages long just for the index of titles. He is already copying all of these for me to take back as a starting point for research. We may have any of these documents we desire.

2. Jerry has been involved in this particular case for the past eight years. The original defendant was the local public utility called "Provincial Utility". He had spent some \$500,000 to \$600,000 on this case of his own money, when after four years of litigation, they settled for political reasons and have since agreed to completely fund his case against Dow without limit on the funds they will make available to "just get Dow, do whatever it takes". He now has a full home office set up to do just this and apparently does this full time.

3. Examples he gave me of just some of the documents he already has on Dow are:

- a. Some 200 letters from around the world with medical doctors writing to Dow saying they are treating patients with various diseases connected to 24-D and 245-T exposures, what are they to do and what is in your products?

- b. Evidence that Dow has had contaminations as high as 14

3941

D-4039

parts per million of 2,3,7,8 TCDD in their 245-T herbicide, while Dow still denies they ever exceeded 1-2 ppm of TCDD and instead express their contamination levels at a few parts per billion.

c. The first litigation case ever brought against Dow for their chlorinated hydrocarbons (forerunner to 24-D) exposure to humans was in 1934.

d. They have just about completed a medically accepted cohort study of these 225 injured or dead workers in which they have hard evidence of numerous causes of death from these herbicides. "It is one hell of a study", says Jerry! He hopes to have it ready for release in March of 1992. It has cost a fortune to put together, but it will be the best ever on what these herbicides do to humans.

e. Based on the excellent medical study done in the 1950's by the German chemical manufacturer, Boehringer Engleheim, there are medically documented cases of various diseases caused to 17 of their own employees in their 1953 chemical plant explosion which spread TCDD everywhere. He has the book on this event. The Germans formally advised Dow of their experiences in the production of these herbicides and strongly advised to immediately change their whole manufacturing process. Apparently Dow did not take heed, because in 1964, Dow had a similar plant explosion at their Midland plant and numerous employees of their's came down with "everything you can imagine". Dow has tried every way to hide the details of this from everyone, but Jerry has all the evidence as to exactly what happened and what Dow has done to try and cover this all up with denials. Jerry said in his opinion, this should not be a civil suit against Dow, but one brought for full criminal conduct with known intent. He does not plan to stop until he "has them nailed". Finally, in 1966, Dow bought the redesigned production process from Boehringer Engleheim and started to clear up some of their major problems of high TCDD contamination. However, they still have a long way to go as evidenced by the complete banning of 245-T in both the U.S. and Canada. Jerry has the full 1953 documents on just what happened to the German production plant and its workers.

f. He has a court order allowing him full access to the very private Dow storage warehouse at Ft. Detrick, Maryland which contains "the whole Dow library of documents". He is already in possession of over 80 rolls of microfilm that contain these documents on them. He only needs to decide what he wants, then go to the warehouse and get it.

4. His case was originally filed in federal court in Midland, Michigan but was removed back to Canada through Dow's efforts. However, the judge made Dow agree to certain stipulations and rules of discovery and Dow has regretted it ever since. They never dreamed Jerry would come up with an unlimited bankroll to fight them on discovery and along with all that, the local

climate in New Brunswick has completely turned against Dow because of increased publicity and public awareness of what these herbicides really do to humans. This lawsuit will be tried before a judge without jury. Jerry is using as his witnesses all independent scientists and former chemical company employees that he can afford to hire as needed.

5. When I told him we were using Dr. Hardell, Jerry advised that there was a case in Nova Scotia in 1984 where Hardell was supposed to appear, but one of his co-workers had to replace him at the last minute because of scheduling problems. The case was decided in Dow's favor and the court came down hard on what they later came to call "junk science experts". Dr. Hardell's reputation took a beating in Canada at that time because his work appeared to be more of an advocate for the plaintiff than an independent scientist. While this was not the case, the judge held that the plaintiff's experts "had assumed the position of advocates and left the field of independent science" and ruled in Dow's favor. He urged us to be careful how we presented Dr. Hardell as a witness at trial, because Dow will be gunning for him. Hardell has later hurt Dow badly on a case in Nebraska in the late 1980's.

6. My travel plans are to arrive in Fredericton midday on Sunday, March 1. They are on Atlantic Standard Time and will be four hours ahead of Pacific Standard Time. Jerry will meet me at the airport and get me settled in a local hotel near his offices. We plan to spend Monday, Tuesday and Wednesday going over his files and Bill Richards plans to spend one of these days with us also. I will depart after 5 P.M. local time for a flight back to Seattle which gets in late Wednesday night, March 4.

20

3944

D-4042

Documents Ordered
From Dow Production
Appendix "A", PARTS I & II

DOCUMENTS ORDERED

~~XXXXXXXXXXXXXXXXXXXX~~

Appendix A Part I (pp 1-410) Documents 1-385

NUMBER

1	71	184	334	412
2	75	186	352	413
6	110	187	356	414
7	90	196	374	417
8	105	197	377	421
11	111	223	378	422
12	122	225	379	423
14	131	227	380	425
18	132	237	381	429
20	* 133	260	382	434
22	134	267	383	443
24	135	268	386	446
25	150	269	387	447
26	160	271	389	448
27	163	276	394	450
28	166	277	395	451
35	167	283	396	454
38	169	310	400	455
49	175	313	401	456
59	176	316	402	* 457
61	178	326		458

3945 D-4043

Appendix A Part I (cont)

Document Number:

462	512	722	810	977
464	516	729	811	978
472	518	734	816	979
473	569	735	817	980
474	595	740	818	981
479	602	* 741	819	⊗ 982
481	* 606	743	820	983
487	607	744	821	984
* 495	614	745	841	985
498	621	746	847	↓ 996
500	622	747	863	↓ 1050
502	625	748	885	1052
505	628	761	887	* 1053
506	633	763	899	* ~~1060~~ ↓
510	637	768	925	* 1064 ↓
511	642	770	932	1067
515	647	771	961	* 1068
516	666	* 772	963	1070
518	671	773	965	1071
525	678	776	966	1077
526	619	788	973	1079
531	680	798	974	1084
538	711	799	975	* 1088
540	720	806	976	* 1091

Appendix A Part I (cont)

Document Number:

1138	* 1177	+ 1234	* 1296	1012
1140	1180	1235	1298	1013
1142	1181	1236	1299	1014
1143	1185	1239	+ 1307	1015
1144	1186	+ 1240	1309	1016
1145	1190	1242	1310	1017
1147	1196	1246	1313	1018
1148	1197	1252	* 1314	1019
1151	* 1198	1258	* 1315	1020
1152	1199	1259	1324	1021
1153	1202	1262	1332	* 1022
1154	* 1204	1264	* 1333	1112
1157	1212	1267	1335	1113
1159	1216	1268	1336	* 1114
1160	1217	* 1273	* 1341	* 1118
1161	1219	1274	1343	1119
* 1164	1220	1275	+ 1348	1121
1166	+ 1222	1278	1349	1123
1169	1223	1279	1352	* 1126
1170	1224	1280	1358	* 1127
* 1172	1226	1282	* 1361	1128
1173	1228	* 1286	1362	1131
1175	1230	1288	1365	* 1134
* 1176	* 1231	* 1291	1368	1135

Appendix A Part I (cont)

Document Number:

* 1371	1494	* 1594	1683	1764
* 1372	↓ 1508	1595	* 1690	↓ * 1770
1373	1509	1600	1691	~~***~~ 1779
1374	* 1511	1607	1695	↓ 1786
1376	1515	1608	↓ * 1705	1788
1377	1517	* 1609	* 1707	↓ 1789
1378	↓ 1520	~~**~~ 1610	↓ 1712	↓ 1790
1379	* 1522	1612	1714	↓ 1794
1400	1530	* 1613	1715	~~***~~ 1797
1401	1531	1614	↓ 1719	↓ 1821
~~1402~~	~~**~~ 1533	↓ 1620	* 1721	1826
1403	1537	1625	~~**~~ 1722	↓ 1845
1406	~~**~~ 1538	1628	* 1726	1849
↓	1545	1630	↓ 1727	1856
1431	↓ 1548	* 1632	* 1731	1863
1450	~~**~~ 1549	↓ 1636	1732	1865
1453	↓ 1563	1642	1734	↓ 1867
1457	* 1569	↓ 1649	* 1740	* 1868
1458	1573	* 1650	↓ 1746	1873
1459	↓ 1583	↓ 1654	↓ * 1750	1875
↓	* 1584	1657	~~**~~ 1751	↓ 1878
1462	* 1587	* 1671	↓ 1759	~~**~~ 1881
↓	1588	1680	* 1761	↓ 1883
1464	* 1590	1682	1762	1884
1473				

Appendix A Part I (cont)

DOCUMENT NUMBER

1885 ↓	2017	2122	2217	2316
~~1934~~	2021	2123	2220	* 2330
1936 ↓	2026	* 2125	2223 ↓	* 2332
1940 ↓	2029 ↓	2130	2225 ↓	2334 ↓
1957	2037	2132	2227	2336 ↓
1959 ↓	2041 ↓	2131	2229	2342
1962	2050	2141	2234 ↓	* 2344
1964	2054	* 2144	2237	2346
~~1967~~	2055	2146	2242	2348
↓	2058	2147	2248	2349
1969	2059	2148	2254	2351
↓	2062	2152	2257 ↓	2353
1978	2065 ↓	2155	2260	2355 ↓
1982	2070	2157	2268	2357
↓	2074 ↓	2159	* 2274 ↓	2362
1989	2091	2172	* 2276	* 2363
1993	2093	2182 ↓	2278 ↓	* 2367 ↓
1994	2097 ↓	2186	2280 ↓	* 2368
1998	2099	2189	2283	* 2369
2002 ↓	* 2101	2191	* 2285 ↓	* 2372 ↓
2003	2108	2192	2291	* 2376
↓	2111	2194 ↓	2293 ↓	2378 ↓
2011	2116	2211	2295 ↓	2380
2013 ↓	2119	* 2216	2301	2383
2015				2384 D-4041

3949

Appendix A Part I (cont)

67.6

Document Number

~~XX~~ 2334	2303	* 2526	2624	~~XXX~~ 2712
↓	↓		↓	
2393	2305	~~XX~~ 2530	2626	* ~~2715~~
~~XX~~ 2402	↓	2531	2631	2717
2403	~~XXX~~ 2467	+ 2537	↓	2718
2406	* 2475	↓	* 2632	* 2733
2409	* 2476	2539	2636	2724
2415	↓	2550	* 2638	↓
↓	2482	* 2551	2643	~~XXX~~ 2726
* 2417	→ ~~XX~~ 2484	* 2552	2645	* 2727
* 2418	↗	2556	↓	2730
	2487		2670	
* 2419	* 2488	2558	* 2676	2732
* 2420	* 2493	* 2559	2677	2735
* 2421	↓	* 2561	2679	~~2736~~
2422	2495			2736
	* 2497	2562	* 2680	* 2740
2424	2498	2565	* 2681	2741
* 2426	2499	↓	2686	2742
2432	2508	2567		
↓		2577	* 2687	2745
2334	* 2509	* 2580	2688	(*) 2746
* 2436	* 2510	* 2582	* 2689	↓
↓		↓		(*) 2748
2433	2511	2587	2693	(*) 2751
* 2440	* 2513	2595	↓	2753
			2698	
2442	2515	* 2613	* 2700	~~XXX~~ 2755
2445	↓	↓		↓
	2517	2617	~~XX~~ 2701	2760
* 2460	* 2522	* 2621	* 2707	2763
2302	* 2525	* 2622	2709	2764

0563

B/404-B

Appendix A Part I (cont)

8.7

Document Number

2765

X 2766

↓

2769

2772

X 2773

2774

2778

↓

2802

2804

↓

2823

2828

2831

↓

2833

2837

2842

2843

↓

2845

X 2850

X 2851

0816

3022

3132

* 3222

* 3321

0900

* 3030

3136

3221

3325

0900

3031

3139

3225

3330

* 2913

3034

~~3134~~

3140

3230

* 3339

2918

3044

3142

3232

3343

2935

3046

3147

* 3239

3344

2937

* 3049

3149

* 3241

3347

2949

3052

3156

4 3242

3350

2955

3054

3157

3247

3357

2956

3061

3159

3250

3362

* 2961

3063

4 3163

3254

3952

3367

2963

3065

3166

3262

3374

2965

3067

3170

3263

3376

APPENDIX I Part II

411-821
 1000000-5815

9.8

DOCUMENT NUMBER

2852	2911	3069	3112	* 3271
2854	2915	* 3086 V	* 3175 V	3275
2856	* 2976	3193	3176	* 3276
2857	* 2983	3104	* 3184 V	3281
2859	2984	* 3110	3186	3283
2865	2987	3111 V	* 3189	3290
* 2878	2988	3112	* 3190	3291
2888	* 2971	* 3120	3197	3305
2890	3000 V	* 3123	3209	3310
2873	3018 V	3125	3210	3312
* 2893	* 3020	3129 V	3217	* 3315

Appendix A Part II

Document Number

3377	3482	* 3713	3870	3980
↓				
3383	3486	* 3729	3879	3982
↓				
3385	3501	3744	* 3886	3984
			↓	
3389	3504	3745	3888	* 4008
	↓			
3390	3507	3757	* 3896	4013
			↓	
3393	3513	3758	3899	4029
* 3395	3515	3768	3900	4031
↓				
3400	3516	*** 3770	3910	4032
		↓		
3411	3518	* 3773	* 3912	4033
	↓			
3414	3522	3775	3915	* 4043
↓				
3417	3530	3787	3919	4044
3429	3537	3788	* 3926	* 4068
* 3437	3540	* 3791	* 3927	4083
				↓
3442	3586	* 3804	3935	4085
3445	3651	* 3805	* 3941	4087
	↓			
* 3448	3653	3813	3946	4090
		↓		
3451	* 3657	3817	* 3950	4096
↓				
3453	3660	3823	3958	* 4097
3458	* 3678	3837	3965	4098
↓				
3466	3685	3840	3969	4104
3471	3686	3852	3971	4110
3474	* 3705	3854	* 3974	4111
	↓			
3477	3707	3860	3976	4121
	↓			
3481	* 3709	3863	3977	4122

0-4051

Appendix A Part II (cont)

Document Numbers

4138	4256	4383	4508	4728
↓				↓
4141	4258	4394	4540	4737
4145	* 4262	4405	* 4542	4743
4155	4264	4409	4547	4750
	↓			
4159	4268	4441	4556	4758
↓		↓		
4162	4274	4443	4557	4767
4170	4296	4458	4563	4776
↓		↓		
4172	* 4297	4471	4568	4782
4180	4301	* 4475	4584	4789
4181	4307	*** 4477	4590	4802
4185	* 4309	4479	4594	↓
	↓		↓	4812
4189	4312	4481	4596	4840
		↓		
4190	4315	4484	4612	4846
	↓			
4200	4317	4486	4613	4851
		↓		↓
4202	4323	4493	4615	4856
4212	4333	4496	↓	4861
	↓		4618	↓
4214	4335	4499	4638	4863
4217	* 4353	4500	4639	* 4874
4222	4354	4503	4655	* 4887
4231	4364	4507	4679	4894
4235	* 4366	4512	4689	4904
↓		↓		↓
4238	4367	4519	* 4709	4906
			↓	
4247	* 4379	* 4522	4711	4924
4249	4382	4523	4727	4937

3954

D-4052

Appendix A Part II

Document Number

* 4941	5144	* 5599
↓	5182	5606
4947	↓	
4951	5184	5607
* 4961	5212	5610
4983	↓	
	5220	5668
4985	* 5238	5670
* 5031	5242	* 5685
* 5037	5244	5716
	↓	
5048	5247	5744
5049	* 5265	5746
5056	5275	5788
5060	5276	5801
5061	5303	5802
5063	5323	* 5803
5064	5359	5824
5068	5368	5826
* 5070	5452	5828
5080	5465	5832
	↓	
5078	5471	5842
5092	5473	
* 5100	5480	
	↓	
5106	5501	
5134	* 5506	
5138	5526	

END

3955

D-4053

MOYER FILE MEMORANDUM

TO: RICHARD SCHULER

FROM: JOHN BETTS

SUBJECT: DOCUMENTS LISTING FROM DOW PRODUCTION (TRIP TO CANADA)

DATE: MAY 20, 1992

I have received a computerized listing from Jerry White as a result of the trip I made for you to Fredericton, New Brunswick, Canada to review the microfilm and other records of these Dow production documents and exhibits.

Attached to this memorandum are the listings of the specific documents that I ordered copied on your behalf from Jerry White. He and his staff have been in the process of cataloging this massive list of documents for integration into their research files.

In addition to this exhibit listing, I was able to secure some choice Dow documents which give specific references to the development of these herbicides and their known effects by Dow on humans, as well as key research papers showing the results of these herbicides on humans, all going back to early years beginning with the development of these chemicals in 1922 by Dow Chemical and ending with a sworn affidavit from Admiral Elmo R. Zumwalt, Jr. who gave the order for these herbicides to be used in Vietnam. (His own son later died of cancer from exposure to 2,4-D and 2,4,5-T while serving in Vietnam.).

Attached to this memo is a listing and a brief summary of these documents.

3956

D-4054

R.D.S.
8/11/72

LISTING OF DOCUMENTS

1. "BRIEF HISTORY OF CHLOROPHENOLS AND THE DOW CHEMICAL COMPANY" from 1922 through 1979 showing what Dow knew about the effects of these herbicides. It includes a long recognition of the severe skin disorder known as Chloracne (which is proof of exposure from the dioxin TCDD), early results on humans, animals and plants. It includes secret British research in 1941 that led to the use of these chemicals as a weapon of war which was shared with United States and all known to Dow. It shows how 2,4,5-T was first registered as a herbicide in 1948 to eradicate hardwoods and other woody plants. By 1979, it became known that Dow was the only producer of 2,4,5-trichlorophenol, the chemical intermediate whose production inevitably results in the formation of the deadly carcinogen TCDD. Note references to the Shoecraft v. Dow litigation and the book, "The Dow Story" by Don Whitehead.
2. Various letters to and from Dow between 1952 and 1955 regarding deep concerns of physicians over the exposure of these herbicides to their patients with Dow saying basically that these chemicals cannot be absorbed through the skin and that they will not harm humans (although Dow already had some 20 years of research that proved the opposite).
3. "INDUSTRIAL POISONING IN THE MANUFACTURE OF CHLOROPHENOL COMPOUNDS", a translated German medical study dated 1961 showing the effects of exposures to West German Chemical plant workers to these herbicides beginning in 1950. This report was received by Dow in 1962. The study clearly shows the connection with the deadly dioxins being formally recognized by the German scientists and doctors and the far ranging effects on the health of its workers.
4. "CHLORACNE - DOW EXPERIENCE", this outline shows Dow's knowledge of these dioxins 2,3,7,8 TCBD and 2,4,5-Trichlorophenol (TCP) which led to the deadly TCDD dioxin that causes cancer in humans. The signal of the exposure of TCDD is the presence of Chloracne in humans. The report shown Dow's own in-house experience with these exposures to its own workers, and outlines the significant cases beginning in the early 1930's. It even shows where they were warned by the Germans in 1957 of the effects of TCP on workers, but the letter was filled and forgotten.
5. Dow letter of September 15, 1977 to "ALL DOW USA SUPERVISORS ON RECORDS RETENTION". It says "when in doubt, throw it away!", because today's memo may be tomorrow's headline.
6. Summary of testimony of JOHN A. GAROFALO, M.D. in 1983 in the Agent Orange Litigation elaborating on the effect of dioxin on the human immune system. This testimony clearly shows how the dioxin of these herbicides cause cancer in humans.
7. "MORTALITY AMONG U.S. WORKERS EMPLOYED IN THE PRODUCTION OF

CHEMICALS CONTAMINATED WITH 2,3,7,8-TETRACHLORODIBENZO-P-DIOXIN (TCDD)", released on January 1991 by the U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES, Centers for Disease Control. It is a retrospective cohort mortality study conducted of 5172 chemical workers from 12 U.S. plants. It says "excess mortality from all cancers combined, respiratory cancer and soft tissue sarcoma, especially in the sub-cohort with more than one year of exposure, is consistent with TCDD being a carcinogen".

8. "AFFIDAVIT OF ADMIRAL ELMO R. ZUMWALT, JR.", given in a New York Federal District Court on August 28, 1991. It blasts the VA study on Vietnam veterans and says they used faulty conclusions and flawed methodology and that new evidence shows a significant association between 2,4-D/2,4,5-T (Agent Orange) and numerous forms of cancer. It claims fraud, manipulation, and interference in the Centers for Disease Control Studies. He also cites political interference, suppression of critical data and the alteration of results of Air Force "Operation Ranch Hand" studies. He swears under oath that any conclusion made in 1984 denying Vietnam veterans were injured by their exposure to Agent Orange was made on the basis of inaccurate and incomplete data, and, therefore, in light of information currently available, has no scientific validity.

9. News article from The Arizona Republic October 13, 1991 on "TOXICS DUG UP, HE BURIES HIS GUILT". It describes the uncovering of a chemical burial site of thirty 55 gallon drums of Silvex (2,4,-D and 2,4,5-TP) by the EPA in September, 1991. It describes how one Herman Najar was ordered to dig a burial site for these illegal chemicals during the investigation of the toxic spraying over the Salt River Project that led to the litigation by Billee Sheocraft against Dow in 1971. After 20 years of silence, he finally spoke up a year ago and led the US Forest Service crews to the 10 deep hole he had bulldozed out 8 feet wide and 40 feet long to dump these containers in as he was ordered to do. This clipping was sent with a hand written letter to attorney Jack Slobodin of San Francisco and cites how these cancers were proven in court, but "Dow gagged us so as to keep it covered up".

10. THE LANCET, October 19, 1991 article "CANCER MORTALITY AMONG WORKERS IN CHEMICAL PLANT CONTAMINATED WITH DIOXIN", where they report a mortality follow-up of 1583 chemical plant workers in a chemical plant in Germany that produced herbicides contaminated with TCDD going back to 1952. It shows where production of TCDD was reduced from 1954 after an outbreak of chloracne. The results of this study support the hypothesis that TCDD is a human carcinogen.

11. THE LANCET, October 26, 1991 article "CANCER MORTALITY IN WORKERS EXPOSED TO CHLOROPHENOXY HERBICIDES AND CHLOROPHENOLS", where is cites epidemiological studies revealing an increased risk of cancer, notably soft-tissue sarcomas and non-Hodgkin's lymphomas, in people occupationally exposed to chlorophenoxy herbicides, including those contaminated with 2,3,7,8 TCDD. They

report here a historical study of mortality in an international register of 18,910 production workers or sprayers from ten countries.

12. Arizona Republic news article of 1988 from Fayetteville, N.C. on "ADMIRAL'S SON DIES OF AGENT ORANGE ILLS". It shows how Admiral Zumwalt's son died of Hodgkin's disease and lymphoma, cancers linked to the toxic herbicides ordered sprayed by him as Agent Orange in Vietnam.

13. DOW PRODUCTION DOCUMENTS - APPENDIX A, PART I. Pages 1 -410 with exhibits numbered 1 - 2851. After reviewing these documents titles and abstracts, I ordered the listed numbers shown on the seven attached pages numbered 1 - 7 (1,260 total documents ordered). These documents include Dow In-House reports, abstracts, news articles, letters, memos, minutes, scientific studies and research papers.

14. DOW PRODUCTION DOCUMENTS - APPENDIX A, PART II. Pages 411-821 with exhibits numbered 2852 - 5845. I ordered the listed numbers shown on attached pages 8 - 11 (689 total documents ordered). These are a continuation of the types of documents from part I, exhibit A, above.

15. DOW PRODUCTION DOCUMENTS - APPENDIX C, pages 1 - 102 and pages 1- 50 with exhibits numbered 0001 to 0552. Dow material data sheets of products, tests made on products, research studies and laboratory reports, and staff meeting notes/reports.

16. DOW PRODUCTION DOCUMENTS - APPENDIX D, Pages 1 - 82 with exhibits 1 - 267; Pages 1 - 23 with exhibits W25000 - 25058; mostly unnumbered pages with exhibits 001 - 0557. It includes Agent Orange reports, studies on animals, correspondence, data sheets, product labels, research reports/studies,

17. TRIAL MAGAZINE DECEMBER 1981 article "DIOXIN - MOLECULE OF DEATH" by Victor John Yannacone, Jr. ,et. al. lead counsel for the plaintiffs in re Agent Orange Product Liability Litigation, MDL 381. This article gives a good history of the entire development and use of 2,4-D and 2,4,5-T and how dioxins are what kill and Dow's admission that they have known since 1950 of the possibility of highly toxic impurities formed in their TCP process, when the Germans first isolated dioxin as the contaminant. Dow also admits that they failed to inform either the USDA or the DOD of its findings of dioxin contaminated 2,4,5-T and shows that the USDA relied exclusively on toxicological information provided by registrants of pesticides, and was not in the practice of conducting its own research or even monitoring the literature.

18. SCIENCE NEWS, January 11, 1992 article "DIOXINS OTHER FACE". this article explains in detail exactly how dioxin causes cancer by attacking the immune system of the body. This is an excellent study and should be reviewed carefully!

19. "THE OTHER FACE OF 2,4-D", A CITIZENS REPORT" published by the South Okanagan Environmental Coalition in Penticton, British Columbia, Canada in January 1978. It shows the substantial threat to the environment and to human health from 2,4-D specifically and phenoxy herbicides in general. It shows how extensive research prior to 1978 has clearly shown 2,4-D to be teratogenic, carcinogenic, and mutagenic. This report was written to get 2,4-D removed from general use in Canada after 2,4,5-T had already been removed. It shows how there is very little chemical difference between all the phenoxy herbicides and the damage they cause to the environment and to humans bears little difference.

20. Documents Ordered from Dow Production Appendix "A" , Parts I & II. (pages 1 - 11).

MOYER FILE MEMORANDUM

TO: RICHARD SCHULER

FROM: JOHN BETTS

SUBJECT: TRIP TO FREDERICTON, N.B., CANADA FOR MEETINGS WITH JERRY WHITE AND ATTORNEY BILL RICHARDS (MAR 1-4, 1992).

DATE: MARCH 5, 1992

This litigation involves a law suit against Dow Chemical U.S. and Dow Chemical Canada filed on behalf of the Sprayers of Dioxin Association (S.O.D.A.). SODA is a citizen organization formed to do battle on behalf of former utility workers who were hired to clear power lines across New Brunswick using a 50/50 mixture of 2,4-D and 2,4,5-T manufactured by Dow Chemical. This was a ten year spray program which took place between 1955 and 1965 during the summer growing season. Most of the sprayers were young men who took this as a summer job and went on to do other jobs throughout Canada in numerous other professions. SODA now represents about 225 former New Brunswick Electric Power employees of which 93 have already died. The injured workers have experienced all types of serious illnesses and cancer related deaths, some occurring at or near the actual job site from massive seizures and heart attacks. Spraying was accomplished from atop a caterpillar tractor driven platform carrying drums of the herbicides with four or more sprayers stationed around the perimeter aiming their nozzle-type wands onto the unwanted brush along the power line right of way.

Jerry White was one of these injured employees and is the executive Director of SODA who has sole and exclusive authority to represent and speak for all the plaintiffs. He has been involved full time at this position for the past 8 years. Prior to that time, he worked in sales for Procter Gamble, but resigned that position to take up this action on a full time basis on behalf of all plaintiffs.

The action was first brought against Dow Chemical in Midland, Michigan, but Dow used jurisdictional issues and legal stalling tactics to delay the action from advancing to a court hearing. Since the entire litigation was being supported from money raised by members of SODA, the general public, and interest groups like trade unions, it was draining these funds. Nearly \$500,000 had been spent before New Brunswick Electric Power stepped in with an unrestricted and unlimited agreement to finance the entire litigation on behalf of their former employees. This occurred on June 12, 1991 after Jerry White discovered a 1961 memo in the power company files while doing research on Worker's Compensation Claims by former employees. The memo showed NB Power was aware that the inadvertent spraying of raspberry bushes had made several residents sick from eating berries that had been sprayed. The publicity surrounding the lawsuit, which had just been transferred to the New Brunswick Courts on behalf of these dioxin sprayers, now took on an even

greater potential liability for the NB Power Company to include many potential new plaintiffs who may have been injured through grasslands, watersheds and homesites that were affected by this 10 year spray project. Jerry had attorney Bill Richards of St. John, N.B. draw up the agreement which gives SODA unlimited funds to prosecute this legal action against Dow and even the Power Company cannot see the exact way these funds are spent. An independent accountant verifies that all the bills are made under the terms of the agreement and simply sends the NB Power Corporation a total invoice which is paid in three working days back to the SODA account. After the suit with Dow is concluded, SODA still has the right to pursue legal action against the NB Power if for any reason Dow is not held totally liable for these injuries. Otherwise, NB Power is cooperating completely with SODA to help them prove that Dow is the party liable for products that Dow told NB Power were completely safe to use. Due to the public awareness of this issue in New Brunswick, the massive publicity the case has received, and the fact that an elected local Fredericton Judge will hear this case without a jury, Dow couldn't possibly be in a worse jurisdiction. The orders given by the Michigan federal judge on how discovery would continue when he allowed Dow to transfer this action to New Brunswick, the stipulations made by Dow on agreements for totally open discovery, and the very liberal discovery rules of New Brunswick, Dow is now opening all their files on these products to these plaintiffs. They tried to put a gag order on the documents, and the local judge refused to do it.

With this background, I was able to look into some of the most massive legal production I have ever experienced. The computer listings of the documents being made available from Dow are close to 1,500 pages and include over 14,000 documents being shipped weekly to the local Dow counsel in St. John, N.B. and then copied for the plaintiffs locally. Jerry has a full time staff that does nothing but list computer entries of these documents so as to organize them into various litigation categories for the attorneys. During my brief visit, I met several times with Jerry White to discuss the case and twice with Bill Richards to go over the legal theories and their case development. Before going to New Brunswick, I had prepared a complete notebook outlining and listing all the documents I had personally reviewed, along with a summary of the Toxic Tort Defense Seminar given in San Francisco last October for their use. They were pleased to have it.

Before leaving, I was able to review some 6,000 plus documents from which I selected about 1,400 initially that were applicable to this specific litigation. Jerry is going to express mail these initial documents to me in the next 10 days and I will continue to review the computer listings and descriptions of documents which remain. In addition, there are about 80 rolls of microfilm documents stored at the Ft. Detrick, Maryland warehouse of Dow that Jerry hasn't had time to review. He just recently ordered an advanced microfilm reader to have his staff start reviewing these additional documents to determine what else they may want Dow to produce for them.

As soon as I receive the documents I have ordered from Jerry, I will review them and get an index of exhibits list prepared for you. During the next week, I will be tied up on other matters, but will complete this after March 13 when I receive the initial documents from Jerry.

This was a most productive trip and I am sure these documents will prove to be an invaluable source of information. Just reading the documents list and their short descriptions was like reading one of the best novels you could ever imagine for telling the true Dow story on these herbicides.

B

3964

D-4060

B

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF NEW YORK

SHIRLEY IVY, Individually and	[]	
as Representative of the Estate	[]	
of DONALD IVY, et al.	[]	
	[]	
Plaintiffs,	[]	
	[]	CV-89-03361 (E.D.N.Y.) (JBW)
V.	[]	
	[]	[B-89-00559-CA (E.D.TEX.)]
	[]	
DIAMOND SHAMROCK CHEMICALS	[]	
COMPANY, et al.	[]	
	[]	
Defendants.	[]	
	[]	

AFFIDAVIT OF ADMIRAL ELMO R. ZUMWALT, JR.

BEFORE ME, the undersigned authority, appeared Admiral Elmo R. Zumwalt, Jr., USN (Ret.), 1500 Wilson Blvd., Arlington, VA 22209, and after being duly sworn does testify and declare as follows:

1. From 1968 to 1970 I served as the Commander of U.S. Naval Forces, Vietnam. From 1970 to 1974 I served as the Chief of Naval Operations and a member of the Joint Chiefs of Staff.
2. On October 6, 1989 I was appointed Special Assistant to Secretary Derwinski of the Department of Veterans Affairs ("VA") to assist the Secretary in determining whether there is a significant ("as likely as not") statistical association between exposure to Agent Orange and any specific adverse health effect.
3. As Special Assistant, it was my duty, with the assistance of independent scientific experts, to do the following: 1) evaluate scientific studies regarding the health effects of Vietnam veterans exposed to Agent Orange, as well as numerous studies concerning the health hazards of civilian exposure to dioxin contaminants; 2) review and evaluate the protocol and standards employed in the major government sponsored studies, in order to assess their credibility, fairness and consistency with generally accepted scientific practices; and 3) review and evaluate the work of the Scientific Council of the Veterans' Advisory Committee on Environmental Hazards.

3965

D-4061

I. NEW EVIDENCE SHOWING A SIGNIFICANT ASSOCIATION BETWEEN AGENT ORANGE EXPOSURE AND CERTAIN HEALTH EFFECTS

4. There is mounting evidence of a causal connection between certain illnesses and exposure to dioxins. After reviewing the scientific literature, I have concluded that the following illnesses are significantly associated with exposure to Agent Orange: non-Hodgkin's lymphoma, chloracne and other skin disorders, lip cancer, bone cancer, soft tissue sarcoma, birth defects, skin cancer, lung cancer, porphyria cutanea tarda and other liver disorders, Hodgkin's disease, hematopoietic diseases, multiple myeloma, neurological defects, auto-immune diseases and disorders, liver cancer, nasal/pharyngeal/esophageal cancers, leukemia, malignant melanoma, kidney cancer, testicular cancer, pancreatic cancer, stomach cancer, prostate cancer, colon cancer, brain cancer, psychosocial effects, gastrointestinal diseases, diabetes, and cardiovascular abnormalities.

5. In addition to my report on the scientific studies showing an association between health effects and Agent Orange exposure, I have reviewed the affidavit of Dr. Cate Jenkins submitted in this action. Dr. Jenkins' affidavit compiles a growing number of studies showing a link between dioxin exposure and serious health effects. This extensive list of positive studies, all published in 1984 or later, further supports my conclusions stated above.

II. FAULTY CONCLUSIONS, FLAWED METHODOLOGY AND NOTICEABLE BIAS OF THE VA ADVISORY COMMITTEE ON ENVIRONMENTAL HAZARDS

6. In 1984, Congress passed the Veterans' Dioxin and Radiation Exposure Compensation Standards Act, Pub. L. No. 98-542, 98 Stat. 2727 (1984) (the "Dioxin Standards Act") to provide disability compensation to Vietnam veterans exposed to herbicides containing dioxin. Congress authorized the VA to conduct rulemaking to determine which diseases were entitled to compensation as a result of a service-related exposure to Agent Orange. The Dioxin Standards Act required the VA to appoint a Veterans' Advisory Committee on Environmental Hazards (the "Advisory Committee") to review the scientific literature on dioxin and submit periodic recommendations and evaluations to the Administrator of the VA. The Advisory Committee is composed of experts in dioxin and epidemiology, as well as interested members of the public. The responsibility of the experts is to evaluate the scientific evidence pursuant to regulations promulgated by the VA and thereafter to submit recommendations and evaluations to the Administrator of the VA (subsequently the Secretary of Veterans Affairs) on whether "sound scientific or medical evidence" indicated a connection between exposure to Agent Orange and the manifestation of various diseases.

7. To assess the validity and competency of the work of the Advisory Committee, I asked several impartial scientists to review the Advisory Committee transcripts. Without exception, these independent experts who reviewed the work of the Advisory Committee disagreed with its findings. They specifically questioned the validity of the Advisory Committee's review of studies on non-Hodgkin's lymphomas. The Secretary subsequently exercised his discretionary authority to find a significant statistical association between Agent Orange exposure and non-Hodgkin's lymphoma, notwithstanding the failure of his own Advisory Committee to recommend such action in the face of overwhelming contrary scientific data.

8. On February 20, 1990, experts from the Fred Hutchinson Cancer Research Institute in Seattle, Washington ("Hutchinson Cancer Institute"), having reviewed the VA's analysis of studies on non-Hodgkin's lymphoma, concluded that the VA Advisory Committee's work was "not sensible" and was "rather unsatisfactory" in its review and classification. These scientists regarded certain members of the Advisory Committee as being "less than objective" in their review of the various studies.

9. On March 1, 1990, after assessing numerous cancer studies relevant to herbicide exposure, Dr. Jeanne Stellman, Ph.D., and Dr. Steven D. Stellman, Ph.D., reached the same conclusions as the experts from the Hutchinson Cancer Institute concerning the validity of the VA Advisory Committee's findings. The Stellmans' assessment of numerous cancer studies relevant to herbicide exposure strongly criticizes the Advisory Committee's scientific interpretation and policy judgments regarding the link between Agent Orange and Vietnam veterans. See Stellman & Stellman, "A Selection of Papers with Commentaries Relevant to the Science Interpretation and Policy: Agent Orange and Vietnam Veterans," (March 1, 1990).

10. On March 7, 1990, Dr. Robert Hartzman, one of the U.S. Navy's top medical researchers, also confirmed the views of the scientists from the Hutchinson Cancer Institute. Dr. Hartzman stated, "an inadequate process is being used to evaluate scientific publications for use in public policy." He further concluded that "the preponderance of evidence from the papers reviewed [by the Advisory Committee] weighs heavily in favor of an effect of Agent Orange on increased risk for non-Hodgkin's lymphoma."

11. Dr. Richard Albanese, a scientist intimately associated with government sponsored studies on the effects of exposure to Agent Orange, also reviewed the Advisory Committee's findings. He concluded that the Advisory Committee's work "has little or no scientific merit, and should not serve as a basis for compensation or regulatory decisions of any sort . . ." In

another paper, Dr. Albanese stated, "I estimate that the [Vietnam] Veterans are experiencing a 40% to 50% increase in sarcomas and non-Hodgkin's lymphoma rates."

12. In the course of my duties as Special Assistant to the Secretary of Veterans Affairs, I concluded that the Veterans' Advisory Committee on Environmental Hazards has not acted with impartiality in its review and assessment of the scientific evidence related to the association of Agent Orange with adverse health effects.

III. FRAUD, MANIPULATION, AND INTERFERENCE IN THE CENTERS FOR DISEASE CONTROL (CDC) STUDIES

13. In addition to the numerous new scientific studies published after 1984 showing an association between Agent Orange exposure in Vietnam and certain adverse health effects, there is new evidence that the data for studies conducted by the Centers for Disease Control (CDC) was manipulated by CDC in an effort to deny the link between Agent Orange exposure and health effects. New evidence also shows that political interference obstructed the CDC exposure study.

14. As concerns grew following the initial studies connecting Agent Orange exposure to adverse health effects, Congress commissioned a large scale epidemiological study to determine the potential health effects of Agent Orange on exposed Vietnam veterans. The Veterans Health Programs Extension and Improvement Act of 1979, Pub. L. No. 96-151, 93 Stat. 1097 (1979), authorized the VA to design and conduct the study. In 1981, Congress enacted the Veterans Health Care, Training, and Small Business Loan Act, Pub. L. No. 97-72, 95 Stat. 1061 (1981), which expanded the scope of the VA study to include a health study of Vietnam veterans, using service during the war as an exposure factor. However, in 1983 Congress transferred the responsibility for the study to CDC when it became evident that the VA's efforts were mired in delay. Three years after the passage of this legislation, the VA had not even begun the study.

15. The Human Resources and Intergovernmental Relations Subcommittee (the "Subcommittee") has investigated CDC studies conducted from 1982 to 1987. As a part of the Subcommittee's year-long investigation, public hearings were conducted on July 11, 1989 and on June 26, 1990 at which time I presented testimony on the findings of my report as Special Assistant to the Secretary of Veterans Affairs. As the hearings revealed, the design, implementation and conclusions of the CDC dioxin exposure study were so ill conceived and unscientific as to suggest that political pressures interfered with the kind of professional, unbiased review Congress sought to obtain. Oversight Review of CDC's Agent Orange Study: Hearing Before the Human Resources and Intergovernmental Relations Subcommittee of the Committee on

Government Operations, House of Representatives, 101st Cong., 1st Sess. (1989) ("1989 Agent Orange Hearing"). Links Between Agent Orange and Other Herbicides With Diseases: Hearing Before the Human Resources and Intergovernmental Relations Subcommittee of the Committee on Government Operations, House of Representatives, 101st Cong., 2d Sess. (1990).

16. On August 9, 1990, the Committee on Government Operations (the "Committee") submitted its Twelfth Report to Congress. The Committee's report is based on extensive investigation of the studies of Agent Orange exposure and Vietnam veterans' health conducted by the Centers for Disease Control (CDC) from 1982 to 1987. The Agent Orange Coverup: A Case of Flawed Science and Political Manipulation, Twelfth Report by the Committee on Government Operations Together with Dissenting Views, H.R. Rep. No. 672, 101st Cong., 2d Sess. 1-43 (1990).

17. The following statements include findings from the July 11, 1989 hearing and the July 26, 1990 hearing at which I testified. My statements also refer to the conclusions of the Committee on Government Operations which I support and adopt based on my own independent review of the evidence, in my capacity as Special Assistant to the Secretary of Veterans Affairs during the period in which I conducted the study for him.

18. In September 1987, CDC canceled the Agent Orange Exposure Study. The Committee believes, as I do, that there was a two-part strategy selected by the CDC that guaranteed the eventual cancellation of the study. As the Committee concluded, first, CDC ignored the military records experts at the Pentagon, created its own use of the records to establish exposure levels, and then diluted the study to the point that numerous veterans who were most likely to have high exposure were eliminated from the study; second, CDC attempted to justify its flawed exposure definition by testing it against a blood serum assay program which, itself, was based on false assumptions about the chemical's half-life in the human body. These unsound assumptions about the half-life of dioxin were thus used to validate the conclusions from a badly-designed exposure definition. Given these restrictions, it would have been impossible to validate exposure levels.

19. From my independent review of the evidence stated below, which I conducted as Special Assistant to the Secretary of Veterans Affairs, I agree with the Committee on Government Operations' conclusion that the Agent Orange exposure study should not have been canceled because CDC did not document its conclusion that exposure could not be assessed, nor did it explore alternative methods of determining exposure. The Committee concluded, as I do, that as discussed below, other methods of determining exposure were available but that CDC had intentionally disregarded them.

20. The Centers for Disease Control cited the inadequacy of military records regarding troop movements and the spraying of Agent Orange as the primary reason for the cancellation of the exposure study. The former Director of the U.S. Army and Joint Services Environmental Support Group ("ESG"), Lt. Col. Richard S. Christian (Ret.), disagreed with the CDC claim that military records were insufficient. Lt. Col. Christian testified that adequate military records do exist with which to identify company-specific movements, as well as spray locations, and that he had personally informed CDC of the existence of these records. 1989 Agent Orange Hearing 40-43 (statement of Richard S. Christian). The Committee found that CDC had unjustifiably discredited the military records provided to it by ESG.

21. Dr. Jeanne Stellman of Columbia University, who conducted a peer reviewed epidemiologic study for the American Legion, testified before the Subcommittee that available records were quite sufficient to establish a reliable exposure classification system. This American Legion-Columbia University study conclusively demonstrated that computerized data could be used to determine exposure to Agent Orange. 1989 Agent Orange Hearing 155-220 (statements of Steven Stellman, Ph.D. and Jeanne M. Stellman, Ph.D.), See also "American Legion and Columbia University Vietnam Experience Study," Environmental Research (December, 1988).

22. Dr. Dennis Smith, who worked on the CDC Agent Orange Project, was one of the people responsible for evaluating records provided to CDC by the Department of Defense. Dr. Smith testified that he and others at CDC believed that sufficient information existed to compensate for gaps in the military records transmitted by the Pentagon. He testified, however, that his superiors were resistant to exploring the alternatives. 1989 Agent Orange Hearing 76-110 (statement of Dennis M. Smith, M.D.).

23. In addition to CDC's false claim that military records were inadequate, there were other flaws with the CDC exposure study effort. When the protocol for this study and blood test procedures were examined, there appeared to be a purposeful effort to sabotage any chance of a meaningful Agent Orange exposure analysis. The Committee found, as I do, that the protocol for the CDC study had been changed from its original format, making it unlikely that the soldiers who received the heaviest exposure to the herbicide would be identified.

24. The Committee found, consistent with my analysis, that from the start CDC had disregarded the records of soldiers who would have been among the most likely to have been exposed. The original protocol contained numerous restrictions which had the effect of arbitrarily limiting the number and type of veterans selected for the study. Thus, only a small percentage of

available records were reviewed by CDC.

25. CDC further diluted the study by adding more restrictions to the criteria for the inclusion of subjects that were not contained in the original protocol.

26. The Committee found, as I do, that CDC made four serious modifications in the original protocol, the most serious being the selection of study subjects from battalions rather than companies. Originally, the study had called for subject veterans to be tracked by company level location. Company units of 200 men, rather than battalions of 1,000 men, were to be tracked to obtain greater precision for determining troop movements and to prevent misclassifying whether or not veterans had been exposed. Then, in 1985, CDC changed its protocol to have battalions serve as the basis for cohort selection and unit location. This change, as CDC admitted, diluted the study.

27. Another protocol change made by CDC involved the alteration of the protocol as to the length of time study subjects were to have served in Vietnam. For example, where the original protocol required subjects to have served a minimum of 9 months in combat companies, the CDC reduced the minimum to 6 months. These changes further diluted the study by reducing both the possibility that study subjects would have been exposed to Agent Orange and the degree of exposure. 1989 Agent Orange Hearing 46-49. See also 1989 Agent Orange Hearing at 149 (statement of John F. Sommer, Jr., Director National Veterans Affairs and Rehabilitation Commission, the American Legion).

28. As mentioned previously, CDC and the White House Agent Orange Working Group ("AOWG") primarily based its decision not to go forward with the study on its criticism of the ESG records. However, before the study was canceled, CDC tested its exposure definition by means of a "verification study" comparing blood tests with company placement records. At a meeting of the AOWG Science Panel on June 17, 1986, the Science Panel concluded that, "There is unanimous agreement that if a well-designed exposure verification study fails to validate individuals' exposures as determined from military records, the Agent Orange Epidemiological Study should be discontinued."

29. Thus, CDC based its conclusion that an exposure study could not be done, not only on the purported inadequacy of herbicide spray and troop movement records, but also on the results of blood tests of Vietnam veterans which ostensibly demonstrated that no association existed between serum dioxin levels and CDC's estimates of the likelihood of exposure to Agent Orange based on those same records. Inexplicably, the CDC then used these "negative" findings to conclude that not only could an exposure study not even be done, but that the "study," which was never even conducted, proves that Vietnam veterans were never exposed

to harmful doses of Agent Orange.

30. As the Committee concluded, the blood serum analysis, used as proof that an exposure study could not be conducted, was based on erroneous assumptions and a flawed analysis. For example, CDC's conclusion that the half-life of dioxin in the human body is 7.1 years was reached in disregard of warnings from CDC's own scientists and the National Academy of Sciences Institute of Medicine ("IOM") peer review committee that there was not sufficient evidence to support the longer half-life. IOM informed CDC that, because of the incorrect assumptions about the half-life of dioxin, the conclusions of the blood study were not supportable. IOM also rejected CDC's conclusion about the inadequacy of military records as a basis for exposure estimates, independent of any blood serum analysis.

31. In his testimony, under questioning from the Subcommittee Chairman, Rep. Weiss, Dr. Vernon Houk admitted that the senior statistician on the Agent Orange project believed that the dioxin blood analysis was so flawed that it had "a substantial likelihood that there would be essentially no correlation" between the exposure scores and the blood levels. Dr. Houk disagreed with this officially expressed opinion of the project's senior statistician and supported the validity of CDC's blood serum analysis. 1989 Agent Orange Hearing at 67 (statement of Vernon N. Houk, M.D., Director, Center for Environmental Health and Injury Control, Centers for Disease Control, U.S. Department of Health and Human Services).

32. In the course of my duties as Special Assistant to the Secretary of Veterans Affairs I have specifically reviewed the work of Dr. Vernon Houk in connection with Agent Orange studies, both in his capacity as a member of the AOWG and as a CDC official. It is my conclusion that Dr. Vernon Houk has made it his mission to manipulate scientific data and procedures so as to prevent the true facts about dioxin from being determined. Continuing to pursue this effort, Dr. Houk has been recently quoted in Time magazine, Aug. 26, 1991, The New York Times, Aug. 15, 1991, St. Louis, Washington, and other newspapers and media outlets, in an apparent public relations campaign; falsely claiming that previous assessments of the harmful effects of dioxin have been overestimated. These articles cite no credible basis for Dr. Houk's opinion. I consider this media campaign further evidence of Dr. Houk's attempts to cover up emerging evidence strongly confirming the harmful effects of dioxin.

33. Dr. Houk's politically motivated efforts to cover up the true effects of dioxin, and manipulate public perception, coincide with the similar, economically motivated, efforts of chemical companies that produce dioxin. They are, in my judgment, responsible for letters and articles that have been published in the media discounting the effects of dioxin on human

health. These chemical companies that place profits above other concerns, were very cunning in working out the 1984 Agent Orange settlement deal before all the scientific information -- such as that now presented in Dr. Jenkins' affidavit in this case or the disclosures recounted here about the way in which the supposedly objective government studies were manipulated -- became available. It is apparent that these same companies are now attempting to support the validity of that settlement, at the very time it is under review in this case, by means of a public relations campaign centered around the statements of Dr. Vernon Houk, whose work on the CDC Agent Orange study has been thoroughly discredited.

34. Upon discovering the irregularities in CDC procedures, Dr. Philip Landrigan, who was the former Director of the Environmental Hazards Branch at the CDC, stated: "Suspicion abounds that CDC did not look deeply enough into the existing records and did not exercise sufficient ingenuity in seeking to identify a potentially heavily exposed subset of veterans. . . . Further, I would argue that CDC should itself be raising the question." 1989 Agent Orange Hearing at 229 (statement of Philip J. Landrigan, M.D.).

35. In 1986, the Subcommittee on Oversight and Investigations of the Committee on Energy and Commerce documented how political officials of the Office of Management and Budget ("OMB"), who were untutored in science, interfered with and second-guessed the professional judgments of agency scientists and multidisciplinary panels of outside peer review experts to effectively alter or forestall CDC research on the effects of Agent Orange, primarily on the grounds that "enough" dioxin research had already been done. OMB Review of CDC Research: Impact of the Paperwork Reduction Act; A report Prepared for the Subcommittee on Oversight and Investigations of the Committee on Energy and Commerce, 99th Cong., 2nd Sess. (1986).

36. The Committee on Government Operations' Agent Orange hearings revealed additional examples of political interference in the CDC's Agent Orange projects by members of the White House Agent Orange Working Group. Evidence of political interference in the design and implementation of the CDC study and drafting of the results of the CDC study by Administration officials rather than CDC scientists, further destroys the credibility of the CDC exposure study efforts. The Committee concluded from this evidence, as do I, that the CDC study of the effects of dioxin on Vietnam veterans was controlled and obstructed by the White House, primarily through its AOWG and the OMB so as to prevent any useful findings by the CDC concerning the effects of Agent Orange. This obstruction was done pursuant to a strategy for denying liability in cases of toxic contamination.

IV. POLITICAL INTERFERENCE, SUPPRESSION OF CRITICAL DATA, AND THE ALTERATION OF RESULTS IN AIR FORCE "OPERATION RANCH HAND" STUDIES

37. The Air Force Health Study is a separate government sponsored epidemiologic investigation to determine whether certain adverse health effects among Air Force veterans who participated in the "Operation Ranch Hand" Agent Orange spraying missions, were caused by exposure to the herbicide. This study consists of both mortality and morbidity components.

38. On January 24, 1984, Air Force scientists studying Vietnam veterans who had participated in the Ranch Hand spraying missions, issued a draft of baseline morbidity study results. The draft was prepared for the Ranch Hand Advisory Committee. In its final conclusion, the study states, "It is incorrect to interpret this baseline study as 'negative'. . . The Ranch Hand study discloses numerous medical findings, a few of concern but most of a minor nature that merit complete and proper follow-up in accordance with the study protocol. The fact that the study findings are not wholly [sic] consistent with the bulk of RVN [Republic of Vietnam] veteran complaints may be somewhat reassuring to the Ranch Handlers and to their families at this time." "Air Force Health Study (Project Ranch Hand II): An Epidemiologic Investigation of Health Effects in Air Force Personnel Following Exposure to Herbicides: Baseline Morbidity Results." Air Force Working Draft Prepared for Advisory Committee (January 24, 1984).

39. Then, on February 24, 1984, after the Ranch Hand Advisory Committee, which operates under the White House Agent Orange Working Group of the Domestic Policy Council, had reviewed the January 1984 working draft, the Air Force issued the final version of the baseline morbidity study results. The Ranch Hand Advisory Committee had changed the final conclusion of the report from the January working draft version in some very important ways. The February 1984 version no longer stated "It is incorrect to interpret this baseline study as 'negative.'" The February final draft conclusion stated, "This study has disclosed numerous medical findings, mostly of a minor or undetermined nature, that require detailed follow-up. In full context, the baseline study results should be viewed as reassuring to Ranch Handlers and to their families at this time, because this study has not identified statistical group differences for illnesses commonly attributed to dioxin exposure. . . . This baseline report concludes that there is insufficient evidence to support a cause and effect relationship between herbicide exposure and adverse health in the Ranch Hand group at this time." Lathrop, G.D., W. H. Wolfe, R. A. Albanese, and P.M. Moynahan "Air Force Health Study (Project Ranch Hand II): An Epidemiological Investigation of Health Effects In Air Force Personnel Following

Exposure to Herbicides: Baseline Morbidity Results" (February 24, 1984).

40. By altering the study's conclusion just prior to the May 1984 settlement of In re Agent Orange Product Liability Litigation, opponents of Agent Orange compensation were able to point to "irrefutable proof" that Agent Orange is not a health problem. If those veterans most heavily exposed to Agent Orange did not manifest any serious health problems, they argued, then it could safely be deduced that no veteran allegedly exposed to Agent Orange in smaller doses could have health problems.

41. On March 9, 1990, Senator Daschle reported to Congress that the changes in the draft of the baseline morbidity study, after the Advisory Committee operating under the White House Agent Orange Working Group reviewed it, show political interference in the Air Force Ranch Hand study. When Senator Daschle inquired of Air Force scientists why discrepancies existed between an Air Force draft of the Ranch Hand Study and the final report actually released to the press, the answers suggested the perpetration of fraudulent conclusions. As Senator Daschle pointed out, Air Force and White House management representatives were involved in scientific decisions in spite of the study's protocol which prohibited such involvement. 136 Cong. Rec. S2551 (1990) (statement of Sen. Daschle).

42. Not until 1987 did it become clear that the Air Force had also suppressed critical data in 1984 when Ranch Hand scientists confirmed that an unpublished report had shown that birth defects among Ranch Hand children were double those of the control group. 135 Cong. Rec. S16543 (1989) (statement of Sen. Daschle).

43. This December 17, 1984, Air Force birth defects study concluding that "There was an increase in the risk of Ranch Hand birth defects with time (pre versus post - Southeast Asia), and this change is statistically significant," had remained unpublished. The study also concluded, "A significant change in risk of the occurrence of neonatal death was noted . . ." USAF School of Aerospace Medicine, "Project Ranch Hand II: An Epidemiological Investigation of Health Effects In Air Force Personnel Following Exposure to Herbicides: Reproductive Outcome Update," WORKING DRAFT - NOT FOR PUBLIC RELEASE (December 17, 1984).

44. In an August 25, 1987 letter to Senator Daschle, Colonel William Wolfe, Chief of the Epidemiology Division for the Air Force, explained the reason why the Air Force birth defects study remained unpublished. "A report of the analyses of these data was submitted to the Advisory Committee in 1984 but they recommended that it not be published."

V. CONCLUSION

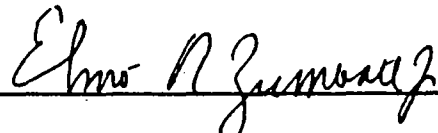
45. It is my conclusion drawn from my analysis of the available evidence, in connection with my duties while I served as special assistant to the Secretary of Veterans Affairs, that:

1) The major federal government health studies on the effects of Agent Orange on Vietnam veterans have significantly understated those effects as a result of deliberate political manipulation of scientific data and methodology.

2) Numerous studies done by scientists who work independently of either such political influence, or the conflicting interests of the corporations who produced Agent Orange, provide valid scientific evidence that Agent Orange has caused a variety of adverse health effects among veterans exposed to the herbicide in Vietnam.

46. The information upon which these conclusions are based has for the most part become available only after 1984. Any conclusion made in 1984 denying that Vietnam veterans were injured by their exposure to Agent Orange was made on the basis of inaccurate and incomplete data, and, therefore, in light of information currently available, has no scientific validity.

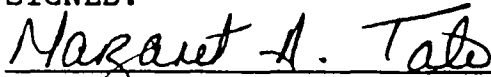
The foregoing affidavit is a true and accurate statement of my testimony in the above-captioned case to the best of my knowledge and belief.



Admiral Elmo R. Zumwalt, Jr.

Signed and sworn before me by ELMO R. ZUMWALT, JR.
this 28th day of AUGUST 1991.
My commission expires on the 9th day of August 1996.

SIGNED:



Notary Public

9

9

3977

D-4073

Worker buries feelings of guilt as toxic chemicals are dug up

— WORKER, from page B1

snowmelt into the lakes serving the desert in Arizona.

In June 1969, the silvex spraying was carried out at two canyons, Icehouse and Kellner, south of Globe.

Several residents of the area were sprayed as they watched the helicopter, and one of them, Billeg Shoecraft, died nine years later of leukemia, which she believed was caused by the spraying, although it never was proved.

Forestry officials are uncertain why Middle Mountain was picked for the dump site, but John Bedell, supervisor of the Apache-Sitgreaves National Forest, offered this theory: "Probably in the heat of battle, some guys decided they had to put it somewhere, and they picked a site that was as remote as it could be."

Najar's first contact with silvex occurred in 1971, three years after he went to work as a heavy-equipment operator with the Forest Service in the Alpine area.

"There was a bunch of us up here (on Middle Mountain) piling up brush from a timber sale," said Najar, who lives in Alpine. "And one day, some Forest Service guys I'd never seen before drove up in a truck and said they had something that had to be buried right away, and I did as I was told."

Najar maneuvered his D-6 Caterpillar to the edge of a small clearing just below an old logging road and

dug a hole about 10 feet deep, 8 feet wide and 40 feet long. After the cargo was buried, he covered it up.

But he didn't forget.

"I always wondered what was in those barrels," Najar said. "And I always wondered if I was doing the right thing by not saying anything about it."

A little more than a year ago, he decided he'd speak up, after he attended a Forest Service seminar on hazardous materials.

"We're pleased that he did," said Walt Brooks of Eagar, forest engineer for the Apache-Sitgreaves National Forest. "No one around here had any idea what was up there."

"And instead of giving him a bad time, like might have happened someplace else, we gave Herman a \$1,000 award."

Forest Service crews took their first look at the Middle Mountain dump in the summer of 1990 and discovered that the dump didn't appear to have damaged the surrounding forest. After unearthing one 55-gallon drum, which by then had developed a leak, they decided to seal off the site and wait before doing any more digging.

Lab tests later confirmed that the liquid seeping from the drum was silvex. Brooks said, but the Forest Service was unsure how to proceed with a cleanup, and it did not have the money. The budget problems were solved by including cleanup funds in the agency budget that started July 1. Then the EPA was called in for its

expertise.

The cleanup started Sept. 28.

Gathered at the edge of the mountain meadow were the EPA disaster-cleanup coordinator, a two-man crew from the Coast Guard's Pacific strike team, which deals with hazardous materials, and a four-member crew from Disposal Control Service, a Phoenix firm that deals in the cleanup of hazardous-material spills.

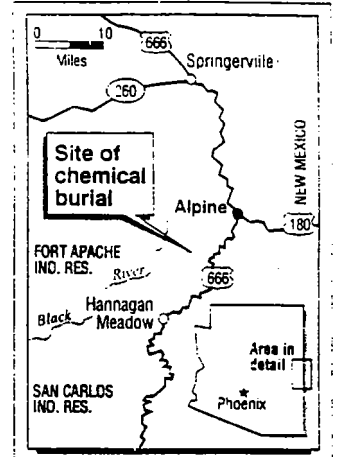
A backhoe and its operator probed the hole. Men wearing protective "moon" suits climbed in and out of the pit, tying barrels to the backhoe bucket for removal. The liquid chemical was pumped into new barrels, which later will be stored in a hazardous-material warehouse.

The earth that had surrounded the old barrels was spread onto the logging road. There it was mixed with sawdust and fertilizer, and this process, with help from Mother Nature, should result in decontamination of the soil in about a year.

The total bill for the cleanup, and for building an 8-foot-high fence around the dump, is expected to run about \$100,000, Brooks said.

The dump is not believed to have caused any environmental damage, said Robert Mandel, EPA cleanup coordinator based in San Francisco.

Five families living in Icehouse and Kellner canyons sued the federal government and several chemical firms over the spraying program. The lawsuit was settled out of court.



The Arizona Republic

Toxics dug up, he buries his guilt

By Fred Smith
The Arizona Republic

ALPINE — Twenty years ago, Herman Najar participated in a graveside service in a pretty mountain meadow 10 miles southwest of Alpine, and the interment later became a nightmare that wouldn't end.

But late last month, Najar's conscience was cleared.

As Najar watched, a crew supervised by the U.S. Environmental Protection Agency uncovered the burial site on Middle Mountain and removed about 30 containers filled with a toxic chemical that once figured in the history of Globe, which is far from Middle Mountain.

That chemical is silvex, a defoliant much like Agent Orange, which was used in the jungles of Vietnam and later became the subject of numerous lawsuits filed by soldiers who came in contact with it.

In the Globe area, silvex was sprayed by helicopter in a cooperative program between the U.S. Forest Service and the Salt River Project in the late 1960s to rid canyons of plants that were believed to impede water runoff. Removing the vegetation, according to beliefs at the time, would increase the water flow from winter

— See WORKER, page B4

(Mr. Stobodine - this is information a friend in Globe, Az. mailed to me. He was one of several that have settled with out of court on silvex contamination. D. Park)

3978

D-4074

Wilma this helps prove the point that
 we had for years. "They Know" all the time
 something was wrong with that bunch of chem. &
 Silver. Kuron & Agent Orange are the same thing
 only 8% are a little diff 24.2 ^{Kuron} 27458P 243T
 orange

one of my employees died in my arms in 1970
 Paul my little boy had childhood cancer & I
 came down with Fibrosarcoma soft tissue
 Sarcoma 'gene Finger print' D.O.W. Plant
 This was proven in court & DOW said yes
 we are sorry - but they gagged us so
 as to keep it covered up.

1000
Bob

call or have your friend call.
for anything I have

B4 Th
 Wc
 as
 - WOOD
 snowmelt
 desert in A
 In June
 was camp
 Icehouse
 Several
 sprayed
 ter, and
 died
 which
 spraying
 proved.
 Forest
 Middle M
 dump site
 of the A
 Forest, off
 in the he
 decided the
 and they
 remote as
 Najar's
 occurred
 went to
 operator
 Alpine are
 "There
 (on Middle
 from a tim
 lives in Al
 Forest Ser
 before dro
 they had
 buried righ
 told."
 Najar
 pillar to th
 just below

10

3980

D-4076

10

THE LANCET

Vol 338

Saturday 19 October 1991

No 8773

ORIGINAL ARTICLES

Cancer mortality among workers in chemical plant contaminated with dioxin

A. MANZ J. BERGER J. H. DWYER D. FLESCH-JANYNS
S. NAGEL H. WALTSGOTT

Dioxin (2,3,7,8-tetrachlorodibenzo-*p*-dioxin or TCDD) can arise as a contaminant in the production of herbicides. It causes chloracne in those exposed to it but its human carcinogenicity has been a matter of dispute. We report here a mortality follow-up of 1583 workers (1184 men, 399 women) employed in a chemical plant in Germany that produced herbicides, including processes contaminated with TCDD. Production of TCDD was reduced from 1954 after an outbreak of chloracne.

Vital status up to 1989 was determined for 97.1% of workers hired between 1952 and 1984, and 367 deaths (313 men, 54 women) were recorded. A malignant neoplasm was the underlying cause of death in 93 men and 20 women. Standardised mortality ratios (SMR) were calculated with, as references, national mortality statistics for West Germany and deaths in a cohort of male gas workers; for total cancer mortality they were 1.24 (95% confidence interval 1.00-1.52) and 1.39 (1.10-1.75), respectively, among men. Cancer mortality was increased among men with 20 or more years of employment (SMR=1.87 [Germany] and 1.82 [gas workers]) and among men who began employment before 1955 (SMR=1.61 and 1.87). The group with suspected highest exposure to TCDD had SMRs of 1.42 and 1.78. Only 7% of cohort women worked in the high exposure locations in the plant, compared with 39.6% of men, and no increased risk of cancer mortality was observed among women; but breast cancer mortality was raised (SRM=2.15).

These results, together with a US occupational study and a German investigation of accidental exposure, support the hypothesis that TCDD is a human carcinogen.

Lancet 1991; 338: 959-64.

Introduction

Although a relation between risk of malignancy at several sites and exposure to 2,3,7,8-tetrachlorodibenzo-*p*-dioxin (dioxin, TCDD) has been observed in animals,^{1,2} the human carcinogenicity of TCDD remains controversial.^{4,5} The debate stems primarily from inconsistent findings in case-referent studies relating risk of soft-tissue sarcoma or non-Hodgkin's lymphoma to herbicide exposure. Several investigators have detected a positive association⁶⁻⁹ but others have not.^{10,11} Epidemiological associations between TCDD exposure and other cancers have also been reported.^{12,14}

Follow-up of a US cohort of over 5000 TCDD-exposed workers has added substantially to the evidence. Fingerhut et al¹⁴ found an increase in mortality from all cancers (standardised mortality ratio [SMR]=1.46; 95% confidence interval [CI] 1.21-1.76), and from respiratory cancer and soft-tissue sarcoma in men exposed to TCDD for more than a year and with an opportunity for a minimum latency of 20 years. The finding for all cancers is consistent with a German study of 247 workers exposed to TCDD during a thermochemical accident in 1953.¹⁵ There was a significant increase in total cancer mortality (SMR=2.01 [1.22-3.15]) in the subgroup with chloracne and more than 20 years since exposure.

We describe here a retrospective cancer mortality study of chemical workers employed in an herbicide plant in Hamburg. The plant was heavily contaminated with TCDD from the production of trichlorophenol (TCP) and 2,4,5-trichlorophenoxyacetic acid (2,4,5-T).

ADDRESSES: Centre for Chemical Workers' Health, Hamburg Department of Health (Prof A. Manz, MD, D. Flesch-Janys, H. Waltsgott); Institute for Mathematics and Computer Science in Medicine, University Hospital Eppendorf, Hamburg, Germany (Prof J. Berger, PhD, S. Nagel, MD); and Department of Preventive Medicine, Institute for Prevention Research, Alhambra, California, USA (J. H. Dwyer, PhD). Correspondence to Prof Dr med A. Manz, Beratungsstelle für Chemiearbeiter, Fuhlsbüttel Strasse 401, D-2000 Hamburg 60, Germany.

3981

D-4077

TABLE I—VITAL STATUS BY EXPOSURE GROUPS

Vital status	Exposure group			Total
	I	II	III	
Men				
Unknown	10 (2.1%)	22 (3.5%)	3 (3.8%)	35 (3.0%)
Known alive	349 (74.4%)	442 (69.5%)	46 (58.2%)	836 (70.6%)
Dead	110 (23.5%)	172 (27.0%)	30 (38.0%)	313 (26.4%)
Total	469 (39.6%)	636 (53.7%)	79 (6.7%)	1184 (100.0%)
Women				
Unknown		10 (3.8%)	1 (0.9%)	11 (2.8%)
Known alive	24 (88.9%)	215 (81.1%)	95 (88.8%)	334 (83.7%)
Dead	3 (11.1%)	40 (15.1%)	11 (10.3%)	54 (13.5%)
Total	27 (6.8%)	265 (66.4%)	107 (26.8%)	399 (100.0%)

Materials and methods

Chemical plant

Public concern over potential hazards from disposal of waste products contaminated with TCDD and other higher chlorinated dioxins led to closure, on June 18, 1984, of a chemical plant in Hamburg-Moorfleet operated by Boehringer-Ingelheim. Production of herbicides began in late 1951. These products included 2,4,5-T, hexachlorocyclohexane (HCH), and lindane. Other products of the plant included dichlorobromophenol and opioids. Synthesis of 2,4,5-T was based upon TCP supplied by a plant in Ingelheim. In response to an outbreak of chloracne in 1954, production of TCP and 2,4,5-T was halted. TCP and 2,4,5-T production were resumed in 1957. Resumption of TCP production was made feasible by a new process that reduced the production of TCDD which, in the meantime, had been identified as a cause of chloracne.

Cohort

The cohort studied consists of all regular employees at the Hamburg-Moorfleet plant who worked under contract with Boehringer-Ingelheim for at least 3 months during the period Jan 1, 1952, to Dec 31, 1984. Temporary or casual workers were not included because of lack of complete information concerning their identity, even though they might have experienced high level acute exposures during clean-up operations. Cohort members were identified from company personnel and union election records, and from employees identified in that way.

Mortality follow-up

Community registries of inhabitants throughout West Germany were used to determine the vital status of cohort members in 1989. Causes of death were derived from medical records. When no medical records were available, death certificates and information from next of kin were used. An experienced nosologist assigned the underlying cause of death according to WHO criteria in the 9th revision of the International Classification of Disease (ICD). All deaths attributed to malignant neoplasms were classified on the basis of medical records.

TCDD exposure

Assessment of exposure to TCDD was based on an analysis of production processes. TCDD concentrations were measured in nonsystematic samples of precursor materials, products, waste, and soil from the grounds of the plant, mainly after the plant had closed in 1984.¹⁴ These indicated TCDD concentrations up to 60 mg/kg in waste from the production of 2,4,5-T. On the basis of this information workers were classified as having had high, medium, or low exposure according to the production departments where they had worked. The numbers were: group 1 (high) 496, group 2 (medium) 901, and group 3 (low) 186.

The validity of these categories was evaluated by analysis of TCDD in adipose tissue from 48 unselected members of the cohort, who volunteered for tests done at the University of Mainz in 1985 (Prof J. Konietzko, personal communication; see also Beck et al¹⁷). TCDD levels, in ng/kg, averaged 296 (SD 479, median 137) in 37

TABLE II—CAUSES OF DEATH

	ICD	Men	Women
Observed death	..	313	54
Cause of death known	..	308 (100%)	52 (100%)
Malignant neoplasms	140-208	93 (30.2%)	20 (38.2%)
Other natural causes	240-799	172 (55.8%)	28 (53.8%)
Unnatural causes	E800-999	43 (14.0%)	4 (7.7%)
Accident		20 (6.5%)	2 (3.9%)
Suicide		22 (7.1%)	2 (3.9%)
Other		1 (0.4%)	0

volunteers in group 1 compared with 83 (SD 73, median 60) for 11 in groups 2 and 3 combined. The median in groups 2 and 3 is higher than the "background" levels of 7-20 ng/kg reported for unexposed persons.¹⁷ TCDD levels in 5 workers in group 1 were below 20, suggesting the possibility of misclassification error; such an error would attenuate any associations between measured exposure and cancer risk.

Chloracne as a marker for TCDD exposure^{15,18,19} was not used here because information about chloracne in the Boehringer cohort was too incomplete. Chloracne may be fairly specific for TCDD, but it is not very sensitive: Beck et al¹⁷ found that only 10 (28%) of those workers from the Boehringer cohort with adipose levels of TCDD exceeding 20 parts per 10¹² had a history of chloracne.

Two other variables expected to be related to TCDD exposure are duration of employment at the plant (less than 20, 20 or more years) and year in which employment began (1954 or earlier for it is presumed that those starting work before 1955 would have had higher levels of TCDD exposure).

Comparison groups

Studies with national or regional mortality data as a reference suffer from the "healthy worker" effect—the tendency of cohorts of industrial workers to have a lower risk of early mortality due to cancer and heart disease than the general population. In this study national mortality data were augmented with a second comparison group selected a priori—namely, 3417 male workers at the Hamburg gas supply company, used as controls in a cohort study of furnace workers. This cohort was investigated by some of us,²⁰ using the same methods to assess vital status and cause of death as with the Boehringer cohort. The follow-up covered the years 1900-85, but was restricted to 1952-85 for comparison with the Boehringer cohort. Amongst the 3120 male workers 1220 deaths were recorded. The follow-up period for the Boehringer cohort was also restricted to 1985. The two cohorts differ in that gas workers had to have worked for at least 10 years to be included while only 3 months of employment were required for the Boehringer cohort. There is no indication of substantial differences in social status between the two cohorts.

Review of medical records

160 medical records from the Boehringer cohort (including 115 cases with a malignant neoplasm at time of death) and 111 medical records from cancer cases of the control group were reviewed by two pathologists, who did not know the cohort status of the cases.

Statistical methods

SMR were calculated by the person-year method.²¹ Expected deaths were computed by applying the observed age, calendar year,

TABLE III—SOURCES OF DIAGNOSIS (MALIGNANT NEOPLASMS AND OTHER CAUSES)

Source	Other causes	Malignant neoplasms	Total
Necropsy, histology	62 (25.1%)	69 (61.1%)	131 (36.4%)
Clinical report	85 (34.4%)	32 (28.3%)	117 (32.5%)
Physician report	54 (21.9%)	12 (10.6%)	66 (18.3%)
Other	46 (18.6%)	— (0.0%)	46 (12.8%)
Total	247 (68.6%)	113 (31.4%)	360* (100.0%)

*Deceased with known causes.

3982

D-4078

TABLE IV—STANDARDISED MORTALITY RATIOS (MEN, ALL CAUSES) WITH WEST GERMAN NATIONAL DATA AND GAS WORKERS AS REFERENCES

Group	No	West German reference			Gas workers' reference*		
		O	E	SMR	O	E	SMR
Total	1148	313	312.8	1.00 (0.89-1.12)	249	186.2	1.34 (1.18-1.51)
Entry ≤ 1954	296	123	131.5	0.94 (0.78-1.12)	102	90.2	1.27 (1.04-1.54)
Entry > 1954	852	190	181.2	1.05 (0.91-1.21)	147	106.0	1.39 (1.17-1.63)
Employment < 20 yr	1030	279	277.0	1.01 (0.89-1.13)	227	164.9	1.38 (1.20-1.57)
Employment ≥ 20 yr	118	34	35.7	0.95 (0.66-1.33)	22	21.3	1.03 (0.65-1.56)

No = number of men; O = observed; E = expected; SMR = standardised mortality ratio (with 95% CI).

*In comparison with gas workers Boehringer cohort was restricted to 1985.

sex, and cause specific mortality rates of the gas workers or rates for West Germany to the person-years of the Boehringer cohort. National mortality data were available from the Federal Office of Statistics for most malignant neoplasms of interest, though for some only since 1965. 95% confidence intervals (CI) were calculated assuming the Poisson distribution. The program used for calculations was developed at the Institute of Mathematics and Computer Science, University Hospital Eppendorf, Hamburg.

Results

The Boehringer cohort included 1184 men and 399 women (table I). No company records could be located for 39 men and 14 women identified from union registers or by interview with cohort members. In this group 8 deaths in men and 2 in women were recorded. The date of birth was not available for 1 person.

Vital status was determined for 1537 persons (97.1%) by 1989. 367 deaths were documented (313 men, 54 women; table II). For 7 cases (1.9%) causes of death remained unknown. Table III shows the distribution of sources of diagnosis.

The reviewing pathologists confirmed malignant neoplasm as the underlying cause of death in 111 cases (91 men, 20 women). 1 death out of 111 records of the gas worker group was not attributed to cancer. 2 additional cases, confirmed by necropsy, were identified after the review in the Boehringer cohort. 1 additional case of lung cancer in a man who had died in 1958 was reported by his next of kin, but no medical record was available. This case was not included in the statistical analysis. Thus malignant neoplasm was the underlying cause of death in 93 men and 20 women.

Mortality among men

Total mortality equalled that of West Germany (SMR 1.00) but was higher than that in the gas worker cohort (1.34)

(table IV). The SMR was slightly greater for those who began employment after 1954 than for those who began before 1955. For the men working up to 20 years SMRs were 1.01 and 1.38 with national and gas-worker data as reference; for the group with more than 20 years, employment SMRs were 0.95 and 1.03, respectively.

Mortality due to malignant neoplasms (table V) was increased with both national (SMR 1.24) and gas-workers (SMR 1.39) references. Analysis after division of the Boehringer cohort by year of employment entry revealed an increased SMR for all malignant neoplasms among those who entered in 1954 or earlier (SMRs 1.61 and 1.87) but not for those starting employment later. An increase in risk of cancer death was also found for employment at the plant lasting 20 or more years, SMRs being 1.87 (West Germany) and 1.82 (gas workers). Employment duration and year of entry are highly correlated; nevertheless the cancer mortality risk was more than doubled for those men who both began employment before 1955 and worked at the plant for 20 years or more (table V).

SMRs for exposure group 1 were raised (table VI); increases were also found for group 2 and group 3 but the CIs were large and included unity. The subgroup with time of entry before 1955 high exposure, and employment for 20 or more years had the greatest increase in risk: SMR (West Germany) was 3.5 (1.51, 6.90) for 8 deaths.

Table VII shows SMRs by cancer site. For SMRs (West Germany) there were increases for all sites except colon, but all 95% CIs include unity. In comparison with the gas workers, mortality from lung cancer (SMR 1.67), and haematopoietic cancers (2.65) were significantly increased. On the Kiel classification 6 cases of non-Hodgkin lymphoma were observed (reticulosarcoma 2, lymphosarcoma 1, chronic lymphatic leukaemia 3)—but expected numbers for West Germany were not available.

TABLE V—STANDARDISED MORTALITY RATIOS (MEN, MALIGNANT NEOPLASMS) WITH WEST GERMAN NATIONAL DATA AND GAS WORKERS AS REFERENCES

Duration of employment (yr)	No	West German reference			Gas workers' reference*		
		O	E	SMR	O	E	SMR
Total cohort	1148	93	75.2	1.24 (1.00-1.52)	75	53.8	1.39 (1.10-1.75)
Duration of employment							
0-4	653	39	34.9	1.12 (0.80-1.53)	32	23.7	1.35 (0.93-1.91)
5-9	158	14	13.3	1.06 (0.58-1.77)	13	10.2	1.27 (0.68-2.18)
10-19	219	22	17.4	1.27 (0.79-1.92)	17	12.8	1.33 (0.78-2.13)
≥ 20	118	18	9.7	1.87 (1.11-2.95)	13	7.1	1.82 (0.97-3.11)
Entry ≤ 1954	296	51	31.6	1.61 (1.20-2.12)	43	23.0	1.87 (1.36-2.52)
0-4	157	14	11.8	1.19 (0.65-2.00)	12	7.9	1.53 (0.79-2.67)
5-9	29	5	4.4	1.12 (0.37-2.63)	5	3.7	1.36 (0.44-3.17)
10-19	35	15	7.7	1.95 (1.09-3.21)	13	5.6	2.31 (1.23-3.95)
≥ 20	75	17	7.7	2.21 (1.29-3.53)	13	5.8	2.24 (1.19-3.83)
Entry > 1954	852	42	43.6	0.96 (0.69-1.30)	32	30.8	1.04 (0.71-1.47)
0-4	496	25	23.2	1.08 (0.70-1.59)	20	15.8	1.27 (0.77-1.96)
5-9	129	9	8.8	1.02 (0.47-1.94)	8	6.5	1.23 (0.53-2.42)
10-19	184	7	9.6	0.73 (0.29-1.50)	4	7.1	0.56 (0.15-1.43)
≥ 20	43	1	1.9	0.52	0	1.3	

TABLE VI—STANDARDISED MORTALITY RATIOS (MEN, MALIGNANT NEOPLASMS) BY TCDD EXPOSURE GROUP AND WITH WEST GERMAN NATIONAL DATA AND GAS WORKERS AS REFERENCES

Exposure group	No	West German reference			Gas workers' reference		
		O	E	SMR	O	E	SMR
<i>Total cohort</i>							
I	459	34	23.9	1.42 (0.98-1.99)	29	16.3	1.78 (1.19-2.55)
II	613	50	45.1	1.11 (0.82-1.46)	39	32.6	1.20 (0.85-1.63)
III	76	9	6.2	1.45 (0.66-2.75)	7	4.8	1.45 (0.58-2.99)
<i>Duration of employment < 20 yr</i>							
I	410	26	20.8	1.25 (0.82-1.83)	22	14.0	1.57 (0.98-2.37)
II	551	41	39.1	1.05 (0.75-1.42)	32	28.2	1.13 (0.78-1.60)
III	69	8	5.6	1.42 (0.61-2.79)	7	4.4	1.60 (0.64-3.29)
<i>Duration of employment ≥ 20 yr</i>							
I	49	8	3.1	2.54 (1.10-5.00)	7	2.3	3.07 (1.24-6.33)
II	62	9	5.9	1.52 (0.69-2.68)	6	4.4	1.36 (0.50-2.96)
III	7	1	0.6	1.78	0	0.5	
<i>Entry ≤ 1954</i>							
I	96	18	8.5	2.11 (1.25-3.34)	16	5.7	2.77 (1.59-4.53)
II	173	26	18.8	1.38 (0.90-2.02)	22	13.7	1.61 (1.10-2.44)
III	27	7	4.3	1.64 (0.66-3.39)	5	3.6	1.41 (0.46-3.28)
<i>Entry > 1954</i>							
I	363	16	15.4	1.04 (0.59-1.69)	13	10.6	1.23 (0.65-2.10)
II	440	24	26.2	0.92 (0.59-1.36)	17	19.0	0.90 (0.52-1.44)
III	49	2	1.9	1.03 (0.12-3.71)	2	1.3	1.57 (0.19-5.67)

No death due to soft-tissue sarcoma (ICD 171) was observed.

14.0% of deaths in men were due to unnatural causes ($n = 43$). There were 22 suicides, yielding an SMR of 2.29 (1.38, 3.57) with West Germany as the reference and 3.90 (2.42, 5.97) with the gas workers.

Mortality among women

The 54 deaths in women yielded an SMR (West Germany) of 0.80 (0.60, 1.05). For malignant neoplasms the SMR was 0.94 (0.58, 1.45) but only the SMR for carcinoma of the breast was raised at 2.15 (0.98, 4.09) for 9 deaths. The 4 deaths due to unnatural causes included 2 suicides. Only 6.9% of women worked in high exposure departments.

Cancer incidence

12 cases of malignant neoplasm in living men were known at the end of the follow-up in 1989. These were prostate, urinary bladder (2), floor of the mouth, larynx, colon, rectum, bronchus, spinocellular carcinoma, melanoma, non-Hodgkin lymphoma, and myeloproliferative syndrome. The men with bronchial carcinoma had myeloproliferative syndrome and a urinary bladder papilloma.

8 malignant neoplasms among living women were breast (5), uterus, pancreas, and colon/skin; in 1 case of breast cancer additionally a carcinoma of the skin was diagnosed.

Smoking

Data on smoking were available for a non-representative group of 361 men in the Boehringer cohort. 73% were self-reported smokers. In the gas worker cohort 76% of 2860 men were smokers.

Discussion

Company and union records provided almost complete coverage of the cohort. This, with the mortality follow-up of 97%, makes it unlikely that there is any serious information bias in the Boehringer cohort. In cohort studies there is always the problem which control group is "best". By using gas workers we could better control for the healthy worker effect and occupational exposure to carcinogens. The national mortality data enabled us to identify the magnitude of risk in relation to the population and help comparison of our results with other studies. The use of two standards makes it less likely that the observed effects are due to uncontrolled confounding. The different inclusion criteria for the Boehringer and gas worker groups with respect to length of employment required for entry to the cohort did not seriously bias the results since restricting the comparison to Boehringer workers with duration of employment greater than 10 years did not substantially change the findings.

The national data came from death certificates, whereas in the Boehringer cohort medical records were used. When 190 death certificates in the Boehringer cohort were reviewed, 54

TABLE VII—STANDARDISED MORTALITY RATIOS (MEN, BY SITE) WITH WEST GERMAN NATIONAL DATA AND GAS WORKERS AS REFERENCES

Site	ICD	No	West German reference			Gas workers' reference		
			O	E	SMR	O	E	SMR
Hypopharynx	148	1148	2	1.4	1.42 (0.17-5.14)			
Oesophagus	150	1148	3	1.6	1.86 (0.38-5.44)	2	0.6	3.23 (0.39-11.69)
Stomach	151	1148	12	9.9	1.21 (0.63-2.12)	10	8.9	1.11 (0.54-2.06)
Colon	153-154	1148	8	8.7	0.92 (0.40-1.82)	6	7.9	0.76 (0.28-1.66)
Larynx	161	1148	2	1.0	2.00 (0.24-7.08)			
Lung	162	1148	30	21.3	1.41 (0.95-2.01)	26	15.6	1.67 (1.09-2.44)
Skin	172	1148	1	0.8	1.28	1	1.2	
Prostate	185	1148	7	4.9*	1.42 (0.57-2.93)	5	3.6	1.40 (0.46-3.27)
Kidney	189	1148	3	1.9*	1.56 (0.32-4.56)	4	1.4	2.90 (0.78-7.36)
Haematopoietic system	200-208	1148	7	4.2*	1.67 (0.67-3.44)	9	3.4	2.65 (1.21-5.03)

*References data available only since 1965

3984

D-4080

were from cases classified as cancer deaths. In 51 there was concordance; in 3 cases the death certificates did not identify a malignant neoplasm as the underlying cause of death. In 1 case out of 136 classified as non-cancer the death certificate mentioned "occult neoplasm" (ICD 199), whereas the study diagnosis did not. It thus appears unlikely that serious underestimation of expected deaths based on national rates^{22,23} is an explanation for the observed effects.

The risk of cancer mortality was less for members of the Boehringer cohort who began employment at the plant after 1954 than for those who began earlier. During 1951-54, high concentrations of TCDD were present as a contaminant of TCP. In the following years the incidence of chloracne decreased, but cases continued to be reported. Thus, declining exposure to TCDD is a possible explanation of changes in risk of cancer mortality according to date of entry. This interpretation is further supported by the absence of any other substantial changes in production processes at the Hamburg plant after 1954.

The relation between length of employment and risk of cancer mortality is further suggestive of a dose-response relation manifesting itself after a latency period. There were also differences in risk between exposure groups as reflected in departmental assignments. However, this was striking only in men working there for more than 20 years. The most striking effect was in members of exposure group 1, who entered in 1954 or earlier, and who were employed for 20 or more years.

Exposure to chemicals other than TCDD also occurred in different areas of the plant, and some of these are known or suspected carcinogens. Benzene was used extensively in the synthesis of technical HCH, so potential exposure existed in a part of exposure group 2. Dimethylsulphate was used as a solvent only for the production of opioids (group 3). Manual workers were probably exposed to some extent to asbestos. However, exposure to these substances explains neither the increased mortality from all cancers nor the observed pattern of associations with TCDD exposure groups.

Available data on smoking suggest that the percentage of smokers in the Boehringer cohort is similar to that in the gas worker control group. Thus, substantial confounding due to more smoking in the Boehringer cohort seems unlikely.

The similarity of the magnitude of relations between TCDD exposure and national mortality data in the Boehringer and the US National Institute for Occupational Safety and Health (NIOSH)¹⁴ cohorts is striking. There seems to be no healthy worker effect in either cohort. The SMR for mortality from all cancers was 1.15 in the NIOSH cohort and 1.24 in the Boehringer cohort (national data). No deaths due to soft-tissue sarcoma were found in the Boehringer cohort. However, the excess in the NIOSH cohort was based upon 3 deaths in a cohort almost five times as large as the Boehringer one. We found an increase in mortality from all hematopoietic cancers. This included 3 non-Hodgkin's lymphomas (ICD 200, 202). No detailed national mortality data on that were available but on an assumption of 1 expected case within 100 cancer deaths²⁴ that would be a three-fold increased risk. In the NIOSH cohort 10 were observed, yielding an SMR of 1.42 (haematopoietic) and 1.33 (NHL).

The NIOSH subcohort with more than 15 years of exposure showed an SMR of 1.41 (based on 25 cases across all latency categories), which is slightly higher than that of the groups with shorter duration of exposure. The effect in our suspected most heavily exposed subgroup (group 1 with

more than 20 years of employment, SMR 2.54) is more pronounced. Neither study shows a clear linear trend with duration of exposure. Zober et al¹⁵ found an increased cancer mortality in the chloracne subgroup with 20 years or more since first exposure (SMR 2.01; 90% CI 1.22-3.15). Even in the study of Ott et al²⁵ this group showed a slight elevation (1.27; 0.96-1.64).

As in the NIOSH study our results show that the increase in cancer mortality is not directed at special sites. TCDD induces tumours in different organs in animals and promotes tumour formation.^{1,2,26,27}

In women we found an increase in breast cancer mortality. In a Danish study²⁸ in the context of herbicide exposure there was no such increase but those women were exposed mainly to 4-chloro-2-methyl-phenoxyacetic acid, which is not thought to be contaminated with TCDD. Increased risks of suicide in cohorts potentially exposed to polychlorinated dioxins were recorded by Zober et al and Fitzgerald,²⁹ and Boyle et al³⁰ refer to three Vietnam veteran studies with slight increases in suicide rates. A relation to psychological disorders, a possible effect of exposure to polychlorinated dioxins, remains open.

The increase in cancer risk of 1.24-1.39 that we found in the Boehringer cohort cannot be explained completely by confounding factors, and our results suggest that this increase is associated with exposure to TCDD. Together with the results of Fingerhut, Zober, and their colleagues our study supports the hypothesis that TCDD is a human carcinogen.

Supported by the Freie und Hansestadt Hamburg, Behörde für Arbeit, Gesundheit und Soziales, and the Industriegewerkschaft Chemie, Papier, Keramik, Bezirk Nordmark-Berlin.

REFERENCES

- Kociba RJ, Keyes DG, Beyer JE, et al. Results of a two-year chronic toxicity and oncogenicity study of 2,3,7,8-tetrachloro-dibenzo-p-dioxin in rats. *Toxicol Appl Pharmacol* 1978; 46: 279-303.
- NTP (US National Toxicology Program). Carcinogenesis bioassay of 2,3,7,8-tetrachloro-dibenzo-p-dioxin (case no 1746-01-5) in Osborne-Mendel-rats and B6C3F1 mice (gavage study). Washington: US Government Printing Office (DHHS publication NIH 82-1765), 1982.
- Rao MS, Subbaro V, Prasad JD, Scarpelli DG. Carcinogenicity of 2,3,7,8-tetrachlorodibenzo-p-dioxin in the Syrian golden hamster. *Carcinogenesis* 1988; 9: 1677-79.
- Lilienfeld DE, Gallo MA. 2,4-D, 2,4,5-T, and 2,3,7,8-TCDD: an overview. *Epidemiol Review* 1989; 11: 28-58.
- Bond AG, Bodner KM, Cook RR. Phenoxy herbicides and cancer: Insufficient epidemiologic evidence for a causal relationship. *Fund Appl Toxicol* 1989; 12: 172-88.
- Eriksson M, Hardell L, Adami HO. Exposure to dioxins as a risk factor for soft tissue sarcoma: a population-based case-control study. *J Natl Cancer Inst* 1990; 82: 486-90.
- Hoar Zahm S, Weisenburger DD, Babbitt PA, Saal RC, Vaught JB, Kantor KP, Blair A. A case-control study of non-Hodgkin's lymphoma and the herbicide 2,4-dichlorophenoxyacetic acid (2,4-D) in Eastern Nebraska. *Epidemiology* 1990; 1: 349-56.
- Woods JS, Polissar L, Severson RK, Heuser LS, Kulander BG. Soft-tissue sarcoma and non-Hodgkin's lymphoma in relation to phenoxy herbicide and chlorinated phenol exposure in western Washington. *J Natl Cancer Inst* 1987; 78: 899-910.
- Persson B, Dahlander A, Fredriksson M, Brage NH, Ohlsson CG, Axelsson O. Malignant lymphoma and occupational exposures. *Br J Ind Med* 1989; 46: 516-20.
- Pearce NE, Sheppard RA, Smith AH, Teague CA. Non-Hodgkin's lymphoma and farming: an expanded case-control study. *Int J Cancer* 1987; 39: 155-61.
- Wiklund K, Dich J, Holm L. Risk of malignant lymphoma in Swedish pesticide applicators. *Br J Cancer* 1987; 56: 505-08.
- Hardell L, Johansson B, Axelsson O. Epidemiological study of nasal and nasopharyngeal cancer and their relation to phenoxy acid or chlorophenol exposure. *Am J Ind Med* 1982; 3: 247-57.
- Thiess AM, Frenzel-Beyne R, Link R. Mortality study of persons exposed to dioxin in a trichlorophenol-process accident that occurred in

- the BASF-AG on November 17, 1953. *Am J Ind Med* 1982; 3: 179-89.
14. Fingerhut MA, Halperin WE, Marlow DA, Piacitelli LA, Honchar PA, Sweeney MH, et al. Cancer mortality in workers exposed to 2,3,7,8-tetrachlorodibenzo-p-dioxin. *N Engl J Med* 1991; 199: 212-18.
 15. Zober A, Messerer P, Huber P. Thirty-four year mortality follow-up of BASF employees exposed to 2,3,7,8-TCDD after the 1953 accident. *Int Arch Occ Environ Health* 1990; 62: 139-57.
 16. Kaune A, Fiedler H, Hutzinger O. Dioxine und Furane—Quellen, Eintrag in die Umwelt und Aufnahme durch den Menschen (Literaturstudie). Lehrstuhl für Ökologische Chemie und Geochemie der Universität, Bayreuth, 1990.
 17. Beck H, Eckart K, Mathar W, Wirtkowski R. Levels of PCDD's and PCDF's in adipose tissue of occupationally exposed workers. *Chemosphere* 1989; 18: 507-16.
 18. Bond GG, McLaren EA, Lipps TE, Cook RR. Update of mortality among chemical workers with potential exposure to higher chlorinated dioxins. *J Occup Med* 1989; 31: 121-23.
 19. Zack JA, Gaffey WR. A mortality study of workers employed at the Monsanto Company plant in Nitro, West Virginia. *Environ Sci Res* 1983; 26: 575-91.
 20. Manz A, Berger J, Waltsgott H. Zur Frage des Berufskrebses bei Beschäftigten der Gasindustrie—Cohortenstudie. Forschungsbericht Nr. 352 der Bundesanstalt für Arbeitsschutz, Dortmund. Wirtschaftsverlag NW, Bremerhaven, 1983.
 21. Breslow NE, Day NE. Statistical methods in cancer research: vol II. The design and analysis of cohort studies. *IARC Sci Publ* 1987; 82: 1-406.
 22. Höpker WW, Burkhardt HU. Validitätsuntersuchungen zur amtlichen Todesursachenstatistik. *Verh D Ges Pathol* 1984; 68: 431.
 23. Kircher T, Nelson J, Burdo H. The autopsy as a measure of accuracy of the death certificate. *N Engl J Med* 1985; 313: 1263-69.
 24. Johnson ES. Association between exposure to phenoxys/chlorophenols and soft-tissue sarcomas and malignant lymphomas. *Fund Appl Toxicol* 1990; 14: 219-34.
 25. Ott MG, Olson RA, Cook RR, Bond GG. Cohort mortality study of chemical worker with potential exposure to higher chlorinated dioxins. *J Occup Med* 1987; 29: 422-29.
 26. Pitot HC, Goldworthy T, Campbell HA, Poland A. Quantitative evaluation of the promotion by 2,3,7,8-tetrachlorodibenzo-p-dioxin of hepatocarcinogenesis from dimethylnitrosamine. *Cancer Res* 1980; 40: 2616-20.
 27. Poland A, Palen D, Glover E. Tumour promotion by TCDD in skin of HRS/J hairless mice. *Nature* 1982; 300: 271-73.
 28. Lynge E. A follow-up of cancer incidence among workers in manufacture of phenox herbicides in Denmark. *Br J Cancer* 1985; 52: 259-70.
 29. Fitzgerald EF, Weinstein AL, Youngblood LG, Standfast SJ, Melius JM. Health effects three years after potential exposure to the toxic contaminants of an electrical transformer fire. *Arch Envir Health* 1989; 44: 214-21.
 30. Boyle CA, Decoufle P, O'Brian TR. Long-term health consequences of military service in Vietnam. *Epidemiol Rev* 1989; 11: 1-27.

Outcome in patients with subarachnoid haemorrhage and negative angiography according to pattern of haemorrhage on computed tomography

GABRIEL J. E. RINKEL EELCO F. M. WIJDECKS DJO HASAN
GEORGE E. M. KIENSTRA CEES L. FRANKE LOES M. HAGEMAN
MARINUS VERMEULEN JAN VAN GIJN

15% of patients with spontaneous subarachnoid haemorrhage have normal cerebral angiograms; they fare better than patients with demonstrated aneurysms, though rebleeding and cerebral ischaemia can still occur. In patients with a normal angiogram and accumulation of blood in the cisterns around the midbrain—"perimesencephalic non-aneurysmal haemorrhage"—outcome is excellent. To test the hypothesis that rebleeding and disability in angiogram-negative subarachnoid haemorrhage might be limited to those with other patterns of haemorrhage on initial computed tomography (CT), complications and long-term outcome were studied in 113 patients with angiogram-negative subarachnoid haemorrhage, admitted between January, 1983, and July, 1990.

All patients were investigated with third-generation CT scans within 72 h of the event, and with cerebral angiography. The mean follow-up period was 45 (range 6-96) months. None of 77 patients with a perimesencephalic pattern of haemorrhage on CT died or was left disabled as a result of the haemorrhage (0% [95% confidence interval 0-5%]). Among the other 36 patients, who had a blood distribution on CT indistinguishable from that in proven aneurysmal bleeds, 4 had rebleeds and 9 died or were left disabled as result of the haemorrhage (25% [14-43%]).

Thus, two distinct subsets of patients with angiogram-negative subarachnoid haemorrhage

should be recognised. Patients with a perimesencephalic pattern of haemorrhage have an excellent prognosis. Rebleeding, cerebral ischaemia, and residual disability occur exclusively in patients with aneurysmal patterns of haemorrhage on initial CT. Repeated angiography in search of an occult aneurysm is justified only in the patients with aneurysmal patterns.

Lancet 1991; 338: 964-68.

Introduction

More than half of patients with aneurysmal rupture die or remain severely disabled.¹ Blood in the basal cisterns on computed tomography (CT) strongly suggests aneurysmal rupture,² but the cause of the bleed remains uncertain until it is confirmed by cerebral angiography. Despite substantial improvements in imaging acquisition, angiography fails to show an aneurysm in 15% of patients with spontaneous subarachnoid haemorrhage.^{1,3-7} It is widely believed that patients with angiogram-negative subarachnoid haemorrhage have a more favourable prognosis than those with positive angiograms. Nevertheless, they may suffer fatal rebleeds and long-term disability.^{3,5,8-10}

ADDRESSES: University Departments of Neurology, Utrecht (G. J. E. Rinkel, MD, E. F. M. Wijdecks, MD, Prof J. van Gijn, MD), and Rotterdam (D. Hasan, MD, Prof M. Vermeulen, MD); University Department of Neurosurgery, Academic Medical Centre, Amsterdam (L. M. Hageman, MD); and Departments of Neurology, St Elisabeth Hospital, Tilburg (G. E. M. Kienstra, MD), and De Wever Hospital, Heerlen, the Netherlands (C. L. Franke, MD). Correspondence to Dr Gabriel J. E. Rinkel, University Department of Neurology, Heidelberglaan 100, 3584 CX Utrecht, the Netherlands.

In 1985 we reported the existence of a variant of subarachnoid haemorrhage characterised by a normal angiogram and focal clots in the cisterns around the midbrain on CT, which we called perimesencephalic non-aneurysmal haemorrhage.¹¹ In a small preliminary study the outcome for these patients was excellent.¹² This finding prompted us to reconsider the whole group of patients with angiogram-negative subarachnoid haemorrhage in relation to the patterns of haemorrhage on initial CT scan. We postulated that patients with other than perimesencephalic patterns of haemorrhage in the basal cisterns might be susceptible to rebleeding, cerebral ischaemia, and residual disability. We describe here the outcome for a large series of patients with and without a perimesencephalic pattern of haemorrhage on CT.

Patients and methods

We studied a consecutive series of patients with subarachnoid haemorrhage and negative angiography, admitted between January, 1983, and July, 1990, to ten teaching hospitals in the Netherlands. This period was selected to include only patients investigated with third-generation CT scanners and to allow a minimum follow-up period of 6 months. 37 of the patients, with perimesencephalic haemorrhage only, were included in a preliminary follow-up study.¹²

Inclusion criteria for this study were: third-generation CT scanning done within 72 h of the first symptoms with evidence of subarachnoid blood; and a selective four-vessel angiogram with oblique views, magnifications, and subtractions judged normal by both the radiologist and clinician (neurologist, neurosurgeon, or both).

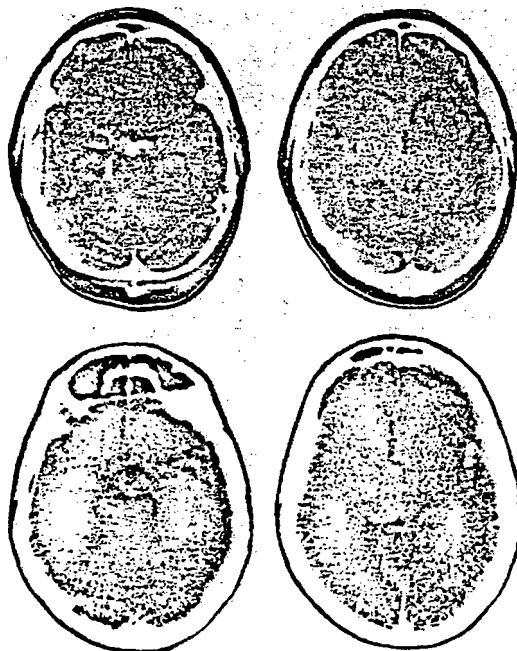


Fig 1—Non-contrast-enhanced CT scans showing two patterns of haemorrhage on CT.

Upper: perimesencephalic pattern of haemorrhage, with accumulation of subarachnoid blood in cistern around midbrain (interpeduncular, ambient, and suprasellar cisterns). Lower: aneurysmal pattern of haemorrhage, with subarachnoid blood in cisterns around midbrain and also in anterior interhemispheric fissure and both sylvian fissures.

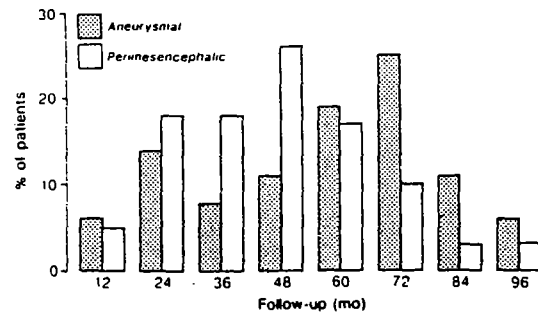


Fig 2—Period of follow-up in 36 patients with aneurysmal pattern and 77 patients with perimesencephalic pattern of haemorrhage on CT.

Before evaluation of the outcome of the patients, all CT scans were classified by one of us (G. J. E. R.). The amount of subarachnoid blood on CT was graded for each of the ten basal cisterns and fissures (anterior interhemispheric fissure, quadrigeminal cistern, the paired suprasellar cisterns, ambient cisterns, basal sylvian fissures, and lateral sylvian fissures), on a semiquantitative scale: 0 = no blood; 1 = small amount of blood; 2 = moderately filled with blood; 3 = completely filled with blood. The density of the clot was not measured. Clots that had expanded the original size of a cistern or fissure were graded as 3. The total amount of subarachnoid blood (sum score) was calculated by adding the ten scores; the sum could therefore range from 0 to 30.¹³ The criteria for a perimesencephalic pattern of haemorrhage were: centre of the bleeding located immediately anterior to the midbrain, with or without extension of blood to the anterior part of the ambient cistern or to the basal part of the sylvian fissure; no extension to the anterior interhemispheric fissure and no extension to the lateral sylvian fissure, except for a small amount of blood (grade 1); and absence of frank intraventricular haemorrhage.¹⁴ As a linear measurement of ventricular size, we used the bicaudate index, which is the width of the frontal horns at the levels of the caudate nuclei divided by the corresponding diameter of the brain. We converted the bicaudate index into a relative size by dividing the absolute values by the upper limit for age as described previously.¹⁵ The in-hospital course of some of the patients with perimesencephalic haemorrhage has been described elsewhere.¹⁶

The outcome was assessed according to the Glasgow outcome scale.¹⁷ Patients were interviewed by telephone, seen as outpatients, or visited at their homes. The interview included questions about recurrent episodes of sudden severe headache, quality of life, and level of performance. In a few cases the information was obtained through the general practitioner if he or she advised against contacting the patient.

Results

We studied 113 patients with angiogram-negative subarachnoid haemorrhage who met the inclusion criteria. The CT scan showed a perimesencephalic pattern of haemorrhage in 77 patients (fig 1). The cisternal blood distribution of the remaining 36 patients was indistinguishable from CT patterns in patients with a proven aneurysmal bleed (aneurysmal pattern; fig 1). In 2 of these patients the CT scan also showed an intracerebral haematoma. Angiography was repeated in 7 patients with a perimesencephalic pattern, and in 15 patients with an aneurysmal pattern of haemorrhage. The mean age was 51 years for both groups of patients. The mean period of follow-up was 45 (range 12–90) months in the perimesencephalic group and 44 (6–96) in the aneurysmal group (fig 2). No patient was lost to follow-up. The clinical and CT features of the two groups are listed in table 1.

Abridged Prescribing Information

SABRIL[▼] Tablets

Presentation: White tablets with a breakline marked SABRIL, each containing 500mg vigabatrin.

Uses:

Indications: Treatment of epilepsy not controlled by other antiepileptic drugs.

Dosage and Administration: Oral administration once or twice daily added to the patient's current therapeutic regimen.

Adults: Recommended starting dose 2g/day. Increased or decreased in 0.5g or 1.0g increments depending upon clinical response and tolerability. Maximum 4g/day. There is no direct correlation between plasma concentration and efficacy.

Children: Recommended starting dose 1g/day in ages 3-9 years and 2g/day if older.

Elderly: Consider dose reduction in patients with impaired renal function.

Contra-indications, Precautions, Warnings etc

Use in pregnancy and lactation: Contra-indicated.

Precautions: Abrupt withdrawal may lead to rebound seizures. Caution in patients with history of psychosis or behavioural problems. Caution in elderly patients, particularly creatinine clearance below 60ml/min. Reduce dose and monitor closely for adverse events.

Warnings: Vigabatrin causes intramyelinated oedema in the brain white matter tracts of animals but there is no evidence of this in man. However, monitor patients for neurological changes. See the full product data sheet.

Effects on driving ability: Drowsiness has been seen and patients should be warned.

Side effects: Are mainly CNS related. Aggression and psychosis have been reported and a previous history of psychosis or a behavioural problem appears to be a predisposing factor. Other reported events: drowsiness and fatigue, dizziness, nervousness, irritability, depression, headache and less commonly confusion, memory disturbance and vision complaints; also weight gain and minor gastrointestinal side-effects. Also in children excitation and agitation. Some patients may experience an increase in seizure frequency with vigabatrin, particularly those with myoclonic seizures. Tests have not revealed evidence of neurotoxicity in humans. Lab data do not indicate renal or hepatic toxicity. Decreases in SGOT and SGPT have been observed. Chronic treatment may lead to a slight decrease in haemoglobin.

Drug Interactions: Are unlikely. A gradual reduction of about 20% in plasma phenytoin concentration has been observed. No clinically significant interactions with carbamazepine, phenobarbitone or sodium valproate.

Legal Category: POM

Package Quantities: Blister strips of 10 in cartons of 100.

Product Licence Number: PL 4425/0098

NHS Price: £46.00

Date of Preparations: November 1990.

You must refer to the full prescribing information before administering Sabril. Further information including full product data sheet is available from the Licence Holder: Merrell Dow Pharmaceuticals Ltd, Lakeside House, Stockley Park, Uxbridge, Middlesex, UB11 1BE

Reference:

1. Mumford JP Br J Clin Pract 1988; 42 (Suppl 61): 7-9



TRADEMARKS: Sabril, Merrell-Dow

**MERRELL
DOW**

NEW BOOKS FROM JOHNS HOPKINS

THE GUIDE TO LIVING WITH HIV INFECTION

Developed at the Johns Hopkins AIDS Clinic

John G. Bartlett, M.D., and
Ann K. Finkbeiner

"Invaluable, enlightening and nonjudgmental."—David Perlman,
San Francisco Chronicle

£11.50 paperback

ERYTHROPOIETIN

Molecular, Cellular, and Clinical Biology

edited by Allan J. Erslev, M.D., John W. Adamson, M.D., Joseph W. Eschbach, Jr., M.D., and Christopher G. Winearls, M.B., Ch.B., D.Phil.

Leading researchers and clinicians offer a complete and up-to-date summary of the physiology and clinical action of erythropoietin.

£53.00 hardcover

AGING AND ENVIRONMENTAL TOXICOLOGY

Biological and Behavioral Perspectives

edited by Ralph L. Cooper, Jerome M. Goldman, and Thomas J. Harbin

Explores the interaction between exposure to environmental hazards and the reduced adaptive capabilities of the elderly.

£46.50 hardcover

INDOOR AIR POLLUTION

A Health Perspective

Jonathan M. Samet, M.D., M.S., and John D. Spengler, Ph.D., M.S.

Contributors discuss methodologies used in measuring exposures to pollution, strategies for improving indoor air quality, and other issues.

£18.00 paperback

REGIONAL ANTINEOPLASTIC DRUG DELIVERY IN THE MANAGEMENT OF MALIGNANT DISEASE

Maurie Markman, M.D.

Offers an overview of the rationale, problems, and clinical results of regional drug therapy.

£36.00 hardcover

MILESTONES IN LEUKEMIA RESEARCH AND THERAPY

Emil J Freireich, M.D., and Noreen A. Lemak, M.D.

The first book to offer a comprehensive history of the subject covers the etiology, therapy, and genetics of the disease.

£43.00 hardcover

THE JOHNS HOPKINS UNIVERSITY PRESS
Distributed in the U.K. by Plymbridge



//

3989

D-4085

//

THE LANCET

Vol 338

Saturday 26 October 1991

No 8774

ORIGINAL ARTICLES

Cancer mortality in workers exposed to chlorophenoxy herbicides and chlorophenols

RODOLFO SARACCI MANOLIS KOGEVINAS PIER-ALBERTO BERTAZZI
BAS H. BUENO DE MESQUITA DAVID COGGON
LOIS M. GREEN TIMO KAUPPINEN KRISTAN A. L'ABBÉ
MARGARETA LITTORIN ELSEBETH LYNGE JOHN D. MATHEWS
MANFRED NEUBERGER JOHN OSMAN NEIL PEARCE
REGINA WINKELMANN

Epidemiological studies have revealed an increased risk of cancer, notably soft-tissue sarcomas and non-Hodgkin's lymphomas, in people occupationally exposed to chlorophenoxy herbicides, including those contaminated by 2, 3, 7, 8-tetrachlorodibenzo-*p*-dioxin (TCDD). We report here a historical cohort study of mortality in an international register of 18 910 production workers or sprayers from ten countries.

Exposure was reconstructed through questionnaires, factory or spraying records, and job histories. Cause-specific national death rates were used as reference. No excess was observed in all-cause mortality, for all neoplasms, for the most common epithelial cancers, or for lymphomas. A statistically non-significant two-fold excess risk, based on 4 observed deaths, was noted for soft-tissue sarcoma with a standardised mortality ratio (SMR) of 196 and 95% confidence interval (CI) 53-502; this was concentrated as a six-fold statistically significant excess, occurring 10-19 years from first exposure in the cohort as a whole (SMR=606 [165-1552]) and, for the same time period, as a nine-fold excess among sprayers (SMR=882 [182-2579]). Risks appeared to be increased for cancers of the testicle, thyroid, other endocrine glands, and nose and nasal cavity, based on small numbers of deaths.

The excess of soft-tissue sarcomas among sprayers is compatible with a causal role of chlorophenoxy herbicides but the excess does not

seem to be specifically associated with those herbicides probably contaminated by TCDD.

Lancet 1991; 338: 1027-32.

Introduction

Chlorophenoxy herbicides have been used extensively since the mid-1950s for control of weeds and for removing unwanted brush on non-crop land.¹ In the 1960s an equal mixture of 2,4-dichloro and 2,4,5-trichloro phenoxyacetic acids (agent orange) was heavily used in South Vietnam and Cambodia for defoliation by the US armed forces. Since 1969 in several industrialised countries, production and use of some compounds, and especially of 2,4,5-trichlorophenoxyacetic acid (2,4,5-T) and its derivatives have been reduced or banned. Chlorinated phenols are

ADDRESSES: Unit of Analytical Epidemiology, International Agency for Research on Cancer, Lyon, France (R. Saracci, MD, M. Kogevinas, PhD, R. Winkelmann, MA); University of Milan, Italy (Prof P. A. Bertazzi, MD); National Institute of Public Health and Environmental Protection, Bilthoven, Netherlands (B. H. Bueno de Mesquita, MD); Medical Research Council Environmental Epidemiology Unit, University of Southampton, UK (D. Coggon, MD); Ontario Hydro, Toronto, Canada (L. M. Green, CPH); Institute of Occupational Health, Helsinki, Finland (T. Kauppinen, PhD); Department of Preventive Medicine and Biostatistics, University of Toronto, Canada (K. A. L'Abbé, PhD); Lund University, Sweden (M. Littorin, MD); Danish Cancer Registry, Copenhagen, Denmark (E. Lynge, PhD); Menzies School of Health Research, Casuarina, Australia (Prof J. D. Mathews, MD); Institute of Environmental Hygiene, Vienna, Austria (Prof M. Neuberger, MD); Health and Safety Executive, Bootle, Merseyside, UK (J. Osman, MD); Wellington School of Medicine, New Zealand (N. Pearce, PhD). Correspondence to Dr Rodolfo Saracci, Unit of Analytical Epidemiology, International Agency for Research on Cancer, 150 cours Albert Thomas, Lyon 69372, Cédex 08, France.

3930

D-4086

intermediates in the production of these chlorophenoxy herbicides and are also used directly for wood preservation. Both groups of compounds may be contaminated during the production process with polychlorinated dioxins and furans, including tetrachlorodibenzo-*p*-dioxin (dioxin, TCDD), which is a widespread contaminant of the general environment.¹

Studies of cancer risks have revealed excesses for soft-tissue sarcoma and non-Hodgkin's lymphoma in populations exposed to chlorophenoxy herbicides, chlorinated phenols, dioxins, and furans during manufacture and spraying or after accidents.²⁻²⁶ In 1987 an International Agency for Research on Cancer (IARC) working group concluded that there was "limited" evidence of human carcinogenicity for chlorophenoxy herbicides and chlorinated phenols.²⁷ A recent paper,¹⁶ focusing on exposure in chemical plants to "dioxin", reported excesses for cancer of the respiratory tract and soft-tissue sarcoma, but could not exclude the contribution of smoking and other exposures in the workplace. We present here the first detailed mortality analysis of a large international cohort of workers (the International Register of Workers Exposed to Phenoxy Herbicides and their Contaminants) set up by the IARC in association with the US National Institute of Environmental Health Sciences (NIEHS). Results for some cohorts in the register have been reported earlier^{4,8,13} but for different follow-up periods.

Material and methods

Study population

The register incorporates information on 17 372 male workers, 1537 female workers, and 1 of unknown sex, distributed among twenty cohorts from ten countries (table 1). Since publication of the register population²⁸ minor corrections have led to the exclusion of 62 workers found to be ineligible. Workers from one British company which both produced and sprayed herbicides have been separated here into two cohorts (14 and 20).

The register includes workers ever employed in production or spraying, except in the cohorts from Australia, Canada, and New Zealand, in which minimum employment periods of 1 year, 6 months, and 1 month, respectively, were specified. Eligibility of cohorts depended on the completeness at company level of records identifying workers and on the ability to ensure tracing rates of 95% or more. Follow-up for mortality was based either on computerised national record systems or on active follow-up procedures. Additional information on cases of soft-tissue sarcoma and non-Hodgkin's lymphoma cases was sought from medical records and cancer registries. Denmark, New Zealand, Finland, and Sweden provided incidence data from population-based cancer registries. Person-years at risk were calculated from 1955 onwards since only from that year were cancer-specific mortality rates available for all participating countries. Excluded from the analysis were 220 workers who either died or were lost to follow-up before 1955, 105 workers with unknown year of first exposure, 131 with unknown year of birth, 1 with unknown sex, and 63 with other missing information. The 18 390 workers included comprise 16 863 males and 1527 females, and 307 488 person-years at risk were accumulated, with an average follow-up of 17 years. Workers lost to follow-up constituted 5% of the total cohort, and in no individual cohort did this proportion exceed 10%.

Exposure assessment

Questionnaires were constructed for factories producing chlorophenoxy herbicides or chlorinated phenols and for spraying cohorts. These were completed with the assistance of industrial hygienists, workers, and/or factory personnel. Industry and other production records were also used. Job histories were examined when available. Workers were classified as exposed, probably exposed, exposure unknown, or non-exposed:

TABLE 1—DESCRIPTION OF COHORTS IN INTERNATIONAL REGISTER

Cohort	No of subjects	Type of cohort	Sex	Period at risk	Main chemicals sprayed or produced
1, Australia	2177	S	M	1955-83	2,4,5-T/2,4-D
2, Austria	159	PC	B	1971-88	2,4,5-T/2,4-D MCPA/2,4,5-TCP 2,4-DCP
3, Canada	1222	S	M	1955-82	2,4,5-T/2,4-D
4, Denmark*	3843	P	B	1955-82	MCPA/MCPP 2,4-DP
5, Denmark	616	P	B	1955-82	2,4-DP/MCPA
6, Finland	62	P	B	1955-85	2,3,4,6-TcCP
7, Italy	325	P	B	1970-86	2,4,5-TCP
8, Italy	81	P	B	1967-86	2,4-D/MCPA
9, Netherlands	1167	P	B	1955-85	2,4,5-T/2,4,5-TCP
10, Netherlands	1143	P	B	1965-86	MCPA/MCPP/2,4-D
11, New Zealand	1038	P	B	1969-87	2,4,5-T/2,4-D MCPA/MCPB/ 2,4,5-TCP
12, New Zealand	780	S	B	1973-87	2,4,5-T/MCPA/2,4-D
13, Sweden	270	P	B	1965-86	2,4-D/MCPA/MCPP 2,4,6-TCP
14, UK*	1531	P	M	1955-87	MCPA
15, UK	145	P	M	1960-85	PCP
16, UK	1147	P	M	1975-87	2,4-DB/MCPA MCPP/2,4-D/2,4-DP 2,4,5-T
17, UK	353	P	M	1961-87	MCPB/PBA
18, UK	275	P	M	1969-87	2,4-DP/2,4-DB MCPA/MCPP
19, UK	528	P	M	1969-87	MCPA/MCPP/2,4-D 2,4-DP
20, UK	2013	S	M	1955-87	MCPA

S = sprayers; P = production; PC = chloracne cases in production.
M = male; B = both sexes.

2,4-D = 2,4-dichlorophenoxyacetic acid; 2,4-DP = 2-(2,4-dichlorophenoxy)-propanoic acid; 2,4-DB = 4-(2,4-dichlorophenoxy)butanoic acid; 2,4,5-T = (2,4,5-trichlorophenoxy)-acetic acid; 2,4,5-TP = 2-(2,4,5-trichlorophenoxy)-propanoic acid; MCPA = (4-chloro-2-methyl-phenoxy)-acetic acid; MCPP = 2-(4-chloro-2-methyl-phenoxy)propanoic acid; MCPB = 4-(4-chloro-2-methyl-phenoxy)butanoic acid; 2,4-DCP = 2,4-dichlorophenol; 2,4,5-TCP = 2,4,5-trichlorophenol; 2,4,6-TCP = 2,4,6-trichlorophenol; 2,3,4,6-TcCP = 2,3,4,6-tetrachlorophenol; PCP = pentachlorophenol; PBA = phenoxybutyric acid.

*35 additional subjects from Denmark and the United Kingdom were exposed during both production and spraying.

†Formulators and packers = 1982-87; handyman = 1967-87; process workers = 1963-87.

Exposed workers (n = 13 482) comprise all known to have sprayed chlorophenoxy herbicides and all who had worked in any of the following departments at factories producing chlorophenoxy herbicides or chlorinated phenols: synthesis, finishing, formulation, packing, maintenance/repair, laboratory, chemical effluent/waste, cleaning, shipping/transportation/stores/warehouse, plant supervision, cleaning during accident, and other and unclassified exposure.

Probably exposed workers (n = 416) comprise all workers in cohorts 15 and 18; no job titles were available but it was judged that most workers would have been exposed. (Exposed and probably exposed are aggregated for some analyses, as indicated in the text.)

Workers with unknown exposure (n = 541) had no information on exposure status.

Non-exposed workers (n = 3951) were those never employed in the parts of factories which produced chlorophenoxy herbicides or chlorinated phenols and who never sprayed chlorophenoxy herbicides came mainly from Australia, Denmark, Netherlands, New Zealand, and UK (224, 1966, 1283, 214, and 180, respectively). Although not exposed to chlorophenoxy herbicides they were exposed to other chemicals, such as dyes and rodenticides.

Workers were also categorised as producers (12 492) and sprayers (5898).

Exposed and probably exposed workers were also classified by groups of chemicals produced or sprayed (9377 chlorophenoxy herbicides, 408 chlorinated phenols, and 4113 both) and within the manufacturing cohorts by department (3034 main production, 1522

TABLE II—MORTALITY BY DETAILED CAUSE AND EXPOSURE TO CHLOROPHENOXY HERBICIDES AND/OR CHLOROPHENOLS, BOTH SEXES

Cause of death (ICD 8)	SMR (95% CI) (no of observed deaths)			
	Exposed	Probably exposed	Non-exposed	Unknown
<i>All causes</i>	92* (88-96) (1870)	122 (93-158) (58)	103 (93-114) (392)	157* (119-203) (57)
<i>Malignant neoplasms (140-207)</i>	101 (92-110) (499)	129 (74-210) (16)	99 (81-120) (100)	135 (72-231) (13)
Buccal cavity and pharynx (140-149)	116 (58-207) (11)	0 (0-1942) (0)	59 (2-330) (1)	667 (17-3714) (1)
Oesophagus (150)	60 (26-119) (8)	0 (0-971) (0)	255 (83-595) (5)	0 (0-2170) (0)
Stomach (151)	89 (64-121) (40)	0 (0-305) (0)	85 (34-175) (7)	0 (0-492) (0)
Intestine, except rectum (152-153)	113 (81-154) (41)	0 (0-479) (0)	67 (22-156) (5)	164 (4-913) (1)
Rectum (154)	110 (70-163) (24)	179 (5-995) (1)	43 (5-156) (2)	238 (6-1327) (1)
Liver, gallbladder and biliary duct (155-156)	44 (12-113) (4)	0 (0-2170) (0)	83 (10-300) (2)	435 (11-2423) (1)
Pancreas (157)	112 (73-164) (26)	185 (5-1032) (1)	61 (13-177) (3)	0 (0-820) (0)
Peritoneum (158)	156 (19-564) (2)	0 (0-12 296) (0)	0 (0-1085) (0)	3333 (84-18 572) (1)
Unspecified digestive organs (159)	331 (90-846) (4)	0 (0-12 296) (0)	870* (105-3141) (2)	0 (0-18 444) (0)
Nose & nasal cavities (160)	291 (60-851) (3)	0 (0-12 296) (0)	0 (0-2170) (0)	0 (0-36 889) (0)
Larynx (161)	145 (63-285) (8)	0 (0-3074) (0)	90 (2-502) (1)	0 (0-3074) (0)
Trachea, bronchus and lung (162)	102 (87-118) (173)	221* (110-395) (11)	140 (100-190) (40)	110 (23-320) (3)
Connective and other soft tissue (171)	201 (55-515) (4)	0 (0-7378) (0)	0 (0-878) (0)	0 (0-12296) (0)
Skin (172-173)	32* (7-94) (3)	0 (0-2838) (0)	144 (30-422) (3)	0 (0-2049) (0)
Male breast (174)	345 (42-1246) (2)	0 (0-36 889) (0)	0 (0-3689) (0)	0 (0-36 889) (0)
Female breast (174)	30 (1-166) (1)	—	114 (31-293) (4)	0 (0-1537) (0)
Female genital organs (180-184)	94 (19-274) (3)	—	89 (18-260) (3)	0 (0-753) (0)
Prostate (185)	111 (75-158) (30)	0 (0-671) (0)	40 (5-143) (2)	217 (6-1211) (1)
Testis (186)	225 (90-464) (7)	0 (0-5270) (0)	0 (0-444) (0)	0 (0-3074) (0)
Bladder (188)	80 (42-136) (13)	227 (6-1266) (1)	56 (7-202) (2)	0 (0-18 444) (0)
Kidney (189)	97 (48-173) (11)	0 (0-1537) (0)	35 (1-197) (1)	0 (0-1366) (0)
Brain (191-192)	38* (14-82) (6)	0 (0-1025) (0)	86 (18-250) (3)	556 (67-2007) (2)
Thyroid gland (193)	367 (100-940) (4)	0 (0-12 296) (0)	0 (0-1230) (0)	0 (0-1757) (0)
Other endocrine gland (194)	462 (95-1349) (3)	0 (0-36 889) (0)	0 (0-1942) (0)	0 (0-36 889) (0)
Ill-defined sites (195, 199)	131 (83-197) (23)	0 (0-802) (0)	153 (50-357) (5)	323 (8-1797) (1)
Lymphosarcoma (200, 202)	97 (48-173) (11)	0 (0-1476) (0)	178 (48-455) (4)	0 (0-1757) (0)
Hodgkins disease (201)	39 (5-141) (2)	769 (19-4286) (1)	0 (0-332) (0)	0 (0-3353) (0)
Multiple myeloma (203)	69 (19-178) (4)	0 (0-2838) (0)	160 (19-578) (2)	0 (0-3074) (0)
Leukaemia and leukaemia (204-207)	117 (70-186) (18)	0 (0-1118) (0)	88 (18-256) (3)	0 (0-1025) (0)
<i>Benign and unspecified neoplasms (210-239)</i>	199* (103-348) (12)	0 (0-2459) (0)	317* (103-739) (5)	0 (0-2306) (0)
Circulatory system (390-458)	90* (84-97) (857)	111 (72-165) (25)	99 (84-116) (162)	113 (64-183) (16)
Respiratory system (460-519)	72* (60-86) (125)	95 (31-221) (5)	106 (69-156) (25)	191 (52-490) (4)
Accidents, poisonings, violence (E800-E999)	100 (86-116) (174)	169 (55-394) (5)	108 (77-146) (41)	319* (182-518) (16)
<i>Unknown causes</i>	— (50)	— (0)	— (11)	— (1)

*p < 0.05.

maintenance and cleaning, 1665 other, 1907 unclassifiable). A substantial number of workers producing chlorophenoxy herbicides may also have been exposed to chlorophenols (eg, *p*-chloro-o-cresol) which are used as raw materials in the synthesis of chlorophenoxy acids. Exposure to the most toxic dioxin congener (2,3,7,8-TCDD) may occur during production of 2,4,5-TCP and 2,4,5-T, and during spraying of herbicides containing 2,4,5-T or its derivatives.¹ Factories 4,5,6,8,10,14,15,17,18, and 20 (*n* = 6845) had either not produced 2,4,5-T or had produced very little of it (around 10 tonnes per year during the study period). Workers in these factories were exposed to various chlorophenoxy herbicides, chlorinated phenols, polychlorinated dibenzodioxins, and furans but were probably not exposed to TCDD. Thus within the register population it was possible to differentiate workers probably exposed to TCDD and workers probably not exposed to TCDD.

Production accidents were known to have occurred in two cohorts (factories 7 and 9), 319 workers being exposed. There were 181 chloracne cases among workers in the cohort, 128 of whom came from cohort 2, which incorporated only workers diagnosed with chloracne. 9 production workers with a history of chloracne from exposure to polychlorinated dioxins in 1971-73 had a median level of 340 pg TCDD per g blood lipids (range 98-659), higher than 4 unexposed workers from the same plant (median 18, range 8-28 pg/g) and 17 external controls (median 16, range <5 to 23 pg/g) (M. Neuberger et al, to be published elsewhere.)

Statistical analysis

The person-years method was used to derive standardised mortality ratios (SMR) with 95% confidence intervals (CI) based on the Poisson distribution.²⁹ An excess or deficit of an SMR is

regarded as statistically significant at *p* < 0.05 (two-tail) when the CI does not include 100. The WHO Mortality Data Bank was used to compute national mortality reference rates for sex, age (in 5-year age groups), and calendar period (in 5-year periods, except when such a period coincides with an ICD revision). Duration of exposure was treated as a time-dependent variable in the allocation of person-years at risk. Poisson regression analysis was applied for selected sites.³⁰

Coding

Coding of underlying cause of death was done nationally. A conversion table has been prepared in IARC to allow the pooling of results over different ICD revisions.³¹⁻³³ About 40% of soft-tissue sarcomas (one of the *a priori* neoplasms of interest) develop in parenchymal organs³⁴ and are not coded under ICD 171 (8th and 9th revision, "malignant neoplasms of connective and other soft tissue"). Histological diagnoses were not generally available and reference mortality rates are not available for sarcomas not coded as ICD 171. SMRs for soft-tissue sarcoma therefore relate only to sarcomas coded as ICD 171. Information on other sarcomas, identified from medical records and cancer registration, is presented but no statistical analysis was done.

Results

All-cause mortality was lower than expected from national rates (SMR = 95 [95% CI 91-99]). Among exposed workers, this was mainly because of low mortality for circulatory and respiratory diseases (SMR = 90 [84-97], SMR = 72 [60-86], respectively). Workers with unknown

TABLE III—MORTALITY FOR ALL MALIGNANT NEOPLASMS AND FOR SOFT-TISSUE SARCOMA AND NON-HODGKIN'S LYMPHOMA SEPARATELY, BOTH SEXES

	All malignant neoplasms			Soft-tissue sarcomas			Non-Hodgkin's lymphomas		
	Obs	Exp	SMR (95% CI)	Obs	Exp	SMR (95% CI)	Obs	Exp	SMR (95% CI)
Exposure									
Exposed and probably exposed	515	508.85	101 (93-110)	4	2.04	196 (33-502)	11	11.64	95 (47-169)
Non-exposed	100	101.08	99 (81-120)	0	0.42	0 (0-878)	4	2.25	178 (48-455)
Type of cohort*									
Production	253	258.91	98 (86-111)	1	1.03	97 (3-541)	8	5.36	149 (64-294)
Sprayers	262	249.94	105 (93-118)	3	1.01	297 (61-868)	3	6.28	49 (10-140)
Chemicals produced or sprayed*									
Both	112	106.70	105 (86-126)	1	0.48	206 (5-1161)	4	2.37	169 (46-432)
Phenoxy	384	385.28	100 (90-110)	3	1.50	200 (41-585)	7	8.96	78 (32-161)
Chlorophenols	19	16.82	113 (68-176)	0	0.06	0 (0-6148)	0	0.31	0 (0-1190)
TCDD exposure*									
Probable	236	215.12	110 (96-125)	2	1.00	200 (24-723)	5	5.76	87 (28-203)
Unlikely	279	293.76	95 (84-107)	2	1.04	193 (23-695)	6	5.88	102 (37-222)
Years since first exposure*									
30+	74	88.60	84 (66-105)	0	0.24	0 (0-1537)	2	1.68	119 (14-430)
20-29	171	159.19	107 (92-125)	0	0.52	0 (0-709)	3	3.38	89 (18-259)
10-19	170	166.49	102 (87-119)	4	0.66	606 (165-1552)	5	3.94	127 (41-296)
0-9	100	94.53	106 (86-129)	0	0.50	0 (0-738)	1	2.67	38 (1-209)
Duration of exposure* (yr)									
20+	36	42.17	85 (60-118)	0	0.15	0 (0-2459)	1	1.02	98 (3-546)
10-19	74	76.16	97 (76-122)	2	0.29	690 (54-2491)	1	1.81	55 (1-308)
1-9	234	230.54	102 (89-115)	0	0.89	0 (0-415)	3	5.36	56 (12-164)
<1	168	155.68	108 (92-126)	2	0.59	339 (41-1125)	6	3.35	179 (66-390)
Department*									
Production	62	60.38	103 (79-132)	0	0.29	0 (0-1272)	2	1.40	143 (17-516)
Maintenance	40	42.02	95 (68-130)	0	0.15	0 (0-2459)	1	0.91	110 (3-612)
Other exposure	42	39.65	106 (76-143)	1	0.16	625 (16-3482)	3	0.90	333 (69-974)
Unclassified	107	114.10	94 (77-113)	0	0.35	0 (0-1054)	2	2.08	96 (12-347)

*Exposed and probably exposed workers are grouped together.

exposure status had high all-cause mortality (table II), especially for accidents, poisoning, and violence including suicide (SMR = 319 [182-518]).

Table II gives SMRs (and 95% CIs) and observed deaths for major causes of death and for malignant neoplasms by site and exposure for both sexes combined since only 10 deaths from cancer were available for analysis among exposed females. Significant excesses were observed among males for malignant thyroid and benign and unspecified neoplasms in the exposed category, malignant neoplasms of trachea, bronchus and lung in the probably exposed category, and malignant neoplasms of unspecified digestive organs and benign and unspecified neoplasms in the non-exposed category; significant deficits were observed for malignant neoplasms of skin and of brain.

Exposed workers had SMRs above 200 for neoplasms of unspecified digestive organs, neoplasms of the nose and nasal cavity, soft-tissue sarcoma, breast cancer (in males) and for neoplasms of the testis, other endocrine glands and thyroid.

Table III gives combined SMRs for exposed and probably exposed workers of both sexes, for all neoplasms, soft-tissue sarcomas and non-Hodgkin's lymphomas. The pattern of risk for all neoplasms by time first exposure did not indicate a strong healthy worker effect, and mortality did not vary substantially between the groups examined.

Soft-tissue sarcoma

4 deaths were observed, all among exposed male workers (table III). No increased risk was observed among production workers (1 death), whereas mortality appeared

to be increased among sprayers (3 deaths, SMR = 297 [61-868]). All deaths occurred 10-19 years after first exposure, giving rise, for this time interval, to a six-fold excess risk in the cohort as a whole (table III) and an even greater excess among exposed sprayers (3 deaths, SMR = 882 [182-2579]). No differentiation in risk was observed in relation to duration of exposure or probable TCDD exposure. 5 additional cases of soft-tissue sarcoma were recorded in cohort members who were alive at the end of follow-up or who had died with a certified cause of death other than ICD 171. These included 1 non-fatal case in the non-exposed group. Details of all 9 cases are given in table IV.

Malignant lymphoma

14 deaths from non-Hodgkin's lymphoma (ICD 200, 202, 8th and 9th revision) were observed among men and 1 among women; 11 deaths were in exposed workers, all men. Mortality for exposed/probably exposed workers was close to expected (SMR = 95) with production workers having a small statistically insignificant increase in mortality (8 deaths, SMR = 149) (table III). 10 out of 11 deaths occurred more than 10 years after first exposure. 6 deaths occurred among workers exposed for than a year, and no difference in risk could be seen in relation to exposure to TCDD or type of chemical produced. The highest SMR among production workers was for those in "other jobs" (transport/storage, laboratory workers, plant supervisors). 4 deaths from non-Hodgkin's lymphoma were observed among non-exposed workers in one Danish factory (cohort 4). Mortality for non-exposed workers was higher than that of all exposed

TABLE IV—DESCRIPTION OF 9 CASES OF SOFT TISSUE SARCOMAS

Case*	Sex, age	Year of death†	Cause of death	Histology‡	Longest held job	Years since first exposure	Years of exposure
1, Australia	M, 46	< 1980	Connective tissue lower limb (ICD 171)	Fibrosarcoma of the hip	Sprayer	16	16
2, Denmark	M, 32	< 1980	Connective tissue lower limb (ICD 171)	Neurofibrosarcoma, lower limb	Production, transportation/storage	10	< 1
3, Denmark	M, 34	Alive, Jan, 1984	..	Mesenchymal sarcoma (possible liposarcoma, retroperitoneum)	Production unspecified	14	< 1
4, Denmark	M, 47	< 1980	Ill-defined cancer	Haemangiopericytoma, back	Production transportation/storage	21	8
5, Denmark	M, 64	< 1980	Prostate cancer	Leiomyosarcoma, prostate	Production, transportation/storage	17	2
6, New Zealand	M, 35	Alive, Jan, 1988	..	Fibrous histiocytoma, lower limb	Sprayer	12	12
7, New Zealand	M, 55	1980 +	Connective tissue upper limb (ICD 171)	Neurilemmoma	Sprayer	14	12
8, UK	M, 43	< 1980	Connective tissue unspecified (ICD 171)	Spindle cell neurilemmoma sarcoma	Sprayer	18	< 1
9, Denmark	M, 56	Alive, Jan, 1984	..	Leiomyosarcoma, larynx	Non-exposed	26	< 1

1 additional incident case occurred after the end of follow-up in New Zealand.

*Cases 2, 3, 4, 5, 8, and 9 previously reported.^{2,4,7}

†Precise year of death not provided for reasons of confidentiality.

‡Histology from cancer registration or medical records. Histology record not retrieved for case 1.

workers, and similar to that of production workers (table III). The cases arose in seven countries. (Not included in table III are 3 cases in cohort members who were alive at the end of follow-up or whose certified underlying cause of death was not ICD 200 or 202.)

Mortality from Hodgkin's disease was below expectation.

Other neoplasms

More than two-fold increases in risk were noted among exposed workers for several less common neoplasms, most of which have not been previously associated with exposure to chlorophenoxy herbicides. 7 deaths from testicular cancer were recorded, with at least a two-fold increase in mortality for the combined group of exposed workers (SMR = 220 [89-454] and for the production workers (5 deaths, SMR = 278 [90-648]). 5 deaths occurred 5 or more years after first exposure, and risk was higher in workers probably exposed to TCDD (SMR = 296) compared to those probably not exposed (SMR = 164). Thyroid cancer mortality was increased for the combined group of exposed workers (4 deaths, SMR = 357 [97-914]), the excess applying both to sprayers and production workers, with deaths registered in three countries. 3 deaths from thyroid cancer occurred 10 or more years after first exposure, and risk was higher for workers probably exposed to TCDD (SMR = 426) compared to those probably not exposed (SMR = 308). 3 deaths from neoplasms of other endocrine glands occurred in the UK with increased mortality for the combined group of exposed workers (SMR = 454 [94-1328]), and separately in sprayers and production workers. Increased mortality from neoplasms of nose and nasal cavity (3 deaths, SMR = 283 [58-827]) was similarly observed only in the UK, with the highest risk in sprayers.

The mortality of cases exposed through accidents was not increased either for all causes (33 deaths, SMR = 98 [67-137]) or for all neoplasms (13 deaths, SMR = 120 [64-205]). Similarly, no increased risk was seen for chloracne cases for all cause mortality (13 deaths, SMR = 66 [35-113]) or for all neoplasms (5 deaths, SMR = 98 [32-228]). No deaths from soft-tissue sarcoma or non-Hodgkin's lymphoma were observed in these groups, but the expected numbers were very low.

Results were virtually unchanged when analyses were repeated with exclusion of all workers with less than one year exposure. Analyses by time since first exposure and duration of exposure for workers probably exposed to TCDD did not show any trends. Analysis using Poisson regression for all cause mortality, all neoplasms, soft-tissue sarcoma, and non-Hodgkin's lymphoma, did not reveal different pattern of risk than that shown in the SMR analysis.

Discussion

The IARC register provides an opportunity to study, with a common protocol, the mortality experience of workers producing and spraying chlorophenoxy herbicides and/or chlorinated phenols in ten countries. This cohort study is the largest to have been done on these categories of workers. Nonetheless the attempt to associate risks with specific agents was only partly successful because there was often simultaneous exposure to several different chlorophenoxy herbicides or chlorophenols (table I) and to other pesticides, raw materials, intermediates, and processing chemicals. The risk specifically related to chlorophenoxy herbicides is best evaluated by looking at sprayers, who are exposed mainly to these compounds and, in smaller amounts, to other herbicides, and only to negligible amounts of chlorophenol impurities. Workers producing chlorophenoxy herbicides may also have been exposed to chlorophenols during the production process. It was not possible to identify a large group of workers exposed solely to chlorophenols. The most toxic dioxin (TCDD) can be formed during production of 2,4,5-T or 2,4,5-TCP so the identification of factories which did not produce 2,4,5-T or produced only very small amounts and of sprayers not using 2,4,5-T allowed a population to be distinguished in which exposure to TCDD was unlikely (with the caveat that even occasional exposures to high concentrations of TCDD may lead to accumulation of high tissue burdens¹⁸).

A non-significant increased risk was observed for soft tissue sarcoma, the excess being significant for sprayers in an analysis by time since first exposure. All 4 cases (in four countries) occurred 10-19 years after first exposure, a time shorter than that observed in Sweden¹⁰ or the USA.¹⁶ The increased risk was not confined to workers probably exposed

to TCDD. Of the 5 additional registered cases of soft-tissue sarcoma, identified from other morbidity or mortality records (3 production workers, 1 sprayer, 1 non-exposed) 1 was in a worker probably exposed to TCDD.

A small, non-significant increase in mortality from non-Hodgkin's lymphoma was observed among production workers, most deaths occurring more than 10 years after first exposure. 6 out of the 11 deaths were in workers exposed for less than one year. Other studies^{12,21} have, however, shown risks associated with exposure to chlorophenoxy herbicides higher for non-Hodgkin's lymphomas than for soft-tissue sarcomas. There was no increase in mortality from Hodgkin's disease, and the evidence for an association of with exposure to chlorophenoxy herbicides has been weaker than that for non-Hodgkin's lymphoma.

We found increased risks for some uncommon neoplasms but these results are difficult to interpret because of the small numbers. Neoplasms of the thyroid and other endocrine glands have not been previously linked with chlorophenoxy herbicides in man but exposure to TCDD and chlorophenols have been associated with neoplasms of the thyroid and the adrenals in mice and rats.¹⁶

Interpretation of our findings will be easier when follow-up of this large cohort is longer—ie, when the number of recorded deaths is greater. The pattern so far indicates no increased mortality for neoplasms in general for the most common epithelial cancers, and no clearly detectable excess for non-Hodgkin's or for Hodgkin's lymphoma. The significant six-fold excess of soft-tissue sarcomas occurring in the period 10–19 years since first exposure in the whole cohort, rising to a nine-fold excess in sprayers, is compatible with a causal role for chlorophenoxy herbicides, though not specifically for those probably contaminated with TCDD.

Supported by grant No 1-ES-05276 of the US National Institute of Environmental Health Sciences. We thank Eric Johnson for his contribution in setting-up the register and David Hoel for support throughout the project; Heiko Beeher, Marilyn Fingerhut, and Paolo Boffetta for constructive comments on an earlier draft; David Marlow and William Parsons for help with planning the industrial hygiene investigation; Gilles Ferro for assistance in data management, and Agnes Hanss-Cousseau for manuscript preparation. K.A. L.A. was in receipt of a research fellowship from IARC during part of the work on this study.

REFERENCES

- 1 International Agency for Research on Cancer. Some halogenated hydrocarbons and pesticide exposures. In: Monographs on the evaluation of the carcinogenic risk of chemicals to humans; vol XLI. Lyon: IARC, 1986; 346, 395.
- 2 Bertazzi PA, Zocchetti C, Pesatori AC, Guercilena S, Sanacore M. Ten-year mortality study of the population involved in the Seveso incident in 1976. *Am J Epidemiol* 1989; 129: 1187–200.
- 3 Bond GG, Wetterstrom NH, Roush GJ, McLaren EA, Lipps TE, Cook RR. Cause specific mortality among employees engaged in the manufacture, formulation or packaging of 2,4-dichlorophenoxyacetic acid and related salts. *Br J Ind Med* 1988; 45: 98–105.
- 4 Coggon D, Pannett B, Winter PD, Acheson ED, Bonsall J. Mortality of workers exposed to 2 methyl-4 chlorophenoxyacetic acid. *Scand J Work Environ Health* 1986; 12: 448–54.
- 5 Cook RR, Bond GG, Olson RA, Ott MG, Gondek MR. Evaluation of the mortality experience of workers exposed to chlorinated dioxins. *Chemosphere* 1986; 15: 1969–76.
- 6 Eriksson M, Hardell L, Berg NO, Moller T, Axelsson O. Soft tissue sarcoma and exposure to chemical substances: a case-referent study. *Br J Ind Med* 1981; 38: 27–33.
- 7 Eriksson M, Hardell L, Adamo HO. Exposure to dioxins as a risk factor for soft tissue sarcoma: a population-based case-control study. *J Natl Cancer Inst* 1990; 82: 486–90.
- 8 Lynge E. A follow-up study of cancer incidence among workers in manufacture of phenoxy herbicides in Denmark. *Br J Cancer* 1985; 52: 259–70.
- 9 Green LM. A cohort mortality study of forestry workers exposed to phenoxy acid herbicides. *Br J Ind Med* 1991; 48: 234–48.
- 10 Hardell L, Sandstrom A. Case-control study. Soft-tissue sarcoma and exposure to phenoxy acetic acids or chlorophenols. *Br J Cancer* 1979; 39: 711–17.
- 11 Hardell L, Eriksson M, Lenner P, Lundgren E. Malignant lymphoma and exposure to chemicals, especially organic solvents, chlorophenols and phenoxy acids: a case-control study. *Br J Cancer* 1981; 43: 169–76.
- 12 Daldemar LM, Zellenrath D. Dioxin exposure. 20 year follow-up. *Lancet* 1983; ii: 1134–35.
- 13 Coggon D, Pannett B, Winter P. Mortality and incidence of cancer at four factories making phenoxy herbicides. *Br J Ind Med* 1991; 48: 173–78.
- 14 Hoar SK, Blair A, Holmes FF, Boyesen CD, Robel RJ, Hoover R, Fraumeni JJ Jr. Agricultural herbicide use and risk of lymphoma and soft tissue sarcoma. *JAMA* 1986; 256: 1141–47.
- 15 Hoar Zham S, Weisenburger DI, Habbitt PA, Saal RC, Vaughn JB, Cantor KP, Blair A. A case-control study of non-Hodgkin's lymphoma and the herbicide 2,4-dichlorophenoxyacetic acid (2,4-D) in Eastern Nebraska. *Epidemiology* 1990; 1: 349–56.
- 16 Fingerhut MA, Halperin WE, Marlow DA, et al. Cancer mortality in workers exposed to 2,3,7,8-tetrachlorodibenzo-p-dioxin. *N Engl J Med* 1991; 324: 212–18.
- 17 Litenfeld DE, Gallo MA. 2,4-D, 2,4,5-T and 2,3,7,8-TCDD: an overview. *Epidemiol Rev* 1989; 11: 28–58.
- 18 Centers for Disease Control. Preliminary report: 2,3,7,8-tetrachlorodibenzo-p-dioxin, exposure to humans—Seveso, Italy. *MMWR* 1988; 48: 733–36.
- 19 Pearce NE, Smith AH, Howard JK, Sheppard RA, Giles HJ, Teague CA. Non-Hodgkin's lymphoma and exposure to phenoxy herbicides, chlorophenols, fencing work, and meat works employment: a case-control study. *Br J Ind Med* 1986; 43: 75–83.
- 20 Persson B, Dahlander A, Fredriksson M, Brage HN, Ohlson C-G, Axelsson O. Malignant lymphomas and occupational exposures. *Br J Ind Med* 1989; 46: 516–20.
- 21 Smith AH, Pearce N, Fisher DO, Giles HJ, Teague CA, Howard JK. Soft tissue sarcoma and exposure to phenoxy herbicides and chlorophenols in New Zealand. *J Natl Cancer Inst* 1984; 72: 1111–17.
- 22 Vines P, Terracini B, Ciccone G, Cignetti A, Colombo E, Donna A, Maffi L, Pisa R, Ricci P, Zanini E, Comba P. Phenoxy herbicides and soft tissue sarcomas in female rice weeder: a population-based case-control study. *Scand J Work Environ Health* 1987; 13: 9–17.
- 23 Wigle DT, Semenciw RM, Wilkins K, Riedel D, Ritter L, Morrison HI, Mao Y. Mortality study of Canadian male farm operators: non-Hodgkin's lymphoma mortality and agricultural practices in Saskatchewan. *J Natl Cancer Inst* 1990; 82: 575–82.
- 24 Wiklund K, Dich J, Holm L-E, Eklund G. Risk of cancer in pesticide applicators in Swedish agriculture. *Br J Ind Med* 1989; 46: 809–14.
- 25 Woods JS, Polissar L, Severson RK, Hensler LS, Kulander BG. Soft tissue sarcoma and non-Hodgkin's lymphoma in relation to phenoxy herbicide and chlorinated phenol exposure in western Washington. *J Natl Cancer Inst* 1987; 78: 899–910.
- 26 Zober A, Messerer P, Huber P. Thirty-four-year mortality follow-up of BASF employees exposed to 2,3,7,8-TCDD after the 1953 accident. *Int Arch Occup Environ Health* 1990; 62: 139–57.
- 27 IARC Monographs on the Evaluation of Carcinogenic Risks to Humans. Overall evaluations of carcinogenicity: an updating of IARC Monograph 1–42 (suppl 7). Lyon: IARC, 1987.
- 28 IARC Working Group. Phenoxy acid herbicides and contaminants: description of the IARC International Register of Workers. *Am J Ind Med* 1990; 18: 39–45.
- 29 Coleman MP, Hermon C, Douglas A. Person-years (PYRS): a Fortran program for cohort study analysis. WHO IARC internal report no 89/006. Lyon: IARC, 1989.
- 30 Checkoway H, Pearce NE, Crawford-Brown DJ. Research methods in occupational epidemiology. New York: Oxford University Press, 1989.
- 31 World Health Organisation. Manual of the international statistical classification of diseases, injuries and causes of death (7th revision conference). Geneva: WHO, 1957.
- 32 World Health Organisation. Manual of the international statistical classification of diseases, injuries and causes of death (8th revision conference). Geneva: WHO, 1967.
- 33 World Health Organisation. Manual of the international statistical classification of diseases, injuries and causes of death (9th revision conference). Geneva: WHO, 1978.
- 34 Fingerhut MA, Halperin WE, Honchar PA, Smith AB, Groth DH, Russell WC. An evaluation of reports of dioxin exposure and soft tissue sarcoma pathology among chemical workers in the United States. *Scand J Work Environ Health* 1984; 10: 299–303.
- 35 Huif JE, Salmon AG, Hooper NF, Zeise L. Long-term carcinogenesis studies on 2,3,7,8-tetrachlorodibenzo-p-dioxin and hexachlorodibenzo-p-dioxin. *Cell Biol Toxicol* 1991; 7: 67–94.

12

3996

D-4092

12

nal and extended the night. When the courtroom, he beat the best the

... Dave Beck, Bernard Goldfine,

"I learned a lot from their mistakes."

OBITUARIES

Admiral's son dies of Agent Orange ills

United Press International

FAYETTEVILLE, N.C. — Elmo Zumwalt III, who in a tragic irony was exposed to Agent Orange ordered dropped on the Vietnam jungles by his father, died Saturday of cancer, a family spokeswoman said. He was 42.

His father, Adm. Elmo Zumwalt Jr., and his brother, Jim Zumwalt, were at his side when he died at his home in Fayetteville at 6:30 a.m., the spokeswoman said. Elmo Zumwalt III had suffered from Hodgkin's disease and lymphoma, cancers linked to the toxic substance Agent Orange.

The spokeswoman said a service for Mr. Zumwalt, an attorney, will be held Wednesday in Fayetteville.

A White House spokesman said, "The president and Mrs. Reagan are deeply saddened and extend their prayers to the Zumwalt family."

When Zumwalt's father, the American naval commander in Vietnam,

ordered the use of Agent Orange to defoliate the guerrilla-infested jungles in the Southeast Asian nation, the toxic substance was thought harmless to humans.

Later, it was learned the defoliant causes birth defects and cancers. Mr. Zumwalt and the son he had after the war were both victims of that toxicity.

But the admiral and his son said they would not rewrite history if given the chance, despite the younger Zumwalt's battles with four rounds of cancer and his son's severe attention-deficit disorder.

"I definitely believe my son would not have had an additional 20 years of life had we not used it," the elder Zumwalt said in a telephone interview Saturday from his son's home. He contended that "thousands who are alive today would not be" if the defoliant had not been sprayed.

"Both my son and I believe the

horrible casualty rates had to be reduced. Thousands of lives were saved," he said, adding that he does not doubt a link between Agent Orange and tragic health consequences.

"Both my son and I made it clear that although the medical evidence is not yet absolutely definitive, we believe there is no doubt that the Agent Orange has caused cancer and birth defects for the population that was exposed," he said.

Mr. Zumwalt once said he did not fault his father for ordering the use of the chemical.

A lawsuit, brought by many Vietnam veterans suffering the adverse affects of Agent Orange, recently was settled for \$180 million without any admission of guilt by the defoliant's manufacturers. The elder Zumwalt said about 250,000 veterans were exposed to the chemical.

88
Republie

13

3998

D-4094

12

APPENDIX A

PART I

PP 1-410

Ex # 1-2851

APPENDIX A

PART I

4000

D-4096

	NUMBER	DATE	TYPE	PAGES
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	1 ✓ CARREON RE DOW	09/12/83	REPORT JOHNSON KA	14 ✓
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	2 ✓ CARREON RE DOW	09/12/83	ABSTRACT JOHNSON KA	1 ✓
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	3 ✓ CARREON RE RAO KS	07/20/82	REPORT JOHNSON KA DOW	32 ✓
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	4 GANATZ RL	04/06/82	AUTH DOW	1
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	5 ✓ CARREON RE WATANABE PG	07/20/82	ABSTRACT JOHNSON KA DOW	2 ✓
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	6 ✓ CARREON RE WATANABE PG RAO KS RAMPY TOX FILES	12/11/81	REPORT YANO DL DOW BRANSON	39 ✓

1-4097

4001

TITLE

XRM-4715 HERBICIDE FORMULATION: ACUTE TOXICOLOGICAL PROPERTIES.
WALL JM RAO KS

XRM-4715 HERBICIDE FORMULATION: ACUTE TOXICOLOGICAL PROPERTIES. R
AND D REPORT. LAB REPORT CODE HETM-004715-001.
WALL JM KAO KS

EXPERIMENTAL FORMULATION XRM-4660: ACUTE TOXICOLOGICAL PROPERTIES
AND INDUSTRIAL HANDLING HAZARDS.
WALL JM WATANABE PG

REQUEST FOR PRELIMINARY TOXICOLOGICAL STUDIES. EXPERIMENTAL
HERBICIDE FORMULATION XRM-4660.

EXPERIMENTAL FORMULATION XRM-4660: ACUTE TOXICOLOGICAL PROPERTIES
AND INDUSTRIAL HANDLING HAZARDS. R AND D REPORT. LAB REPORT CODE
HET M-4660-(1).
WALL JM RAO KS

TRICHOPIR PLUS 2,4-D PLUS PICLORAM: ACUTE TOXICOLOGICAL
PROPERTIES AND INDUSTRIAL HANDLING HAZARDS.
WALL JM RAO KS

KEELER PT
SCHNEIDER

LOCKWOOD DD
CRI

NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT 7 ✓	01/19/82	ABSTRACT	2 ✓	TRICHLOPYR PLUS 2,4-D PLUS PICLORAM: ACUTE TOXICOLOGICAL PROPERTIES AND INDUSTRIAL HANDLING HAZARDS. R AND D REPORT. CRI NO. D4-0212-1246-(1) (820659). LAB REPORT CODE HET DR-0212-1246-(1). AUTHOR: CARREON RE YANO BL WATANABE PG DOW ADDRESSEE: RAO KS COPYEE: DAVEY KF LOCKWOOD DD DOW BRANSON DOSTAL RL TALCOTT AT LOEFGREN C SCHNEIDER CRI CAPUTO R GEHRING PJ OBREGON E RINZEMA LC TOX FILES CHEN WL KEELER PT RAMPY STEWART D LANGNER RR
DOCUMENT 8 ✓	09/30/81	REPORT	44 ✓	NEUROLOGICAL EFFECTS OF HERBICIDES AND PESTICIDES. AN EXPLANATION TO A CURRENT TOXICOLOGICAL CRISIS, AND A POSSIBLE SOLUTION TO PREVENT FURTHER TRAGEDY. (INCLUDES NEWS ARTICLES VOL 2, CHAP 20, CEREBRAL INTOXICATION (PAGE 11) AND CLINICAL NEUROLOGY (PAGE 10)). AUTHOR: BARR M DR ADDRESSEE: COPYEE:
DOCUMENT 9 ✓	07/21/83	REPORT	17 ✓	AN ACUTE ORAL TOXICITY STUDY IN THE MALLARD WITH 2,4-D ISOPROPYLAMINE SALT. FINAL REPORT, PROJECT NO: 103-226. AUTHOR: BEAVERS JB AVIAN ADDRESSEE: DOW COPYEE: DOW BETSO JE CRI GANTZ RL SCHOBER AE
DOCUMENT 10 ✓	08/01/83	ABSTRACT	1 ✓	AN ACUTE ORAL TOXICITY STUDY IN THE MALLARD WITH 2,4-D ISOPROPYLAMINE SALT. R&D REPORT. CRI NO. 833376. LAB REPORT CODE ES-623. AUTHOR: BEAVERS JB AVIAN ALEXANDER HC DOW ADDRESSEE: ALLEN BA COPYEE: CHEN WL DAIGRE GW HEINIGER GD KAGEL RO LICKLIDER KS LOEFGREN C MARTIN JB MCDONALD K PENNINGTON JY RAMPY LW SHEETZ DP SHEWBART KL VERSCHUUREN H VEURINK GR ANDERSON JA DEGESERO RA LANGNER RR RINZEMA L MERCER C ROWE R SIM CW WILSON JD BALLANTYNE GD GEHRING PJ LEBEAU JE LUOMA EV MILLIGAN DJ SCHOLLEMAN F STRAWTER BJ ANDERSON WE
DOCUMENT 11 ✓	00/00/77	ABSTRACT	1 ✓	TUMOR INITIATING ABILITY OF TCDD AND AROCHLOR 1254 IN THE TWO STAGE SYSTEM OF MOUSE SKIN CARCINOGENESIS (BULLETIN ENVIRON TOX 18(5) 552-557)(PESTICIDES ABSTRACTS 78-2107). AUTHOR: DIGIOVANNI J VIAJE A JUCHAU MR UNIV WA SEATTLE ADDRESSEE: COPYEE:

4002

D-4698

	NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT	12	00/00/79	ABSTRACT	1	LABORATORY STUDIES ON THE IMMUNE EFFECTS OF HALOGENATED AROMATICS (ANN NY ACAD SCI 320, 473-486)(91:169431F).
AUTHOR:	LUSTER ML		FAITH RE		CLARK G NIEHS
ADDRESSEE:					
COPYEE:					
DOCUMENT	13 ✓	00/00/79	ABSTRACT	1 ✓	REPRODUCTIVE EFFECTS OF HALOGENATED AROMATIC HYDROCARBONS ON NONHUMAN PRIMATES (ANN NY ACAD SCI 320, 419-425)(91:169430E).
AUTHOR:	ALLEN JR		BARSOTTI DA		LAMBRECHT LK VANMILLER JP
ADDRESSEE:	UNIV WI				
COPYEE:					
DOCUMENT	14 ✓	00/00/79	ABSTRACT	3 ✓	DIOXIN STUDIES (SCIENCE 205)(INCLUDES 2 COPIES AND A REQUEST FOR JOURNAL ARTICLES).
AUTHOR:	ROBBINS A		NIOSH		
ADDRESSEE:					
COPYEE:					
DOCUMENT	15 ✓	00/00/77	REPORT	3 ✓	TCDD IN THE UK.
AUTHOR:	MAY G				
ADDRESSEE:					
COPYEE:					
DOCUMENT	16 ✓	00/00/82	REPORT	5 ✓	THE IN VIVO BIOTRANSFORMATION OF TCDD IN THE RAT (TOX AND APPLIED PHARMACOLOGY 65, 180-184).
AUTHOR:	RAMSEY JC		HEFNER JO		KARBOWSKI RJ BRAUN WH
ADDRESSEE:	GEHRING PJ		DOW		
COPYEE:					
DOCUMENT	17 ✓	00/00/80	ABSTRACT	2 ✓	TCDD, RESULTS OF A 13 WEEK ORAL TOXICITY STUDY IN RATS (INCLUDES INSTRUCTIONS FOR PREPARING AN ABSTRACT FOR 1975 MEETING OF THE SOCIETY OF TOXICOLOGY).
AUTHOR:	KOCIBA RJ		KEELER PA		PARK CN GEHRING PJ
ADDRESSEE:	DOW				
COPYEE:					
DOCUMENT	18 ✓	06/00/80	ABSTRACT	2 ✓	GENETIC EFFECTS OF TCDD IN VITRO AND IN VIVO USING D7 STRAIN OF S CEREVISIAE (MUTATION RESEARCH 74(3)).
AUTHOR:	BRONZETTI G		LEE I		ZEIGER E MALLING H
ADDRESSEE:	SUZUKI		LAB DI MUTAGENESI E DIFF		NIEHS
COPYEE:					

4003

D-4099

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	19 ✓	00/00/78	ABSTRACT	1 ✓
AUTHOR:	MCCONNELL EE		MOORE JA	
ADDRESSEE:	NIEHS			
COPYEE:				
DOCUMENT	20 ✓	00/00/71	ABSTRACT	1 ✓
AUTHOR:	COLLINS TF		WILLIAMS CH	
ADDRESSEE:				
COPYEE:				
DOCUMENT	21 ✓	00/00/78	ABSTRACT	1 ✓
AUTHOR:	RASMUSON BO		SVAHLIN HO	
ADDRESSEE:				
COPYEE:				
DOCUMENT	22 ✓	11/18/75	LETTER	1 ✓
AUTHOR:	LENG ML			
ADDRESSEE:	LENG ML		MCCOLLISTER DD	
COPYEE:	LENG ML		COULTER LL	
	SCHOBER AE		THOMAS PA	
DOCUMENT	23 ✓	06/29/72	MEMO	1 ✓
AUTHOR:	LENG ML		DOW	
ADDRESSEE:	GEHRING PJ		DOW	
COPYEE:				
DOCUMENT	24 ✓	00/00/81	NEWS	13 ✓
AUTHOR:	HARDELL H		REPORT	
ADDRESSEE:			UNIV OF UMEA SWEDEN	
COPYEE:				
DOCUMENT	25 ✓	00/00/81	NEWS	5 ✓
AUTHOR:	HARDELL L		REPORT	
ADDRESSEE:	UNIV OF UMEA SWEDEN		ERIKSSON M	
COPYEE:				

TITLE

THE COMPARATIVE TOXICITY OF CHLORINATED DIBENZO-P-DIOXINS IN MICE
AND GUINEA PIGS (TOX AND APPLIED PHARMACOLOGY 44(2),
335-336)(PESTICIDE ABSTRACTS 78-2199).
HASEMAN JK HARRIS MH

TERATOGENIC STUDIES WITH 245T AND 24D IN THE HAMSTER (BULL ENVIRON
CONTAM TOX 6(6), 550-567)(SELECTED REVIEWS FROM THE LITERATURE).
FDA

MUTAGENICITY TESTS OF 24D AND 245T IN GENETICALLY STABLE AND
UNSTABLE STRAINS OF DROSOPHILA MELANOGASTER (ECOL BULL 217,
190-192).
UNIV UMEA SWEDEN

FAO WHO OPINION ON 24D AND 245T.

DAVIDSON JH

GEHRING PJ

TRANSMITTAL OF ERNE KO PAPERS CTTL.

ON THE RELATION OF SOFT TISSUE SARCOMA, MALIGNANT LYMPHOMA AND
COLON CANCER TO PHENOXY ACIDS, CHLOROPHENOLS AND OTHER AGENTS
(SCANDANAVIAN JOUR OF WORK, ENVIRON & HEALTH).

MALIGNANT LYMPHOMA AND EXPOSURE TO CHEMICALS, ESPECIALLY ORGANIC
SOLVENTS, CHLOROPHENOLS AND PHENOXY ACIDS, A CASE CONTROL STUDY
(BRITISH JOUR OF CANCER 43, 169-176).

LENNER P

LUNDGREN E

DOCUMENT	NUMBER	DATE	TYPE	PAGES	TITLE
	26 ✓	00/00/79	NEWS REPORT UNIV OF UMEA SWEDEN	3 ✓	MALIGNANT LYMPHOMA OF HISTIOCYTIC TYPE AND EXPOSURE TO PHENOXTACETIC ACIDS OR CHLOROPHENOLS (LANCET 1, 55-56).
AUTHOR:	HARDELL L				
ADDRESSEE:					
COPYEE:					
DOCUMENT	27 ✓	00/00/80	NEWS REPORT HARDELL L UNIV OF UMEA SWEDEN	12 ✓	SOFT TISSUE SARCOMAS AND EXPOSURE TO CHEMICAL SUBSTANCES, A CASE REFERENCE STUDY (BRITISH JOUR OF IND HYGIENE).
AUTHOR:	ERIKSSON H AXELSON O				BERG NO UNIV OF LINKOPING SWEDEN
ADDRESSEE:					HOLLER T
COPYEE:					
DOCUMENT	28 ✓	00/00/79	NEWS REPORT SANDSTROM A UNIV OF UMEA SWEDEN	4 ✓	CASE CONTROL STUDY, SOFT TISSUE SARCOMAS AND EXPOSURE TO PHENOXTACETIC ACIDS OR CHLOROPHENOLS (BRITISH JOUR OF CANCER 39, 711-717).
AUTHOR:	HARDELL L				
ADDRESSEE:					
COPYEE:					
DOCUMENT	29 ✓	00/00/77	NEWS REPORT UNIV OF UMEA SWEDEN	4 ✓	SOFT TISSUE SARCOMAS AND EXPOSURE TO PHENOXY ACIDS, A CLINICAL OBSERVATION (LAKARTIDNINGEN 74, 2753-2754).
AUTHOR:	HARDELL L				
ADDRESSEE:					
COPYEE:					
DOCUMENT	30 ✓	00/00/81	NEWS REPORT UNIV OF UMEA SWEDEN UNIV OF LINKOPING SWEDEN	33 ✓	EPIDEMIOLOGICAL STUDIES ON SOFT TISSUE SARCOMA AND MALIGNANT LYMPHOMA AND THEIR RELATION TO PHENOXY ACID OR CHLOROPHENOL EXPOSURE (UMEA UNIV MEDICAL DISSERTATIONS 65).
AUTHOR:	HARDELL L				
ADDRESSEE:					
COPYEE:					
DOCUMENT	31 ✓	03/00/84	PRESENT REPORT ALBEE RR	39 ✓	NEUROTOXICOLOGIC EXAMINATION OF RATS DERMALLY EXPOSED TO 24D AMINE FOR THREE WEEKS (50C OF TOX, ATLANTA GA).
AUTHOR:	MATTSSON JL DOH				JOHNSON KA QUAST JF
ADDRESSEE:					
COPYEE:					

D-4161

4005

NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT 32 ✓	00/00/85	REPORT	11 ✓	THE IMPROBABLE ASSOCIATION BETWEEN THE HERBICIDE 24D AND POLYNEUROPATHY.
AUTHOR: MATTSSON JL DOW ADDRESSEE: COPYEE:				
DOCUMENT 33 ✓	00/00/86	NEWS REPORT	7 ✓	LACK OF NEUROPATHOLOGIC CONSEQUENCES OF REPEATED DERMAL EXPOSURE TO 24D IN RATS (FUNDAMENTAL & APPLIED TOX 6, 175-181).
AUTHOR: MATTSSON JL ADDRESSEE: JOHNSON KA ALBEE RR DOW COPYEE:				
DOCUMENT 34 ✓	00/00/77		3 ✓	PATHOLOGICAL EFFECTS OF TCDD ON THE COMMON BILE DUCT OF RATS (FED PROC 36(3))(INCLUDES PHOTOCOPY REQUEST FOR JOURNAL ARTICLES).
AUTHOR: CROFT W YANG KH ADDRESSEE: COPYEE: PETERSON RE UNIV WI				
DOCUMENT 35 ✓	12/07/67	MINUTES	1 ✓	DOWICIDE PLANT ENVIRONMENTAL CONTROL TASK FORCE.
AUTHOR: BENDER SL DOW ADDRESSEE: STAEBLING EC HOLDER DD ROWE VK KRAMER CO HOYLE HR SAUERS RC CLARK GA BAILEY CZ WIDIGER AH MUTCHLER JE COPYEE:				
DOCUMENT 36 ✓	01/06/86		15 ✓	EVALUATION OF THE TOXICITY OF TECHNICAL PICLORAM TO FRESHWATER GREEN ALGA ES-824.
AUTHOR: DILL DC MILAZZA DP ADDRESSEE: COPYEE: TAKAHASHI IT DOW				
DOCUMENT 37 ✓	01/09/86		185	PICLORAM; A TWO YEAR DIETARY CHRONIC TOXICITY - ONCOGENICITY STUDY IN FISCHER 344 RATS HET K-38323-(34).
AUTHOR: CIESZLAK FS LANDRY TE ADDRESSEE: KROPSCOTT BE DOW COPYEE: WOLFE EL JOHNSON KA QUAST JF				
DOCUMENT 38 ✓	03/00/86		2 ✓	PICLORAM; A TWO YEAR CHRONIC TOXICITY AND ONCOGENICITY STUDY IN FISCHER 344 RATS (THE TOXICOLOGIST, ABSTRACTS OF THE 25TH ANNIVERSARY MEETING 6(1)) (331).
AUTHOR: LANDRY TD GORZINSKI SJ ADDRESSEE: WOLFE EL DOW COPYEE: CIESZLAK FS KROPSCOTT DE				

D-4/02

4006

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	39 ✓	00/00/85		4 ✓
AUTHOR:	JOHNGREENE JA		OUELLETTE JH	
ADDRESSEE:	JOHNSON KA		RAO KS	
COPYEE:				
DOCUMENT	40 ✓	00/00/00		51 ✓
AUTHOR:	MULLISON WR		DOW	
ADDRESSEE:				
COPYEE:				
DOCUMENT	41 ✓	04/09/85		26 ✓
AUTHOR:	GOLLAPUDI BB		MCCLINTOCK ML	
ADDRESSEE:	JERSEY GC			
COPYEE:				
DOCUMENT	42 ✓	06/12/84		18 ✓
AUTHOR:	HOPKINS DL		TAKAHASHI IT	
ADDRESSEE:				
COPYEE:				
DOCUMENT	43 ✓	06/18/84		18 ✓
AUTHOR:	GERSICH FM		HOPKINS DL	
ADDRESSEE:	TAKAHASHI IT			
COPYEE:				
DOCUMENT	44 ✓	08/13/84		18 ✓
AUTHOR:	MAYES MA		DILL DC	
ADDRESSEE:	TAKAHASHI IT			
COPYEE:				
DOCUMENT	45 ✓	08/16/84		24 ✓
AUTHOR:	FOX TR		REITZ RH	
ADDRESSEE:	DOW		SCHUMANN AM	
COPYEE:				

0-4/03

4007

TITLE

 TERATOLOGICAL EVALUATION OF PICLORAM POTASSIUM SALT IN RABBITS (FD
 CHEM TOXIC 00(0), 000-000).
 OULLETTE JH JEFFRIES TK
 DOW

A TOXICOLOGICAL AND ENVIRONMENTAL REVIEW OF PICLORAM

EVALUATION OF PICLORAM IN THE MOUSE BONE MARROW MICRONUCLEUS TEST
 TXT:K-038323-039.
 WILKERSON JE DOW

THE DETERMINATION OF 4-AMINO-3,5,6-TRICHLOROPICOLINIC ACID IN WATER
 BY HIGH PERFORMANCE LIQUID CHROMATOGRAPHY DURING AQUATIC TOXICITY
 STUDIES ES-681.
 DOW

THE ACUTE AND CHRONIC TOXICITY OF TECHNICAL PICLORAM
 (4-AMINO-3,5,6-TRICHLOROPICOLINIC ACID) TO DAPHNIA MAGNA STRAUS
 ES-690.
 MILAZZO DP DOW

THE TOXICITY OF TECHNICAL PICLORAM TO THE EMBRYO, LARVAL, AND
 JUVENILE STAGES OF THE RAINBOW TROUT (SALMO GAIRDNERI RICHARDSON)
 ES-703.
 HOPKINS DL DOW

BIOLOGICAL MECHANISMS INVOLVED IN THE TOXICITY OF PICLORAM
 HERBICIDE IN RATS HET K-038323-037.
 MENDRALA AL JOHNSON KA

DOCUMENT	NUMBER	DATE	TYPE	PAGES	TITLE
AUTHOR:	46 ✓	00/00/84	FRESHOUR NL	6 ✓	PHARMACOKINETICS OF PICLORAM IN MALE VOLUNTEERS (TOX AND APPLIED PHARMACOLOGY 76,264-269). KASTL PE SAUNDERS JH
ADDRESSEE:					
COPYEE:					
AUTHOR:	47 ✓	02/00/84	PUBLIC HEALTH SERVICE	14 ✓	TOXICOLOGY RESEARCH AND TESTING OVERVIEW. NATIONAL TOCICOLOGY PROGRAM ANNUAL PLAN FOR FISCAL YEAR 1984 NTP-84-023.
ADDRESSEE:			DEPT HEALTH HUMAN SERVIC		
COPYEE:					
AUTHOR:	48 ✓	03/12/73	SUSCHETET M	8 ✓	TOXICOLOGY AND NUTRITION (TOXICOLOGIE ET NUTRITION) (C R ACAD SC PARIS 276 SERIES D, 1775-1777)(ORINGINAL ARTICLE AND TRANSLATION) TRUHAUT R
ADDRESSEE:			CAUSERET J		
COPYEE:					
AUTHOR:	49 ✓	01/00/84	LIBICH S	7 ✓	OCCUPATIONAL EXPOSURE OF HERBICIDE APPLICATORS TO HERBICIDES U SED ALONG ELECTRIC POWER TRANSMISSION LINE RIGHT OF WAY (AM IN D HYG ASSOC JOUR 45(1), 56-62). FRANK R SIRONS GJ
ADDRESSEE:			ONTARIO HYDRO		
COPYEE:			TO JC ONTARIO MINISTRY AG AND		
AUTHOR:	50 ✓	10/10/83	BEAVERS JB	17 ✓	AN ACUTE ORAL TOXICITY STUDY IN THE MALLARD WITH PICLORAM TECHNICAL WILDLIFE INTERNATIONAL LTD,SOLITUDE CREEK FARM,ST MICHAELS MD 21663 PROJECT NO 103-221 ES-642. ALEXANDER HC DOW
ADDRESSEE:			WILDLIFE INTL LTD		
COPYEE:			JABER M		
AUTHOR:	51 ✓	08/19/83	NOLAN RJ	12 ✓	PICLORAM; PHARMACOKINETICS IN HUMAN VOLUNTEERS HEB-DR-0114-1351-1. KASTL PE SAUNDERS JH
ADDRESSEE:			DOW		
COPYEE:			FRESHOUR NL RAMSEY JC		
AUTHOR:	52 ✓	07/28/83	FRESHOUR NL	17 ✓	PICLORAM; QUANTITATIVE DETERMINATION IN HUMAN BLOOD AND URINE HET-K-038323-036. WAECHTER JM JR DOW
ADDRESSEE:			HERMANN EA		
COPYEE:					

D-4104

4008

NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT 53 ✓	04/00/83		29 ✓	TOXICOLOGY OF PICLORAM (INCLUDES APPROVAL FOR RELEASE OF PROPRIETARY INFORMATION OUTSIDE OF THE DOW CHEMICAL COMPANY).
AUTHOR: BETSO JE		DOW		
ADDRESSEE:				
COPYEE:				
DOCUMENT 54 ✓	00/00/83		20 ✓	A REVIEW OF VOLATILE ORGANIC CONTAMINANT DATA (PROC. AWWA WATER QUAL TECHNOL CONF 1983, 225-244).
AUTHOR: BORZELLECA JF		VA COMMONWEALTH UNIV		
ADDRESSEE:				
COPYEE:				
DOCUMENT 55 ✓	07/29/82		98 ✓	PICLORAM; THE INFLUENCE OF HEXACHLOROBENZENE CONCENTRATION ON PICLORAM INDUCED LIVER TOXICITY IN FISCHER 344 RATS HET K-038323-(33).
AUTHOR: GORZINSKI SJ		JOHNSON KA		
ADDRESSEE: DOW		MCKENNA MJ		
COPYEE:				KROPSCOTT BE PARK CH
DOCUMENT 56 ✓	06/09/82		141 ✓	RESULTS OF A SIX MONTH DIETARY TOXICITY STUDY OF PICLORAM (4-AMINO-3,5,6-TRICHLOROPICOLINIC ACID) ADMINISTERED IN THE DIET TO MALE AND FEMALE BEAGLE DOGS.
AUTHOR: BARNALLOYD T		TAYLOR HW		
ADDRESSEE: MCDERMOTT MC		DUKE RL		
COPYEE: JERSEY GC				SWAIM LD HINZE CA GRANDJEAN M DOW
DOCUMENT 57 ✓	04/30/82		39 ✓	PICLORAM; RESULTS OF A 2 WEEK DIETARY PROBE STUDY IN CDF FISCHER 344 RATS K-38323-(26).
AUTHOR: GORZINSKI SJ		JOHNSON KA		
ADDRESSEE: DITTENBER DA		CAMPBELL RA		
COPYEE: MCKENNA MJ		DOW		WADE CE WILLIAMS DM HERMAN JR CHEN WL
DOCUMENT 58 ✓	11/16/82		2 ✓	THE TOXICITY OF PICLORAM (4-AMINO-3,5,6-TRICHLOROPICOLINIC ACID) TO REPRESENTATIVE FRESHWATER ORGANISMS ES-561.
AUTHOR: MAYES MA		DILL DC		
ADDRESSEE:				DOW TAKAHASHI IT
COPYEE:				

D-4105

4009

NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT 59 ✓	00/00/76		17 ✓	MUTAGENIC ACTIVITY OF PESTICIDES. ATTIVITA' MUTAGENICA DEGLI ANTIPARASSITARI (RIV SCI TECN ALIM NUTR UM)(ORIGINAL ARTICLE AND TRANSLATION). PONTI I BOLOGNA UNIV
AUTHOR: GUERZONI ME		DEL CUPOLO L		
ADDRESSEE:				
COPYEE:				
DOCUMENT 60 ✓	07/00/78		2 ✓	TESTS FOR POSSIBLE CARCINOGENICITY OF 20 PESTICIDES IN OSBORNE MENDEL RATS AND B6C3F1 MICE (ABSTRACTS: SEVENTEENTH ANNUAL MEETING 40)(TOX AND APPLIED PHARMACOLOGY 45(1), 236).
AUTHOR: ROBENS JF		TRACOR Jitco INC		
ADDRESSEE:				
COPYEE:				
DOCUMENT 61 ✓	00/00/83		11 ✓	PESTICIDE INDUCED COMPLETE AND PARTIAL CHROMOSOME LOSS IN SCREENS WITH REPAIR DEFECTIVE FEMALES OF DROSOPHILA MELANOGASTER (ENVIRON MUTAGENESIS 5, 835-846). IRWIN D BOWLING GREEN STATE UNIV
AUTHOR: HOODRUFF RC		PHILLIPS JP		
ADDRESSEE:				
COPYEE:				
DOCUMENT 62 ✓	00/00/72		1 ✓	MICROBIAL DEGRADATION AND PHYTOTOXICITY OF PICLORAM AND OTHER SUBSTITUTED PYRIDINES (SOIL BIOL BIOCHEM 4(3), 313-323) (TOX AND PHARMACOLOGY 72-2668). STOKES J SHAWBY RJ
AUTHOR: NAIK MN		JACKSON RB		
ADDRESSEE: CSIRO AUSTRALIA				
COPYEE:				
DOCUMENT 63 ✓	00/00/00		10 ✓	DRINKING WATER AND HEALTH TOXICITY OF SELECTED CONTAMINANTS.
AUTHOR:				
ADDRESSEE:				
COPYEE:				
DOCUMENT 64 ✓	00/00/00		5 ✓	FATE OF BANVEL T, IOXYNIL, TORDON AND TRIFLUORILIN IN THE DAIRY COW
AUTHOR:				
ADDRESSEE:				
COPYEE:				
DOCUMENT 65 ✓	00/00/00		5 ✓	ILLEGIBLE DOCUMENT (TITLE CONTAINS RESIDUES AND TRICHLOROPICOLINIC ACID).
AUTHOR: ILLEGIBLE				
ADDRESSEE:				
COPYEE:				

D-4/106

4010

NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT 66 ✓	01/00/84		7 ✓	OCCUPATIONAL EXPOSURE OF HERBICIDE APPLICATORS TO HERBICIDES USED ALONG ELECTRIC POWER TRANSMISSION LINE RIGHT OF WAY (AM IND HYG ASSOC J 45(1), 56-62). FRANK R SIRONS OJ
AUTHOR: LIBICH S ADDRESSEE: ONTARIO HYDRO COPYEE:		TO JC ONTARIO MINISTRY OF AG A		
DOCUMENT 67 ✓	00/00/72		1 ✓	MOVEMENT AND PERSISTENCE OF PICLORAM IN SOIL (WEED SCI 2, 186-189). CANADA DEPT AG
AUTHOR: HUNTER JH ADDRESSEE: COPYEE:		STOBBE LH		
DOCUMENT 68 ✓	00/00/71		1 ✓	ON THE TOXICOLOGICAL AND HYGIENIC EVALUATION OF THE HERBICIDE 4-AMINO-3,5,6-TRICHLOROPICOLINIC ACID (TORDON 22K, PICLORAM) (HYG. SANIT. 36(3), 466-469)(73-0137).
AUTHOR: BELOV ADDRESSEE: COPYEE:		SATATOV RES INST OF RURA		
DOCUMENT 69 ✓	00/00/71		1 ✓	DISSIPATION OF DICAMBA, PICLORAM AND 2,3,6 TBA ACROSS NEBRASKA (PLANT GROWTH REGULATORS 75)(97486).
AUTHOR: ILLEGIBLE ADDRESSEE: COPYEE:				
DOCUMENT 70 ✓	00/00/69		1 ✓	EFFECT OF TORDON HERBICIDES ON MICROBIAL ACTIVITIES IN THREE WILLAMETTE VALLEY SOILS(DOWN EARTH 25(2), 15-17)(70-1394). CANADA DEPT OF AG
AUTHOR: TU CM ADDRESSEE: COPYEE:		BOLLEN WB		
DOCUMENT 71 ✓	12/00/84		1 ✓	EXPOSURE OF FOREST WORKERS USING HERBICIDES MEASURED (ARKANSAS FARM BUREAU NOV. - DEC. 1984, 8). NORRIS LA
AUTHOR: LAVY TL ADDRESSEE: COPYEE:		MATTICE JD		
DOCUMENT 72 ✓	00/00/00		1 ✓	ACUTE, 14 DAY AND SUBCHRONIC TOXICITY OF POTASSIUM PICLORAM (PIC) ADMINISTERED TO RATS VIA THE DRINKING WATER (887). BORZELLECA JF MEDICAL COLLEGE OF VA
AUTHOR: CONDIE LH ADDRESSEE: COPYEE:		HAYES JR		

D-4107

4011

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	73 ✓	05/00/81		18 ✓
AUTHOR: REUBER MD				
ADDRESSEE:				
COPYEE:				
DOCUMENT	74 ✓	03/20/81		2 ✓
AUTHOR:				
ADDRESSEE:				
COPYEE: WOOD DD				
DOCUMENT	75 ✓	03/20/81		7 ✓
AUTHOR: LOCKWOOD DD				
ADDRESSEE: JOHNSTON RV				
COPYEE:				
DOCUMENT	76 ✓	03/20/81		2 ✓
AUTHOR: LOCKWOOD DD				
ADDRESSEE: BORREGO V				
COPYEE:				
DOCUMENT	77 ✓	10/22/80		16 ✓
AUTHOR: CAMPBELL RA				
ADDRESSEE: HERMANN EA				
COPYEE:				
DOCUMENT	78 ✓	07/30/80		60 ✓
AUTHOR: TOLLETT JT				
SCHUETZ DJ				
HERMANN EA				
ADDRESSEE: BUREK JD				
DITTENBER DA				
COPYEE: GORZINSKI SJ				

17-4108

4012

TITLE

 CARCINOGENICITY OF PICLORAM (JOUR OF TOX AND ENVIRON HEALTH 7(2),
 207-222).

ACUTE TOXICOLOGICAL PROPERTIES AND INDUSTRIAL HANDLING HAZARDS OF
 TORDON ACID; 4 AND 6 ISOMERS WITH IMPURITIES, WASHED
 TXT:K-38323-(29).

TORDON PLANTS CF-2 MOTHER LIQUOR SOLIDS WITH RESIDUAL SULFURIC
 ACID, NOT WASHED. DATA SHEET OF PROPERTIES, HEALTH HAZARDS AND
 PRECAUTIONS FOR SAFE HANDLING OF MATERIALS (INCLUDES DATA SHEETS
 ON ACUTE ORAL TOXICITY, EYE IRRITATION TEST, AND PRIMARY SKIN
 IRRITATION).

DOW

DANIEL RL

ACUTE TOXICOLOGICAL PROPERTIES AND INDUSTRIAL HANDLING HAZARDS OF
 TORDON ACID; 4 AND 6 ISOMERS WITH IMPURITIES, NOT
 WASHED, TXT:K-38323-(31).

DOW

JOHNSTON RV

DETERMINATION OF 4-AMINO-3,5,6-TRICHLOROPICOLINIC ACID, PICLORAM,
 IN LABORATORY RAT CHOW BY HIGH PERFORMANCE LIQUID CHROMATOGRAPHY
 MET K-038323-(23).

DOW

BRAUN WH

PICLORAM; RESULTS OF A 13 WEEK TOXICITY STUDY IN B6C3F1 MICE MET
 K-038323-(14) SUPPLEMENT.

WADE CE
 SCHWETZ BA
 DOW

MORDEN DC
 KALNINS RV

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	79 ✓	00/00/74		24 ✓

AUTHOR: SUSCHETET M LECLERC J
 ADDRESSEE: SUNLONE INC

COPYEE:

DOCUMENT 80 ✓ 00/00/74

4 ✓

AUTHOR: SOMERS J

MORAN ET JR

ADDRESSEE:
 COPYEE:

DOCUMENT 81 ✓ 00/00/00

4 ✓

AUTHOR: COPE FG

DEPT RECREATION CONSV

ADDRESSEE:
 COPYEE:

DOCUMENT 82 ✓ 00/00/78

1

AUTHOR: SOMER JD

MORAN ET

ADDRESSEE:
 COPYEE:

DOCUMENT 83 ✓ 00/00/78

1

AUTHOR: SOMERS JD

MORAN ET JR

ADDRESSEE:
 COPYEE:

DOCUMENT 84 ✓ 00/00/75

1

AUTHOR: SOMERS JD

ADDRESSEE:
 COPYEE:

D-4109

4013

TITLE

TOXICITY AND NUTRITIONAL EFFECTS OF TWO HERBICIDES IN THE RAT;
PICLORAM (4-AMINO-3,5,6-TRICHLORO-PICOLINIC ACID) AND ATRAZINE
(2-CHLORO-4-ETHYLAMINO-6-ISOPROPYLAMINO-S-TRIAZINE) (ANNALES DE LA
NUTRITION ET DE L'ALIMENTATION 28, 29-47)(TRANSLATION BY SUNLONE
INC OCTOBER 1975).

LHUISSIER M

LOISEL W

EFFECT OF EXTERNAL APPLICATION OF PESTICIDES TO THE FERTILE EGG ON
HATCHING SUCCESS AND EARLY CHICK PERFORMANCE 2. COMMERCIAL
HERBICIDE MIXTURES OF 24D WITH PICLORAM OR 245T USING THE PHEASANT
(BULLETIN ENVIRON CONTAMINATION & TOX 11(1), 339-342).

REINHART BS

UNIV GUELPH ONTARIO

TOXICITY OF TORDON 101 TO RAINBOW TROUT (PESTICIDE PROG 3(4),
89-90)(INCLUDES PHOTOCOPY REQUEST FOR JOURNAL ARTICLES).

BR

REPRODUCTIVE SUCCESS OF HENS AND COCKERELS ORIGINATING FROM EGGS
SPRAYED WITH 24D, 245T, AND PICLORAM FOLLOWED BY EARLY PERFORMANCE
OF THEIR PROGENY AFTER A COMPARABLE IN OVO EXPOSURE (BULL ENVIRON
CONTAM TOXICOL 20(1), 111-119).

REINHART BS

UNIV GUELPH ONTARIO

HATCHING SUCCESS AND EARLY PERFORMANCE OF CHICKS FROM EGGS SPRAYED
WITH 24D, 245T, AND PICLORAM AT VARIOUS STAGES OF EMBRYONIC
DEVELOPMENT (BULL ENVIRON CONTAM TOXICOL 20(3), 289-293).

REINHART BS

UNIV GUELPH ONTARIO

INFLUENCE OF EXTERNAL APPLICATION OF HERBICIDES ON AVIAN
EMBRYOGENESIS AND REPRODUCTION; EFFECT OF EGG ENCOUNTER TIME (DISS
ABSTR INT B 37,1163B).

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	85 ✓	00/00/74		1

AUTHOR: SOMER JD MORAN ET JR
 ADDRESSEE:
 COPYEE:

DOCUMENT	86 ✓	00/00/74		1 ✓

AUTHOR: SOMERS J MORAN ET JR
 ADDRESSEE:
 COPYEE:

DOCUMENT	87 ✓	00/00/74		1 ✓

AUTHOR: SOMERS J MORAN ET JR
 ADDRESSEE:
 COPYEE:

DOCUMENT	88 ✓	00/00/73		1 ✓

AUTHOR: SOMER JD MORAN ET JR
 ADDRESSEE:
 COPYEE:

DOCUMENT	89 ✓	00/00/72		1 ✓

AUTHOR: BREAZEAL FW CAMPER ND
 ADDRESSEE:
 COPYEE:

DOCUMENT	90 ✓	00/00/73		1 ✓

AUTHOR: YODER J WATSON M
 ADDRESSEE:
 COPYEE:

D-4110

4014

TITLE

EFFECT OF EXTERNAL APPLICATION OF PESTICIDES TO THE FERTILE EGG ON HATCHING SUCCESS AND EARLY CHICK PERFORMANCE 3. CONSEQUENCES OF COMBINING 24D WITH PICLORAM AND EXTREMES IN CONTAMINATION (BULL ENVIRON CONTAM TOXICOL 11(6) 511-516).

REINHART BS

EFFECT OF EXTERNAL APPLICATION OF PESTICIDES TO THE FERTILE EGG ON HATCHING SUCCESS AND EARLY CHICK PERFORMANCE 2. COMMERCIAL HERBICIDE MIXTURES OF 24D WITH PICLORAM OR 245T USING THE PHEASANT (BULL ENVIRON CONTAM TOXICOL 11(4) 339-342).

REINHART BS

EFFECT OF EXTERNAL APPLICATION OF PESTICIDES TO THE FERTILE EGG ON HATCHING SUCCESS AND EARLY CHICK PERFORMANCE 1. PRE-INCUBATION SPRAYING WITH DDT AND COMMERCIAL MIXTURES OF 24D - PICLORAM AND 24D - 245T (BULL ENVIRON CONTAM TOXICOL 11(1) 33-38).

REINHART BS

STEPHENSON GR

EFFECT OF EXTERNAL APPLICATION OF 24D AND PICLORAM TO THE FERTILE EGG ON HATCHING SUCCESS AND EARLY CHICK PERFORMANCE (DOWN EARTH 29(3), 15-17).

REINHART BS

DOW

EFFECT OF HERBICIDES ON BACTERIAL GROWTH RATES (APPL MICROBIOL 23,431-432).

CLEMSON UNIV

LYMPHOCYTE CHROMOSOME ANALYSIS OF AGRICULTURAL WORKERS DURING EXTENSIVE OCCUPATIONAL EXPOSURE TO PESTICIDES (MUTAT RES 21, 335-340).

BENSON WW

NUMBER	DATE	TYPE	PAGES
DOCUMENT 91 ✓	00/00/76		1 ✓
AUTHOR: TORRACCA AM ADDRESSEE: RASCHETTI R COPYEE: CARDAMONE GC RICCIARDI G			
DOCUMENT 92 ✓	00/00/76		1 ✓
AUTHOR: TOMKINS DJ ADDRESSEE: COPYEE:			
DOCUMENT 93 ✓	00/00/76		1 ✓
AUTHOR: TOMKINS DJ ADDRESSEE: COPYEE: GRANT WF			
DOCUMENT 94 ✓	00/00/68		1 ✓
AUTHOR: SAWAMURA S ADDRESSEE: COPYEE: JACKSON WT			
DOCUMENT 95 ✓	00/00/72		1 ✓
AUTHOR: MIKHNO AN ADDRESSEE: COPYEE: MUSIYAKA VK			
DOCUMENT 96 ✓	00/00/74		1 ✓
AUTHOR: HAMEED KM ADDRESSEE: COPYEE: FOY CL			
DOCUMENT 97 ✓	00/00/76		1 ✓
AUTHOR: GUERZONI ME ADDRESSEE: COPYEE: DELCUPOLO L			

D-4/111

4015

TITLE

MUTAGENICITY OF PESTICIDES AS PURE COMPOUNDS AND AFTER METABOLIC ACTIVATION WITH RAT LIVER MICROSOMES(ATTI ASSOC GENET ITAL 21, 28-29).

ORTALI V

CARERE A

EFFECTS OF HERBICIDES ON WILD PLANTS AT CHROMOSOMAL, POPULATION, AND COMMUNITY LEVELS (DISS ABSTR INT B 36,5925).

MONITORING NATURAL VEGETATION FOR HERBICIDE INDUCED CHROMOSOMAL ABERRATIONS (MUTAT RES 36(1), 73-83).

MCGILL UNIV QUEBEC

CYTOLOGICAL STUDIES IN VIVO OF PICLORAM, PYRICLOR, TRIFLURALIN, 2,3,6-TBA, 2,3,5,6-TBA AND NITRALIN (CYTOLOGIA 33,545-554).

MITOTIC ACTIVITY OF CELLS DURING TREATMENT WITH 4-AMINO-3,5,6-TRICHLOROPICOLINIC ACID (TSITOL GENET 6,516-519).

KALININ FL

EFFECT OF PICLORAM ON THE GROWTH OF FIVE SOIL FUNGI (BULL COLL SCI UNIV BAGHDAD 15, 13-19).

UNIV BAGHDAD IRAQ

MUTAGENIC ACTIVITY OF PESTICIDES (RIV SCI TECNOLOGIA ALIMENTI NUTR UM 6(3), 161-165).

PONTI I

UNIV BOLOGNA ITALY

NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT 98 ✓	00/00/77		1 ✓	MUTAGENESIS INDUCED IN MUTANT STRAINS OF SALMONELLA TYPHIMURIUM BY PESTICIDES (AMER CHEM SOC ABSTR PAP 174:PEST 43).
AUTHOR: ERCEGOVICH CD		RASHID KA		
ADDRESSEE:				
COPYEE:				
DOCUMENT 99 ✓	00/00/75		1 ✓	APPLICATION OF SIX BIOTESTS TO THE DETECTION OF HERBICIDES IN WATER (REV AGRIC (BRUSSELS) 1, 27-38).
AUTHOR: DELEIRE M		DECAT W		BASTIN R
ADDRESSEE:				
COPYEE:				
DOCUMENT 100 ✓	00/00/78		1 ✓	MICROBIOLOGICAL MUTAGENICITY STUDIES OF PESTICIDES IN VITRO (MUTAT RES 57(3), 277-286).
AUTHOR: CARERE A		ORTALI VA		CARDAMONE G TORRACCA AM
ADDRESSEE: RASCHETTI R		IST SUPER SANIT ROME ITA		
COPYEE:				
DOCUMENT 101 ✓	00/00/76		1 ✓	MUTATIONAL STUDIES WITH SOME PESTICIDES IN STREPTOMYCES COELICOLOR AND SALMONELLA TYPHIMURIUM (MUTAT RES 38(2), 136).
AUTHOR: CARERE A		CARDAMONE G		ORTALI V BRUZZONE ML
ADDRESSEE: DIGIUSEPPE G				
COPYEE:				
DOCUMENT 102 ✓	00/00/77		1 ✓	MUTAGENIC AND RECOMBINOGENIC ACTION OF PESTICIDES IN ASPERGILLUS NIDULANS (MUTAT RES 46(6), 395-402).
AUTHOR: BIGNAMI M		AULICINO F		VELCICH A CARERE A
ADDRESSEE: MORPURGO G		IST SUPERIORE DI SANITA		
COPYEE:				
DOCUMENT 103 ✓	00/00/76		1 ✓	MUTATIONAL STUDIES WITH SOME PESTICIDES IN ASPERGILLUS NIDULANS (MUTAT RES 38(2), 138)
AUTHOR: AULICINO F		BIGNAMI M		CARERE A CONTI G
ADDRESSEE: MORPURGO G		VELCICH A		
COPYEE:				
DOCUMENT 104 ✓	00/00/66		1 ✓	PICLORAM AND 24D EFFECTS WITH ASPERGILLUS NIGER PROLIFERATION (WEEDS 14(1), 89-90).
AUTHOR: ARNOLD WR		SANTELMANN PW		LYND JQ OK AGR EXPT STA
ADDRESSEE:				
COPYEE:				

4016

D-4112

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	105 ✓	00/00/72		1
AUTHOR:	ANDERSEN KF		LEIGHTY EG	
ADDRESSEE:				
COPYEE:				
DOCUMENT	106 ✓	00/00/69		1
AUTHOR:	PALMER JS		RADELEFF RD	
ADDRESSEE:				
COPYEE:				
DOCUMENT	107 ✓	00/00/70		1
AUTHOR:	MACLEAN GJ JR		DAVIDSON JH JR	
ADDRESSEE:				
COPYEE:				
DOCUMENT	108 ✓	00/00/69		1
AUTHOR:	KUTSCHINSKI AH		RILEY V	
ADDRESSEE:				
COPYEE:				
DOCUMENT	109 ✓	00/00/70		1
AUTHOR:	KUTCHES AJ		CHURCH DC	
ADDRESSEE:				
COPYEE:				
DOCUMENT	110 ✓	00/00/66		1
AUTHOR:	JACKSON JB		DOW	
ADDRESSEE:				
COPYEE:				
DOCUMENT	111 ✓	00/00/65		1
AUTHOR:	FISHER DE		STJOHN LE JR	
ADDRESSEE:	LISK DJ		CORNELL UNIT	
COPYEE:				

D-4113

4017

TITLE

EVALUATION OF HERBICIDES FOR POSSIBLE MUTAGENIC PROPERTIES (J AGRIC
FOOD CHEM 20, 649-656).
TAKAHASHI MT

THE TOXICITY OF SOME ORGANIC HERBICIDES TO CATTLE, SHEEP AND
CHICKENS (US DEPT AGR PROD RES REPT 106, 1-26).
USDA

DIAGNOSIS OF DISORDERS IN PASTURED LIVESTOCK (IND VEGETATION
MANAGEMENT 2(2), 11-15).
DOW

RESIDUES IN VARIOUS TISSUES OF STEERS FED
4-AMINO-3,5,6-TRICHLOROPICOLINIC ACID (J AGR FOOD CHEM 17(2)
283-287).

TOXICOLOGICAL EFFECTS OF PESTICIDES ON RUMEN FUNCTION IN VITRO (J
AGRIC FOOD CHEM 18(3), 430-433).
DURYEE FL OR ST UNIV

TOXICOLOGIC STUDIES ON A NEW HERBICIDE IN SHEEP AND CATTLE (AM J
BET RES 27(118), 821-824).

FATE OF BANVEL T, IOXYNIL, TORDON, AND TRIFLUORILIN IN THE DAIRY
DOW (J DAIRY SCI 48(12), 1711-1715).
GUTENMANN WH WAGNER DO

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	112 ✓	00/00/71		1 ✓
AUTHOR:	SERGEANT M		BLAZEK D	
ADDRESSEE:	MORRE DJ		PURDUE UNIV	
COPYEE:				
DOCUMENT	113 ✓	00/00/79		1 ✓
AUTHOR:	NISHIUCHI Y		ASANO K	
ADDRESSEE:				
COPYEE:				
DOCUMENT	114 ✓	00/00/77		1 ✓
AUTHOR:	FOGELS A		SPRAGUE JB	
ADDRESSEE:				
COPYEE:				
DOCUMENT	115 ✓	00/00/65		1 ✓
AUTHOR:	COPE FG			
ADDRESSEE:				
COPYEE:				
DOCUMENT	116 ✓	00/00/74		1 ✓
AUTHOR:	SUSCHETET M		LECLERC J	
ADDRESSEE:				
COPYEE:				
DOCUMENT	117 ✓	00/00/73		1 ✓
AUTHOR:	SUSCHETET M		CAUSERET J	
ADDRESSEE:				
COPYEE:				
DOCUMENT	118 ✓	00/00/79		1 ✓
AUTHOR:	RUBEN FL		MONTEFIORE HOSPITAL	
ADDRESSEE:				
COPYEE:				

D-4114

4018

TITLE

TOXICITY OF 24D AND PICLORAM HERBICIDES TO FISH (PROC INDIANA ACAD SCI 80, 114-123).

ELDER JH

LEMBI CA

TOXICITY OF PESTICIDES TO SOME FRESHWATER ORGANISMS (SUISAN ZOSHOKU 27(1) 48-55).

NORIN SUISANSHO NOYAKU K

COMPARATIVE SHORT TERM TOLERANCE OF ZEBRAFISH, FLAGFISH, AND RAINBOW TROUT TO FIVE POISONS INCLUDING POTENTIAL REFERENCE TOXICANTS (WATER RES 11(9), 811-817).

UNIV GUELPH ONTARIO

TOXICITY OF TORDON 101 TO RAINBOW TROUT (PESTICIDE PROG 3(4), 89-90).

TOXICITY AND NUTRITIONAL EFFECTS IN THE RAT OF TWO HERBICIDES, PICLORAM AND ATRAZINE (ANN NUTR ALIMENT 28(1), 29-47).

UHUSSIER M

LOISEL W

PHYSIOPATHOLOGICAL AND NUTRITIONAL EFFECTS OF 4-AMINO-3,5,6-TRICHLOROPICOLINIC ACID (PICLORAM) IN THE RAT (C R ACAD SCI SER D 276(11), 1775-1777).

INST NATL RECH AGRON DIJ

RECENT DEVELOPMENTS AND CONTRIBUTIONS FROM EXPERIMENTAL MODELS OF REYE'S SYNDROME (REYE'S SYNDROME 11, 385-397).

PITT

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	119 ✓	00/00/78		1 ✓
AUTHOR:	ROBENS JF		TRACOR JITCO INC	
ADDRESSEE:				
COPYEE:				
DOCUMENT	120 ✓	00/00/78		1 ✓
AUTHOR:	NATL CANCER INST			
ADDRESSEE:				
COPYEE:				
DOCUMENT	121 ✓	00/00/70		1 ✓
AUTHOR:	MOGILEVCHIK ZK		RUSYAEV A	
ADDRESSEE:				
COPYEE:				
DOCUMENT	122 ✓	00/00/69		1 ✓
AUTHOR:	MCCOLLISTER DD		LENG ML	
ADDRESSEE:				
COPYEE:				
DOCUMENT	123 ✓	00/00/72		1 ✓
AUTHOR:	MAILMAN RB		HODGSON E	
ADDRESSEE:				
COPYEE:				
DOCUMENT	124 ✓	00/00/79		1 ✓
AUTHOR:	KRAYBILL HF		NATL CANCER INST	
ADDRESSEE:				
COPYEE:				
DOCUMENT	125 ✓	00/00/75		1
AUTHOR:	KOSACHEVSKAYA PI		BARAN NI	
ADDRESSEE:				
COPYEE:				

D-4115

4019

TITLE

TESTS FOR POSSIBLE CARCINOGENICITY OF 20 PESTICIDES IN OSBORNE MENDEL RATS AND B6C3F1 MICE (TOXICOL APPL PHARMACOL 45(1), 236).

BIOASSAY OF PICLORAM FOR POSSIBLE CARCINOGENICITY (NCI TECH REP SER 23).

IMPORTANCE OF NONSPECIFIC MANIFESTATIONS OF PESTICIDE POISONING IN SETTING NORMS FOR THEIR RESIDUAL QUANTITIES (VOP GIG TOKSIKOL PESTITS TR NAUCH SE, 49-51).
VYALCHANNIKOV KA BUSLOVICH SY

TOXICOLOGY OF PICLORAM AND SAFETY EVALUATION OF TORDON HERBICIDES (DOWN EARTH 25(2), 5-10).
DOW

CYTOCHROME P-450 SUBSTRATE OPTICAL DIFFERENCE SPECTRA OF PESTICIDES WITH MOUSE HEPATIC MICROSOMES (BULL ENVIRON CONTAM TOXICOL 8(3), 186-192).
NC STATE UNIV

BY APPROPRIATE METHODS: THE DELANEY CLAUSE (ECOTOXICOL ENVIRON QUAL (2), 61-82).

HYGIENIC EVALUATION OF WATER AFTER SOIL TREATMENT WITH THE PESTICIDE TORDON 22K (VRACH DELO 1, 131-133).

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	126 ✓	00/00/72		1
AUTHOR:	HODGSON E		MAILMAN RB	
ADDRESSEE:				
COPYEE:				
DOCUMENT	127 ✓	00/00/79		1 ✓
AUTHOR:	CROUCH E		WILSON R	
ADDRESSEE:				
COPYEE:				
DOCUMENT	128 ✓	00/00/75		1 ✓
AUTHOR:	BURCHFIELD HP		STORRS EE	
ADDRESSEE:				
COPYEE:				
DOCUMENT	129 ✓	00/00/71		1 ✓
AUTHOR:	BELOV LG			
ADDRESSEE:				
COPYEE:				
DOCUMENT	130 ✓	00/00/71		1 ✓
AUTHOR:	BELOV LG		GULF SOUTH RES INST	
ADDRESSEE:				
COPYEE:				
DOCUMENT	131 ✓	00/00/72		1 ✓
AUTHOR:	GALSTON AW			
ADDRESSEE:				
COPYEE:				
DOCUMENT	132 ✓	00/00/70		1 ✓
AUTHOR:	GLASON AW			
ADDRESSEE:				
COPYEE:				

D-4116

4020

TITLE

THE CYTOCHROME P-450 SUBSTRATE OPTICAL DIFFERENCE SPECTRA OF PESTICIDES WITH MOUSE HEPATIC MICROSOMES (BULL ENVIRON CONTAM TOXICOL 8(3), 186-192).

INTERSPECIES COMPARISON OF CARCINOGENIC POTENCY (J TOXICOL ENVIRON HEALTH 5(6), 1095-1118).
HARVARD UNIV

THE MAXIMUM TOLERATED DOSE IN PESTICIDE CARCINOGENICITY STUDIES (ENVIRON QUAL SAF SUPPL VOL 3 ISS PESTICIDES, 599-603).
KRAYBILL HF

ON THE TOXICOLOGICAL AND HYGIENIC EVALUATION OF THE HERBICIDE 4-AMINO-3,5,6-TRICHLOROPICOLINIC ACID (TORDON 22K PICLORAM) (HYG SANIT 36(3), 466-469).

TOXICOLOGICAL AND HYGIENIC EVALUATION OF THE 4-AMINO-3,5,6-TRICHLOROPICOLINIC ACID (TORDON 22K) HERBICIDE (GIO SANIT 36(3), 112).

SCIENCE AND SOCIAL RESPONSIBILITY: A CASE HISTORY (ANN N Y ACAD SCI 196(4), 223-235).

PLANTS, PEOPLE AND POLITICS (BIOSCIENCE 20(7), 405-410).

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	133 ✓	00/00/60		1 ✓
AUTHOR: WORLD HEALTH ORGANIZATIO				
ADDRESSEE:				
COPYEE:				
DOCUMENT	134 ✓	00/00/72		1 ✓
AUTHOR: WESTING AH				
ADDRESSEE:				
COPYEE:				
DOCUMENT	135 ✓	00/00/73		1 ✓
AUTHOR: NEILANDS JB				
ADDRESSEE:				
COPYEE:				
DOCUMENT	136 ✓	00/00/73		1 ✓
AUTHOR:				
ADDRESSEE:				
COPYEE:				
DOCUMENT	137 ✓	00/00/74		1 ✓
AUTHOR: SHOEMAKER JP				
ADDRESSEE: BRADLEY RL				
COPYEE:				
DOCUMENT	138 ✓	00/00/74		1 ✓
AUTHOR: BRADLEY RL				
ADDRESSEE: SHOEMAKER JP				
COPYEE:				
DOCUMENT	139 ✓	00/00/72		1 ✓
AUTHOR: THOMPSON DJ				
ROBINSON VB				
ADDRESSEE: EMERSON JL				
COPYEE:				

1-4117

4021

TITLE

HEALTH ASPECTS OF CHEMICAL AND BIOLOGICAL WEAPONS; REPORT OF A WHO GROUP OF CONSULTANTS.

HERBICIDES IN WAR: CURRENT STATUS AND FUTURE DOUBT (BIOL CONSERV 4(5), 322-327).

SURVEY OF CHEMICAL AND RELATED WEAPONS OF WAR (NATURWISSENSCHAFTEN 60, 177-183).

DEGREE OF HAZARD WHEN USING HERBICIDES (S AFR SUGAR J 57(2), 71).

DIRECT INJECTION OF EXPERIMENTAL MAMMARY ADENOCARCINOMA WITH PICLORAM (AM J MED SCI 268(6), 333-335).
HOFFMAN RV JR

TREATMENT OF EXPERIMENTAL MAMMARY ADENOCARCINOMA WITH HERBICIDES (CANCER CHEMOTHER 58(5), 745-748).
HOFFMAN RV

TERATOLOGY AND POSTNATAL STUDIES ON 4-AMINO-3,5,6-TRICHLOROPICOLINIC ACID (PICLORAM) IN THE RAT (FOOD COSMET TOX 10(6), 797-803).
STREBING RJ GERBIO CG

	NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	140 ✓ AULICION F MORPURGO G	00/00/00	BIGNAMI M VELCICH A	1 ✓	MUTATIONAL STUDIES WITH SOME PESTICIDES IN ASPERGILLUS NIDULANS. CARERE A CONTI G ISTITUTO SUPERIORE DI SA
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	141 ✓ CARERE A DIGIUSEPPE G	00/00/00	CARDAMONE G ISTITUTO SUPERIORI DI SA	2 ✓	MUTATIONAL STUDIES WITH SOME PESTICIDES IN STREPTOMYCES COELICOLOR AND SALMONELLA TYPHIMURIUM. ORTALI V BRUZZONE ML
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	142 ✓ BIGNAMI M MORPURGO G	00/00/77	AULICION F UNIV DI ROMA ITALY	8 ✓	MUTAGENIC AND RECOMBINOGENIC ACTION OF PESTICIDES IN ASPERGILLUS NIDULANS (MUTATION RESEARCH 46, 395-402). VELCICH A CARERE A ISTITUTO SUPERIORE DI SA
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	143 ✓ MORPURGO B CRESCENZI OS	08/00/79	BELLINCAMPI D ISTITUTO DELLORTO BOTANI	8 ✓	ANALYSIS OF MITOTIC NONDISJUNCTION WITH ASPERGILLUS NIDULANS (ENVIRON HEALTH PERSPECTIVE 31, 81-93). GUALANDI G BALDINELLI L ISTITUTO SUPERIORE DI SA
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	144 ✓ OLSON KJ	12/30/65	ARNOLD JE	20 ✓	TOXICOLOGICAL PROPERTIES AND INDUSTRIAL HANDLING HAZARDS OF ELEVEN TORDON PROCESS SAMPLES BC T35.12 38323-10. SILVERSTEIN LG DOW
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	145 ✓ JACKSON JB	04/01/63	DOW	15 ✓	TOXICOLOGY EVALUATION OF K-38323 (PICOLINIC ACID 4-AMINO-3,5,6-TRICHLORO)TA-224.
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	146 ✓ WILLIAMS RC	01/31/63	GANTZ RL	11 ✓	FISH TOXICITY OF LILI TA-222 DOW

D-4118

4022

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	147 ✓	08/23/65		24 ✓
AUTHOR:	STEVENSON GT		STOCK BL	
ADDRESSEE:				
COPYEE:				
DOCUMENT	148 ✓	06/20/63		1 ✓
AUTHOR:	LYNN GE		DOW	
ADDRESSEE:				
COPYEE:				
DOCUMENT	149 ✓	00/00/77		1 ✓
AUTHOR:	NATL CANCER INST			
ADDRESSEE:				
COPYEE:				
DOCUMENT	150 ✓	02/07/78		1 ✓
AUTHOR:	HEW			
ADDRESSEE:				
COPYEE:				
DOCUMENT	151 ✓	01/30/78		22 ✓
AUTHOR:	MCCARTY WM		ALEXANDER HC	
ADDRESSEE:	MOOLENAAR RJ			
COPYEE:				
DOCUMENT	152 ✓	05/16/80		38 ✓
AUTHOR:	TOLLETT JT		KOCIBA RJ	
	DITTENDER DA		HERMANN EA	
	SCHWETZ BA			
ADDRESSEE:				
COPYEE:				
DOCUMENT	153 ✓	02/04/80		42 ✓
AUTHOR:	NOLAN RJ		SMITH FA	
ADDRESSEE:	DOW		BRAUN WH	
COPYEE:				

4023

D-4119

TITLE

A GAMEBIRD TOXICOLOGY STUDY - ACUTE DIETARY FEEDING OF TORDON TO
WILD TYPE MALLARD DUCKLINGS OH-A-119.

DOW

PICOLINIC ACID, 4-AMINO-3,5,6-TRICHLORO-, TORDON REQUEST FOR
SCREENING OR APPLICATION TESTING.

BIOASSAY OF PICLORAM FOR POSSIBLE CARCINOGENICITY (NATL TECH INFORM
SERV PB-276471:94P)(PESTICIDE ABSTRACTS 78-2158).

NEW NEWS (REPORT ON ANIMAL TESTS OF PICLORAM FOR CANCER CAUSING
ACTIVITY RELEASED).

COMPARATIVE TOXICITY OF THREE SAMPLES OF TECHNICAL PICLORAM
CONTAINING VARIOUS AMOUNTS OF N''-(3,4,5,6-TETRACHLORO-2-PYRIDINYL)
GUANIDINE TO BLUEGILL ES-200.

DOW

PARK CN

PICLORAM; RESULTS OF A 32 DAY TOXICITY TOLERANCE IN FEED IN B6C3F1
MICE HET K-038323-(14).

WADE CE

GORZINSKI SJ

MORDEN DC

DOW

KINETICS OF C14 - LABELED PICLORAM IN MALE FISCHER 344 RATS HET
K-38323-(22).

MULLER CJ

CURL TC

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	154 ✓	02/00/72		15 ✓
AUTHOR:	HEATH RG		SPANN JW	
ADDRESSEE:	PATUXENT WILDLIFE RESEAR		USDI	
COPYEE:				
DOCUMENT	155 ✓	09/00/70		27 ✓
AUTHOR:	WEIMER JT		BALLARD TA	
ADDRESSEE:	DEPT OF THE ARMY			
COPYEE:				
DOCUMENT	156 ✓	00/00/69		1 ✓
AUTHOR:	KUTSCHINSKI A		DOW	
ADDRESSEE:				
COPYEE:				
DOCUMENT	157 ✓	00/00/69		1 ✓
AUTHOR:	KUTSCHINSKI AH		RILEY V	
ADDRESSEE:				
COPYEE:				
DOCUMENT	158 ✓	00/00/72		1 ✓
AUTHOR:	BAUR J		BOVEY RW	
ADDRESSEE:				
COPYEE:				
DOCUMENT	159 ✓	00/00/69		2 ✓
AUTHOR:	KUTSCHINSKI AH		DOW	
ADDRESSEE:				
COPYEE:				
DOCUMENT	160 ✓	09/26/77		2 ✓

AUTHOR: CLEARINGHOUSE ON ENVIRON
 ADDRESSEE:
 COPYEE:

4024

D-4/20

TITLE

COMPARATIVE DIETARY TOXICITIES OF PESTICIDES TO BIRDS. SPECIAL
SCIENTIFIC REPORT - WILDLIFE NO. 152.
HILL EF KREITZER JF

TOXICOLOGICAL STUDIES ON THE HERBICIDE WHITE IN ANIMALS. EDGEWOOD
ARSENAL TECHNICAL REPORT EATR 4439.
OWENS EJ MCNAMARA BP

RESIDUES IN MILK FROM COWS FED 4-AMINO-3,5,6-TRICHLOROPICOLINIC
ACID (JOUR AG FOOD CHEM 17 (2),288-290) (CHEM ABSTRACT) 113932.

RESIDUES IN VARIOUS TISSUES OF STEERS FED
4-AMINO-3,5,6-TRICHLOROPICOLINIC ACID (JOUR AG FOOD CHEM 17
(2),283-287)(CHEM ABSTRACTS) 113931T.
DOW

CONCENTRATION OF PICLORAM IN RUNOFF WATER 110345P (WEED SCIENCE
20(4),309-313).
MERKLE MG TX A&M UNIV

RESIDUES IN MILK FROM COWS FED 4-AMINO-3,5,6-TRICHLOROPICOLINIC ACID
43807 (JOUR AG FOOD CHEM 17(2),288-290)(TOXICOLOGY,4253-4254).

REVIEW OF THE BIOASSAY OF PICLORAM FOR CARCINOGENICITY BY THE DATA
EVALUATION / RISK ASSESSMENT SUBGROUP OF THE CLEARINGHOUSE ON
ENVIRONMENTAL CARCINOGENS.

NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT 161 ✓	06/12/62		3 ✓	RESULTS OF ADDITIONAL ACUTE ORAL TESTS AND SKIN ABSORPTION STUDIES ON 4-AMINO 3,5,6-TRICHLOROPICOLINIC ACID T35.12-38323-3. DOW
AUTHOR: OLSON K		OYEN F		
ADDRESSEE:				
COPYEE:				
DOCUMENT 162 ✓	06/29/67		1 ✓	RESIDUES OF TORDON ACID IN MILK FROM COWS FED THE HERBICIDE (GH-C 240).
AUTHOR: KUTSCHINSKI AH		DOW		
ADDRESSEE:				
COPYEE:				
DOCUMENT 163 ✓	00/00/00		38 ✓	CARCINOGENICITY OF PICLORAM.
AUTHOR: REUBER MD		NATL CANCER INST		
ADDRESSEE:				
COPYEE:				
DOCUMENT 164 ✓	12/00/74		3 ✓	DIRECT INJECTION OF EXPERIMENTAL MAMMARY ADENOCARCINOMA WITH PICLORAM - PRELIMINARY REPORT (AM JOUR MEDICAL SCIENCES 268(6), 333-335). HOFFMAN RV VA HOSPITAL HUNTINGTON W
AUTHOR: SHOEMAKER JP		BRADLEY RL		
ADDRESSEE:				
COPYEE:				
DOCUMENT 165 ✓	00/00/84		9 ✓	DIFFERENTIAL ACTIVATION AND INHIBITION OF DIFFERENT FORMS OF RAT LIVER GLUTATHIONE S-TRANSFERASE BY THE HERBICIDES 24D AND 245T (TOX AND APPLIED PHARMACOLOGY 73, 492-499). VA MEDICAL CENTER SAN FR UNIV OF CA SAN FRANCISCO
AUTHOR: VESSEY DA		BOYER TD		
ADDRESSEE:				
COPYEE:				
DOCUMENT 166 ✓	01/15/84		6 ✓	EFFECT OF 24D AND 245T ON PEROXISOMAL ENZYMES IN RAT LIVER (BIOCHEMICAL PHARMACOLOGY 33(2), 241-245). NAKAJIMA S KOZUKA H KATOH H TOYAMA MEDICAL & PHARMAC NATL INST HYGIENIC SCIEN
AUTHOR: KAWASHIMA Y				
ADDRESSEE: UCHIYAMA M				
COPYEE:				
DOCUMENT 167 ✓	03/00/82		7 ✓	MORTALITY OF 24D AND 245T HERICIDE APPLICATORS IN FINLAND (SCAND JOUR WORK ENVIRON HEALTH 8 (1), 37-42). HERNBERG S INST OCCUPATIONAL HEALTH
AUTHOR: RIIHIMAKI V		SISKO A		
ADDRESSEE:				
COPYEE:				

D-4121

4025

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	168 ✓	00/00/85		10

AUTHOR: SINGH SV
 ADDRESSEE:
 COPYEE: AWASTHI YC

DOCUMENT	169 ✓	08/00/84		10

AUTHOR: MORTELMANS
 ADDRESSEE:
 COPYEE:

DOCUMENT	170 ✓	00/00/00		8

AUTHOR: COURTNEY KD
 ADDRESSEE:
 COPYEE:

DOCUMENT	171 ✓	10/00/84		10

AUTHOR: RUBINSTEIN C
 ADDRESSEE: MI ST UNIV
 COPYEE: JONE C

DOCUMENT	172 ✓	00/00/70		2

AUTHOR: MESTRES R
 ADDRESSEE:
 COPYEE: LEONARDI G

DOCUMENT	173 ✓	00/00/00		16 ✓

AUTHOR:
 ADDRESSEE:
 COPYEE:

DOCUMENT	174 ✓	02/10/70		2 ✓

AUTHOR: FERNANSKY J
 ADDRESSEE:
 COPYEE:

D-4/22

4026

TITLE

INHIBITION OF HUMAN GLUTATHIONE S-TRANSFERASES BY 24D AND 245T (TOX
AND APPLIED PHARMACOLOGY 81, 328-336).
UNIV OF TX

MUTAGENICITY OF AGENT ORANGE COMPONENTS (TOX AND APPLIED
PHARMACOLOGY 75(1), 138-145).

245T IN THE RAT; EXCRETION PATTERN, SERUM LEVELS, PLACENTAL
TRANSPORT, AND METABOLISM (PESTICIDES SYMPOSIA, 277-283)(INCLUDES
HANDWRITTEN GRAPH).

INHIBITION OF INTERCELLUALR COMMUNICATION IN CULTURES OF CHINESE
HAMSTER V79 CELLS BY 24D AND 245T (FUNDAMENTAL AND APPLIED TOX 4,
731-739).

TROSKO JE

CHANG CC

PESTICIDE RESIDUES IN NATURAL WATERS. 2. RESIDUES FROM
CHLOROPHENOXY TYPE HERBICIDES. 2904D PESTICIDE RESIDUES XX (ANN
FALS EXPERT CHIM 62 (686), 214-220) (CHEM ABSTRACTS 73, 246)
(INCLUDES HANDWRITTEN LIST OF K NUMBERS).

DUDIEUZEREPRICE M

CHEVALIER MRS C

CHLOROPHENOXY HERBICIDES DRINKING WATER LIMITS 0.1 MG PER LITER
(INCLUDES CHARACTERISTICS OF 3-OXA-5-DIAZABICYCLO(5.2.1)DECAN-4-ONE;
5-(P-CHLOROBENZOYL)-10-METHYL,).

24D K2372 REQUEST FOR PRELIMINARY TOXICOLOGICAL STUDIES.

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	175 ✓	04/13/70		2 ✓
AUTHOR:	DUNN FL		DOW	
ADDRESSEE:				
COPYEE:				
DOCUMENT	176 ✓	00/00/62		1 ✓
AUTHOR:	TODD RL			
ADDRESSEE:				
COPYEE:				
DOCUMENT	177 ✓	00/00/00		20 ✓
AUTHOR:	SHAFIK MT		SULLIVAN HC	
ADDRESSEE:				
COPYEE:				
DOCUMENT	178 ✓	00/00/63		1 ✓
AUTHOR:	BERKLEY MC		MAGEE KR	
ADDRESSEE:				
COPYEE:				
DOCUMENT	179 ✓	11/20/50		5 ✓
AUTHOR:	ASSOULY M			
ADDRESSEE:				
COPYEE:				
DOCUMENT	180 ✓	00/00/83		11 ✓
AUTHOR:	YOUNG AL		SHEPARD BM	
ADDRESSEE:				
COPYEE:				
DOCUMENT	181 ✓	00/00/83		7 ✓
AUTHOR:	DEVERNEUIL J		SASSA S	
ADDRESSEE:				
COPYEE:				

4027

D-4/23

TITLE

RESULTS OF CHLORACNE STUDIES CONDUCTED ON ASSORTED 24D, 245T, SILVEX SAMPLES AND THEIR ESTERS, ORANGE AND DIAMOND'S CROP RIDER AMINE 4T-2.

A CASE OF 24D INTOXICATION (JOUR IOWA MED SOC 52, 663-664).

A METHOD FOR DETERMINATION OF LOW LEVELS OF EXPOSURE TO 24D AND 245T.
 ENOS HF HEN

NEUROPATHY FOLLOWING EXPOSURE TO A DIMETHLYAMINE SALT OF 24D (ARCH INT MED 111, 351-352)

DESHERBANTS SELECTIFS ET SUBSTANCES DE CROISSANCE. SPERCH TECHNIQUE. EFFET PATHOLOGIQUE SUR L'HOMME AU COURS DE LA FABRICATION DE L'ESTER DU 24D(COMOMUNICATION A LA SOCIETIE DE MEDICINE DU TRAVAIL, 26-30).

A REVIEW OF ON GOING EPIDEMIOLOGIC RESEARCH IN THE UNITED STATES ON THE PHENOXY HERBICIDES AND CHLORINATED DIOXIN CONTAMINANTS(CHEMOSPHERE 12(4/5), 749-459).
 VETERANS ADMIN

EFFECTS OF POLYCHLORINATED BIPHENYL COMPOUNDS, TCDD, PHENOBARBITAL AND IRON ON HEPATIC UROPORPHYRINOGEN DECARBOXYLASE (BIOCHEM J 214, 145-151).
 KAPPAS A ROCKEFELLER UNIV HOSPITA

NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT 182 ✓	00/00/82		8 ✓	THE TOXICITY AND TOXIC POTENTIAL OF FLY ASH FROM MUNICIPAL INCINERATORS ASSESSED BY MEANS OF A FISH EARLY LIFE STAGE TEST (CHEMOSPHERE 11(10), 965-972).
AUTHOR:	HELDER T	ST UNIV UTRECHT NETHERLA		OLIE K
ADDRESSEE:	UNIV AMSTERDAM NETHERLAN			
COPYEE:				
DOCUMENT 183 ✓	00/00/83		6 ✓	TOXICOLOGICAL EVALUATION OF URBAN WASTE INCINERATOR EMISSIONS (CHEMOSPHERE 12(4/5), 559-564).
AUTHOR:	RIZZARDINI M	ROMANO M		TURSI F
	VECCHI A	SIRONI M		SALMONA M
	GARATTINI S	FANELLI R		BENFENATI E
ADDRESSEE:				ISTITUTO RICERCHE FARMAC
COPYEE:				
DOCUMENT 184 ✓	00/00/81		14 ✓	ENHANCED SUPPRESSOR CELL ACTIVITY AS A MECHANISM OF IMMUNOSUPPRESSION BY TCDD (PROCEEDINGS OF THE SOCIETY FOR EXPERIMENTAL BIOLOGY AND MEDICINE 168, 290-299)(INCLUDES PHOTOCOPY REQUEST FOR JOURNAL ARTICLES).
AUTHOR:	CLARK DA	GAULDIE J		SZEWCUK MR
ADDRESSEE:	MCMASTER UNIV ONTARIO			SWEENEY G
COPYEE:				
DOCUMENT 185 ✓	00/00/81		14 ✓	REPERTI ISTOLOGICI PLACENTARI IN SOGGETTI PROVENIENTI DA AREA INQUINATA DA TCDD (OST GIN MED PERIN CII, 155-164) (PLACENTAL HISTOLOGY OF THE TCDD EXPOSED PREGNANT WOMEN).
AUTHOR:	CATTANEO M	REMOTTI G		COVIELLO D
ADDRESSEE:	CEFIS F	UNIV MILANO ITALY		CARINI A
COPYEE:				
DOCUMENT 186 ✓	09/00/73		30 ✓	CHLORINATED DIBENZODIOXINS AND DIBENZOFURANS (ENVIRONMENTAL HEALTH PERSPECTIVES, 283-312).
AUTHOR:	HUFF JE	WASSOM JS		BIOMEDICAL STUDIES TOX I OAK RIDGE NATL LAB
ADDRESSEE:				
COPYEE:				
DOCUMENT 187 ✓	00/00/73		22 ✓	ACNE CHLORINA AND PORPHYRIA CUTANEA TARDA DURING THE MANUFACTURE OF HERBICIDES (REPORT AND SUMMARY).
AUTHOR:	JIRASEK LL	KALENSKY J		KUBEC K
ADDRESSEE:				
COPYEE:				

D-4/124

4028

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	188 ✓	09/15/83		13 ✓
AUTHOR:	TOFTGARD R GUSTAFSSON J UNIV STOCKHOLM SWEDEN		LOFROTH O KAROLINSKI INST SWEDEN	
ADDRESSEE: COPYEE:				
DOCUMENT	189 ✓	09/00/83		15 ✓
AUTHOR:	CHRISTIAN BJ		PETERSON RE	
ADDRESSEE: COPYEE:				
DOCUMENT	190 ✓	00/00/83		8 ✓
AUTHOR:	MARINOVICH M UNIV MILANO ITALY		SIRTORI CR	
ADDRESSEE: COPYEE:				
DOCUMENT	191 ✓	10/00/83		8 ✓
AUTHOR:	GASIEWICZ TA VANDERBILT UNIV		RUCCI G	
ADDRESSEE: COPYEE:				
DOCUMENT	192 ✓	07/00/83		10 ✓
AUTHOR:	THUNBERG T		HAKANSSON H	
ADDRESSEE: COPYEE:				
DOCUMENT	193 ✓	00/00/00		1 ✓
AUTHOR:	DOH			
ADDRESSEE: COPYEE:				
DOCUMENT	194 ✓	02/09/82		2 ✓

D-4125

AUTHOR:
ADDRESSEE:
COPYEE:

4029

TITLE

 COMPOUNDS IN URBAN AIR COMPETE WITH TCDD FOR BINDING TO THE
 RECEPTOR PROTEIN (CHEMICO - BIOLOGICAL INTERACTIONS 46(3), 335-346).
 CARLSTEDT DUKE J KURL R
 HUDDINGE UNIV HOSPITAL S NORDIC SCHOOL PUBLIC HEA

EFFECTS OF TCDD ON (H)THYMIDINE INCORPORATION INTO RAT LIVER
 DEOXYRIBONUCLEIC ACID (TOXICOLOGY 28(1,2), 133-146).
 UNIV WI

THE BINDING OF TCDD TO PLASMA LIPOPROTEINS MAY DELAY TOXICITY IN
 EXPERIMENTAL HYPERLIPIDEMIA (CHEMICO - BIOLOGICAL INTERACTIONS
 45(3), 393-399).
 GALLI CL PAOLETTI R

DISTRIBUTION, EXCRETION, AND METABOLISM OF TCDD IN D57BL/6J,
 DBA/2J, AND B6D2F/J MICE (DRUG METABOLISM AND DISPOSITION; THE
 BIOLOGICAL FATE OF CHEMICALS 11(5), 397-403).
 NEAL RA GEIGER LE

VITAMIN A (RETINOL) STATUS IN THE GUNN RAT (ARCHIVES OF TOXICOLOGY
 53(3), 225-233).
 KAROLINSKA INST STOCKHOL

CALCULATION OF APPROPRIATE HEALTH STANDARD FOR TCDD IN DRINKING
 WATER AND FISH (USING ADI ESTABLISHED BY DUTCH GOVERNMENT).

DIOXINE NOT A COMPLETE CARCINOGEN (DIOXINE NIET VOLLEDIG
 KANKERVERWEKKEND)(STAATSCOURANT)(ORIGINAL NEWS ARTICLE AND
 TRANSLATION).

	NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT	195 ✓	00/00/83		1 ✓	TETRACHLORODIBENZODIOXIN (BRITISH JOURNAL OF INDUSTRIAL MEDICINE 40, 116). MAY G
AUTHOR:	ZIEM G		JOHNS HOPKINS UNIV		
ADDRESSEE:					
COPYEE:					
DOCUMENT	196 ✓	04/00/79		2 ✓	CARCINOGENICITY TESTING OF HERBICIDE 2,4,5-TRICHLOROPHENOXYETHANOL CONTAINING DIOXIN AND OF PURE DIOXIN IN SWISS MICE. SUGAR J ILLEGIBLE
AUTHOR:	TOTH K		SOMFAIREILL S		
ADDRESSEE:					
COPYEE:					
DOCUMENT	197 ✓	00/00/83		8 ✓	MEDICAL AND MORBIDITY SURVEILLANCE FINDINGS AMONG EMPLOYEES POTENTIALLY EXPOSED TO TCDD (BRITISH JOURNAL OF INDUSTRIAL MEDICINE 40, 318-324). BRENNER FE COOK RR
AUTHOR:	BOND GG DOW		OTT MG		
ADDRESSEE:					
COPYEE:					
DOCUMENT	198 ✓	00/00/83		5 ✓	STUDIES ON THE EFFECT OF TCDD ON VITAMIN A; A NEW ASPECT CONCERNING THE MECHANISM OF TOXICITY.
AUTHOR:	THUNBERG T		KAROLINSKA INST STOCKHOL		
ADDRESSEE:					
COPYEE:					
DOCUMENT	199 ✓	00/00/83		2 ✓	TETRACHLORODIBENZODIOXIN (BRITISH JOURNAL OF INDUSTRIAL MEDICINE 40, 116). MAY G
AUTHOR:	ZIEM G		JOHNS HOPKINS UNIV		
ADDRESSEE:					
COPYEE:					
DOCUMENT	200 ✓	03/00/83		7 ✓	CYTOTOXICITY OF TCDD ON PRIMARY CULTURES OF ADULT RAT HEPATOCYTES (ARCHIVES OF ENVIRONMENTAL CONTAMINATION AND TOXICOLOGY 12(2), 183-188). CHOE SY KOREA ADVANCED INST SCIE
AUTHOR:	YANG KH		CHOI EJ		
ADDRESSEE:					
COPYEE:					
DOCUMENT	201 ✓	07/00/84		8 ✓	IMMUNOTOXICOLOGIC EFFECTS OF TCDD IN RABBITS (JOURNAL OF ENVIRONMENTAL PATHOLOGY TOXICOLOGY AND ONCOLOGY 5(4/5), 321-328). KOCIBA RJ GEHRING PJ
AUTHOR:	SHARMA RP DOW		UT ST UNIV		
ADDRESSEE:					
COPYEE:					

D-4126

4030

NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT 202 ✓	11/00/84		12 ✓	BODY WEIGHT REGULATION IN RATS TREATED WITH TCDD (TOXICOLOGY AND APPLIED PHARMACOLOGY 76, 526-536). PETERSON RE UNIV WI
AUTHOR: SEEFELD MD		KEESEY RE		
ADDRESSEE:				
COPYEE:				
DOCUMENT 203 ✓	10/00/84		5 ✓	PREVENTION OF TCDD TOXICITY IN LABORATORY RODENTS BY ADDITION OF CHARCOAL OR CHOLIC ACIDS TO CHOW (FOOD AND CHEMICAL TOXICOLOGY 22(10), 815-818). CROCI T ISTITUTO RICERCHE FARMAC
AUTHOR: MANARA L		COCCIA P		
ADDRESSEE:				
COPYEE:				
DOCUMENT 204 ✓	00/00/84		48 ✓	HEALTH IMPLICATIONS OF TCDD CONTAMINATION OF RESIDENTIAL SOIL (JOURNAL OF TOXICOLOGY AND ENVIRONMENTAL HEALTH 14(1), 47-93). STEHR P US DEPT HEALTH HUMAN SER
AUTHOR: KIMBROUGH RD		FALK H		
ADDRESSEE: FRIES G		USDA		
COPYEE:				
DOCUMENT 205 ✓	00/00/84		11 ✓	TCDD INDUCED CLEFT PALATE IN THE MOUSE; EVIDENCE FOR ALTERATIONS IN PALATAL SHELF FUSION (TERATOGENESIS CARCINOGENESIS AND MUTAGENESIS 4(5), 427-436). DIEWERT VM NATL INST OF HEALTH
AUTHOR: PRATT RM		DENCKER L		
ADDRESSEE: UPPSALA UNIV SWEDEN		UNIV BRITISH COLUMBIA		
COPYEE:				
DOCUMENT 206 ✓	00/00/84		8 ✓	SEPARATION OF WASTING SYNDROME AND LETHALITY CAUSED BY TCDD (TOXICOLOGY LETTERS 22(3), 279-285).
AUTHOR: ROZMAN K		UNIV KS		
ADDRESSEE:				
COPYEE:				
DOCUMENT 207 ✓	03/00/84		6 ✓	COMPARISON BETWEEN THE EFFECTS OF TCDD AND SIX OTHER COMPOUNDS ON THE VITAMIN A STORAGE, THE UCP-GLUCURONOSYLTRANSFERASE AND THE ARYL HYDROCARBON HYDROXYLASE ACTIVITY IN THE RAT LIVER (ARCHIVES OF TOXICOLOGY 55(1), 16-19). WAHLSTROM B KAROLINSKI INST STOCKHOL
AUTHOR: THUNBERG T		AHLBORG UG		
ADDRESSEE: NATL FOOD ADMIN UPPSALA				
COPYEE:				

D-4127

4031

NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT 208 ✓	10/00/85		14 ✓	EFFECT OF THYROID HORMONES ON LIVER MICROSOMAL ENZYME INDUCTION IN RATS EXPOSED TO TCDD (TOXICOLOGY 37, 51-63). KLAASSEN CD ARLOTTO MP
AUTHOR: ROZMAN K ADDRESSEE: PARKINSON A COPYEE:		HAZELTON GA UNIV KS		
DOCUMENT 209 ✓	00/00/85		12 ✓	TOXICITY OF PARTICULATE EMISSIONS FROM A MUNICIPAL INCINERATOR; CRITIQUE OF THE CONCEPT OF TCDD EQUIVALENTS. UNIV ZURICH SWITZERLAND
AUTHOR: SUTERHOFMANN M ADDRESSEE: COPYEE:		SCHLATTER C		
DOCUMENT 210 ✓	00/00/85		1 ✓	CORRECTION OF DATA FOR 'DIOXIN 85' SENT TO KOCIBA R CTTL.
AUTHOR: SUTERHOFMAN M ADDRESSEE: COPYEE:		INSTITUT FUR TOXIKOLOGIE		
DOCUMENT 211 ✓	11/00/81		9 ✓	CARDIOVASCULAR TERATOGENICITY OF TCDD IN THE CHICK EMBRYO (TOXICOLOGY AND APPLIED PHARMACOLOGY 61(2), 197-204). PETERSON RE UNIV WI
AUTHOR: CHEUNG MO ADDRESSEE: COPYEE:		GILBERT EF		
DOCUMENT 212 ✓	10/00/81		11 ✓	DIFFERENCES IN THE NATURE OF INDUCTION OF MIXED FUNCTION OXIDASE SYSTEMS OF THE RAT LIVER AMONG PHENOBARBITAL, DDT, 3-METHYLCHOLANTHRENE, AND TCDD (TOXICOLOGY AND APPLIED PHARMACOLOGY 61(1), 109-118). MI ST UNIV
AUTHOR: MADHUKAR BV ADDRESSEE: COPYEE:		MATSUMURA F		
DOCUMENT 213 ✓	00/00/81		10 ✓	INDUCTION OF MIXED FUNCTION OXIDASE BY CHRONIC TREATMENT WITH TCDD IN FEMALE RATS (TOXICOLOGY 21(2), 159-167). BELVEDERE O CANTONI R ISTITUTO RICERCHE FARMAC
AUTHOR: CANTONI L ADDRESSEE: FANELLI R COPYEE:		RIZZARDINI M SALMONA M		
DOCUMENT 214 ✓	00/00/81		13 ✓	THE INFLUENCE OF MALNUTRITION ON THE TOXICITY OF TCDD IN RATS (TOXICOLOGY 21(1), 77-88). MCCONNELL EE MOORE JA
AUTHOR: VANLOGTEN MJ ADDRESSEE: NATL INST ENVIRON HEALTH COPYEE:		GUPTA BN		

D-4128

4032

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	215 ✓	07/00/81		12 ✓
AUTHOR:	SWIFT LL		GASIEWICZ TA	
ADDRESSEE:	SOULE PD		NEAL RA	
COPYEE:				
DOCUMENT	216 ✓	07/00/81		15 ✓
AUTHOR:	STEWART AR		BYARD JL	
ADDRESSEE:				
COPYEE:				
DOCUMENT	217 ✓	08/00/84		2 ✓
AUTHOR:	YASUDA M		IGAWA HH	
ADDRESSEE:				
COPYEE:				
DOCUMENT	218 ✓	00/00/83		1 ✓
AUTHOR:	CHRISTIAN BJ		PETERSON RE	
ADDRESSEE:				
COPYEE:				
DOCUMENT	219 ✓	00/00/83		1 ✓
AUTHOR:	KATZ LB		THEOBALD HM	
ADDRESSEE:				
COPYEE:				
DOCUMENT	220 ✓	00/00/83		1 ✓
AUTHOR:	HUDSON LG		TOSCANO HA JR	
ADDRESSEE:				
COPYEE:				
DOCUMENT	221 ✓	00/00/00		1 ✓
AUTHOR:				
ADDRESSEE:				
COPYEE:				

D-4/27

4033

TITLE

CHARACTERIZATION OF HYPERLIPIDEMIA IN GUINEA PIGS INDUCED BY TCDD
(TOXICOLOGY AND APPLIED PHARMACOLOGY 59(3), 489-499).

VANDERBILT UNIV

DUNN GD

INDUCTION OF BENZO(A)PYRENE METABOLISM BY TCDD IN PRIMARY CULTURES
OF ADULT RAT HEPATOCYTES (TOXICOLOGY AND APPLIED PHARMACOLOGY
59(3), 603-616).

UNIV CA DAVIS

TERATOGENICITY OF TCDD IN MICE (TERATOLOGY 30(1), 12A).

HIROSHIMA UNIV JAPAN

THE ROLE OF REDUCED FOOD CONSUPTION IN THE LETHALITY OF TCDD
TREATED RATS (PHARMACOLOGIST 25, 169).

UNIV WI

EFFECT OF ANTIINFLAMMATORY DRUGS ON THE ENHANCED EDEMA RESPONSE TO
CARRAGEENAN AND DEXTRAN IN RATS TREATED WITH TCDD (PHARMACOLOGY 25,
103).

PETERSON RE

UNIV HI

REGULATION OF EPIDERMAL GROWTH FACTOR BINDING AND UPTAKE IN
CULTURED HUMAN EPIDERMAL CELLS BY TCDD (FEDERAL PROCEEDINGS 42(7),
1988).

GREENLEE WF

HARVARD SCHOOL PUBLIC HE

DIOXIN - ILLEGIBLE (PESTICIDE AND TOXIC CHEMICAL NEWS).

NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT 222 ✓ AUTHOR: ADDRESSEE: COPYEE:	00/00/00		1 ✓	ILLNESS ASSOCIATED WITH TCDD CONTAMINATED SOIL.
DOCUMENT 223 ✓ AUTHOR: ERICKSON JD ADDRESSEE: JAMES LM COPYEE:	08/17/84	MULINARE J MCCLEARN AB	11 ✓	VIETNAM VETERANS' RISKS FOR FATHERING BABIES WITH BIRTH DEFECTS (JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION 252(7), 903-912). MCCLAIN PW FITCH TG ADAMS MJ JR CENTERS FOR DISEASE CONT
DOCUMENT 224 ✓ AUTHOR: SEEFELD MD ADDRESSEE: COPYEE:	06/30/84	PETERSON RE	10 ✓	DIGESTIBLE ENERGY AND EFFICIENCY OF FEED UTILIZATION IN RATS TREATED WITH TCDD (TOXICOLOGY AND APPLIED PHARMACOLOGY 74(2), 214-222). UNIV WI
DOCUMENT 225 ✓ AUTHOR: DAN BB ADDRESSEE: COPYEE:	08/17/84	AMERICAN MEDICAL ASSOC	3 ✓	VIETNAM AND BIRTH DEFECTS (JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION 252(7), 936).
DOCUMENT 226 ✓ AUTHOR: DARGY R ADDRESSEE: COPYEE:	00/00/84	HASSOUN E	7 ✓	TERATOGENICITY OF TCDD AND THE CONGENER 3,3',4,4'-TETRACHLOROAZOXYBENZENE IN SENSITIVE AND NONSENSITIVE MOUSE STRAINS AFTER RECIPROCAL BLASTOCYST TRANSFER (TOXICOLOGY LETTERS 21, 197-202). DENCKER L UNIV UPPSALA SWEDEN
DOCUMENT 227 ✓ AUTHOR: MARTIN JV ADDRESSEE: COPYEE:	00/00/84	OLDHAM DISTRICT GENERAL	3 ✓	LIPID ABNORMALITIES IN WORKERS EXPOSED TO DIOXIN (BRITISH JOURNAL OF INDUSTRIAL MEDICINE 41, 254-256).
DOCUMENT 228 ✓ AUTHOR: ROZMAN K ADDRESSEE: BASOTHERM BMGH FED REPUB COPYEE:	02/00/84	ROZMAN T	6 ✓	EFFECT OF THYROIDECTOMY AND THYROXINE ON TCDD INDUCED TOXICITY (TOXICOLOGY AND APPLIED PHARMACOLOGY 72(2), 372-376). GREIM H UNIV KS

4034

D-4/30

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	229 ✓	03/30/84		10 ✓
AUTHOR:	KOSHAKJI RP		HARBISON RD	
ADDRESSEE:	TN NEUROPSYCHIATIC INST			
COPYEE:				
DOCUMENT	230 ✓	04/00/84		13 ✓
AUTHOR:	SEEFELD MD		CORBETT SW	
ADDRESSEE:	UNIV WI			
COPYEE:				
DOCUMENT	231 ✓	03/30/84		7 ✓
AUTHOR:	PUHVEL SM		ERTL DC	
ADDRESSEE:				
COPYEE:				
DOCUMENT	232 ✓	06/15/84		10 ✓
AUTHOR:	GREIG JB		FRANCIS JE	
ADDRESSEE:	SMITH AG		MEDICAL RES COUNCIL	
COPYEE:				
DOCUMENT	233 ✓	06/15/84		9 ✓
AUTHOR:	GEIRTHY JF		CRANE D	
ADDRESSEE:				
COPYEE:				
DOCUMENT	234 ✓	00/00/84		8 ✓
AUTHOR:	CANTONI L		DALFUME D	
ADDRESSEE:	ISTITUTO RECERCH FARMAC			
COPYEE:				

11-4131

4035

TITLE

STUDIES ON THE METABOLIC FATE OF 14C TCDD IN THE MOUSE (TOXICOLOGY AND APPLIED PHARMACOLOGY 73(1), 69-77).
 BUSH MT VANDERBILT UNIV

CHARACTERIZATION OF THE HASTING SYNDROME IN RATS TREATED WITH TCDD (TOXICOLOGY AND APPLIED PHARMACOLOGY 73(2), 311-322).
 KEESEY RE PETERSON RE

INCREASED EPIDERMAL TRANSGLUTAMINASE ACTIVITY FOLLOWING TCDD; IN VIVO AND IN VITRO STUDIES WITH MOUSE SKIN (TOXICOLOGY AND APPLIED PHARMACOLOGY 73(1), 42-47).
 LYNBERG CA UNIV CA LOS ANGELES

INCOMPLETE CORRELATION OF TCDD HEPATOXICITY WITH AH PHENOTYPE IN MICE (TOXICOLOGY AND APPLIED PHARMACOLOGY 74(1), 17-25).
 KAY SJE LOVELL DP

LAB

REVERSIBLE INHIBITION OF IN VITRO EPITHELIAL CELL PROLIFERATION BY TCDD (TOXICOLOGY AND APPLIED PHARMACOLOGY 74(1), 91-98).
 NY ST DEPT HEALTH

IN VITRO INHIBITORY EFFECT ON PORPHYRINOGEN CARBOXYLYASE OF LIVER EXTRACTS FROM TCDD TREATED MICE (TOXICOLOGY LETTERS 20, 211-217).
 RIZZARDINI M RUGGIERI R

NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT 235 ✓	12/00/83		9 ✓	NATURAL HISTORY OF TCDD INDUCED LIVER LESIONS IN RATS AS OBSERVED BY TRANSMISSION ELECTRON MICROSCOPY DURING A 32 WEEK PERIOD AFTER A SINGLE INTRAPERITONEAL INJECTION (JOURNAL OF TOXICOLOGY AND ENVIRONMENTAL HEALTH 12(4-6), 533-540).
AUTHOR: WEBER O		LUZI P		RESI L
ADDRESSEE: UNIV SIENA ITALY		LOVATI MR		TANGANELLI P
COPYEE:				UNIV MILAN ITALY
DOCUMENT 236 ✓	00/00/84		11 ✓	DIFFERENT SUSCEPTIBILITY OF MOUSE TISSUES TO PORPHYROGENIC EFFECT OF TCDD (TOXICOLOGY LETTERS 20, 201-210).
AUTHOR: CANTONI L		DALFUME D		FERRAROLI A
ADDRESSEE: RUGGIERI R		ISTITUTO RICERCHE FARMAC		SALMONA M
COPYEE:				
DOCUMENT 237 ✓	09/00/83		12 ✓	DIOXIN TOXICOLOGY (INCLUDING AGENT ORANGE)(NATIONAL LIBRARY OF MEDICINE LITERATURE SEARCH 83-19).
AUTHOR: JACKSON S		US DEPT HEALTH AND HUMAN		
ADDRESSEE:				
COPYEE:				
DOCUMENT 238 ✓	12/00/83		10 ✓	COMPARATIVE ABILITY OF TCDD TO INDUCE LIPID PEROXIDATION IN RATS, GUINEA PIGS, AND SYRIAN GOLDEN HAMSTERS (BULLETIN OF ENVIRONMENTAL CONTAMINATION AND TOXICOLOGY 31(6), 649-657).
AUTHOR: HASSAN MQ		STOHS SJ		MURRAY WJ
ADDRESSEE:				UNIV NB
COPYEE:				
DOCUMENT 239 ✓	00/00/78		34 ✓	PATHOLOGICAL EMBRYOLOGICAL INVESTIGATIONS IN CASES OF ABORTION RELATED TO THE SEVESO ACCIDENT (SCHWEIZERISCHE MEDIZINISCHE WOCHENSCHRIFT 108(42), 1617-1625).
AUTHOR: REHDER H		SANCHIONI L		CEFIS F
ADDRESSEE: MEDICAL HOCHSCHULE LUBEC		ISTITUTI ELINICI DI PERF		GROPP A
COPYEE:				
DOCUMENT 240 ✓	04/02/77		2 ✓	LONG TERM EFFECTS OF DIOXIN EXPOSURE (THE LANCET)(SEVESO INFO PACKET).
AUTHOR: DEALE MO		ILLEGIBLE		KARL MM
ADDRESSEE: WA UNIV				ROBSON AM
COPYEE:				

4036

D-4132

NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT 241 ✓	00/00/77		23 ✓	ACTIVITY OF THE LPIP IN TESTING CONSEQUENT TO THE ICMESA INCIDENT (SEVESO INFO PACKET).
AUTHOR: LAB DI IGIENE E PROFILAS SCHOOL OF AEROSPACE MEDI				
ADDRESSEE:				
COPYEE:				
DOCUMENT 242 ✓	00/00/77		42 ✓	VALUTAZIONE DELLA TCDD NEL TERRENS SVILUPPO DELIA NETODELOGIA NANLITICA DEFINIZIONE DEL SISTEME DE APPONTAMENTO DI UNA MAPPA DI CONTAMINAZIONE (CHAPTER III - VI) (INCLUDES ATTACHMENTS)(SEVESO INFO PACKET).
AUTHOR: DI DOMENICO A				
ADDRESSEE: ISTITUTO SUPERIORE DI SA LAB PROVINCIALE DI IGIEN				
COPYEE:				
DOCUMENT 243 ✓	12/00/81		7 ✓	RELATIONSHIP BETWEEN CLINICAL AND ELECTROPHYSIOLOGICAL FINDINGS AND INDICATORS OF HEAVY EXPOSURE TO TCDD (SCANDINAVIAN JOURNAL OF WORK, ENVIRONMENT AND HEALTH 7(4), 257-262).
AUTHOR: FILIPPINI G				
ADDRESSEE: MUSICCO M				
COPYEE:				
BORDO B				
BOERI R				
CRENNA P				
MASSETTO N				
ISTITUTO NEUROLOGICO ITA				
DOCUMENT 244 ✓	00/00/81		6	BIOCHEMICAL AND MORPHOLOGICAL CHANGES INDUCED BY TCDD IN THE RAT LIVER CELL PLASMA MEMBRANE (JOURNAL OF APPLIED TOXICOLOGY 1(6), 334-338).
AUTHOR: GREIG JB				
ADDRESSEE: OSBORNE G				
COPYEE:				
DOCUMENT 245 ✓	10/00/81		11	INTESTINAL ABSORPTION OF NUTRIENTS IN RATS TREATED WITH TCDD (JOURNAL OF TOXICOLOGY AND ENVIRONMENTAL HEALTH 8(4), 629-638).
AUTHOR: BALL LM				
ADDRESSEE: CHHABRA RS				
COPYEE:				
DOCUMENT 246 ✓	00/00/81		9 ✓	ASSOCIATION BETWEEN THE PRESENCE OF THE AH RECEPTOR IN EMBRYONIC MURINE TISSUES AND SENSITIVITY TO TCDD INDUCED CLEFT PALATE (TERATOGENESIS CARCINOGENESIS AND MUTAGENESIS 1(4), 399-406).
AUTHOR: DENCKER L				
ADDRESSEE: PRATT RM				
COPYEE:				
DOCUMENT 247 ✓	00/00/81		6 ✓	ELIMINATION OF TCDD IN GOAT MILK (TOXICOLOGY LETTERS 9, 215-219).
AUTHOR: ARSTILA AU				
ADDRESSEE: REGGIANI G				
COPYEE:				
WIPF HK				
SORVARI TE				
RAISANEN S				

D-4133

4037

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	248 ✓	00/00/83		11 ✓
AUTHOR:	COOK RR		BODNER KM	
ADDRESSEE:				
COPYEE:				
DOCUMENT	249 ✓	00/00/83		8 ✓
AUTHOR:	BOND GG		OTTMG	
ADDRESSEE:	DOW			
COPYEE:				
DOCUMENT	250 ✓	00/00/85		11 ✓
AUTHOR:	STEINBERG KK		MACNEIL ML	
ADDRESSEE:	NEESE JW		NEEDHAM LL	
COPYEE:				
DOCUMENT	251 ✓	03/18/81		3 ✓
AUTHOR:				
ADDRESSEE:				
COPYEE:				
DOCUMENT	252 ✓	02/02/73		2 ✓
AUTHOR:	POLAND A		GLOVER E	
ADDRESSEE:				
COPYEE:				
DOCUMENT	253 ✓	00/00/00		1 ✓
AUTHOR:				
ADDRESSEE:				
COPYEE:				
DOCUMENT	254 ✓	00/00/86		10 ✓
AUTHOR:	POTTER CL		MENAHAN LA	
ADDRESSEE:				
COPYEE:				

2-4134

4038

TITLE

DIOXIN AND REPRODUCTIVE EVENTS (HUMAN AND ENVIRONMENTAL RISKS OF CHLORINATED DIOXINS AND RELATED COMPOUNDS, 593-603).
DOW

MEDICAL AND MORBIDITY SURVEILLANCE FINDINGS AMONG EMPLOYEES POTENTIALLY EXPOSED TO TCDD (BRITISH JOURNAL OF INDUSTRIAL MEDICINE 40, 318-324).
BRENNER FE COOK RR

ASSESSMENT OF TCDD EXPOSURE USING A MODIFIED D-GLUCARIC ACID ASSAY (JOURNAL OF TOXICOLOGY AND ENVIRONMENTAL HEALTH 16(6), 743-752).
KARON JM STEHR PA
US DEPT HEALTH HUMAN SER

REPRODUCTIVE EFFECTS, WORKER CANCER STUDIES NOTED IN TSCA 8(E) REPORTS (PESTICIDE & TOXIC CHEMICAL NEWS, 8-10).

TCDD A POTENT INDUCER OF A-AMINOLEVULINIC ACID SYNTHETASE(SCIENCE).
UNIV OF ROCHESTER

DIOXIN - ILLEGIBLE (PEST AND TOXIC CHEMICAL NEWS).

RELATIONSHIP OF ALTERATIONS IN ENERGY METABOLISM TO HYPOPHAGIA IN RATS TREATED WITH TCDD (FUNDAMENTAL AND APPLIED TOXICOLOGY 6, 89-97).
PETERSON RE UNIV WI

NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT 255 ✓	11/16/68		2 ✓	CHEMICAL AND TOXICOLOGICAL EVALUATIONS OF ISOLATED SYNTHETIC CHLORO DERIVATIVES OF DIBENZO-P-DIOXIN (NATURE 220, 702-703).
AUTHOR: HIGGINBOTHAM GR		HUANG A		FIRESTONE D
ADDRESSSEE: RESS J		CAMPBELL AD		VERRETT J
COPYEE:				HEW
DOCUMENT 256 ✓	00/00/83		8 ✓	MEDICAL AND MORBIDITY SURVEILLANCE FINDINGS AMONG EMPLOYEES POTENTIALLY EXPOSED TO TCDD (BRITISH JOURNAL OF INDUSTRIAL MEDICINE 40, 318-324).
AUTHOR: BOND GG		OTT MG		BRENNER FE
ADDRESSSEE: DOW				COOK RR
COPYEE:				
DOCUMENT 257 ✓	00/00/81		11 ✓	TREATMENT OF THE PORPHYRIAS; MECHANISMS OF ACTION (JOURNAL OF INVESTIGATIVE DERMATOLOGY 77, 107-113)(INCLUDES PHOTOCOPY REQUEST FOR JOURNAL ARTICLES).
AUTHOR: BICKERS DR		CASE WESTERN RESERVE		UNI
ADDRESSSEE:				
COPYEE:				
DOCUMENT 258 ✓	00/00/82		3 ✓	REGULATORY GENE PRODUCT OF THE AH LOCUS; DEMONSTRATION OF THE CYTOSOLIC RECEPTOR IN HUMAN PLACENTA (DEVELOPMENTAL PHARMACOLOGY, 121A)(257).
AUTHOR: BIGELOW SW		LAZARTE RA		EISEN HJ
ADDRESSSEE: NICHD				NEBERT DM
COPYEE:				
DOCUMENT 259 ✓	00/00/83		9 ✓	INVESTIGATIONS FOR GENOTOXIC EFFECTS AFTER EXPOSURE TO CRUDE 2,4,5-TRICHLOROPHENOL (BRITISH JOURNAL OF INDUSTRIAL MEDICINE 40, 87-91).
AUTHOR: BLANK CE		COOKE P		POTTER AM
ADDRESSSEE:				CITY HOSPITAL NOTTINGHAM
COPYEE:				
DOCUMENT 260 ✓	09/00/73		6 ✓	SUMMARY; CONFERENCE ON DIBENZODIOXINS AND DIBENZOFURANS, NATIONAL INSTITUTE OF ENVIRONMENTAL HEALTH SERVICES APRIL 2-3, 1973 (ENVIRONMENTAL HEALTH PERSPECTIVES, 278-282).
AUTHOR: BURGER EJ JR		OFFICE SCIENCE TECHNOLOG		
ADDRESSSEE:				
COPYEE:				

D-4135

4039

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	261 ✓	00/00/82		17 ✓
AUTHOR:	CARAMASCHI F		MONTESARCHIO E	
ADDRESSEE:	GIAMBELLUCA SE		BONETTI F	
COPYEE:				
DOCUMENT	262 ✓	00/00/81		10 ✓
AUTHOR:	CANTONI L		RIZZARDINI M	
ADDRESSEE:	FANELLI R		SALMONA M	
COPYEE:				
DOCUMENT	263 ✓	00/00/79		3 ✓
AUTHOR:	CORDLE F		KOLBYE AC	
ADDRESSEE:				
COPYEE:				
DOCUMENT	264 ✓	07/00/82		4 ✓
AUTHOR:	CALDER CS		POLLOCK M	
ADDRESSEE:				
COPYEE:				
DOCUMENT	265 ✓	00/00/82		13 ✓
AUTHOR:	COCKERHAM LG		YOUNG AL	
ADDRESSEE:				
COPYEE:				
DOCUMENT	266 ✓	08/20/74		1 ✓
AUTHOR:	POLAND A		BLOVER E	
ADDRESSEE:				
COPYEE:				
DOCUMENT	267 ✓	00/00/74		1 ✓
AUTHOR:	LOHS K			
ADDRESSEE:				
COPYEE:				

D-4136

4040

TITLE

ANALYSIS OF EXPOSURE TO ENVIRONMENTAL CONTAMINATION BY TCDD IN INDIVIDUALS AFFECTED BY DERMATOLOGICAL LESIONS (LIGIENE MODERNA 77, 681-706).

DELCORNO G
VOLPATO C

FAVARETTI C
ISTITUTO IGIENE ITALY

INDUCTION OF MIXED FUNCTION OXIDASE BY CHRONIC TREATMENT WITH TCDD IN FEMALE RATS (TOXICOLOGY 21, 159-167).

BELVEDERE G CANTONI R
ISTITUTO RICERCHE FARMAC

APPLIED TOXICOLOGY; DIFFICULTIES IN EXTRAPOLATION OF TOXICITY RESULTS FROM ANIMAL TO MAN (CLIN TOX 15(4), 478).

FDA

FAILURE OF DIOXIN TO CAUSE POLYNEUROPATHY IN RATS (PROCEEDINGS OF THE UNIVERSITY OF OTAGO MEDICAL SCHOOL 60(2), 26-27).

LOVELACE RE PRESBYTERIAN HOSPITAL NY

THE ABSENCE OF HEPATIC CELLULAR ANOMALIES IN TCDD EXPOSED BEACH MICE - A FIELD STUDY (ENVIRONMENTAL TOXICOLOGY AND CHEMISTRY 1, 299-308).

USAF

THE INDUCTION OF ARYL HYDROCARBON HYDROXYLASE BY TCDD; EVIDENCE FOR A RECEPTOR MUTATION IN GENETICALLY NONRESPONSIVE MICE (THE PHARMACOLOGIST, BIOTRANSFORMATION III, 240)(284).

UNIV ROCHESTER

DIOXIN, A NEW CHEMICAL WARFARE AGENT OF THE IMPERIALISTIC ARMIES (Z MILITAERMED 14(6), 318-319)(BIOCHEM INTERACTIONS 81,146407)(146393Z).

NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT 268 ✓	00/00/74		1	EFFECTS OF TCDD ON STIMULATED DNA SYNTHESIS IN THE LIVER AND KIDNEY OF THE RAT (CHEM BIOLINTERACT 8(1), 31-39)(2350). JONES JD MRC LAB
AUTHOR: GREIG JB		TAYLOR DM		
ADDRESSEE:				
COPYEE:				
DOCUMENT 269 ✓	00/00/74		1	TCDD DEADLY MOLECULE (CHEMISTRY 47(2), 15-18) (TOXICOLOGY 81,33985)(33956S).
AUTHOR: GRIBBLE GW		DARTMOUTH COLLEGE		
ADDRESSEE:				
COPYEE:				
DOCUMENT 270 ✓	00/00/00		8	REFERENCES.
AUTHOR:				
ADDRESSEE:				
COPYEE:				
DOCUMENT 271 ✓	00/00/73		2	TOXIC EFFECTS OF TCDD (FOOD COSMET TOXICOL 1194), 585-595). BUTLER WH BARNES JM
AUTHOR: GREIG JB		JONES G		
ADDRESSEE: MED RES COUNC LAB CARSHA				
COPYEE:				
DOCUMENT 272 ✓	00/00/73		1	EFFECT OF TCDD ON THE BILIARY EXCRETION OF INDOCYANINE GREEN IN RAT (ENVIRON HEALTH PERSPECT 5, 227-231).
AUTHOR: HWANG SH		NATL INST ENVIRON HEALTH		
ADDRESSEE:				
COPYEE:				
DOCUMENT 273	00/00/75		1	EFFECTS OF TCDD ON MAMALIAN HEPATIC B-AMINOLEVULINIC ACID SYNTHETASE (ENVIRON HEALTH PERSPECT 5, 221-225)(CHEMICAL ABSTRACT 82, 96)(39245B).
AUTHOR: WOODS JS		NATL INST ENVIRON HEALTH		
ADDRESSEE:				
COPYEE:				
DOCUMENT 274 ✓	00/00/74		1	TOXICITY OF TCDD IN GUPPIES (POECILIA RETICULATUS)(BULL ENVIRON CONTAM TOXICOL 12(1), 76-80)(CHEMICAL ABSTRACTS 82, 130)(26753R). PAC NORTHWEST FOREST RAN
AUTHOR: NORRIS LA		MILLER RA		
ADDRESSEE:				
COPYEE:				

D-4137

4041

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	275 ✓	07/00/72		2 ✓
AUTHOR:	BUUHOI NP		PHAMHUU C	
ADDRESSEE:	CENTRE NATIONAL RECHERCH			
COPYEE:				
DOCUMENT	276 ✓	11/00/72		2 ✓
AUTHOR:				
ADDRESSEE:				
COPYEE:				
DOCUMENT	277 ✓	07/00/71		1
AUTHOR:	BUUHOI NP		HIEN DP	
ADDRESSEE:				
COPYEE:				
DOCUMENT	278 ✓	11/16/68		4
AUTHOR:	HIGGINBOTHAM GR		HUANG A	
ADDRESSEE:	RESS J		CAMPBELL AD	
COPYEE:				
DOCUMENT	279 ✓	00/00/75		4
AUTHOR:	KIMBROUGH RD		LINDER RE	
ADDRESSEE:				
COPYEE:				
DOCUMENT	280 ✓	00/00/82		14
AUTHOR:	TIERNAN TO		WRIGHT ST UNIV	
ADDRESSEE:				
COPYEE:				
DOCUMENT	281 ✓	11/04/81		19 ✓
AUTHOR:	RAMSEY JC		HEFNER JO	
ADDRESSEE:	GEHRING PJ		SCHWETZ BA	
COPYEE:				

①-4138

4042

TITLE

 ENZYMATIC FUNCTIONS AS TARGETS OF THE TOXICITY OF TCDD
 (NATURWISSENSCHAFTEN 59(4), 173-174).
 AZUMGELADE MC SAINTRUF O

CHLORODIBENZODIOXINS IN THE LIVER (INFORMATION BULLETIN BIBRA 2(9),
 442-443).

TETRACHLORODIBENZODIOXIN - INTIMATIONS OF CARCINOGENICITY? (BIBRA,
 295).
 SAINTRUF O SERVOINSIDOINE J

CHEMICAL AND TOXICOLOGICAL EVALUATIONS OF ISOLATED AND SYNTHETIC
 CHLORO DERIVATIVES OF DIBENZO-P-DIOXIN (NATURE 220, 702-703).
 FIRESTONE D VERRETT J
 HEW

THE EFFECT OF TECHNICAL AND 99 PERCENT PURE PENTACHLOROPHENOL ON
 THE RAT LIVER. LIGHT MICROSCOPY AND ULTRASTRUCTURE (ABSTRACTS;
 FOURTEETH ANNUAL MEETING 23).
 EPA

CHLORODIBENZODIOXINS AND CHLORODIBENZOFURANS; AN OVERVIEW (DET
 OXICATION OF HAZARDOUS WASTE ANN ARBOR SCI PUB EXNER, JH)

THE IN VIVO BIOTRANSFORMATION OF TCDD IN THE RAT (HET K-66681-(38).
 KARBOHKKI RJ BRAUN WH
 DOW

NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT 282	✓ 00/00/83		15	ANIMAL TOXICOLOGY OF CHLORINATED DIBENZO-P-DIOXINS (CHEMOSPHERE 12(4/5), 453-562). SWISS FED INST TECHNOL
AUTHOR:	POIGER H	SCHLATTER C		
ADDRESSEE:				
COPYEE:				
DOCUMENT 283	✓ 06/28/80		3	DIOXIN AND THE HEART (THE LANCET 1(183),1428)(INCLUDES PHOTOCOPY REQUEST FOR JOURNAL ARTICLES).
AUTHOR:				
ADDRESSEE:				
COPYEE:				
DOCUMENT 284	✓ 00/00/82		13	HAIRLESS MICE AS MODELS FOR CHLORACNE, A STUDY OF CUTANEOUS CHANGES INDUCED BY TOPICAL APPLICATION OF ESTABLISHED CHLORACNEGENS (TOXICOLOGY AND APPLIED PHARMACOLOGY 64, 492-503). ERTL DC REISNER RM
AUTHOR:	PUHVEL SM	SAKAMOTO M		
ADDRESSEE:	UCLA SCHOOL OF MEDICINE	WADSWORTH MEDICAL CENTER		
COPYEE:				
DOCUMENT 285	✓ 00/00/82		10	CHLORACNE, CLINICAL SYMPTOMS AND BIOCHEMICAL CHANGES IN CHILDREN EXPOSED TO TCDD IN SEVESO (IGIENE MODERNA 77, 659-674). CARAMASCHI F GIAMBELLUCA SE BONETTI F VOLPATO C
AUTHOR:	FAVARETTI C	DELCORNO G		
ADDRESSEE:	MONTESARCHIO E	MARNI E		
COPYEE:	UNIV MILAN ITALY	MUNICIPAL HEALTH DEPT MI		
DOCUMENT 286	✓ 00/00/77		8	ENHANCED THYROXINE METABOLISM AND HIGH UPTAKE GOITERS IN RATS AFTER A SINGLE DOSE OF TCDD (ENDOCRINOLOGY 101(1), 292-296)(INCLUDES PHOTOCOPY REQUEST FOR JOURNAL ARTICLES).
AUTHOR:	BASTOMSKY CH	MCGILL UNIV CLINC QUEBEC		
ADDRESSEE:				
COPYEE:				
DOCUMENT 287	✓ 00/00/81		13	INTESTINAL ABSORPTION OF NUTRIENTS IN RATS TREATED WITH TCDD (JOURNAL OF TOXICOLOGY AND ENVIRONMENTAL HEALTH 8, 629-638). NATL INST ENVIRON HEALTH
AUTHOR:	BALL LM	CHHABRA RS		
ADDRESSEE:				
COPYEE:				
DOCUMENT 288	✓ 00/00/78		21	EFFECTS OF TCDD ON LIPID PROFILES IN TISSUE OF THE FISCHER RAT (CHEM BIOL INTERACTIONS 23, 315-330). HARRIS M LAWSON LD
AUTHOR:	ALBRO PW	CORBETT JT		
ADDRESSEE:	NATL INST OF ENVIRON HEA			
COPYEE:				

4043

D-4139

NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT 295 ✓	00/00/80		26	CHLOROAROMATIC COMPOUNDS CONTAINING OXYGEN PHENOLS, DIPHENYL ETHERS, DIBENZO-P-DIOXINS AND DIBENZOFURANS (HANDBOOK ENVIRONMENTAL CHEM 3, 157-179).
AUTHOR: RAPPE C		UNIV UMEA SWEDEN		
ADDRESSEE:				
COPYEE:				
DOCUMENT 296 ✓	04/30/81		3	DIOXIN HAZARDS SECRECY AT COALITE (NATURE 290, 729)(INCLUDES REQUEST FOR PHOTOCOPY).
AUTHOR: HAY A				
ADDRESSEE:				
COPYEE:				
DOCUMENT 297 ✓	00/00/83		10	EXPOSURE TO POLYCHLORINATED DIBENZO-P-DIOXINS AND DIBENZO-FURANS IN THE ENVIRONMENT (13TH INTL CANCER CONGRESS PART E CANCER MANAGEMENT, 357-369).
AUTHOR: HARDELL L		UNIV HOSPITAL UMEA SWEDE		
ADDRESSEE:				
COPYEE:				
DOCUMENT 298 ✓	00/00/85		10	REGULATION OF EPIDERMAL GROWTH FACTOR BINDING IN A HUMAN KERATINOCYTE CELL LINE BY TCDD (TOXICOLOGY AND APPLIED PHARMACOLOGY 77, 251-259).
AUTHOR: HUDSON LG		TOSCANO WA JR		
ADDRESSEE: CHEMICAL INDUSTRY INST O				
COPYEE:				
DOCUMENT 299 ✓	00/00/85		12	TOXIC INTERACTION OF SPECIFIC POLYCHLORINATED BIPHENYLS AND TCDD; INCREASED INCIDENCE OF CLEFT PALATE IN MICE (TOXICOLOGY AND APPLIED PHARMACOLOGY 77, 292-302).
AUTHOR: BIRNBAUM LS		WEBER H		
ADDRESSEE: MCKINNEY JD		NATL INST ENVIRON HEALTH		
COPYEE:				
DOCUMENT 300 ✓	02/00/85		7	GENETICALLY MEDIATED INDUCTION OF ARYL HYDROCARBON HYDROXYLASE ACTIVITY IN HUMAN LYMPHOBLASTOID CELLS BY POLYCHLORINATED DIBENZOFURAN ISOMERS AND TCDD (ARCHIVES OF TOXICOLOGY 56(4), 230-235).
AUTHOR: NAGAYAMA J		KIYOHARA C		
ADDRESSEE: KYUSHU UNIV		DAIICHI COLLEGE OF PHARM		
COPYEE:				

GREENLEE WF HARVARD UNIV SCHOOL PUBL

HARRIS MW LAMB JC IV

MASUDA Y KURATSUNE M

4044

D-4140

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	308 ✓	00/00/85		11
AUTHOR:	WROBLEWSKI VJ		OLSON JR	
ADDRESSEE:				
COPYEE:				
DOCUMENT	309 ✓	10/00/85		11
AUTHOR:	LUSTER MI		HONG LH	
	HAYES HT		GREENLEE WF	
	NATL INST ENVIRON HEALTH		CHEMICAL INDUSTRY	
ADDRESSEE:				
COPYEE:				
DOCUMENT	310 ✓	00/00/85		5
AUTHOR:	SPILL E		KNIGHT AS	
ADDRESSEE:				
COPYEE:				
DOCUMENT	311 ✓	08/00/85		14
AUTHOR:	KELLING CK		CHRISTIAN BJ	
	UNIV WI			
ADDRESSEE:				
COPYEE:				
DOCUMENT	312 ✓	00/00/85		10
AUTHOR:	JANSING RL		SHAIN W	
ADDRESSEE:				
COPYEE:				
DOCUMENT	313 ✓	00/00/85		21
AUTHOR:	CONSTABLE JD		HATCH MC	
ADDRESSEE:				
COPYEE:				

D-4141

4045

TITLE

HEPATIC METABOLISM OF TCDD IN THE RAT AND GUINEA PIG (TOXICOLOGY AND APPLIED PHARMACOLOGY 81, 231-240).
SUNY AT BUFFALO SCHOOL O

ACUTE MYELOTXIC RESPONSES IN MICE EXPOSED TO TCDD (TOXICOLOGY AND APPLIED PHARMACOLOGY 81(1), 156-165).

BOORMAN GA
DOLD K

CLARK G
TUCKER AN

INST O

DIOXINS HAVE LEFT THEIR MARK ON CHILDREN FROM SEVESO NINE YEARS AGO - THE LINGERING (INSIDIOUS) CONTAMINATION. SCIENTISTS (INVESTIGATORS) HAVE NOW DISCOVERED HOW DIOXINS WORK IN THE BODY (STERN MAGAZINE)(TRANSLATION AND ORIGINAL GERMAN DOCUMENT).
MCCARTY LP

HYPOPHAGIA INDUCED WEIGHT LOSS IN MICE, RATS, AND GUINEA PIGS TREATED WITH TCDD (FUNDAMENTAL AND APPLIED TOXICOLOGY 5(4), 700-712).

INHORN SL

PETERSON RE

ARYL HYDROCARBON HYDROXYLASE INDUCTION IN ADULT RAT HEPATOCYTES IN PRIMARY CULTURE BY SEVERAL CHLORINATED AROMATIC HYDROCARBONS INCLUDING TCDD (FUNDAMENTAL AND APPLIED TOXICOLOGY 5, 713-720).
NY ST DEPT HEALTH

REPRODUCTIVE EFFECTS OF HERBICIDE EXPOSURE IN VIETNAM; RECENT STUDIES BY THE VIETNAMESE AND OTHERS (TERATOGENESIS CARCINOGENESIS AND MUTAGENESIS 5(4), 231-250).

MS GENERAL HOSPITAL

COLUMBIA UNIV SCHOOL OF

NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT 314 ✓	07/08/85		2	EFFECTS OF PREVIOUS MATERNAL EXPOSURE TO SOCIAL BEHAVIOR OF THERHESUS MONKEY MOTHER INFANT PAIRS (BEHAVIORAL TERATOLOGY SOCIETY NINTH ANNUAL MEETING 81).
AUTHOR: SCHANTZ SL		VANVALKENBERG HC		BOWMAN RE UNIV WI
ADDRESSEE:				
COPYEE:				
DOCUMENT 315 ✓	05/00/85		13	TOXICITY AND FETOTOXICITY OF TCDD, TCDF AND PCB ISOMERS IN RHESUS MACAQUES (MACACA MULATTA) (ENVIRONMENTAL HEALTH PERSPECTIVES 60, 77-88).
AUTHOR: MCNULTY WP		OR REGIONAL PRIMATE RES		
ADDRESSEE:				
COPYEE:				
DOCUMENT 316 ✓	06/15/85		10	EVIDENCE FOR DIRECT ACTION OF TCDD ON THYMIC EPITHELIUM (TOXICOLOGY AND APPLIED PHARMACOLOGY 79, 112-120).
AUTHOR: GREENLEE WF		DOLD KM		IRONS RD OSBORNE R
ADDRESSEE: CHEMICAL INDUSTRY INST O				
COPYEE:				
DOCUMENT 317 ✓	02/00/85		5	GENETICALLY MEDIATED INDUCTION OF ARYL HYDROCARBON HYDROXYLASE ACTIVITY IN MICE BY POLYCHLORINATED DIBENZOFURAN ISOMERS AND TCDD (ARCHIVES OF TOXICOLOGY 56(4), 226-220).
AUTHOR: NAGAYAMA J		KUROKI H		MASUDA Y HANDA S
ADDRESSEE: KURATSUNE M		KYUSHU UNIV FUKUOKA JAPA DAIICHI COLLEGE PHARMACE		
COPYEE:				
DOCUMENT 318 ✓	04/00/85		5	ABSENCE OF LIPID PEROXIDATION AS DETERMINED BY ETHANE EXHALATION IN RATS TREATED WITH TCDD (ARCHIVES OF TOXICOLOGY 57(1), 13-16).
AUTHOR: ROBERTSON LW		REGEL U		FILSER JG OESCH F
ADDRESSEE: UNIV MAINZ FED REPUBLIC				
COPYEE:				
DOCUMENT 319 ✓	00/00/85		14	ANDROGENIC DEFICIENCY IN MALE RATS TREATED WITH TCDD (TOXICOLOGY AND APPLIED PHARMACOLOGY 79, 99-111).
AUTHOR: MOORE RW		POTTER CL		THEOBALD HM ROBINSON JA
ADDRESSEE: PETERSON RE		UNIV WI		
COPYEE:				
DOCUMENT 320 ✓	03/15/85		7	COMPARATIVE TOXICITY OF TCDD IN FOUR (SUB)STRAINS OF ADULT MALE RATS (TOXICOLOGY AND APPLIED PHARMACOLOGY 77(3), 490-495).
AUTHOR: WALDEN R		SCHILLER CM		
ADDRESSEE:				
COPYEE:				

4046

D-4142

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	321 ✓	03/15/85		11
AUTHOR:	OSBORNE R		GREENLEE WF	
ADDRESSEE:				
COPYEE:				
DOCUMENT	322 ✓	03/00/85		12
AUTHOR:	CHAPMAN DE		SCHILLER CM	
ADDRESSEE:				
COPYEE:				
DOCUMENT	323 ✓	00/00/84		8
AUTHOR:	LOVATI MR RESI L UNIV SIENA ITALY		GALBUSSERA M TANGANELLI P	
ADDRESSEE:				
COPYEE:				
DOCUMENT	324 ✓	00/00/85		19
AUTHOR:	KERKVLiet NI		BRAUNER JA	
ADDRESSEE:				
COPYEE:				
DOCUMENT	325 ✓	00/00/85		71
AUTHOR:	HEMMINKI K		VINEIS P	
ADDRESSEE:				
COPYEE:				
DOCUMENT	326 ✓	00/00/84		10
AUTHOR:	MORTELMANS K		ILLEGIBLE	
ADDRESSEE:				
COPYEE:				
DOCUMENT	327 ✓	00/00/81		9
AUTHOR:	REGGIANI G		F HOFFMANN LAROCHE	
ADDRESSEE:				
COPYEE:				

D.4/43

4047

TITLE

 TCDD ENHANCES TERMINAL DIFFERENTIATION OF CULTURED HUMAN EPIDERMAL
 CELLS (TOXICOLOGY AND APPLIED PHARMACOLOGY 77(3), 434-443).
 CHEMICAL INDUSTRY INST O

DOSE RELATED EFFECTS OF TCDD IN C57BL/6J AND DBA/2J MICE
 (TOXICOLOGY AND APPLIED PHARMACOLOGY 78, 147-157).
 NATL INST OF ENVIRON HEA

INCREASED PLASMA AND AORTIC TRIGLYCERIDES IN RABBITS AFTER ACUTE
 ADMINISTRATION OF TCDD (TOXICOLOGY AND APPLIED PHARMACOLOGY 75,
 92-97).

GRANCESCHINI G
 SIRTORI CR

WEBER G
 UNIV MILANO ITALY

HUMORAL IMMUNOTOXICITY OF POLYCHLORINATED DIPHENYL ETHERS,
 PHENOXYPHENOLS, DIOXINS AND FURANS PRESENT AS CONTAMINANTS OF
 TECHNICAL GRADE PENTACHLOROPHENOL (TOXICOLOGY 36,307-324).
 MATLOCK JP OR ST UNIV

EXTRAPOLATION OF THE EVIDENCE ON TERATOGENICITY OF CHEMICALS
 BETWEEN HUMANS AND EXPERIMENTAL ANIMALS; CHEMICALS OTHER THAN DRUGS
 (TERATOGENESIS CARCINOGENESIS AND MUTAGENESIS 5(4), 251-318).
 INST OCCUPATIONAL HEALTH INST ANATOMIA ELSTOLOGIA

MUTAGENICITY TESTING OF AGENT ORANGE COMPONENTS AND RELATED
 CHEMICALS (TOXICOLOGY AND APPLIED PHARMACOLOGY 75, 137-146).

MEDICAL SURVEY TECHNIQUES IN THE SEVESO TCDD EXPOSURE (JOUR OF
 APPLIED TOXICOLOGY 1(6), 323-331).

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	328 ✓	00/00/81		1
AUTHOR:	CORDIE F		FDA	
ADDRESSEE:				
COPYEE:				
DOCUMENT	329 ✓	03/01/81		1
AUTHOR:	BOROUJERDI M		ANDERSON MW	
ADDRESSEE:				
COPYEE:				
DOCUMENT	330 ✓	00/00/80		1
AUTHOR:	JOHANSSON G		GILLNER M	
ADDRESSEE:	KAROLINSKA INST STOCKHOL			
COPYEE:				
DOCUMENT	331 ✓	03/00/81		1
AUTHOR:	LUSTER MI		ALBRO PW	
ADDRESSEE:	GOLDSTEIN JA		NATL INST ENVIRON	
COPYEE:				
DOCUMENT	332 ✓	03/00/81		1
AUTHOR:	OLSON JR		GUDZINOWICZ M	
ADDRESSEE:	SUNY AT BUFFALO			
COPYEE:				
DOCUMENT	333 ✓	03/00/81		1
AUTHOR:	GOLDSTEIN JA		KOHLI KK	
ADDRESSEE:				
COPYEE:				
DOCUMENT	334 ✓	00/00/82		1
AUTHOR:	TOGNONI G		BONACCORSI A	
ADDRESSEE:				
COPYEE:				

D-4144

4048

TITLE

THE USE OF EPIDEMIOLOGY IN THE REGULATION OF DIOXINS IN THE FOOD
SUPPLY (REGUL TOXICOL PHARMACOL 1(3-4), 379-387).

EFFECT OF TCDD AND BUTYLATED HYDROXYANISOLE (BHA) ON THE ENZYMATIC
CONJUGATION OF BENZO(A)PYRENE (BP) METABOLITES (FEDERATION
PROCEEDINGS 40(3).

LAW F

DALHOUSIE UNIV

DETECTION OF THE TCDD RECEPTOR IN RAT INTESTINAL MUCOSA USING
ISOELECTRIC FOCUSING IN POLYACRYLAMIDE GEL (DEV BIOCHEM 13, 243-246).

HOEGBERG B

GUSTAFSSON JA

QUANTITATION OF TCDD IN ANIMAL AND HUMAN TISSUES BY RADIO
IMMUNOASSAY (THE TOXICOLOGIST 1(1)).

CHAE K

MCKINNEY JD

HEALTH

THE IN VITRO AND IN VIVO METABOLISM OF TCDD IN THE RAT (THE
TOXICOLOGIST 1(1)).

NEAL RA

VANDERBILT UNIV

EFFECTS OF TCDD ON MICROSOMAL PROSTAOLANDIN SYSTHESIS (THE
TOXICOLOGIST 1(1)).

NATL INST ENVIRON HEALTH

EPIDEMIOLOGICAL PROBLEMS WITH TCDD (A CRITICAL VIEW)(DRUG METAB REV
13(3), 447-469).

IST RIC FARMACOL

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	335 ✓	01/00/82		1

AUTHOR: HUDSON LG GREENLEE WF
 ADDRESSEE:
 COPYEE:

DOCUMENT	336 ✓	01/00/82		1

AUTHOR: ROGERS AM ANDERSEN ME
 ADDRESSEE:
 COPYEE:

DOCUMENT	337 ✓	01/00/82		1

AUTHOR: RICE RH GREENLEE WF
 ADDRESSEE:
 COPYEE:

DOCUMENT	338 ✓	01/00/82		1

AUTHOR: POTTER CL SIPES IO
 ADDRESSEE:
 COPYEE:

DOCUMENT	339 ✓	01/00/82		1

AUTHOR: SEEFELD MD CORBETT SW
 UNIV WI
 ADDRESSEE:
 COPYEE:

DOCUMENT	340 ✓	01/00/82		1

AUTHOR: SEEFELD MD CORBETT SW
 UNIV WI
 ADDRESSEE:
 COPYEE:

DOCUMENT	341 ✓	01/00/82		1

AUTHOR: GASIEWICZ TA RUCCI G
 ADDRESSEE:
 COPYEE:

D-4185

4049

TITLE

INDUCTION OF 7-ETHOXYCOUMARIN O-DEETHYLASE ACTIVITY IN HUMAN
EPITHELIAL CELLS IN CULTURE; EVIDENCE FOR DIOXIN RECEPTOR (THE
TOXICOLOGIST 2(1)).

DENT JG

HARVARD SCHOOL PUBLIC HE

THE TOXICITY OF TCDD AND PERFLUORODECANOIC ACID IN L5178Y MOUSE
LYMPHOMA CELLS (THE TOXICOLOGIST 2(1)).

BACK KC

WRIGHTPATTERSON AIR FORC

EFFECTS OF TCDD ON CULTURED HUMAN EPITHELIAL TARGET CELLS;
MODULATION BY HYDROCORTISONE (THE TOXICOLOGIST 2(1)).

WHITTENBERGER JL

HARVARD SCHOOL PUBLIC HE

EFFECTS OF TCDD ON RNA POLYMERASE I INDUCTION IN RAT LIVER (THE
TOXICOLOGIST 2(1)).

RUSSELL DH

UNIV AZ

COMPARISON OF BODY WEIGHT LOSS AND OXYGEN CONSUMPTION IN RATS
TREATED WITH TCDD AND PAIR FED CONTROL RATS (THE TOXICOLOGIST 2(1)).

KEESEY RE

PETERSON RE

EFFECT OF TCDD ON FOOD INTAKE, BODY WIEGHT AND ENERGY EXPENDITURE
IN THE RAT (THE TOXICOLOGIST, 2(1)).

KEESEY RE

PETERSON RE

COMPARISON OF THE BINDING PROPERTIES OF CYTOSOLIC RECEPTORS FOR
TCDD IN VARIOUS MAMMALIAN SPECIES (THE TOXICOLOGIST 2(1)).

UNIV ROCHESTER

CLARKSON TW

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	342	01/00/82		1
AUTHOR:	THEOBALD HM		MOORE RW	
ADDRESSEE:				
COPYEE:				
DOCUMENT	343	01/00/82		1
AUTHOR:	MUSCARELLA D		DENNETT D	
ADDRESSEE:	CORNELL UNIV			
COPYEE:				
DOCUMENT	344 ✓	12/00/82		3
AUTHOR:	MCNULTY WP		OR REGIONAL PRIMATE	
ADDRESSEE:	LAY JO JR		LIPPSTREU DL	
COPYEE:	UNIV NB			
DOCUMENT	345 ✓	01/00/82		1
AUTHOR:	GASIEWICZ TA		RUCCI G	
ADDRESSEE:				
COPYEE:				
DOCUMENT	346 ✓	08/00/82		6
AUTHOR:	RAMSEY JC		HEFNER JO	
ADDRESSEE:	GEHRING PJ		DOW	
COPYEE:				
DOCUMENT	347 ✓	00/00/82		4
AUTHOR:	KURL RN		LUND J	
ADDRESSEE:	KAROLINSKA INST SWEDEN			
COPYEE:				
DOCUMENT	348 ✓	00/00/82		10
AUTHOR:	KNUTSON JC		POLAND A	
ADDRESSEE:				
COPYEE:				

24146

4050

TITLE

A PROINFLAMMATORY EFFECT OF TCDD ON CARRAGEENAN INDUCED
INFLAMMATION IN THE RAT PAW (THE TOXICOLOGIST 2(1)).
PETERSON RE UNIV WI MADISON

THE EFFECTS OF TCDD ON FETAL DEVELOPMENT IN THE FERRET (THE
TOXICOLOGIST 2(1)).
BABISH JO NODEN D

PERSISTENCE OF TCDD IN MONKEY ADIPOSE TISSUE (FOOD AND CHEMICAL
TOXICOLOGY 20(6), 985-986).
RES NIELSENSMITH KA OR GRADUATE CENTER
KANGAS NL LYON PA

COMPARISON OF THE BINDING PROPERTIES OF CYTOSOLIC RECEPTORS FOR
TCDD IN VARIOUS MAMMALIAN SPECIES (THE TOXICOLOGIST 2(1)).
CLARKSON TW UNIV ROCHESTER

THE IN VIVO BIOTRANSFORMATION OF TCDD IN THE RAT (TOXICOLOGY AND
APPLIED PHARMACOLOGY 65(1), 180-184).
KARBOWSKI RJ BRAUN WH

DIFFERENTIAL EFFECT OF TCDD ON NUCLEAR RNA POLYMERASE ACTIVITY IN
THE RAT LIVER AND THYMUS (BIOCHEMICAL PHARMACOLOGY 31(15),
2459-2462).
POELLINGER L GUSTAFSSON J

RESPONSE OF MURINE EPIDERMIS TO TCDD; INTERACTION OF THE AH AND HR
LOCI (CELL 30, 225-234).
UNIV WI MADISON

NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT 349 ✓	00/00/82		8	CYTOSOLIC AND NUCLEAR BINDING PROTEINS FOR TCDD IN THE RAT THYMUS (BIOCHEMICA ET BIOPHYSICA ACTA 716, 16-23).
AUTHOR: LUND J		KURL RN		POELLINGER L GUSTAFSSON J
ADDRESSEE: HUDDINGE UNIV HOSPITAL S		KAROLINSKA INST SWEDEN		
COPYEE:				
DOCUMENT 350 ✓	12/00/82		6	MUTAGENICITY OF TCDD AND PERFLUORO-N-DECANOIC ACID IN L5178Y MOUSE LYMPHOMA CELLS (MUTATION RESEARCH 105(6), 445-449).
AUTHOR: ROGERS AM		ANDERSEN ME		BACK KC AIR FORCE AEROSPACE MEDI
ADDRESSEE:				
COPYEE:				
DOCUMENT 351 ✓	00/00/82		7	ACUTE ORAL TOXICITY OF TCDD METABOLITES IN MALE GUINEA PIGS (TOXICOLOGY LETTERS 14, 117-122).
AUTHOR: WEBER H		POIGER H		SCHLATTER C UNIV OF ZURICH SWITZERLA
ADDRESSEE:				
COPYEE:				
DOCUMENT 352 ✓	00/00/84		12	EVALUATION OF THE CARCINOGENIC AND MUTAGENIC POTENTIAL OF TCDD AND OTHER CHLORINATED DIOXINS (BANBURY REPORT 18: BIOLOGICAL MECHANISMS OF DIOXIN ACTION, 73-81).
AUTHOR: KOCIBA R		DOW		
ADDRESSEE:				
COPYEE:				
DOCUMENT 353 ✓	00/00/78		8	REVERSAL OF IMMUNOLOGIC AND TOXICOLOGIC EFFECTS OF A SINGLE EXPOSURE OF TCDD IN MICE (TRACE SUBSTANCES IN ENVIORN HEALTH XII, 299-306).
AUTHOR: SHARMA RP		UT ST UNIV		KOCIBA RJ GEHRING PJ
ADDRESSEE: DOW				
COPYEE:				
DOCUMENT 354 ✓	00/00/82		21	A REVIEW OF THE TOXICITY OF TCDD WITH A COMPARISON TO THE TOXICITY OF OTHER CHLORINATED DIOXIN ISOMERS (ASSOCIATION OF FOOD AND DRUG OFFICIALS QUARTERLY BULLETIN 46(3), 168-183).
AUTHOR: KOCIBA RJ		SCHWETZ BA		DOW
ADDRESSEE:				
COPYEE:				
DOCUMENT 355 ✓	00/00/81		3	TCDD, ACUTE ORAL TOXICITY IN HAMSTERS (TOX AND APPLIED PHARMACOLOGY 59, 405-407).
AUTHOR: HENCK JM		NEW MA		KOCIBA RJ RAO KS
ADDRESSEE: DOW				
COPYEE:				

4051

D4147

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	356 ✓	10/18/84		12

AUTHOR: KOCIBA RJ CABEY O
 ADDRESSEE:
 COPYEE:

DOCUMENT 357 ✓ 00/00/84 8
 AUTHOR: SHARMA RP KOCIBA RJ
 DOW

ADDRESSEE:
 COPYEE:

DOCUMENT 358 ✓ 06/20/80 1
 AUTHOR: BUR NATL AFFAIRS
 ADDRESSEE:
 COPYEE:

DOCUMENT 359 ✓ 00/00/79 1

AUTHOR: DIGIOVANNI J BERRY DL
 ADDRESSEE:
 COPYEE:

DOCUMENT 360 ✓ 06/00/80 1
 AUTHOR:
 ADDRESSEE:
 COPYEE:

DOCUMENT 361 ✓ 00/00/80 43

AUTHOR: BICKEL MH MUEHLEBACH STEFAN
 ADDRESSEE:
 COPYEE:

DOCUMENT 362 ✓ 10/24/79 1

AUTHOR:
 ADDRESSEE:
 COPYEE:

D-4148

4052

TITLE

COMPARATIVE TOXICITY AND BIOLOGIC ACTIVITY OF CHLORINATED
DIBENZO-P-DIOXINS AND FURANS RELATIVE TO TCDD (PRESENTED 4TH INTL
SYMPOSIUM ON CHLORINATED DIOXINS AND RELATED COMPOUNDS)(PROCEEDINGS
IN CHEMOSPHERE).

DOW

IMMUNOTOXICOLOGIC EFFECTS OF TCDD IN RABBITS.

GEHRING PJ

UT ST UNIV

TCDD (ORAL)(DERMAL)(CURRENT REPORT).

TCDD; POTENT ANTICARCINOGENIC ACTIVITY IN CD-1 MICE (BIOCHEM
BIOPHYS RES COMMUN 86(3), 577-584)(CHEM ABSTRACTS 90)(90 180115F).

JUCHAU MR

UNIV WA SEATTLE

TCDD (ORAL)(DERMAL) (NCI BIOASSAY SUMMARY).

PHARMACOKINETICS AND ECODISPOSITION OF POLYHALOGENATED
HYDROCARBONS; ASPECTS AND CONCEPTS (DRUG METABOLISM REVIEWS 11(2),
149-190)

UNIV BERNE SWITZERLAND

DEATHS AMONG TCDD EXPOSED WORKERS FOUND NOT TO EXCEED NATIONAL
AVERAGE (PEST AND TOXIC CHEMICAL NEWS, 21).

	NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT	363 ✓	10/00/79		9	EFFECTS OF TCDD, KEPONE, AND POLYBROMINATED BIPHENYLS ON TRANSPORT SYSTEMS IN ISOLATED RAT HEPATOCYTES (TOX AND APPLIED PHARMACOLOGY 51(1), 137-144). UNIV KS MEDICAL CENTER
AUTHOR:	EATON DL		KLAASSEN CD		
ADDRESSEE:					
COPYEE:					
DOCUMENT	364 ✓	00/00/00		10	STUDIES WITH CHLORINATED DIBENZO-P-DIOXINS, POLYBROMINATED BIPHENYLS, AND POLYCHLORINATED BIPHENYLS IN A TWO STAGE SYSTEM OF MOUSE SKIN TUMORIGENESIS; POTENT ANTICARCINOGENIC EFFECTS (ANNALS NEW YORK ACADEMY OF SCIENCES 320, 405-414). DIGIOVANNI J JUCHAU MR
AUTHOR:	BERRY DL		SLAGA TJ		
ADDRESSEE:	OAK RIDGE NATL LAB		UNIV WA		
COPYEE:					
DOCUMENT	365 ✓	03/00/80		5	INCREASED TOTAL AND HIGH DENSITY LIPOPROTEIN CHOLESTEROL WITH APOPROTEIN CHANGES RESEMBLING STREPTOZOTOCIN DIABETES IN TETRACHLORODIBENZODIOXIN (TCDD) TREATED RATS (BIOCHEMICAL PHARMACOLOGY 29(5), 835-838). PUGLISI L SIRTORI CR
AUTHOR:	POLI A		FRANCESCHINI G		
ADDRESSEE:	UNIV MILANO ITALY				
COPYEE:					
DOCUMENT	366 ✓	00/00/77		1	STUDIES OF THE METABOLISM AND POSSIBLE MECHANISMS OF TOXICITY OF TCDD (CHEMISTRY, BIOLOGICAL 3665-B). NEAL RA
AUTHOR:	BEATTY PW		VANDERBILT UNIV		
ADDRESSEE:					
COPYEE:					
DOCUMENT	367 ✓	02/00/85		7	PERSPECTIVES ON POLYHALOGENATED AROMATIC COMPOUNDS (ENVIRON HEALTH PERSPECTIVES 59, 179-181). NY UNIV MEDICAL CENTER
AUTHOR:	NELSON N				
ADDRESSEE:					
COPYEE:					
DOCUMENT	368 ✓	02/00/85		1	WASTE DISPOSAL TECHNOLOGIES FOR POLYCHLORINATED BIPHENYLS (ENVIRON HEALTH PERSPECTIVES 59, 163-177). NIEHS OR ST UNIV
AUTHOR:	PIVER WT		LINDSTROM FT		
ADDRESSEE:					
COPYEE:					

①-4149

4053

NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT 369 ✓	02/00/85		4	POLYCHLORINATED DIBENZO-P-DIOXINS AND DIBENZOFURANS IN FLY ASH AND CINDERS COLLECTED FROM SEVERAL MUNICIPAL INCINERATORS IN JAPAN (ENVIRON HEALTH PERSPECTIVES 59, 159-162). EHIME UNIV MATSUYAMA JAP
AUTHOR: WAKIMOTO T		TATSUKAWA R		
ADDRESSEE:				
COPYEE:				
DOCUMENT 370 ✓	02/00/85		14	SOURCES AND FATE OF POLYCHLORINATED DIBENZODIOXINS, DIBENZOFURANS AND RELATED COMPOUNDS IN HUMAN ENVIRONMENTS (ENVIRON HEALTH PERSPECTIVES 59, 145-158). GARRETT JH VANNESS OF FERGUSON GL SCHECTER A
AUTHOR: TIERNAM TO		TAYLOR ML		
ADDRESSEE: SOLCH JO		WAGEL DJ		
COPYEE: WRIGHT ST UNIV		ST UNIV NY BINGHAMTON		
DOCUMENT 371 ✓	02/00/85		7	TOXICITY OF POLYCHLORINATED BIPHENYL WITH SPECIAL REFERENCE TO PROPHYRIN METABOLISM (ENVIRON HEALTH PERSPECTIVES 59, 137-143). SEKI Y KYOTO UNIV JAPAN
AUTHOR: SANO S		KAWANISHI S		
ADDRESSEE:				
COPYEE:				
DOCUMENT 372 ✓	02/00/85		7	MECHANISM OF BIOSYNTHESIS OF METHYLSULFONES FROM PCBS AND RELATED COMPOUNDS (ENVIRON HEALTH PERSPECTIVES 59, 129-135). KOBE UNIV JAPAN
AUTHOR: MIO T		SUMINO K		
ADDRESSEE:				
COPYEE:				
DOCUMENT 373 ✓	02/00/85		8	MECHANISM OF ACTION OF TOXIC HALOGENATED AROMATICS (ENVIRON HEALTH PERSPECTIVES 59, 121-128). LUCIER GW NATL INST OF HEALTH
AUTHOR: VICKERS AEM		SLOOP TC		
ADDRESSEE:				
COPYEE:				
DOCUMENT 374 ✓	02/00/85		7	INDUCTIVE EFFECT ON HEPATIC ENZYMES AND TOXICITY OF CONGENERS OF PCBS AND PCDFS (ENVIRON HEALTH PERSPECTIVES 113-119). KOGA N NAGATA K HOKAMA Y KYUSHU UNIV FUKUOKA JAPA
AUTHOR: YOSHIMURA H		YOSHIHARA S		
ADDRESSEE: WADA I		KUROKI J		
COPYEE: HIROSHIMA UNIV JAPAN				

4054

D-4156

NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT 375	02/00/85		6	INDUCING POTENCY OF ARYL HYDROCARBON HYDROXYLASE ACTIVITY IN HUMAN LYMPHOBLASTOID CELLS AND MICE BY POLYCHLORINATED DIBENZOFURAN CONGENERS (ENVIRON HEALTH PERSPECTIVES 59, 107-112).
AUTHOR:	NAGAYAMA J	KIYOHARA C		MASUDA Y KURATSUNE M
ADDRESSEE:	KYUSHU UNIV FUKUOKA JAPA	DAIICHI COLLEGE FUKUOKA		
COPYEE:				
DOCUMENT 376	02/00/85		8	LABORATORY AND HUMAN STUDIES ON POLYCHLORINATED BIPHENYLS (PCBS) AND RELATED COMPOUNDS (ENVIRON HEALTH PERSPECTIVES 59, 99-106).
AUTHOR:	KIMBROUGH RD	US DEPT HEALTH HUMAN SER		
ADDRESSEE:				
COPYEE:				
DOCUMENT 377	02/00/85		7	SURVEYS OF WORKERS OCCUPATIONALLY EXPOSED TO PCBS AND OF YUSHO PATIENTS (ENVIRON HEALTH PERSPECTIVES 59, 90-97).
AUTHOR:	TAKAMATSU M	OKI M		MAEDA K INOUE Y
ADDRESSEE:	HIRAYAMA H	YOSHIZUKA K		KURUME UNIV JAPAN
COPYEE:				
DOCUMENT 378	02/00/85		6	HEALTH STATUS AND PCBS IN BLOOD OF WORKERS EXPOSED TO PCBS AND OF THEIR CHILDREN (ENVIRON HEALTH PERSPECTIVES 59, 85-90).
AUTHOR:	HARA I	KANSAI MEDICAL UNIV OSAK		
ADDRESSEE:				
COPYEE:				
DOCUMENT 379	02/00/85		6	BIOLOGICAL EFFECT OF PCBS, PCQS AND PCDFS PRESENT IN THE OIL CAUSING YUSHO AND YU-CHENG (ENVIRON HEALTH PERSPECTIVES 59, 79-84).
AUTHOR:	KUNITA N	HORI S		OBANA H OTAKE T
ADDRESSEE:	NISHIMURA H	KASHIMOTO T		IKEGAMI N NATL OSAKA HOSPITAL JAPA
COPYEE:	OSAKA PREFECTURAL INST P			
DOCUMENT 380	02/00/85		6	PCBS, PCQS AND PCDFS IN BLOOD OF YUSHO AND YU-CHENG PATIENTS (ENVIRON HEALTH PERSPECTIVES 59, 73-78).
AUTHOR:	KASHIMOTO T	MIYATA H		FUKUSHIMA S KUNITA N
ADDRESSEE:	OHI G	TUNG T		OSAKA PREFECTURAL INST P UNIV OF TOKYO JAPAN
COPYEE:	NATL TAIWAN UNIV REPUBLI			

D-4151

4055

NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT 381 ✓	02/00/85		6	PCBS, PCQS AND PCDFS IN TISSUES OF YUSHO AND YU-CHENG PATIENTS (ENVIRON HEALTH PERSPECTIVES 59, 67-72).
AUTHOR:	MIYATA H	FUKUSHIMA S		KASHIMOTO T KUNITA N
ADDRESSEE:	OSAKA PREFECTURAL INST P			
COPYEE:				
DOCUMENT 382 ✓	02/00/85		7	POLYCHLORINATED BIPHENYLS, DIBENZOFURANS AND QUATERPHENYLS IN TOXIC RICE BRAN OIL AND IN THE BLOOD AND TISSUES OF PATIENTS WITH PCB POISONING (YU-CHENG) IN TAIWAN (ENVIRON HEALTH PERSPECTIVES 59, 59-65).
AUTHOR:	CHEN PH	HONG C		RAPPE C NYGREN M
ADDRESSEE:	NATL YANG MING MEDICAL C	VETERANS GENERAL HOSPITA		UNIV UMEA SWEDEN
COPYEE:				
DOCUMENT 383 ✓	02/00/85		6	PCB AND PCDF CONGENERS IN THE BLOOD AND TISSUES OF YUSHO AND YU-CHENG PATIENTS (ENVIRON HEALTH PERSPECTIVES 59, 53-58).
AUTHOR:	MASUDA Y	KUROKI H		HARAGUCHI K NAGAYAMA J
ADDRESSEE:	DAIICHI COLLEGE JAPAN	KYUSHU UNIV FUKUOKA JAPA		
COPYEE:				
DOCUMENT 384 ✓	02/00/85		5	RELATIONSHIP BETWEEN THE AMOUNT OF RICE OIL INGESTED BY PATIENTS WITH YUSHO AND THEIR SUBJECTIVE SYMPTOMS (ENVIRON HEALTH PER SPECTIVES 59, 47-51).
AUTHOR:	YOSHIMURA T	HAYABUCHI H		KYUSHU UNIV FUKUOKA JAPA
ADDRESSEE:				
COPYEE:				
DOCUMENT 385 ✓	02/00/85		5	FETA PCB SYNDROME; CLINICAL FEATURES, INTRAUTERINE GROWTH RETARDATION AND POSSIBLE ALTERATION IN CALCIUM METABOLIM (ENVIRON HEALTH PERSPECTIVES 59, 41-45).
AUTHOR:	YAMASHITA F	HAYASHI M		KURUME UNIV KURUME CITY
ADDRESSEE:				
COPYEE:				
DOCUMENT 386 ✓	02/00/85		9	RESPIRATORY INVOLVEMENT AND IMMUNE STATUS IN YUSHO PATIENTS (ENVIRON HEALTH PERSPECTIVES 59, 31-36).
AUTHOR:	NAKANISHI Y	SHIGEMATSU N		KURITA Y MATSUBA K
ADDRESSEE:	KANEGAE H	ISHIMARU S		KYUSHU UNIV FUKUOKA JAPA
COPYEE:				

D-4152

4056

NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT 387 ✓	02/00/85		13	CLINICAL FINDINGS AND IMMUNOLOGICAL ABNORMALITIES IN YU-CHENG PATIENTS (ENVIRON HEALTH PERSPECTIVES 59, 17-29).
AUTHOR: WU Y NATL TAIWAN UNIV TAIPEI				
ADDRESSEE:				
COPYEE:				
DOCUMENT 388 ✓	02/00/85		5	PAST AND CURRENT DERMATOLOGICAL STATUS OF YUSHO PATIENTS (ENVIRON HEALTH PERSPECTIVES 59, 11-15).
AUTHOR: URABE H ASahi M				
ADDRESSEE:				
COPYEE:				
DOCUMENT 389 ✓	02/00/85		6 ✓	DISCOVERY AND EPIDEMIOLOGY OF PCB POISONING IN TAIWAN; A FOUR YEAR FOLLOWUP (ENVIRON HEALTH PERSPECTIVES 59, 5-10).
AUTHOR: HSU S MA C				
ADDRESSEE: HSU NH YEH C				
COPYEE:				
DOCUMENT 390 ✓	02/00/85		179	JAPAN - U.S. JOINT SEMINAR ON TOXICITY OF CHLORINATED BIPHENYLS, DIBENZOFURANS, DIBENZODIOXINS, AND RELATED COMPOUNDS APRIL 25-28, 1983 (ENVIRON HEALTH PERSPECTIVES 59).
AUTHOR: NATL INST ENVIRON HEALTH				
ADDRESSEE:				
COPYEE:				
DOCUMENT 391 ✓	00/00/00		8 ✓	REFERENCES.
AUTHOR:				
ADDRESSEE:				
COPYEE:				
DOCUMENT 392 ✓	12/00/84		9	THE CLEAN UP BEGINS (BULL ENVIRON CONTAM TOXICOL 33(6), 725-734).
AUTHOR: SCHRIEBER R MI DEPT NATURAL RESOURCE				
ADDRESSEE:				
COPYEE:				
DOCUMENT 393 ✓	12/00/84		16 ✓	SEARCHING FOR GENETIC EFFECTS OF TOXIC CHEMICALS; CHROMOSOMAL ABERRATION AND SISTER CHROMATID EXCHANGE (BULL ENVIRON CONTAM TOXICOL 33(6), 710-725).
AUTHOR: MONTELEONE P ST LOUIS UNIV				
ADDRESSEE:				
COPYEE:				

D-4153

4057

NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT 394 ✓	12/00/84		8	DETERMINATION AND MEASUREMENT OF HUMAN EXPOSURE TO THE DIBENZO-P-DIOXINS (BULL ENVIRON CONTAM TOXICOL 33(6), 702-709).
AUTHOR: YOUNG AL		USAF		
ADDRESSEE:				
COPYEE:				
DOCUMENT 395 ✓	12/00/84		20	LESSONS FOR LIVING IN A CHEMICAL WORLD (BULL ENVIRON CONTAM TOXICOL 33(6), 682-695).
AUTHOR: SEILIKOFF IJ		MOUNT SINAI SCHOOL OF ME		
ADDRESSEE:				
COPYEE:				
DOCUMENT 396 ✓	00/00/84		9	IMMUNOLOGIC EFFECTS OF TCDD EXPOSURE IN HUMANS (BULL ENVIRON CONTAM TOXICOL 33(6), 673-681).
AUTHOR: KNUITSEN AP		ST LOUIS UNIV		
ADDRESSEE:				
COPYEE:				
DOCUMENT 397 ✓	12/00/84		11	THE PILOT MISSOURI HEALTH EFFECT STUDY (BULL ENVIRON CONTAM TOXICOL 33(6), 662-672).
AUTHOR: WEBB KB		ST LOUIS UNIV		
ADDRESSEE:				
COPYEE:				
DOCUMENT 398 ✓	12/00/84		7	THE PSYCHOSOCIAL IMPACT OF ENVIRONMENTAL DISASTERS (BULL ENVIRON CONTAM TOXICOL 33(6), 655-661).
AUTHOR: REKO K		ECUMENICAL DIOXIN RESPON		
ADDRESSEE:				
COPYEE:				
DOCUMENT 399 ✓	12/00/84		7	DIOXIN IN MISSOURI; 1971-1983 (BULL ENVIRON CONTAM TOXICOL 33(6), 648-654).
AUTHOR: POWELL RL		UNIV CA DAVIS		
ADDRESSEE:				
COPYEE:				
DOCUMENT 400 ✓	12/00/84		17	THE PROSPECTS FOR CHEMICAL DARWINISM (BULL ENVIRON CONTAM TOXICOL 33(6), 631-635).
AUTHOR: AYRES SM		ST LOUIS UNIV		
ADDRESSEE:				
COPYEE:				
DOCUMENT 401 ✓	12/00/84		120	DIOXIN; LESSONS FROM THE MISSOURI EXPERIENCE (ENVIRON C ONTAMINATION AND TOX 33(6)).
AUTHOR: WEBB KB				
ADDRESSEE:				
COPYEE:				

4058

D
4/54

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	402 ✓	00/00/84		29
AUTHOR:	FRIEDMAN JM		UNIV TX	
ADDRESSEE:				
COPYEE:				
DOCUMENT	403 ✓	00/00/84		8
AUTHOR:	GIERTHY JF		CRANE D	
ADDRESSEE:				
COPYEE:				
DOCUMENT	404 ✓	00/00/84		9
AUTHOR:	GREIG JB SMITH AG		FRANCIS JE MEDICAL RES COUNCIL	
ADDRESSEE:				
COPYEE:				
DOCUMENT	405 ✓	00/00/84		7
AUTHOR:	LOVATI MR RESI L UNIV SIENA ITALY		GALBUSSERA M TANGANELLI P	
ADDRESSEE:				
COPYEE:				
DOCUMENT	406 ✓	00/00/82		11
AUTHOR:	VOS JG		VANLEEUVEN FXR	
ADDRESSEE:				
COPYEE:				
DOCUMENT	407 ✓	00/00/84		12
AUTHOR:	SEEFELD MD UNIV WI		CORBETT SW	
ADDRESSEE:				
COPYEE:				
DOCUMENT	408 ✓	00/00/84		6
AUTHOR:	PUHVEL SM		ERTL DC	
ADDRESSEE:				
COPYEE:				

D.4155

4059

TITLE

PAGE 61

DOES AGENT ORANGE CAUSE BIRH DEFECTS? (TERATOLOGY 29, 193-221).

REVERSIBLE INHIBITION OF INVITRO EPITHELIAL CELL PROLIFERATION OF
TCDD (TOX AND APPLIED PHARMACOLOGY 74, 91-98).
NY ST DEPT HEALTH

INCOMPLETE CORRELATION OF TCDD HEPATOTOXICITY WITH AH PHENOTYPE IN
MICE (TOX AND APPLIED PHARMACOLOGY 74, 17-25).
KAY SJE LOVELL DP

LABS

INCREASED PLASMA AND AORTIC TRIGLYCERIDES IN RABBITS AFTER ACUTE
ADMINISTRATION OF TCDD (TOX AND APPLIED PHARMACOLOGY 75, 91-97).
FRANCESCHINI O WEDER O
SIRTORI CR UNIV MILANO ITALY

ACNEGENIC ACTIVITY OF 3-METHYLCHOLANTHRENE AND BENZO(A)PYRENE AND A
COMPARATIVE STUDY WITH TCDD IN THE RABBIT AND HAIRLESS MOUSE
(TOXICOLOGY 23, 187-196).
DEJONG P NATL INST PUBLIC HEALTH

CHARACTERIZATION OF THE WASTING SYNDROME IN RATS TREATED WITH TCDD
(TOX AND APPLIED PHARMACOLOGY 73, 311-322).
KEESEY RE PETERSON RE

INCREASED EPIDERMAL TRANSGLUTAMINASE ACTIVITY FOLLOWING TCDD; IN
VIVO AND IN VITRO STUDIES WITH MOUSE SKIN (TOX AND APPLIED
PHARMACOLOGY 73, 42-47).
LYNBERG CA UNIV CA LOS ANGELES

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	409	00/00/80		16

AUTHOR: POCCHIARI F ISTITUTO SUPERIORE
 ADDRESSEE: VIVIANO G ZAPIONI G
 COPYEE:

DOCUMENT 410 00/00/81 15

AUTHOR: JONES KG COLE FM
 ADDRESSEE:
 COPYEE:

DOCUMENT 411 00/00/79 5

AUTHOR: NIENSTEDT W PARKKI M
 ADDRESSEE:
 COPYEE:

DOCUMENT 412 04/00/84 77

AUTHOR: DOW
 ADDRESSEE:
 COPYEE:

DOCUMENT 413 01/23/84 21

AUTHOR: NATL INST OCCUPATIONAL S MILLAR JD
 ADDRESSEE:
 COPYEE:

DOCUMENT 414 00/00/84 17

AUTHOR: HASEMAN JK CRAWFORD DD
 ADDRESSEE: BOORMAN GA MCCONNELL EE
 COPYEE:

DOCUMENT 415 00/00/75 9

AUTHOR: SAINTRUUF G HIEN DP
 ADDRESSEE:
 COPYEE:

4060

4060

TITLE

 ACCIDENTAL RELEASE OF TCDD AT SEVESO ITALY 1. SENSITIVITY AND
 SPECIFICITY OF ANALYTICAL PROCEDURES ADOPTED TO TCDD ASSAY
 (INCLUDES FORWARD TO PAPER I-VI)(ECOTOXICOLOGY AND ENVIRON SAFETY
 4, 282-297).

DI SA DOMENICO AD

SILANO V

THE ROLE OF IRON IN THE TOXICITY OF TCDD (TOX AND APPLIED
 PHARMACOLOGY 61, 74-88).

SWEENEY GD

MCMASTER UNIV ONTARIO

EFFECT OF TCDD ON THE HEPATIC METABOLISM OF TESTOSTERONE IN T HE
 RAT (TOXICOLOGY 13, 233-236).
 ILLEGIBLE

DIOXIN, AGENT ORANGE AND HUMAN HEALTH.

TCDD - DIOXIN (CURRENT INTELLIGENCE BULLETIN 40).

RESULTS FROM 86 TWO YEAR CARCINOGENICITY STUDIES CONDUCTED BY THE
 NATIONAL TOXICOLOGY PROGRAM (JOUR OF TOX AND ENVIRON HEALTH 14,
 621-639).

NATL INST ENVIRON HEALTH HUFF JE

SIMILARITIES OF THE BIOCHEMICAL EFFECTS OF 2,3,7,8,-TETRACHLORO
 DIBENZO-P-DIOXINE AND 2,3,7,8,-TETRABROMO DIBENZO-P-DIOXINE IN RATS
 (COMPTES RENDUS HEBDOMADAIRES DE L'ACADEMIE DES SCIENCES)PARIS)
 SERIES D, SCEINCES NATURELLES 280, 2709-2711)(ORIGINAL FRENCH
 ARTICLE AND TRANSLATION).

SUNLONE INC

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	416 ✓	00/00/75		1
AUTHOR:	GREEN S		MORELAND FS	
ADDRESSEE:				
COPYEE:				
DOCUMENT	417 ✓	04/00/73		2
AUTHOR:				
ADDRESSEE:				
COPYEE:				
DOCUMENT	418 ✓	01/10/77		1
AUTHOR:	MOORE JA			
ADDRESSEE:				
COPYEE:				
DOCUMENT	419 ✓	11/26/80		2
AUTHOR:				
ADDRESSEE:				
COPYEE:				
DOCUMENT	420 ✓	00/00/70		2
AUTHOR:	FIDELUS J		ZIETEK M	
ADDRESSEE:				
COPYEE:				
DOCUMENT	421 ✓	00/00/63		1
AUTHOR:	BERKLEY MC		MAGEE KR	
ADDRESSEE:				
COPYEE:				
DOCUMENT	422 ✓	00/00/63		1
AUTHOR:	FLORSHEIM WH		VELCOFF SM	
ADDRESSEE:				
COPYEE:				

D.4157

4061

TITLE

CYTOGENETIC EVALUATION OF SEVERAL DIOXINS IN THE RAT (TOX AND
APPLIED PHARMACOLOGY 33, 161).
FDA

CHLORODIBENZODIOXINS IN THE LIVER (FOOD AND COSMETIC TOX 11(2),
332-333)(2498).

ACNE CHLORINA AND PORPHYRIA CUTANEA TARDA DURING THE MANUFACTURE OF
HERBICIDES (ROUTING AND TRANSMITTAL SLIP).

NATIONAL PARK SERVICE URGED BY AFBF, NFPA, NCA TO CONTINUE 24D USE
(PEST & TOXIC CHEM NEWS, 18-19).

INDIRECT POLAROGRAPHIC DETERMINATION OF 24D IN BIOLOGICAL MATERIAL
(MIKROCHIM ACTA 5, 1010-1016)(74410H).
INST TOX FORENSIC CHEM A

NEUROPATHY FOLLOWING EXPOSURE TO A DIMETHYLAMINE SALT OF 24D (ARCH
INTERN MED 111(3), 351-352)(BULLETIN OF HYGIENE, 910).

SOME EFFECTS OF 24D ON THYROID FUNCTION IN THE RAT, EFFECTS ON
PERIPHERAL THYROXINE (ENDOCRINOLOGY 72, 327)(INFORMATION BULLETIN
BIBRA 3 FEB 1964, 39)(24D AND THE THYROID 585).
WILLIAMS AD

	NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT	423	✓ 00/00/66		1	OCCUPATIONAL ACNE 5 CASES CAUSED BY WEEDKILLERS (MEDNA CUTANEA 1(3), 225-231)(ABSTRACTS ON HYGIENE 43(8), 1014)(3343).
AUTHOR:	LONDONO F		DUNSCOMBE WK		
ADDRESSEE:					
COPYEE:					
DOCUMENT	424	✓ 03/00/68		3	EFFECT OF 24D ON INCORPORATION OF 14C INTO URINARY METABOLITES FROM RATS RECEIVING 14C LABELED ACETATE (JOUR AG FOOD CHEM 16(2), 358-360).
AUTHOR:	PHILLED WM		FANG SC		OR ST UNIV
ADDRESSEE:					
COPYEE:					
DOCUMENT	425	✓ 00/00/69		1	TOXICITY AND HAZARDS TO MAN, DOMESTIC ANIMALS AND WILDLIFE FROM SOME COMMONLY USED AUXIN HERBICIDES (RESIDUE REV 26, 37-62)(PLANT GROWTH REGULATORS 71, 247)(90143S).
AUTHOR:	WAY JM		MONKS WOOD EXP STA HUNTI		
ADDRESSEE:					
COPYEE:					
DOCUMENT	426	✓ 00/00/69		1	STUDIES OF EFFECT OF ACUTE TOXAEMIA WITH DICHLOROPHENOXYACETIC ACID ON SOME HISTOCHEMICAL REACTIONS OF CELLS IN RAT KIDNEY NE PHRONS (ANN UNIV M CURIE SKLODOWSKA 23, 151-155).
AUTHOR:	HOLANSKI I		ZAKLAD HISTOL EMBRIOL AK		
ADDRESSEE:					
COPYEE:					
DOCUMENT	427	✓ 01/00/69		4	TOXIC CHEMICALS AND PERIPHERAL NEUROPATHY; CLINICAL AND EPIDEMIOLOGICAL FEATURES (PROC RAY SOC MED 62, SECTION OF OCCUPATIONAL MEDICINE WITH SECTION OF NEUROLOGY).
AUTHOR:	FULLERTON PM		MIDDLESEX HOSPITAL LONDO		
ADDRESSEE:					
COPYEE:					
DOCUMENT	428	✓ 00/00/70		1	INDIRECT POLAROGRAPHIC DETERMINATION OF 24D IN BIOLOGICAL MATERIAL (MIKROCHIM ACTA 5, 1010-1016)(74410H).
AUTHOR:	FIDELUS J		ZIETEK M		ACAD MED CRACOW POLAND
ADDRESSEE:					
COPYEE:					
DOCUMENT	429	✓ 00/00/60		1	SYNTHETIC AUXINS IN CHEMOTHERAPY OF TRANSPLANTED AND SPONTANEOUS MOUSE ADENOCARCINOMA (IMMUNOLOGY AND EXPERIMENTAL PATHOLOGY 5204)(J NAT CANCER INST 25, 1111-1120).
AUTHOR:	APFFEL CA		TREGIER A		HOMBURGER F BIO-RES CAMBRIDGE MA
ADDRESSEE:					
COPYEE:					

2458

4062

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	430	00/00/79		1

AUTHOR: MEKSASHINA ZA
 ADDRESSEE: BUSLOVICH SY
 COPYEE:

DOCUMENT	431	00/00/71		1

AUTHOR: BODEM R
 ADDRESSEE: PREISS D
 COPYEE:

DOCUMENT	432	00/00/79		1

AUTHOR: KOSCHIER FJ
 ADDRESSEE: GIRARD PR
 COPYEE:

DOCUMENT	433	00/00/70		1

AUTHOR: LINCER JL
 ADDRESSEE: SOLON JH
 COPYEE:

DOCUMENT	434	00/00/70		1

AUTHOR: CRAWFORD IM
 ADDRESSEE: BLACK WD
 COPYEE:

DOCUMENT	435	00/00/71		2

AUTHOR: ILLEGIBLE
 ADDRESSEE:
 COPYEE:

DOCUMENT	436	00/00/00		1

AUTHOR: ILLEGIBLE
 ADDRESSEE:
 COPYEE:

D.4/59

4063

TITLE

PECULIAR FEATURES OF THE EMBRYOTOXIC ACTION OF HERBICIDES -
DERIVATIVES OF 24D (GIG SANIT 4, 70-71). (TOXICOLOGY ABSTRACTS
3(1))(162-X3).

KOLOSOVSKAYA UM

WHITE RUSSIAN SCI RES SA

THE DELAY OF RELAXATION OF STIMULATED GUINEA PIG PAPILLARY MUSCLE
PRODUCED BY 24D (KLINWSCHR 49(4), 227-228)(3436).

KUHN E

UNIV HEIDELBERG

TRANSPORT OF 24D BY RAT RENAL CORTICAL SLICES (RENAL PHARMACOLOGY
3732, 992).

HONG SK

ST UNIV NY BUFFALO

DDT AND ENDRIN FISH TOXICITY UNDER STATIC VERSUS DYNAMIC BIOASSAY
CONDITIONS (AM FISHERIES SOC 99(1), 13-19).

NAIR JH

SYRACUSE UNIV RES CORP

HERBICIDE TOXICITY TO DOMESTIC ANIMALS (PROC S WEED CONF 23).

TOXICITY - ILLEGIBLE - APPLICATIONS OF 24D, 245T AND A COTTON
DESICCANT TO -ILLEGIBLE (ENVIRONMENTAL POLLUTION).

EFFECT OF SPRAYING WITH 24D UPON ABUNDANCE OF POCKET GOPHERS -
ILLEGIBLE (TOX AND PHARMACOLOGY, 648)(71-2501).

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	437	12/13/83		42
AUTHOR:	KLECKA GM		MENDOZA CG	
ADDRESSEE:	ILLEGIBLE		DOW	
COPYEE:				
DOCUMENT	438 ✓	12/13/83		28
AUTHOR:	MENDOZA CG		ILLEGIBLE	
ADDRESSEE:				
COPYEE:				
DOCUMENT	439 ✓	04/02/84		19
AUTHOR:	KLECKA GM		GONSIOR SJ	
ADDRESSEE:				
COPYEE:				
DOCUMENT	440 ✓	09/19/85		43
AUTHOR:	KLECKA GM		SHALER TA	
ADDRESSEE:				
COPYEE:				
DOCUMENT	441 ✓	00/00/46		1
AUTHOR:	HARRISSON JWE		REES EW	
ADDRESSEE:				
COPYEE:				
DOCUMENT	442 ✓	00/00/46		1
AUTHOR:	KING JE		PENFOUND WT	
ADDRESSEE:				
COPYEE:				
DOCUMENT	443 ✓	03/14/47		4
AUTHOR:	HSUEH YL		LOU CH	
ADDRESSEE:				
COPYEE:				

D.4160

4064

TITLE

EFFECT OF BIOAUGMENTATION ON THE REMOVAL OF 24D IN WASTEWATER
TREATMENT.

GONSIOR SJ

MAIER WJ

HIGH PERFORMANCE LIQUID CHROMATOGRAPHY DETERMINATION OF 24D IN
WASTE TREATMENT EFFLUENTS.
DOW

SUBSTRATE SPECIFICITY OF A MIXED MICROBIAL CULTURE ISOLATED ON 24D.
ILLEGIBLE DOW

EFFECT OF DISSOLVED OXYGEN CONCENTRATION ON THE BIODEGRADATION OF
24D
ILLEGIBLE DOW

TOXICITY TOWARD CERTAIN SPECIES OF FISH (AMERICAN JOURNAL OF
PHARMACY 118, 422-425).

EFFECTS OF TWO OF THE NEW FORMAGENIC HERBICIDES ON BREAM AND
LARGEMOUTH BASS (ECOLOGY 27(4), 372-374)(BIOLOGICAL ABSTRACTS 21,
19017).

EFFECTS OF 24D ON SEED GERMINATION AND RESPIRATION (SCIENCE
105(2724), 283-286).
TSING HUA UNIV KUNMING C

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	444	00/00/70		1

AUTHOR: LUKOSHKINA LP
 ADDRESSEE:
 COPYEE: GUSEINOVA RS

DOCUMENT	445	00/00/00		2

AUTHOR: BRITISH IND BIOLOGICAL R
 ADDRESSEE:
 COPYEE:

DOCUMENT	446	00/00/48		4

AUTHOR: RAOUL Y
 ADDRESSEE:
 COPYEE: MARNAY C

DOCUMENT	447	04/00/52		11

AUTHOR: ZIMMERMAN PW
 ADDRESSEE:
 COPYEE: HITCHCOCK AE

DOCUMENT	448	04/00/52		1

AUTHOR: ASSOULY M
 ADDRESSEE:
 COPYEE:

DOCUMENT	449	11/20/50		5

AUTHOR: ASSOULY M
 ADDRESSEE:
 COPYEE:

DOCUMENT	450	08/26/50		2

AUTHOR: UNIV OF LONDON
 ADDRESSEE:
 COPYEE: AUDUS LJ

4161

4065

TITLE

LIPID PROTEIN CARBOHYDRATE METABOLISM IN WORKER DURING 24D
PRODUCTION (TR AZERB NAUCH ISSLED INST TR PROFZABOL 5,
146-?)(299565).
MELIKZADE TM

CONTRASTING STUDIES ON 24D (INFORMATION BULLETIN BIPRA AGRICULTURAL
CHEMICALS 8,406).

ACTION DE L'ACIDE INDOL-3-ACETIQUE ET DE L'ACIDE 24D SUR LE RAT EN
VOIE DE CROISSANCE (COMPTES RENDUS HEBDOMADAIRES DES SEANCES DE
L'ACADEMIE DES SCIENCES 226, 1043-1045).
JAVILLIER M

DETECTION AND DETERMINATION OF 24D AS A CONTAMINANT BY BIOLOGICAL
METHODS (BOYCE THOMPSON INST 16(1), 439-449).
KIRKPATRICK H JR BOYCE THOMPSON INST FOR

SELECTIVE HERBICIDES AND GROWTH SUBSTANCES. PATHOLOGIC EFFECTS ON
MAN DURING THE MANUFACTURE OF THE ESTER OF 24D (ARCH MAL PROFESS
12, 26-30)(IND HYGIENE DIGEST 16(4)).

DESHERBANTS SELECTIFS ET SUBSTANCES DE CROISSANCE APERCU TECHNIQUE
EFFET PATHOLOGIQUE SUR L'HOMME AU COURS DE LA FABRICATION
(COMMUNICATION A LA SOCIETE DE MEDECINE DU TRAVAIL, 26-30).

BIOLOGICAL DETOXICATION OF 24D IN SOILS; ISOLATION OF AN EFFECTIVE
ORGANISM (NATURE 166, 356).

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	451 ✓	03/00/53		1

AUTHOR: BAKER DL RAMSEY FK
 ADDRESSEE:
 COPYEE:

DOCUMENT	452 ✓	11/20/53		2
AUTHOR:	LOUSTALOT AJ MORRIS MP			
FED EXP STATION PUERTO R				
ADDRESSEE:				
COPYEE:				

DOCUMENT	453	03/24/54		4

AUTHOR: WELLCOME FOUNDATION LIMI HASLAM RF
 ADDRESSEE:
 COPYEE:

DOCUMENT	454 ✓	00/00/59		1

AUTHOR: SOS J KERTAI P
 DOW
 ADDRESSEE:
 COPYEE:

DOCUMENT	455 ✓	00/00/60		1

AUTHOR: SCHILLINGER JI
 ADDRESSEE:
 COPYEE:

DOCUMENT	456 ✓	01/00/62		1

AUTHOR: DESI I
 ADDRESSEE:
 COPYEE:

DOCUMENT	457 ✓	00/00/62		2

AUTHOR: DESI I SOS J
 MARKUS V
 ADDRESSEE:
 COPYEE:

4162
 D

4066

TITLE

SUSPECTED POISONING OF DOGS FROM EATING GRASSES TREATED WITH 24D
(THE NORTH AMERICAN VETERINARIAN, 194).
SYLWESTER EP IA ST COLLEGE

24D AFFECTS PHOSPHORUS METABOLISM (SCIENCE 118(3037), 627-628).
GARCIA J PAGAN C

ANTI VIRAL COMPOUNDS COMPRISING PHENOXY-PYRIMIDINE DERIVATIVES AND
THEIR MANUFACTURE (PATENT SPECIFICATION 706253)

EFFECT OF DICHLOROPHENOXYACETIC ACID (DCA) ON THE IODINE 131 UPTAKE
OF THE THYROID (ACTA PHYSIOL ACAD SCI HUNGARY 14, 367-369)(CHEM
ABSTRACTS 53, 7433H).
MED UNIV BUDAPEST ROWE VK

HYGIENIC EVALUATION OF AGRICULTURAL PRODUCTION WITH THE USE OF
HERBICIDES (J HYG EPIDEMIOL MICROBIOL & IMMUNOL PRAGUE 4(2),
243-252)(OCCUPATIONAL DISEASES 36(3), 245).

NERVOUS SYSTEM EFFECTS OF A CHEMICAL HERBICIDE (ARCH ENVIRONMENTAL
HEALTH 4, 95-102) (INDUSTRIAL HYGIENE DIGEST APRIL 1962).

HARMFUL EFFECTS ON AGRICULTURAL WORKERS CAUSED BY CHEMICAL
WEEDKILLERS (EGESZSEGTUDOMANY BUDAPEST 6(1), 43-51)(OCCUPATIONAL
DISEASES 37(7), 713-714).
OLASZ J SULE F

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	458 ✓	00/00/62		1
AUTHOR:	DESI I		SOS J	
ADDRESSEE:				
COPYEE:				
DOCUMENT	459 ✓	07/26/85		73
AUTHOR:	WIL RES LAB		KOPP S	
ADDRESSEE:	TASKER EJ		ADAM GP	
COPYEE:				
DOCUMENT	460 ✓	07/22/85		11
AUTHOR:	WALL JM		CARREON RE	
ADDRESSEE:				
COPYEE:				
DOCUMENT	461 ✓	08/13/84		32
AUTHOR:	HAZLETON LABS		SNYDER FG	
ADDRESSEE:				
COPYEE:				
DOCUMENT	462 ✓	06/00/81		2
AUTHOR:	BEELER D			
ADDRESSEE:				
COPYEE:				
DOCUMENT	463 ✓	06/25/85		15
AUTHOR:	HAZLETON LABS		SEROTA DG	
ADDRESSEE:	DUDECK LE		SERABIAN MA	
COPYEE:				
DOCUMENT	464 ✓	00/00/83		16
AUTHOR:	REUBER MD			
ADDRESSEE:				
COPYEE:				
DOCUMENT	465 ✓	11/08/71		24
AUTHOR:	IND BIOTEST LABS		CALANDRA JC	
ADDRESSEE:				
COPYEE:				

D-4163

4067

TITLE

CENTRAL NERVOUS INJURY BY A CHEMICAL HERBICIDE (ACTA MED BUDAPEST 18(4), 429-433) (BULLETIN OF HYGIENE APRIL 1963, 396).

A DIETARY TWO GENERATION REPRODUCTION STUDY IN FISCHER 344 RATS WITH 24D (FINAL REPORT VOLUME 1 OF 5)(PROJECT WIL-81137).
LEIST PL MERDIECA MD
NEMEC MD RODWELL DE

MOLTEN 24D; DERMAL SENSITIZATION STUDY IN HARTLEY GUINEA PIGS.
RAO KS DOW

THE PHARMACOKINETIC EVALUATION OF 14C24D IN THE MOUSE (FINAL REPORT).
EISEMAN JL THAKUR AK

BAD SCIENCE TELLING IT LIKE IT IS (AGRICHEMICAL AGE, 37E).

ONCOGENICITY STUDY IN MICE 24D 52 WEEK PROGRESS REPORT (PROJECT 2184-101).
ALSAKER RD MACHOTKA SV

CARCINOGENICITY AND TOXICITY OF 24D (THE SCIENCE OF THE TOTAL ENVIRONMENT 31, 203-218).

TERATOGENIC STUDY WITH 24D IN SWISS WEBSTER MICE (REPORT TO THE DOW CHEMICAL COMPANY 1BT B8799).

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	466 ✓	00/00/74		1

AUTHOR: SOMERS JD MORAN ET JR
 ADDRESSEE:
 COPYEE:

DOCUMENT	467 ✓	00/00/74		1

AUTHOR: CHANG HC RIP JW
 ADDRESSEE:
 COPYEE:

DOCUMENT	468 ✓	01/00/74		7

AUTHOR: SOMERS JD MORAN ET JR
 ADDRESSEE:
 COPYEE:

DOCUMENT	469 ✓	00/00/77		1

AUTHOR: GINIYATULLINA AK IVANOVA TS
 ADDRESSEE: Khabarova FY
 COPYEE:

DOCUMENT	470 ✓	00/00/77		5

AUTHOR: ELO H YLITALO P
 ADDRESSEE:
 COPYEE:

DOCUMENT	471 ✓	10/00/77		4

AUTHOR: DUX E TOTTH I
 ADDRESSEE: KISZELY G HUNGARIAN ACADEMY OF
 COPYEE:

D. 4164

4068

TITLE

EFFECTS OF EXTERNAL APPLICATION OF PESTICIDES TO THE FERTILE EGG ON HATCHING SUCCESS AND EARLY CHICK PERFORMANCE 3. CONSEQUENCES OF COMBINING 24D WITH PICLORAM AND EXTREMES IN CONTAMINATION (BULL ENVIRON CONTAM TOXICOL 11(6), 511-516) (CHEMICAL ABSTRACTS 81, 92)(146595S).

REINHART BS

UNIV GUELPH ONTARIO

EFFECTS OF PHENOXYACETIC ACIDS ON RAT LIVER TISSUES (J AGR FOOD CHEM 22(1), 62-65)(CHEMICAL ABSTRACTS 80,102)(116880T).

CHERRY JH

PURDUE UNIV

EFFECT OF EXTERNAL APPLICATION OF PESTICIDES TO THE FERTILE EGG ON HATCHING SUCCESS AND EARLY CHICK PERFORMANCE 3. CONSEQUENCES OF COMBINING 24D WITH PICLORAM AND EXTREMES IN CONTAMINATION (BULLETIN OF ENVIRON CONTAMINATION AND TOX 11(1), 511-516).

REINHART BS

UNIV GUELPH ONTARIO

STATE OF THE EYE IN PERSONS IN CONTACT WITH COPPER TRICHLOROPHENOLATE AND INTERMEDIATE PRODUCTS WITH THE SYNTHESIS OF THE HERBICIDE 24D (DIASNOSTIKE I LECHENIYU ZABOLEVANII KHIM ETIOL, 59-60).

KUDOYAROV RG

SYUNYAEVA SI

SUBSTANTIAL INCREASE IN THE LEVELS OF CHLOROPHOXYACETIC ACIDS IN THE CNS OF RATS AS A RESULT OF SEVERE INTOXICATION (ACTA PHARMACOL ET TOXICOL 41,280).

UNIV TAMPERE FINLAND

THE POSSIBLE CELLULAR MECHANISM OF 2,4-DICHLOROPHOXYACETATE INDUCED MYOPATHY (FEBS LETTERS 82(2), 219-222).

DUX L

JOO F

SCI MEDICAL UNIV OF SZEGED H

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	472 ✓	00/00/77		1
AUTHOR:	ZAMFIR GH		INST IS SANAT PUBL IA	
ADDRESSEE:				
COPYEE:				
DOCUMENT	473 ✓	00/00/78		7
AUTHOR:	KASKEVICH LM		SOBOLEVA LP	
ADDRESSEE:				
COPYEE:				
DOCUMENT	474 ✓	00/00/77		1
AUTHOR:	ILLEGIBLE		SINGH PK	
ADDRESSEE:				
COPYEE:				
DOCUMENT	475 ✓	00/00/78		1
AUTHOR:	SIMON N		ILLEGIBLE	
ADDRESSEE:				
COPYEE:				
DOCUMENT	476 ✓	00/00/78		12
AUTHOR:	KOSCHIER FJ		GIRARD PR	
ADDRESSEE:				
COPYEE:				
DOCUMENT	477 ✓	00/00/78		1
AUTHOR:	KOSCHER FJ		GIRARD PR	
ADDRESSEE:				
COPYEE:				
DOCUMENT	478 ✓	00/00/77		1
AUTHOR:	ZETTERBERG G		UNIV UPPSALA SWEDEN	
ADDRESSEE:				
COPYEE:				

14165

4069

TITLE

PUBLIC HEALTH PROBLEMS CAUSED BY CHEMICALS WITH MUTAGENIC,
TERATOGENIC AND CARCINOGENIC EFFECTS (ISIENA 26(3), 203-208).

ASI

A CASE OF ACUTE POISONING WITH HERBICIDE 24D (HYGIENE OF LABOR AND
OCCUPATIONAL DISEASES 10, 26-31)(TRANSLATION AND ORIGINAL ARTICLE).
INST HYGIENE AND TOX OF

MUTAGENICITY OF PESTICIDES IN BLUEGREEN ALGAE (MICROBIOL LETT
5(19), 103-107)(79-0681).

INFLUENCE OF ENVIRONMENTAL FACTORS ON PORPHYRIN METABOLISM (J CHN
CHEN CLIN BIOCHEM 16(1), 54)(PESTICIDES ABSTRACTS 78-2069).

TRANSPORT OF 2,4-DICHLOROPHENOXYACETATE BY RAT RENAL CORTICAL
SLICES(TOX AND APPLIED PHARMACOLOGY 45, 883-894).
HONG SK ST UNIV NY BUFFALO

TRANSPORT OF 2,4-DICHLOROPHENOXYACETATE BY RAT RENAL CORTICAL
SLICES (TOXICOL APPL PHARMACOL 45(3), 883-894)(PESTICIDES ABSTRACTS
79-0461).
HONG SK ST UNIV NY BUFFALO

GENETIC EFFECTS OF PHENOXY ACIDS ON MICROORGANISMS (ECOL BULL 27,
193-204)(90).

NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT 479 ✓	00/00/78		1	DATA FOR HYGIENIC STANDARDIZATION OF HERBICIDES 24D IN THE ENVIRONMENT (GIG SANIT 43(11) 9-13). ANTONENKO TA NECHKINA MA
AUTHOR: KONSTANTINOVA TK EFIMENKO LP SCI RES INST RURAL HYG S ADDRESSEE: COPYEE:				
DOCUMENT 480 ✓	00/00/78		7	DATA FOR THE HYGIENIC STANDARDIZATION OF 24D HERBICIDES IN ENVIRONMENTAL SUBSTANCES (GIGIENA I SANITARIIA 11, 9-13). ANTONENKO TA NECHKINA MA
AUTHOR: KONSTANTINOVA TK EFIMENKO LP SHILOV VN RURAL HYGIENE RES INST S ADDRESSEE: COPYEE:				
DOCUMENT 481 ✓	00/00/78		1	24D POISONING (MED PR 29(1), 61-63). ETRZNYCH SZPITALA MIEJSK
AUTHOR: KOLNY H KITA K ADDRESSEE: COPYEE:				
DOCUMENT 482 ✓	00/00/78		1	NATURAL RESISTANCE IN CATTLE TO 24D POISONING (VETERINARIYA MOSCOW 9, 93-94). INST EKSP VET MINSK USSR
AUTHOR: GIRIS DA ADDRESSEE: COPYEE:				
DOCUMENT 483 ✓	00/00/60		1	HYGIENIC EVALUATION OF AGRICULTURAL PRODUCTION WITH THE USE OF HERBICIDES (J HYG EPIDEMIOL MICROBIOL & IMMUNOL 4(2) 243-252) (OCCUPATIONAL DISEASES 36(3)).
AUTHOR: SCHILLINGER JI ADDRESSEE: COPYEE:				
DOCUMENT 484 ✓	10/16/81		72	PURIFIED 24D RESULTS OF A 13 WEEK SUBCHRONIC DIETARY TOXICITY STUDY IN THE CDF FISCHER 344 RAT (HET K-002372-(21). MORDEN DC REYES DG SCHUETZ D KOCIBA RJ
AUTHOR: GORZINSKI SJ WADE CE DITTENBER JA KALNINS RV DOW ADDRESSEE: COPYEE:				
DOCUMENT 485 ✓	00/00/00		3	ILLEGIBLE - OF CYCLAMATE AND SOME PESTICIDES IN DROSOPHILA MELANOGASTER.
AUTHOR: CHANDLER JLR VOGEL E ADDRESSEE: COPYEE:				

4070
24/6

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	486	✓ 00/00/74		2
AUTHOR:	KOHLI JL		KHANNA RN	
	TANDON JS		SIRCAR KP	
ADDRESSEE:				
COPYEE:				
DOCUMENT	487	✓ 00/00/83		9
AUTHOR:	KILMODINHEDMAN B		HOGLUND S	
	SWEDISH FARMERS SAFETY P		NATL SWEDISH LAB FO	
ADDRESSEE:				
COPYEE:				
DOCUMENT	488	12/19/79		37
AUTHOR:	HENCK JW		RAO KS	
	DOW			
ADDRESSEE:				
COPYEE:				
DOCUMENT	489	✓ 00/00/85		5
AUTHOR:	TOYOSHIMA E		MAYER RF	
	VA MEDICAL CENTER		UNIV OF MD	
ADDRESSEE:				
COPYEE:				
DOCUMENT	490	✓ 00/00/79		8
AUTHOR:	ELO HA		YLITALO P	
ADDRESSEE:				
COPYEE:				
DOCUMENT	491	✓ 01/00/80		1
AUTHOR:	ALEKSASHINA ZA		BUSLOVICH SY	
ADDRESSEE:				
COPYEE:				
DOCUMENT	492	✓ 10/00/70		1
AUTHOR:	SARGENT M		BLAZEK D	
ADDRESSEE:				
COPYEE:				

D4167

4071

TITLE

 ABSORPTION AND EXCRETION OF 24D IN MAN (XENOBIOTICA 1(2), 97-100)(73107X).

ILLEGIBLE DHAR MM
 IND TOXICOL RES CENTER L

STUDIES ON PHENOXY ACID HERBICIDES - FIELD STUDY OCCUPATIONAL EXPOSURE TO PHENOXY ACID HERBICIDES (ARCH TOXICOL 54, 257-265).

AKERBLOM M NATL BD OF OCCUPATIONAL

OR AG

ACNEGENIC POTENTIAL OF 24D SAMPLES(HET K-2372-(25)).

JERSEY GC OLSON KJ

24D DOES NOT CAUSE POLYNEUROPATHY IN THE RAT (JOUR OF THE NEUROLOGICAL SCIENCES 70, 225-229).

MAX SR ECCLES C

DISTRIBUTION OF 2-METHYL-4-CHLOROPHENOXYACETIC ACID AND 24D IN MALE RATS; EVIDENCE FOR THE INVOLVEMENT OF THE CENTRAL NERVOUS SYSTEM IN THEIR TOXICITY (TOX AND APPLIED PHARMACOLOGY 51,439-446).

UNIV OF TAMPERE FINLAND

PECULIAR FEATURES OF THE EMBRYOTOXIC ACTION OF HERBICIDES - DERIVATIVES OF 24D (GIG SANIT 4 70-71)(TOXICOLOGY ABSTRACTS 3(1)) (162-X3).

KOKOSOVSKAYA UM RES SANIT HYG INST MINSK

THE TOXICITY OF 24D AND PICLORAM HERBICIDES TO FISH.

ILLEGIBLE PURDUE UNIV

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	493 ✓	00/00/70		1
AUTHOR:	DONAHUE J		ILLEGIBLE	
ADDRESSEE:				
COPYEE:				
DOCUMENT	494 ✓	00/00/70		1
AUTHOR:	GARRAWAY JL		WYE COLLEGE	
ADDRESSEE:				
COPYEE:				
DOCUMENT	495 ✓	07/17/80		8
AUTHOR:	SENCZUK W		POGORZELSKA H	
ADDRESSEE:				
COPYEE:				
DOCUMENT	496 ✓	03/27/72		5
AUTHOR:	DE N		BUSLOVICH SY	
ADDRESSEE:	SANITATION AND HYGIENE I			
COPYEE:				
DOCUMENT	497 ✓	07/17/80		9
AUTHOR:	SENCZUK W		POGORZELSKA H	
ADDRESSEE:	LILIENHEIM			
COPYEE:				
DOCUMENT	498 ✓	00/00/82		14
AUTHOR:	NASH		PLIMMER JR	
ADDRESSEE:				
COPYEE:				
DOCUMENT	499 ✓	00/00/82		18
AUTHOR:	DRAPER WF		STREET JC	
ADDRESSEE:				
COPYEE:				

24168

4072

TITLE

THE TOXICITY OF CERTAIN HERBICIDES TO HEN'S EGGS ASSESSED BY THE
EGG INJECTION TECHNIQUE (ANN APPL BIOL 66(3), 515-520)(71-1415).
UNIV OF STTAHTELYDE GLAS

BETA OXIDATION OF CERTAIN GROWTH REGULATORS BY PLANT TISSUES
(PESTICIDE SCI 1(4), 132-137)(71-0362).

ABSORPTION OF 24D THROUGH THE SKIN (TRANSLATION AND ORIGINAL
RUSSIAN ARTICLE).
DEBSKA M MEDICAL ACADEMY OF POZNA

THE DISTRIBUTION OF HERBICIDES - PHENOXY ACIDS CHLORODERIVATIVES -
IN THE BODY OF ALBINO RATS (GIGIENA TRUDA I PROFESSIONALNYE
ZABOLEVANIYA 17(3), 35-37) (TRANSLATION FROM RUSSIAN).
VOINOVA IV MILCHINA MG

ABSORPTION OF 24D THROUGH THE SKIN (TRANSLATION AND ORIGINAL
RUSSIAN ARTICLE) (WARSAW PANSTHOWY ZAKLAD HIGIENY ROCZNIKI 31(6)
611-614).
DEBSKA M MEDICAL ACADEMY OF POZNA

PESTICIDE RESIDUES AND EXPOSURE - APPLICATORS EXPOSURE TO 24D (ACS
SYMPOSIUM SERIES 182, 120-132).

APPLICATOR EXPOSURE TO 24D, DICAMBA, AND DICAMBA ISOMER (J ENVIRON
SCI HEALTH B17(4), 321-339).
UT ST UNIV

NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT 500 AUTHOR: MILHAM S JR ADDRESSEE: COPYEE:	06/26/82	WA ST DEPT SOCIAL AND HE	1	HERBICIDES, OCCUPATION, AND CANCER (THE LANCET 1(8287)).
DOCUMENT 501 AUTHOR: TASKAR PK BROWN HD ADDRESSEE: COPYEE:	00/00/82	DAS YT RUTGERS UNIV	6	MEASUREMENT OF 24D AFTER OCCUPATIONAL EXPOSURE (BULL ENVIRON CONTAM TOX 29, 586-591). TROUT JR CHATTOPADHYAY SK
DOCUMENT 502 AUTHOR: KORTE C ADDRESSEE: COPYEE:	00/00/82	JALAL SM	3	24D INDUCED CLASTOGENICITY AND ELEVATED RATES OF SISTER CHROMATID EXCHANGES IN CULTURED HUMAN LYMPHOCYTES (JOUR OF HEREDITY 73, 224-226). ST MARYS COLLEGE UNIV OF ND
DOCUMENT 503 AUTHOR: CUSHMAN JR ADDRESSEE: COPYEE:	10/00/82	STREET JC	14	ALLERGIC HYPERSENSITIVITY TO THE HERBICIDE 24D IN BALB/C MICE (JOUR OF TOX AND ENVIORN HEALTH 10(4-5), 729-741). UT ST UNIV
DOCUMENT 504 AUTHOR: EPSTEIN SS BISHOP Y ADDRESSEE: COPYEE:	00/00/72	ARNOLD E CHILDRENS CANCER RES	38	DETECTION OF CHEMICAL MUTAGENS BY THE DOMINANT LETHAL ASSAY IN THE MOUSE (TOX AND APPLIED PHARMACOLOGY 23, 288-325). ANDREA J BASS W FOU HARVARD MEDICAL SCHOOL HARVARD SCHOOL OF PUBLIC
DOCUMENT 505 AUTHOR: LAVY TL UNIV AR ADDRESSEE: COPYEE:	00/00/82	HALSTAD JD OR ST UNIV	7	24D EXPOSURE RECEIVED BY AERIAL APPLICATION CREWS DURING FOREST SPRAY OPERATIONS (JOUR AG FOOD CHEM 30, 375-381). FLYNN RR MATTICE JD
DOCUMENT 506 AUTHOR: EASLEY CB UNIV OF NB ADDRESSEE: COPYEE:	00/00/83	LAUGHLIN JM	6	LAUNDERING PROCEDURE FOR REMOVAL OF 24D ACID ESTER AND AMINE H ERBICIDES FROM CONTAMINATED FABRICS (ARCH ENVION CONTAM TOXICOL 12, 71-76). GOLD RE TUPY DR

4073

D
4169

NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT 507	10/00/83		6	INTERACTION OF CHLOROPHENOXYALKYL ACID HERBICIDES WITH RAT LIVER GLUTATHIONE S-TRANSFERASES (FOOD AND CHEM TOX 21(5), 575-579).
AUTHOR:	DIERICKX PJ	INST VOOR HYGIENE EPIDEM		
ADDRESSEE:				
COPYEE:				
DOCUMENT 508	09/15/83		7	HYPOLIPIDEMIA AND PEROXISOME PROLIFERATION INDUCED BY PHENOXYACETIC ACID HERBICIDES IN RATS (BIOCHEMICAL PHARMACOLOGY 32(18), 2775-2800).
AUTHOR:	VAINIO H HIETANEN E UNIV OF TURKU FINLAND	LINNAINMAA K MARNIEMI J UNIV HELSINKI FINLAND		KAHONEN M PELTONEN P SOCIAL INSURANCE INST FI
ADDRESSEE:				NICKELS J INST OF OCCUPATIONAL HEA
COPYEE:				
DOCUMENT 509	00/00/70		1	LIPID PROTEIN CARBOHYDRATE METABOLISM IN WORKERS DURING 24D PRODUCTION (AZERB NAUCH ISSLED INST TR PROFZABOL 5, 146-149).
AUTHOR:	LUKOSHKINA LP	GUSEINOVA RS		MELIKZADE TM
ADDRESSEE:				
COPYEE:				
DOCUMENT 510	00/00/83		16	CARCINOGENICITY AND TOXICITY OF 24D (SCIENCE OF THE TOTAL ENVIRON 31, 203-218).
AUTHOR:	REUBER MD			
ADDRESSEE:				
COPYEE:				
DOCUMENT 511	00/00/83		5	TOXICOLOGIC STUDIES IN A FATAL OVERDOSE OF 24D, MCPP AND CHLORPYRIFOS (JOUR OF ANALYTICAL TOX 7, 125-129).
AUTHOR:	OSTERLOH J	LOTTI M		POND SM UNIV CA SAN FRANCISCO
ADDRESSEE:				
COPYEE:				
DOCUMENT 512	00/00/83		1	TOXICOLOGIC STUDIES IN A FATAL OVERDOSE OF 24D, MCPP AND CHLORPYRIFOS (J ANAL TOXICAL 7(3), 125-129)(99 485700).
AUTHOR:	OSTERLOH J	LOTTI M		POND SM UNIV CA SAN FRANCISCO
ADDRESSEE:				
COPYEE:				
DOCUMENT 513	00/00/83		6	NEUROBEHAVIORAL ASSESSMENT OF 24D IN RATS (NEUROBEHAVIORAL TOX AND TERAIOLOGY 5(3), 331-335).
AUTHOR:	SQUIBB RE	TILSON HA		MITCHELL CL NATL INST ENVIRON HEALTH
ADDRESSEE:				
COPYEE:				

D.4170

4074

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	514	00/00/83		11
AUTHOR:	LINNAINMAA K		INST OF OCCUPATIONAL	
ADDRESSEE:				
COPYEE:				
DOCUMENT	515	00/00/83		2
AUTHOR:	LINNAINMAA K		VAINIO H	
ADDRESSEE:				
COPYEE:				
DOCUMENT	516	05/00/83		2
AUTHOR:	TORRINGTON KG			
ADDRESSEE:				
COPYEE:				
DOCUMENT	517	10/00/85		7
AUTHOR:	KNOPP D		NUHN P	
	MARTIN LUTHER UNIV GERMA			
ADDRESSEE:				
COPYEE:				
DOCUMENT	518	00/00/85		9
AUTHOR:	FRANK R		CAMPBELL RA	
	ONTARIO MINISTRY OF NATU			
ADDRESSEE:				
COPYEE:				
DOCUMENT	519	00/00/84		6
AUTHOR:				
ADDRESSEE:				
COPYEE:				
DOCUMENT	520	00/00/00		1
AUTHOR:	ILLEGIBLE			
ADDRESSEE:				
COPYEE:				

D.4171

4075

TITLE

SISTER CHROMATID EXCHANGES AMONG WORKERS OCCUPATIONALLY EXPOSED TO PHENOXY ACID HERBICIDES 24D AND MCPA (TERATOGENESIS CARCINOGENESIS AND MUTAGENESIS 3, 269-279).
HEA

SCES AMONG HERBICIDE SPRAYERS EXPOSED TO 24D AND MCPA (MUTATION RESEARCH, 90).
INST OCCUPATIONAL HEALTH

HERBICIDE EXPOSURE AND PULMONARY DISEASE (JOUR OF OCCUPATIONAL MEDICINE 25(5)).

RADIOIMMUNOASSAY FOR 24D (ARCH TOXICOL 58(1), 27-32).
DOBBERKAU HJ RES INST HYGIENE MICROBI

FORESTRY WORKERS INVOLVED IN AERIAL APPLICATION OF 24D; EXPOSURE AND URINARY EXCRETION (ARCH ENVIRON CONTAM TOXICOL 14,427-435).
SIRONS GJ UNIV OF GUELPH ONTARIO

ENVIRONMENTAL HEALTH CRITERIA 29 24D.

EFFECT OF 24D ON THE TRANSVERSE TUBULAR SYSTEM OF THE MYOCARDIUM (ILLEGIBLE) (HEALTH ASPECTS OF PESTICIDES 5(6), 288).

NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT 521	06/00/72		2	HERBICIDAL CONTROL OF AQUATIC PLANTS (ILLEGIBLE) (HEALTH ASPECTS OF PESTICIDES 5(6), 268).
AUTHOR: ILLEGIBLE				
ADDRESSEE:				
COPYEE:				
DOCUMENT 522	00/00/00		1	THE CURRENT STATUS OF PHENOXY HERBICIDES - ILLEGIBLE.
AUTHOR: ILLEGIBLE				
ADDRESSEE:				
COPYEE:				
DOCUMENT 523	00/00/00		2	24D, ATRAZINE, SHEEP - ILLEGIBLE.
AUTHOR: ILLEGIBLE				
ADDRESSEE:				
COPYEE:				
DOCUMENT 524	00/00/72		1	THE EFFECT OF 24D AND - ILLEGIBLE - (10357).
AUTHOR: KOPISCHKE ED				
ADDRESSEE:				
COPYEE:				
				MN DEPT NATURAL RESOURCE
DOCUMENT 525	00/00/72		1	FATAL HUMAN INGESTION OF 24D A COMMON HERBICIDE (ARCH PATHOL 94(3), 270-275).
AUTHOR:				
ADDRESSEE:				
COPYEE:				
DOCUMENT 526	00/00/00		2	THE RENAL TRANSPORT OF 24D AND 245T IN VITRO (ABSTRACTS, 441-442).
AUTHOR: BURNDT WO				
ADDRESSEE:				
COPYEE:				
				KOSCHER I
DOCUMENT 527	00/00/00		1	EFFECTS OF 245T AND OTHER ORGANOHERBICIDES ON THE METABOLISM OF - ILLEGIBLE - TESTOSTERONE IN MALE ORGANS OF REPRODUCTION (ABSTRACTS, 441).
AUTHOR: ILLEGIBLE				
ADDRESSEE:				
COPYEE:				
				HV UNIV MEDICAL CENTER
DOCUMENT 528	00/00/00		1	THE FATE OF 245T FOLLOWING ORAL ADMINISTRATION TO MAN (ABSTRACTS, 441).
AUTHOR: GEHRING PJ				
ADDRESSEE: ROWE VK				
COPYEE:				
				KRAMER CO
				ZIMMER JS
				ILLEGIBLE
				ROSE JQ
				DOW

D4172

4076

	NUMBER	DATE	TYPE	PAGES
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	529 ✓ ALDEN W	00/00/00	ILLEGIBLE	1
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	530 ✓ WHITEHEAD CC	00/00/00	ILLEGIBLE	1
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	531 ✓ DALLEY	00/00/00	ILLEGIBLE	1
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	532 ✓ TOYOSHIMA E	03/00/84	MAYER RF	1
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	533 ✓ DOUGHERTY J	03/00/84	SHULZE G	2
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	534 ✓ LINNAINMAA K	00/00/84	INST OF OCCUPATIONAL	5
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	535 ✓ SENCZUK W	00/00/75	POGORZELSKA H	1
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	536 ✓ KOHLI JD TANDON JS	00/00/75	KHANNA RN SIRCAR KP	3

2173

1077

TITLE

FATAL HUMAN INGESTION OF 24D, A COMMON HERBICIDE (ILLEGIBLE).

THE EFFECT OF 24D - ILLEGIBLE.

FATAL HUMAN INGESTION OF 24D A COMMON HERBICIDE (ILLEGIBLE).

DOES 24D CAUSE POLYNEUROPATHY? (NEUROLOGY 34 (SUPPL 1), 145).
MAX SR

EFFECTS OF 24D ON SCHEDULE CONTROLLED BEHAVIOR (NEUROBEHAVIORAL TOX
AND TERATOLOGY 6(2), 177).
TAYLOR R UNIV OF KY

INDUCTION OF SISTER CHROMATID EXCHANGES BY THE PEROXISOME
PROLIFERATORS 24D, MCPA, AND CLOFIBRATE IN VIVO AND IN VITRO
(CARCINOGENESIS 5(6), 703-707).
HEA

THE COURSE OF EXCRETION OF 24D WITH URINE (PRZEBIEG WYDALANIA Kwasu
2,4-DHUCHLOROFENOKSYOCTOWEGO Z MOCZEM)(ROCZ PUNSTW ZAKL Hig 26(2),
217-222).
INST CHEM ANAL AKAD MED

ELIMINATION OF 24D IN MAN(2874)(FOOD AND COSMETICS TOX 13, 475-476)
ABSORPTION AND EXCRETION OF 24D IN MAN (XENOBIOTICA 4, 97).
GUPTA BN DHAR MM

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	537	00/00/75		1
AUTHOR:	ENIKEEVA NA		ELINA VA	
ADDRESSEE:				
COPYEE:				
DOCUMENT	538	00/00/75		1
AUTHOR:	ARKHIPOV GN		KOZLOVA IN	
ADDRESSEE:				
COPYEE:				
DOCUMENT	539	00/00/85		1
AUTHOR:	ZIMMERING S		MASON JM	
ADDRESSEE:	BROWN UNIV			
COPYEE:				
DOCUMENT	540	00/00/77		1
AUTHOR:	ZETTERBERG G		BUSK L	
ADDRESSEE:	RYTTMAN H			
COPYEE:				
DOCUMENT	541	00/00/78		1
AUTHOR:	ZETTERBERG G		UNIV UPPSALA SWEDEN	
ADDRESSEE:				
COPYEE:				
DOCUMENT	542	00/00/73		1
AUTHOR:	YODER J		WATSON M	
ADDRESSEE:				
COPYEE:				
DOCUMENT	543	00/00/84		1
AUTHOR:	WOODRUFF RC		PHILLIPS JP	
ADDRESSEE:				
COPYEE:				

4174

4078

TITLE

INDUSTRIAL HYGIENE AND HEALTH STATUS OF WORKERS PRODUCING THE
HERBICIDE AMINE SALT OF 24D (I KHIM PROM-STI, 45-50).
DUMKINA GZ MURTAZINA LF

CANCEROGENIC PROPERTIES OF THE HERBICIDE AMMONIUM 24D AMINE SALT
(VOPR PITAN (5), 83-84).
LAB KANTSEROGENOV INST P

CHEMICAL MUTAGENESIS TESTING IN DROSOPHILA II, RESULTS OF 20 CODED
COMPOUNDS TESTED FOR THE NATIONAL TOXICOLOGY PROGRAM (ENVIRON
MUTAGEN 7(1), 87-100).
VALENCIA R WOODRUFF RC

INFLUENCE OF PH ON THE EFFECTS OF 24D (NA SALT) ON SACCHAROMYCES
CEREVISIAE AND SALMONELLA TYPHIMURIUM (MUTAT RES 42, 3-18).
ELOVSON R STARECNORDENHAMMAR I

MUTAGENICITY OF CHLORINATED PHENOXYACETIC ACIDS IN SACCHAROMYCES
CEREVISIAE (MUTAT RES 53(2), 285-286).

LYMPHOCYTE CHROMOSOME ANALYSIS OF AGRICULTURAL WORKERS DURING
EXTENSIVE OCCUPATIONAL EXPOSURE TO PESTICIDES (MUTAT RES 21,
335-340).
BENSON WH

PESTICIDE INDUCED COMPLETE AND PARTIAL CHROMOSOME LOSS IN SCREENS
WITH REPAIR DEFECTIVE FEMALES OF DROSOPHILA (ENVIRON MUTAGEN 5(6),
835-846).
IRWIN D BOWLING GREEN ST UNIV

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	544 ✓	00/00/58		1
AUTHOR:	WILSON GB		MORRISON JH	
ADDRESSEE:				
COPYEE:				
DOCUMENT	545 ✓	00/00/84		1
AUTHOR:	WEIGHTMAN AJ		DON RH	
ADDRESSEE:	CENTRE MEDICALE UNIV SWI			
COPYEE:				
DOCUMENT	546 ✓	00/00/80		1
AUTHOR:	WATERS MD		SIMMON VF	
ADDRESSEE:	VALENCIA R			
COPYEE:				
DOCUMENT	547 ✓	00/00/82		1
AUTHOR:	WATERS MD		SANDHU SS	
	MITCHELL AD		JORGENSEN TA	
ADDRESSEE:	GARRETT NE			
COPYEE:				
DOCUMENT	548 ✓	00/00/81		1
AUTHOR:	WATERS MD		NESNOW S	
ADDRESSEE:	JORGENSEN TA		VALENCIA R	
COPYEE:				
DOCUMENT	549 ✓	00/00/74		1
AUTHOR:	VOGEL E		CHANDLER JLR	
ADDRESSEE:				
COPYEE:				
DOCUMENT	550 ✓	00/00/78		1
AUTHOR:	VACHKOVAPETROVA R		MED ACAD BULGARIA	
ADDRESSEE:				
COPYEE:				

D.4175

4079

TITLE

 MITOTIC ACTIVITY AND BEHAVIOR AS AN INDEX OF CHEMICAL EFFECT
 (NUCLEUS (CALCUTTA) 1, 45-56).

THE IDENTIFICATION AND CLONING OF GENES ENCODING HALOAROMATIC
 CATABOLIC ENZYMES AND THE CONSTRUCTION OF HYBRID PATHWAYS FOR
 SUBSTRATE MINERALIZATION (BASIC LIFE SCI 28, 47-80).
 LEHRBACH PR TIMMIS KN

OVERVIEW OF SHORT TERM TESTS FOR THE MUTAGENIC AND CARCINOGENIC
 POTENTIAL OF PESTICIDES (J ENVIRON SCI HEALTH PART B 15, 867-906).
 MITCHELL AD JORGENSEN TA

STUDY OF PESTICIDE GENOTOXICITY (BASIC LIFE SCI 21, 275-326).
 SIMMON VF MORTELMANS KE
 JONES DC L VALENCIA R

PESTICIDES, MUTAGENIC AND CARCINOGENIC POTENTIAL (ACS SYMP SER 160,
 89-113).
 SIMMON VF MITCHELL AD

MUTAGENICITY TESTING OF CYCLAMATE AND SOME PESTICIDES IN DROSOPHILA
 MELANOGASTER (EXPERIENTIA 30(6), 621-623).

MUTAGENIC ACTIVITY OF PESTICIDES (KHIG ZDRAVEOPAZ 21(5), 496-506).

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	551 ✓	00/00/85		1
AUTHOR:	TURKULA TE		JALAL SM	
ADDRESSEE:				
COPYEE:				
DOCUMENT	552 ✓	00/00/77		1
AUTHOR:	TOURE IM		STENZ E	
ADDRESSEE:				
COPYEE:				
DOCUMENT	553 ✓	00/00/80		1
AUTHOR:	TOMKINS D		KWOK E	
ADDRESSEE:				
COPYEE:				
DOCUMENT	554 ✓	00/00/81		1
AUTHOR:	TIWARI DN		PANDEY AK	
ADDRESSEE:				
COPYEE:				
DOCUMENT	555 ✓	00/00/73		1
AUTHOR:	STYLES JA			
ADDRESSEE:				
COPYEE:				
DOCUMENT	556 ✓	00/00/82		1
AUTHOR:	STRALEY JP		CHRISTIENSEN JA	
ADDRESSEE:				
COPYEE:				
DOCUMENT	557 ✓	00/00/79		1
AUTHOR:	SIMMON VF		POOLE DC	
ADDRESSEE:	MITCHELL AD		WATERS MD	
COPYEE:				

174176

4080

TITLE

INCREASED RATES OF SISTER CHROMATID EXCHANGES INDUCED BY THE
HERBICIDE 24D (J HERED 76(3), 213-214).

ACTION OF SELECTED HERBICIDES ON BACTERIOPHAGES AND ESCHERICHIA
COLI (ZBL BAKTERIOL PARASIT INFEKTIONS K HTG ABT 2, 132, 163-177).

TESTING OF PESTICIDES FOR INDUCTION OF SISTER CHROMATID EXCHANGE IN
CHINESE HAMSTER OVARY CELLS (CAN J GENET CYTOL 22, 681).
DOUGLAS G

24D RESISTANT MUTANT STRAINS OF ANACYSTIS NIDULANS AND FILAMENT
FORMATION (INDIAN J EXP BIOL 19(10), 988-990).
BANARAS HINDU UNIV VARAN

CYTOTOXIC EFFECTS OF VARIOUS PESTICIDES IN VIVO AND IN VITRO (MUTAT
RES 21(1), 50-51).

IMPROVED BIOLOGICAL DEGRADATION OF CHLORINATED HYDROCARBONS USING
MUTANT BACTERIA (PROC INT WATER CONF ENG SOC WEST PA 43, 523-532).
KOPECKY AL SYBRON BIOCHEM

IN VITRO MUTAGENICITY AND GENOTOXICITY ASSAYS OF 38 PESTICIDES
(ENVIRON MUTAGENESIS 1, 142-143).
RICCIO ES ROBINSON DE

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	558 ✓	00/00/79		1
AUTHOR:	SIMMON VF		POOLE DC	
ADDRESSEE:				
COPYEE:				
DOCUMENT	559 ✓	00/00/77		1
AUTHOR:	SIMMON VF		KAUHANEN K	
ADDRESSEE:				
COPYEE:				
DOCUMENT	560 ✓	00/00/80		1
AUTHOR:	SIMMON VF		SRI INTERNATIONAL	
ADDRESSEE:				
COPYEE:				
DOCUMENT	561 ✓	00/00/74		1
AUTHOR:	SIEBERT D		LEMPERLE E	
ADDRESSEE:				
COPYEE:				
DOCUMENT	562 ✓	00/00/82		1
AUTHOR:	SHIRASU Y		MORIYA M	
ADDRESSEE:	OHTA T		INOUE T	
COPYEE:				
DOCUMENT	563 ✓	00/00/76		1
AUTHOR:	SHIRASU Y		MORIYA M	
ADDRESSEE:	KADA T			
COPYEE:				
DOCUMENT	564 ✓	00/00/75		1
AUTHOR:	SHIRASU Y			
ADDRESSEE:				
COPYEE:				

D.4177

4081

TITLE

 IN VITRO MICROBIOLOGICAL MUTAGENICITY AND UNSCHEDULED DNA SYNTHESIS
 STUDIES OF EIGHTEEN PESTICIDES. FINAL REPORT PHASE 2
 (EPA-600/1-79-041(PB80-13266)177 PP).
 MITCHELL AD ROBINSON DE

MUTAGENIC ACTIVITY OF CHEMICALS IDENTIFIED IN DRINKING WATER (DEV
 TOXICOL ENVIRON SCI 2, 249-258).
 TARDIFF RG STANFORD RES INST INT

'IN VITRO' MICROBIOLOGICAL MUTAGENICITY AND UNSCHEDULED DNA
 SYNTHESIS STUDIES OF EIGHTEEN PESTICIDES (GOVT REPORTS
 ANNOUNCEMENTS & INDEX (GRA&I) 10).

GENETIC EFFECTS OF HERBICIDES; INDUCTION OF MITOTIC GENE CONVERSION
 IN SACCHAROMYCES CEREVISIAE (MUTAT RES 22(2), 111-120).

MUTAGENICITY SCREENING STUDIES ON PESTICIDES (ENVIRON MUTAGENS
 CARCINOGEN PROC INT CONF, 3RD, 331-335).
 TEZUKA H TERAMOTO S

MUTAGENICITY SCREENING OF PESTICIDES IN THE MICROBIAL SYSTEM (MUTAT
 RES 40, 19-20).
 KATO K FURUHASHI A

SIGNIFICANCE OF MUTAGENICITY TESTING ON PESTICIDES (ENVIRON QUAL
 SAF 4, 226-231).

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	565 ✓	00/00/79		1
AUTHOR: SEILER JP				
ADDRESSEE:				
COPYEE:				
DOCUMENT	566 ✓	00/00/78		1
AUTHOR: SEILER JP			SWISS FED RES STN	
ADDRESSEE:				
COPYEE:				
DOCUMENT	567 ✓	00/00/70		1
AUTHOR: SCHROEDER I			MEYER M	
ADDRESSEE:				
COPYEE:				
DOCUMENT	568 ✓	00/00/76		1
AUTHOR: SARMA Y			TRIPATHI SN	
ADDRESSEE:				
COPYEE:				
DOCUMENT	569 ✓	00/00/82		1
AUTHOR: SANKARANARAYANAN K				
ADDRESSEE:				
COPYEE:				
DOCUMENT	570 ✓	00/00/80		1
AUTHOR: ROSENKRANZ HS			LEIFER Z	
ADDRESSEE:				
COPYEE:				
DOCUMENT	571 ✓	00/00/78		1
AUTHOR: RASMUSON B			SVAHLIN H	
ADDRESSEE:				
COPYEE:				

D.4178

4082

TITLE

PHENOXYACIDS AS INHIBITORS OF TESTICULAR DNA SYNTHESIS IN MALE MICE (BULL ENVIRON CONTAM TOXICOL 21, 89-92).

THE GENETIC TOXICOLOGY OF PHENOXY ACIDS OTHER THAN 245T (MUTAT RES 55(3-4), 197-226).
SWITZE

EFFECTS OF THE HERBICIDES 24D, AMINOTRIAZOLE, ATRAZINE, CHLORPROPHAM AND CHLORFURENOL ON NUCLEIC-ACID BIOSYNTHESIS IN THE ASCOMYCETE NEUROSPORA CRASSA (WEED RES 10, 172-177).
MUECKE D

EFFECTS OF CHEMICALS ON SOME MEMBERS OF INDIAN CHAROPHYTA 2. (CARYOLOGIA 29, 263-276).

DETERMINATION AND EVALUATION OF GENETIC RISKS TO HUMANS FROM EXPOSURE TO CHEMICALS, IN: CHEMICAL MUTAGENESIS, HUMAN POPULATION MONITORING AND GENETIC RISK ASSESSMENT (PROG MUTAT RES 3, 289-322).

DETERMINING THE DNA MODIFYING ACTIVITY OF CHEMICALS USING DNA POLYMERASE DEFICIENT ESCHERICHIA COLI (CHEM MUTAGENS:PRIN METHODS THEIR DETECTION 6, 109-147).

MUTAGENICITY TESTS OF 24D AND 245T IN GENETICALLY STABLE AND UNSTABLE STRAINS OF DROSOPHILIA MELANOGASTER (ECOL BULL 27, 190-192).
UNIV UMEA SWEDEN

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	572 ✓	00/00/83		1
AUTHOR:	RASHID KA		MUMMA RO	
ADDRESSEE:				
COPYEE:				
DOCUMENT	573 ✓	00/00/84		1
AUTHOR:	RASHID KA		BABISH JO	
ADDRESSEE:				
COPYEE:				
DOCUMENT	574 ✓	00/00/79		1
AUTHOR:	RASHID KA		PA ST UNIV	
ADDRESSEE:				
COPYEE:				
DOCUMENT	575 ✓	00/00/79		1
AUTHOR:	RAMEL C		MAGNUSSON J	
ADDRESSEE:				
COPYEE:				
DOCUMENT	576 ✓	00/00/78		1
AUTHOR:	RAMEL C		WALLENBERG LAB SWEDEN	
ADDRESSEE:				
COPYEE:				
DOCUMENT	577 ✓	00/00/81		1
AUTHOR:	PROBST GS		MCMAHON RE	
ADDRESSEE:	EPP JK		NEAL SB	
COPYEE:				
DOCUMENT	578 ✓	00/00/79		1
AUTHOR:	PROBST GS		HILL LE	
ADDRESSEE:				
COPYEE:				

9-7-79

4083

TITLE

MUTAGENICITY ASSAYS WITH (2,4-DICHLOROPHENOXY) ACETIC ACID-AMINO
ACID CONJUGATES (J AGRIC FOOD CHEM 31(6), 1371-1372).
PA ST UNIV

POTENTIAL OF 24D CONJUGATES AS PROMUTAGENS IN THE SALMONELLA /
MICROSOME MUTAGENICITY TEST (J ENVIRON SCI HEALTH PART B B19(8-9),
689-701).
MUMMA RO PA ST UNIV

THE RELATIONSHIP BETWEEN MUTAGENIC AND DNA DAMAGING ACTIVITY OF
PESTICIDES AND THEIR POTENTIAL FOR CARCINOGENESIS (DISS ABSTR INT B
39(10), 4726).

CHEMICAL INDUCTION OF NONDISJUNCTION IN DROSOPHILA (ENVIRON HEALTH
PERSPECT 31, 59-66).

GENETIC EFFECTS OF PHENOXYACETIC ACIDS IN MAMMALS (ECOL BULL 27,
182-185).

CHEMICALLY INDUCED UNSCHEDULED DNA SYSTHESIS IN PRIMARY RAT
HEPATOCTE CULTURES; COMPARISON WITH BACTERIAL MUTAGENICITY USING
218 COMPOUNDS (ENVIRON MUTAGENESIS 3, 11-32).
HILL LE THOMPSON CZ

CHEMICALLY INDUCED DNA REPAIR SYSTHESIS IN PRIMARY RAT HEPATOCYTES
A CORRELATION WITH BACTERIAL MUTAGENICITY (ANNUAL OF THE NY ACADEMY
OF SCIENCES 349).

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	594 ✓	00/00/84		1 ✓
AUTHOR:	MA TH		HARRIS MM	
ADDRESSEE:	MOHAMMAD K		BARE JL	
COPYEE:				
DOCUMENT	595 ✓	00/00/54		1 ✓
AUTHOR:	LOVELESS LE		SPOERL E	
ADDRESSEE:				
COPYEE:				
DOCUMENT	596 ✓	00/00/83		1 ✓
AUTHOR:	LINNAINMAA K		VAINIO H	
ADDRESSEE:				
COPYEE:				
DOCUMENT	597 ✓	10/00/82		1 ✓
AUTHOR:	LARSEN KO		HARDT F	
ADDRESSEE:	LARSEN JC		LYNGE E	
COPYEE:				
DOCUMENT	598 ✓	00/00/81		1 ✓
AUTHOR:	LAMB JC		MOORE JA	
ADDRESSEE:				
COPYEE:				
DOCUMENT	599 ✓	00/00/81		1 ✓
AUTHOR:	LAMB JC		MARKS TA	
ADDRESSEE:	MOORE JA			
COPYEE:				
DOCUMENT	600 ✓	00/00/80		1 ✓
AUTHOR:	KUZMENKO NM		DIDENKO GG	
ADDRESSEE:	PETROVSKAIA OG		PILINSKIAIA MA	
COPYEE:				

2
4180

4084

TITLE

TRADESCANTIA MICRONUCLEUS (TRAD-MCN) TEST ON 140 HEALTH RELATED AGENTS (MUTAT RES 138(2-3), 157-167).

ANDERSON VA
LIN G

AHMED I
WESTERN IL UNIV

SURVEY OF EFFECTS OF CHEMICALS ON DIVISION AND GROWTH OF YEAST AND ESCHERICHIA COLI (J BACTERIOL 68, 637-644).

WEISMAN TH

SCES AMONG HERBICIDE SPRAYERS EXPOSED TO 24D AND MCPA (MUTAT RES 113, 276-277).

CHLOROPHENOLS - PHENOXYCARBOXYLIC ACIDS (ARGEJDSTILSYNET, ARBEJDSMILJ INSTITUTTET ROSENVAENGETS ALLE 16-18).

SORUP P
HANSEN T

KRISTIANSEN E

DEVELOPMENT AND VIABILITY OF OFFSPRING OF MALE MICE TREATED WITH CHLORINATED PHENOXY ACIDS AND TCDD (J TOXICOL ENVIRON HEALT H 8, 835-844).

MARKS TA

HASEMAN JK

MALE FERTILITY, SISTER CHROMATID EXCHANGE, AND GERM CELL TOXICITY FOLLOWING EXPOSURE TO MIXTURES OF CHLORINATED PHENOXY ACIDS CONTAINING DIOXIN (J TOXICOL ENVIRON HEALTH 8, 825-834).

GLADEN BE

ALLEN JW

OTDALENNYE POSLEDSTVIIA PRI DEISTVII PESTITSIDOV (LONG TERM EFFECTS OF PESTICIDES) (GIG SANIT 45(9), 88-89).

KURINNYI AI
SHEPILSKAIA NR

MARTSON LV
ALL-UNION RES INST USSR

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	601 ✓	00/00/78		1
AUTHOR: KURINNYI AI				
ADDRESSEE:				
COPYEE:				
DOCUMENT	602 ✓	00/00/81		1
AUTHOR: KUBINSKI H			BUTZKE GE	
ADDRESSEE:				
COPYEE:				
DOCUMENT	603 ✓	00/00/82		1
AUTHOR: KORTE C			JALAL SM	
ADDRESSEE:				
COPYEE:				
DOCUMENT	604 ✓	00/00/79		1
AUTHOR: KORTE C			JALAL SM	
ADDRESSEE:				
COPYEE:				
DOCUMENT	605 ✓	00/00/82		1
AUTHOR: KOOL HJ			VANKREIJL CF	
ADDRESSEE:				
COPYEE:				
DOCUMENT	606 ✓	00/00/83		1
AUTHOR: KONSTANTINOVA RK			SHEVELO FS	
ADDRESSEE:				
COPYEE:				
DOCUMENT	607 ✓	00/00/84		1
AUTHOR: KONSTANTINOVA TK			SHEVELO FS	
ADDRESSEE:				
COPYEE:				
DOCUMENT	608 ✓	00/00/82		1
AUTHOR: KHALATKAR AS			BHARGAVA YR	
ADDRESSEE:				
COPYEE:				

4/81

4085

TITLE

GENETIC - HYGIENIC REGULATION OF PESTICIDE APPLICATION WITH REGARD FOR THEIR POTENTIAL MUTAGENIC HAZARD (TSITOL GENET 12(4), 353-358).

DNA CELL BINDING (DCB) ASSAY FOR SUSPECTED CARCINOGENS AND MUTAGENS (MUTAT RES 89, 95-136).
KUBINSKI ZO

24D INDUCED CLASTOGENICITY AND ELEVATED RATES OF SISTER CHROMATID EXCHANGES IN CULTURED HUMAN LYMPHOCYTES (J JERED 73(3), 224-226).
ST MARYS COLL

24D INDUCED ALTERATIONS IN MAMMALIAN CHROMOSOMES - PRELIMINARY RESULTS (PROC N D ACAD SCI 33,6).
UNIV ND

TOXICOLOGY ASSESSMENT OF ORGANIC COMPOUNDS IN DRINKING WATER (CRIT REV ENVIRON CONTROL 12(4), 307-357).
ZOETEMAN B CJ

MUTAGENIC ACTIVITY OF THE COMBINED EFFECT OF THE HERBICIDES 24D AND 245T (GIG SANIT (4), 21-22).

CYTOGENETIC ACTIVITY OF THE COMBINED EFFECT OF THE HERBICIDES 24D AND 245T (GIG SANIT (9), 28-29).
SARAT MED INST SARATOV

24D - A NEW ENVIRONMENTAL MUTAGEN (MUTAT RES 103(2), 111-114).

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	609 ✓	00/00/71		1

AUTHOR: KESSLER B
 ADDRESSEE:
 COPYEE:

DOCUMENT	610 ✓	00/00/85		1

AUTHOR: KALLAK HE
 ADDRESSEE: VAPPER MA
 COPYEE:

DOCUMENT	611 ✓	00/00/76		1

AUTHOR: JENSSEN D
 ADDRESSEE: RENBERG L
 COPYEE:

DOCUMENT	612 ✓	00/00/80		1

AUTHOR: JENSSEN D
 ADDRESSEE: RAMEL C
 COPYEE:

DOCUMENT	613 ✓	00/00/79		1

AUTHOR: HEINARU A
 ADDRESSEE: METSKI R
 COPYEE:

DOCUMENT	614 ✓	00/00/73		1

AUTHOR: HAKEEM H
 ADDRESSEE: SHEHAB A
 COPYEE:

DOCUMENT	615 ✓	00/00/75		1

AUTHOR: HAAG D
 ADDRESSEE: GOERTTLER K
 COPYEE:

D.4182

4086

TITLE

INTERACTIONS IN VITRO BETWEEN HORMONES AND DNA 3. EFFECTS OF PLANT AND ANIMAL HORMONES ON THE ACTION OF DNA LIGASE AND ITS RELATIONSHIP TO AGE (BIOCHIM BIOPHYS ACTA 240, 330-342).

PLANT TISSUE CULTURE AS A MODEL SYSTEM FOR MUTAGENICITY TESTING OF CHEMICALS (MUTAT RES 147(1-2), 51-57).

DISTRIBUTION AND CYTOGENETIC TEST OF 24D AND 245T PHENOXYACETIC ACIDS IN MOUSE BLOOD TISSUES (CHEM BIOL INTERACT 14(3-4) 291-299).

THE MICRONUCLEUS TEST AS PART OF A SHORT-TERM MUTAGENICITY TEST PROGRAM FOR THE PREDICTION OF CARCINOGENICITY EVALUATED BY 143 AGENTS TESTED (MUTAT RES 75, 191-202).

INDUCTION OF RESISTANCE TO COLICINS IN ESCHERICHIA COLI AS A SUITABLE MODEL FOR MUTAGENICITY STUDIES OF CHEMICAL SUBSTANCES (TARTU RIIKLIKU ULIK TOIM 499, 128-132).

CYTOLOGICAL EFFECTS OF SOME HERBICIDES (EGYPT J BOT 16(1/3), 291-301).

INFLUENCE OF NONCYTOTOXIC CONCENTRATIONS OF THE HERBICIDE 24D ON THE DNA SYNTHESIS IN CULTURED VERTEBRATE CELLS (ARCH TOXICOL 33, 91-102).

PREISS D

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	616✓	00/00/81		1

AUTHOR: GOPALAN HNB
 ADDRESSEE: NJAGI GOE
 COPYEE:

DOCUMENT	617✓	00/00/81		1

AUTHOR: GOPALAN HNB
 ADDRESSEE: NJAGI GDE
 COPYEE:

DOCUMENT	618✓	00/00/79		1

AUTHOR: GOELTENBOTH F
 ADDRESSEE:
 COPYEE:

DOCUMENT	619✓	00/00/81		1

AUTHOR: FISKESJOE G
 ADDRESSEE: LASSEN C
 COPYEE:

DOCUMENT	620✓	00/00/72		1

AUTHOR: FICSOR G
 ADDRESSEE: NII LO
 COPYEE:

DOCUMENT	621✓	00/00/74		1

AUTHOR: FAHRIG R
 ADDRESSEE:
 COPYEE:

DOCUMENT	622✓	00/00/84		1

AUTHOR: POLLAK JK
 ADDRESSEE:
 COPYEE:

DOCUMENT	623✓	00/00/77		1

AUTHOR: ERCEGOVICH CD
 ADDRESSEE: RASHID KA
 COPYEE:

4/83

4087

TITLE

MUTAGENICITY TESTING OF PESTICIDES 3. DROSOPHILA; RECESSIVE
SEX-LINKED LETHALS (GENETICS 97, S44).

MUTAGENICITY TESTING OF PESTICIDES (GENETICS 97(S1),S44).

EFFECT OF FOUR HERBICIDE MIXTURES ON THE MITOTIC ACTIVITY OF
EICHHORNIA CRASSIPES (261-265).

CHLORINATED PHENOXYACETIC ACIDS AND CHLOROPHENOLS IN THE MODIFIED
ALLIUM TEST (CHEM BIOL INTERACT 34, 333-344).
RENBERG L

SURVEY OF PESTICIDES FOR MUTAGENICITY BY THE BACTERIAL-PLATE ASSAY
METHOD (EMS NEWSL 6, 6-8).
PICCOLO GM

COMPARATIVE MUTAGENICITY STUDIES WITH PESTICIDES (IARC SCI PUBL 10,
161-181).

THE EFFECT OF THE PHENOXYACETIC ACID HERBICIDES 245T AND 24D AS
ASCERTAINED BY DIRECT EXPERIMENTATION (RESIDUE REV 92, 29-58).

MUTAGENESIS INDUCED IN MUTANT STRAINS OF SALMONELLA TYPHIMURIUM BY
PESTICIDES (ABSTR PAP AM CHEM SOC 174; PEST 43).

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	624 ✓	00/00/72		1
AUTHOR:	EPSTEIN SS		ARNOLD E	
ADDRESSEE:	BISHOP Y			
COPYEE:				
DOCUMENT	625 ✓	00/00/80		1
AUTHOR:	ELZOKA TA		MCKENZIE WH	
ADDRESSEE:				
COPYEE:				
DOCUMENT	626 ✓	00/00/72		1
AUTHOR:	EHRENBERG L			
ADDRESSEE:				
COPYEE:				
DOCUMENT	627 ✓	00/00/84		1
AUTHOR:	DON RH		WEIGHTMAN AJ	
ADDRESSEE:				
COPYEE:				
DOCUMENT	628 ✓	00/00/85		1
AUTHOR:	DON RH		PEMBERTON JM	
ADDRESSEE:				
COPYEE:				
DOCUMENT	629 ✓	00/00/84		1
AUTHOR:	DAVRONOV ID			
ADDRESSEE:				
COPYEE:				
DOCUMENT	630 ✓	00/00/81		1
AUTHOR:	BUTCHER RL		PAGE RD	
ADDRESSEE:				
COPYEE:				

7-4184

4088

TITLE

DETECTION OF CHEMICAL MUTAGENS BY THE DOMINANT LETHAL ASSAY IN THE
 MOUSE (TOXICOL APPL PHARMACOL 23, 288-325).
 ANDREA J BASS H

CYTOLOGICAL EFFECTS OF THE HERBICIDES 24D AND 245T ON HUMAN
 PERIPHERAL LYMPHOCYTES EXPOSED IN VITRO (AM J HUM GENET 32, 154A).

ON THE MUTAGENIC ACTION OF PHENOXY ACID PREPARATIONS (NEWSLETT
 ENVIRON MUTAGEN SOC 6, 27).

TRANSPOSON MUTAGENESIS AND CLONING ANALYSIS OF THE PATHWAYS FOR
 DEGRADATION OF 24D AND 3-CHLOROBENZOATE IN ALCALIGENES EUTROPHUS
 JMP134(PJP4) (J BACTERIOL 161(1), 85-90).
 KNACKMUSS HF TIMMIS KN

GENETIC AND PHYSICAL MAP OF THE 24D - DEGRADATIVE PLASMID PJP4 (J
 BACTERIOL 161(1), 466-468).

RECOMBINANT - INDUCING EFFECT OF COTTON DEFOLIANTS ON YEAST
 SACCHAROMYCETES (BIOL NAUKI (MOSCOW 4), 87-90).

INTRODUCTORY REMARKS; ENVIRONMENTAL ENDOGENOUS HAZARDS TO THE
 FEMALE REPRODUCTIVE SYSTEM (ENVIRON HEALTH PERSPECT 38, 35-37).

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	631 ✓	00/00/82		1

AUTHOR: BULL RJ
 ADDRESSEE:
 COPYEE:

DOCUMENT	632 ✓	00/00/73		1
AUTHOR:	BONGSO RA		BASRUR PK	
ADDRESSEE:				
COPYEE:				

DOCUMENT	633 ✓	00/00/73		1

AUTHOR: BISHUN NP
 ADDRESSEE: RAVEN RW
 COPYEE:

WILLIAMS DC
 PARKE DV

DOCUMENT	634 ✓	00/00/73		1

AUTHOR: BERIN EG
 ADDRESSEE:
 COPYEE:

BUSLOVICH SY

DOCUMENT	635 ✓	00/00/76		1

AUTHOR: BASRUR SV
 ADDRESSEE:
 COPYEE:

FLETCHER RA

DOCUMENT	636 ✓	00/00/79		1

AUTHOR: BARHAD B
 ADDRESSEE: MELINTE L
 COPYEE:

DINU I

DOCUMENT	637 ✓	00/00/69		1
AUTHOR:	BAMBERGER ES		SHARABANI M	
ADDRESSEE:				
COPYEE:				

1-4185

4089

TITLE

EXPERIMENTAL METHODS FOR EVALUATING THE HEALTH RISKS ASSOCIATED WITH ORGANIC CHEMICALS IN DRINKING WATER (TOXICOL ENVIRON CHEM 6(1), 1-18).

IN VITRO RESPONSE OF BOVINE CELLS TO 24D (IN VITRO 8, 416-417).

CHROMOSOME DAMAGE INDUCED BY CHEMICALS (CHEM-BIOL INTERACTIONS 6(6), 375-392).

MILLS J

LLOYD N

GENETIC ACTIVITY OF DIETHYLAMINE SALT OF 24D (BENET TSITOL ISSLED YAD TSITOPLAZMATICHESKOI NASLEDSTVENNOSTI, 154-157).

PEKARSKAYA LS

IN VITRO EFFECTS OF 24D ON BOVINE CELLS (CAN J COMP MED 40, 408-415).

BASRUR PK

MUTAGENIC / CARCINOGENIC POTENTIAL OF SOME PESTICIDES WITH THE "SALMONELLA - MICROSOME" SYSTEM (REV IG BACTERIL VIRUSOL PARAZITOL EPIDEMIOL PNEUMOFITIZIOL IG 28(1), 77-83).

ROMAN A

BOGHIANU L

THE EFFECT OF PLANT GROWTH REGULATORS ON DNA (ISR J CHEM 7, 122).

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	638 ✓	00/00/73		1

AUTHOR: BALOBANGA MJ ANTONI F
 ADDRESSEE: KOC SIS F
 COPYEE:

DOCUMENT	639 ✓	00/00/84		1

AUTHOR: AZATYAN RA AVAKYAN VA
 ADDRESSEE:
 COPYEE:

DOCUMENT	640 ✓	00/00/82		1

AUTHOR: ANONYMOUS
 ADDRESSEE:
 COPYEE:

DOCUMENT	641 ✓	00/00/78		1

AUTHOR: ANONYMOUS
 ADDRESSEE:
 COPYEE:

DOCUMENT	642 ✓	00/00/82		1

AUTHOR: ANONYMOUS
 ADDRESSEE:
 COPYEE:

DOCUMENT	643 ✓	00/00/72		1

AUTHOR: ANDERSEN KJ KEIGHTY EO
 ADDRESSEE:
 COPYEE:

DOCUMENT	644 ✓	00/00/78		1

AUTHOR: ANDERSON D STYLES JA
 ADDRESSEE:
 COPYEE:

12.4/186

4090

TITLE

EFFECT OF 24D ON SEMICONSERVATIVE AND DNA REPAIR SYNTHESIS)CASE
 REPORT; BULLOUS DERMATITIS AFTER EXPOSURE TO 24D) (BER OESTERR
 STUDIENGES ATOMENERG 2218, 1-7).
 ALTMANN H VINCZE I

CYTOGENETIC ACTIVITY OF 24D AND TREFLAN HERBICIDES ON THE
 CHROMOSOMES OF CREPIS CAPILLARIS L (BIOL ZH ARM 37(6), 460-463).
 MIRZOYAN GI

MUTAGENESIS TESTING RESULTS (NTP TECH BULL 7, 5-9).

CHLORINATED PHENOXY ACIDS AND THEIR DIOXINS; GENETICS - SUMMARY
 (ECOL BULL 27, 179-181).

REVIEW OF LITERATURE ON HERBICIDES , INCLUDING PHENOXY HERBICIDES
 AND ASSOCIATED DIOXINS VOLUME I. ANALYSIS OF LITERATURE (GOVT
 REPORTS ANNOUNCEMENTS & INDEX (GRA&I) (8)).

EVALUATION OF HERBICIDES FOR POSSIBLE MUTAGENIC PROPERTIES (J AGRIC
 FOOD CHEM 20, 649-656).
 TAKAHASHI MT

AN EVALUATION OF 6 SHORT TERM TESTS FOR DETECTING ORGANIC CHEMICAL
 CARCINOGENS APPENDIX 2, THE BACTERIAL MUTATION TEST (BR J CANCER
 37, 924-930).

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	645 ✓	00/00/84		1
AUTHOR:	AIRAPETYAN RB		AVAKYAN VA	
ADDRESSEE:				
COPYEE:				
DOCUMENT	646 ✓	00/00/77		1
AUTHOR:	AHMED FE		LEWIS NJ	
ADDRESSEE:				
COPYEE:				
DOCUMENT	647 ✓	00/00/76		2 ✓
AUTHOR:	AHMED F			
ADDRESSEE:				
COPYEE:				
DOCUMENT	648 ✓	00/00/67		1
AUTHOR:	YANAGISHIMA N		SHIMODA C	
ADDRESSEE:				
COPYEE:				
DOCUMENT	649 ✓	00/00/71		1
AUTHOR:	YAMADA Y		YASUDA T	
ADDRESSEE:				
COPYEE:				
DOCUMENT	650 ✓	00/00/73		1
AUTHOR:	VASIL IK			
ADDRESSEE:				
COPYEE:				
DOCUMENT	651 ✓	00/00/69		1
AUTHOR:	VASIL IK		ALDRICH HC	
ADDRESSEE:				
COPYEE:				
DOCUMENT	652 ✓	00/00/76		1
AUTHOR:	TOMKINS DJ		GRANT WF	
ADDRESSEE:				
COPYEE:				

D-4187

4091

TITLE

CYTOGENETIC ACTIVITY OF 24D DALAPON AND SEMERON HERBICIDES ON THE CHROMOSOMES OF ALLIUM CEPA L (BIOL ZH ARM 37(5), 404-408).

AZATYAN RA

PESTICIDE INDUCED OUABAIN RESISTANT MUTANTS IN CHINESE HAMSTER V79 CELLS (CHEM BIOL INTERACT 19(3), 369-374).

HART RW

ENVIRONMENTAL GENETICS; MODEL TO INVESTIGATE POLLUTANTS PRODUCING GENETIC DAMAGE (DISS ABSTR INT B 36(8), 3737).

PRODUCTION OF YEAST VARIANTS BY AUXIN AND EFFECTS OF PLANT GROWTH REGULATORS ON THESE VARIANTS (PLANT CELL PHYSIOL 8(1), 109-119).

OSAKA CITY UNIV JAPAN

THE INTERRELATIONSHIP OF 24D WITH MOLECULAR COMPONENTS OF THE CELL DURING CALLUS INDUCTION (AGRIC BIOL CHEM 35, 99-104).

KOGE M

SEKIYA J

MORPHOGENETIC, HISTOCHEMICAL AND ULTRASTRUCTURAL EFFECTS OF PLANT GROWTH SUBSTANCES IN VITRO (BIOCHEM PHYSIO PFLANZEN 164, 58-71).

BIOLOGY OF CALLUS FORMATION IN "GERMINATING " SEEDS OF SWEET PEA (24D) (ABST XI INT BOT CONGR, 227).

MONITORING NATURAL VEGETATION FOR HERBICIDE INDUCED CHROMOSOMAL ABERRATIONS (MUTAT RES 36, 73-84).

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	653 ✓	00/00/72		1
AUTHOR:	SPANG HA		PLATT RS	
ADDRESSEE:				
COPYEE:				
DOCUMENT	654 ✓	00/00/71		1
AUTHOR:	SMIRNOV Y		FEDOROV AA	
ADDRESSEE:				
COPYEE:				
DOCUMENT	655 ✓	00/00/75		1
AUTHOR:	SKORUPSKA H			
ADDRESSEE:				
COPYEE:				
DOCUMENT	656 ✓	00/00/76		1
AUTHOR:	SKORUPSKA H			
ADDRESSEE:				
COPYEE:				
DOCUMENT	657 ✓	00/00/76		1
AUTHOR:	SINGH BD		SINGH RM	
ADDRESSEE:				
COPYEE:				
DOCUMENT	658 ✓	00/00/77		1
AUTHOR:	SINGH BD			
ADDRESSEE:				
COPYEE:				
DOCUMENT	659 ✓	00/00/75		1
AUTHOR:	SINGH BD		HARVEY BL	
ADDRESSEE:				
COPYEE:				

D.4188

4092

TITLE

EFFECT OF PLANT GROWTH SUBSTANCES ON THE HYPERCHROMICITY OF DNA
(PHYSIOL PLANT 27, 321-326).

TERATISMS IN PLANTS INDUCED BY HIGH DOSES OF GROWTH STIMULATORS AND
HERBICIDES. BIOCHEMICAL MECHANISMS OF THE INDUCTION OF THESE
TERATISMS (BOT ZH (LENINGRAD) 56, 633-646).

SHKOLNIK M

RADIOMIMETIC EFFECT OF HERBICIDES ON THE PROGRESS OF MITOSES IN PEA
(PISUM SATIVUM) IN COMPARISON WITH THOSE OF CHEMOMUTAGENS AND GAMMA
RAYS (GENET POL 16, 301-311).

EFFECT OF SOME HERBICIDES, CHEMOMUTAGENS AND GAMMA RADIATION ON
MEIOSIS IN PEA (PISUM SATIVUM) (GENET POL 17(2), 149-157).

REDUCTION IN ANAPHASE BRIDGE FREQUENCY BY 24D IN IRRADIATED AND
NORMAL WHEAT (TRITICUM AESTIVUM L) ROOT TIPS (INDIAN J EXP BIOL 14,
526-527).

SINGH RB

SINGH Y

EFFECTS OF IAA, NAA AND 24D ON CYTOGENETIC BEHAVIOR OF HAPLOPAPPUS
GRACILIS (NUTT) GRAY CALLUS CULTURES (CARYOLOGIA 29, 447-455).

EFFECTS OF DIFFERENT 24D CONCENTRATIONS ON THE CYTOGENETIC BEHAVIOR
OF PLANT CELLS CULTURED IN VITRO (BIOL PLANT 17, 167-174).

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	660 ✓	00/00/75		1
AUTHOR:	SINGH BD		HARVEY BL	
ADDRESSEE:				
COPYEE:				
DOCUMENT	661 ✓	00/00/77		1
AUTHOR:	SINGH BD		SINGH Y	
ADDRESSEE:	SINGH RM		BHATNAGAR PS	
COPYEE:				
DOCUMENT	662 ✓	00/00/75		1
AUTHOR:	SINGH BD			
ADDRESSEE:				
COPYEE:				
DOCUMENT	663 ✓	00/00/76		1
AUTHOR:	SINGH BD			
ADDRESSEE:				
COPYEE:				
DOCUMENT	664 ✓	00/00/76		1
AUTHOR:	SIKKA K		SHARMA AK	
ADDRESSEE:				
COPYEE:				
DOCUMENT	665 ✓	00/00/82		1
AUTHOR:	SIDDIQUI SA		ANSARI MK	
ADDRESSEE:				
COPYEE:				
DOCUMENT	666 ✓	00/00/48		1
AUTHOR:	RYLAND AG			
ADDRESSEE:				
COPYEE:				

7-4189

4093

TITLE

DOES 24D INDUCE MITOTIC IRREGULARITIES IN PLANT TISSUE CULTURES
(EXPERIENTIA 31,785-787).

CYTOGENETIC EFFECTS OF SEED TREATMENT WITH IAA, NAA AND 24D IN
BARLEY HORDEUM VULGARE L (INDIAN J EXP BIOL 15, 1107-1108).
SINGH RB SINGH VP

COMPARATIVE STUDY OF CYTOGENETIC EFFECTS OF TWO CULTURE MEDIA ON
SUSPENSIONS OF HAPLOPAPPUS GRACILIS (ACTA BOT INDICA 3, 98-103).

COMPARISON OF CYTOGENETIC EFFECTS OF IAA, NAA AND 24D IN CALLUS
CULTURES OF HAPLOPAPPUS GRACILIS (NUTT) GRAY (INDIAN J EXP BIOL 14,
524-526).

EFFECTS OF SOME HERBICIDES ON PLANT CHROMOSOMES (PROC INDIAN NATL
SCI ACAD PART B 42, 299-307).

EFFECT OF 24D ON MEIOTIC CHROMOSOMES OF HELIANTHUS ANNUUS L CV
"PEREDOVICK" (LETT BOT (2), 91-94).
AHMAD R ALIGARH MUSLIM UNIV ALIG

CYTOLOGICAL STUDY OF THE EFFECTS OF COLCHICINE, INDOLE-3-ACETIC
ACID, POTASSIUM CYANIDE AND 24D ON PLANT CELLS (J ELISHA MITCHELL
SCI SOC 64, 117-125).

NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT 667 ✓	00/00/69		1	THE EFFECT OF THE SODIUM SALT 24D ON THE CELL DIVISION OF VICIA FABIA AND PISUM SATIVUM SEEDLINGS (BOT KOZL 56, 245-250). LONTAI I
AUTHOR: ROJIK I		HORVATHMESZAROS M		
ADDRESSEE:				
COPYEE:				
DOCUMENT 668 ✓	00/00/85		1	POTENTIAL OF 24D CONJUGATES AS PROMUTAGENS IN SALMONELLA MICROsome MUTAGENICITY TEST (J ENVIRON SCI HEALTH PART B PESTIC FOOD CONTAM AGRIC WASTES 19(8-9), 689-702). MUMMA RO UNIV SALAH ADDEEN IRAQ
AUTHOR: RASHID KA		BABISH JO		
ADDRESSEE:				
COPYEE:				
DOCUMENT 669 ✓	00/00/72		1	ACTION OF CHEMICAL MUTAGENS ON SEED PROGENY OF GRAPES STUDIED TO PRODUCE FORMS IMMUNE OR HIGHLY RESISTANT TO PHYLLOXERA AND MILDEW (KHIM JUTAGENEZ SOZDANIE SELEKTS MATER, 345-347). INST IM FRUNZE KISHINEV
AUTHOR: POLIVTSEV FP		VOITOVICH KA		
ADDRESSEE:				
COPYEE:				
DOCUMENT 670 ✓	00/00/77		1	MUTAGENICITY TESTING OF HERBICIDES WITH A HAPLOID PELARGONIUM (MUTAT RES 46(3),232). GUNTHER G
AUTHOR: POHLHEIM E		POHLHEIM F		
ADDRESSEE:				
COPYEE:				
DOCUMENT 671 ✓	00/00/72		1	ROLE OF PH IN THE OBSERVED EFFECT OF PLANT GROWTH REGULATORS ON DNA (PHYTOCHEMISTRY 11, 3135-3138).
AUTHOR: PENNER D		EARLY RW		
ADDRESSEE:				
COPYEE:				
DOCUMENT 672 ✓	00/00/77		1	TESTING OF THE MUTAGENIC ACTION OF SOME HERBICIDES APPLIED ON CEREAL CROPS (MARER SES NAUK INST OCHR ROSL (POZNAN) 17,133-147).
AUTHOR: PALIKOWA E		INST OCHR ROSL SOSNICOWI		
ADDRESSEE:				
COPYEE:				
DOCUMENT 673 ✓	00/00/75		1	IN VITRO CULTURE OF WHEAT TISSUES 2. MORPHOLOGICAL, CYTOLOGICAL AND ENZYMATIC VARIATIONS INDUCED IN WHEAT CALLUS BY GROWTH REGULATORS, ADENINE SULFATE AND CASEIN HYDROLYSATE (JPN J GENET (ID ENGAKU ZASSHI 50, 19-31).
AUTHOR: NAKAI Y		SHIMADA T		
ADDRESSEE:				
COPYEE:				

D.4190

4094

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	674 ✓	00/00/72		1

AUTHOR:	NAGL W		RUECKER W
ADDRESSEE:			
COPYEE:			

DOCUMENT	675 ✓	00/00/60		1

AUTHOR:	HUEHLING GN		VANTHOF J
ADDRESSEE:			
COPYEE:			

DOCUMENT	676 ✓	00/00/80		1

AUTHOR:	MORI S		NAKANISHI H
ADDRESSEE:	KYOTO PREFECT UNIV KYOTO		
COPYEE:			

DOCUMENT	677 ✓	00/00/73		1

AUTHOR:	MOHANDAS T		GRANT WF
ADDRESSEE:			
COPYEE:			

DOCUMENT	678 ✓	00/00/72		1

AUTHOR:	MOHANDAS T		GRANT WF
ADDRESSEE:			
COPYEE:			

DOCUMENT	679 ✓	00/00/59		1

AUTHOR:	MELCHERS G		BERGMANN L
ADDRESSEE:			
COPYEE:			

DOCUMENT	680 ✓	00/00/60		1

AUTHOR:	MCMAHON RM		WITKUS ER
ADDRESSEE:			
COPYEE:			

4191

4095

TITLE

RELATIONS BETWEEN MORPHOGENESIS AND NUCLEAR DNA CONTENT IN ASEPTIC CULTURES OF CYMBIDIUM AND THEIR CHANGE BY GROWTH REGULATORS (Z PFLANZENPHYSIOL 67, 120-134).

CYTOLOGICAL EFFECTS OF HERBICIDAL SUBSTITUTED PHENOLS (WEEDS 8, 173-181).

WILSON GB

GRIOSBY BH

EFFECTS OF MUTAGENS ON CULTURED CELLS OF HIGHER PLANTS II. RADIOSENSITIVITY IN CALLUS TISSUES OF PHASEOLUS VULGARIS CV KENTUCKY WONDER (KYOTO-FURITSU DAIGAKU GAKUJUTSU HOKOKY NOGAKU (32), 1-7).

SHIOJIRI S

MURAKAMI M

A RELATIONSHIP BETWEEN NUCLEAR VOLUME AND RESPONSE TO AUXIN HERBICIDES FOR SOME WEED SPECIES (CAN J BOT 51, 1133-1136).

CYTOGENETIC EFFECTS OF 24D AND AMITROLE IN RELATION TO NUCLEAR VOLUME AND DNA CONTENT IN SOME HIGHER PLANTS (CAN J GENET CYTO L 14(4), 773-783).

MCGILL UNIV QUEBEC

STUDIES ON THE CULTURE OF HAPLOID TISSUES OF ANTIRRHINUM MAJUS (BER DTSCH BOT GES 71, 459-473).

SOME CYTOLOGICAL CHARACTERISTICS OF 24D INDUCED MITOSIS IN POLYPLOID CELLS OF SOLANUM TUBEROSUM (CARYOLOGIA 12, 398-403).

BERGER CA

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	681 ✓	00/00/77		1
AUTHOR: MAHER EP				
ADDRESSEE:				
COPYEE:				
DOCUMENT	682 ✓	00/00/76		1
AUTHOR: NUTI RV			MARTINI G	
ADDRESSEE:				
COPYEE:				
DOCUMENT	683 ✓	00/00/82		1
AUTHOR: MA TH				
ADDRESSEE:				
COPYEE:				
DOCUMENT	684 ✓	00/00/78		1
AUTHOR: LOGVINENKO VF			MORGUN VV	
ADDRESSEE:				
COPYEE:				
DOCUMENT	685 ✓	00/00/73		1
AUTHOR: LIBBENGA KR			TORREY JO	
ADDRESSEE:				
COPYEE:				
DOCUMENT	686 ✓	00/00/76		1
AUTHOR: LIN Y			KUO P	
ADDRESSEE:				
COPYEE:				
DOCUMENT	687 ✓	00/00/69		1
AUTHOR: LIANG GHL			FELTNER KC	
ADDRESSEE:				
COPYEE:				

D.4192

4096

TITLE

RESISTANCE TO 24D IN ARABIDOPSIS THALIANA (ARABIDOPSIS INF SERV 14,
18-21).

GENOTYPE HORMONE INTERACTION IN THE INDUCTION OF CHROMOSOME
ABERRATIONS; EFFECT OF 24D AND KINETIN ON TISSUE CULTURES FROM
NICOTIANA SPP (MUTAT RES 36, 67-72).

BUIATTI M

VICIA CYTO GENETIC TESTS FOR ENVIRONMENTAL MUTAGENS A REPORT OF THE
USA ENVIRONMENTAL PROTECTION AGENCY GENE-TOX PROGRAM (MUTAT RES
99(3), 257-272).

STUDY OF THE MUTAGENIC EFFECT OF SOME PESTICIDES ON THE DURUM
SPRING WHEAT (TSITOL GENET 12(3), 207-212).

INST MOL VIOL GENET KIEV

HORMONE INDUCED ENDOREDUPPLICATION PRIOR TO MITOSIS IN CULTURED PEA
ROOT CORTEX CELLS (AM J BOT 60, 293-299).

PHYTOTOXICITY OF 24D ON THE DEVELOPMENT OF ROOT STOCK OF TAIWAN
PAULOWNIA (KUO LI TAI-WAN TA HSUEH NUNG HSUEH YUAN YEN CHIU PAO KAO
16(2), 45-53).

RIN U

TAIWAN UNIV TAIWAN

MEIOTIC AND MORPHOLOGICAL RESPONSE OF GRAIN SORGHUM TO ATRAZINE,
24D, OIL, AND THEIR COMBINATIONS (WEED SCI 17, 8-12).

RUSS OG

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	688 ✓	00/00/71		1
AUTHOR:	LEFFLER HR		OBRIEN TJ	
ADDRESSEE:				
COPYEE:				
DOCUMENT	689 ✓	00/00/77		1
AUTHOR:	KULKARNI VS		PATIL VP	
ADDRESSEE:				
COPYEE:				
DOCUMENT	690 ✓	00/00/70		1
AUTHOR:	KULIKOV BN		EZERZHA AA	
ADDRESSEE:				
COPYEE:				
DOCUMENT	691 ✓	00/00/85		1
AUTHOR:	KHALATKAR AS		BHARGAVA YR	
ADDRESSEE:				
COPYEE:				
DOCUMENT	692 ✓	00/00/72		1
AUTHOR:	KERTESZ J		MOLNAR A	
ADDRESSEE:				
COPYEE:				
DOCUMENT	693 ✓	00/00/75		1
AUTHOR:	KAR S			
ADDRESSEE:				
COPYEE:				
DOCUMENT	694 ✓	00/00/71		1
AUTHOR:	KALLACK H		YARVEKYLO L	
ADDRESSEE:				
COPYEE:				

D. 41193

4097

TITLE

ENHANCED DEOXRIBONUCLEIC ACID POLYMERASE ACTIVITY OF CHROMATIN FROM
SOYBEAN HYPOCOTYLS TREATED WITH 24D (PLANT PHYSIOL 48,43-45).
GLOVER DV CHERRY JH

EFFECTS OF AGROCHEMICALS ON TETRAPLOID AND HEXAPLOID WHEATS
(BIOVIGYANAM 3, 161-169).
DEODIKAR GB

EFFECT OF 24D ON HEAT DENATURATION TEMPERATURE OF DNA AND
CHROMOSOME APPARATUS OF PLANT CELLS (TRANSLATED FROM FIZIOL RAST
17, 1205-1208).
OVCHINNIKOVA MI MOCHALKIN AI

MUTAGENIC EFFECTS OF 24D ALONE AND WITH ETHYL METHANESULFONATE IN
HORDEUM VULARE L (ENVIRON POLLUT SER A 38(1), 9-17).
NAGPUR UNIV NAGPUR

EFFECT OF THE SODIUM SALT OF 24D ON THE MITOTIC GROWTH OF YELLOW
CORN (ACTA BIOL(SZEGED) 18, 131-133).
HORVATH M

CYTOGENETIC EFFECTS OF 24D ON PISUM SATIVUM (PROC INDIAN SCI CONGR
62, 122).

ON THE CYTOGENETIC EFFECTS OF 24D ON PEA CALLUS IN CULTURE (ACTA
BIOL ACAD SCI HUNG 22, 67-73).

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	695 ✓	00/00/79		1
AUTHOR:	KALLAK H		JARVEKULG L	
ADDRESSEE:				
COPYEE:				
DOCUMENT	696 ✓	00/00/81		1
AUTHOR:	HARASHIMA S		OND K	
ADDRESSEE:				
COPYEE:				
DOCUMENT	697 ✓	00/00/72		1
AUTHOR:	GUO C			
ADDRESSEE:				
COPYEE:				
DOCUMENT	698 ✓	00/00/69		1
AUTHOR:	GUENTHER G		RIESS P	
ADDRESSEE:				
COPYEE:				
DOCUMENT	699 ✓	00/00/72		1
AUTHOR:	GRANT WF		MOHANDAS T	
ADDRESSEE:				
COPYEE:				
DOCUMENT	700 ✓	00/00/83		1
AUTHOR:	FURUYA T		YOSHIKAWA T	
ADDRESSEE:	KITASATO UNIV JAPAN			
COPYEE:				
DOCUMENT	701 ✓	00/00/78		1
AUTHOR:	EHRENBERG L		STOCKHOM UNIV SWEDEN	
ADDRESSEE:				
COPYEE:				

4194

4098

TITLE

CULTURE OF PLANT TISSUES AS MODEL FOR MUTAGENICITY TESTING OF
HERBICIDES (TARTU RIIKLIKU ULIK TOIM 499, 30-47).
VAPPER M

ESTABLISHMENT OF HAPLOID, DIPLOID AND MIXOPLOID CELL LINES FROM
ISOLATED MICROSPORE CUTURES IN PEONY (JPN J GENET(IDENGAKU ZASSHI)
56,596).

EFFECTS OF CHEMICAL AND PHYSICAL FACTORS ON THE CHROMOSOME NUMBER
IN NICOTIAMA ANTHR CALLUS CULTURES (IN VITRO 7, 381-386).

INFLUENCE OF 24D ON THE NUCLEIC ACID METABOLISM OF BEAN PLANTS
(ABST XI INT BOT CONGR 80).

CYTOGENETIC EFFECTS OF 24D AND AMITROLE IN RELATION TO NUCLEAR
VOLUME AND DNA CONTENT IN SOME HIGHER PLANTS (CAN J GENET CYTOL
14(4), 773-783).

STUDIES ON PLANT TISSUE CULTURES. PART 37. EFFECTS OF AUXINS ON
GROWTH AND SAPONIN PRODUCTION IN CALLUS CULTURES OF PANAX GINSENG
(PLANTA MED 47(3), 183-187).
ISHII T KAJII K

GENETIC EFFECTS OF CHLOROPHENOXY ALKANOIC ACIDS ON PLANTS (ECOL
BULL 27, 186-189).

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	702 ✓	00/00/73		1
AUTHOR: DEV K				
ADDRESSEE:				
COPYEE:				
DOCUMENT	703 ✓	00/00/77		1
AUTHOR: DAS B			SINGH PK	
ADDRESSEE:				
COPYEE:				
DOCUMENT	704 ✓	00/00/75		1
AUTHOR: BUTCHER DN			SOGKEKE AK	
ADDRESSEE:				
COPYEE:				
DOCUMENT	705 ✓	00/00/75		1
AUTHOR: BAYLISS MW				
ADDRESSEE:				
COPYEE:				
DOCUMENT	706 ✓	00/00/77		1
AUTHOR: BAYLISS MW				
ADDRESSEE:				
COPYEE:				
DOCUMENT	707 ✓	00/00/83		1
AUTHOR: AMIROVA FD			ALIEV AA	
INST BOT IM KOMAROVA BAK				
ADDRESSEE:				
COPYEE:				
DOCUMENT	708 ✓	00/00/74		1
AUTHOR: AMER SM			ALI EM	
ADDRESSEE:				
COPYEE:				

4195

4099

TITLE

EFFECTS OF SOME HERBICIDES ON THE STURCTURE AND BEHAVIOR OF PLANT CHROMOSOMES (PROC INDIAN SCI CONGR 60, 308).

MUTAGENICITY OF PESTICIDES IN BLUE GREEN ALGAE (MICROBIOS LETT 19-20, 103-107).
RICE RES INST CUTTACK IN

FACTORS INFLUENCING CHANGES IN PLIODY AND NUCLEAR DNA LEVELS IN CELLS FROM NORMAL, CROWN-GALL AND HABITUATED CULTURES OF HELIANTHUS ANNUUS L).
TOMMERUP IC

EFFECTS OF GROWTH IN VITRO ON THE CHROMOSOME COMPLEMENT OF DAUCUS CAROTA SUSPENSION CULTURES (CHROMOSOMA 51, 401-411).

EFFECTS OF 24D ON GROWTH AND MITOSIS IN SUSPENSION CULTURES OF DAUCUS CAROTA (PLANT SCI LETT 8, 99-103).

EFFECT OF THE SYSTEMIC HERBICIDE 24D VALERIC ACID ETHYLENE GLYCOL MIXED ESTER ON CYTOGENETIC AND SOME PHYSIOLOGICAL PARAMETERS OF ALLIUM FISTULOSUM L. SEEDS (DEPOSITED DOC, ISS VINITI 3183-3183).
ARSHAVA EA IBRAGIMOV FI

CYTOLOGICAL EFFECTS OF PESTICIDES 5. EFFECTS OF SOME HERBICIDES ON VICIA FABA (CYTOLOGIA 39, 633-643).

NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT 709 ✓	00/00/82		1	CYTOLOGICAL EFFECTS OF HERBICIDES 1. EFFECT OF 24D AND 245T ON MEIOTIC CELLS OF WHEAT AND TWO RELATED SPECIES (CYTOLOGIA 47, 53-61).
AUTHOR: ALNAJJAR NR		SOLIMAN AS		
ADDRESSEE:				
COPYEE:				
DOCUMENT 710 ✓	00/00/72		1	DNA ANALYSIS OF AUXIN TREATED JERUSALEM ARTICHOKE TUBER TISSUE AS A SCREEN FOR THE EVALUATION OF SUBSTANCES INFLUENCING CELL DIVISION (PLANT GROWTH SUBST PROC INT CONT 7TH(1970), 428-434)
AUTHOR: ADAMSON D		HINDE R		KAMISAKA S
ADDRESSEE:				
COPYEE:				
DOCUMENT 711 ✓	00/00/75		2 ✓	AN INTERNATIONAL COMPARISON OF HYGIENIC STANDARDS FOR CHEMICALS IN THE WORK ENVIRONMENT (AMBIO 1975, 34-35).
AUTHOR: WINELL M				
ADDRESSEE:				
COPYEE:				
DOCUMENT 712 ✓	00/00/75		13 ✓	THE INFLUENCE OF NON CYTOTOXIC CONCENTRATIONS OF THE HERBICIDE 24D ON THE DNA SYSTHESIS IN CULTURED VERTEBRATE CELLS(ARCH TOXICOL 33, 84-102).
AUTHOR: HAAG D		GOERTTLER K		PREISS D UNIV HEIDELBERG TEILINST
ADDRESSEE:				
COPYEE:				
DOCUMENT 713 ✓	00/00/76		7 ✓	EMBRYOTROPIC EFFECT OF THE PRODUCTS FROM THE DECOMPOSITION OF HERBICIDES BASED ON 24D (EMBRIOTROPNOE DEISTVIE PRODUKTOV RAZLOZHENIYA GERBITS IDOV NAOSNOE 2,4-DIKLORFENOKSIUKSUSNOI KISLOTY)(TRANSLATED FROM RUSSIAN)(GIO I SANIT 11, 102-105).
AUTHOR: KOSNTANTINOVA TK		EFIMENKO LP		ANTONENKO TA MINISTRY OF HEALTH RSFSR
ADDRESSEE: RALPH MCELROY CO				
COPYEE:				
DOCUMENT 714 ✓	00/00/76		1 ✓	EFFECT OF 24D ON RABBIT DUODENUN (INDIAN J PHYSIOL PHARMACOL 20(3), 153-155)(PEST ABSTRACTS 78-1865).
AUTHOR: ANNA RM		FRANCIS CM		MED COLL TRIVANDRUM INDI
ADDRESSEE:				
COPYEE:				
DOCUMENT 715 ✓	00/00/76		3 ✓	EFFECT OF 24D ON RABBIT DUODENUM.
AUTHOR: AMMA RM		FRANCIS CM		MEDICAL COLLEGE TRIVANDR
ADDRESSEE:				
COPYEE:				

4100

7/196

NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT 716 ✓	00/00/76		1 ✓	EFFECT OF 24D ON THE ABSORPTION AND EXCRETION OF CHLOROCHOLINE CHLORIDE (CCC) IN RATS (ANN UNIV MARIAE CURIE SKŁODOWSKI SECT D 31(43), 333-338)(PEST ABSTRACTS 79-0617)
AUTHOR: REMANOWSKI H		ACAD MED LUBLIN POLAND		
ADDRESSEE:				
COPYEE:				
DOCUMENT 717 ✓	00/00/73		1 ✓	EFFECTS OF PHENOXYACETIC ACIDS ON RAT LIVER TISSUES (INCOMPLETE DOCUMENT).
AUTHOR: CHANG HC		RIP JW		CHERRY JH
ADDRESSEE:				
COPYEE:				
DOCUMENT 718 ✓	00/00/73		1 ✓	EFFECT OF 24D ON SEMICONSERVATIVE AND DNA REPAIR SYSTHESES. BULLOUS DERMATITIS AFTER EXPOSURE TO 24D (BER OESTERR STUDIENGES ATOMENERG SGAE BER 2218, 1-7).
AUTHOR: BALOBANGA MJ		ANTONI F		ALTMANN H
ADDRESSEE: KOCSIS F				VINCZE I
COPYEE:				
DOCUMENT 719 ✓	00/00/73		2 ✓	ILLEGIBLE - 24D AND 245T - ALBUMIN (ACTA PHARMACOL TOX 33, 470-471)(6348).
AUTHOR: KOLBERG J		ILLEGIBLE		
ADDRESSEE:				
COPYEE:				
DOCUMENT 720 ✓	00/00/74		1	HERBICIDE EXPOSURE, MORTALITY AND TUMOR INCIDENCE. AN EPIDEMIOLOGICAL INVESTIGATION ON SWEDISH RAILROAD WORKERS (WORK - ENVIRON - HEALTH 11(1), 21-28)(IND HYGIENE DIGEST, 21)(1005/74).
AUTHOR: AXELSON O		SUNDEIL L		
ADDRESSEE:				
COPYEE:				
DOCUMENT 721 ✓	00/00/74		1 ✓	EFFECT OF 24D ON SEMICONSERVATIVE - AND DNA - REPAIR SYSTHESIS. BULLOUS DERMATITIS AFTER EXPOSURE TO 24D (BER OSESTERR STUDIENGES ATOMENERG 1973, SGAE BER 2218, 1-7)(TOXICOLOGY 81, 79)(103075).
AUTHOR: BALOBANGA MJ		ANTONI F		ALTMANN H
ADDRESSEE: KOCSIS F				VINCZE I
COPYEE:				
DOCUMENT 722 ✓	00/00/74		5 ✓	CARCINOGENIC PROPERTIES OF HERBICIDE; 24D AMINE SALT (VOPROSY PITANIIA, MOSCOW 5, 83-84)(ORIGINAL ARTICLE AND TRANSLATION).
AUTHOR: ARKHIPOV GN		KOZLOVA IN		LIVAL J
ADDRESSEE:				
COPYEE:				

4101

4/97

NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT 723	00/00/00		2	P.03 NO. 980 (LIST OF TRANSLATIONS OF JOURNAL ARTICLES).
AUTHOR: ADDRESSEE: COPYEE:				
DOCUMENT 724	05/17/83		110	A RANGE FINDING TERATOLOGY STUDY IN FISCHER 344 RATS WITH 24D FINAL REPORT PROJECT NUMBER WIL-22002.
AUTHOR:	WIL RES LABS MERCIECA MD RODWELL DE	NEMEC MD SIGLER FW		KOPP SE KING SG LEIST PL TASKER EJ
ADDRESSEE: COPYEE:				
DOCUMENT 725	05/26/83		1	MEMORANDUM RE: A RANGE FINDING TERATOLOGY STUDY IN FISCHER 344 RATS WITH 24D.
AUTHOR:	CONNER JD JR	MCKENNA CONNER & CUNEO		
ADDRESSEE: COPYEE:				
DOCUMENT 726	09/12/83		103	SUBCHRONIC TOXICITY STUDY IN RATS 24D FINAL REPORT.
AUTHOR:	HAZLETON LABS MACHOTKA SV BURNS CJ	SNYDER FO DAWKINS BG		SEROTA DG ALSAKER RD BURDOCK GA HEPNER KE
ADDRESSEE: COPYEE:				
DOCUMENT 727	01/21/85		5	SUBCHRONIC TOXICITY IN RATS 24D ADDENDUM TO FINAL REPORT.
AUTHOR:	HAZLETON LABS	SEROTA DG		MACHOTKA SV
ADDRESSEE: COPYEE:				
DOCUMENT 728	09/12/83		80	SUBCHRONIC TOXICITY STUDY IN MICE 24D FINAL REPORT.
AUTHOR:	HAZLETON LABS MACHOTKA SV COLPEAN BR	SNYDER FO DAWKINS BG		SEROTA DG ALSAKER RD BURDOCK GA HEPNER KE
ADDRESSEE: COPYEE:				
DOCUMENT 729	10/14/80		18	DOSE LEVELS OF 24D IN FOREST WORKERS HET K-002372-(27).
AUTHOR:	RAMSEY JC BRAUN WH	SMITH FA DOW		LAVY TL PARK CN
ADDRESSEE: COPYEE:				

4198

4102

NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT 730 AUTHOR: INTL RES AND DEVELOPMENT MYER JR	10/09/81	BENSON BW JOHNSON DE	27	DETERMINATION OF ACUTE DERMAL LD50 IN RABBITS 24D TECHNICAL. MARROQUIN F RICHTER WR
ADDRESSEE: COPYEE:				
DOCUMENT 731 AUTHOR: INTL RES AND DEVELOPMENT MYER JR	10/09/81	URIAH LC JOHNSON DE	30	DETERMINATION OF ACUTE ORAL LD50 IN FISCHER 344 RATS 24D TECHNICAL. RICHTER WR BENSON BW
ADDRESSEE: COPYEE:				
DOCUMENT 732 AUTHOR: WIL RES LAB ADDRESSEE: COPYEE:	03/02/83		177	A TERATOLOGY STUDY IN FISCHER 344 RATS WITH 24D FINAL REPORT PROJECT NUMBER WIL-81135.
DOCUMENT 733 AUTHOR: ADAMS EM ADDRESSEE: COPYEE:	06/09/48	IRISH DD	2	TOXICOLOGY AND HYGIENE; 24D T23.14-11-19. DOW
DOCUMENT 734 AUTHOR: ONTARIO HYDRO WATSON DA ADDRESSEE: COPYEE:	01/00/81	LIBICH S	34	A STUDY TO ASSESS THE OCCUPATIONAL EXPOSURE TO 24D HERBICIDES REPORT SSD-81-1. TO JC WONG KY
DOCUMENT 735 AUTHOR: WIKLUND K ADDRESSEE: COPYEE:	02/00/86	HOLM LE	7	SOFT TISSUE SARCOMA RISK IN SWEDISH AGRICULTURAL AND FORESTRY WORKERS (JOUR OF THE NATL CANCER INST 76(2), 229-234). KAROLINSKA HOSPITAL AND
DOCUMENT 736 AUTHOR: RIVAROLA VA ADDRESSEE: COPYEE:	00/00/85	BERGESSE JR	9	DNA AND PROTEIN SYSTHESIS INHIBITION IN CHINESE HAMSTER OVARY CELLS BY DICHLOROPHENOXYACETIC ACID (TOXICOLOGY LETTERS 29, 137-144). BALEGNO HF UNIV NACIONAL DE RIO CUA
DOCUMENT 737 AUTHOR: SARGENT M ILLEGIBLE ADDRESSEE: COPYEE:	00/00/00	BLAZEK D PURDUE UNIV	1	THE TOXICITY OF 24D AND PICLORAM HERBICIDES TO FISH. ELDER JH MORRE DJ

4103

D-4199

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	738	02/26/86		10
AUTHOR:	WALL JM		RAO KS	
ADDRESSEE:				
COPYEE:				
DOCUMENT	739	00/00/85		7
AUTHOR:	ANTONENKO TA		ERMOLOV VI	
ADDRESSEE:				
COPYEE:				
DOCUMENT	740	06/25/47		2
AUTHOR:	ADAMS DW		ROWE VK	
ADDRESSEE:				
COPYEE:				
DOCUMENT	741	10/19/44		1
AUTHOR:	DUNN EC		ROWE VK	
ADDRESSEE:				
COPYEE:				
DOCUMENT	742	00/00/00		6
AUTHOR:	ROWE VK		MCCOLLISTER DD	
ADDRESSEE:				
COPYEE:				
DOCUMENT	743	06/12/47		17
AUTHOR:	ROWE VK		ADAMS EW	
ADDRESSEE:				
COPYEE:				
DOCUMENT	744	06/25/47		2
AUTHOR:	ADAMS EW		ROWE VK	
ADDRESSEE:				
COPYEE:				
DOCUMENT	745	08/31/50		2
AUTHOR:	ROWE VK		SPENCER H	
ADDRESSEE:				
COPYEE:				

4104

4206

TITLE

24D ACID: ACUTE TOXICOLOGIC PROPERTIES HET K-002372-043 P.
(INCLUDES DATA SHEETS ON ACUTE ORAL TOXICITY, EYE IRRITATION TEST,
AND SKIN IRRITATION TESTS).
DOW

CERTAIN ASPECTS OF THE MECHANISM OF EMBRYOTROPIC EFFECTS OF 24D
(GIGIENA I SANITARIA 10, 76-77)(ORIGINAL ARTICLE AND TRANSLATION).
KONSTATINOVA TK MINISTRY OF HEALTH OF RS

RANGE FINDING TOXICOLOGICAL TESTS ON CHICKENS WITH 24D T23.14-11-1.
DOW

PRELIMINARY INFORMATION RELATIVE TO THE TOXICITY OF 24D (K2372-3)
T23.14-11-1.
DOW

ACUTE ORAL TOXICITY OF 24D TO RATS, MICE, GUINEA PIGS AND CHICKS
(INCLUDES HANDWRITTEN NOTES).
SPENCER HC DOW

THE TOXICOLOGICAL PROPERTIES OF 24D AND ITS SODIUM AND ALKANOLAMINE
SALTS, AS REVEALED BY EXPERIMENTS UPON LABORATORY ANIMALS
T23.14-11-1.
DOW

RANGE FINDING TOXICOLOGICAL TESTS ON CHICKENS WITH 24D T23.14-11-1.
DOW

RESULTS OF SEMICHRONIC ORAL TOXICITY STUDIES ON 24D T23.14-11-1.
DOW

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	746 ✓	04/11/50		1
AUTHOR:	WHITE LC		DOW	
ADDRESSEE:				
COPYEE:				
DOCUMENT	747 ✓	04/15/51		1 ✓
AUTHOR:	MCCOLLISTER DD		HES	
ADDRESSEE:				
COPYEE:				
DOCUMENT	748 ✓	10/11/50		4 ✓
AUTHOR:	ADAMS IH		ROWE VK	
ADDRESSEE:				
COPYEE:				
DOCUMENT	749 ✓	00/00/70		1 ✓
AUTHOR:	COPE OB		WOOD EM	
ADDRESSEE:				
COPYEE:				
DOCUMENT	750 ✓	07/00/74		4 ✓
AUTHOR:	BURTON JA		GARDINER TH	
ADDRESSEE:				
COPYEE:				
DOCUMENT	751 ✓	11/00/82		2 ✓
AUTHOR:	EPA			
ADDRESSEE:				
COPYEE:				
DOCUMENT	752 ✓	10/00/82		4 ✓
AUTHOR:	EPA			
ADDRESSEE:				
COPYEE:				
DOCUMENT	753 ✓	01/23/81		2 ✓
AUTHOR:				
ADDRESSEE:				
COPYEE:				

D.4201

4105

TITLE

245T ACID.

24D REQUEST FOR BIOLOGICAL TEST
RGH DOW

RESULTS OF SKIN IRRITATION AND SKIN SENSITIZATION TESTS CONDUCTED
ON HUMAN SUBJECTS WITH OLD AND NEW PREPARATIONS OF 24D T23.14-11-6.
DOW

SOME CHRONIC EFFECTS OF 24D ON THE BLUEGILL (ILLEGIBLE) (TOX AND
PHARMACOLOGY, 229).
WALLEN GH BUR OF SPORT FISHERIES A

ABSORPTION OF HERBICIDES FROM THE RAT LUNG (ARCH ENVIRON HEALTH 29,
31-33).
SCHANKER LS UNIV OF MO KANSAS CITY

24D FACT SHEET.

24D FACT SHEET.

FACT SHEET ON 24D.

NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT 754 ✓	04/22/80		9 ✓	24D FACT SHEET.
AUTHOR: ADDRESSEE: COPYEE:				
DOCUMENT 755 ✓	09/00/84		11 ✓	COMMENTS ON THE IMPROBABILITY OF 24D AS A CAUSE OF PERIPHERAL NEUROPATHY.
AUTHOR: ADDRESSEE: COPYEE:				
DOCUMENT 756 ✓	00/00/77		12 ✓	PHARMACOKINETIC STUDY OF A PATIENT INTOXICATED WITH 24D AND 2-METHOXY-3,6-DICHLOROBENZOIC ACID (CLINICAL TOX 11(3), 489-500). HEW
AUTHOR: YOUNG JF		HALEY TJ		
ADDRESSEE: COPYEE:				
DOCUMENT 757 ✓	04/00/72		1 ✓	A METHOD FOR DETERMINATION OF LOW LEVELS OF EXPOSURE TO 24D AND 245T (ILLEGIBLE)(HEALTH ASPECTS OF PESTICIDES ABSTRACT BULLETIN 5(4), 192)(72-0845).
AUTHOR: ILLEGIBLE ADDRESSEE: COPYEE:				
DOCUMENT 758 ✓	04/00/72		2 ✓	ECOLOGICAL EFFECTS OF THE WAR IN VIETNAM (ILLEGIBLE)(HEALTH ASPECTS OF PESTICIDES ABSTRACT BULLETIN 5(4), 169)(72-0743).
AUTHOR: ANONYMOUS ADDRESSEE: COPYEE:				
DOCUMENT 759 ✓	03/00/82		5 ✓	PHENOXY ACID HERBICIDES CAUSE PEROXISOME PROLIFERATION IN CHINESE HAMSTERS (SCAND J WORK ENVIRON HEALTH 8, 70-73). LINNAINMAA K INST OF OCCUPATIONAL HEA
AUTHOR: VAINIO H		NICKELS J		
ADDRESSEE: COPYEE:				
DOCUMENT 760 ✓	00/00/76		1 ✓	EFFECTS OF 24D (SODIUM SALT) ON REPRODUCTIVE PROCESSES IN MICE (NUOVE ANN IS MICROBIOL 27(6), 569-584). CORRADINI L MARCATI F
AUTHOR: CENCI P		CAVAZZINI G		
ADDRESSEE: UNIV OF FERRARA ITALY COPYEE:				

D.4262

4106

NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT 761	01/00/64		5	ANIMAL METABOLISM OF HERBICIDES THE FATE OF 24D IN SHEEP(AQ AND FOOD CHEMISTRY 12(1), 43-45).
AUTHOR:	CLARK DE	YOUNG JE		
ADDRESSEE:	MCLARAN JK	USDA		HUNT LM
COPYEE:				
DOCUMENT 762	12/09/80		34	PHARMACOKINETICS OF 24D IN FISCHER 344 RATS HET K-002372-(24).
AUTHOR:	SMITH FA	HERMANN EA		RAMSEY JC
ADDRESSEE:	DOW			BRAUN WH
COPYEE:				
DOCUMENT 763	01/31/59		20	CYTOSTATIC EFFECT OF CERTAIN AUXINS PRELIMINARY REPORT(ACTION CYTOSTATIQUE DE CERTAINES AUXINES)(LA PRESSE MEDICALE 67(6), 207-209)(ORIGINAL ARTICLE AND TRANSLATION).
AUTHOR:	APFFEL CA			
ADDRESSEE:				
COPYEE:				
DOCUMENT 764	11/07/59		4	PERIPHERAL NEUROPATHY AFTER EXPOSURE TO AN ESTER OF DICHLOROPHENOXYACETIC ACID (JOUR AM MEDICAL ASSOC 171, 1306-1309).
AUTHOR:	GOLDSTEIN NP	JONES PH		
ADDRESSEE:	MAYO FOUNDATION	UNIV OF MN		BROWN JR
COPYEE:				MAYO CLINIC
DOCUMENT 765	00/00/00		1	THE FOLLOWING IS A REPORT ON ODOR AND TASTE THRESHOLDS AS REQUESTED.
AUTHOR:				
ADDRESSEE:				
COPYEE:				
DOCUMENT 766	09/00/72		2	THE TOXICITY OF 24D AND PICLORAM HERBICIDES TO FISH (PROC INDIANA ACAD SCI, 114-123)(HEALTH ASPECTS OF PESTICIDES ABSTRACT BULLETIN 5(9),453)(72-1950).
AUTHOR:	SARGEANT M	BLAZEK D		
ADDRESSEE:	ILLEGIBLE	PURDUE UNIV		ELDER JH
COPYEE:				MOTTE DJ
DOCUMENT 767	00/00/76		1	EMBRYOTOXIC EFFECT OF HERBICIDES - CHLORINE DERIVATIVES OF PHENOXY ACIDS (ZDRAVOOKHR GELORUSS (10), 83-84)(PESTICIDES ABSTRACTS 78-2207).
AUTHOR:	BUSLOVICH SY	ALEKSASHINA ZA		
ADDRESSEE:				KOLOSOVSKAYA VM
COPYEE:				

D.4203

4107

NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT 768	08/31/50		10	INTERIM REPORT ON THE ACUTE AND SUBACUTE ORAL TOXICITY OF 24D FOR DOGS T23.14-11-5. SPENCER AC
AUTHOR:	DRILL VA	WAYNE UNIV		ROWE VK
ADDRESSEE:	DOW			
COPYEE:				
DOCUMENT 769	11/07/59		4	PERIPHERAL NEUROPATHY AFTER EXPOSURE TO AN ESTER OF DICHLOROPHENOXYACETIC ACID(JOUR OF AM MEDICAL ASSOC 171, 1306-1309). BROWN JR
AUTHOR:	GOLDSTEIN NP	JONES PH		MAYO CLINC
ADDRESSEE:	MAYO FOUNDATION	UNIV OF MN		
COPYEE:				
DOCUMENT 770	07/00/81		104	THE HEALTH EFFECTS OF HERBICIDE 245T, A REPORT BY THE AMERICAN COUNCIL ON SCIENCE AND HEALTH.
AUTHOR:	AM COUNCIL ON SCIENCE AN			
ADDRESSEE:				
COPYEE:				
DOCUMENT 771	00/00/70		1	THE EFFECTS OF 245T AND RELATED HERBICIDES ON MAN AND THE ENVIRNMENT (ILLEGIBLE)(4246)
AUTHOR:	COMMITTEE ON COMMERCE			
ADDRESSEE:				
COPYEE:				
DOCUMENT 772	00/00/71		1	HERBICIDES 'SECRET' 245T REPORT (CHEM ENG NEWS 49(29), 15).
AUTHOR:	ANONYMOUS			
ADDRESSEE:				
COPYEE:				
DOCUMENT 773	00/00/72		1	THE PROBLEM OF USING 245T (ANZ SCHAEDELINGSK PFLANZENSCHUTZ 45(1), 2-6)(CHEMICAL ABSTRACT 77, 134)(15071N).
AUTHOR:	MAIERBODE H	FRIEDRICHWILHELMS UNIV G		
ADDRESSEE:				
COPYEE:				
DOCUMENT 774	00/00/72		1	NO HERBICIDE RESIDUES IN MEAT (AGR RES - ILLEGIBLE)(TOX AND PHARMACOLOGY, 553).
AUTHOR:	ANONYMOUS			
ADDRESSEE:				
COPYEE:				

D.4204

4108

NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT 775 ✓	00/00/72		1 ✓	METABOLISM OF 245T IN RATS (TOXICOL APPL PHARMACOL 22(2), 317)(TOX AND PHARMACOLOGY, 272). GEHRING PJ DOW
AUTHOR: PIPER WN		ROSE JQ		
ADDRESSEE:				
COPYEE:				
DOCUMENT 776 ✓	03/00/76		1 ✓	THE 245T QUESTION (2776)(ANZ SCHAE DLINGSKD PFLANZEN SCHUTZ 45(1), 2-6)(BIOSIS ABSTRACTS OF ENVIRONMENTAL POLLUTANTS 5(3)).
AUTHOR: MAIERBODE H		FRIEDRICHWILLHELMS UNIV		
ADDRESSEE:				
COPYEE:				
DOCUMENT 777 ✓	00/00/00		1 ✓	NON-TERATOGENICITY OF 245T IN MONKEYS (MUCACA MULATTA) (ABSTRACTS: TWELFTH ANNUAL MEETING, 442). ILLEGIBLE
AUTHOR: DOUGHERTY WH		GOLDBERG L		
ADDRESSEE:				
COPYEE:				
DOCUMENT 778 ✓	00/00/72		1 ✓	SEX DEPENDENT EFFECTS OF PRENATAL 245T ON RATS OPEN FIELD BEHAVIOR (PHYSIOL BEHAV 9(3), 357-360)(132486H). ULLERAKER HOSPITAL SWEDEN
AUTHOR: SJODEN PO		SODERBERG U		
ADDRESSEE:				
COPYEE:				
DOCUMENT 779 ✓	00/00/72		1 ✓	THE PROBLEM OF USING 245T (ANZ SCHAE DLINGSKD PFLANZEN SCHUTZ 45(1), 2-6)(15071N).
AUTHOR: MAIERBODE H		FRIEDRICHWILHELMS UNIV G		
ADDRESSEE:				
COPYEE:				
DOCUMENT 780 ✓	00/00/72		1 ✓	THE EFFECT OF THE HERBICIDE 245T ON WHITE RATS DURING - ILLEGIBLE (ANN INST PHYTOPATHOL BENAKI).
AUTHOR: FYTIZAS DANIELIDOU R		INST PHYTOPATHOL ATHENS		
ADDRESSEE:				
COPYEE:				
DOCUMENT 781 ✓	00/00/00		1 ✓	INCOMPLETE DOCUMENT
AUTHOR:				
ADDRESSEE:				
COPYEE:				
DOCUMENT 782 ✓	00/00/71		1 ✓	TERATOLOGY STUDIES WITH THE TRICHLOROPHENOXYACID HERBICIDES, 245T AND SILVEX (TERATOLOGY 4, 236). NATL INST OF ENVIRON HEA
AUTHOR: MOORE JA		COURTNEY KD		
ADDRESSEE:				
COPYEE:				

4109

D.4205

	NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT	783 ✓	00/00/71		1 ✓	TERATOGENIC STUDIES WITH 245T AND 24D IN THE HAMSTER (BULL ENVIRON CONTAM TOXICOL, 559-567)(TOX AND PHARMACOLOGY, 76).
AUTHOR:	COLLINS IF		WILLIAMS CH		FDA
ADDRESSEE:					
COPYEE:					
DOCUMENT	784 ✓	00/00/00		1 ✓	245T QUESTION (ILLEGIBLE).
AUTHOR:	ILLEGIBLE				
ADDRESSEE:					
COPYEE:					
DOCUMENT	785 ✓	00/00/71		1 ✓	CYTOGENIC EFFECTS OF 245T ON OOGENESIS AND EARLY EMBRYOGENESIS (TOX AND PHARMACOLOGY, 28)(ILLEGIBLE).
AUTHOR:	ILLEGIBLE				
ADDRESSEE:					
COPYEE:					
DOCUMENT	786 ✓	00/00/00		2 ✓	ILLEGIBLE.
AUTHOR:	ILLEGIBLE				
ADDRESSEE:					
COPYEE:					
DOCUMENT	787 ✓	00/00/71		1 ✓	TOXICITY OF AIRPLANE APPLICATIONS OF 24D, 245T AND A COTTON DESSICANT TO COLONIES OF HONEY BEES (ILLEGIBLE).
AUTHOR:	MOFFETT JO		ILLEGIBLE		
ADDRESSEE:					
COPYEE:					
DOCUMENT	788 ✓	00/00/71		1 ✓	MORE ABOUT 245T - RESIDUAL ASPECTS OF 245T AND AN ESTER IN SHEEP AND CATTLE WITH OBSERVATIONS ON --- TOXICOLOGICAL EFFECTS (J AG FOOD CHEM 19(76).
AUTHOR:	CLARK DL		PALMER JS		
ADDRESSEE:					
COPYEE:					
DOCUMENT	789 ✓	00/00/71		1 ✓	BUT 245T IN THE - ILLEGIBLE - (PHARMA 20, 556).
AUTHOR:	COURTNEY KD		MOORE JA		
ADDRESSEE:					
COPYEE:					
DOCUMENT	790 ✓	00/00/00		1 ✓	RENAL EXCRETION OF 245T IN THE RAT(RENALE AUSSCHIEDUNG VON 245T BEI RATTEN) --- ILLEGIBLE.
AUTHOR:	ILLEGIBLE				
ADDRESSEE:					
COPYEE:					

4110

D-1206

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	791 ✓	00/00/00		1 ✓
AUTHOR: ILLEGIBLE				
ADDRESSEE:				
COPYEE:				
DOCUMENT	792 ✓	00/00/73		1 ✓
AUTHOR: SOKOLIK IY			INST EXP MED ACAD ME	
ADDRESSEE:				
COPYEE:				
DOCUMENT	793 ✓	00/00/73		2 ✓
AUTHOR: KOLBERG J			HELGELAND K	
ADDRESSEE:				
COPYEE:				
DOCUMENT	794 ✓	00/00/00		1 ✓
AUTHOR: ILLEGIBLE				
ADDRESSEE:				
COPYEE:				
DOCUMENT	795 ✓	00/00/71		1 ✓
AUTHOR: PALMER JS				
ADDRESSEE:				
COPYEE:				
DOCUMENT	796 ✓	03/00/77		1 ✓
AUTHOR: KOSCHIER IJ			BERNDT WO	
ADDRESSEE:				
COPYEE:				
DOCUMENT	797 ✓	02/00/81		24 ✓
AUTHOR: BECK SL			WHEATON COLLEGE	
ADDRESSEE:				
COPYEE:				

①-4267

4111

TITLE

 DIFFICULTY OF EVALUATING THE TOXICITY AND TERATOGENICITY OF 245T
 FROM EXISTING ANIMAL EXPERIMENTS --- ILLEGIBLE.

THE EFFECT OF 245T AND ITS BUTYL ESTER ON RAT EMBRYOGENESIS (BYULL
 EKSP BIL MFD 76(7), 90-93)(6146).
 D SC

BINDING OF 24D AND 245T IN BOVINE SERUM ALBUMIN (ACTA PHARMACOL
 TOXICOL 33(5,6), 470-475)(6348).
 JONSEN J UNIV OSLO

ILLEGIBLE

ASPECTS OF 245T AND AN ESTER IN SHEEP AND -ILLEGIBLE- TO
 TOXICOLGICAL EFFECTS (J AG FOOD CHEM 19(4), 761)(PLANT GROWTH
 REGULATORS 25).

STUDIES ON THE MECHANISM C4 RENAL TRANSPORT DEPRESSION CAUSED BY
 PRETREATMENT WITH 245T (J TOX ENVIRON HEALTH 2, 323-334)(IND
 HYGIENE DIGEST, 15).

ASSESSMENT OF ADULT SKELETONS TO DETECT PRENATAL EXPOSURE TO 245T
 OR TRIFLURALIN IN MICE (TERATOLOGY 23(1), 33-55).

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	798 ✓	00/00/81		1 ✓
AUTHOR:	HANIFY JA		METCALF P	
ADDRESSEE:				
COPYEE:				
DOCUMENT	799 ✓	09/00/81		14 ✓
AUTHOR:	COURTNEY KD		EBRON MT	
ADDRESSEE:				
COPYEE:				
DOCUMENT	800 ✓	09/00/81		12 ✓
AUTHOR:	COURTNEY KD		EBRON MT	
ADDRESSEE:				
COPYEE:				
DOCUMENT	801 ✓	00/00/82		8 ✓
AUTHOR:	EATON DL		UNIV OF WA	
ADDRESSEE:				
COPYEE:				
DOCUMENT	802 ✓	00/00/82		1 ✓
AUTHOR:	ILLEGIBLE			
ADDRESSEE:				
COPYEE:				
DOCUMENT	803 ✓	12/00/82		2 ✓
AUTHOR:	ERIKSSON M		HARDELL L	
ADDRESSEE:	AXELSON O			
COPYEE:				
DOCUMENT	804 ✓	06/00/84		6 ✓
AUTHOR:	RASHID KA		BABISH JG	
ADDRESSEE:	CORNELL UNIV			
COPYEE:				

D.4208

4112

TITLE

 AERIAL SPRAYING OF 245T AND HUMAN BIRTH MALFORMATIONS; AN
 EPIDEMIOLOGICAL INVESTIGATION (PROFILE ID 11467T).
 NOBBS CL WORSLEY KJ

245T EFFECTS ON CARDIAC AND SERUM LACTIC DEHYDROGENASE (LDH) AND
 CREATINE KINASE (CK) ISOZYMES II. NEONATAL ENZYME ACTIVITIES AND
 ISOZYME PROFILES (ARCH ENVIRON CONTAM TOX 10, 583-595).
 EPA

245T EFFECTS ON CARDIAC AND SERUM LACTIC DEHYDROGENASE (LDH) AND
 CREATINE KINASE (CK) ISOZYMES I. MATERNAL ENZYME ACTIVITIES AND
 ISOZYME PROFILES (ARCH ENVIRON CONTAM TOX 10, 571-581).
 EPA

BILIARY EXCRETION OF 245T IN THE RAT (TOX LETTERS 14, 175-181).

ILLEGIBLE (PROC UNIV OTAGO MED SCH 60(2) 31-32).

ANOTHER LOOK AT THE CARCINOGENICITY OF 245T SOFT TISSUE SARCOMAS
 AND EXPOSURE TO CHEMICAL SUBSTANCES; A CASE REFERENT STUDY (BR J
 IND MED 38(27))(ABSTRACTS AND COMMENTS FOOD AND CHEM TOX 20(6),
 973).
 BERG NO MOLLER T

TESTING OF 245T-AMINO ACID CONJUGATES FOR MUTAGENIC ACTIVITY IN
 SALMONELLA TYPHIMURIUM STRAINS (MUTATION RESEARCH 136(3), 217-221).
 MUMMA RO PA ST UNIV

NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT 805 ✓	06/00/85		1 ✓	245T PHARMACOKINETICS IN PREGNANT AND NONPREGNANT CD-1 MICE (TERATOLOGY 31(3))(ABSTRACTS THE TERATOLOGY SOCIETY 25TH ANNUAL MEETING). LEAMONS ML NELSON CJ
AUTHOR: BAZARE JJ		YOUNG JF		
ADDRESSEE: NATL CENTER FOR TOX RES				
COPYEE:				
DOCUMENT 806 ✓	09/00/84		1 ✓	STUDY OF HEALTH EFFECTS OF HERBICIDES IN HIGHWAY MAINTENANCE WORKERS (DISSERTATION ABSTRACTS INTERNATIONAL 45(3)).
AUTHOR: KOVASZNAV BM		JOHNS HOPKINS UNIV		
ADDRESSEE:				
COPYEE:				
DOCUMENT 807 ✓	00/00/81		8 ✓	PHARMACOKINETICS OF 245T PGDE ESTER APPLIED DERMALLY TO RATS (JOUR OF TOX AND ENVIORN HEALTH 8, 401-408). BRAUN WH DOW
AUTHOR: YOUNG JD		RAMSEY JC		
ADDRESSEE:				
COPYEE:				
DOCUMENT 808 ✓	05/28/71		2 ✓	PSAC HICCOUGHS OVER 245T - NEW WORLD (NATURE 231, 210-211).
AUTHOR:				
ADDRESSEE:				
COPYEE:				
DOCUMENT 809 ✓	00/00/73		1 ✓	SEX DEPENDENT EFFECTS OF PRENATAL 245T ON RATS OPEN FIELD BEHAVIOR (PHYSIOL BEHAV 9(3), 357-360)(TOXICOLOY 78) 132486H. ULLERAKER HOPSITAL SWEDE
AUTHOR: SJODEN PO		SODERBERG U		
ADDRESSEE:				
COPYEE:				
DOCUMENT 810 ✓	00/00/82		24 ✓	REVIEW OF STUDIES WITH 245T IN HUMANS INCLUDING APPLICATORS UNDER FIELD CONDITIONS (ACS SYMPOSIUM SERIES, NO 182 PESTICIDE RESIDUES AND EXPOSURE). BRAUN WH DOW
AUTHOR: LENG ML		RAMSEY JC		
ADDRESSEE: LAVY TL		UNIV OF AR		
COPYEE:				
DOCUMENT 811 ✓	01/00/80		8 ✓	FIELD WORKER EXPOSURE AND HELICOPTER SPRAY PATTERN OF 245T (BULL ENVIRON CONTAM TOXICOL 24, 90-06). BOUCHARD DC UNIV OF AR
AUTHOR: LAVY TL		SHEPARD JS		
ADDRESSEE:				
COPYEE:				

D-4209

4113

NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT 812 AUTHOR: Kligman AM ADDRESSEE: ROWE VK COPYEE:	08/22/67	LETTER UNIV OF PA DOW	1 ✓	TIME SCHEDULE FOR PROGRESS REPORT ON ACNEGENS STUDY CTTL.
DOCUMENT 813 AUTHOR: ROWE VK ADDRESSEE: Kligman AM COPYEE: ROWE VK	08/09/67	LETTER DOW UNIV OF PA	1 ✓	INVITATION TO PRESENT ON WORK DONE WITH ACNEGENS CTTL.
DOCUMENT 814 AUTHOR: DOW ADDRESSEE: ROWE VK COPYEE:	07/08/66	LETTER Kligman AM	1 ✓	COVERLETTER FOR SUPPLEMENTING DATA SUBMITTED BY DR KLIGMAN ON TCDD STUDY CTTL. UNIV OF PA ALLEN AF
DOCUMENT 815 AUTHOR: ALLEN AF ADDRESSEE: ROWE VK COPYEE:	06/22/66	LETTER Kligman DOW	1 ✓	CONCERNS DATA COLLECTED IN STUDY CTTL. UNIV OF PA
DOCUMENT 816 AUTHOR: Kligman AM ADDRESSEE: ROWE VK COPYEE:	05/31/66	LETTER UNIV OF PA DOW	1 ✓	TCDD STUDY CTTL.
DOCUMENT 817 AUTHOR: DOW ADDRESSEE: HOSPITAL OF THE UNIV OF COPYEE: DOW HOYLE HR	07/09/65	LETTER ROWE VK Kligman AM ROWE VK KRAMER	2 ✓	COMMUNICATION ON SUGGESTED PROTOCOL FOR TCDD STUDIES ON HUMAN SUBJECTS CTTL. GORDON HL PETERSON JE HOLDER BB SILVERSTEIN L
DOCUMENT 818 AUTHOR: DOW ADDRESSEE: COPYEE:	07/08/65	REPORT ROWE VK	1 ✓	DIBENZO-P-DIOXIN 2378-TETRACHLORO REQUEST FOR SCREENING OR APPLICATION TESTING.
DOCUMENT 819 AUTHOR: Kligman AM ADDRESSEE: DOW COPYEE:	01/23/68	LETTER UNIV OF PA ROWE VK	2 ✓	RECAP OF KLIGMAN TESTS OF TCDD ON HUMAN SUBJECTS CTTL.

D-4210

4114

NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT 820	00/00/65	NEWS	11	FATAL POISONING IN MAN BY 24D DETERMINATION OF THE AGENT IN FORENSIC MATERIALS (ACTA PHARMACOL ET TOX 22, 224-234).
AUTHOR:	NIELSEN K	REPORT		JENSENHOLM J
ADDRESSEE:	UNIV OF COPENHAGEN	KAEMPE B		UNIV OF AARHUS
COPYEE:				
DOCUMENT 821	00/00/00	LEGAL	3	WEED SCIENCE SOCIETY OF AMERICA PROPOSED RESOLUTION NO.1 EPA ACTION REGARDING RESGISTRATION CANCELLATION HEARINGS ON 245T AND SILVEX.
AUTHOR:				
ADDRESSEE:				
COPYEE:	ADMINISTRATOR AG MARKETI	ADMINISTRATOR APHIS		ADMINISTRATOR VET ADMIN
	CHAIRMAN HOUSE APPROPRIA	CHAIRMAN SENATE AG&FORES		CHAIRMAN HOUSE AG COMM
	DEPUTY DIRECTOR SEA CR	DEPUTY DIRECTOR SEA E		DEPUTY DIRECTOR SEA AR
	DIRECTOR SEA	EMBASSIES OF COUNTRIES M		DIRECTOR OF EACH ST DEPT
	PRESIDENT AM SEED TRADE	SECRETARY AG		EPA
				STUART EIZENSTAT PRESIDE
DOCUMENT 822	08/16/78	LETTER	1	
AUTHOR:	CROSBY DG	UC DAVIS		
ADDRESSEE:	BLAIR EH	DOW		
COPYEE:				
DOCUMENT 823	10/13/82	NEWS	1	HERBICIDE NOT LINKED TO BOY'S DEATH (TUSCALOOSA NEWS).
AUTHOR:	HEINE M	TUSCALOOSA NEWS		
ADDRESSEE:				
COPYEE:				
DOCUMENT 824	10/20/82	REPORT	3	RANDALL CEPHUS SAMPLES (R17038, R17039, R17040) (PRELIMINARY REPORT 821014)(FINAL REPORT 821014).
AUTHOR:	MORGAN PE II	DEPT OF AG & IND AL		
ADDRESSEE:	MCDUFFIE JR	DEPT OF AG & IND AL		
COPYEE:	BLOCH JA	VANPRUITT		AUBURN UNIV
DOCUMENT 825	00/00/00	MEMO	1	RIGHT-OF-WAY MAINTENANCE.
AUTHOR:				
ADDRESSEE:				
COPYEE:				
DOCUMENT 826	12/22/82	LETTER REPORT	8	
AUTHOR:	BLOCH JA	DEPT AG & IND AL		MORGAN PE II
ADDRESSEE:	CEPHUS C	HARE FH		HARE WYNN NEWELL & NEWTO
COPYEE:	HAGOOD J	EVERGREEN HELICOPTER		

D-4a11

4115

	NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT	827 ✓	07/20/82	REPORT	3 ✓	POSTMORTEM EXAMINATION (CASE 27(A)-82-45754 RANDALL CEPHUS, SUBJECT A-82-56).
AUTHOR:	SANTINA HD		DEPT OF FORENSIC SCIENCE		
ADDRESSEE:					
COPYEE:					
DOCUMENT	828 ✓	08/12/82	NEWS	1 ✓	TESTS FIND NO TRACE OF TORDON (TUSCALOOSA NEWS).
AUTHOR:	HEINE M		TUSCALOOSA NEWS		
ADDRESSEE:					
COPYEE:					
DOCUMENT	829 ✓	03/11/83	NEWS	2 ✓	60 MINUTES TO AIR SEGMENT CONCERNING AL POWER (UPDATE).
AUTHOR:	AL POWER				
ADDRESSEE:					
COPYEE:					
DOCUMENT	830 ✓	04/00/79	NEWS	6 ✓	CREATING STABLE SHRUB COMMUNITIES FOR MANAGED OPENINGS IN THE ASPEN FOREST (DTE 35(2):19-24, 1979).
AUTHOR:	N CNTL FOR EX S		PERALA DA		
ADDRESSEE:					
COPYEE:	SORENSEN RW				
DOCUMENT	831 ✓	09/24/79	TECH	3 ✓	TORDON (R) 101 MIXTURE WEED AND BRUSH KILLER (87120) (MATERIAL SAFETY DATA SHEET).
AUTHOR:	DOW				
ADDRESSEE:					
COPYEE:					
DOCUMENT	832 ✓	04/00/66	LABEL	2 ✓	TORDON 101 MIXTURE.
AUTHOR:	DOW				
ADDRESSEE:					
COPYEE:					
DOCUMENT	833 ✓	05/00/70	LABEL	2 ✓	TORDON 101 MIXTURE WEED AND BRUSH KILLER.
AUTHOR:	DOW				
ADDRESSEE:					
COPYEE:	MCINTYRE HH				
DOCUMENT	834 ✓	06/01/78	TECH	2 ✓	TORDON (R) 101 MIXTURE WEED AND BRUSH KILLER MATERIAL SAFETY DATA SHEET.
AUTHOR:	DOW				
ADDRESSEE:					
COPYEE:					

D.4212

4116

	NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT	835 ✓	04/25/79	PRINT TECH	3 ✓	TORDON 101 MIXTURE WEED & BRUSH KILLER MSD 0381.
AUTHOR:	DOW				
ADDRESSEE:					
COPYEE:					
DOCUMENT	836 ✓	08/00/79	LABEL	2 ✓	DOW TORDON 101 MIXTURE WEED AND BRUSH KILLER.
AUTHOR:	DOW				
ADDRESSEE:					
COPYEE:					
DOCUMENT	837 ✓	01/00/80	LABEL	2 ✓	TORDON 101 MIXTURE WEED AND BRUSH KILLER.
AUTHOR:	DOW				
ADDRESSEE:					
COPYEE:					
DOCUMENT	838 ✓	10/00/74	LABEL	2 ✓	TORDON 101 MIXTURE WEED AND BRUSH KILLER (86-1160, EPA REG. 464-306AA).
AUTHOR:	DOW				
ADDRESSEE:					
COPYEE:	JOHNSON RR		SPEER L		TOWNSEND R WRIGHT W
DOCUMENT	839 ✓	12/00/65	LABEL LEGIS	1 ✓	TORDON 101 MIXTURE BRUSH KILLER (PA2.14.S1).
AUTHOR:	DOW				
ADDRESSEE:					
COPYEE:					
DOCUMENT	840 ✓	02/00/78	LABEL	4 ✓	TORDON 101 MIXTURE WEED AND BRUSH KILLER.
AUTHOR:	DOW				
ADDRESSEE:					
COPYEE:					
DOCUMENT	841 ✓	07/00/64	LABEL	2 ✓	TORDON 101 MIXTURE BRUSH KILLER.
AUTHOR:	DOW				
ADDRESSEE:					
COPYEE:					
DOCUMENT	842 ✓	08/00/75	LABEL	2 ✓	TORDON 101 MIXTURE WEED AND BRUSH KILLER.
AUTHOR:	DOW				
ADDRESSEE:					
COPYEE:					

D.4213

4117

	NUMBER	DATE	TYPE	PAGES
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	843 ✓ DOW	10/00/78	LABEL	1 ✓
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	844 ✓ TOWNSEND RM HOLZSCHU RG HEIN ND FLANNERY RF	07/14/76	LABEL LETTER DOW STRINGER WM	1 ✓
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	845 ✓ LICHY CT	00/00/76	NEWS DOW	7 ✓
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	846 ✓ BELLEW RE REIMER CA DOW	09/12/80	MEMO REPORT CHADDOCK JD NILSEN A	2 ✓
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	847 ✓ DOW	10/31/79	REPORT MAZEROLLE M	10 ✓
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	848 ✓ DOW DOW TOWNSEND RM	04/23/79	REPORT FINK R COULTER LL WRIGHT WG	8 ✓
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	849 ✓ DOW DOW TOWNSEND RM	04/23/76	REPORT FINK R COULTER LL WRIGHT WG	8 ✓

D-4214

4118

TITLE

TORDON 101 MIXTURE.

AMCHEM 245T LABEL TO INCREASE TORDON 101.

WRIGHT WG

NEITZKE ET

BRUSH CONTROL WITH GARLON HERBICIDES ALONE & IN COMBINATION WITH
TORDON 101 MIXTURE OR 24D HERBICIDES USING TREE METHODS OF
APPLICATION (INDUSTRIAL VEGETATION MANAGEMENT 10 (2), 5-11).

GARLON 3A AND TORDON 101.

DOW

MCLEOD DM

PICLORAM RESIDUE DETERMINATIONS AFTER TORDON 101 APPLICATION FOR
BRUSH CONTROL 770000 R & D REPORT CS 575 GHS-C-5 CRI 801491.
STEHL RH

SUBACUTE DIETARY TOXICITY STUDY OF TORDON 101 MIXTURE ON THE
MALLARD CRI 76 3397 LABORATORY REPORT CODE GH-RC 68.
KENAGA EE WILDLIFE RES DIV MD

MCCOLLISTER DD

STRINGER WM

SUBACUTE DIETARY TOXICITY STUDY OF TORDON 101 MIXTURE ON THE
BOBWHITE CRI 76 3396 LABORATORY REPORT GH-RC 69.
KENAGA EE

MCCOLLISTER DD

STRINGER WM

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	850 ✓	02/24/78	ABSTRACT	10 ✓
AUTHOR:	KRAUSE RE		REPORT	
ADDRESSEE:			SEYMOUR KG	
COPYEE:	SEYMOUR KG DISHBURGER HJ GORING CA JANTZ OK MINTZ MJ PARSEY ES REYES JO WINEGERTER LE		BJORK CK DONALDS JE HANSON RG KOHLEBRAND HT MITCHELL MK PLAUMANN D SAUNDERS ES	
DOCUMENT	851 ✓	11/14/77	REPORT	13 ✓
AUTHOR:	DOW		JANTZ OK	
ADDRESSEE:				
COPYEE:	DOW COLBY RH DREYER WA GRUMBLES JB HEFNER RE HYMAS TA MCCOLLISTER DD REGAN JB TURNER GO		JANTZ OK COULTER LL FERGUSON RH HAAGSMA TA HOLMSEN TW LANING ER MOSS RD RITTY PM VANDERSCHAAF P	
DOCUMENT	852 ✓	02/25/77	REPORT	1 ✓
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:	DOW		FRASER JM	
DOCUMENT	853 ✓	09/07/76	REPORT	8 ✓
AUTHOR:	DOW LOEHNE E		LAFEVOR D RUZZALA R	
ADDRESSEE:				
COPYEE:	DOW		FRASER JM	
DOCUMENT	854 ✓	08/12/75	SPEC	1 ✓
AUTHOR:	CHASE FI MANFROM R TOWNSEND RM		FRASER JM MCLAUGHLIN EL WOODS CD	
ADDRESSEE:				
COPYEE:	FRASER JM MCLAUGHLIN EL WOODS CD		HOFF RC SEYMOUR KG	

4119

Pyais

TITLE

TORDON 101 MIXTURE CANDIDATE FORMULATION M-3779 TWO YEAR STORAGE STABILITY DATA (R&D REPORT)(CH-C 1085)(CRI 781591).

BOHNERT T	COULTER LL
FURCHES BJ	GOLD WI
HEFNER RE	HYMAS TA
LACEY R	MCCOLLISTER DD
MOSS RD	OSBORNE DW
PRUITT ME	RANCE RR
VANHORN RL	VOGEL AJ

HIGH VOLUME APPLICATIONS OF TRICLOPYR APPLIED ALONE AND WITH OTHER HERBICIDE PRODUCTS FOR WOODY PLANT CONTROL IN MN IN 760000 (R & D REPORT)(GH-P1016).

RYDER JC

BTORK CK	BYRD BC
DISHBURGER HJ	DONALDS JE
GERONIMO J	GORING CA
HANSON RG	HEBBOURN RG
HUNTER JH	HUNTER RC
LICHY CT	LUDWIG PD
OSBORNE DW	PRUITT ME
SAUNDERS ES	SEYMOUR KG
WARREN LE	WILLIAMS CS

TORDON 101 MIXTURE (AGRICULTURAL CHEMICALS TECHNOLOGY CENTER ILU TEST PROGRAM).

ANALYSIS OF TECHNICAL PICLORAM AND TORDON 101 FOR ILU TEST PROGRAM (ANALYTICAL REPORT)(AL 76-40370).

LAMKIN R	LANGE C
ZIMMERMAN R	

TORDON 101 MIXTURE M-3296 (PRODUCTION SPECIFICATION).

HOFF RC	HOLDEMAN GE
SEYMOUR KG	STRINGER WM

HOLDEMAN GE	MANFROM R
STRINGER WM	TOWNSEND RM

NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT 855 ✓	09/24/79	TECH	3 ✓	TORDON 101 MIXTURE WEED AND BRUSH KILLER MATERIAL SAFETY DATA SHEET (TRANSPORTATION EMERGENCY MANUAL).
AUTHOR: DOW ADDRESSEE: COPYEE:				
DOCUMENT 856 ✓	07/02/79	SPEC	3 ✓	TORDON 101 MIXTURE WEED AND BRUSH KILLER (QUALITY ASSURANCE PRODUCTION SPECIFICATION).
AUTHOR: BUZZELLI DT COLBY RW DEIBEL C DOW DRENCKPOHL JW FRASER JM GOLD WL SCOLES GW SEMANCO J STRINGER WM VANHORN R WOODS CD				
ADDRESSEE: COPYEE:				
DOCUMENT 857 ✓	08/10/80	TECH	2 ✓	TORDON 101 (MEDICAL INFORMATION).
AUTHOR: CHENOWETH MB DOW ADDRESSEE: COPYEE:				
DOCUMENT 858 ✓	11/00/74	LABEL	2 ✓	TORDON 101 MIXTURE WEED AND BRUSH KILLER.
AUTHOR: DOW ADDRESSEE: COPYEE:				
DOCUMENT 859 ✓	03/00/74	TECH	2 ✓	TORDON 101 MIXTURE WEED AND BRUSH KILLER (MATERIAL SAFETY DATA SHEET).
AUTHOR: DOW ADDRESSEE: COPYEE:				
DOCUMENT 860 ✓	03/00/74	TECH	2 ✓	TORDON 101 MIXTURE WEED AND BRUSH KILLER (MATERIAL SAFETY DATA SHEET).
AUTHOR: DOW ADDRESSEE: COPYEE:				
DOCUMENT 861 ✓	07/22/76	LETTER	2 ✓	DATE REQUIREMENTS EPA APPLICATIONS TORDON 202, TORDON 101 MIXTURE, TORDON 22K, TORDON 10K AND TORDON 5K.
AUTHOR: DOW VANHORN RL ADDRESSEE: STRINGER WM DOW COPYEE: TOWNSEND RM WRIGHT WG KEENEY FN HOLDAMAN GE				

D-4216

4120

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	862 ✓	06/04/76	LETTER	1 ✓
AUTHOR:	DOW		KRAUSE RE	
ADDRESSEE:	DOW		VANHORN RL	
COPYEE:	DOW		KEENEY FN	
DOCUMENT	863 ✓	10/22/76	REPORT	13 ✓
AUTHOR:	DOW		FEARS RD	
ADDRESSEE:	DOW		FEARS RD	
COPYEE:	GERONIMO J		GORING CA	
	HEFNER RE		HOLMSEN TW	
	MOSS RD		REGAN JB	
	SAUNDERS ES		SMITH LL	
	WILLIAMS CS		WRIGHT WG	
DOCUMENT	864 ✓	10/20/76	REPORT	15 ✓
AUTHOR:	DOW		FEARS RD	
ADDRESSEE:				
COPYEE:				
DOCUMENT	865 ✓	05/19/76	REPORT	19 ✓
AUTHOR:	DOW		WARREN LE	
ADDRESSEE:	DOW		WARREN LE	
COPYEE:	FEARS RD		GERONIMO J	
	HANSON RG		HEFNER RE	
	MOSS RD		REGAN JB	
	SAUNDERS ES		WRIGHT WG	
DOCUMENT	866 ✓	08/04/75	REPORT	15 ✓
AUTHOR:	DOW		FEARS RD	
	WILLIAMS CS			
ADDRESSEE:	DOW		FEARS RD	
COPYEE:	GERONIMO J		HANSON RG	
	LANING ER		MCCOLLISTER DD	
	REGAN JB		SHAVER RJ	
DOCUMENT	867 ✓	01/18/70	REPORT	14 ✓
AUTHOR:	DOW		HEIN ND	
ADDRESSEE:				
COPYEE:				

D. 4217

4121

TITLE

STATUS OF STUDIES ON TORDON 101 AND TORDON 22K FORMULATED WITH
REDUCED ALCOHOL CONTENT.

EVALUATION OF TORDON 101 MIXTURE AND ESTERON 245 TANK MIXTURES
APPLIED FOR FOREST SITE PREPARATION NEAR DAYTON, TENNESSEE IN'
710000 (770059).

FREDERICK DM

BYRD BC
GRUMBLES JB
LICHY CT
RITTY PM
STRINGER WM

COLBY RW
HANSON RG
MCCOLLISTER DD
RYDER JC
WARREN LE

PERFORMANCE OF GARLON 3A HERBICIDE THROUGH AERIAL APPLICATION ON A
RIGHTOFWAY NEAT TUSCALOOSA AL (LAB REPORT GH-P1005, 771652).

FREDERICK DM

CONTROL OF WOODY PLANTS WITH LEAF STEM SPRAYS OF TRICLOPYR (REPORT
GH-P 968) (764134).

WILLIAMS CS

WILLIAMS CS
GORING CA
LINCE M
RITTY PM

BYRD BC
GRUMBLES JB
MCCOLLISTER DD
RYDER JC

EVALUATION OF DONCO 233 AND TORDON 101 MIXTURE ESTERON 245 TANK
MIXES AS HIGH VOLUME SPRAYS ON INDIVIDUAL WOODY PLANTS IN GA
(REPORT GH-P-922)(756839).

FREDERICK DM

HAAGSMA TA

WILLIAMS CS
HEFNER RE
MOSS RD
SIMON C

FERGUSON RH
JANTZ OK
OSBORNE DW
SMITH LL

CHEMICAL SITE PREPARATION FOR PINE (REPORT B-15459).
NATION HA

	NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	868 ✓ DOW	03/13/78	REPORT MERY C	2 ✓	WEED CONTROL IN IRRIGATED SUGARCANE WITH TORDON 101 (ROI 68185).
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	869 ✓ DOW	11/30/71	TECH	5	TORDON 101 MIXTURE MATERIAL SAFETY DATA SHEET.
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	870 ✓ DOW	03/00/74	TECH	4 ✓	TORDON 101 MIXTURE MATERIAL SAFETY DATA SHEET.
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	871 DOW	03/00/74	TECH	2 ✓	TORDON 101 MIXTURE WEED AND BRUSH KILLER MATERIAL SAFETY DATA SHEET.
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	872 ✓ DOW	03/28/72	TECH	2 ✓	TORDON 101 MIXTURE MATERIAL SAFETY DATA SHEET.
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	873 ✓ DOW	03/00/74	TECH	2 ✓	TORDON 101 MIXTURE WEED AND BRUSH KILLER (MATERIAL SAFETY DATA SHEET).
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	874 ✓ DOW	03/28/72	TECH	2 ✓	TORDON 101 MIXTURE (MATERIAL SAFETY DATA SHEET).
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	875 ✓ DOW	01/28/76	PROC HIGHHILL CA	1 ✓	HANDLING TORDON 101 SPILLS.
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	876 ✓ DOW	09/00/76	LABEL	2 ✓	TORDON 101 MIXTURE WEED AND BRUSH KILLER (EPA SLN CA-760183).

4218

4122

	NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	877 ✓	09/00/76	LABEL	2 ✓	TORDON 101 MIXTURE WEED AND BRUSH KILLER (EPA SLN CA-760183).
					DISTR AT DOW0936401
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	878 ✓	09/00/76	LETTER WARREN LE	1 ✓	TORDON 101 MIXTURE FOR USE IN CALIFORNIA FOREST INDUSTRY.
					DISTR AT DOW0936401
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	879 ✓	06/14/79	REPORT	71	TORDON 101 SUMMARY OF EFFICACY DATA AGRICULTURAL CHEMICALS R D INFORMATION ASSEMBLY.
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	880 ✓	07/27/77	TELEX GETZENDANER ME BROWN FG MACQUILLAN MJ COULTER LL SMITH JT MCCOLLISTER DD WRIGHT WG	1 ✓	TORDON 101 FORMULATION CHANGE. HEBBOURN DG DRENCKPOHL JW STRINGER WM LANING ER KEENEY FN WOODS CD
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	881 ✓	08/25/76	REPORT DOW HIGHHILL CA SPEER LH	6 ✓	FOAMING CHARACTERISTICS OF PROPOSED TORDON 101 FORMULATION (M-3779). REIMER CA KEENEY NF WRIGHT WG VANHORN RL MANFROM RP
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	882 ✓	01/06/75	REPORT DOW CHASE FI PARSEY ES VANHORN RL MCCOY CE TOWNSEND RM	10 ✓	EFFECTS OF POLYGLYCOL 26-2 AND VERSENE ON TORDON 101 MIXTURE WATER DILUTIONS (INTERIM REPORT 163). HOFF RC SEYMOUR KG KEENEY FN SOUTHWICK L
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	883 ✓	06/11/71	ROC HIFFEN EE COULTER LL LENG ML KENAGA EE	2 ✓	EFFECT OF TORDON 101, DDT, ESTERON 3-3E ON HATCHABILITY OF POULTRY EGGS. HAAGSMA TA LYNN GE HEBBOURN RG MCCOLLISTER DD

D4a19

4123

NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT 884 ✓	06/00/75	REPORT	11 ✓	ACUTE TOXICITY OF TORDON 101 MIXTURE TO LARVAE OF THE EASTERN OYSTER (CRASSOSTREA VIRGINICA) PINK SHRIMP (PENAEUS DUORARUM) AND FIDDLER CRABS (UCA PUGILATOR). PARRISH R
AUTHOR: HEITMULLER T		MARINE RES LAB		
ADDRESSEE: ABCT CORAL GABLES		ABCT HONG KONG		ABCT KINGS LYNN
COPYEE: DOW		MCCOLLISTER DD		ABCT SARNIA
		TOWNSEND RM		STRINGER WM
DOCUMENT 885 ✓	02/09/71	LETTER	3 ✓	DEGRADATION OF HERBICIDES IN THE FOREST FLOOR, LOGAN A NORRIS.
AUTHOR: DOW		GORING CA		
ADDRESSEE: DOW		CAMPBELL BL		HAMAKER JH
COPYEE: DOW		FERGUSON RH		WARREN LE
		MURPHY AR		HOWE RG
DOCUMENT 886 ✓	12/00/78	LABEL	3 ✓	TORDON 101 MIXTURE WEED AND BRUSH KILLER. SPECIMEN LABEL.
AUTHOR: DOW				
ADDRESSEE:				
COPYEE:				
DOCUMENT 887 ✓	03/09/70	REPORT	61 ✓	A STUDY OF POTENTIAL MOVEMENT OF PICLORAM AFTER APPLICATION TO HIGHWAY AND RAILROAD RIGHTSOFWAY(GH-C 379). GETZENDANER ME MOSS RD
AUTHOR: BJERKE EL		BYRD BC		
ADDRESSEE: WILLIAMS CS				
COPYEE: MOSS RD		WILLIAMS CS		BARRONS KC
		GORING CA		LUDWIG PD
				CAMPBELL B
				RIDNER JM
DOCUMENT 888 ✓	03/07/75	REPORT	9 ✓	EIGHT DAY DIETARY LC50 BOBWHITE QUAIL TORDON 101 MIXTURE FINAL REPORT (PROJECT NO. 103-133).
AUTHOR: FINK R		TRUSLOW FARMS		
ADDRESSEE: DOW				
COPYEE: DOW		COULTER LL		MCCOLLISTER DD
		TOWNSEND RM		STRINGER WM
DOCUMENT 889 ✓	04/23/76	REPORT	1 ✓	SUBACUTE DIETARY TOXICITY STUDY OF TORDON 101 MIXTURE ON THE BOBWHITE (GH-RC 69). KENAGA EE TRUSLOW FARMS
AUTHOR: DOW		FINK R		
ADDRESSEE: DOW		COULTER LL		MCCOLLISTER DD
COPYEE: TOWNSEND RM		WRIGHT WG		STRINGER WM
DOCUMENT 890 ✓	03/07/75	REPORT	9 ✓	EIGHT DAY DIETARY LC50 MALLARD DUCKS TORDON 101 MIXTURE FINAL REPORT (PROJECT NO. 103-134).
AUTHOR: FINK R		TRUSLOW FARMS		
ADDRESSEE: DOW				
COPYEE: DOW		COULTER LL		MCCOLLISTER DD
		TOWNSEND RM		STRINGER WM

4224
4220

	NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT	891 ✓	05/16/75	REPORT	10 ✓	QUANTITATIVE DETERMINATION OF N* (3456-TETRACHLORO-2-PYRIDYL) GUANIDINE IN TORDON HERBICIDE FORMULATIONS (ML-AL75-00645).
AUTHOR:	DOW		HOWARD AJ		SKELLY NE
ADDRESSEE:	DOW		CAREY F		CHASE F
COPYEE:	DISHBURGER HJ		FRANCOIS C		GORING CA
	HUDSON T		KENAGA EE		LACOUME J
	LITTLE J		MANFROM R		MCCOLLISTER DD
	NEWPORT J		PARROT A		PARSEY ES
	SEYMOUR K		SHEETZ DP		STONE F
	TOWNSEND RM		WILLIAMS CS		WOODWARD R
					CRUMMETT WB
					HOLDEMAN G
					LASKOWSKI D
					MOSS RD
					SEXTON A
					STRINGER WM
					YEAMAN D
DOCUMENT	892 ✓	05/07/75	REPORT	7 ✓	EIGHT DAY DIETARY LC50 BOBWHITE QUAIL TORDON 101 MIXTURE FINAL REPORT PROJECT NO. 103 133.
AUTHOR:	FINK R		TRUSLOW FARMS		
ADDRESSEE:	DOW				
COPYEE:					
DOCUMENT	893 ✓	10/22/76	REPORT	13 ✓	EVALUATION OF TORDON 101 MIXTURE AND ESTERON 245 TANK MIXTURES APPLIED FOR FOREST SITE PREPARATION NEAR DAYTON, TN IN 710000 (LAB REPORT GH-P 991).
AUTHOR:	DOW		FEARS RD		FREDERICK DM
ADDRESSEE:					
COPYEE:					
DOCUMENT	894 ✓	01/03/77	REPORT	1 ✓	EVALUATION OF TORDON 101 MIXTURE AND ESTERON 245 TANK MIXTURES APPLIED FOR FOREST SITE PREPARATION NEAR DAYTON TN IN 710000 (LAB REPORT GH-P 991).
AUTHOR:	DOW		FEARS RD		FREDERICK DM
ADDRESSEE:					WRIGHT WG
COPYEE:					
DOCUMENT	895 ✓	08/12/75	SPEC	1 ✓	TORDON 101 MIXTURE WEED AND BRUSH KILLER. SALES SPECIFICATION.
AUTHOR:	DOW				
ADDRESSEE:					
COPYEE:					
DOCUMENT	896 ✓	07/02/79	PRINT	3 ✓	TORDON 101 MIXTURE WEED AND BRUSH KILLER DOW QUALITY ASSURANCE PRODUCTION SPECIFICATION (TRANSPORTATION EMERGENCY MANUAL).
AUTHOR:	BUZZELLI DT		COLBY RW		DOW
	FRASER JM		SCALES GW		SEMANCO J
	WOODS CD				DRENCKPOHL JW
ADDRESSEE:					STRINGER WM
COPYEE:					

①4221
4125

	NUMBER	DATE	TYPE	PAGES
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	897 ✓ DOW	09/19/79	LABEL	5
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	898 ✓ DOW	11/21/74	LABEL	6 ✓
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	899 ✓ BJERKE EL	11/14/74	REPORT DOW	17 ✓
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	900 ✓ BJERKE EL	11/14/74	REPORT DOW	1 ✓
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	901 ✓ CHENOWETH MB	08/10/80	TECH DOW	2 ✓
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	902 ✓ CHENOWETH MB	08/10/80	TECH DOW	2 ✓
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	903 ✓ DOW	11/14/73	TECH SKELLY NE	7 ✓
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	904 ✓ DOW	04/20/71	SPEC BASINGER RF	1 ✓

4122

4126

TITLE

TORDON 101 MIXTURE PROPOSED LABEL COPY.

LABEL COPY TORDON 101 MIXTURE WEED AND BRUSH KILLER.

RESIDUES OF PICLORAM AND 24D IN GRASS FOLLOWING TREATMENT WITH
TORDON 101 MIXTURE IN PUERTO RICO (R&D REPORT)(GH-C 769).

RESIDUES OF PICLORAM AND 24D IN GRASS FOLLOWING TREATMENT WITH
TORDON 101 MIXTURE IN PR (R&D REPORT).
MOSS RD

TORDON 101 R (MEDICAL INFORMATION)(M-4086).
KEELER P

TORDON 101 (MEDICAL INFORMATION).
KEELER P

ANALYSIS OF TORDON 101 HERBICIDE BY LIQUID CHROMATOGRAPHY
(ANALYTICAL METHOD)(871208).

TORDON 101 MIXTURE DRUM SPECIFICATIONS.

HOLDEMAN GE

WINTERGER LE

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	905 ✓	08/13/75	SPEC	1 ✓
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:	DOW MILKS WN		BROWN RC NIELSEN RC	
DOCUMENT	906 ✓	08/13/75	SPEC	1 ✓
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:	DOW MILKS WN		BROWN RC NIELSEN RC	
DOCUMENT	907 ✓	06/01/77	SPEC	1 ✓
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:	DOW WINGERTER LE		DRENCKPOHL JW	
DOCUMENT	908 ✓	08/13/75	SPEC	1 ✓
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:	DOW MILKS WN		BROWN LG NIELSEN RC	
DOCUMENT	909 ✓	08/13/75	SPEC	1 ✓
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:	DOW MILKS WN		BROWN LG NIELSEN RC	
DOCUMENT	910 ✓	11/29/79	SPEC	1 ✓
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:	DOW SIAS DM		DRENCKPOHL JW WINGERTER LE	
DOCUMENT	911 ✓	03/19/76	SPEC	1 ✓
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:	DOW HOLDEMAN GE		BROWN LG SIAS DM	

D.4223

4127

TITLE

TORDON 101 MIXTURE DRUM SPECIFICATIONS.

HOFF RC

HOLDEMAN GE

TORDON 101 MIXTURE PAIL SPECIFICATIONS.

HOFF RC

HOLDEMAN GE

TORDON 101, TORDON 155, TORDON 472, TORDON 101R, TORDON 212, TORDON 2696 PAIL SPECIFICATIONS.

GOLD WL

SIAS DM

TORDON 101 (PORTUGUESE) DRUM SPECIFICATIONS.

HOFF RC

HOLDEMAN GE

TORDON 101 MIXTURE SPANISH DRUM SPECIFICATIONS.

HOFF RC

HOLDEMAN GE

TORDON 101 MIXTURE WEED KILLER DAIL SPECIFICATIONS.

GLASER J

GOLD WL

TORDON 101 MIXTURE (CAN) DRUM SPECIFICATIONS.

DIGNARD G

DILLEY RH

	NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	912 ✓ DOW SIAS DM	04/14/78	SPEC	1 ✓	TORDON 101 MIXTURE HERBICIDE DRUM SPECIFICATIONS. DRENCKPOHL JW GLASER J GOLD WL WINGERTER LE
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	913 ✓ DOW SIAS DM	11/29/79	SPEC	1 ✓	TORDON 101 MIXTURE HERBICIDE DRUM SPECIFICATIONS. DRENCKPOHL JW GLASER J GOLD WL WINGERTER LE
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	914 ✓ DOW	10/01/77	PRINT TECH	3 ✓	TORDON 101 MIXTURE WEED AND BRUSH KILLER (MATERIAL SAFETY DATA SHEET) (PHENOXIES) (HERBICIDES MATERIAL SAFETY DATA SHEET).
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	915 ✓ DOW	12/00/76	REPORT	5 ✓	DETERMINATION OF PICLORAM AND 24D CONTENT OF TORDON 101, M3943(TENTATIVE ANALYTICAL METHOD).
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	916 ✓ SMITH DW	02/22/78	REPORT SUFFLING R	9 ✓	THE EFFECT OF TORDON 101 HERBICIDE ON SOIL ORGANIC MATTER BALANCE(CAN J BOT 57, 108-115). UNIV OF GUELPH CAN UNIV OF WATERLOO CAN
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	917 ✓ NEWTON M	05/03/76	REPORT	4 ✓	INFLUENCE OF SEASON AND DOSAGE ON EFFECTIVENESS OF INJECTIONS FOR CONTROL OF DOUGLAS FIR (REPRINT FROM RESEARCH PROGRESS REPORT WESTERN WEED CONTROL CONFERENCE RENO, NV 660316 TO 660318)(TECHNICAL DATA 1)(TECHNICAL INFORMATION IN SUPPORT OF APPLICATION FOR STATE REGISTRATION OF TORDON 101 MIXTURE WEED AND BRUSH KILLER TO MEET A SPECIAL LOCAL NEED IN ID)(PA2.08.02.S3).
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	918 ✓ DOW	05/03/76	REPORT	3 ✓	TECHNICAL INFORMATION IN SUPPORT OF APPLICATION FOR STATE REGISTRATION OF TORDON 101 MIXTURE WEED AND BRUSH KILLER TO MEET A SPECIAL LOCAL NEED IN OR (PA2.08.02.S3 TORDON 101 STATE REGISTRATION OR 760503).

D-4224 4128

NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT 919 ✓	05/03/76	REPORT	3 ✓	TECHNICAL INFORMATION IN SUPPORT OF APPLICATION FOR STATE REGISTRATION OF TORDON 101 MIXTURE WEED AND BRUSH KILLER TO MEET A SPECIAL LOCAL NEED IN ID (PA2.08.02.S2 TORDON 101 STATE REGISTRATION ID 760503).
AUTHOR: DOW ADDRESSEE: COPYEE:				
DOCUMENT 920 ✓	01/16/70	REPORT	10 ✓	TECHNICAL INFORMATION IN SUPPORT OF APPLICATION FOR REGISTRATION OF REVISED LABELING FOR THE USE OF TORDON 101 MIXTURE WEED AND BRUSH KILLER ON HIGHWAYS, RAILROAD AND UTILITY RIGHTS OF WAY AND OTHER NON CROP AREAS VOLUME 2 (PA.2.08.S10).
AUTHOR: DOW ADDRESSEE: COPYEE:				
DOCUMENT 921 ✓	01/00/70	LABEL	14 ✓	LABEL COPY TORDON 101 MIXTURE WEED AND BRUSH KILLER (PA2.08.S9).
AUTHOR: DOW ADDRESSEE: COPYEE:				
DOCUMENT 922 ✓	01/16/70	REPORT	7 ✓	TECHNICAL INFORMATION IN SUPPORT OF APPLICATION FOR REGISTRATION OF REVISED LABELING FOR THE USE OF TORDON 101 MIXTURE WEED AND BRUSH KILLER ON HIGHWAYS, RAILROAD AND UTILITY RIGHTS OF WAY AND OTHER NON CROP AREAS VOLUME I (PA2.08.S9).
AUTHOR: DOW ADDRESSEE: COPYEE:				
DOCUMENT 923 ✓	03/00/78	LABEL	2 ✓	TORDON 101 MIXTURE WEED AND BRUSH KILLER FOR DISTRIBUTION AND USE ONLY WITHIN CA, OR AND WA (PA2.08.06 TORDON 101 STATE REGISTRATION OR).
AUTHOR: DOW ADDRESSEE: COPYEE:				
DOCUMENT 924 ✓	11/00/79	TECH	2 ✓	TORDON 101 MIXTURE (PRODUCT BULLETIN)(PA2.08.02 TORDON 101 STATE REGISTRATION CA).
AUTHOR: DOW ADDRESSEE: COPYEE:				
DOCUMENT 925 ✓	05/04/70	LEGIS	3 ✓	TORDON 101 MIXTURE WEED AND BRUSH KILLER(464-306)(APPLICATION FOR AMENDED REGISTRATION OF ECONOMIC POISONS).
AUTHOR: DOW ADDRESSEE: DOW COPYEE:				
HAMMER OH HAMMER OH USDA				

4129

4225

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	926 ✓	05/04/70	LEGIS	2 ✓
AUTHOR:	DOW		HAMMER OH	
ADDRESSEE:	DOW		HAMMER OH	
COPYEE:				
DOCUMENT	927 ✓	05/22/70	LETTER	1 ✓
AUTHOR:	ALFORD HG		USDA ARS	
ADDRESSEE:	DOW			
COPYEE:				
DOCUMENT	928 ✓	05/04/70	LEGIS	2 ✓
AUTHOR:	DOW		HAMMER OH	
ADDRESSEE:	DOW		HAMMER OH	
COPYEE:				
DOCUMENT	929 ✓	05/22/70	LETTER	1 ✓
AUTHOR:	ALFORD HG		USDA	
ADDRESSEE:	DOW			
COPYEE:				
DOCUMENT	930 ✓	06/03/70	LETTER	1 ✓
AUTHOR:	ALFORD HG		USDA ARS	
ADDRESSEE:	DOW		HAMMER OH	
COPYEE:				
DOCUMENT	931 ✓	06/12/70	LABEL LETTER	2 ✓
AUTHOR:	DOW		TALCOTT AT	
ADDRESSEE:	ALFORD HG		USDA ARS	
COPYEE:	DOW		HAMMER OH	
DOCUMENT	932 ✓	08/27/71	REPORT	13
AUTHOR:	DOW		WARREN LE	
ADDRESSEE:				
COPYEE:				
DOCUMENT	933 ✓	06/00/70	LABEL	1
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:				

4226
D

4130

TITLE

TORDON 101 MIXTURE WEED AND BRUSH KILLER(464-306)(APPLICATION FOR AMENDED REGISTRATION OF ECONOMIC POISONS).

USDA

TORDON 101 MIXTURE(USDA REG. 464-306)(YOUR APPLICATION OF 700504).

TORDON 101 MIXTURE WEED AND BRUSH KILLER(464-306)(APPLICATION FOR AMENDED REGISTRATION OF ECONOMIC POISONS).

USDA

TORDON 101 MIXTURE(USDA REG. 464-306)(YOUR APPLICATION OF 700504).

TORDON 101 MIXTURE(USDA REG. 464-306)(YOUR TELEPHONE CONVERSATION OF 700601).

TORDON 101 MIXTURE WEED AND BRUSH KILLER(USDA REGISTRATION 464-306).

SUNDERLAND WW

CONTROL OF UNDESIRABLE WOODY PLANTS WITH AERIAL SPRAYS CONTAINING NEW INVERT EMULSION FORMULATIONS OF 24D, 245T AND PICLORAM(REFERENCE REPORT B) (TECHNICAL INFORMATION IN SUPPORT OF THE APPLICATION FOR REGISTRATION OF VERTON 2D VERTON 2T AND TORDON K HERBICIDES)(DA14.02.S3 PERFORMANCE).

TORDON 101 (DA14.02.S2).

NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT 934 ✓ AUTHOR: DOW ADDRESSEE: COPYEE:	05/00/79	ABSTRACT PAEZ JA	3 ✓	TORDON 101 HERBICIDE LAB REPORT NO 79.025.004.
		BRIONES L FERGUSON H HAMMOND LE HUNTER RC LINCE M PRUITT ME NESELOH JW		CARVALHEIRO A FLETCHER DR HANSON RG JANTZ OK MCCOLLISTER DD SHEETZ DP
				COULTER LL GORING CA HEBBOURN D LADEIRA A MITCHELL K TURNER GO
DOCUMENT 935 ✓ AUTHOR: DOW ADDRESSEE: COPYEE:	05/09/79	TEST	14 ✓	TORDON 101 MIXTURE WEED AND BRUSH KILLER(ANALYTICAL METHOD 87120E).
DOCUMENT 936 ✓ AUTHOR: DOW ADDRESSEE: COPYEE:	03/00/74	TECH	2 ✓	TORDON 101 MIXTURE WEED AND BRUSH KILLER MATERIAL SAFETY DATA SHEET
DOCUMENT 937 ✓ AUTHOR: DOW ADDRESSEE: COPYEE:	10/26/79	REPORT FISHBECK WA	2 ✓	TORDON 101 101R MEDICAL INFORMATION. KEELER P
DOCUMENT 938 ✓ AUTHOR: DOW ADDRESSEE: DOW COPYEE: DOW	05/16/79	MEMO MESTRE S HUMBURG ER LANING ER	1 ✓	TORDON 101 & LORSBAN 4E NEW LABELS FOR VENEZUELA. WOODS CD
DOCUMENT 939 ✓ AUTHOR: DOW ADDRESSEE: DOW COPYEE:	07/29/77	LETTER WOODS CD MESTRE S	1 ✓	PERUVIAN LABELS. DMA 6 WEED KILLER. ESTERON 245 CONCENTRATE HERBICIDE. TORDON 101 MIXTURE HERBICIDE. TORDON 472 HERBICIDE.
DOCUMENT 940 ✓ AUTHOR: DOW ADDRESSEE: DOW COPYEE: DOW	09/26/78	LETTER WOODS CD MERY C LANING ER	1 ✓	TORDON 101 MIXTURE HERBICIDE. PERUVIAN LABELING. VANWERT JB
DOCUMENT 941 ✓ AUTHOR: DOW ADDRESSEE: DOW COPYEE: DOW	09/26/78	LETTER WOODS CD STEVENS F LANING ER	1 ✓	TORDON 101 MIXTURE HERBICIDE. BRAZILIAN LABELING. VANWERT JB

4131
4227

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	942 ✓	07/14/77	LETTER	2 ✓
AUTHOR:	DOW		STRINGER WM	
ADDRESSEE:	DOW		BOHNERT T	
	DRENCKPOHL JW		GETZENDANER ME	
	MCCOLLISTER DD		SEYMOUR KG	
	TOWNSEND RM		VANHORN RL	
COPYEE:				
DOCUMENT	943 ✓	04/17/78	LETTER	1 ✓
AUTHOR:	DOW		WOODS CD	
ADDRESSEE:				
COPYEE:				
DOCUMENT	944 ✓	09/00/76	LABEL	2 ✓
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:				
DOCUMENT	945 ✓	03/00/78	LABEL	2 ✓
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:				
DOCUMENT	946 ✓	09/22/70	LETTER	2 ✓
AUTHOR:	DOW		WILLIAMS GJ	
ADDRESSEE:	HEW		STEINFELD JL	
COPYEE:				
DOCUMENT	947 ✓	11/14/75	ABSTRACT	6 ✓
			REPORT	
AUTHOR:	DOW		HOLMSEN TH	
ADDRESSEE:				
COPYEE:	HANSON RG			
DOCUMENT	948 ✓	03/21/72	REPORT	5 ✓
AUTHOR:	DOW		JOHNSON TB	
ADDRESSEE:				
COPYEE:	DOW		BAILES R	
	COULTER LL		DOWELL PH	
	GENTRY WM		GORING CA	
	JOHNSTON RV		KAGY JF	
	LUDWIG PD		MACKAY J	
	MOSS RD		OSBORNE DW	
	SAUNDERS ES		THOMPSON C	

D-4228

4132

TITLE

TORDON 101 MIXTURE HERBICIDE CHANGE IN FORMULATION REDUCED IPA.
OUR EPA SUBMISSION OF 760803.

COLBY RH
JANTZ OK
SMITH JT
WOODS CD

COULTER LL
KEENEY FN
SPEER LH
WRIGHT WG

REVISED SPECIMEN LABELS FOR TORDON 101 MIXTURE WEED AND BRUSH
KILLER.

TORDON 101 MIXTURE WEED AND BRUSH KILLER FOR DISTRIBUTION AND USE
ONLY WITHIN CA.

TORDON 101 MIXTURE WEED AND BRUSH KILLER FOR DISTRIBUTION AND USE
ONLY WITHIN CA, OR AND WA.

DOW AND DOD AGREE THAT BASED ON CURRENT KNOWLEDGE TORDON 101 CAN BE
SAFELY USED BY THE DOD CTTL.

VAPOR PHASE PHYTOTOXICITY OF TORDON 101 HERBICIDE, LOTS 590634,
590905 AND 591135 (GS-1435).

VAPOR PHASE PHYTOXICITY DOW PRODUCTS, 9 TORDON 101 MIXTURE.

BLAIR EH
FERGUSON RH
HEITZ R
KUYPER CK
MAGANA JL
PRUITT ME
TURNER GO

BREMNER NW
GANTZ RL
HYMAS TA
LINCE M
MCCOLLISTER DD
REGAN JB
WRIGHT WG

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	949 ✓	03/21/72	ABSTRACT	1 ✓
AUTHOR:	DOW		JOHNSON TB	
ADDRESSEE:				
COPYEE:	DOW		BAILES R	
	BLAIR EH		BREMNER NW	
	FERGUSON RH		GANTZ RL	
	GORING CA		HEITZ R	
	JOHNSON RB		JOHNSTON RV	
	LINCE M		LITTLE JC	
	MAGANA JL		MCCOLLISTER DD	
	OSBORNE DW		PRUITT ME	
	SEYMOUR KG		SHELDON HW	
	WRIGHT WG			
DOCUMENT	950 ✓	06/02/75	REPORT	1 ✓
AUTHOR:	DOW		VANHORN RL	
ADDRESSEE:				
COPYEE:	DOW		BYRD BC	
	KEENEY FN		PARSEY ES	
DOCUMENT	951 ✓	03/00/74	TECH	2 ✓
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:				
DOCUMENT	952 ✓	08/22/78	DISTRB	48
			REPORT	
AUTHOR:	COLBY RH		DOW	
ADDRESSEE:				
COPYEE:	COLBY RH		DOW	
	BJORK CK		BYRD BC	
	DONALDS JE		DREYER WA	
	GORING CA		GRAHAM DL	
	HOLMSEN TW		HUNTER JH	
	JANTZ OK		LICHY CT	
	MOSS RD		NILSEN A	
	REGAN JB		RITTY PM	
	SCHMIDTKE DJ		SEYMOUR KG	
	VRANISH SR		WILLIAMS CS	

4133
D.4229

TITLE

VAPOR PHASE PHYTOTOXICITY DOW PRODUCTS, 9 TORDON 101 MIXTURE(1600019).

BAURIEDEL WR
COULTER LL
GENTRY WM
HINMAN CW
KAGY JF
LUDWIG PD
MOSS RD
REGAN JB
THOMPSON C

BJORK CK
DOWELL PH
GETZENDANER ME
HYMAS TA
KUYPER CK
MACKEY J
MUELDER WW
SAUNDERS BS
TURNER GO

COMPATIBILITY OF TORDON 101 MIXTURE AND DOWCO 233 (M-3724) WITH KARMEX 80 WP AND PARAQUAT CL AG FORMULATIONS (INTERIM REPORT NO 181) (DATA BOOK 1-5480-19).

HAAOSMA TA
SEYMOUR KG

HIGHHILL CA

TORDON 101 MIXTURE WEED AND BRUSH KILLER, MATERIAL SAFETY DATA SHEET (FORM NO. 336-158-74).

EVALUATION OF NALCOTROL THICKENING AGENT TO CONTROL DRIFT FROM AERIAL APPLICATION OF TORDON 101 MIXTURE AND GARLON 3A HERBICIDE R&D REPORT (GH-P-103).

WARREN LE

WARREN LE
COULTER LL
FLYNN JM
GRUMBLES JB
HUNTER RC
LUDWIG PD
OSBORNE DW
RYDER JC
SMITH ML
WRIGHT WG

BAURIEDEL WR
DISHBURGER HJ
GERONIMO J
HANSON RG
HYMAS TA
MCCOLLISTER DD
PRUITT ME
SAUNDERS ES
TURNER GO

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	953 ✓	02/17/77	AUTH	1 ✓
AUTHOR: DOW ADDRESSEE: COPYEE: RITTY PM				
DOCUMENT	954 ✓	02/29/72	LEGAL	29 ✓
AUTHOR: DOW ADDRESSEE: COPYEE:				
DOCUMENT	955 ✓	03/05/80	LETTER	2 ✓
AUTHOR: DOW ADDRESSEE: LOTTRITZ G COPYEE: ALLISON WE FEARS RD WATSON AJ WARREN LE USDA FS BEACHELL GR KARWAHL JH				
DOCUMENT	956 ✓	12/13/74	LETTER	4 ✓
AUTHOR: NORRIS LA ADDRESSEE: BONNEVILLE POWER ADMIN COPYEE: BERGMAN E OR ST UNIV GROSS F MONTGOMERY M				
DOCUMENT	957 ✓	09/24/79	TECH	3 ✓
AUTHOR: DOW ADDRESSEE: COPYEE:				
DOCUMENT	958 ✓	03/19/79	LETTER	2 ✓
AUTHOR: DOW ADDRESSEE: DOW COPYEE: DOW KARWAL JH WARREN LE COLBY RW ALLISON WE REIMER CA				

D.4230

4134

TITLE

TRICLOPYR, M-4021, M-3724, TORDON 101 R, TORDON 10 PERCENT PELLETS, TORDON 5 PERCENT PELLETS. REQUEST FOR GRANT (KANSAS STATE UNIVERSITY).

TECHNICAL INFORMATION IN SUPPORT OF APPLICATION FOR AMENDED REGISTRATION OF ESTERON 245 HERBICIDE (EPA REGISTRATION NO. 464-205) FOR USE AS A TANK MIXTURE WITH TORDON 101 MIXTURE HERBICIDE (EPA REGISTRATION NO. 464-306) TO OBTAIN IMPROVED CONTROL OF CERTAIN 245T RESISTANT WOODY PLANT SPECIES ON FOREST PLANTING SITES.

RESPONSE TO QUESTIONS REGARDING NITROSAMINE CONTENT IN TORDON 101 MIXTURE CTTL.

CRUMMETT W
KARWAL JH

DAVIDSON JH
NORRIS MO

CONTAMINATION SURVEY AT TORDON 101 SPILL SITE.

TORDON 101 MIXTURE WEED AND BRUSH KILLER (MATERIAL SAFETY DATA SHEET)(87120).

DRIFT CONTROL SPECIFICATIONS FOR TORDON 101 IN FORESTRY.

BEACHELL GR

FREDERICK DM

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	959 ✓	02/05/70	REPORT	7

AUTHOR:	DOW	GETZENDANER ME
ADDRESSEE:		
COPYEE:	DOW	HAMAKER JW
	I CAH	I CSW
	I JFP	I JMR
	I PDL	MOSS RD

DOCUMENT	960 ✓	02/05/70	ABSTRACT	1

AUTHOR:	DOW	GETZENDANER ME
ADDRESSEE:		
COPYEE:	DOW	HAMAKER JW
	I CAH	I CSW
	I HF	I JFK
	I JMR	I KGS
	I PDL	I PMR
	I RWM	I TAH
	SCHOCH H	

DOCUMENT	961 ✓	01/23/68	LETTER	2 ✓
AUTHOR:	KLIGMAN AM		UNIV OF PA	
ADDRESSEE:	ROWE VK		DOW	
COPYEE:				

DOCUMENT	962 ✓	00/00/00	CHART	63 ✓

AUTHOR:	LAMB JC	REPORT
ADDRESSEE:		MOORE JA
COPYEE:		

DOCUMENT	963 ✓	12/15/49	LETTER	5 ✓

AUTHOR:	DOW	ROWE VK
ADDRESSEE:	DRILL VA	WAYNE UNIV COL
COPYEE:		

DOCUMENT	964 ✓	09/12/66	REPORT	5 ✓

AUTHOR:	NACA
ADDRESSEE:	
COPYEE:	

D-4231

4135

TITLE

TORDON COMPOSITION FOR PRODUCING TORDON 101 MIXTURE IN CANADA (CRI 70 702).

PARSEY ES	VANHORN RL
HANDLEY HF	HEBBOURN RO
I EEW	I JFK
I KGS	I NWB
SCHOCH H	

TORDON COMPOSITION FOR PRODUCING TORDON 101 MIXTURE IN CAN (CRI 70 702).

PARSEY ES	VANHORN RL
HANDLEY HF	HEBBOURN RO
I EES	I EEW
I JFP	I JHG
I MGW	I NWB
I REW	I RJS
MATHEWS B	MOSS RD

PROGRESS OF TCDD STUDY CTTL.

EVALUATION OF 24D, 245T & TCDD TOXICITY IN C57BL/6 MICE: REPRODUCTION & FERTILITY IN TREATED MALE MICE & EVALUATION OF CONGENITAL MALFORMATIONS IN THEIR OFFSPRING.

MARKS TA	UPJOHN

24D AND 245T SAMPLES SENT FOR TOX TESTS IN DOGS, TEST RESULTS ON OTHER ANIMALS GIVEN CTTL.

QUESTIONS THE VALIDITY OF THE REQUIREMENT FOR RESTRICTING LIVESTOCK FROM SPRAYED AREAS FOR SEVEN DAYS AFTER APPLICATION CTTL.

NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT 965 ✓ AUTHOR: DOW ADDRESSEE: HOSPITAL OF THE UNIV OF COPYEE: DOW HOYLE HK	07/09/65	LETTER ROWE VK KLIGMAN AM ROWE VK KRAMER	2 ✓	SUGGESTIONS FOR TOXICOLOGY TESTS USING TCDD CTTL. GORDON HL PETERSON JE HOLDER BB SILVERSTEIN L
DOCUMENT 966 ✓ AUTHOR: BAYLEY ND BICKNIT ADDRESSEE: HART P COPYEE:	07/01/70	LEGIS LETTER USDA HART PA US SENATE	9 ✓	(EFFECTS OF 245T AND RELATED HERBICIDES ON MAN AND THE ENVIRONMENT). BYERLY TC BAYLEY ND
DOCUMENT 967 ✓ AUTHOR: COURTNEY KD ADDRESSEE: COPYEE:	09/00/71	REPORT EPA	17	TERATOLOGY STUDIES WITH CHLORODIBENZO-P-DIOXINS.
DOCUMENT 968 ✓ AUTHOR: DOW ADDRESSEE: COPYEE:	00/00/00	REPORT	1 ✓	U.S. EPA SUSPENSION OF 245T SILVEX FOR USES ON RIGHTSOFWAY FORESTRY PASTURES.
DOCUMENT 969 ✓ AUTHOR: MONSANTO ADDRESSEE: COPYEE: SUSSKIND RR	01/00/80	NEWS ZACK JA	4 ✓	THE MORTALITY EXPERIENCE OF WORKERS EXPOSED TO TCDD IN A TRICHLOROPHENOL PROCESS ACCIDENT (JOURNAL OF OCCUPATIONAL MEDICINE 22(1): 11-14, 1980).
DOCUMENT 970 ✓ AUTHOR: CROSBY DG ADDRESSEE: COPYEE:	03/25/77	REPORT UC DAVIS	2 ✓	ENVIRONMENTAL DEGRADATION OF TCDD(TCDD)(SCIENCE 195, 1337-1338). WONG AS
DOCUMENT 971 ✓ AUTHOR: COOK RC TOWNSEND JC ADDRESSEE: COPYEE:	08/00/80	NEWS REPORT DOW UNIV OF MI	3 ✓	MORTALITY EXPERIENCE OF EMPLOYEES EXPOSED TO TCDD (JOUR OF OCCUPATIONAL MEDICINE 22(8) 530-532). OTT MO SILVERSTEIN LG

D-4232

4136

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	972	00/00/78	REPORT	24
AUTHOR:	BARNARD SD		BEYER JE	
	DOW		FRAUSON LE	
	KALNINS RP		KEYES DG	
ADDRESSEE:	WADE CE			
COPYEE:				
DOCUMENT	973	08/28/78	LETTER	1
AUTHOR:	MCHUGH MF		US HSE REPS	
ADDRESSEE:	ASPLUNDH		MEHRE FW	
COPYEE:				
DOCUMENT	974	08/21/78	LETTER	1
AUTHOR:	ASPLUNDH		MEHRE FW	
ADDRESSEE:	EPA			
COPYEE:				
DOCUMENT	975	08/30/78	LETTER	1
AUTHOR:	ASPLUNDH		HICKS JH	
ADDRESSEE:	EPA		FOSTER RL	
COPYEE:	FINCHER WH		WILLIAMS R	
	SENATE GA			
DOCUMENT	976	07/18/78	LETTER	2
AUTHOR:	DAVEY TREE EXPERT		JEFFERS WA	
ADDRESSEE:	EPA			
COPYEE:				
DOCUMENT	977	09/05/78	LETTER	1
AUTHOR:	ABBOTT RE		DAVEY TREE EXPERT	
ADDRESSEE:	ASPLUNDH		SKELTON J	
COPYEE:				
DOCUMENT	978	09/14/78	LETTER	2
AUTHOR:	ASPLUNDH		SHIVER D	
ADDRESSEE:	EPA		STONE R	
COPYEE:	CHILES LM			

D-41233

4137

TITLE

RESULTS OF A TWO YEAR CHRONIC TOXICITY AND ONCOGENICITY STUDY OF
TCDD IN RATS (TOX AND APPLIED PHARMACOLOGY 46, 279-303).

CARREON RM
HUMISTON CG
KOCIBA RJ

DITTENBER DA
HUMMEL RA
PARK CN

TELEPHONE CONTACTS TO SOLICIT 245T BENEFIT LETTERS TO THE EPA.

OPP 30000 26. TELEPHONE CONTACTS TO SOLICIT 245T BENEFIT LETTERS
TO THE EPA.

OPP 30000 26. TELEPHONE CONTACTS TO SOLICIT 245T BENEFIT LETTERS
TO THE EPA.

HSE REPS GA

RAMSEY T

OPP 30000 26. TELEPHONE CONTACTS TO SOLICIT 245T BENEFIT LETTERS
TO THE EPA.

TELEPHONE CONTACTS TO SOLICIT 245T BENEFIT LETTERS TO THE EPA.

245T RPAR. OPP 30000 26. TELEPHONE CONTACTS TO SOLICIT 245T
BENEFIT LETTERS TO THE EPA.

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	979 ✓	09/25/78	LETTER	1
AUTHOR:	ASPLUNDH		ROSE G	
ADDRESSEE:	EPA			
COPYEE:	BRECKINRIDGE J HUDDLESTON W SNYDER G		CARTER TL MAZZOLI R	
DOCUMENT	980 ✓	10/13/78	LETTER	3
AUTHOR:	ASPLUNDH		SCHNARR JO	
ADDRESSEE:	EPA			
COPYEE:	BOLAND E EARLY J STUDDS G		BROOKE E MARKEY E TSONGAS P	
DOCUMENT	981 ✓	00/00/00	REPORT	7
AUTHOR:				
ADDRESSEE:				
COPYEE:				
DOCUMENT	982 ✓	03/13/78	LEGIS	2
AUTHOR:	EVANS		US HSE REPS	
ADDRESSEE:				
COPYEE:				
DOCUMENT	983 ✓	06/28/78	LETTER	2
AUTHOR:	CAMPBELL AIR SERVICE		ROWE WB SR	
ADDRESSEE:	KIRBY FOREST INDUS		PRICE T	
COPYEE:				
DOCUMENT	984 ✓	08/02/78	MEMO	1
AUTHOR:	CAMPBELL AIR SERVICE		EAKIN JO	
ADDRESSEE:	ASPLUNDH		SKELTON J	
COPYEE:				
DOCUMENT	985 ✓	08/23/78	LETTER	1
AUTHOR:	EASTERN SHORE NATURAL GA		MORRIS W	
ADDRESSEE:	ASPLUNDH		SKELTON J	
COPYEE:				

D-4234

4138

TITLE

OPP 30000 26. TELEPHONE CONTACTS TO SOLICIT 245T BENEFIT LETTERS TO THE EPA.

FORD W
NATCHER W

HUBBARD C
PERKINS C

OPP 30000 26. TELEPHONE CONTACTS TO SOLICIT 245T BENEFIT LETTERS TO THE EPA.

CONTE S
MOAKLEY J
US HSE REPS

DRINAN R
ONEILL T

CONTRACTORS. TELEPHONE CONTACTS TO SOLICIT 245T BENEFIT LETTERS TO THE EPA.

A BILL TO ABOLISH THE EPA (95TH CONGRESS, 2ND SESSION. IN THE HOUSE OF REPRESENTATIVES). TELEPHONE CONTACTS TO SOLICIT 245T BENEFIT LETTERS TO THE EPA.

TELEPHONE CONTACTS TO SOLICIT 245T BENEFIT LETTERS TO THE EPA.

TELEPHONE CONTACTS TO SOLICIT 245T BENEFIT LETTERS TO THE EPA.

TELEPHONE CONTACTS TO SOLICIT 245T BENEFIT LETTERS TO THE EPA.

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	986 ✓	09/15/78	LETTER	2
AUTHOR:	ARCO PIPE LINE		CLAPP GE	
ADDRESSEE:	ASPLUNDH		HOLEWINSKI DE	
COPYEE:				
DOCUMENT	987 ✓	00/00/00	REPORT	7
AUTHOR:				
ADDRESSEE:				
COPYEE:				
DOCUMENT	988 ✓	06/28/78	LETTER	1
AUTHOR:	DEPT OF TRANS PA		ROSS RS	
ADDRESSEE:	EPA			
COPYEE:				
DOCUMENT	989 ✓	05/25/78	LETTER	1
AUTHOR:	DEPT OF TRANS ME		MALLAR RL	
ADDRESSEE:	CASTLE D		EPA	
COPYEE:	DEPT OF TRANS ME		STONE TM	
DOCUMENT	990 ✓	08/03/78	LETTER	1
AUTHOR:	DEPT OF TRANS ME		STONE TM	
ADDRESSEE:	ASPLUNDH		SKELTON J	
COPYEE:				
DOCUMENT	991 ✓	08/03/78	LETTER	1
AUTHOR:	DEPT OF TRANS IA		GIVEN RH	
ADDRESSEE:	EPA			
COPYEE:				
DOCUMENT	992 ✓	08/07/78	LETTER	1
AUTHOR:	RINARD JE			
ADDRESSEE:	EPA			
COPYEE:				
DOCUMENT	993 ✓	00/00/00	REPORT	1
AUTHOR:				
ADDRESSEE:				
COPYEE:				

D-4235

4139

TITLE

245T (RPAR). TELEPHONE CONTACTS TO SOLICIT 245T BENEFIT LETTERS TO THE EPA.

PIPELINES. TELEPHONE CONTACTS TO SOLICIT 245T BENEFIT LETTERS TO THE EPA.

TELEPHONE CONTACTS TO SOLICIT 245T BENEFIT LETTERS TO THE EPA.

TELEPHONE CONTACTS TO SOLICIT 245T BENEFIT LETTERS TO THE EPA.
RISSEL MC

TELEPHONE CONTACTS TO SOLICIT 245T BENEFIT LETTERS TO THE EPA.

OPP 30000 26. TELEPHONE CONTACTS TO SOLICIT 245T BENEFIT LETTERS TO THE EPA.

CODE NO. 30000 76. TELEPHONE CONTACTS TO SOLICIT 245T BENEFIT LETTERS TO THE EPA.

TELEPHONE CONTACTS TO SOLICIT 245T BENEFIT LETTERS TO THE EPA.

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	994 ✓	06/29/78	LETTER	1
AUTHOR:	HENDRICKSON CH		MARKET OPINION RES	
ADDRESSEE:				
COPYEE:				
DOCUMENT	995 ✓	07/13/78	LETTER	1
AUTHOR:	BRIGGS OM		NY DEPT OF TRANS	
ADDRESSEE:	HENDRICKSON CH		MARKET OPINION RES	
COPYEE:				
DOCUMENT	996 ✓	08/09/78	LETTER	1
AUTHOR:	BRIGGS GM		NY DEPT OF TRANS	
ADDRESSEE:	ASPLUNDH		HOLEWINSKI DE	
COPYEE:				
DOCUMENT	997 ✓	08/14/78	LETTER	2
AUTHOR:	DEPT OF HIGHWAYS & TRANS HUNDLEY RL			
ADDRESSEE:	EPA			
COPYEE:	ASPLUNDH			CASELL BB
	ROBB ET			
DOCUMENT	998 ✓	08/16/78	LETTER	1
AUTHOR:	CHILDERS FA		GA DEPT OF TRANS	
ADDRESSEE:	ASPLUNDH		HOLEWINSKI DE	
COPYEE:				
DOCUMENT	999 ✓	09/11/78	LETTER	3
AUTHOR:	MD DEPT OF TRANS		MOFFETT RC	
ADDRESSEE:	EPA			
COPYEE:	LONG C		MCMATHIAS C JR	
	US SENATE			
DOCUMENT	1000 ✓	00/00/00	REPORT	4
AUTHOR:				
ADDRESSEE:				
COPYEE:				
DOCUMENT	1001 ✓	04/13/78	REPORT	4
AUTHOR:	BOGLE GH JR		RH BOGLE CO	
ADDRESSEE:				
COPYEE:				

D.4236

4140

TITLE

TELEPHONE CONTACTS TO SOLICIT 245T BENEFIT LETTERS TO THE EPA.

TELEPHONE CONTACTS TO SOLICIT 245T BENEFIT LETTERS TO THE EPA.

TELEPHONE CONTACTS TO SOLICIT 245T BENEFIT LETTERS TO THE EPA.

RPAR OF PRODUCTS CONTAINING 245T. OPP 30000 26. TELEPHONE
CONTACTS TO SOLICIT 245T BENEFIT LETTERS TO THE EPA.

CLEMENTS WR

HOLEWINSKI

TELEPHONE CONTACTS TO SOLICIT 245T BENEFIT LETTERS TO THE EPA.

245T RPAR. OPP 30000 26. TELEPHONE CONTACTS TO SOLICIT 245T
BENEFIT LETTERS TO THE EPA.

SARBANES PS

US HSE REPS

HIGHWAYS. TELEPHONE CONTACTS TO SOLICIT 245T BENEFIT LETTERS TO
THE EPA.

RR BRUSH CONTROL. TELEPHONE CONTACTS TO SOLICIT 245T BENEFIT
LETTERS TO THE EPA.

NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT 1002 ✓ AUTHOR: BOGLE JB ADDRESSEE: ASPLUNDH COPYEE:	08/17/78	LETTER RH BOGLE CO SKELTON J	1	TELEPHONE CONTACTS TO SOLICIT 245T BENEFIT LETTERS TO THE EPA
DOCUMENT 1003 ✓ AUTHOR: LOUISVILLE & NASHVILLE R ADDRESSEE: EPA COPYEE: ASPLUNDH MAZZOLI RL US SENATE	08/29/78	LETTER CARTER TL SKELTON J	2	OPP 30000 26. TELEPHONE CONTACTS TO SOLICIT 245T BENEFIT LETTERS TO THE EPA. FORD WH SNYDER G HUDDLESTON WD US HSE REPS
DOCUMENT 1004 ✓ AUTHOR: BESSEMER & LAKE ERIE RR ADDRESSEE: EPA COPYEE: HEINZ HJ US SENATE	08/31/78	LETTER WACKENHUT JB MARKS ML	2	OPP 30000 26. TELEPHONE CONTACTS TO SOLICIT 245T BENEFIT LETTERS TO THE EPA. SCHWEIKER RS US HSE REPS
DOCUMENT 1005 ✓ AUTHOR: ADDRESSEE: COPYEE:	00/00/00	REPORT	4	RAILROADS. TELEPHONE CONTACTS TO SOLICIT 245T BENEFIT LETTERS TO THE EPA.
DOCUMENT 1006 ✓ AUTHOR: CENTRAL ELECTRIC POWER C HAAKE WJ ADDRESSEE: EPA COPYEE: DANFORTH J	07/21/78	LETTER EACH OF MO REPRESENTATIV EAGLETON TF	2	OPP 30000 26. TELEPHONE CONTACTS TO SOLICIT 245T BENEFIT LETTERS TO THE EPA. US SENATE
DOCUMENT 1007 ✓ AUTHOR: ADDRESSEE: EPA COPYEE:	07/27/78	LETTER	1	TELEPHONE CONTACTS TO SOLICIT 245T BENEFIT LETTERS TO THE EPA.
DOCUMENT 1008 ✓ AUTHOR: KRAUSE M ADDRESSEE: EPA COPYEE:	08/15/78	LETTER KUTTER JP	1	PROHIBITION ON USE OF 245T FOR RIGHTOFWAY CLEARANCE. TELEPHONE CONTACTS TO SOLICIT 245T BENEFIT LETTERS TO THE EPA. THUMB ELECTRIC COOPERATI

D-4237

4141

NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT 1009 ✓	08/21/78	LETTER	1	PROHIBITION ON USE OF 245T FOR RIGHTOFWAY CLEARANCE. OPP 30000 26. TELEPHONE CONTACTS TO SOLICIT 245T BENEFIT LETTERS TO THE EPA.
AUTHOR: JAFFRE LE ADDRESSEE: EPA COPYEE:				
DOCUMENT 1010 ✓	08/31/78	LETTER	3	OPP 30000 26. TELEPHONE CONTACTS TO SOLICIT 245T BENEFIT LETTERS TO THE EPA.
AUTHOR: DELAWARE COUNTY ELECTRIC GIFFORD R ADDRESSEE: EPA COPYEE: ASPLUNDH DELAWARE COUNTY ELECTRIC IVES J KULP F NRECA PRESCOTT CP				
DOCUMENT 1011 ✓	00/00/00	REPORT	17	RURAL ELECTRIC COOPS. TELEPHONE CONTACTS TO SOLICIT 245T BENEFIT LETTERS TO THE EPA.
AUTHOR: ADDRESSEE: COPYEE:				
DOCUMENT 1012 ✓	08/11/78	LETTER	1	OPP 30000 26. TELEPHONE CONTACTS TO SOLICIT 245T BENEFIT LETTERS TO THE EPA.
AUTHOR: WARREN D WAYNEWHITE COUNTIES ELEC ADDRESSEE: EPA COPYEE:				
DOCUMENT 1013 ✓	09/07/78	LETTER	2	245T RPAR. OPP 30000 26. TELEPHONE CONTACTS TO SOLICIT 245T BENEFIT LETTERS TO THE EPA.
AUTHOR: BOSSIER RURAL ELECTRIC BURGESS JC ADDRESSEE: EPA COPYEE:				
DOCUMENT 1014 ✓	00/00/00	REPORT	19	MINOR UTILITIES. TELEPHONE CONTACTS TO SOLICIT 245T BENEFIT LETTERS TO THE EPA.
AUTHOR: ADDRESSEE: COPYEE:				
DOCUMENT 1015 ✓	05/16/78	LETTER	2	TELEPHONE CONTACTS TO SOLICIT 245T BENEFIT LETTERS TO THE EPA.
AUTHOR: METROPOLITAN EDISON ULRICH ES ADDRESSEE: EPA COPYEE: DENNO WH DUDDLEY RE HEINZ HJ III JARMOSKA DR JOHNS HR JR LANGLEY F MANBECK CF OPAKE MA ROBIDOUX HL ROSSMAN WR SCHWEIKER RS US HSE REPS US SENATE YATRON G				

D-4238

4142

NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT 1016 ✓	05/26/78	LETTER	1	REGISTRATION PROCEEDINGS CONCERNING PESTICIDE PRODUCTS CONTAINING 245T (OPP 3000036). TELEPHONE CONTACTS TO SOLICIT 245T BENEFIT LETTERS TO THE EPA.
AUTHOR: KENNY PJ ADDRESSEE: EPA COPYEE: NEW ENGLAND POWER SERVIC				
DOCUMENT 1017 ✓	05/31/78	LETTER	2	TELEPHONE CONTACTS TO SOLICIT 245T BENEFIT LETTERS TO THE EPA.
AUTHOR: JOHNSTONE RA ADDRESSEE: COPYEE: MONONGAHELA POWER				
DOCUMENT 1018 ✓	06/01/78	LETTER	3	245T - NOTICE OF REBUTTABLE PRESUMPTION 43FR17116, ET SEQ., 780421. TELEPHONE CONTACTS TO SOLICIT 245T BENEFIT LETTERS TO THE EPA.
AUTHOR: DETROIT EDISON ADDRESSEE: EPA COPYEE: EISELE PJ LEONARD DA GESSNER JJ HEIDRICH A JR KNIGHT JE				
DOCUMENT 1019 ✓	06/02/78	LETTER	3	245T HERBICIDE REVIEW. TELEPHONE CONTACTS TO SOLICIT 245T BENEFIT LETTERS TO THE EPA.
AUTHOR: SPANGLER PE ADDRESSEE: EPA COPYEE: EPA COULTER R GOODLING WF MOORHEAD WS SCHWEIKER RS WALGREN D WEST PENN POWER AMMERMAN JS DENT JH HEINZ H J III MURPHY AJ SHUSTER EO BECKWITH C DOW JOHNSON EL MURTHA JP US HSE REPS COSTLE D GAYDOS JM JOHNSTON PH MYERS GA US SENATE				
DOCUMENT 1020 ✓	07/03/78	LETTER	1	NONRESTRICTIVE USE OF 245T FOR BRUSH CONTROL. OPP 30000 26. TELEPHONE CONTACTS TO SOLICIT 245T BENEFIT LETTERS TO THE EPA.
AUTHOR: RUDDICK B ADDRESSEE: EPA COPYEE: AMCHEM CANNON F KIDDER H ANTRIM LYNN CAPLINGER B NELSON TREE SERVICE ASPLUNDH DEWILDE RC BLUME TREE SERVICES FRITSCH DW				
DOCUMENT 1021 ✓	07/06/78	LETTER	1	TELEPHONE CONTACTS TO SOLICIT 245T BENEFIT LETTERS TO THE EPA.
AUTHOR: IVES JS ADDRESSEE: ASPLUNDH COPYEE: NATL RURAL ELECTRIC COOP GALVIN MT				
DOCUMENT 1022 ✓	07/07/78	LETTER	1	TELEPHONE CONTACTS TO SOLICIT 245T BENEFIT LETTERS TO THE EPA.
AUTHOR: POWER AUTHORITY OF THE S ADDRESSEE: ASPLUNDH COPYEE: SAROKWASH PJ SKELTON J				

4239

4143

NUMBER	DATE	TYPE	PAGES
DOCUMENT 1023 ✓ AUTHOR: KG&E ADDRESSEE: ASPLUNDH COPYEE:	07/07/78	LETTER PICKARTS LA SKELTON J	1
DOCUMENT 1024 ✓ AUTHOR: COLEMAN MC ADDRESSEE: EPA COPYEE: ASPLUNDH HOLLAND KL SPENCE F	07/14/78	LETTER SC ELECTRIC & GAS DAVIS MJ HOLLINGS EF THURMOND STROM	2
DOCUMENT 1025 ✓ AUTHOR: GORDON DA ADDRESSEE: COPYEE:	07/19/78	LETTER	1
DOCUMENT 1026 ✓ AUTHOR: HOLLOWAY JE ADDRESSEE: EPA COPYEE: PERCY CH US SENATE	07/20/78	LETTER SOUTHERN IL POWER SIMON P	2
DOCUMENT 1027 ✓ AUTHOR: MOSS RH III ADDRESSEE: EPA COPYEE:	07/28/78	LETTER VEPCO	2
DOCUMENT 1028 ✓ AUTHOR: SOUTHERN CA EDISON ADDRESSEE: ASPLUNDH COPYEE: ECKMAN JR	08/01/78	LETTER STLAURENT D SKELTON J	1
DOCUMENT 1029 ✓ AUTHOR: NOSSE RA ADDRESSEE: EPA COPYEE: ASPLUNDH US HSE REPS	08/11/78	LETTER HOLEWINSKI DE US SENATE	3

D-4240

4144

TITLE

TELEPHONE CONTACTS TO SOLICIT 245T BENEFIT LETTERS TO THE EPA.

OPP 30000 26. TELEPHONE CONTACTS TO SOLICIT 245T BENEFIT LETTERS
TO THE EPA.

DERRICK B
JENRETTE JW JR
US HSE REPS

HOLEWINSKI DE
MANN JR
US SENATE

TELEPHONE CONTACTS TO SOLICIT 245T BENEFIT LETTERS TO THE EPA.

OPP 30000 26. TELEPHONE CONTACTS TO SOLICIT 245T BENEFIT LETTERS
TO THE EPA.

COOP

STEVENSON AE

US HSE REPS

REBUTTAL RESUMPTION AGAINST REGISTRATION (RPAR 245T). OPP 30000
26. TELEPHONE CONTACTS TO SOLICIT 245T BENEFIT LETTERS TO THE EPA.

TELEPHONE CONTACTS TO SOLICIT 245T BENEFIT LETTERS TO THE EPA.

OPP 30000 26. TELEPHONE CONTACTS TO SOLICIT 245T BENEFIT LETTERS
TO THE EPA.

METZENBAUM HM

REGULA R

NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT 1030 ✓	08/14/78	LETTER	2	245T CHEMICAL. OPP 30000 26. TELEPHONE CONTACTS TO SOLICIT 245T BENEFIT LETTERS TO THE EPA.
AUTHOR: DAUBERT RL		KAMO ELECTRIC COOPERATIV		
ADDRESSEE:				
COPYEE: BARTLETT D		BELLMON H		BOLLING R
DANFORTH J		EAGLETON T		ICHORD R
RISENHOOVER T		SKELTON I		TAYLOR G
US SENATE		YOUNG G		COLEMAN T
				JONES JR
				US HSE REPS
DOCUMENT 1031 ✓	08/17/78	LETTER	2	OPP 30000 26. TELEPHONE CONTACTS TO SOLICIT 245T BENEFIT LETTERS TO THE EPA.
AUTHOR: ATLANTIC ELECTRIC		MORGENWECK FE		
ADDRESSEE: EPA				
COPYEE:				
DOCUMENT 1032 ✓	08/28/78	LETTER	2	OPP 30000 26. TELEPHONE CONTACTS TO SLICIT 245T BENEFIT LETTERS TO THE EPA.
AUTHOR: ME PUBLIC SERVICE		NORSWORTHY W		
ADDRESSEE: EPA				
COPYEE: COHEN W		EMERY D		HATHAWAY W
US HSE REPS		US SENATE		MUSKIE E
DOCUMENT 1033 ✓	09/13/78	LETTER	2	OPP 30000 26. TELEPHONE CONTACTS TO SOLICIT 245T BENEFIT LETTERS TO THE EPA.
AUTHOR: BALDWIN MR		INDIANAPOLIS POWER & LIG		
ADDRESSEE: EPA				
COPYEE: ASPLUNDH		BAYH B		EVANS DW
JACOBS A JR		LUGAR RG		US HSE REPS
				HOLEWINSKI DE
				US SENATE
DOCUMENT 1034 ✓	08/31/78	LETTER	1	OPP 30000 26. TELEPHONE CONTACTS TO SOLICIT 245T BENEFIT LETTERS TO THE EPA.
AUTHOR: ALTHEIDE WL		FARMERS ELECTRIC COOPERA		
ADDRESSEE: EPA				
COPYEE: COLEMAN ET		EAGLETON TF		US HSE REPS
				US SENATE
DOCUMENT 1035 ✓	09/18/78	LETTER	2	OPP 30000 26. TELEPHONE CONTACTS TO SOLICIT 245T BENEFIT LETTERS TO THE EPA.
AUTHOR: EASTERN IA LIGHT & POWER		SCHWABENLANDER A		
ADDRESSEE: EPA				
COPYEE:				
DOCUMENT 1036 ✓	09/21/78	LETTER	2	OPP 30000 26 - USAGE, ALTERNATIVE AND BENEFITS OF THE HERBICIDE 245T. TELEPHONE CONTACTS TO SOLICIT 245T BENEFIT LETTERS TO THE EPA.
AUTHOR: POTOMAC EDISON		WATSON MR		
ADDRESSEE: EPA				
COPYEE: ASPLUNDH		HOLEWINSKI DE		

4145
4141

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1037 ✓	10/02/78	LETTER	2
AUTHOR:	BRENNEMAN WS		IL POWER	
ADDRESSEE:	EPA			
COPYEE:	ADAMS GL MADIGAN ER US SENATE		ASPLUNDH PERCY C	
DOCUMENT	1038 ✓	10/04/78	LETTER	2
AUTHOR:	MO POWER & LIGHT		QUICK GL	
ADDRESSEE:	EPA			
COPYEE:	ASPLUNDH ICHORD R		DANFORTH J US HSE REPS	
DOCUMENT	1039 ✓	10/11/78	LETTER	2
AUTHOR:	GILLESPIE JL		PENN LINE SERVICE	
ADDRESSEE:	EPA			
COPYEE:	DENT JH US SENATE		HEINZ J III	
DOCUMENT	1040 ✓	10/11/78	LETTER	1
AUTHOR:	DELMARVA POWER		HAMILTON W	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1041 ✓	10/12/78	LETTER	2
AUTHOR:	MORROW PA		NEW BEDFORD GAS &	
ADDRESSEE:	EPA			
COPYEE:	CASH HD VARNUM DF		DEMATOS AB	
DOCUMENT	1042 ✓	10/18/78	LETTER	1
AUTHOR:	MI POWER		SMITH L	
ADDRESSEE:	EPA			
COPYEE:				
DOCUMENT	1043 ✓	10/18/78	LETTER	2
AUTHOR:	BROOKS HE		IN & MI ELECTRIC	
ADDRESSEE:	EPA			
COPYEE:	ASPLUNDH WILSON AC		RUFF DE	

D-4242

4146

TITLE

OPP 30000 26. TELEPHONE CONTACTS TO SOLICIT 245T BENEFIT LETTERS TO THE EPA.

HOLEWINSKI DE
STEVENSON A

IDLEMAN LL
US HSE REPS

REREGISTRATION OF THE HERBICIDE 245T. OPP30000 26. TELEPHONE CONTACTS TO SOLICIT 245T BENEFIT LETTERS TO THE EPA.

EAGLETON T
US SENATE

HOLEWINSKI DE

OPP 30000 26. TELEPHONE CONTACTS TO SOLICIT 245T BENEFIT LETTERS TO THE EPA.

SCHWEIKER RS

US HSE REPS

OPP 30000 26. TELEPHONE CONTACTS TO SOLICIT 245T BENEFIT LETTERS TO THE EPA.

OPP 30000 26. REGISTRATION PROCEEDINGS CONCERNING 245T.
EDISON

HARTSHORN JA

ROUSSEAU RA

OPP 30000 26. TELEPHONE CONTACTS TO SOLICIT 245T BENEFIT LETTERS TO THE EPA.

OPP 30000 26. TELEPHONE CONTACTS TO SOLICIT 245T BENEFIT LETTERS TO THE EPA.

SKELTON J

WARTZOK DF

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1044 ✓	00/00/00	MEMO	3

AUTHOR: BOSTON EDISON
 ADDRESSEE:
 COPYEE:
 REPORT
 LITTLE RH

DOCUMENT	1045 ✓	00/00/00	REPORT	15

AUTHOR:
 ADDRESSEE:
 COPYEE:

DOCUMENT	1046 ✓	00/00/00	CHART	1

AUTHOR:
 ADDRESSEE:
 COPYEE:

DOCUMENT	1047 ✓	11/02/78	LETTER	1

AUTHOR: ASPLUNDH
 ADDRESSEE: DOW
 COPYEE:
 HOLEWINSKI DE
 SMITH LL

DOCUMENT	1048 ✓	02/01/79	DISTRB	2

AUTHOR: DOW
 ADDRESSEE: DOW
 COPYEE: NORRIS MG
 LETTER
 SMITH LL
 DAVIDSON JH
 TRAYNOR MJ

DOCUMENT	1049 ✓	04/21/78	NEWS	1

AUTHOR: BARRONS K
 ADDRESSEE:
 COPYEE: HESS GE
 DOW

DOCUMENT	1050 ✓	08/02/78	LEGIS	4

AUTHOR: EPA
 ADDRESSEE:
 COPYEE:
 JOHNSON EL

①
 4243

4147

TITLE

REBUTTABLE PRESUMPTION AGAINST REGISTRATION AND CONTINUED
REGISTRATION OF PESTICIDE PRODUCTS CONTAINING 245T. OPP 30000 26.
TELEPHONE CONTRACTS TO SOLICIT 245T BENEFIT LETTERS TO THE EPA.

MAJOR UTILITIES. TELEPHONE CONTACTS TO SOLICIT 245T BENEFIT
LETTERS TO THE EPA.

SUMMARY OF TELEPHONE CONTACTS TO SOLICIT 245T BENEFIT LETTERS TO
EPA.

ASPLUNDH TELEPHONE SOLICITATION. TELEPHONE CONTACTS TO SOLICIT
245T BENEFIT LETTERS TO THE EPA.

FREDERICK DM
WILLIAMS CS

LENG ML

245T RPAR REVIEW IS NOT A SUSPENSION OF USE.

EPA PESTICIDE PROGRAMS REBUTTABLE PRESUMPTION AGAINST REGISTRATION
AND CONTINUED REGISTRATION OF PESTICIDE PRODUCTS CONTAINING 245
TRICHLOROPHENOL AND ITS SALTS (FED REGISTER 43(149), 34026-34028,
780802).

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1051	00/00/00	CHART	1

AUTHOR: JENSEN DJ
ADDRESSEE:
COPYEE:

DOCUMENT	1052	07/17/78	MEMO	1
AUTHOR:	DOW		LENG ML	
ADDRESSEE:	DOW		CRUMMETT WB	
	GLEESON JG		GRAY JA	
	MCCOLLISTER DD		SCHROETER RH	
COPYEE:				

DOCUMENT	1053	05/09/78	REPORT	4
AUTHOR:	DOW		KOCIBA RJ	
ADDRESSEE:	DOW		DAVIDSON JH	
COPYEE:				

DOCUMENT	1054	05/31/78	LETTER	1
AUTHOR:	DAVIDSON JH		DOW	
ADDRESSEE:	PROponents OF PHENOXY HE			
COPYEE:				

DOCUMENT	1055	08/16/78	LETTER	2
AUTHOR:	CROSBY DG		UC DAVIS	
ADDRESSEE:	BLAIR EH		DOW	
COPYEE:				

DOCUMENT	1056	08/16/78	LETTER	1
AUTHOR:	ASPLUNDH		DALTON CB	
ADDRESSEE:	EPA			
COPYEE:				

DOCUMENT	1057	05/09/78	LETTER	2
AUTHOR:	DEPT OF TRANS ME		MALLAR RL	
ADDRESSEE:	EPA			
COPYEE:	DEPT OF TRANS ME		MAIRS D	

DOCUMENT	1058	07/05/78	REPORT	1
AUTHOR:	DOW		MORGAN AH	
ADDRESSEE:				
COPYEE:				

D.
4244

4148

TITLE

SUMMARY OF RESIDUES OF SILVEX AND 245-TRICHLOROPHENOL IN TISSUES OF CATTLE FED 300 PPM OF SILVEX IN THEIR DIET FOR 28 DAYS AND THE DISSIPATION OF THOSE RESIDUES.

CHARLOTTE TAYLOR RESPONSE TO 245T RPAR NO 310 30000/26.

DAVIDSON JH
JENSEN DJ
SMITH LL

GETZENDANER ME
LAFOLLETTE
TRAYNOR MJ

SUGGESTED STATEMENT TO BE USED FOR RPAR.

SMITH LL

GROUP MEETING TO COORDINATE EFFORTS ON RPAR FOR 245T.

COVER LETTER FOR CA REBUTTAL TO EPA 245T RPAR CTTL.

245T RPAR. OPP 30000 26. TELEPHONE CONTACTS TO SOLICIT 245T BENEFIT LETTERS TO THE EPA.

245T RPAR. TELEPHONE CONTACTS TO SOLICIT 245T BENEFIT LETTERS TO THE EPA.

RISSEL MC

STONE TM

PROPOSED COMPILATION SCHEDULE OF 245T RPAR REBUTTAL SUBMISSION.

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1059 ✓	07/05/78	LETTER REPORT	1
AUTHOR:	DOW		MORGAN AH	
ADDRESSEE:	DOW		DAVIDSON JH	
COPYEE:	MCCOLLISTER DD		TRAYNOR MJ	
DOCUMENT	1060 ✓	00/00/78	REPORT	29
AUTHOR:	DOW		RAO KS	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1061 ✓	07/14/78	REPORT	23
AUTHOR:	DOW		RAO KS	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1062 ✓	02/28/79	REPORT	4
AUTHOR:	DOW			
ADDRESSEE:	EPA			
COPYEE:				
DOCUMENT	1063 ✓	00/00/00	REPORT	8
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:				
DOCUMENT	1064 ✓	06/19/78	REPORT	39
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:				
DOCUMENT	1065 ✓	06/19/78	MEMO	1
AUTHOR:	DOW		SCHWETZ BA	
ADDRESSEE:	DOW		GEHRING PJ	
COPYEE:	MCCOLLISTER DD		RAO KS	

D-4245

4149

TITLE

POLICY QUESTIONS ON THE ORGANIZATION OF THE 245T RPAR REBUTTAL.

GRAY JA

LENG ML

EVALUATION OF THE MUTAGENIC POTENTIAL OF 245T AND TCDD IN RESPONSE
TO A RPAR ON 245T.
SCHWETZ BA

EVALUATION OF THE MUTAGENIC POTENTIAL OF 245T AND TCDD IN RESPONSE
TO A RPAR ON 245T.
SCHWETZ BA

RESPONSE BY DOW TO THE EPA'S DECISION AND EMERGENCY ORDER
SUSPENDING REGISTRATIONS FOR CERTAIN USES OF 245T AND
2-(245-TRICHLOROPHENOXY) PROPIONIC ACID (SILVEX) IN A NOTICE TO
REGISTRANTS DATED 790228.

RPAR OF 245T; MUTAGENICITY.

RPAR OF 245T; TERATOGENICITY/FETOTOXICITY AS A TRIGGER.

RPAR ON 245T.

KOCIBA RJ
SMITH LL

LENG ML

	NUMBER	DATE	TYPE	PAGES
DOCUMENT 1066	✓	05/11/78	LETTER	2
AUTHOR:	DAY BE		HOFFMAN GO	
	OR ST UNIV		PURDUE UNIV	
	WITT JM			
ADDRESSEE:	AG EXP STATION			
COPYEE:				
DOCUMENT 1067	✓	06/13/78	MEMO	1
AUTHOR:	DOW		LENG ML	
ADDRESSEE:	DOW		DAVIDSON JH	
COPYEE:	DOW		DONALDS JE	
	SMITH LL		TRAYNOR MJ	
DOCUMENT 1068	✓	08/02/78	LEGIS	26
AUTHOR:	FED REGISTER			
ADDRESSEE:				
COPYEE:				
DOCUMENT 1069	✓	05/03/78	NEWS	1
AUTHOR:	PEST & TOX CHEM NEWS			
ADDRESSEE:				
COPYEE:				
DOCUMENT 1070	✓	05/03/78	NEWS	3
AUTHOR:	PEST & TOX CHEM NEWS			
ADDRESSEE:				
COPYEE:				
DOCUMENT 1071	✓	06/09/78	LEGIS	14
AUTHOR:	CITIZENS FOR ENVIRON		WOOLEY DR	
ADDRESSEE:				
COPYEE:				
DOCUMENT 1072	✓	05/16/78	LETTER	1
AUTHOR:	DOW		LENG ML	
ADDRESSEE:	DOW		HOLDER BB	
COPYEE:	DOW		DAVIDSON JH	
DOCUMENT 1073	✓	07/06/78	MEMO	1
AUTHOR:	DOW		LENG ML	
ADDRESSEE:	DOW		KILIAN DJ	
COPYEE:	DOW		DUNN FL	

D-4246

4150

TITLE

BACKGROUND INFORMATION ON RPAR PROCESS CTTL.

HOLT HA
TX A&M

NEWTON M
UC BERKELEY

USDA STATE UNIVERSITY ROLE IN 245T RPAR.

KAYE SCHOLER
WESSEL MR

MCCOLLISTER DD

(FED REGISTER 43(149), 34029-34054).

DOW REGISTERS IMMEDIATE WELCOME TO RPAR NOTICE ON 245T (PEST & TOX
CHEM NEWS, 4).

EACH FOREST SERVICE USE OF TCDD CONTAINING HERBICIDES TO BE PASSED
BY CUTLER (PEST & TOX CHEM NEWS, 9-11).

CITIZEN COMMENTS REGARDING 245T USE ON TRANSMISSION LINES BEFORE
THE EPA OFFICE OF PESTICIDE PROGRAMS REBUTTABLE PRESUMPTION AGAINST
REGISTRATION AND CONTINUED REGISTRATION OF PESTICIDE PRODUCTS
CONTAINING 245T.

SEVESCO AND 245T RPAR.

TRAYNOR MJ

245T RPAR CTTL.

HOLDER BB

MCCOLLISTER DD

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1074 ✓	08/16/78	LETTER	1
AUTHOR:	DOW		MCCOLLISTER DD	
ADDRESSEE:	DOW		GEHRING PJ	
COPYEE:	DOW		DAVIDSON JH	
DOCUMENT	1075 ✓	00/00/00	MEMO	2
AUTHOR:	EPA		PERTEL R	
ADDRESSEE:	EPA		REECE M	
COPYEE:				
DOCUMENT	1076 ✓	04/28/78	MEMO	1
AUTHOR:	DOW		LENG ML	
ADDRESSEE:	DOW		HOLDER BB	
COPYEE:	DOW		DAVIDSON JH	
	SMITH LL		TRAYNOR MJ	
DOCUMENT	1077 ✓	07/28/78	LETTER	3
AUTHOR:	DOW		WULF ML	
ADDRESSEE:	DOW		BLAIR EH	
	COOPER RD		DAVIDSON JH	
	EADIE JD		FIERO TH	
	GLOMSKI RL		GRAY JA	
	HOLDER BB		JANTZ OK	
	LEHMAN FR		MANSTON JH	
	MORGAN AH		ROBERTS DJ	
	VATNE RD		WEAVER MA	
	WOODS CD			
COPYEE:				
DOCUMENT	1078 ✓	05/25/78	LETTER	1
AUTHOR:	SMITH CL		USDA	
ADDRESSEE:	DOW		LENG ML	
COPYEE:				
DOCUMENT	1079 ✓	05/31/78	LETTER	1
AUTHOR:	DOW		LENG ML	
ADDRESSEE:	DOW		SMITH LL	
COPYEE:	DOW		DAVIDSON JH	
	KAYE SCHOLER		MCCOLLISTER DD	
	WESSEL MR			
DOCUMENT	1080 ✓	00/00/76	REPORT	2
AUTHOR:				
ADDRESSEE:				
COPYEE:				

4151

D-4247

TITLE

245T RPAR.

KOCIBA RJ
LENG ML

SCHWETZ BA
SMITH LL

245T STUDIES FURTHER REVIEW.

WARNICK H

245T RPAR MUTAGENICITY STUDIES.

SCHWETZ BA
GEHRING PJ
WULF ML

GRAY JA

245--TRICHLOROPHENOL RPAR POSITION DOCUMENTS.

BOEKER RW
DAVIS DW
GEHRING PJ
HAGERMAN RL
KENAGA EE
MARTIN PS
SCHWETZ BA
WILLIAMS CS

CAPRICCIOSO JM
DEVRIEZE JD
GETZENDANER ME
HEMBREE JD
KOCIBA RJ
MCCOLLISTER DD
TRAYNOR MJ
WINQUIST ME

USDA ROLE IN 245T RPAR.

HEFNER RE
MULLISON WR

JONES GO
TRAYNOR MJ

TCDD MUTAGENICITY.

NUMBER	DATE	TYPE	PAGES
DOCUMENT 1081	03/00/78	LETTER REPORT	2
AUTHOR: EPA		PERTEL R	
ADDRESSEE: EPA		REECE M	
COPYEE:			
DOCUMENT 1082	04/28/78	LETTER	1
AUTHOR: DOW		LENG ML	
ADDRESSEE: DOW		HOLDER BB	
COPYEE: DOW		DAVIDSON JH	
SMITH LL		TRAYNOR MJ	
DOCUMENT 1083	06/21/78	LETTER	2
AUTHOR: DOW		WARREN LE	
ADDRESSEE: TO ALL WHO WANT TO PREVE			
COPYEE:			
DOCUMENT 1084	05/31/78	LETTER	1
AUTHOR: DAVIDSON JH		DOW	
ADDRESSEE: PROPONENTS OF PHENOXY HE			
COPYEE:			
DOCUMENT 1085	00/00/74	TELEX	3
AUTHOR: DOW			
ADDRESSEE:			
COPYEE:			
DOCUMENT 1086	05/08/78	LETTER	1
AUTHOR: BECKWITH CL		DOW	
ADDRESSEE:			
COPYEE:			
DOCUMENT 1087	00/00/00	LETTER	2
AUTHOR:			
ADDRESSEE:			
COPYEE:			
DOCUMENT 1088	05/15/78	LETTER	4
AUTHOR: DOW		SMITH LL JR	
ADDRESSEE: DOW		BALDWIN DM	
CUMMINS DW		FEARS RD	
HAMMOND LE		HARRISON RP	
HUNTER SM		JENTES CE	
REGAN JB		RITTY PM	
STEELE RW		ULLOM RE	
COPYEE: 4152 DOW		COLBY RW	
GRAY JA		HAMAGUCHI H	
JANTZ OK		JONES GG	
MULLISON WR		SMITH LL	

①-4248

TITLE

245T STUDIES, FURTHER REVIEW.

WARNICK H

245T RPAR, MUTAGENICITY STUDIES

SCHWETZ BA
GEHRING PJ
WULF ML

GRAY JA

BENEFITS FOR 245T RPAR.

GROUP MEETING TO COORDINATE EFFORTS ON RPAR FOR 245T.

DOW COMMENTS ON EPA ANNOUNCEMENT OF REVIEW OF 245T HERBICIDE.

245T RPAR.

245T RPAR

245T RPAR FIELD PLANS.

BEAN JN
GRUMBLES JB
HUFFMAN JR
LICHY CT
RYDER JC
VANDERSCHAAF P
DAVIDSON JH
HEFNER RE
LENG ML
STEARNS JH

BYRD BC
HALE DB
HUNTER JH
LUDWIG PD
SMITH ML
WARREN LE
GANTZ RL
HUNTER RC
MCCOLLISTER DD
TRAYNOR MJ

NUMBER	DATE	TYPE	PAGES
WILLIAMS CS		WRIGHT WG	
DOCUMENT 1089 ✓	05/22/78	LETTER	1
AUTHOR: DOW		STEARNS WJ	
ADDRESSEE: DOW		AG DIST SALES MGR	
COPYEE: DOW		DAVIDSON JH	
DOCUMENT 1090 ✓	06/19/78	LETTER REPORT	2
AUTHOR: DOW		JONES GO	
ADDRESSEE: ALL DIST SALES MGR		ALL FIELD R&D TS&D	
COPYEE: DOW		BOYLE CM	
DOYLE JP		DREYER WA	
JANTZ OK		LENG ML	
MULLISON WR		NILSON A	
STAMISON PG		STEARNS WJ	
VRANISH SR		WARD WH	
DOCUMENT 1091 ✓	04/21/78	REPORT	43
AUTHOR: EPA			
ADDRESSEE:			
COPYEE:			
DOCUMENT 1092 ✓	07/31/78	PRESENT	25
AUTHOR: DOW		SMITH LL	
ADDRESSEE: DOW			
COPYEE: LENG ML			
DOCUMENT 1093 ✓	04/21/78	PROMO	5
AUTHOR: DOW			
ADDRESSEE:			
COPYEE: BALDWIN DM		BEAN JN	
CUMMINS DW		DAVIDSON JH	
GRUMBLES JB		HALE DB	
HEFNER RE		HUFFMAN JR	
JANTZ OK		JENTES CE	
LUDWIG PD		MCCOLLISTER DD	
RITTY PM		RYDER JC	
STEELE RW		TRAYNOR MJ	
WARREN LE		WILLIAMS CS	

4153

1-4249

TITLE

245T RPAR STATUS.

AG SALESPERSONS
SMITH LL

STAMISON PG

INFORMATIONAL MATERIAL 245T RPAR.

PERSO

DAVIDSON JH
GORING CA
MACDONALD LA
PRIDY JK
TOWNSEND RM
WILLIAMS CS

DONALDS JE
HUNTER RC
MOSS RD
SMITH LL
TRAYNOR MJ

REBUTTABLE PRESUMPTION AGAINST REGISTRATION AND CONTINUED
REGISTRATION OF PESTICIDE PRODUCTS CONTAINING 245T(FEDERAL REGISTER
43(78), 17116-17157).

RESPONSE OF DOW CHEMICAL U.S.A. TO NOTICE OF REBUTTABLE
PRESUMPTION AGAINST REGISTRATION AND CONTINUED REGISTRATION OF
PESTICIDE PRODUCTS CONTAINING 245T.

WHAT THE 245T RPAR MEANS TO YOU. .

BYRD BC
FEARS RD
HAMMONDLE
HUNTER RC
LENG ML
MOSS RD
SMITH ML
ULLOM RE
WRIGHT WG

COLBY RW
GRAY JA
HARRISON RP
HUNTER SM
LICHY CT
MULLISON WH
STEARNS WJ
VANDERSCHAAF P

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1094	05/30/78	LETTER	2
AUTHOR:	DOW		SMITH LL	
ADDRESSEE:	DOW		BALDWIN DM	
	COLBY RW		CUMMINS DW	
	GRAY JA		GRUMBLES JB	
	HARRISON RP		HEFNER RE	
	HUNTER SM		JANTZ OK	
	LICHY CT		LUDWIG PD	
	MULLISON WH		RITTY PM	
	STEARNS WJ		STEELE RW	
	VANDERSCHAAF P		WARREN LE	

COPYEE:

DOCUMENT	1095	08/17/78	NEWS	4
AUTHOR:	DOW		EADIE JD	
ADDRESSEE:				
COPYEE:				

DOCUMENT	1096	05/01/78	REPORT	7
AUTHOR:	DOW		LENG ML	
ADDRESSEE:				
COPYEE:				

DOCUMENT	1097	05/01/78	LETTER	2
AUTHOR:	DOW		LENG ML	
ADDRESSEE:	DOW		BLAIR EH	
	CRUMMETT WB		DAVIDSON JH	
	GORING CA		GRAY JA	
	HOERGER FD		HOLDER BB	
	JONES GO		KOCIBA RJ	
	MCCOLLISTER DD		MOOLENAAR RJ	
	NORRIS JM		OCONNOR JN	
	PRUITT ME		ROME VK	
	SHADOFF LA		SHEETS DP	
	STEARNS WJ		TRAYNOR MJ	
	WILLIAMS CS		DOW	

COPYEE:

DOCUMENT	1098	07/00/78	REPORT	13
AUTHOR:	CA DEPT FOOD AND AG		CROSBY DG	
ADDRESSEE:				
COPYEE:				

D-4250

4154

TITLE

245T RPAR-BACK-UP-LITERATURE.

BEAN JN	BYRD BC
DAVIDSON JH	FEARS RD
HALE DB	HAMMOND LE
HUFFMAN JR	HUNTER RC
JENTES CE	LENG ML
MCCOLLISTER DD	MOSS RD
RYDER JC	SMITH ML
TRAYNOR MJ	ULLOM RE
WILLIAMS CS	WRIGHT WO

DOW CHEM USA STATEMENT RELATIVE TO EPA RPAR CONCERNING 245T
(DOWICIDE 2).
DOW

245T RPAR-REVIEW OF EPA'S RATIONALE AND THEIR CALCULATIONS FOR
EXPOSURE TO 245T AND TCDD.

245T RPAR - A GAME BY EPA'S RULES.

DOM	BUMB RB
BLAU GE	GEHRING PJ
DONALDS JE	HEFNER RE
HART RD	JOHNSON JE
JANTZ OK	MACDONALD LA
LANGNER RR	MULLISON WR
MOSS RD	PARK CN
OREFFICE PF	SCHNETZ BA
SCHROETER RH	STAMISON PG
SMITH LL	WESSEL MR
VACCARO JR	

REBUTTAL TO EPA'S INTERPRETATION OF DATA REGARDING THE HEALTH
HAZARDS OF 245T.
KNAAK JB UC DAVIS

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1099 ✓	07/25/78	LEGIS	11

AUTHOR: EPA JOHNSON EL
 ADDRESSEE:
 COPYEE:

DOCUMENT	1100 ✓	09/08/78	LETTER	1

AUTHOR: EPA JOHNSON EL
 ADDRESSEE: DOW MCCOLLISTER DD
 COPYEE:

DOCUMENT	1101 ✓	04/12/78	REPORT	3

AUTHOR: EPA ONEILL
 ADDRESSEE:
 COPYEE:

DOCUMENT	1102 ✓	05/22/78	LETTER	2

AUTHOR:
 ADDRESSEE:
 COPYEE:

DOCUMENT	1103 ✓	08/26/77	MEMO	1

AUTHOR: EPA PERTEL R
 ADDRESSEE: EPA REESE M
 COPYEE:

DOCUMENT	1104 ✓	09/08/78	LEGIS	1

AUTHOR: EPA JOHNSON EL
 ADDRESSEE:
 COPYEE:

DOCUMENT	1105 ✓	04/12/78	NEWS	1

AUTHOR: CITIZENS NATL FOREST COAL JANSSON E
 ADDRESSEE:
 COPYEE:

4155
 D-4251

TITLE

PESTICIDE PROGRAMS NOTICE OF REBUTTABLE PRESUMPTION AGAINST
REGISTRATION AND CONTINUED REGISTRATION OF PESTICIDE PRODUCTS
CONTAINING 245-TRICHLOROPHENOL AND ITS SALTS.

EXTENSION OF THE PERIOD FOR THE THE SUBMISSION OF RISK REDUTTAL
EVIDENCE FOR 245-TRICHLOROPHENOL WAS GRANTED CTTL.

FOR IMMEDIATE RELEASE WEDNESDAY 780412 245T PESTICIDE BEING
REVIEWED BY EPA (ENVIRONMENTAL NEWS).

EFFECTS FROM 245T SPRAYING IN CA CTTL.

TCDD DIOXIN MUTAGENICITY.

WARNICK H

RPAR AND CONTINUED REGISTRATION OF PESTICIDE PRODUCTS CONTAINING
245 TRICHLOROPHENOL AND ITS SALTS(FED REGISTER 43(180), 41269,
780915).

CITIZENS NATL FOREST COALTN CALLS UPON THE EPA TO IMMEDIATELY HALT
THE SALES AND PRODUCTION OF ALL PRODUCTS CONTAMINATED WITH TCDD
DIOXIN, THE MOST DEADLY CHEMICAL EVER SYNTHESIZED.

STAUBER J

LLEN JR

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1106 ✓	07/10/80	LETTER REPORT	2
AUTHOR:	FOE		JANSSON E	
ADDRESSEE:	COSTLE D		EPA	
COPYEE:				
DOCUMENT	1107 ✓	10/24/80	NEWS REPORT	7
AUTHOR:	BUMB RR SHADOFF LA HUMMEL RH WOODS JS		CRUMMETT WB STEHL RH KAGEL RO	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1108 ✓	07/10/80	REPORT	1
AUTHOR:	FOE		JANSSON E	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1109 ✓	01/16/80	LETTER	3
AUTHOR:	FOE		ZEMANSKY GM	
ADDRESSEE:	FOE		JANSSON E	
COPYEE:				
DOCUMENT	1110 ✓	06/00/79	REPORT	3
AUTHOR:	ENVIRON SCIENCE & TECH		I LRE	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1111 ✓	05/00/78	LETTER	2
AUTHOR:	NEW ENGLAND POWER SERVIC		VANBOSSUYT R	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1112 ✓	10/26/80	NEWS	2
AUTHOR:	HOWARD R		TORONTO STAR	
ADDRESSEE:				
COPYEE:				

7-4252

4156

TITLE

PETITION 2 PICLORAM AND CANCER SLIDE REVIEW STANDARDIZATION.

TRACE CHEMISTRIES OF FIRE; A SOURCE OF CHLORINATED DIOXINS (SCIENCE 210, 385-390).

LAMPARSKI LL
DOW
MILLER DL

LUOMA EV
CUTIE SS
NESTRICK TJ

SUPPORTING DOCUMENTS TO PETITIONS.

DISCUSSION OF THE INADEQUACY OF THE SAFETY INFORMATION IN THE EPA PESTICIDE REGISTRATION FILES CTTL.

EPA SUSPENDS THE MAJOR USES OF TWO HERBICIDES, A LINK BETWEEN FORESTRY SPRAYINGS AND MISCARRIAGES IN WOMEN LIVING IN ALSEA, OR, PROMPTED THE EMERGENCY SUSPENSION OF 245T AND SILVEX (ENVIRON SCIENCE & TECH 13(6), 640-641).

RPAR AND CONTINUED REGISTRATION OF PESTICIDE PRODUCTS CONTAINING 245T. OPP 30000 36. TELEPHONE CONTACTS TO SOLICIT 245T BENEFIT LETTERS TO THE EPA.

DIOXINS FOUND IN 24D ALARM OTTAWA (TORONTO STAR).

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1113 ✓	02/03/76	ABSTRACT	1
AUTHOR:	LYNCH RS		OU LT	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1114 ✓	04/22/80	NEWS	8
AUTHOR:	EPA			
ADDRESSEE:				
COPYEE:				
DOCUMENT	1115 ✓	00/00/72	REPORT	5
AUTHOR:	HUSTON BL			
ADDRESSEE:				
COPYEE:				
DOCUMENT	1116 ✓	03/04/80	LETTER REPORT	2
AUTHOR:	DOW		WESELOH JH	
ADDRESSEE:	DOW		ASHLEY JH	
	BUMB RR		BURGESS KL	
	CHAMBERLIN RS		CHARLTON RW	
	CRUMMETT WB		DAVIDSON JH	
	FISCHBACK BC		FISCHER AC	
	GEHRING PJ		GETZENDANER ME	
	HANSON RG		HEFNER RE	
	JANTZ OK		JENSEN DJ	
	KENAGA EE		KOCIBA RJ	
	MCKENNON KR		MOOLENAAR RJ	
	NORRIS MG		OREFFICE PF	
	PRUITT ME		ROOKE DL	
	SINCLAIR TD		THEIS JM	
	WATSON AJ		WILLIAMS CS	
COPYEE:	DOW		GORING CA	
	REGISTRATION GROUP		SCRIVEN JO	
DOCUMENT	1117 ✓	01/00/80	REPORT	4
AUTHOR:	DOW		SUSKIND RR	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1118 ✓	00/00/53	REPORT	1
AUTHOR:	BISKIND MS		AM JOUR OF DIGESTIVE	
ADDRESSEE:				
COPYEE:				

1-4853

4157

TITLE

 DEGRADATION OF 245T BY MICROORGANISMS (760000 MEETING WSSA 760203
 TO 760205).

SIKKA HC

SYRACUSE UNIV RES

24D FACT SHEET.

IDENTIFICATION OF THREE NEUTRAL CONTAMINANTS IN PRODUCTION GRADE
 24D(JOUR OF AG & FOOD CHEM 20(3), 724-726).

245T AND SILVEX DEFENSE.

BLAIR EH
 BUZELLI DT
 COOK RR
 DISHBURGER HJ
 FLANNERY RF
 GOODMAN C
 HOLDER BB
 JOHNSON JE
 LUOMA EV
 MOSS RD
 OSBORNE DW
 SCHWETZ BA
 VENABLE J
 WOODS CD
 HOERGER FD
 TUCKER MD

BRAUN WH
 CASTILLO L
 COULTER LL
 DONALDS JE
 FRAYER DR
 HANES JH
 HUNTER RC
 JONES J
 MCCOLLISTER DD
 MUELDER WW
 PRIDDY JK
 SHADOFF LA
 VRANISH SR

 LENG ML

THE MORTALITY EXPERIENCE OF WORKERS EXPOSED TO
 TETRACHLORODIBENZODIOXIN IN A TRICHLOROPHENOL PROCESS ACCIDENT JOUR
 OF OCCUPATIONAL MEDICINE 22(1), 11-14).
 ZACK JA

EXCERPTS FROM PUBLIC HEALTH ASPECTS OF THE NEW INSECTICIDES (AM
 JOUR OF DIGESTIVE DISEASES 20(11), 331-335).
 DIS

NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT 1119 ✓	00/00/50	REPORT	1	245T ON CHILDREN (CLINICAL TOX OF COMMERCIAL PRODUCTS, 3RD EDITION, THERAPEUTICS INDEX, 80)(WILLIAMS & WILKINS) CTTL.
AUTHOR: WILLIAMS & WILKINS ADDRESSEE: COPYEE:				
DOCUMENT 1120 ✓	00/00/68	NEWS	3	EXCERPTS FROM THE BIONETICS REPORT (FROM VOLUME 3, EVALUATION OF THE TERATOGENIC ACTIVITY OF SELECTED PESTICIDES AND INDUSTRIAL CHEMICALS IN RATS AND MICE) (DEFOLIATION).
AUTHOR: BIONETICS ADDRESSEE: WHITESIDE T COPYEE:				
DOCUMENT 1121 ✓	00/00/50	REPORT	12	ACUTE AND SUBACUTE ORAL TOXICITY OF 245T FOR DOGS.
AUTHOR: DRILL VA ADDRESSEE: WAYNE UNIV COL OF MEDIC COPYEE:				
DOCUMENT 1122 ✓	00/00/50	REPORT	5	THE ACUTE ORAL TOXICITY OF 245T TO RATS, MICE, GUINEA PIGS AND CHICKS.
AUTHOR: MCCOLLISTER DD ADDRESSEE: ROWE VK COPYEE: SPENCER HC DOW				
DOCUMENT 1123 ✓	08/00/50	REPORT	5	RESULTS OF TOXICOLOGICAL TESTS ON 245T.
AUTHOR: DOW ADDRESSEE: COPYEE:				
DOCUMENT 1124 ✓	08/00/50	REPORT	1	RESULTS OF TOXICOLOGICAL TESTS ON 245T.
AUTHOR: DOW ADDRESSEE: COPYEE:				
DOCUMENT 1125 ✓	00/00/50	NEWS	4	EFFECTS OF ROTENONE AND SOME COMMON HERBICIDES ON FISH FOOD ORGANISMS (FIELD & LABORATORY).
AUTHOR: ZISCHKALE M ADDRESSEE: SOUTHERN METHODIST UNIV COPYEE: REPORT				
DOCUMENT 1126 ✓	00/00/60	NEWS REPORT	2	UNTERSUCHUNGEN UBER DIE TOXIZITAT EINIGER HERBIZIDE FUR FISCH.
AUTHOR: BODENSTEIN G ADDRESSEE: MULLERBASTGEN G COPYEE: BOEHRINGER & SOHN				

4158

D-4254

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1127 ✓	11/00/53	NEWS	4
AUTHOR:	RUDD RL		REPORT	
ADDRESSEE:			UC DAVIS	
COPYEE:				
DOCUMENT	1128	12/00/62	REPORT	135
AUTHOR:	LAWRENCE JM		AUBURN UNIV	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1129	00/00/65	REPORT	110
AUTHOR:	SNYDER		OYEN F	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1130	01/01/64	NEWS	6
AUTHOR:	CLARK DE		REPORT	
ADDRESSEE:			HUNT LM	
COPYEE:				
DOCUMENT	1131	12/16/54	ROC	1
AUTHOR:	CLOFT HF		DOW	
ADDRESSEE:			BENDALL T	
COPYEE:	DOW SMITH H			
DOCUMENT	1132	00/00/50	REPORT	12
AUTHOR:	DRILL VA		WAYNE ST UNIV	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1133	08/00/50	REPORT	5
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:				

4159

1-4255

TITLE

FIELD REPORTING OF SUSPECTED WILDLIFE POISONING BY AGRICULTURAL
CHEMICALS.

AQUATIC HERBICIDE DATA.
USDA

DATA FROM 1 YEAR, 18 MONTH AND 2 YEAR KURO SOL SL FEEDING STUDIES IN
RATS CTTL.
BUERGE JF MCKENNON J

TOXICOLOGICAL EFFECTS OF SILVEX ON YEARLING CATTLE (J.A.V.M.A.
144(7) 750-755).

PAMER JS

ESTERON 245 (SALESMANS CALL REPORT)(LUCAS TREE EXPERT COMPANY).

LAWRENCE AA

ROWE VK

ACUTE AND SUB ACUTE ORAL TOXICITY OF 245T FOR DOGS (WAYNE ST UNIV).

RESULTS OF TOXICOLOGICAL TESTS ON 245T (DOW).

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1134	00/00/68	LEGAL	15

AUTHOR: BAYLEY ND
 ADDRESSEE: WELLFORD H
 COPYEE: HARDIN CM

DOCUMENT	1135	00/00/69	CHART	1

AUTHOR:
 ADDRESSEE:
 COPYEE:

DOCUMENT	1136	10/29/68	REPORT	9

AUTHOR: DOW
 ADDRESSEE:
 COPYEE: LENG ML

DOCUMENT	1137	03/00/65	NEWS	12
AUTHOR:	DUNHAM RS		USDA ARS	
ADDRESSEE:				
COPYEE:				

DOCUMENT	1138	00/00/60	NEWS	3
AUTHOR:				
ADDRESSEE:				
COPYEE:				

DOCUMENT	1139	09/07/67	REPORT	23

AUTHOR: DOW
 ADDRESSEE:
 COPYEE: WARREN LE

DOCUMENT	1140	00/00/53	REPORT	2
AUTHOR:	DOW		HYMAS	
ADDRESSEE:				
COPYEE:				

D-4256

4160

TITLE

STATEMENT OF THE REASONS UNDERLYING THE DECISION OF THE SECRETARY
WITH RESPECT TO THE REGISTRATIONS OF PRODUCTS CONTAINING 245T (ON
PETITION FOR REVIEW OF AN ORDER OF THE SECRETARY OF AG) HARRISON
WELLFORD, ET AL. V. CLIFFORD M. HARDIN IN THE U.S. COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT.
USDA

PRESENCE OF CHLORACNEGEN AND TCDD IN 245T FROM VARIOUS
MANUFACTURERS.

KURON SILVEX; REGISTRATION STATUS REPORT (USE OF SILVEX IN PASTURE
AND RANGELAND. REQUEST FOR EXTENSION OF ALL REGISTRATIONS SUBMITTED
BY NACA INDUSTRY TASK FORCE FOR PHENOXY HERBICIDE TOLERANCES).
LYNN GE MCCOLLISTER DD

HERBICIDE MANUAL FOR NONCROPLAND WEEDS (AG HANDBOOK 269 USDA).

REDUCTION OF HAZARD BY CONTROL OF TOXICITY.

RESIDUES OF HERBICIDES AND IMPACT ON USES BY LIVESTOCK (FOR
PRESENTATION AT THE FOREST, RANGE & NONCROPLAND HERBICIDE SYMPOSIUM
OR ST UNIV SEPTEMBER 7 THROUGH 9, 1967).

ACUTE STUDIES (STATEMENT 2).
ROWE VK

NUMBER	DATE	TYPE	PAGES
DOCUMENT 1141	00/00/69	NEWS	2
AUTHOR: PALMER		RADELEFF	
ADDRESSEE:			
COPYEE:			
DOCUMENT 1142	04/06/61	REPORT	17
AUTHOR: BUCEK OC		DOW	
ADDRESSEE:			
COPYEE: DOW		BARRONS KC	
HAAGSMA TA		I APB	
I JFK		I JS	
I KWM		I PDL	
I TRN		JOHNSON JE	
DOCUMENT 1143	00/00/62	REPORT	4
AUTHOR: USDI			
ADDRESSEE:			
COPYEE:			
DOCUMENT 1144	05/05/59	REPORT	5
AUTHOR: DOW		NATION HA	
ADDRESSEE:			
COPYEE: HOWE			
DOCUMENT 1145	00/00/69	REPORT	18
AUTHOR:			
ADDRESSEE:			
COPYEE:			
DOCUMENT 1146	10/00/51	NEWS	5
		REPORT	
AUTHOR: KRATOCHVIL DE		ST COL OF AG SD	
ADDRESSEE:			
COPYEE:			
DOCUMENT 1147	00/00/58	REPORT	12
AUTHOR: RADELEFF RD		USDA	
ADDRESSEE:			
COPYEE:			

17-4257

4161

TITLE

245T.

PROPYLENE GLYCOL, SILVEX, 24D OR 245T FOR FATTENING BEEF CATTLE
(DOW REPORT TA-176).

BLAIR EH
I CMS
I JWB
I RMI
LYNN GE

BRITTON EC
I CRI
I J WV
I RPP
ROWE VK

EFFECTS OF PESTICIDES ON FISH AND WILDLIFE A REVIEW OF
INVESTIGATIONS DURING 1960 (FISH & WILDLIFE SERVICE CIRCULAR 143).

RESULTS OF HERBICIDE SCREENING TESTS AGAINST CERTAIN AQUATIC WEEDS
AND FISH.

SOME SALIENT ASPECTS OF 245T TOXICOLOGY, METABOLISM AND DISSIPATION
REACTION OF THE ENVIRONMENT.

DETERMINATION OF THE EFFECT OF SEVERAL HERBICIDES ON SOIL
MICROORGANISM (WEEDS 1(1),25-31).

THE TOXICITY OF INSECTICIDES AND HERBICIDES TO LIVESTOCK ADVANCE
VET SCI 4, 265-276).

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1148	00/00/59	REPORT	7
AUTHOR: LHOSTE J				
ADDRESSEE:				
COPYEE:				
DOCUMENT	1149	00/00/62	REPORT	6
AUTHOR: DAVIS JT		HUGHES JS		
ADDRESSEE:				
COPYEE:				
DOCUMENT	1150	00/00/65	ABSTRACT	1
AUTHOR: GOLDBERT HS		GOODMAN RN		
ADDRESSEE:				
COPYEE:				
DOCUMENT	1151	09/00/55	NEWS	5
AUTHOR: COLMER AR		LA ST UNIV		
ADDRESSEE:				
COPYEE:				
DOCUMENT	1152	08/00/58	NEWS	3
AUTHOR: CHESTERFORD PARK		RES STA EDSON EF		
ADDRESSEE:				
COPYEE:				
DOCUMENT	1153	11/25/67	NEWS REPORT	3
AUTHOR: GALSTON AW		YALE UNIV		
ADDRESSEE:				
COPYEE:				
DOCUMENT	1154	00/00/65	NEWS	14
		REPORT		
AUTHOR: INST OF WATER EARTH AND		KAYSER H		
ADDRESSEE:				
COPYEE:				

D-4258

4162

TITLE

THE REPERCUSSIONS ON THE AQUATIC FAUNA DUE TO THE USE OF CHEMICAL
WEED KILLERS (FEVRIER).

COMPARATIVE TOXICITY TO BLUEGILL SUNFISH OF GRANULAR AND LIQUID
HERBICIDES (PROCEEDINGS OF THE SIXTEETH ANNUAL CONFERENCE SE ASSN
OF GAME AND FISH COMMISSIONERS).
LA WILD LIFE FISHERIES C

INFLUENCE OF 245T ON STAPHYLOCOCCAL PENICILLINASE (JOUR
BACTERIOLOGY 89(6), 1621-1622).
KUCERA LS

THE EFFECT OF HERBICIDES ON SOIL MICROORGANISMS (THE EFFECT OF SOME
HERBICIDES ON THE RESPIRATION OF AZOTOBACTER (APPLIED MICROBIOL
3(5), 288-292).
MAGEE LA

THE RISKS OF PESTICIDES TO FISH (WORLD CROPS).

HERBICIDES IN VIETNAM (THE NEW REPUBLIC).

CONTRIBUTIONS TO THE TOXICITY OF HERBICIDES TO THE WATER-LIFE
COMMUNITY PART I, FISH (DAS GAS- UND WASSERFACH 106(8), 2203).

LUEDEMANN D

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1155	00/00/69	ABSTRACT	1
AUTHOR:	HILTIBRAN RC		IL NATURAL HISTORY	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1156	00/00/61	NEWS	12
			REPORT	
AUTHOR:	GRIEPENTROG F			
ADDRESSEE:				
COPYEE:				
DOCUMENT	1157	00/00/62	NEWS	22
			REPORT	
AUTHOR:	BANDT HJ		NEHRING D	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1158	08/01/64	REPORT	3
AUTHOR:	BOUNDS HC		COLMER AR	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1159	00/00/62	ABSTRACT	1
AUTHOR:	ANDERSSON A		DAHL S	
	WADNE C			
ADDRESSEE:				
COPYEE:				
DOCUMENT	1160	05/00/52	NEWS	1
			REPORT	
AUTHOR:	ONTARIO AG COLL		SMITH MV	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1161	00/00/59	ABSTRACT	2
AUTHOR:	FISH CULTURE RES INST		PROWSE GA	
ADDRESSEE:				
COPYEE:				

4163

D.4259

TITLE

OXYGEN AND PHOSPHATE UPTAKE BY BLUEGILL LIVER MITOCHONDRIA IN THE PRESENCE OF VARIOUS PHENOXY COMPOUNDS (WSSA ABSTRACT 27).
SURVE

A FEW PLANT PROTECTION AGENTS AS EXAMPLES OF WEAK ALLERGENS (MEDIZIN UND ERNAHRUNG, 2(5), 106-8).

INJURIOUS EFFECT AND USE OF HERBICIDES IN FISHERIES (TAGUNGSBERICHT, DEUTSCHE AKADEMIE DER LANDWIRTSCHAFTSWISSENSCHAFTEN, BERLIN 54, 45-58).

SCHLUTER M

RESISTANCE OF STREPTOMYCES TO HERBICIDES (THE SUGAR BULLETIN).
LA AG EXP STATION

THE TOXICITY OF SOME HERBICIDES TO CHICKS (KGL LANTBRUKSHOGSKOL OCH STATENS LANTBRUKSFORSOK, STATENS HUSDJURSFORSOK, SARTRYCK OCH FERHANDSMEDD 155, 18)(CHEM ABSTRACT 59, 5548).
INST TECH STOCKHOLM KIVIMAE A

WEED KILLING SPRAYS VS BEES (CANADIAN BEE JOUR 60(5), 16-17).

NOTES ON THE TOXICITY TO FISH OF SOME COMMON AGRICULTURAL INSECTICIDES AND WEEDICIDES (PEST ABSTRACTS AND NEWS SUMMARY AS (4), 508-509).

NUMBER	DATE	TYPE	PAGES
DOCUMENT 1162	12/14/67	NEWS	4
AUTHOR: DAVIS GRF		REPORT	
ADDRESSEE:		DEPT OF AG CAN	
COPYEE:			
DOCUMENT 1163	00/00/64	REPORT	13
AUTHOR: COPE OB		FISH-PEST RES LAB	
ADDRESSEE:			
COPYEE:			
DOCUMENT 1164	00/00/63	CHART	16
AUTHOR:			
ADDRESSEE:			
COPYEE:			
DOCUMENT 1165	00/00/50	REPORT	11
AUTHOR: DRILL VA		WAYNE UNIV	
ADDRESSEE:			
COPYEE:			
DOCUMENT 1166	08/00/50	REPORT	6
AUTHOR: DOW			
ADDRESSEE:			
COPYEE:			
DOCUMENT 1167	00/00/56	REPORT	3
AUTHOR: DEPT FISH & GAME CA		GENELLY RE	
ADDRESSEE:			
COPYEE:			
DOCUMENT 1168	02/18/63	CHART	4
AUTHOR: DAVIS JT		REPORT	
ADDRESSEE:		HUGHES JS	
COPYEE:			
DOCUMENT 1169	08/00/68	ABSTRACT	4
AUTHOR: BIONETICS		CHART	
KOTIN P		BRL	
ADDRESSEE:		NATL CANCER INST	
COPYEE:			

4164

D-4260

TITLE

EFFECTS OF 24D, MALEIC ACID HYDRAZIDE, AND 245T ON SURVIVAL AND GROWTH OF THE PRAIRIE GRAIN WIREWORM, CTENICERA DESTRUCTOR BROWN (COLEOPTERA, ELATERIDAE) (CANADIAN JOUR OF ZOOLOGY 46, 747-750).

SPORT FISHERY INVESTIGATIONS.

TOXICITY TESTS OF SELECTED CHEMICALS AT PATUXENT, 1963 (97112).

ACUTE AND SUBACUTE ORAL TOXICITY OF 245T FOR DOGS.

RESULTS OF TOXICOLOGICAL TESTS ON 245T.

HERBICIDES 24D (PESTICIDES AND WILDLIFE).
RUDD RL UC DAVIS

MEDIAN TOLERANCE LIMITS REPORTED IN PARTS PER MILLION OF BLUEGILL SUNFISH TO HERBICIDES TESTED DURING 1961-62.

LA WILD LIFE & FISHERIES

EVALUATION OF CARCINOGENIC, TERATOGENIC & MUTAGENIC ACTIVITIES OF SELECTED PESTICIDES AND INDUSTRIAL CHEMICALS.

FALK H
NIH

HART ER
PALOTTA AJ

NUMBER	DATE	TYPE	PAGES
DOCUMENT 1170	05/00/57	REPORT	2
AUTHOR: SIMON J		SUND JM	
ADDRESSEE:			
COPYEE:			
DOCUMENT 1171	08/12/60	ABSTRACT REPORT	18
AUTHOR: DOW		RAPER JT	
ADDRESSEE:			
COPYEE: DOW		I CMS	
I JFK		I JS	
I TAH		I WRM	
DOCUMENT 1172	08/25/45	REPORT	9
AUTHOR: DOW		MODARNS C	
ADDRESSEE: DOW		ALLEN WN	
COPYEE:			
DOCUMENT 1173	04/25/67	LETTER	4
AUTHOR: DOW		WIDIGER A	
ADDRESSEE: DOW		COULTER KE	
COPYEE: DOW		BENDER SL	
STAENHLING EC			
DOCUMENT 1174	05/25/65	REPORT	3
AUTHOR: BROWN MT		DOW	
ADDRESSEE:			
COPYEE: DOW		BARRONS KC	
FALKENSTEIN WJ		GORDON HL	
KAGY JF		KILIAN DJ	
NORTON TR		WILSON AW	
DOCUMENT 1175	10/26/54	REPORT	11
AUTHOR: DOW		MCCOLLISTER DD	
ADDRESSEE:			
COPYEE:			
DOCUMENT 1176	12/13/63	LETTER	2
AUTHOR: DOW		ROWE VK	
ADDRESSEE: MANUFACTURING CHEMISTS A		STEPHENSON FG	
COPYEE: DOW		ROWE VK	

1961

4165

TITLE

 WEEDS CONTAINING NITRATES CAUSE ABORTION IN CATTLE (AGRONOMY JOUR
 49(5), 278-279).
 UNIV OF WI WRIGHT MJ

ADDITION OF HERBICIDES OR VERSENES TO BROILER FEEDS.

I GEL
 I KCB

I JEJ
 I RPP

TOXICITY OF 245T.
 ROWE VK
 VEAZEY WR

CHLORACNE RESEARCH PROGRAM.

HABERSTROH WH

SAUERS RC

RESULTS OF A TWO YEAR DIETARY FEEDING STUDY IN DOGS OF KUROSAI SL
 (POTASSIUM SALT OF SILVEX).
 MCCOLLISTER DD WHITE LC

BOUNDY RH
 HAKE CL
 LYNN GE

ELSHERE D
 JOHNSTON RV
 MULLISON WR

RESULTS OF ACUTE AND SEMICHRONIC ORAL TOXICITY TESTS WITH RATS FED
 SILVEX OR 2(245-TRICHLOROPHENOXY) PROPIONIC ACID.
 ROWE VK

REPLY ON INFORMATION ABOUT THE SAFETY IN THE MANUFACTURE OF
 245-TRICHLOROPHENOL CTTL.

HOYLE HR

MCCUTCHEN S

NUMBER	DATE	TYPE	PAGES
DOCUMENT 1177	12/06/61	LETTER	1
AUTHOR: DOW		RITTY PM	
ADDRESSEE: LOWE JI		USDI	
COPYEE: DOW		COULTER LL	
DOCUMENT 1178	02/18/58	MEMO	2
AUTHOR: DOW			
ADDRESSEE:			
COPYEE:			
DOCUMENT 1179	11/28/61	LETTER	1
AUTHOR: DOW		RITTY PM	
ADDRESSEE: LOWE JI		USDI	
COPYEE:			
DOCUMENT 1180	06/27/62	LETTER	1
AUTHOR: DOW		RITTY PM	
ADDRESSEE: DOW		WINSTON AW JR	
COPYEE: DOW		KORSMEIER RB	
DOCUMENT 1181	07/00/66	REPORT	5
AUTHOR: MEAGHER HR		TEST	
ADDRESSEE:		UNIV OF FL	
COPYEE:			
DOCUMENT 1182	00/00/68	REPORT	6
AUTHOR: LEE YN		TEST	
ADDRESSEE:		LUH BS	
COPYEE:			
DOCUMENT 1183	00/00/66	REPORT	5
AUTHOR: UC DAVIS			
ADDRESSEE:			
COPYEE:			

D-4262

4166

TITLE

INERT INGREDIENT REQUEST DENIED, FISH TOXICITY DATA SENT INSTEAD
CTTL.

SAUNDERS ES

WINSTON B

TOXIC EFFECTS OF 24D, 245T, MCP, 245T ETHANOL AND DALAPON CTTL.

INERT INGREDIENT REQUEST DENIED, FISH TOXICITY DATA SENT INSTEAD
CTTL.

ATTACHED REPORT ON FISH TOXICITY CTTL.

WILTSE M

DETERMINATION OF 24D AND 2-(245-TRICHLOROPHENOXY)PROPIONIC ACID IN
CITRUS BY ELECTRON CAPTURE GAS CHROMATOGRAPHY (AG & FOOD CHEM
14(4), 374-377)(TA05.01.P4)(PP8F0669).

EFFECT OF CHLOROPHENOXYACETIC ACID GROWTH REGULATOR SPRAYS ON
RESIDUES IN CANNED APRICOTS AND GRAPES (JOUR OF FOOD SCIENCE 33,
104-108)(TA50.01.P4)(PP8F0669).

UC DAVIS

660000 ANNUAL REPORT RESIDUE PROGRAM OF THE AGRICULTURAL,
TOXICOLOGY AND RESIDUE RESEARCH LABORATORY, UC DAVIS(TA50.01.P4)
(PP8F0669).

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1184	09/00/67	REPORT	5

AUTHOR: FISHBEIN L ZIELINSKI WL JR
 ADDRESSEE:
 COPYEE:

DOCUMENT	1185	06/06/68	LETTER	2

AUTHOR: CORNELL LISK DJ
 ADDRESSEE: DOW LENG ML
 COPYEE:

DOCUMENT	1186	00/00/62	REPORT	8

AUTHOR: CRAFTS AS KEY JL
 UNIV OF IL YAMAGUCHI S
 ADDRESSEE:
 COPYEE:

DOCUMENT	1187	00/00/66	REPORT	7

AUTHOR: MORTON HL USDA ARS
 ADDRESSEE:
 COPYEE:

DOCUMENT	1188	00/00/68	REPORT	5

AUTHOR: DAVIS FS TEST
 TX A&M DOD
 ADDRESSEE: USDA ARS
 COPYEE:

DOCUMENT	1189	09/12/68	REPORT	6

AUTHOR: DOW LENG ML
 ADDRESSEE:
 COPYEE:

DOCUMENT	1190	06/00/66	REPORT	12

AUTHOR: BUR OF COMMERCIAL FISHER BUTLER PA
 ADDRESSEE:
 COPYEE:

4167

D-4263

TITLE

GAS CHROMATOGRAPHIC MEASUREMENT OF DISAPPEARANCE RATES OF 24D AND 245T AND 24D ESTERS IN MICE (JOUR AG FOOD CHEM 15(5), 841-844)(TA50.01.P4)(PP8F0669).

MISTAKE IN CALCULATIONS OF KURON IN COW FEEDING STUDY CONFIRMED (TA50.01.P4)(PP8F0669) CTTL.

PENETRATION, TRANSLOCATION, AND METABOLISM OF 24D AND 245T IN WILD AND CULTIVATED CUCUMBER PLANTS (WEEDS 10, 29-35) (TA50.01.P4)(PP8F0669).

SLIFE FW

UC DAVIS

INFLUENCE OF TEMPERATURE AND HUMIDITY ON FOLIAR ABSORPTION, TRANSLOCATION, AND METABOLISM OF 245T BY MESQUITE SEEDLINGS (WEEDS 14, 136-141)(TA50.01.P4)(PP8F0669).

RADIOISOTOPIC AND GAS CHROMATOGRAPHIC METHODS FOR MEASURING ABSORPTION AND TRANSLOCATION OF 245T BY MESQUITE (WEED SCIENCE 16, 88-91)(TA50.01.P4)(PP8F0669).

MERKLE MG

MORTON HL

REVIEW ON THE METABOLISM OF PHENOXY COMPOUNDS IN PLANTS AND ANIMALS (SUMMARY STATEMENT)(PP8F0669)(TA50.01.P3).

COMMERCIAL FISHERIES INVESTIGATIONS (PESTICIDE WILDLIFE STUDIES, A REVIEW OF FISH AND WILDLIFE SERVICE INVESTIGATIONS, CIRCULAR 167).

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1191	11/27/61	REPORT	9
AUTHOR: DOW				
ADDRESSEE:				
COPYEE:				
DOCUMENT	1192	08/00/50	REPORT	4
AUTHOR: DOW				
ADDRESSEE:				
COPYEE:				
DOCUMENT	1193	00/00/50	REPORT	6
AUTHOR: DOW				
ADDRESSEE: MCCOLLISTER DD				
COPYEE:				
DOCUMENT	1194	00/00/60	REPORT	6
AUTHOR: DOW				
ADDRESSEE: WILTSE MG				
COPYEE:				
DOCUMENT	1195	09/26/67	LETTER	2
AUTHOR: BEUTEL AP				
ADDRESSEE: KRATZ WG				
COPYEE: DOW				
DOW US ARMY STAEHLING EC				
DOCUMENT	1196	02/15/61	LETTER	3
AUTHOR: ID EXP STATION				
ADDRESSEE: USDA				
COPYEE: HALLER HL				
VERNER L WARD JC YOST G				
DOCUMENT	1197	00/00/53	NEWS	3
REPORT				
HIRATZKA T				
AUTHOR: DRILL VA				
ADDRESSEE:				
COPYEE:				

1-4264

4168

TITLE

RESULTS OF 90 DAY DIETARY FEEDING STUDIES OF DOWANOL 97D ESTER 245T
IN RATS.

RESULTS OF TOXICOLOGICAL TESTS ON 245T.

THE ACUTE ORAL TOXICITY OF 245T TO RATS, MICE, GUINEA PIGS AND
CHICKS.

ROWE VK

SPENCER HC

AQUATIC VEGETATION CONTROL WITH KURON (PRESENTED AT 600000 MEETING
OF THE WSA DENVER CO).

DOW'S DECISION NOT TO BID ON THE U.S. ARMY'S REQUEST FOR PROPOSAL
DACA41-68-R-0001, FOR THE DESIGN, CONSTRUCTION AND OPERATION OF AN
8 MILLION GALLON PER YEAR HERBICIDE ORANGE PLANT AT WELDON SPRING,
MO CTTL.

WHITESELL RA

YANKA DE

RESIDUE ANALYSES OF EARLY ITALIAN PRUNES SPRAYED WITH 245TP (TAKEN
FROM SALMON SECTION OF APPLICATION FOR REGISTRATION OF COLOR SET
(USDA REG 464-267) FOR USE ON PRUNES, SUBMITTED TO PEST REGULATION
DIV BY DOW ON 610525).

TOXICITY OF 24D AND 245T(A REPORT ON THEIR ACUTE AND CHRONIC
TOXICITY IN DOGS)(INDUSTRIAL HYGIENE AND OCCUPATIONAL MEDICINE 7,
61-63).

WAYNE UNIV

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1198	00/00/68	PRESENT	23
AUTHOR: DOW				
ADDRESSEE:				
COPYEE:				
DOCUMENT	1199	00/00/69	NEWS	1
AUTHOR: MINTZ M				
ADDRESSEE:				
COPYEE:				
DOCUMENT	1200	12/03/64	LETTER	1
AUTHOR: HEW				
ADDRESSEE:				
COPYEE:				
				PUB HEALTH SERV
DOCUMENT	1201	04/07/69	NEWS REPORT	8
AUTHOR: CHEM ENGINEERING				
ADDRESSEE:				
COPYEE:				
DOCUMENT	1202	00/00/65	REPORT	4
AUTHOR:				
ADDRESSEE:				
COPYEE:				
DOCUMENT	1203	10/05/67	LETTER	1
AUTHOR: DOW				
ADDRESSEE: DOW				
COPYEE:				
				SILVERSTEIN LG
				FERNANDEZ JB
DOCUMENT	1204	08/26/64	CHART	7
MINUTES				
REPORT				
HOLMES R				
AUTHOR: DOW				
ADDRESSEE:				
COPYEE:				

4169

D-4265

TITLE

DOW EXPERIENCE 640000 TO PRESENT(CHLORACNE) AND BRIEF MENTION OF INCIDENCES IN FRANCE AND GERMANY CTTL.

WIDELY USED HERBICIDE TIED TO BIRTH DEFECTS(THE WASHINGTON POST).

ALTHOUGH CLAIMS HAVE BEEN MADE THAT LIVER AND SKIN TOXICITY IS DUE TO TCDD RATHER THAN 245T, NO CONCLUSIVE EVIDENCE OF THIS IS AVAILABLE SINCE NO ONE HAS SEPARATED THE VARIOUS COMPOUNDS PRESENT IN COMMERCIAL 245T CTTL.

PESTICIDES, PRESENT AND FUTURE (CHEM ENGINEERING, 133-140).

SUMMARY OF TOXICOLOGICAL AND ANALYTICAL INFORMATION ON THE CHLORACNEGEN IMPURITY FOUND IN SOME SAMPLES OF 245T.

CHLORACNE AT THOMPSON HAYWARD COMPANY.

MEETING DISCUSSIONS INCLUDE CHLORACNE TREATMENT, CAUSE, PLANS FOR CLEANUP CTTL.

OLSON KJ

NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT 1205	11/27/67	LETTER	2	REQUEST FOR EXTENTION OF CANCELLATION OF REGISTRATION FOR USE OF PHENOXY HERBICIDE, 24D, 245T, MCPA, AND SILVEX, FOR AT LEAST ONE YEAR BEYOND 671231 CTTL.
AUTHOR: DUNN CL		NACA IND TASK FORCE ON P		
ADDRESSEE: HAYS H		USDA		
COPYEE: ANDERSON RJ		DANIELSON LL IRVING GW USDA ARS		
DOCUMENT 1206	04/16/68	LETTER	2	REASONS FOR FDA REFUSAL TO ESTABLISH TOLERANCES FOR SILVEX REQUESTED IN PP 8F0675 CTTL.
AUTHOR: FDA		HEW		
ADDRESSEE: DUNN CL		NACA IND TASK FORCE ON P		
COPYEE: USDA ARS		STOKES W		
DOCUMENT 1207	07/11/68	LETTER	2	LETTER REGARDING MEETING WITH NACA, USDA, AND DOW CONCERNING PESTICIDE PETITION 8F0669 (245T), 8F0670 (24D), 8F0675 (SILVEX), AND 8F0676 (MCPA), AND ADDING A SECTION FOR THE PETITION REVIEWING SCIENTIFIC LITERATURE WITH RESPECT TO METABOLISM OF PHENOXY HERBICIDES AND EMPHASIZING THE APPLICATION TO RESIDUES CTTL.
AUTHOR: DUNN CL		NACA		
ADDRESSEE: BAKER DM JR		FDA		
COPYEE: USDA		HEW		
DOCUMENT 1208	10/29/68	LETTER	11	EXTENSIONS OF REGISTERED USES OF 24D, 245T, MCPA, AND SILVEX (PP8F0675) CTTL.
AUTHOR: DUNN CL		REPORT		
ADDRESSEE: HAYS H		NACA		
COPYEE: DANIELSON LL		USDA		
		USDA ARS		
DOCUMENT 1209	00/00/66	REPORT	5	PRELIMINARY STUDY ON TOXICOLOGIC AND BIOCHEMICAL EFFECTS OF SILVEX ON SHEEP (AM JOUR OF VETERINARY RES 27(116), 172-176) (SA50.00.01.P1)(PP8F0675).
AUTHOR: HUNT LM		USDA ARS		
ADDRESSEE:		PALMER JS		
COPYEE:		WRIGHT FC		
DOCUMENT 1210	00/00/64	REPORT	7	TOXICOLOGICAL EFFECTS OF SILVEX ON YEARLING CATTLE (JOUR OF AM VETERINARY MEDICAL ASSOC 144(7), 750-755)(SA50.00.01.P1) (PP8F0675).
AUTHOR: CLARK DE		HUNT LM		
ADDRESSEE:		PALMER JS		
COPYEE:		USDA		
DOCUMENT 1211	07/00/68	REPORT	2	REVIEW ON THE METABOLISM OF PHENOXY COMPOUNDS IN PLANTS AND ANIMALS (TAKEN FROM AMENDMENT TO PP 8F0675 FOR SILVEX, SUBMITTED 680900)(SA50.00.P1).
AUTHOR: DOW		LENG ML		
ADDRESSEE:				
COPYEE:				

4170

Page 4266

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1219	11/03/67	REPORT	4
AUTHOR: DOW				
ADDRESSEE:				
COPYEE:				
DOCUMENT	1220	11/00/62	REPORT	10
AUTHOR: DOW			MESLER RJ	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1221	09/00/67	NEWS	5
AUTHOR: DUGGAN RE			REPORT	
ADDRESSEE:			FDA	
COPYEE:				
DOCUMENT	1222	02/00/50	NEWS	8
AUTHOR: AG EXP STATION MI			REPORT	
MI ST COLLEGE			BELDING RC	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1223	00/00/62	REPORT	5
AUTHOR: BUR OF SPORT FISHERIES & DEWITT JB				
ADDRESSEE:				
COPYEE:				
DOCUMENT	1224	00/00/60	REPORT	7
AUTHOR: BUR OF SPORT FISHERIES & CRAB TREE DG				
GEORGE JL				
ADDRESSEE:				
COPYEE:				
DOCUMENT	1225	00/00/62	REPORT	5
AUTHOR: BUR OF SPORT FISHERIES & COPE OB				
ADDRESSEE:				
COPYEE:				

104268

4172

TITLE

ACUTE ORAL, SKIN, EYE AND INHALATION STUDIES(C.1.1.1.0)
(PA50.01.P1)(PP8F0660)(TORDON) CTTL.

7. RESULTS OF 610000 AND 620000 FIELD TESTS WITH TORDON IN MICHIGAN
(IN SUPPORT OF REQUEST OF REGISTRATION OF TORDON 101
MIXTURE)(PA2.08.S1).
WATSON AJ

DIETARY INTAKE OF PESTICIDE CHEMICALS (SCIENCE 157(3792),
1006-1010)(DA50.02.P0)(PP 8F0760).

WEATHERWAX JR

SOME EFFECTS OF HERBICIDES ON PASTURE AND ON GRAZING LIVESTOCK (MI
AG EXP STATION QUARTERLY BULLETIN 32(3), 378-385) (DA50.02.P0)(PP
8F0670).

FARWELL ED

GRIGSBY BH

WILDLIFE STUDIES, PATUXENT WILDLIFE RES CENTER (DA50.02.P0) (PP
8F0670).

SPRINGER PF

STICKEL WH

EFFECTS ON WILDLIFE (DA50.02.P0)(PP 8F0670).
DEWITT JB

FINLEY RB

SPORT FISHERY INVESTIGATIONS (DA50.02.P0)(PP 8F0670).

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1226	10/00/54	NEWS	8

AUTHOR: DOW
 ADDRESSEE:
 COPYEE:

REPORT
 HYMAS TA

DOCUMENT	1227	04/00/65	NEWS REPORT	3
AUTHOR:	DOW			
ADDRESSEE:			LYNN GE	
COPYEE:				

DOCUMENT	1228	12/14/64	MEMO REPORT	4
AUTHOR:	DELISLE NG		DOW	
ADDRESSEE:				
COPYEE:				

DOCUMENT	1229	00/00/69	CHART TECH	11
AUTHOR:	DOW		FERNANDEZ JB	
ADDRESSEE:				
COPYEE:				

DOCUMENT	1230	00/00/69	PRESENT	23
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:				

DOCUMENT	1231	12/23/68	LETTER	2
AUTHOR:	CH BOEHRINGER SOHN		WGERM DOLL O	
ADDRESSEE:	DOW		TRAPP WB	
COPYEE:				

DOCUMENT	1232	01/14/65	REPORT	3
AUTHOR:	DOW		WIDIGER AH	
ADDRESSEE:				
COPYEE:	DOW GOERGEN G LUECK AF VANARSDALE JD		WIDIGER AH HABERSTROH WH POFFENBERGER N	

①-4269

4173

TITLE

SUMMARY OF TOXICOLOGICAL INFORMATION ON 24D AND 245T TYPE
HERBICIDES AND AN EVALUATION OF THE HAZARDS TO LIVESTOCK ASSOCIATED
WITH THEIR USE (AM JOUR VETERINARY RES, 622-629) (DA50.02.P0)(PP
8F0670).

ROWE VK

A REVIEW OF TOXICOLOGICAL INFORMATION ON TORDON HERBICIDES (DTE).

CHLORACNE(NOTES PER LUECK)(BOEHRINGER PROGIL).

PHENOLIC BYPRODUCTS IN 245-TRICHLOROPHENOL DERIVED FROM IMPURITIES
IN TETRACHLOROBENZENE.

HABERSTROH WH

CHLORACNE, DOW EXPERIENCE.

245-TRICHLOROPHENOL.

245-TRICHLOROPHENOL, PROPOSED INTERIM REACTOR.

DELISLE NG
HOLMES RD
SAUERS RC

DOEDENS JD
HUTCHENREUTHER C
TRAPP WB

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1233	08/16/66	LETTER	1
AUTHOR:	DOW		SILVERSTEIN LG	
ADDRESSEE:	DOW		HIGHHILL CA	
COPYEE:	DOW		AMSTUTZ FC	
	ROWE VK		STAEHLING EC	
DOCUMENT	1234	00/00/64	NEWS	1
AUTHOR:				
ADDRESSEE:				
COPYEE:				
DOCUMENT	1235	05/23/56	REPORT	5
AUTHOR:	KIMMIG J		SCHULZ KH	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1236	06/00/66	REPORT	5
AUTHOR:	DIV OF OCCUPATIONAL HEAL		GAFATER WM	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1237	00/00/66	REPORT	9
AUTHOR:	MENZEE CM		USDI	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1238	00/00/63	NEWS	5
			REPORT	
AUTHOR:	BUR OF COMMERCIAL		FISHER BUTLER PA	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1239	00/00/63	NEWS	9
			REPORT	
AUTHOR:	PALMER JS		RADELEFF RD	
ADDRESSEE:				
COPYEE:				

D-4270

4174

TITLE

ANIMAL TEST WILL DETECT THE PRESENCE OF CHLORACNE PRODUCING
COMPOUNDS CTTL.

CHASE FI
WILSON AW

HOLDER BB

DOW HERBICIDE HISTORY TRACED.

OCCUPATIONAL CHLORACNE CAUSED BY AROMATIC CYCLIC ETHERS
(DERMATOLOGICA, 115, 540-546)(23RD CONGRESS OF GERMAN
DERMATOLOGISTS VIENNA).
UNIV CLINIC OF DERMATOLO

OCCUPATIONAL DISEASES, HERBICIDES, A GUIDE TO THEIR RECOGNITION
(PUB HEALTH SERV).
HEW

METABOLISM OF PESTICIDES (USDI FISH AND WILDLIFE SERVICE, BUR OF
SPORT FISHERIES AND WILDLIFE, SPECIAL SCIENTIFIC REPORT WILDLIFE
96, 61-69)(SECTION C METABOLISM)(TA50.01.P2 PP8F0669 671200).

COMMERCIAL FISHERY INVESTIGATIONS, 5-8, 25(PEST WILDLIFE STUDIES
630000)(A REVIEW OF FISH AND WILDLIFE SERVICE INVESTIGATIONS DURING
THE CALENDAR YEAR, CIRCULAR 199, 640800)(SECTION C
METABOLISM)(TA50.01.P2 PP8F0669 671200).

THE TOXICOLOGIC EFFECTS OF CERTAIN FUNGICIDES AND HERBICIDES ON
SHEEP AND CATTLE (ANNALS NY ACADEMY OF SCIENCES, 729-736) (SECTION
C METABOLISM)(TA50.01.P2 PP8F0669 671200).

USDA ARS

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1240	08/00/50	REPORT	4
AUTHOR: DOW				
ADDRESSEE:				
COPYEE:				
DOCUMENT	1241	00/00/50	REPORT	6
AUTHOR: DOW				
ADDRESSEE: MCCOLLISTER DD				
COPYEE:				
DOCUMENT	1242	12/08/67	REPORT	15
AUTHOR:				
ADDRESSEE:				
COPYEE:				
DOCUMENT	1243	04/00/69	NEWS	3
REPORT				
AUTHOR: CHANG WC				
ADDRESSEE: GOODIN JR				
COPYEE:				
DOCUMENT	1244	00/00/68	NEWS	4
REPORT				
AUTHOR: MCCARTY MK				
ADDRESSEE: SCIFES CJ				
COPYEE:				
DOCUMENT	1245	09/00/68	REPORT	6
AUTHOR:				
ADDRESSEE:				
COPYEE:				
DOCUMENT	1246	06/23/53	LETTER	1
AUTHOR: DOW				
ADDRESSEE: LUCAS TREE EXPERT				
COPYEE: DOW				
SMITH HL				
ROWE VK				
SICKMAN WL				
BENDALL T				

D-4271

4175

TITLE

RESULTS OF TOXICOLOGICAL TESTS ON 245T (SECTION C TOXICOLOGY)
(TA50.01.P2 PP8F0669 671200).

THE ACUTE ORAL TOXICITY OF 245T TO RATS, MICE, GUINEA PIGS AND
CHICKS (SECTION C TOXICOLOGY)(TA50.01.P2 PP8F0669 671200).
 ROME VK SPENCER HC

FULL REPORTS OF INVESTIGATIONS MADE WITH RESPECT TO THE SAFETY OF
THE PESTICIDE CHEMICAL, 245T (SECTION C)(TA50.01.P2 PP8F0669
671200).

A NEW SELECTIVE BIOASSAY FOR TORDON IN WATER(DTE 24(4), 4-5
(PP0F0863).

UC RIVERSIDE

SMOOTH BROMEGRASS RESPONSE TO HERBICIDES AS AFFECTED BY TIME OF
APPLICATION IN RELATION TO NITROGEN FERTILIZATION(WEED SCIENCE 16,
443-446)(PP0F0863).

METABOLISM IN ANIMALS (DA50.02.01.P1)(PP8F0670).

SUGGESTED TREATMENT FOR ANY CHEMICAL CONTAMINATION OF THE EYE CTTL.

CLOFT HF

GAY HH

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1247	06/05/53	LETTER	1
AUTHOR:	BRYANT CA		DOW	
ADDRESSEE:	DOW		ROWE VK	
COPYEE:	DOW		SMITH HL	
DOCUMENT	1248	06/07/54	LETTER	1
AUTHOR:	JENKINS RE			
ADDRESSEE:	DOW		GAY HH	
COPYEE:				
DOCUMENT	1249	04/12/54	LETTER	1
AUTHOR:	DOW		GAY HH	
ADDRESSEE:	AG EXTEN SER PURDUE		VANDEMARK JS	
COPYEE:	DOW		ROWE VK	
DOCUMENT	1250	03/24/54	LETTER	1
AUTHOR:	AG EXTEN SER PURDUE		VANDEMARK JS	
ADDRESSEE:	DOW		ROWE VK	
COPYEE:				
DOCUMENT	1251	04/01/54	LETTER	1
AUTHOR:	CASTRO IJ		HI NATL PARK	
ADDRESSEE:	DOW			
COPYEE:				
DOCUMENT	1252	04/23/54	LETTER	3
AUTHOR:	DOW		ROWE VK	
ADDRESSEE:	CASTRO IJ		HI NATL PARK	
COPYEE:	DOW		GAY HH	
DOCUMENT	1253	06/02/54	LETTER REPORT	1
AUTHOR:	HAND EA			
ADDRESSEE:	CONSUMERS POWER		WOODRUFF JT	
COPYEE:				
DOCUMENT	1254	06/15/54	LETTER	1
AUTHOR:	CONSUMERS POWER		ONEIL RH	
ADDRESSEE:	DOW		ROWE VK	
COPYEE:				

D-4272

4176

TITLE

REPORT OF CALL BY CLOFT, BOSTON OFFICE ON LUCAS TREE EXPERT COMPANY.

RESULTS OF EXAMINATION OF JAMES R MAYFIELD'S DERMATITIS ALLEGEDLY
CAUSED BY EXPOSURE TO 245T CTTL.

COMMENTS AND SUGGESTIONS RELATIVE TO A DERMATITIS ALLEGEDLY CAUSED
BY CONTACT WITH 245T CTTL.

REQUEST FOR INFORMATION ON TREATMENT OF A SKIN INJURY ALLEGEDLY
CAUSED BY 245T CTTL.

REPORT OF A WORKER DEVELOPING A RASH AFTER USING ESTERON 245
DILUTED WITH FUEL OIL CTTL.
USDI

SUMMARY OF INFORMATION ON ESTERON 245 CTTL.

USDI
SMITH HL

WILLIAMS GJ

RICHARD OUILLET VS CONSUMERS POWER COMPANY.

TRANSMITTAL OF A DERMATOLOGIST'S REPORT ON PATCH TESTS CONDUCTED ON
A CONSUMERS POWER EMPLOYEE CTTL.
STERLING JN

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1255	07/27/54	TELEX	1
AUTHOR:	DOW		STEWART LC	
ADDRESSEE:	DOW		GAY HH	
COPYEE:				
DOCUMENT	1256	04/07/55	LETTER REPORT	3
AUTHOR:	DOW		ROWE VK	
ADDRESSEE:	DOW		MUNSON NH	
COPYEE:	DOW		GAY HH	
DOCUMENT	1257	06/25/55	LETTER	1
AUTHOR:	DANIEL HARRELL CLINIC		GOESL AG	
ADDRESSEE:	DOW			
COPYEE:				
DOCUMENT	1258	07/12/55	LETTER	2
AUTHOR:	DOW		ROWE VK	
ADDRESSEE:	DANIEL HARRELL CLINIC		GOESL AG	
COPYEE:	DOW		CRANDALL RA	
	WILLIAMS GJ			
DOCUMENT	1259	08/00/50	REPORT	4
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:				
DOCUMENT	1260	00/00/53	NEWS	7
			REPORT	
AUTHOR:	DRILL VA		HIRATZKA T	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1261	00/00/50	REPORT	4
AUTHOR:	DOW		MCCOLLISTER DD	
ADDRESSEE:				
COPYEE:				

D-4273

4177

TITLE

ESTERON 245 SKIN CONTACT APPEARS TO HAVE BURNED PERSON'S HANDS AND A RECOMMENDED TREATMENT IS REQUESTED CTTL.

LUCAS TREE EXPERT COMPANY, ESTERON 245, PERLEY W CHASE.

SMITH HL

REQUEST FOR TOXICITY DATA ON ESTERON 245 FOLLOWING A REPORT OF A MILD CASE OF HEPATITIS CTTL.

REPLY TO A LETTER REQUESTING TOXICITY DATA FOR ESTERON 245 IN CONNECTION WITH A MILD CASE OF HEPATITIS CTTL.

GAY HH

SMITH HL

RESULTS OF TOXICOLOGICAL TESTS ON 245T.

TOXICITY OF 24D AND 245T, A REPORT ON THEIR ACUTE AND CHRONIC TOXICITY IN DOGS (IND HYGIENE AND OCCUPATIONAL MEDICINE 7(61), 61-67).

THE ACUTE ORAL TOXITY OF 245T TO RATS, MICE, GUINEA PIGS, AND CHICKS.

ROWE VK

SPENCER HC

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1262	07/12/56	LETTER	6
AUTHOR:	DOW		REPORT	
ADDRESSEE:	REESE R		WOLF MA	
COPYEE:	BOUNDY R		BRADLEY K	
DOCUMENT	1263	04/14/67	REPORT	7
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:				
DOCUMENT	1264	07/11/68	LETTER	2
AUTHOR:	DUNN CL		NACA IND TASK FORCE	
ADDRESSEE:	BAKER DM JR		FDA	
COPYEE:	USDA			
DOCUMENT	1265	06/02/66	LEGIS	2
AUTHOR:	USDA			
ADDRESSEE:				
COPYEE:				
DOCUMENT	1266	04/21/65	REPORT	5
AUTHOR:	DOW		WHITE LC	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1267	12/09/49	LETTER	1
AUTHOR:	DOW		ROWE VK	
ADDRESSEE:	DOW		VEAZEY WR	
COPYEE:	DOW		ALLEN WW	
DOCUMENT	1268	10/26/54	REPORT	16.
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:				

10-4274

4178

TITLE

SKIN IRRITATION OF SOME IMPURITIES IN 245-TRICHLOROPHENOL AND
TETRACHLOROBENZENE FROM VARIOUS SOURCES.

INFORMATION ON THE TOXICOLOGY OF THE HERBICIDAL INGREDIENTS IN
TORDON 144 (SUPPLEMENTAL SHEET REFERRING TO ITEMS ON PR FORM 9-228)
CTTL.

STATUS OF NACA TASK FORCE REPORT ON METABOLISM OF PHENOXY
HERBICIDES CTTL.

ON P
HEW

FISH AND WILDLIFE CAUTION STATEMENT (PGBEE 245T 464-272).

SILVEX (DESCRIPTION OF TEST MATERIAL).

REQUEST FOR AUTHORIZATION TO FINANCE ACUTE AND SUB ACUTE TOXICITY
TESTS ON DOGS WITH 24D AND 245T.

PUTNAM ME

A COMPILATION OF INFORMATION ON THE TOXICOLOGY OF SILVEX (ACUTE AND
SEMI CHRONIC TOXICITY OF SILVEX TO LABORATORY RATS).

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1269	05/19/65	REPORT	31
AUTHOR:	DOW		GILL HH	
	I REA		LUECK AF	
ADDRESSEE:	SKELLY NE			
COPYEE:				
DOCUMENT	1270	01/13/65	LETTER	2
AUTHOR:	DOW		FARNUM JH	
ADDRESSEE:	CH BOEHRINGER SOHN WGERM		KUDSZUS	
COPYEE:	DOW		GOERGEN GO	
	POFFENBERGER N		SAUERS RC	
DOCUMENT	1271	04/09/65	LETTER	4
AUTHOR:	DOW		TRAPP WB	
ADDRESSEE:	CH BOEHRINGER SOHN WGERM		MERZ H	
COPYEE:	DOW		AMOS L	
DOCUMENT	1272	04/22/65	LETTER	2
AUTHOR:	CH BOEHRINGER SOHN WGERM		DOLL O	
ADDRESSEE:	DOW			
COPYEE:				
DOCUMENT	1273	01/28/65	LETTER	3
AUTHOR:	DOW		TRAPP WB	
ADDRESSEE:	CH BOEHRINGER SOHN WGERM		MERZ H	
COPYEE:	DOW		DYLEWSKI SW	
DOCUMENT	1274	12/03/64	REPORT	4
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:				
DOCUMENT	1275	04/06/61	ABSTRACT	2
AUTHOR:	BUCEK OC		DOW	
ADDRESSEE:				
COPYEE:	DOW		BARRONS KC	
	I APB		I CMS	
	I JWB		I JWV	
	I RMI		I RPP	
	LYNN GE		ROWE VK	

D-4275

4179

TITLE

245-TRICHLOROPHENOL PROCESS DATA AND PHYSICAL PROPERTIES SUMMARY
(REPORT PE 65-22).

HARRIS JS
MILLER N

HUDBERG RN
SINKE GC

ACKNOWLEDGES RECEIPT OF INFORMATION CTTL.

TRAPP WB

GRIESS GA
SILVERSTEIN L

LUECK AF

TOXICOLOGICAL STUDIES, GAS CHROMATOGRAPHY AND INFRARED ANALYSES
CTTL.

GROTE

245T KONTRAKT.

MERZ H

SUMMARY OF TELEPHONE CONVERSATION WITH DR H MERZ, OF CH BOEHRINGER
AND WB TRAPP, L SILVERSTEIN, H TOLKMITH, AND SW DYLEWSKI CTTL.

GRIESS GA

SILVERSTEIN L

PROGIL PARIS, SUMMARY OF CHLORACNE EXPERIENCE.

PROPYLENE GLYCOL, SILVEX, 24D OR 245T FOR FATTENING BEEF CATTLE
(REPORT TA-176).

BLAIR EH
I JFK
I KWM
I TRN

HAAGSMA TA
I JS
I PDL
JOHNSON JE

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1276	07/01/60	ABSTRACT	2
AUTHOR:	DOW		TRUCHELUT GB	
ADDRESSEE:				
COPYEE:	DOW		BARRONS KC	
	I CED		I CMS	
	I JS		I LJL	
	I TRN		JOHNSON JE	
	WARREN LE		WATSON AJ	
DOCUMENT	1277	06/19/62	REPORT	2
AUTHOR:	DOW		MCCOLLISTER DD	
ADDRESSEE:				
COPYEE:	DOW		BARRONS KC	
	COLBY RW		DOSSER RC	
	GREENE LM		HART A	
	KILIAN DJ		LUCE EN	
	NASH HA		PERKINS RP	
	VANVALKENBURG W		WRIGHT N	
DOCUMENT	1278	07/29/54	REPORT	1
AUTHOR:	DOW		MCCOLLISTER DD	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1279	02/19/51	REPORT	2
AUTHOR:	DOW		ROWE VK	
ADDRESSEE:				
COPYEE:	DOW		BERHENKE LF	
	BRITTON JW		DAVIDSON JH	
	HEATH SB		HIRSCHKIND W	
	NELSON WL		RECHTIN HJ	
DOCUMENT	1280	10/26/54	REPORT	1
AUTHOR:	DOW		MCCOLLISTER DD	
ADDRESSEE:				
COPYEE:				

D-4276

4180

TITLE

LARGE SCALE HYDROPHYTOTOXIN EXPERIMENTS IN LAKES AND STREAMS,
590000 (REPORT TA-147)(21 2872).

BLAIR EH
I CWH
I OHH
LYNN GE

HOLZSCHU RG
I JFK
I RPP
SCHAFFER AH

RESULTS OF 90 DAY DIETARY FEEDING OF PROPYLENE GLYCOL ISOBUTYL
ETHER ESTER OF SILVEX (DOWCO 171) TO RATS (K 44181-3).

BOUNDY RH
FALKENSTEIN WJ
JONES GD
LYNN GE
SHRADER SA

BROWN R
GAY HH
KAGY JF
MCINTYRE HH
TISDALE WL

RESULTS OF RANGE FINDING TOXICOLOGICAL TESTS ON BUTYL (AND
ISOBUTYL) ALPHA-(245-TRICHLOROPHENOXY) PROPIONATE.
ROGERS F

RESULTS OF TOXICOLOGICAL TESTS ON ALPHA-245-TRICHLOROPHENOXY
PROPIONIC ACID.

BRANCH CB
DUTTON WJ
KELLY JA
SOUTHWICK L

BRITTON EC
HAMMER OH
LYNN GE
SUNDERLAND WM

RESULTS OF ACUTE AND SEMICHRONIC ORAL TOXICITY TESTS WITH RATS FED
"SILVEX", OR 2(245-TRICHLOROPHENOXY) PROPIONIC ACID (K8690-1).
ROWE VK

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1281	12/04/68	CHART LETTER MINUTES	4
AUTHOR:	MUTCHLER JE			
ADDRESSEE:	MUTCHLER JE KRUMEL KL TREE RM		BAILEY CZ MORSE DB	
COPYEE:				
DOCUMENT	1282	00/00/69	REPORT	27
AUTHOR:	FDA YANG GC		HANSEN E	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1283	10/29/68	CHART REPORT	7
AUTHOR:				
ADDRESSEE:				
COPYEE:				
DOCUMENT	1284	05/04/66	AUTH LEGIS	3
AUTHOR:	DOW		HAMMER OH	
ADDRESSEE:	USDA ARS			
COPYEE:				
DOCUMENT	1285	12/17/64	LETTER	1
AUTHOR:	CH BOEHRINGER SOHN		JAENICKE	
ADDRESSEE:	DOW		SILVERSTEIN L	
COPYEE:				
DOCUMENT	1286	12/15/64	LETTER	2
AUTHOR:	CH BOEHRINGER SOHN TRAPP WB		DOW	
ADDRESSEE:	DOW			
COPYEE:				
DOCUMENT	1287	01/13/65	LETTER	2
AUTHOR:	DOW		FARNUM JH	
ADDRESSEE:	CH BOEHRINGER SOHN		KUDSZUS	
COPYEE:	DOW POFFENBERGER N		GOERGEN GO SAUERS RC	

D-4277

4181

TITLE

DOWICIDES PLANT ENVIRONMENTAL CONTROL TASK FORCE MINUTES 681115.

DOW
ROWE VK

KRAMER CO
STEHL RH

THE PREPARATION AND CHARACTERIZATION OF CHLORINATED
DIBENZO-P-DIOXINS.
HEW POHLAND AE

REQUEST FOR EXTENSION OF USES OF PHENOXY HERBICIDES IN PASTURE &
RANGELAND (PP8F0669).

M-3060 LIQUID HERBICIDE FORMULATION APPLICATION FOR TEMPORARY
PERMIT TO SHIP AN ECONOMIC POISON FOR EXPERIMENTAL PURPOSES ONLY.

ENCLOSURE LETTER FOR RABBIT TESTS CONDUCTED IN CONNECTION WITH
550000 PLANT DISINFECTION CTTL.
MERZ

REPORT ON CHLORACNE SENT TO DOW CTTL.
KUDSZUS MERZ

REQUEST FOR ADDITIONAL INFORMATION ON 245T PRODUCTION CTTL.
TRAPP WB

GRIESS GA
SILVERSTEIN L

LUECK AF

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1288	07/16/65	REPORT	9
AUTHOR:	GRUBAUGH K			
ADDRESSEE:				
COPYEE:	DOW		MUTCHLER JE	
DOCUMENT	1289	00/00/68	PRESENT	23
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:				
DOCUMENT	1290	11/03/67	REPORT	5
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:				
DOCUMENT	1291	07/29/63	REPORT	13
AUTHOR:	DOW		I JLS	
	ROWE VK		WILTSE MG	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1292	00/00/63	LEGIS	4
			REPORT	
AUTHOR:	DAVIS JM		HUGHES JS	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1293	00/00/63	LEGIS	4
			REPORT	
AUTHOR:	DAVIS JT		HUGHES JS	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1294	12/00/66	LEGIS	9
			REPORT	
AUTHOR:	DAVIS JT		HUGHES JS	
ADDRESSEE:				
COPYEE:				

D-4278

4182

TITLE

PROCESS SAMPLES AND AIR FILTER SAMPLES FROM 263 BLDG 650716 TO
651117.

SILVERSTEIN LO

CHLORACNE DOW EXPERIENCE.

TOXICITY IN SMALL ANIMALS (PA50.01.01.P1).

TORDON A NEW HERBICIDE FOR VEGETATION CONTROL (DEFOLIATION
CONFERENCE, US ARMY BIOLOGICAL LABORATORIES, FORT DETRICK, MD
630729 TO 630730).

MONROE E
WOLF MA

MULLISON WR

FURTHER OBSERVATIONS ON THE TOXICITY OF COMMERCIAL HERBICIDES TO
BLUEGILL SUNFISH(PROCEEDINGS SWCC)(PPOF0863)(PA50.02.01.P1).

LA WILD LIFE & FISHERIES

VARIATIONS IN TOXICITY TO BLUEGILL SUNFISH OF PHENOXY
HERBICIDES(WEEDS 11, 50-53)(PPOF0863)(PA50.02.01.P1).

LA WILD LIFE & FISHERIES

TOXICOLOGY OF PESTICIDES TO BLUEGILL SUNFISH TESTED DURING 1961 TO
1966(PPOF0863)(PA50.02.01.P1).

LA WILD LIFE AND FISHERI

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1295	03/00/67	LEGIS	16
AUTHOR:	BOND CE		REPORT	
ADDRESSEE:			MALICK J	
COPYEE:				
DOCUMENT	1296	01/26/53	REPORT	11
AUTHOR:	DOW		SMITH HL	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1297	01/19/68	CHART LETTER	2
AUTHOR:	DOW		MCCOLLISTER DD	
ADDRESSEE:	BAKER DM JR		FDA	
COPYEE:	HAYS HW		USDA	
DOCUMENT	1298	05/02/61	LETTER	1
AUTHOR:	DOW		MCINTYRE HH	
ADDRESSEE:	KELSEY D		USDA	
COPYEE:	DOW		SUNDERLAND WW	
DOCUMENT	1299	02/11/69	PRESENT	12
AUTHOR:	RAY HC		USDI	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1300	01/10/69	REPORT	8
AUTHOR:				
ADDRESSEE:				
COPYEE:				
DOCUMENT	1301	12/13/68	LETTER	2
AUTHOR:	HEW		ROTHSCHILD A	
ADDRESSEE:	DUNN CL		NACA IND TASK	
COPYEE:	USDA ARS		FORCE	
DOCUMENT	1302	07/00/68	REPORT	7
AUTHOR:	DOW		LENG ML	
ADDRESSEE:				
COPYEE:				

D-4279

4183

TITLE

PROGRESS REPORT ON AQUATIC WEED RESEARCH(PROJECT 773)DEPT OF
FISHERIES AND WILDLIFE(PP0F0863)(PA50.02.01.P1).

OR ST UNIV

WILSON DC

BRUSH AND WEED CONTROL ON RAILROAD RIGHTS OF WAY BY USE OF 24D AND
245T (PRESENTED BEFORE THE TORONTO RAILWAY CLUB TORONTO, CAN).

PESTICIDE PETITION SF0675.

HEW

SEVERAL ITEMS ARE NOTED IN RESPONSE TO THE USDA'S LETTER OF 610412
REGARDING KUROSAI SL CTTL.
OUELLETTE FE

REPORT OF THE NATL TECH ADVISORY COMM ON WATER QUALITY CRITERIA THE
SAFE USE OF AQUATIC HERBICIDES(WSSA MEETING, LAS VEGAS, NV 690211
TO 690213).

NORTHEASTERN WEED CONTROL CONF 690108 TO 690110.

PP 8F0669 REQUESTING RESIDUE TOLERANCES FOR 245T CTTL.

ON P

REVIEW ON THE METABOLISM OF PHENOXY COMPOUNDS IN PLANTS AND ANIMALS
(PP 8F0669).

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1303	03/16/67	LETTER	3
AUTHOR:	ALFORD HG		USDA ARS	
ADDRESSEE:	DOW		SACHS SB	
COPYEE:				
DOCUMENT	1304	00/00/69	LEGIS.	1
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:				
DOCUMENT	1305	09/00/68	REPORT	4
AUTHOR:	NACA			
ADDRESSEE:				
COPYEE:				
DOCUMENT	1306	06/15/65	REPORT	3
AUTHOR:	DOW		ERBEL AJ	
ADDRESSEE:				
COPYEE:	DOW		BOSSCHER H	
	COULTER KE		DIETZLER AJ	
	HABERSTROH WH		HESS TM	
	LUNDQUIST JT		NORTON TR	
	ROWE VK		SAUERS RC	
	TRAPP WB		WIDIGER AH	
DOCUMENT	1307	07/30/65	MEMO	3
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:				
DOCUMENT	1308	11/23/64	CHART MEMO	2
AUTHOR:	DELISLE NG		DOW	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1309	11/00/64	MEMO	1
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:				

D-4280

4184

TITLE

REDDON(USDA REG. 464-180)YOUR LETTER OF 660923.

PORTION OF SENATE HEARING TRANSCRIPT CTTL.

24D, 245T, SILVEX, MCPA RESIDUES(METABOLISM IN ANIMALS)(PP 8F0676
REFILED AS PP 9F0761) CTTL.

EFFECT OF 1245-TETRACHLOROBENZENE PURITY ON FORMATION OF
CHLORACNEGENS IN 245-TRICHLOROPHENOL PROCESS (SL 151874).

BRADLEY KB
GILL HH
HOYLE H
OLSON KJ
SILVERSTEIN L
WOLF RR

CHAMBERLAIN LC
GOERGEN GG
KALLOS G
POFFENBERGER N
STAEHLING EC
WRIGHT N

BOEHRINGER REPORT, EXCERPTS.

TCP, ACNE, TASK FORCE MEETING 1.

TCP CHLORACNE, ANILINE SECTION, PERSONNEL.

NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT 1310	07/20/53	REPORT	15	REPORT ON ENVIRONMENTAL SURVEY CARRIED OUT IN THE 245T PLANT OF MON AT NITRO, WV (PART 2). SCHAFFER LJ UNIV OF CINCINNATI
AUTHOR: CHOLAK J KEHOE RA YEAGER D ADDRESSEE: COPYEE:				
DOCUMENT 1311	12/00/64	REPORT	45	GRASSLAND RESTORATION PART 2 BRUSH CONTROL (PA2.18.S3). POLK DB RECHENTHIN CA
AUTHOR: BELL HM SMITH HN ADDRESSEE: COPYEE:				
DOCUMENT 1312	00/00/63	REPORT	37	THE EFFECTS OF 4-AMINO-356-TRICHLOROPICOLINIC ACID ON SEEDLING AND ESTABLISHED NATIVE GRASSES AND PERENNIAL FORBS (PA2.18.S3).
AUTHOR: ARNOLD WR ADDRESSEE: OK ST UNIV COPYEE:				
DOCUMENT 1313	11/01/62	LETTER	2	TOXICOLOGICAL INFORMATION ON A NUMBER OF AGRICULTURAL FORMULATIONS SUITABLE FOR SENDING TO RS DUNHAM OF THE USDA.
AUTHOR: DOW ADDRESSEE: DOW COPYEE: WOLF MA RITTY PM				
DOCUMENT 1314	08/01/52	LETTER	2	TOXICOLOGICAL DATA ON 245T IN RESPONSE TO A REQUEST FOR INFORMATION ON THE PHYSIOLOGICAL OR TOXIC EFFECTS OF ESTERON 245 CTTL.
AUTHOR: DOW ADDRESSEE: DUXBURY MH COPYEE: GORDON HL ROWE VK VET ADMIN HOSPITAL WA SMITH HL				
DOCUMENT 1315	07/22/52	LETTER	1	REQUEST FOR INFORMATION ON PHYSIOLOGICAL AND TOXIC EFFECTS OF ESTERON 245 CTTL.
AUTHOR: DUXBURY MH ADDRESSEE: DOW COPYEE: VET ADMIN HOSPITAL WA				
DOCUMENT 1316	05/31/09	REPORT	11	FUNDAMENTAL PROBLEMS RELATED TO VALIDATION OF ANALYTICAL DATA ELABORATED ON THE EXAMPLE OF TCDD (TOX AND ENVIRON CHEM REVIEWS (3, 61-71)).
AUTHOR: CRUMMETT WB ADDRESSEE: DOW COPYEE:				

D-4281

4185

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1317	00/00/62	REPORT	5
AUTHOR: BUR OF SPORT FISHERIES & COPE OB				
ADDRESSEE:				
COPYEE:				
DOCUMENT	1318	00/00/63	REPORT	8
AUTHOR: PALMER JS			RADELEFF RD	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1319	00/00/50	REPORT	5
AUTHOR: DOW			MCCOLLISTER DD	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1320	00/00/69	MEMO	2
AUTHOR: DOW				
ADDRESSEE:				
COPYEE:				
DOCUMENT	1321	03/17/69	NEWS	5
AUTHOR: FOOD CHEM NEWS				
ADDRESSEE:				
COPYEE:				
DOCUMENT	1322	00/00/68	REPORT	10
AUTHOR:				
ADDRESSEE:				
COPYEE:				
DOCUMENT	1323	08/29/68	MINUTES	40
AUTHOR: BALCOM RB			BOYLE WD	
CUMMINGS J			DEA S	
ENIS WB			MCCLURE T	
TIMMONS FL				
ADDRESSEE:				
COPYEE:				

D-4282

4186

TITLE

SPORT FISHERY INVESTIGATION (FISH & WILDLIFE SERVICE CIRCULAR 167,
PAGES 26, 28, 29, 38 & 42).

THE TOXICOLOGIC EFFECTS OF CERTAIN FUNGICIDES AND HERBICIDES ON
SHEEP AND CATTLE (ANNALS NEW YORK ACADEMY OF SCIENCES, 729-736).
USDA

THE ACUTE ORAL TOXICITY OF 245T TO RATS, MICE, GUINEA PIGS AND
CHICKS.
ROWE VK SPENCER HC

NOTES ON 245T REPORT BY BIONETICS CTTL.

CARCINOGEN PAPER ON DDT, 245T WITHDRAWN FROM MEETING (FOOD CHEM
NEWS, 17-21).

DEMOBILIZATION PLANNING PART 1.

DR-ARS RESEARCH ADVISORY COMMITTEE MEETING IRRIGATED AGRICULTURE
RESEARCH & EXTENSION CENTER, PROSSER, WA.
BRUNS VF COHAN H
DEMINT RJ DEVANEY T
MURRAY W OLIVER F

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1324	03/19/59	CHART	4
			LETTER	
AUTHOR:	KLAUDER JV			
ADDRESSEE:	DOW		ROWE VK	
COPYEE:	DOW		BARRONS KC	
	COULTER LL		ELSHERE D	
	GREENE LM		HAMMER OH	
	JONES GD		KAGY JF	
	LYNN GE		MCINTYRE HH	
	TISDALE WL		WHITE LC	
DOCUMENT	1325	11/05/53	REPORT	4
AUTHOR:	DOW		OYEN F	
ADDRESSEE:	DOW		ALLINSON RL	
COPYEE:	DOW		GAY HH	
	DUTTON WC		MACUTCHEON SM	
	LYNN GE		WRIGHT P	
	SUNDERLAND WW			
DOCUMENT	1326	05/20/53	LETTER	2
AUTHOR:	DOW		HYMAS TA	
ADDRESSEE:	DOW		ROWE VK	
COPYEE:	DOW		BRITTON JW	
	SMITH HL		SOUTHWICK L	
DOCUMENT	1327	02/17/54	REPORT	1
AUTHOR:	COPPERS J		DOW	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1328	02/18/54	REPORT	1
AUTHOR:	DOW		OYEN F	
ADDRESSEE:	DOW		ROWE VK	
COPYEE:				
DOCUMENT	1329	12/09/53	LETTER	1
AUTHOR:	DOW		HYMAS TA	
ADDRESSEE:	DOW		ROWE VK	
COPYEE:	DOW		BARRONS KC	
DOCUMENT	1330	00/00/53	REPORT	9
AUTHOR:	DOW		WYSE H	
ADDRESSEE:				
COPYEE:				

D-4283

4187

TITLE

DISCUSSION AND RESULTS OF REPEATED INSULT METHOD OF PATCH TEST WITH
KURON ON MALE SUBJECTS.

BOUNDY RH
GAY HH
HART A
KILIAN DJ
PERKINS RP
WRIGHT N

COLBY RH
GRAY HE
HYMAS TA
LUCE EN
STENGER VA

RESULTS OF SKIN, EYE, AND ACUTE ORAL TOXICITY TESTS ON ESTERON
BRUSH KILLER. KILLER.

BOUNDY RH
JONSON JE
MARTIN D

DAVIDSON JH
KAGY JF
MELASS VH

ACUTE ORAL TOXICITY OF DOW ESTERON BRUSH KILLER FOR CATTLE.

IRISH DD
VANHORN JG

JOHNSON JE

ESTERON BRUSH KILLER (TISSUE EXAMINATION).

HISTOPATHOLOGIC IMPRESSIONS OF STEER FED DOW ESTERON BRUSH KILLER.

ESTERON BRUSH KILLER TOXICITY TO CATTLE.

JOHNSON JE

LYNN GE

BRUSH KILLER T (SKIN IRRITATION).

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1331	00/00/53	REPORT	3
AUTHOR:	DOW		WYSE H	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1332	00/00/53	REPORT	8
AUTHOR:	DOW		WOLF MA	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1333	04/12/68	REPORT	25
AUTHOR:	MI ST UNIV		TSCHIRLEY FH	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1334	04/06/68	REPORT	12
AUTHOR:	DARROW RA		MINARIK CE	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1335	04/03/68	REPORT	5
AUTHOR:	DARROW RA		MINARIK CE	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1336	00/00/61	NEWS	5
AUTHOR:	DOW		REPORT	
ADDRESSEE:			LOCKWOOD DT	
COPYEE:				
DOCUMENT	1337	10/12/66	REPORT	1
AUTHOR:	DOW		SILVERSTEIN LG	
ADDRESSEE:	DOW		CHASE F	
COPYEE:				
DOCUMENT	1338	10/24/66	REPORT	1
AUTHOR:	DOW		SILVERSTEIN LG	
ADDRESSEE:				
COPYEE:				

0-4284

4188

TITLE

BRUSH KILLER T (EYE IRRITATION).

DOW BRUSH KILLER T (ACUTE ORAL TOXICITY).
WYSE H

AN ASSESSMENT OF ECOLOGICAL CONSEQUENCES OF THE DEFOLIATION PROGRAM
IN VIETNAM.

PERSISTENCE OF HERBICIDES IN SOIL AND WATER (APPENDIX D).
US ARMY

TOXICITY OF HERBICIDES IN USE IN RVN (APPENDIX C).
US ARMY

TOXICOLOGIC INFORMATION ON 245-TRICHLOROPHENOL (TOX AND APPLIED
PHARMACOLOGY 3, 63-70).

MCCOLLISTER DD

ROWE VK

BUTYL ESTER OF 245T, 489 BLDG, DIRECT ESTER PROCESS (REQUEST FOR
SCREENING OR APPLICATION TESTING).

DIRECT ESTER PLANT 489 BLDG, PROCESS SAMPLES (REQUEST FOR SCREENING
OR APPLICATION TESTING).

NUMBER	DATE	TYPE	PAGES
DOCUMENT 1339	07/17/67	REPORT	1
AUTHOR: DOW ADDRESSEE: DOW COPYEE: HOYLE HOYLE			
DOCUMENT 1340	08/00/68	REPORT	152
AUTHOR: BIONETICS RES LAB MD ADDRESSEE: NATL CANCER INST MD COPYEE:			
DOCUMENT 1341	02/22/67	REPORT	3
AUTHOR: DOW ADDRESSEE: OHARE CP COPYEE:			
DOCUMENT 1342	01/25/67	CHART REPORT	2
AUTHOR: DOW ADDRESSEE: HURDELBRINK MJ COPYEE:			
DOCUMENT 1343	00/00/65	REPORT	3
AUTHOR: DOW ADDRESSEE: PERRY KW COPYEE:			
DOCUMENT 1344	10/16/64	REPORT	1
AUTHOR: DOW ADDRESSEE: SKELLY NE COPYEE:			
DOCUMENT 1345	02/00/65	REPORT	16
AUTHOR: DOW ADDRESSEE: OHARE C COPYEE:			
DOCUMENT 1346	02/00/65	REPORT	6
AUTHOR: DOW ADDRESSEE: OHARE CP COPYEE:			

D-4285

4189

TITLE

245T SAMPLES FROM MONSANTO & DIAMOND (REQUEST FOR SCREENING OR APPLICATION TESTING).

FERNANDEZ JB

EVALUATION OF CARCINOGENIC, TERATOGENIC, AND MUTAGENIC ACTIVITIES OF SELECTED PESTICIDES AND INDUSTRIAL CHEMICALS, VOLUME TWO
TERATOGENIC STUDY IN MICE AND RATS (PB-223 160).

BONE MARROW SUMMARY (TCDD).
SADEK SE

HEMATOLOGY SUMMARY (TCDD).
SADEK S

TCDD (USE TOX. SPL. 127).

"TETRACHLORODIBENZO-P-DIOXANS" ISOLATED FROM OIL #658 (REQUEST FOR SCREENING OR APPLICATION TESTING).

THE EFFECTS OF REPEATED APPLICATIONS OF SYMMETRICAL
TETRACHLORODIBENZODIOXIN ON GUINEA PIG EARS (FILE T36.25-66681-5).
OLSEN K ROWE VK

THE EFFECTS OF REPEATED APPLICATIONS OF SYMMETRICAL
TETRACHLORODIBENZODIOXIN ON THE RAT EAR (FILE T36.25-66681-3).
OLSEN K ROWE VK

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1347	03/00/65	REPORT	15

AUTHOR: DOW OHARE CP
 ADDRESSEE:
 COPYEE:

DOCUMENT	1348	05/12/58	MEMO	3

AUTHOR: DOW WOLF MA
 ADDRESSEE: DOW HYMAS T
 COPYEE:

DOCUMENT	1349	00/00/57	REPORT	1

AUTHOR: DOW
 ADDRESSEE:
 COPYEE:

DOCUMENT	1350	01/24/67	REPORT	17

AUTHOR: DEPT OF THE INTERIOR GA NICHOLSON HP
 ADDRESSEE:
 COPYEE: DOW I CLM
 I DDM I EEA
 I ESS I FJL
 I HWL I JFK
 I JT I JWL
 I MAN I MGW
 I RGH I RLG
 I TTT I TWH
 I WRN

DOCUMENT	1351	12/28/61	LETTER	2

AUTHOR: DOW WINSTON AW JR
 ADDRESSEE: DOW RITTY PM
 COPYEE:

DOCUMENT	1352	02/18/58	LETTER	2

AUTHOR: DOW WINSTON AW JR
 ADDRESSEE: DOW JOSEPHS MJ
 COPYEE:

D-4286

4190

TITLE

 THE FORMATION OF FOLLICULITIS IN THE RABBIT EAR FOLLOWING A SINGLE
 SUBCUTANEOUS INJECTION OF SYMMETRICAL TETRACHLORODIBENZODIOXIN IN
 BENZENE (FILE T36.25-66681-4).

OLSEN K

ROWE VK

TOXICITY INFORMATION ON SOME RECENTLY RELEASED DOW AGRICULTURAL
 CHEMICALS.

(TEXAN REPORT 700900 TO 701100).

THE SOUTHEAST WATER LAB AND ITS PROGRAM (20TH ANNUAL MEETING OF
 SOUTHERN WEED CONFERENCE 670124 TO 670126 LA).

I CLS
 I EHB
 I HA
 I JLS
 I JHV
 I PDL
 I TAH
 I VKR

I CTL
 I ERL
 I HJ
 I JRF
 I KCB
 I RCH
 I TJP
 I WPF

FISH TOXICITY OF SOME HERBICIDE FORMULATIONS AND THEIR INGREDIENTS.

FISH TASTE THRESHOLD AND TOXICITY OF SOME AQUATIC HERBICIDE
 MATERIALS.

NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT 1353	10/16/50	LETTER	4	ODOR AND TASTE THRESHOLDS AND FISH TOXICITY OF SMC ORGANIC COMPOUNDS CTTL.
AUTHOR: DOW		REPORT		
ADDRESSEE: DOW		POWERS TJ		
COPYEE:		ROWE VK		
DOCUMENT 1354	11/21/60	LETTER	2	LD50 ON FISH OF VARIOUS HERBICIDES CTTL.
AUTHOR: DOW		RAYNOR RN		
ADDRESSEE: DOW		WARREN LE		
COPYEE: DOW		COULTER LL		
		RITTY PM		SWEZEY AM
DOCUMENT 1355	00/00/66	REPORT	9	TOXICITY OF PESTICIDES TO BLUEGILL SUNFISH TESTED DURING 610000 TO 660000.
AUTHOR: DAVIS JT		HUGHES JS		LA WILDLIFE AND FISHERIE
ADDRESSEE:				
COPYEE:				
DOCUMENT 1356	04/00/69	NEWS	9	EFFECTS OF FIVE HERBICIDES ON THREE GREEN ALGAE (TX JOUR OF SCIENCE XX(4), 329-337).
AUTHOR: NORTH TX ST UNIV		REPORT		
ADDRESSEE:		SMITH DL		
COPYEE:		VANCE BD		
DOCUMENT 1357	04/00/69	NEWS	7	SURVIVAL OF FISH IN 164 HERBICIDES, INSECTICIDES, FUNGICIDES, WETTING AGENTS AND MISCELLANEOUS SUBSTANCES (INTERNATIONAL PEST CONTROL, 29-35).
AUTHOR: ALABASTER JS		REPORT		
ADDRESSEE:		MINISTRY OF AG FISHERIES		
COPYEE:				
DOCUMENT 1358	01/00/54	REPORT	10	SILVEX (SILVEX TECHNICAL BULLETIN 1).
AUTHOR: DOW				
ADDRESSEE:				
COPYEE:				
DOCUMENT 1359	11/00/66	REPORT	4	SUMMARY OF THE BIONETICS TERATOLOGY STUDY ON 24D AND RELATED COMPOUNDS.
AUTHOR:				
ADDRESSEE:				
COPYEE:				

D-4287

4191

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1360	00/00/69	NEWS	12
AUTHOR:	HEGYI E		REPORT	
ADDRESSEE:			LUPTAKOVA A	
COPYEE:				
DOCUMENT	1361	10/00/63	NEWS	16
AUTHOR:	BASF WGERM		REPORT	
ADDRESSEE:			OETTEL H	
COPYEE:				
DOCUMENT	1362	04/22/63	LETTER	2
AUTHOR:	DOW		LYNN GE	
ADDRESSEE:	DELMOR FJ		DOD	
COPYEE:	DOW		ROWE VK	
	USDA ARS			
DOCUMENT	1363	00/00/66	REPORT	39
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:				
DOCUMENT	1364	06/00/65	REPORT	21
AUTHOR:	DOW			
ADDRESSEE:	DOW		MUTSCHLER JE	
COPYEE:				
DOCUMENT	1365	00/00/57	REPORT	5
AUTHOR:	FISHER P		HAMBURG EPPENDORF	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1366	08/30/50	ABSTRACT	1
AUTHOR:	DOW		ROWE VK	
ADDRESSEE:				
COPYEE:				

①-4288

4192

TITLE

THE PART OF ALKALI IN THE KERATOGENOUS EFFECT OF TECHNICAL
245-TRICHLOROPHENOL (BERUFS-DERMATOSEN 6, 327-337)(GERMAN).

STOTA Z

NEUERE ERKENNTNISSE UBER GESUNDHEITSGEFAHRLICHE ORBEITSSTOFF
(MODERNE UNFALLVERHUTUNG 8, 3-16)(GERMAN).

INFORMATION ON TOXICITY OF 24D AND 245T, LACK OF ILL EFFECTS ON DOW
WORKERS INVOLVED IN MANUFACTURING 24D AND 245T AND LACK OF
COMPLAINTS FROM USERS OF 24D AND 245T CTTL.

SHAW WG

SUNDERLAND WM

199 BUILDING WIPE SAMPLES.

199 BLDG AIR SAMPLES.

OCCUPATIONAL ACNE (SOCALLED CHLORACNE) DUE TO CHLORINATED AROMATIC
CYCLIC ETHER (DERMATOLOGICA 115, 540).

UNIV S KIMMIG K

SCHULZ KH

INTERIM REPORT ON THE ACUTE AND SUBACUTE ORAL TOXICITY OF 245T FOR
DOGS (ACETIC ACID (245-TRICHLOROPHENOXY) TOXICITY).

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1367	12/31/69	ABSTRACT	1

AUTHOR: DOW
 ADDRESSEE:
 COPYEE: EMERSON JL

DOCUMENT	1368	00/00/57	REPORT	5

AUTHOR: KIMMIG J
 ADDRESSEE:
 COPYEE: SCHULZ KH

DOCUMENT	1369	06/00/63	REPORT	12

AUTHOR: BUTLER PA
 ADDRESSEE:
 COPYEE: USDI

DOCUMENT	1370	08/00/64	REPORT	5

AUTHOR: BUTLER PA
 ADDRESSEE:
 COPYEE: USDI

DOCUMENT	1371	00/00/53	REPORT	7

AUTHOR: DRILL VA
 ADDRESSEE:
 COPYEE: HIRATZKA T

7-4287

4193

TITLE

ORAL MEDIAN LETHAL DOSE (LD 50) DETERMINATION ON 245T IN THE FEMALE RAT.

GERBIO CO

THOMPSON DJ

OCCUPATIONAL CHLORACNE CAUSED BY AROMATIC CYCLIC ETHERS (DERMATOLOGICA 115, 540-546)(LECTURE DELIVERED AT THE 23RD CONGRESS OF GERMAN DERMATOLOGISTS, VIENNA, 560523 TO 560527).

UNIV OF HAMBURG EPPENDOR

COMMERCIAL FISHERIES INVESTIGATIONS (PESTICIDE WILDLIFE STUDIES, A REVIEW OF FISH AND WILDLIFE SERVICE INVESTIGATIONS, CIRCULAR 167)(PETITION FOR THE ESTABLISHMENT OF TOLERANCES FOR THE PESTICIDE CHEMICAL, 245T ON RAW AGRICULTURAL COMMODITIES, SECTION C, FULL REPORTS OF INVESTIGATIONS MADE WITH RESPECT TO THE SAFETY OF THE PESTICIDE CHEMICAL, 245T).

COMMERCIAL FISHERY INVESTIGATIONS (PESTICIDE WILDLIFE STUDIES 630000, A REVIEW OF FISH AND WILDLIFE SERVICE INVESTIGATIONS DURING THE CALENDAR YEAR, CIRCULAR 199)(PETITION FOR THE ESTABLISHMENT OF TOLERANCES FOR THE PESTICIDE CHEMICAL, 245T ON RAW AGRICULTURAL COMMODITIES, SECTION C, FULL REPORTS OF INVESTIGATIONS MADE WITH RESPECT TO THE SAFETY OF THE PESTICIDE CHEMICAL, 245T).

TOXICITY OF 24D AND 245T, A REPORT ON THEIR ACUTE AND CHRONIC TOXICITY IN DOGS (IND HYGIENE AND OCCUPATIONAL MEDICINE 7, 61-67)(PETITION FOR THE ESTABLISHMENT OF TOLERANCES FOR THE PESTICIDE CHEMICAL, 245T ON RAW AGRICULTURAL COMMODITIES, SECTION C, FULL REPORTS OF INVESTIGATIONS MADE WITH RESPECT TO THE SAFETY OF THE PESTICIDE CHEMICAL, 245T).

WAYNE UNIV

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1372	00/00/50	REPORT	4

AUTHOR: DOW
ADDRESSEE:
COPYEE: MCCOLLISTER DD

DOCUMENT	1373	12/08/67	REPORT	14

AUTHOR: DOW
ADDRESSEE:
COPYEE:

DOCUMENT	1374	05/09/62	REPORT	19

AUTHOR: BAUER H
ADDRESSEE: BERGMAN
COPYEE: DOW ROWE VK

DOCUMENT	1375	00/00/62	REPORT	7

AUTHOR: JONES EL
ADDRESSEE: KRIZEK H
COPYEE:

DOCUMENT	1376	00/00/57	MEMO	4

AUTHOR:
ADDRESSEE:
COPYEE:

DOCUMENT	1377	00/00/68	MEMO	1

AUTHOR:
ADDRESSEE:
COPYEE:

DOCUMENT	1378	05/04/67	REPORT	10

AUTHOR: BLUMS ZB
ADDRESSEE: LONDONO F
COPYEE:

7-4270

4194

TITLE

 THE ACUTE ORAL TOXICITY OF 245T TO RATS, MICE, GUINEA PIGS AND CHICKS (PETITION FOR THE ESTABLISHMENT OF TOLERANCES FOR THE PESTICIDE CHEMICAL, 245T ON RAW AGRICULTURAL COMMODITIES, SECTION C, FULL REPORTS OF INVESTIGATIONS MADE WITH RESPECT TO THE SAFETY OF THE PESTICIDE CHEMICAL, 245T).

ROWE VK

SPENCER HC

PETITION FOR THE ESTABLISHMENT OF TOLERANCES FOR THE PESTICIDE CHEMICAL, 245T ON RAW AGRICULTURAL COMMODITIES, SECTION C, FULL REPORTS OF INVESTIGATIONS MADE WITH RESPECT TO THE SAFETY OF THE PESTICIDE CHEMICAL 245T.

INDUSTRIAL POISONING IN THE MANUFACTURE OF CHLOROPHENOL COMPOUNDS (ARCHIV FUR GEWERBEPATHOLOGIE UND GEWERBEHYGIENE 18, 538-555 610000).

SCHULZ KH

SPIEGELBERG U

A TECHNIC FOR TESTING ACNEGENIC POTENCY IN RABBITS, APPLIED TO THE POTENT ACNEGEN TCDD(JOUR OF INVESTIGATIVE DERMATOLOGY 39, 511-517)(PRESENTED AT THE TWENTY-THIRD ANNUAL MEETING OF THE SOCIETY FOR INVESTIGATIVE DERMATOLOGY INC CHICAGO IL 620626).

UNIV OF CHICAGO

ROUGH DRAFT REPORT ON CHLORACNE CTTL.

BIBLIOGRAPHY CTTL.

CLINICAL STUDIES, OCCUPATIONAL ACNE (FABIO LONDONO, MEDICINA CUTANEA 3, 225-232 660000).

NUMBER	DATE	TYPE	PAGES
DOCUMENT 1379	00/00/55	NEWS REPORT	22
AUTHOR: ADDRESSEE: COPYEE:			
DOCUMENT 1380	02/00/66	CHART REPORT	2
AUTHOR: DOW ADDRESSEE: COPYEE:			
DOCUMENT 1381	07/16/65	REPORT	1
AUTHOR: DOW		GILL HH	
ADDRESSEE:		MUTCHLER JE	
COPYEE: DOW			
DOCUMENT 1382	05/05/66	REPORT	13
AUTHOR: HOYLE HR		SILVERSTEIN LG	
ADDRESSEE:		DUNKELBARGER DC	
COPYEE: DOW		WALKER RE	
LUECK AF			
DOCUMENT 1383	03/20/68	REPORT	9
AUTHOR: DOW		HOYLE HR	
ADDRESSEE:		DUNKELBARGER DC	
COPYEE: DOW		KREGER WP	
HUTCHENREUTHER CO		ROSE R	
RAGER EE			
DOCUMENT 1384	00/00/65	CHART	3
AUTHOR: DOW			
ADDRESSEE:			
COPYEE:			
DOCUMENT 1385	00/00/65	CHART	3
AUTHOR: DOW			
ADDRESSEE:			
COPYEE:			
DOCUMENT 1386	00/00/65	CHART	3
AUTHOR: DOW			
ADDRESSEE:			
COPYEE:			

4195

D-4291

TITLE

EXCERPTS FROM ARTICLE, REFERENCES TO PAGES OF ORIGINAL.

265 BLDG SPL PT, CATCHALL STORAGE PROCESS SAMPLES.

PROCESS SAMPLES FROM 265 BLDG DATED 650708 SAMPLE RECORD AL W9-127.

SILVERSTEIN LG

199 BUILDING WIPE SAMPLES FOR CHLORACNE CONTAMINATION 660000 TO
DATE (T17.4-12-3).

GOERGEN GG
WILSON AW

GORDON HL

WIPE TESTS IN 199 BUILDING DURING TRICHLOROPHENOL PROCESS
DISMANTLING (T17.4-12-3).
SILVERSTEIN LG

HERITIER WJ
LOHRKE EE
STAEHLING EC

HOLDER DB
MORSE D

703 BLDG WIPE SAMPLES.

WIPE SAMPLES(474 BLDG).

338 BLDG PROCESS SAMPLES.

	NUMBER	DATE	TYPE	PAGES
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	1387 DOW	00/00/65	CHART	6
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	1388 DOW	00/00/65	CHART	3
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	1389 DOW	00/00/65	CHART	3
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	1390 DOW	00/00/65	CHART	12
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	1391 DOW	00/00/65	CHART	3
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	1392 DOW	03/16/65	AUTH SILVERSTEIN LG	1
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	1393 DOW	05/14/65	CHART	5
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	1394 DOW	00/00/65	REPORT MUTCHLER JE	9

①-4292

4196

TITLE

267 BLDG WIPE SAMPLES.

NA SALT FILTER PRESS CAKE(267 BUILDING).

267 BUILDING(ISOOCYL ESTER PRODUCT).

267 BUILDING(245T ACID PRODUCT).

267 BUILDING(AIR SAMPLES).

SPIKED SAMPLES OF SILVEX, RONNEL, 245T BUTYLESTER (REQUEST FOR
SCREENING OR APPLICATION TESTING).

245T PROCESS SAMPLES(AOLUKON GESELLSCHAFT).

PROCESS SAMPLES FROM 265 BLDG DATED 650708 (AL-W9-127).

SILVERSTEIN LO

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1395	00/00/68	NEWS	2
AUTHOR:	CAMPBELL AD		REPORT	
ADDRESSEE:	HUANG A		FDA	
COPYEE:			RESS J	
DOCUMENT	1396	03/00/69	REPORT	28
AUTHOR:	HANSEN E		HEW	
ADDRESSEE:	FDA			
COPYEE:				
DOCUMENT	1397	02/14/68	REPORT	8
AUTHOR:	DOW		DUDDLES GA	
ADDRESSEE:				
COPYEE:	DOW		ALEXANDER HC	
	LYNN GE		SHANNON ES	
	WOLF MA			
DOCUMENT	1398	01/07/60	REPORT	6
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:				
DOCUMENT	1399	10/30/53	REPORT	7
AUTHOR:	DREYER F			
ADDRESSEE:				
COPYEE:	ADAMS EM		ALLEN WW	
	BARRONS KC		BESHGETOOR AW	
	DAVIDSON JH		DOW	
	GREENE LM		KAGY JF	
	MACCUTCHEON		PRESCOTT RF	
	WRIGHT P			
DOCUMENT	1400	10/22/56	LETTER	1
AUTHOR:	DEPT OF HEALTH VA		KAYE S	
ADDRESSEE:	DOW			
COPYEE:				

D-4293

4197

TITLE

CHEMICAL AND TOXICOLOGICAL EVALUATIONS OF ISOLATED AND SYNTHETIC
CHLORO DERIVATIVES OF DIBENZO-P-DIOXIN.

FIRESTONE D
VERRETT J

HIGGINBOTHAM GR

THE PREPARATION AND CHARACTERIZATION OF CHLORINATED
DIBENZO-P-DIOXINS.

POHLAND AE

YANG GC

THE ACUTE FISH TOXICITY OF TORDON FORMULATIONS 144, 155, 202, 212
AND 225.

BARRONS KC
TEAL JL

KENAGA EE
WILTSE MG

A RESIDUE STUDY OF SILVEX IN FISH LIVING IN KURON CONTAINING WATER.

RESULTS OF RANGE FINDING TOXICOLOGICAL TESTS ON DOW BRUSH KILLER T.

ALLINSON RL
BOUNDY RH
DUTTON WC
LUCE EN
SUNDERLAND WM

ALQUIST FN
BRITTON EC
GAY HH
LYNN GE
WHITE L

REQUEST FOR INFORMATION CONCERNING POSSIBLE EXPOSURE TO ESTERON 245
AND MORTALITY IN CHILDREN CTTL.

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1401	10/26/56	LETTER	2
AUTHOR:	DOW		ROWE VK	
ADDRESSEE:	DOW		GAY HH	
COPYEE:				
DOCUMENT	1402	06/21/67	REPORT	1
AUTHOR:	DOW		GORDON HL	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1403	04/06/65	LETTER	2
AUTHOR:	BLEIBERG J		BRODKIN RH	
ADDRESSEE:	DOW		HOLDER BB	
COPYEE:				
DOCUMENT	1404	07/27/56	LETTER	2
AUTHOR:	DOW		ROWE VK	
ADDRESSEE:	MILLER MC			
COPYEE:	DOW		GAY HH	
DOCUMENT	1405	01/04/56	LETTER MEMO	2
AUTHOR:	SHANKS RW			
ADDRESSEE:				
COPYEE:				
DOCUMENT	1406	12/16/55	LETTER	1
AUTHOR:	CHINBURG W		DOW	
ADDRESSEE:	DOW		GAY HH	
COPYEE:				
DOCUMENT	1407	12/28/55	LETTER	1
AUTHOR:	DOW		GAY HH	
ADDRESSEE:	DOW		CHINBURG W	
COPYEE:				
DOCUMENT	1408	06/17/55	LETTER	1
AUTHOR:	DOW		ROWE VK	
ADDRESSEE:	BIERER BW			
COPYEE:	DOW		ROWE VK	
	HYMAS TA		SMITH HL	

4198
 86
 D-4294

TITLE

ESTERON 245 INQUIRY OF DR. SIDNEY KAYE OF THE COMMONWEALTH OF VA,
DEPT OF HEALTH.

ESTERON 245(REPORT OF TELEPHONE INQUIRIES).

TCDD IS PROBABLE CAUSE BEHIND THE CHLORACNE FOUND IN WORKERS AT
PLANT MAKING 24D AND 245T CTTL.

TOXICOLOGICAL INFORMATION ON ESTERON 99 CTTL.

BESSIE SPERRY.

CONSUMER LETTER.

LETTER DISCOUNTING 24D AND 245T AS THE CAUSE OF HEPATITIS CTTL.

24D AND ALLEGED TURKEY ILLNESS CTTL.

BARRONS KC
WILLIAMS GJ

GORDON HL

NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT 1409	03/03/53	LETTER	3	INFORMATION REGARDING INJURIES WHICH MIGHT BE CAUSED TO PERSONS HANDLING 24D AND 245T CTTL.
REPORT				
AUTHOR: DOW		ROWE VK		
ADDRESSEE: BOURBON COUNTY HOSPITAL		KINNARD BW		
COPYEE: DOW		GAY HH		
DOCUMENT 1410	07/17/51	LETTER	2	SKIN TOXICITY INFORMATION ON 24D, 245T AND SODIUM TCA IN RESPONSE TO REQUEST CTTL.
AUTHOR: DOW		ROWE VK		
ADDRESSEE: REAGEL FV		ST HIGHWAY DEPT MO		
COPYEE: DOW		BRANCH CB		COULTER LL GAY HH
		SMITH HL		WILLIAMS GJ
DOCUMENT 1411	07/28/67	LETTER	1	ENCLOSED DATA ON TOXICITY OF 24D AND 245T PRODUCTS CTTL.
AUTHOR: DOW		ROWE VK		
ADDRESSEE: IL DEPT OF PUBLIC HEALTH		ROSE NJ		
COPYEE: DOW		KRAMER CJ		
DOCUMENT 1412	05/09/66	LETTER	2	TOXICOLOGICAL DATA ON 245T ESTERON PRODUCTS CTTL.
AUTHOR: DOW		WOLF MA		
ADDRESSEE: PRESCOTT C		VT ELECTRIC COOPERATIVE		
COPYEE:				
DOCUMENT 1413	09/13/62	LETTER	1	TOXICOLOGICAL INFORMATION ON A NUMBER OF HERBICIDE FORMULATIONS FOR TRANSMITTAL TO TURKISH AUTHORITIES.
AUTHOR: DOW		WOLF MA		
ADDRESSEE: DOW		HOLDEMAN GE		
COPYEE: DOW		WOLF MA		
DOCUMENT 1414	10/06/61	LETTER	2	CLAIM 1556026.
AUTHOR: DOW		ROWE VK		
ADDRESSEE: HARWARE MUTUALS SENTRY L		WANER WE		
COPYEE: DOW		ROWE VK		SINCLAIR R
DOCUMENT 1415	02/13/56	LETTER	1	RECOMMENDATION NOT TO USE BACKPACK SPRAYING WHEN APPLYING ESTERON BRUSH KILLER AND ESTERON 245 AS INHALATION OF THE MIST MAY CAUSE RESPIRATORY PROBLEMS CTTL.
AUTHOR: DOW		ROWE VK		
ADDRESSEE: DOW		COULTER LL		
COPYEE: DOW		FLETCHER FW		
DOCUMENT 1416	01/26/56	LETTER	2	PAPERS PRESENTED AT THE CHARTER MEETING OF THE WSA, NEW YORK CITY, 560104 AND 560105.
AUTHOR: COULTER LL		DOW		
ADDRESSEE: DOW		ROWE VK		
COPYEE: FLETCHER FW				

①-4295

66199

NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT 1417 AUTHOR: SINGER RH ADDRESSEE: DOW COPYEE:	07/06/55	LETTER UNIV OF KY ROWE VK	2	24D NEEDED FOR ANALYSIS CTTL.
DOCUMENT 1418 AUTHOR: CAN NATL RAILWAYS ADDRESSEE: DOW COPYEE:	11/20/53	LETTER MUNRO DJ ROWE VK	2	LETTER REQUESTING INFORMATION ON ESTERON AND COMMENTS ON HERBICIDE CLAIM CTTL.
DOCUMENT 1419 AUTHOR: DOW ADDRESSEE: CALLOWAY JB COPYEE: DOW	09/01/53	LETTER WILLIAMS GJ FARMERS RURAL ELECTRIC C ROWE VK	1	LETTER INDICATE CONCENTRATION OF TWO PARTS PER MILLION IS SAFE AND FOUR PARTS PER MILLION IS FATAL CTTL. SMITH HL
DOCUMENT 1420 AUTHOR: DOW ADDRESSEE: DOW COPYEE:	12/23/59	LETTER ROWE VK COULTER LL	2	SILVEX.
DOCUMENT 1421 AUTHOR: DOW ADDRESSEE: COPYEE:	08/00/50	REPORT	4	RESULTS OF TOXICOLOGICAL TESTS ON 245T.
DOCUMENT 1422 AUTHOR: DOW ADDRESSEE: COPYEE: DOW EPSTEIN J HAKE CL JONES GD LYNN GE PAVKA RC	06/16/64	REPORT OLSON K BARRONS KC FALKENSTEIN WJ HART A KAGY JF MCINTYRE HH SHRADER SA	1	RESULTS OF RANGE FINDING TOXICOLOGICAL TESTS ON 245T(CURRENT DOW PRODUCT). OYEN F BOUNDY RH GORDON HL HOLDEMAN GE KILIAN DJ MULLISON WR WILSON AW ELSHERE D GREENE LM JOHNSTON RV LUCE EN NORTON TR WRIGHT N
DOCUMENT 1423 AUTHOR: DOW ADDRESSEE: DOW COPYEE: DOW MCINTYRE HH	03/22/61	LETTER RITTY PM LYNN GE COULTER LL	2	COVER LETTER FOR DATA SUPPORTIVE OF HERBICIDAL PROPRITIES OF KROSAL SL AND KROSAL G CTTL. FALSEY WP JOHNSON JE

4200
D-4296

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1424	00/00/69	REPORT	18
AUTHOR:				
ADDRESSEE:				
COPYEE:				
DOCUMENT	1425	10/02/50	ABSTRACT	1
AUTHOR: DOW		POWERS TJ		
ADDRESSEE:				
COPYEE:				
DOCUMENT	1426	00/00/57	NEWS REPORT	8
AUTHOR: CHENOWETH MB				
ADDRESSEE:				
COPYEE:				
DOCUMENT	1427	00/00/64	PRESENT	14
AUTHOR: DOW		I JBC		
ADDRESSEE: DOW		I DBJ		
COPYEE:				
DOCUMENT	1428	08/17/64	LETTER	1
AUTHOR: HOWLAND WL				
ADDRESSEE: DOW				
COPYEE:				
DOCUMENT	1429	08/05/52	LETTER	1
AUTHOR: DOW		GORDON HL		
ADDRESSEE: DUXBURY MH		VA HOSPITAL		
COPYEE: DOW		ROWE VK		
DOCUMENT	1430	04/20/61	LETTER	1
AUTHOR: DOW		GAY HH		
ADDRESSEE: IUKA CLINIC		SEGARS KS		
COPYEE:				
DOCUMENT	1431	03/04/65	LETTER	1
AUTHOR: MICKLESON KNP		PALMERSTON NORTH		
ADDRESSEE: DOW				
COPYEE:				

D.4297

4201

TITLE

NOTES FOR THE PREPARATION OF A LETTER OF INTEREST RELATED TO AIR
FORCE BASE MAINTENANCE.

INFORMATION ON ORGANIC COMPOUND TASTE ODER & FISH TOXICITY ESTERON
BRUSH KILLER TOXICITY TO FISH TASTE & ODOR 3461-3.

INSECTICIDES, RODENTICIDES, AND AGRICULTURAL POISONS(61, 875-882).

METHODOLOGY OF A REPRODUCTIVE STUDY OF WIVES OF DOW MI DIVISION
EMPLOYEES POSSIBLY EXPOSED TO DIOXINS CTTL.

POSSIBLE POISONING DUE TO CONSUMPTION OF SPRAYED FRUIT.

NO REPORTS OF 245T TOXICITY IN MAN CTTL.

245T MILDLY IRRITATING TO SKIN OVER A LONG PERIOD OF TIME WITH
DIRECT, INTIMATE CONTACT CTTL.

SUSPECTS 245T POISONING IN PATIENT WITH PERIPHERAL NEUROPATHY, ASKS
FOR INFORMATION AND HUMAN TISSUE TEST PROCEDURES.

HOSPITA

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1432	03/25/65	LETTER	1
AUTHOR:	GAY HH			
ADDRESSEE:	MICKLESON KNP		PALMERSTON NORTH	
COPYEE:	DOW		ROWE VK	
DOCUMENT	1433	06/20/66	LETTER	1
AUTHOR:	QUETSCH RM			
ADDRESSEE:	DOW			
COPYEE:	IA POISON INFO CENTER			
DOCUMENT	1434	12/16/65	REPORT	1
AUTHOR:	DOW		SCHABERG DE	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1435	11/11/59	TELEX	1
AUTHOR:	DOW		PRIDDY JK	
ADDRESSEE:	GAY HH			
COPYEE:				
DOCUMENT	1436	08/15/63	LETTER	1
AUTHOR:	DOW		NIZIO LD	
ADDRESSEE:	DOW		GAY HH	
COPYEE:				
DOCUMENT	1437	06/14/63	LETTER	2
AUTHOR:	WILLARD G			
ADDRESSEE:	DOW			
COPYEE:				
DOCUMENT	1438	08/20/63	LETTER	1
AUTHOR:	DOW		GAY HH	
ADDRESSEE:	WILLARD G			
COPYEE:	FLETCHER FW		MCCLURE F	
DOCUMENT	1439	08/01/61	LETTER	1
AUTHOR:	LEVINSON B			
ADDRESSEE:	DOW			
COPYEE:				

D-4298

4202

TITLE

245T NONTOXIC TO THE NERVOUS SYSTEM CTTL.

HOSPITA

QUESTIONING IF 245T COULD HAVE LEFT RESIDUAL OVER A LONG PERIOD OF TIME CTTL.

EXPOSURES BETWEEN 540405 AND 640117 (245T) CTTL.

REQUEST FOR TREATMENT OF SKIN IRRITATION ALLEGEDLY DUE TO ACCIDENTAL EXPOSURE TO MIXTURE OF REDDON AND CRUDE OIL CTTL.

REQUEST FOR ASSISTANCE IN ANSWERING COMPLAINT OF WILLARD G OF SKIN RASH FROM REDDON CTTL.
PENCE CB

COMPLAINT OF ITCHING AND BURNING OF ARMS, FACE, HANDS AND LEGS ALLEGEDLY FROM USE OF REDDON CTTL.

REPORT OF ALLEGED SKIN REACTION FROM EXPOSURE TO REDDON REQUIRES FURTHER DETAILS CTTL.

NIZIO LD

PENCE CB

INQUIRY REGARDING TOXICOLOGICAL EFFECTS OF ESTERON CTTL.

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1440	09/21/65	TELECON	2
AUTHOR:	DOW		SCHARNWEBER HC	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1441	07/26/55	REPORT	3
AUTHOR:	DOW		ROWE VK	
ADDRESSEE:				
COPYEE:	GORDON HL WILLIAMS GJ		HYMAS TA	
DOCUMENT	1442	10/26/62	LETTER	1
AUTHOR:	EMPLOYERS MUTUAL LIABILI		MULLINS GW	
ADDRESSEE:	DOW		ROWE VK	
COPYEE:				
DOCUMENT	1443	11/02/62	LETTER	2
AUTHOR:	DOW		ROWE VK	
ADDRESSEE:	EMPLOYERS MUTUALS OF WAS		MULLINS GW	
COPYEE:	DOW		KOEHLINGER DG	
DOCUMENT	1444	11/03/61	MEDREC	1
AUTHOR:	DOW		GAY HH	
ADDRESSEE:	SNYDER G			
COPYEE:				
DOCUMENT	1445	08/21/59	TELEX	1
AUTHOR:	DOW		VANHOUTEN R	
ADDRESSEE:	DOW		GAY HH	
COPYEE:				
DOCUMENT	1446	10/29/57	LETTER	2
AUTHOR:	CHIPMAN CHEM		REED LR	
ADDRESSEE:	DREESSEN J		NACA	
COPYEE:				
DOCUMENT	1447	07/17/57	LETTER	2
AUTHOR:	DOW		ROWE VK	
ADDRESSEE:	BUCHER WH		CHILDRENS HOSPITAL	
COPYEE:	DOW		GAY HH	

D-4299

4203

TITLE

BOSTON POISON CONTROL CENTER, REPORT OF TELEPHONE INQUIRIES,
ESTERON (WHICH FORMULATION NOT SPECIFIED).

NOTES REGARDING AN ILLNESS ALLEGEDLY INVOLVING ESTERON 245.

SANFORD D

SMITH HL

COMMUNICATION CONCERNING CLAIM THAT 24D AND 245T SPRAYING
CONTAMINATED DRINKING WATER SUPPLY CTTL.

COMMUNICATION CONCERNING 24D AND 245T TOXICOLOGICAL INFORMATION
CTTL.

KRAMER CG

WEEDONE POSSIBLE CAUSE OF AGRANULOCYTOSIS IN PREGNANT PATIENT CTTL.

LETTER REQUESTING RECOMMENDED TREATMENT FOR 24D, 245T SPRAYING
RELATED DERMATOLOGICAL TOXICITY CTTL.

IN REFERENCE TO AM MOTORISTS INSURANCE CLAIM, REED SAYS THEY HAVE
NOT ENCOUNTERED A BRONCHIAL REACTION TO 24D, 245T, AND MCP SPRAYS
CTTL.

24D TOXICITY TO HUMANS CTTL.

SOCIE

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1448	06/24/57	LETTER	2
AUTHOR:	DOW		ROWE VK	
ADDRESSEE:	KEITH RL		RUTLAND RAILWAY	
COPYEE:	DOW		ROWE VK	
	GAY HH		LAWRENCE AA	
DOCUMENT	1449	06/26/57	LETTER	1
AUTHOR:	RUTLAND RAILWAY			
ADDRESSEE:	DOW		ROWE VK	
COPYEE:				
DOCUMENT	1450	03/17/66	LETTER	1
AUTHOR:	DOW		MILLER ME	
ADDRESSEE:	ETHERINGTON HALL		ONTARIO CAN	
COPYEE:	DOW		BAKER G	
DOCUMENT	1451	00/00/63	CHART	1
AUTHOR:				
ADDRESSEE:				
COPYEE:				
DOCUMENT	1452	02/00/55	REPORT	4
AUTHOR:	DOW		HYMAS TA	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1453	00/00/66	CHART	1
AUTHOR:	DURHAM WF		WASHINGTON ST UNIV	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1454	00/00/69	REPORT	8
AUTHOR:	ERICHSENJONES JR		UNIV COL OF WALES ABE	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1455	06/22/67	LETTER	2
AUTHOR:	COOK FB		DOW	
ADDRESSEE:	DOW		GOWELL JH	
COPYEE:	DOW		CLOSE GW	
	WOLF MA			

2-4380

4204

TITLE

INFORMATION DENYING HEMOLYTIC ANEMIA ALLEGEDLY CAUSED BY HERBICIDES
CTTL.

CONNER DL

COON ET

ACKNOWLEDGEMENT OF RECEIPT OF TECHNICAL ARTICLES TO ASSIST IN
CLAIMS CTTL.

TOXICOLOGICAL PROPERTIES OF 245T CTTL.

VALBERG LS
BREMNER NW

GORDON HL

TABLE 4 CRUDE FREQUENCIES AND RATES OR RATIOS PER 1000 LIVE BIRTHS
OF PREGNANCY OUTCOMES ACCORDING TO DIOXINS EXPOSURE CATEGORIES CTTL.

SUMMARY OF TOXICOLOGICAL INFORMATION ON 24D AND 245T TYPE
HERBICIDES AND AN EVALUATION OF THE HAZARDS TO LIVESTOCK ASSOCIATED
WITH THEIR USE.

ROWE VK

ESTIMATED RELATIVE ACUTE TOXICITY HAZARD OF PESTICIDES TO SPRAYMEN.
WOLFE HR

FISH AND RIVER POLLUTION (FISH TOX, 128-141).
ERYs

NORFOLK & WESTERN RAILWAY ESTERON 245 OS.

GORDON HL

SHELDON HW

NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT 1456	11/19/58	LETTER	2	TOXICOLOGICAL INFORMATION ON MCP AMINE WEED KILLER AND ESTERON 99 CTTL.
AUTHOR: DOW ADDRESSEE: GRINVALSKY HT COPYEE: DOW WOLF MA ST MICHAELS HOSPITAL WOLF MA				
DOCUMENT 1457	05/26/67	LETTER	2	TRANSMITTAL OF INFORMATION ON TORDON 101 AND ISOPROSPANOL AMINE CTTL.
AUTHOR: DOW ADDRESSEE: MCNAMARA BP COPYEE: DOW ROWE VK US ARMY ROWE VK HAMMER OH				
DOCUMENT 1458	05/00/66	LETTER	2	SAFETY FACTS ABOUT ESTERON 245 OS, ESTERON 245 CONCENTRATE AND ESTERON BRUSH KILLER OS CTTL.
AUTHOR: DOW ADDRESSEE: PRESCOTT C COPYEE: WOLF MA VERMONT ELECTRIC COOPERA				
DOCUMENT 1459	11/12/63	LETTER	2	LIABILITY CLAIM ON ESTERON 245 OS.
AUTHOR: DOW ADDRESSEE: DOW COPYEE: DOW MARTIN FB ROWE VK COULTER LL ROWE VK KOOHLINGER DO LYNN GE				
DOCUMENT 1460	12/13/56	LETTER	1	MR H.F. HILTON, PUBLIC SERVICE COMPANY OF IN, PLAINFIELD IN.
AUTHOR: COON ET ADDRESSEE: DOW COPYEE: DOW DOW ROWE VK ALLEN WW BENDALL TL CORBIN WL				
DOCUMENT 1461	09/13/56	MINUTES	2	RESPONSE TO GRIFFITH COMPLAINT INCLUDING OPINION THAT DESCRIBED CONTAMINATION MAY BE RESPONSIBLE CTTL.
AUTHOR: DOW ADDRESSEE: CHEMI TROL CHEM COMPANY COPYEE: DOW ROWE VK KARLEVETZ F ROWE VK CONNER DL MCCOY WJ				
DOCUMENT 1462	08/14/55	LETTER	1	ALLEGED ILLNESS DUE TO 245T SPRAYING CTTL.
AUTHOR: DOW ADDRESSEE: GRAVENS AND HALK COMPANY COPYEE: DOW SMITH HL ROWE VK GRAVENS J ROWE VK WILLIAMS GJ GORDON H SANFORD D				
DOCUMENT 1463	06/15/54	LETTER	1	RESULTS OF PATCH TEST SHOWS NO ALLERGIC REACTION TO ESTERON 245T CTTL.
AUTHOR: CONSUMERS POWER COMPANY ADDRESSEE: DOW COPYEE: ONEIL RH ROWE VK STENBERG JN				

D-4301

4205

NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT 1464	06/10/54	LETTER	1	NO REACTION TO ESTERON 245 IN DERMATOLOGIST'S TEST ON CONSUMER POWER EMPLOYEE CTTL.
AUTHOR: CONSUMERS POWER COMPANY		WOODRUFF JT		
ADDRESSEE: DOW		MCCUTCHEON SD		
COPYEE: JOHNSON JC		SANFORD D		SMITH HL WILLIAMS GJ
DOCUMENT 1465	08/26/64	MEMO TELECON	1	MAX COOLEY CLAIMS AGENT, LONG DISTANCE PHONE CALL.
AUTHOR: DOW		WOLF MA		
ADDRESSEE:				
COPYEE:				
DOCUMENT 1466	09/28/60	LETTER	2	LETTER CONCERNING COMPLAINT AGAINST 24D AND 245T TYPE HERBICIDE AND CATTLE MORTALITY CTTL.
AUTHOR: BECKWITH C		DOW		
ADDRESSEE: CONTINENTAL INSURANCE		DAVIS DD		
COPYEE: ASHWORTH RH		KARL KUEMMERLING INC		KMEMMERLING INC KMEMMERLING K
DOCUMENT 1467	01/05/60	LETTER	2	LETTER FROM JV KLAUDER TO VK ROWE CONCERNING DOW M-1500 AND DDOW ET-394 CTTL.
AUTHOR: KLAUDER JV				
ADDRESSEE: DOW		ROWE VK		
COPYEE:				
DOCUMENT 1468	12/09/59	LETTER	1	LETTER TO VK ROWE FROM JV KLAUDER REGARDING M-1500 AND ET-394 CTTL.
AUTHOR: KLAUDER JV				
ADDRESSEE: DOW		ROWE VK		
COPYEE:				
DOCUMENT 1469	10/14/59	LETTER	1	LETTER SUGGESTING SKIN TESTS BE DONE USING DOW ET-394 AND DOW M-1500 CTTL.
AUTHOR: DOW		ROWE VK		
ADDRESSEE: KLAUDER JV				
COPYEE: DOW		ROWE VK		OLSON KJ
DOCUMENT 1470	05/13/69	LETTER	2	HEALTH HAZARDS FOR THE HANDLING OF 24D, FORMULA 40 AND KURON CTTL.
AUTHOR: DOW		WOLF MA		
ADDRESSEE: CHAMBERLAIN SV		OM SCOTT & SONS		
COPYEE:				
DOCUMENT 1471	07/05/60	LETTER	2	24D SHOULD NOT INCREASE SUSCEPTIBILITY TO RESPIRATORY DISEASES CTTL.
AUTHOR: DOW		WIFFEN EE		
ADDRESSEE: CARSON DJ		VANWATERS & ROGERS OF CA		
COPYEE: DOW		BAIRD GK		KENNAN JD
WELDEN L		WILSON JB		WOLF MA RITTY PM

①-4302

4206

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1472	06/15/60	LETTER	1
AUTHOR:	DOW		RITTY PM	
ADDRESSEE:	DOW		NORRIS MG	
COPYEE:	DOW		COULTER LL	
DOCUMENT	1473	12/04/56	LETTER	1
AUTHOR:	DOW		ROWE VK	
ADDRESSEE:	DOW		MCCOMB JR	
COPYEE:	DOW		ROWE VK	
DOCUMENT	1474	04/17/58	REPORT	3
AUTHOR:	DOW		STEVENSON GT	
ADDRESSEE:				
COPYEE:	DOW		BARRONS KC	
	COLBY RW		COULTER LL	
	JOHNSON JE		KAGY JF	
	NORTON TR		NUTTING HS	
	SPALDING J		VANVALKENBURG JW	
DOCUMENT	1475	12/11/57	LETTER	1
AUTHOR:	DOW		LYNN GE	
ADDRESSEE:	DOW		HYMAS TA	
COPYEE:	DOW		COULTER LL	
DOCUMENT	1476	12/14/61	LETTER	2
AUTHOR:	DOW		ROWE VK	
ADDRESSEE:	RISKEN AND HERRON		RISKEN JH	
COPYEE:	DOW		ROWE VK	
DOCUMENT	1477	05/19/53	LETTER	2
AUTHOR:	DOW		ROWE VK	
ADDRESSEE:	MAJOR GB		MO ST HIGHWAY DEPT	
COPYEE:	DOW		CRAIN HD	
DOCUMENT	1478	05/15/53	LETTER	2
AUTHOR:	DOW		MULLISON WR	
ADDRESSEE:	HUMES MF		INTL PACKERS	
COPYEE:	BALL HR		MCCASKEY DB	
DOCUMENT	1479	05/01/53	LETTER	1
AUTHOR:	CRAIN HD		DOW	
ADDRESSEE:	DOW		ROWE VK	
COPYEE:	DIETZEL AL		MO ST HIGHWAY DEPT	

D-4303

4207

TITLE

PROPOSAL FOR TESTS ON M-1845 CTTL.

FLETCHER FW

BRUSH KILLER TX IN NO. 2 FUEL OIL.

BENDALL TL

COON ET

INVERTON (BRUSH KILLER) HAY SPRAY CATTLE FEEDING TEST.

BLAIR EH
GREEN J
LIPPIE LJ
PERKINS RP

BOUNDY RH
HYMAN TA
LYNN GE
ROWE VK

PLANS FOR TOXIOLOGICAL STUDY USING INVERTON CTTL.

JOHNSON JE

ROWE VK

INFORMATION ON THE TOXICITY OF 24D & 245T TOWARD HUMANS CTTL.

KOEHLINGER D

INFORMATION CONCERNING SKIN IRRITATION OF 24D & 245T FORMULATIONS
CTTL.

DIETZEL AL

SMITH HL

INFORMATION REPLY ABOUT ESTERON BRUSH KILLER CAUSING NAUSEA IN AN
EMPLOYEE CTTL.

WOLF MA

REQUEST FOR INFORMATION ON 24D & 245T REGARDING SKIN EXPOSURE OF
ONE OF THEIR EMPLOYEES CTTL.

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1480	07/22/52	LETTER	1
AUTHOR:	DOW		SOUTHWICK L	
ADDRESSEE:	HARVEY JT		LYON CHEM	
COPYEE:	DOW		ROWE VK	
DOCUMENT	1481	02/18/52	ROC	2
AUTHOR:	SIMSON HA			
ADDRESSEE:				
COPYEE:				
DOCUMENT	1482	02/01/52	LETTER	2
AUTHOR:	DOW		ROWE VK	
ADDRESSEE:	DOW		SMITH HL	
COPYEE:				
DOCUMENT	1483	02/22/61	LETTER	4
AUTHOR:	DOW		WOLF MA	
ADDRESSEE:	DOW		QUELLETTE FE	
COPYEE:				
DOCUMENT	1484	09/13/56	LETTER	2
AUTHOR:	DOW		ROWE VK	
ADDRESSEE:	CHEMITROL		KARLEVETZ F	
COPYEE:	DOW		ROWE VK	
DOCUMENT	1485	09/30/55	LETTER	5
AUTHOR:	DOW		ROWE VK	
ADDRESSEE:	CHEMITROL		KARLEVETZ F	
COPYEE:	DOW		ROWE VK	
	HYMAS TA			
DOCUMENT	1486	08/04/55	REPORT	5
AUTHOR:	DOW		ROWE VK	
ADDRESSEE:				
COPYEE:	DOW		BARRONS KC	
	LEASURE K		NORTON TR	

4208
D-4304

TITLE

TOXICITY OF NEW ESTERS IS NOT SIGNIFICANTLY DIFFERENT THAN THE OLD
ESTERS CTTL.

WALLBERG J

LOCAL SPORTS WRITER ACCUSES ESTERON 245 USED BY PA POWER & LIGHT ON
RIGHT OF WAY OF KILLING RABBITS(CHEMICAL SALESMAN'S CALL REPORT)
CTTL.

REQUEST OF TOXIC INFORMATION FOR 5 DIFFERENT HERBICIDES CTTL.

TOXICOLOGICAL INFORMATION ON A NUMBER OF PRODUCTS SUITABLE FOR
APPLICATION FOR REGISTRATION IN ZEALND.

HIGH LEVELS OF ESTERON 10 10 AND ESTERON 245 FOUND IN STREAM CAUSE
MORTALITY OF FISH CTTL.

CONNER DL

MCCOY KW

POISONING CASE IN JASPER, IN SEEMS TO BE UNRELATED TO SPRAYING OF
ESTERON BRUSH KILLER CTTL.

BRYANT CA

CONNER D

INFORMATION RELATIVE TO ILLNESS TO CATTLE ON THE ALBERT SCHMUCKER
FARM THREE MILES NORTH OF HARBOR BEACH MI.

HYMAS TA
WILLIAMS GJ

JOHNSON JE

NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT 1487	02/04/68	LETTER	2	BARBOUR REQUESTS INFORMATION ON THE INGREDIENTS IN 24D AND 245T THAT MAY HAVE CAUSED RESPIRATORY ILLNESS TO HIS WIFE CTTL.
AUTHOR: ASST COUNTY AGENT CHARLO BARBOUR K ADDRESSEE: BERRY R STATE CHEMIST COPYEE:				
DOCUMENT 1488	04/16/58	LETTER	2	TOXICITY INFORMATION ON ESTERON 44 TO HUMANS AND PRECAUTIONS TO TAKE IF EXPOSURE IS FOR PROLONGED PERIODS CTTL.
AUTHOR: DOW ADDRESSEE: ADLEY FE ROWE VK COPYEE: DOW HANFORD ATOMIC PRODUCTS ROWE VK				
DOCUMENT 1489	08/23/57	LETTER	4	TOXICITY INFORMATION ON ESTERON 44 AND ESTERON 245 SUITABLE FOR TRANSMITTAL TO ATTORNEYS IN THE CASE OF RADEL VERSUS DOW CTTL.
AUTHOR: ADDRESSEE: DARGER RJ DOW COPYEE:				
DOCUMENT 1490	08/05/59	LETTER	1	ALLEGED INJURY TO CATTLE FROM THE USE OF DOW ESTERON 245 BRUSH KILLER CTTL.
AUTHOR: DOW ADDRESSEE: DOW ROWE VK COPYEE: DOW MUNSON NH ROWE VK				
DOCUMENT 1491	08/03/59	LETTER	1	ALLEGED INJURY TO CATTLE FROM THE USE OF DOW 245 ESTERON BRUSH KILLER CTTL.
AUTHOR: DOW ADDRESSEE: DOW MUNSON NH COPYEE: ROWE VK				
DOCUMENT 1492	07/17/62	LETTER	1	PERMITS FOR THE AQUATIC USE OF KUROSAI SL CTTL.
AUTHOR: DOW ADDRESSEE: DOW LYNN GE COPYEE: DOW JOHNSON J WIFFEN EE MCINTYRE HH WILTSE M				
DOCUMENT 1493	02/08/61	REPORT	10	SUMMARY OF AQUATIC HERBICIDE INFORMATION ON KUROSAI SL (M-1845) AND KUROSAI G (M-1847), ACD STATUS REPORT, DOCUMENT 21529 (FOR DOW PERSONNEL ONLY NOT FOR OUTSIDE DISTRIBUTION).
AUTHOR: DOW ADDRESSEE: RITTY PM COPYEE: DOW BARRONS KC COULTER LL FLETCHER RO GIBSON JW LEASURE JK MCCOY WJ RAYNOR RN SEEKER B RITTY PM COLBY RW DOSSER RC FOSTER TS GREENFIELD JE LUTZ EM MCINTYRE HH ROWE VK SMITH HL ACD CIRCULATION CONNER DL FALSEY NP FURMAN FS HAMMER OH LYNN GE MULLISON WR SAUNDERS ES SPALDING JL ALLEN WW CORBIN WL FISHER JR GANTZ RL JOHNSON JE MARTUCH LL NATION HA SCHWARTZBECK RA SUGGON DK				

D-4305

4209

	NUMBER	DATE	TYPE	PAGES
	SWEZEY AH WATSON AJ		TRUCHELUT GB WIFFEN EE	
DOCUMENT	1494	09/28/59	LETTER	1
AUTHOR:	DOW		JOSEPHS MJ	
ADDRESSEE:	DOW		ROWE VK	
COPYEE:	DOW		LYNN GE	
DOCUMENT	1495	09/23/60	LETTER	2
AUTHOR:	DOW		ROWE VK	
ADDRESSEE:	DOW		MAXWELL JL	
COPYEE:	DOW		ROWE VK	
DOCUMENT	1496	06/11/51	ROC	2
AUTHOR:	CORBIN WL		DOW	
ADDRESSEE:				
COPYEE:	DOW		ROWE VK	
DOCUMENT	1497	01/07/63	LETTER REPORT	5
AUTHOR:	DOW		ROWE VK	
ADDRESSEE:	AG RES SERVICE		SCHOUBOE PJ	
COPYEE:	DOW		ROWE VK	
	GORDON HL		KOEHLINGER DG	
	SUNDERLAND WH			
DOCUMENT	1498	12/13/61	LETTER	1
AUTHOR:	DOW		ROWE VK	
ADDRESSEE:	DOW		MCCOY WJ	
COPYEE:	DOW		ROWE VK	
	LUTZ E		REED DL	
DOCUMENT	1499	04/02/62	LETTER	1
AUTHOR:	DOW		REED DL	
ADDRESSEE:	DOW		WALLBERG JB	
COPYEE:	DOW		MCCOY WJ	
DOCUMENT	1500	05/22/59	LETTER	2
AUTHOR:	DOW		WOLF MA	
ADDRESSEE:	DOW		IRVINE M	
COPYEE:	DOW		WOLF MA	

4210

D-4306

TITLE

VANVALKENBURG JW
WILSON JS

HARDEN RL
WILTSE MC

M-1500 HANDLING HAZARD STUDIES AND SKIN SENSITIZATION TESTS TO BE INITIATED CTTL.

TOXICOLOGICAL INFORMATION ON SILVEX AND GARLON CTTL.

STAMFORD WATER COMPANY (CHEMICAL SALESMAN'S CALL REPORT).

COMPLAINTS CONCERNING DONPON CTTL.

USDA
ALLEN HW
LEARY JS JR

GAY HH
LYNN GE

KURON SORDONI CONSTRUCTION COMPANY OF KINGSTON PA.

JOHNSON JE
WALLBERG JH

KOEHLINGER D

SONDON CONSTRUCTION COMPANY KINGSTON PA.

RITTY PM

TOXICOLOGICAL INFORMATION ON KURON FOR OUTSIDE DISTRIBUTION.

ROWE VK

NUMBER	DATE	TYPE	PAGES
DOCUMENT 1501	01/02/59	LETTER	2
AUTHOR: DOW		ROWE VK	
ADDRESSEE: KLAUDER JV			
COPYEE: DOW		ROWE VK	
DOCUMENT 1502	12/05/58	LETTER	2
AUTHOR: DOW		ROWE VK	
ADDRESSEE: HOSPITAL OF THE UNIV OF		KLIGMAN AM	
COPYEE: DOW		ROWE VK	
DOCUMENT 1503	12/01/58	LETTER	1
AUTHOR: DOW		LYNN GE	
ADDRESSEE: HYMAS TA			
COPYEE: DOW		COULTER LL	
		ROWE VK	
DOCUMENT 1504	12/01/58	LETTER	1
AUTHOR: DOW		LENG ML	
ADDRESSEE: DOW		GETZENDANER ME	
COPYEE: DOW		COULTER LL	
		ROWE VK	
		MCINTYRE HH	
DOCUMENT 1505	12/01/58	LETTER	1
AUTHOR: DOW		LYNN GE	
ADDRESSEE: DOW		ROWE VK	
COPYEE: DOW		COULTER LL	
		MCINTYRE HH	
DOCUMENT 1506	10/10/58	LETTER	1
AUTHOR: COULTER LL		DOW	
ADDRESSEE: DOW		ROWE VK	
COPYEE: MCINTYRE H		OTIS CE	
DOCUMENT 1507	01/31/58	LETTER	3
AUTHOR: DOW		ROWE VK	
ADDRESSEE: DOW		COULTER LL	
COPYEE: DOW		ROWE VK	
		FLETCHER FW	
		CONNER DL	

①-4307

4211

TITLE

LETTER REGARDING SKIN IRRITATION AND SKIN SENSITIZATION STUDY ON
HUMANS WITH KURON CTTL.

DISCUSS THE POSSIBILITY OF AM KLIGMAN ON DOING SKIN IRRITATION AND
SKIN SENSITIZATION STUDY ON HUMANS WITH KURON CTTL.

TOXICITY TEST ON LIVESTOCK AND CHICKENS USING KURON IN DRINKING
WATER CTTL.

JOHNSON JE

MCINTYRE HH

OBJECTIVE TO FIND OUT IF FISH AQUIRE THE CONCENTRATION OF SILVEX
PRESENT IN THE WATER OR CONCENTRATE IT CTTL.

HYMAS TA

JOHNSON JE

REQUEST FOR WORK TO EVALUATE THE SAFETY OF KURON AS AN AQUATIC
HERBICIDE CTTL.

HYMAS TA

JOHNSON JE

REACTION OF SWIMMERS TO KURON.

KURON FOR AQUATIC WEED CONTROL.

BARRONS KC
IRISH DD

BRITTON JW

DOCUMENT	NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT 1508	1508	10/08/57	LETTER	1	EVALUATION OF USE HAZARDS IN CONJUNCTION WITH AQUATIC WEED CONTROL WITH KURON.
AUTHOR:					
ADDRESSEE:			ROWE VK		
COPYEE:			DAVIDSON JH		FLETCHER FW
DOCUMENT 1509	1509	01/18/67	PRESENT	28	A TALK GIVEN BY DR. DON D. IRISH IN BIOCHEMICAL RESEARCH DEPARTMENT CONFERENCE ROOM, 1701 BUILDING, ON 670118.
AUTHOR:		IRISH DD			
ADDRESSEE:					
COPYEE:					
DOCUMENT 1510	1510	08/00/64	CHART REPORT	3	TOXICITY OF 24D AND SILVEX COMPOUNDS TO BIRDS IN DIETS(SA3.00 ISOCTYL ESTERS, SILVEX BEG).
AUTHOR:					
ADDRESSEE:					
COPYEE:					
DOCUMENT 1511	1511	00/00/53	REPORT	9	CHROMOSOMENANALYSE BEI MITARBEITERN MIT EXPOSITION GEGENUBER TCDD (UNFALLGESCHEHEN AM 531117).
AUTHOR:		BASF WGERM	FLEIG I		
		UNIVERSITAT DUSSELDORF W			GOLDMANN P ROHRBORN G
ADDRESSEE:					
COPYEE:					
DOCUMENT 1512	1512	01/24/67	REPORT	4	CHEMICAL COMPOUNDS USED IN AGRICULTURE AND FOOD STORAGE(RECOMMENDATIONS FOR SAFE USE IN GREAT BRITAIN)(245T)(A HERBICIDE)(HOME GARDEN USE)(MINISTRY OF AG, FISHERIES AND FOOD, PEST BRANCH).
AUTHOR:		ENG	MINISTRY OF AG FISHERIES		
ADDRESSEE:					
COPYEE:					
DOCUMENT 1513	1513	08/04/55	ABSTRACT	3	RESUME OF NEW ADVANCES IN AGRICULTURAL RESEARCH-FIELD RESEARCH (AGRICULTURAL CHEMICAL REASEARCH AND DEVELOPMENT SEMINAR MIDLAND, MI)(ROI 9845).
AUTHOR:		BARRONS KC	DOW		
ADDRESSEE:					
COPYEE:					
DOCUMENT 1514	1514	08/15/50	REPORT	5	THE ACUTE ORAL TOXICITY OF 245T TO RATS, MICE, GUINEA PIGS AND CHICKS.
AUTHOR:		DOW	MCCOLLISTER DD		
ADDRESSEE:					ROWE VK SPENCER HC
COPYEE:					

D-4308

4212

	U.B	E	E	PAGES
DOCUMENT 1515	08/00/50	REPORT		6
AUTHOR: DOW ADDRESSEE: COPYEE:				
ROWE VK				
DOCUMENT 1516	07/17/60	REPORT		14
AUTHOR: DRILL VA ADDRESSEE: COPYEE:				
WAYNE UNIV				
DOCUMENT 1517	03/09/49	REPORT		5
AUTHOR: WHITE L ADDRESSEE: COPYEE:				
DOCUMENT 1518	12/27/49	REPORT		22
AUTHOR: ADDRESSEE: COPYEE:				
DOCUMENT 1519	11/00/49	REPORT		4
AUTHOR: DOW ADDRESSEE: COPYEE:				
MCCOLLISTER DD				
DOCUMENT 1520	08/23/50	REPORT		4
AUTHOR: DOW ADDRESSEE: DOW DOSSER RC LYNN GE COPYEE:				
ROWE VK ALLEN WW DUTTON WC SUNDERLAND WW				
DOCUMENT 1521	08/15/78	MEMO		1
AUTHOR: BECKWITH C ADDRESSEE: COPYEE:				
DOW				
DOCUMENT 1522	00/00/66	REPORT		6
AUTHOR: NACA ADDRESSEE: COPYEE:				
NY ST EXP STATION				

10-4309

4213

TI.

TESTIMONY TO BE PRESENTED AT THE FOOD AND DRUG ADMINISTRATION
RESIDUE TOLERANCE HEARING FOR FRESH FRUITS AND VEGETABLES, 500800
(TOXICITY OF 245T).

ACUTE AND SUBACUTE ORAL TOXICITY OF 245T FOR DOGS.

245T (K NUMBER 4568-4 BIOCHEM FILE T23K4-23-2).

245T (K NUMBER 4568-4 BIOCHEM FILE T2314-23-3).

THE ACUTE ORAL TOXICITY OF 245T TO RATS, MICE, GUINEA PIGS AND
CHICKS.

ROWE VK

SPENCER HC

RESULTS OF TOXICOLOGICAL TESTS ON 245T.

BRITTON
IRISH DD

BRITTONS DIV
KAGY JF

DIAMOND SHAMROCK CLEVELAND, OH RON DEZEMBER

660000 ANNUAL REPORT PHENOXY HERBICIDES IN PASTURE AND RANGELAND OR
ALONG ROADSIDES.

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1523	00/00/66	REPORT	25
AUTHOR: NACA ADDRESSEE: COPYEE:				
DOCUMENT	1524	09/28/65	CHART	1
AUTHOR: DOW ADDRESSEE: OHARE C COPYEE:				
DOCUMENT	1525	02/26/65	LETTER	1
AUTHOR: GROTH DH ADDRESSEE: THA COPYEE: HEW UPTON ET				
DOCUMENT	1526	08/02/67	REPORT	9
AUTHOR: ADDRESSEE: COPYEE: 1				
DOCUMENT	1527	06/02/67	REPORT	2
AUTHOR: ADDRESSEE: COPYEE:				
DOCUMENT	1528	10/02/67	REPORT	2
AUTHOR: ADDRESSEE: COPYEE:				
DOCUMENT	1529	05/12/67	REPORT TEST	2
AUTHOR: ADDRESSEE: COPYEE:				
DOCUMENT	1530	03/10/65	REPORT	17
AUTHOR: DOW ADDRESSEE: SILVERSTEIN LG COPYEE:				

D-4310

4214

TITLE

TOXICOLOGY. ACUTE STUDIES. ORAL AND INTRAPERITONEAL
ADMINISTRATION RATS, MICE, GUINEA PIGS, RABBITS, AND MONKEYS;
INTRAVENOUS ADMINISTRATION RABBITS.

TOXICOLOGICAL RESULTS OF APPLIED TORDON 101, WEEDAR 245T AMINE,
VEON 245T AND VEON BRUSH KILLER CTTL.

570000 DERMATOLOGICA ARTICLE BY KIMMIG REPRESENTS PRESENT HEW
KNOWLEDGE OF TOXICITY OF 245T AND ITS TOXIC CONTAMINANTS CTTL.

METHODS AND RESULTS IN TESTING SEVERAL DIFFERENT LAB ANIMALS CTTL.

TCDD SINGLE DOSE ORAL TOXICITY TO RATS.

TCDD SINGLE DOSE ORAL TOXICITY TO MALE GUINEA PIGS.

TCDD SINGLE DOSE ORAL TOXICITY TO MALE GUINEA PIGS.

THE CHLORACNE PROBLEM BIOCHEM'S CONTRIBUTION.

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1531	00/00/69	CHART MEMO	1
AUTHOR: DOW				
ADDRESSEE:				
COPYEE:				
DOCUMENT	1532	00/00/69	MEMO	3
AUTHOR:				
ADDRESSEE:				
COPYEE:				
DOCUMENT	1533	04/06/65	LETTER	2
AUTHOR: DOW			OTIS CE	
ADDRESSEE: DOW			COON ET	
COPYEE: DOW			HOLDEMAN GE	
STEARNS JCH			THAYER G	
DOCUMENT	1534	10/17/57	LETTER	1
AUTHOR: ALLAN PF			CORNELL	
ADDRESSEE: DOW			WRIGHT WL	
COPYEE: DOW			BORELL AE	
DOCUMENT	1535	04/00/69	REPORT	12
AUTHOR: BUR OF COMMERCIAL FISHER DAVIS HC				
UNIV OF MD				
ADDRESSEE:				
COPYEE:				
DOCUMENT	1536	00/00/68	REPORT	14
AUTHOR: BATES RR			BIONETICS	
GART JJ			HART ER	
LITTON INDUS			MITCHELL I	
PETERS J			PETRUCELLI L	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1537	08/00/68	CHART	2
AUTHOR: DOW				
ADDRESSEE:				
COPYEE:				

D.4311

4215

TITLE

TABLE OF RESULTS OF 245T AND TRICHLOROPHENOL TOXICITY TESTS CTTL.

CHRONOLOGY OF CHLORACNE TESTING IN ARL.

SPECIFICATIONS ALLOWING NIL AMOUNTS OF ACNEGEN IN 245T SHOULD BE
RIGIDLY ADHERED TO IN ORDER TO AVOID PRESENTING A SERIOUS HEALTH
HAZARD TO THE PUBLIC CTTL.

COULTER LL
HUTCHENREUTHER C

MULHOLLAND R
ROWE VK

AQUATIC WEED TREATMENTS(ROI 13861) CTTL.

WILTSE MG

EFFECTS OF PESTICIDES ON EMBRYONIC DEVELOPMENT OF CLAMS AND OYSTERS
AND ON SURVIVAL AND GROWTH OF THE LARVAE (FISHERY BULLETIN 67(2),
393-404).

HIDU H

U.S. FISH & WILDLIFE SER

BIOASSAY OF PESTICIDES AND INDUSTRIAL CHEMICALS FOR TUMORIGENICITY
IN MICE; A PRELIMINARY NOTE (JOUR OF NATL CANCER INST, 42(6),
1101-1114, 690600).

FALK HL
INNES JRM
NATL CANCER INST
ULLAND BM

FISHBEIN L
KLEIN M
PALOTTA AJ
VALERIO MG

DOWICIDE PRODUCT SAMPLES.

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1538	03/21/69	REPORT	8
AUTHOR:	DOW		HOYLE HR	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1539	05/00/69	CHART	1
AUTHOR:	SILVERSTEIN LG		DOW	
ADDRESSEE:	DOW		FERNANDEZ JB	
COPYEE:				
DOCUMENT	1540	00/00/68	REPORT	25
AUTHOR:				
ADDRESSEE:				
COPYEE:				
DOCUMENT	1541	00/00/69	REPORT	26
AUTHOR:	MONKS WOOD EXP STATION E WAY JM			
ADDRESSEE:				
COPYEE:				
DOCUMENT	1542	00/00/68	REPORT	14
AUTHOR:	BATES RR		COURTNEY KD	
	HOGAN MD		MITCHELL I	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1543	02/21/69	REPORT	8
AUTHOR:	TSCHIRLEY FH		USDA	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1544	00/00/68	ABSTRACT	1
AUTHOR:	EDWARDS NT		OAK RIDGE NATL LAB	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1545	00/00/67	ABSTRACT	1
AUTHOR:	CHEM ABSTRACTS		DERMER OC	
ADDRESSEE:				
COPYEE:				

①-4312

4216

TITLE

CHLORACNE PROBLEM AT FORT SASKATCHEWAN PLANT, DOW CAN. BIOCHEMICAL
RESEARCH LABORATORY FILE T21-18-2.
SILVERSTEIN LG

BIOCHEMICAL RESEARCH RABBIT EAR TESTING OF CERTAIN DOWICIDES FOR
CHLORACNE PRODUCING ACTIVITY CTTL.

CHLORACNE DOW EXPERIENCE.

TOXICITY AND HAZARDS TO MAN, DOMESTIC ANIMALS, AND WILDLIFE FROM
SOME COMMONLY USED AUXIN HERBICIDES (RESIDUE REVIEWS 26, 37-62).

TERATOGENIC EVALUATION OF 245T.
FALK HL GAYLOR DW
NATL CANCER INST NIEHS

DEFOLIATION IN VIETNAM (SCIENCE 163, 779-786).

METABOLISM OF HERBICIDES IN ECOSYSTEMS (U.S. AT ENERGY COMM
6700000)(NUCL SCI ABSTR 22(8), 14913).
VANDYNE GM

EFFECT OF THE HERBICIDE 245T ON BREEDING BIRD POPULATIONS
(PROCEEDINGS OK ACAD SCI 46, 235-7)(CHEM ABSTRACTS 67).
MARTIN RP OK ST UNIV

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1546	00/00/63	ABSTRACT	1

AUTHOR: DAVIS JT HUGHES JS
 ADDRESSEE:
 COPYEE:

DOCUMENT	1547	00/00/62	ABSTRACT	1

AUTHOR: ANDERSON A CHEM ABSTRACTS
 KIVIMAE A WADNE C
 ADDRESSEE:
 COPYEE:

DOCUMENT	1548	00/00/60	ABSTRACT	1

AUTHOR: BODENSTEIN G CHEM ABSTRACTS
 ADDRESSEE:
 COPYEE:

DOCUMENT	1549	11/14/55	LETTER	3

AUTHOR: MUNICIPAL HOSPITAL KASSE SCHMIDT
 ADDRESSEE: BOEHRINGER KNECHT
 COPYEE: WILDHIRT

DOCUMENT	1550	02/13/68	LETTER	1

AUTHOR: ALFORD HG USDA
 ADDRESSEE: DOW
 COPYEE:

DOCUMENT	1551	12/08/64	REPORT	14

AUTHOR: SKELLY NE
 ADDRESSEE:
 COPYEE: BRADLEY KB COULTER KE
 GILL HM GOERGEN GG
 HESS TM HOLMES RD
 KALLOS GJ KEY M
 NORTON TR NYQUIST RA
 ROWE VK SAUERS RC
 SHRADER SA SILVERSTEIN L
 TRAPP WB WALKER RE
 WRIGHT N

①-4313

4217

TITLE

FURTHER OBSERVATIONS ON THE TOXICITY OF COMMERCIAL HERBICIDES TO BLUEGILL SUNFISH (PROCEEDINGS SOUTHERN WEED CONF 16, 337-40)(BIOCHEMISTRY).

LA WILDLIFE & FISHERIES LEGATSKI E

THE TOXICITY OF SOME HERBICIDES TO CHICKS (KGL LANTBRUKSHOGSKOL OCH STATENS LANTBRUKSFORSOK STATENS HUSDJURSFORSOK SARTRYCK OCK FORHANDSMEDD 155, 18)(CHEM ABSTRACTS 39).

DAHL S

INST TECH

TOXICITY OF PRESENT DAY PESTICIDES FOR FISH. THE TOXICITY OF SOME HERBICIDES TO FISH (Z PFLANZENKRANKH U PFLANZENSCHUTZ 67, 150-3)(CHEM ABSTRACTS 53).

GREEN EL

MULLERBASTGEN O

SUMMARY OF OBSERVATIONS OF SIX CASES OF TRICHLOROPHENOL INTOXICATION CTTL.

ESTERON T6 OS USDA REG 464-220 YOUR LETTER OF 680102.

ISOLATION AND IDENTIFICATION OF POSSIBLE ACNEGENS FROM THE CAUSTIC INSOLUBLE PORTION OF THE PRODUCTS FROM THE 245-TRICHLOROPHENOL PROCESS 1 (REPORT ALS 57-474).

DELISLE NG
GREENE LM
HOYLE HR
LUCE EN
OLSON KJ
SCHOLTEN HG
SWIM LE
WESTOVER LB

DOW
HABERSTROH
JOHNSON RL
LUECK AF
POTTS WJ
SEXTON AR
THORSBERG TF
WIDIGER AH

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1552	00/00/57	REPORT	6
AUTHOR:	KIMMIG J		SCHULZ KH	
ADDRESSEE:	DOW		TORKELSON T	
COPYEE:				
DOCUMENT	1553	04/06/65	LETTER	2
AUTHOR:	DOW		OTIS CE	
ADDRESSEE:	DOW		COON ET	
COPYEE:	DOW		HOLDEMAN OE	
	STEARNS JCH		THAYER G	
DOCUMENT	1554	07/25/67	LETTER	1
AUTHOR:	DOW		ROWE VK	
ADDRESSEE:	DOW		MCCOY WJ	
COPYEE:	DOW		ROWE VK	
DOCUMENT	1555	05/20/65	TEST	7
AUTHOR:	TIFFANY PA			
ADDRESSEE:				
COPYEE:				
DOCUMENT	1556	04/14/65	LETTER	1
AUTHOR:	DOW		MULHOLLAND RS	
ADDRESSEE:	DOW		OTIS CE	
COPYEE:	DOW		COON ET	
	HUTCHENREUTHER C		ROWE VK	
DOCUMENT	1557	03/28/57	REPORT	2
AUTHOR:	DOW		RAYNOR RN	
ADDRESSEE:				
COPYEE:	CHRISTIAN HJ		HILL JM	
	WILLIAMS RT			
DOCUMENT	1558	07/29/64	LETTER	2
AUTHOR:				
ADDRESSEE:				
COPYEE:				

①-4314

4218

TITLE

OCCUPATIONAL CHLORACNE CAUSED BY AROMATIC CYCLIC ETHERS
(DERMATOLOGICA 115 (4) 540-546).

ESTABLISHING SPECS FOR 1 PPM MAXIMUM OF ACNEGEN IN 245T AND OTHER
DOW TRICHLOROPHENOL PRODUCTS CTTL.

COULTER LL
HUTCHENREUTHER C

MULLHOLLAND RS
ROWE VK

245T FORMULATIONS.

CORBIN WL

THE DETERMINATION OF TCDD IN 245T BY GAS LIQUID CHROMATOGRAPHY.

REQUEST FOR SPECIFICATIONS ON PRODUCTS MADE FROM TCP CTTL.

COULTER LL
TRAYER G

HOLDEMAN CE

RANGE MANAGEMENT RESEARCH (ROI 6207).

PRENDERGAST DT

UNDERHILL RW

EVALUATION OF DATA FOR HR REGISTRATION FOR 24D AND 245T ON
BLUEBERRIES SUBMITTED BY DOW 640715.

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1559	09/12/68	REPORT	6

AUTHOR: DOW
ADDRESSEE:
COPYEE:

DOCUMENT	1560	07/00/58	MEMO	1

AUTHOR:
ADDRESSEE:
COPYEE:

DOCUMENT	1561	07/28/58	LETTER	2

AUTHOR: MCFARLAND FJ
ADDRESSEE:
COPYEE: I DF I DP
I RSR

DOCUMENT	1562	02/24/49	LETTER	2

AUTHOR: DOW
ADDRESSEE: USDA
COPYEE: WARD JC

DOCUMENT	1563	04/25/67	LETTER	4

AUTHOR: WIDIGER A
ADDRESSEE: COULTER KE
COPYEE: BENDER SL
SILVERSTEIN L
DOW
DOW
DOW
STAEHLING EC

DOCUMENT	1564	01/19/65	CHART	29

AUTHOR: DOW
ADDRESSEE:
COPYEE:

DOCUMENT	1565	00/00/69	MEMO	6

AUTHOR:
ADDRESSEE:
COPYEE:

①-4315

4219

TITLE

SUPPLEMENT TO PP 8F0670 24D SECTION C METABOLISM VOLUME 2 PETITIONS FOR THE ESTABLISHMENT OF TOLERANCES ON RAW AGRICULTURAL COMMODITIES FOR THE PESTICIDE CHEMICALS 245T (PP 8F0669) 24D (PP 8F0670) 2-(245-TRICHLOROPHENOXY) PROPIONIC ACID COMMON NAME SILVEX (PP 8F0675) 2-METHYL-4-CHLOROPHENOXYACETIC ACID (PP 8F0676).

SUGGESTED AGENDA MEETING OF USDA, FDA AND NACA ON USE OF 24D AND 245T ON GRAZING LANDS (PESTICIDE PETITION 162).

MEMORANDUM OF CONFERENCE USE OF 24D AND 245T ON GRAZING LAND (PESTICIDE PETITION 162).

I EPS

I FAV

SUMMARY OF TOXICITY FIGURES ON 245T AND ISOPROGPYLPHENOL CARBAMATE(IPC) CTTL.

HISTORY OF CHLORACNE INCIDENCES AT DOW (CHLORACNE RESEARCH PROGRAM)(LAB REPORT NO. PL-2172-1).

HABERSTROH WH

SAUERS RC

DOW HERBICIDES FISH TOXICITY IN EEK TABLES.

THIRTY-EIGHT REFERENCES CITED CTTL.

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1566	00/00/59	REPORT	17
AUTHOR: RALPH MCELROY CO				
ADDRESSEE:				
COPYEE:				
DOCUMENT	1567	02/12/65	REPORT	1
AUTHOR: DOW				
ADDRESSEE: OYEN F				
COPYEE:				
DOCUMENT	1568	04/01/64	REPORT	7
AUTHOR: CLARK DE				
ADDRESSEE: HUNT LM				
COPYEE:				
DOCUMENT	1569	12/13/54	REPORT	9
AUTHOR: DOW				
ADDRESSEE: MCCOLLISTER DD				
COPYEE:				
DOCUMENT	1570	03/17/65	REPORT	95
AUTHOR:				
ADDRESSEE:				
COPYEE:				
DOCUMENT	1571	04/21/65	DISTRB	2
REPORT				
DOW				
AUTHOR: BROWN MT				
ADDRESSEE:				
COPYEE: DOW				
FALKENSTEIN WJ				
KAGY JF				
NORTON TR				
BARRONS KC				
GORDON HL				
KILIAN DJ				
PITMAN-MOORE				

D-4316

4220

TITLE

THE CYTOSTATIC ACTION OF CERTAIN AUXINS PRELIMINARY REVIEW (PRESSE MEDICALE 67(6), 207-209, 590000).

SUMMARY OF PATHOLOGY ON MALE AND FEMALE RATS FED K 39291 IN THE DIET FOR 18 MONTHS (T60.14-39291-5).

APPENDIX EIGHT TOXICOLOGIC EFFECTS OF SILVEX ON YEARLING CATTLE (JAVMA 144 (7), 750-755)(PROTOCOL 015 ABSORPTION OF SILVEX ESTERS THROUGH THE SKIN OF HUMAN VOLUNTEERS).

PALMER JS

APPENDIX SIX RESULTS OF RANGE FINDING TOXOLOGICAL TESTS ON M-213 (SILVEX AMINE FORMULATION)(PROTOCOL 015 ABSORPTION OF SILVEX ESTERS THROUGH THE SKIN OF HUMAN VOLUNTEERS).

WOLF MA

RESULTS OF TWO YEAR DIETARY FEEDING STUDY IN RATS OF KURASOL SL (POTASSIUM SALT OF SILVEX)(APPENDIX 3).

APPENDIX THREE, RESULTS OF TWO YEAR DIETARY FEEDING STUDY IN RATS OF KURASOL SL (POTASSIUM SALT OF SILVEX)(PROTOCOL 015 ABSORPTION OF SILVEX ESTERS THROUGH THE SKIN OF HUMAN VOLUNTEERS).

MCCOLLISTER DD

BOUNDY RH
HAKE CL
LYNN GE
WILSON AW

ELSHERE D
JOHNSTON RV
MULLISON WR

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1572	01/18/66	REPORT	17

AUTHOR:
ADDRESSEE:
COPYEE:

DOCUMENT	1573	02/20/56	TEST	4

AUTHOR: DOW
ADDRESSEE: LOCKWOOD D
COPYEE:

DOCUMENT	1574	01/31/56	TEST	1

AUTHOR:
ADDRESSEE:
COPYEE:

DOCUMENT	1575	03/23/56	DISTRB	7

TECH
MCCOLLISTER DD

AUTHOR: DOW
ADDRESSEE:
COPYEE: DOW
BRITTON EC
HART A
MARTIN D

ALLINSON RL
ELSHERE D
KILIAN DJ
SUNDERLAND WW

DOCUMENT	1576	04/03/61	DATA TEST	2

AUTHOR: DOW
ADDRESSEE:
COPYEE: TOMPSON E

DOCUMENT	1577	03/21/61	TEST	2

AUTHOR: DOW
ADDRESSEE:
COPYEE: OLSON KJ

DOCUMENT	1578	07/04/61	TECH	1

AUTHOR: DOW
ADDRESSEE:
COPYEE: TOMPSON E

4221
D-4317

TITLE

 APPENDIX ONE SOME TOXICOLOGICAL ASPECTS OF SILVEX (PRESENTED AT THE
 SOUTHERN WEED CONFERENCE 660118, JACKSONVILLE, FL)(PROTOCOL 015
 ABSORPTION OF SILVEX ESTERS THROUGH THE SKIN OF HUMAN VOLUNTEERS).

ACETIC ACID. (245-TRICHLOROPHENOXY)-, 6-METHYL-HEPTYL ESTER (EYE
 CONTACT TEST).

ACETIC ACID. (245-TRICHLOROPHENOXY)-, 6-METHYL-HEPTYL ESTER (ACUTE
 ORAL TOXICITY).

RESULTS OF RANGE FINDING TOXICOLOGICAL TESTS ON ACETIC ACID (245
 TRICHLOROPHENOXY)-, 6-METHYL-HEPTYL ESTER (FILE T25.14-302-1).

OLSON KJ

BESHGETOOR AW
 GAY HH
 LUCE EN
 WHITE LC

BOUNDY RH
 GREENE LM
 MACCUTCHEON
 WRIGHT N

DOWANOL PIB MIX ESTERS OF 245T (SKIN CONTACT - IRRITATION).

DOWANOL PIB MIX ESTERS OF 245T (EYE CONTACT TEST).

DOWANOL PIB MIX ESTER OF 245T (ACUTE ORAL TOXICITY).

DOCUMENT	70	04/23/61	TECH	
AUTHOR:	DOW			TOMPSON E
ADDRESSEE:				
COPYEE:				
DOCUMENT	1580	06/06/61	TECH	1
AUTHOR:	TOMPSON E			
ADDRESSEE:				
COPYEE:				
DOCUMENT	1581	03/24/61	TECH	1
AUTHOR:	DOW			TOMPSON E
ADDRESSEE:				
COPYEE:				
DOCUMENT	1582	06/12/61	TECH	2
AUTHOR:				
ADDRESSEE:				
COPYEE:				
DOCUMENT	1583	09/28/61	TECH	1
AUTHOR:				
ADDRESSEE:				
COPYEE:				
DOCUMENT	1584	00/00/66	REPORT	4
AUTHOR:	DARTMOUTH MEDICAL SCHOOL			GLEASON MN
	SMITH RP			UNIV OF ROCHESTER
ADDRESSEE:				
COPYEE:				
DOCUMENT	1585	00/00/61	REPORT	24
AUTHOR:	BOLLEN WB			OR ST UNIV
ADDRESSEE:				
COPYEE:				
DOCUMENT	1586	00/00/65	REPORT	133
AUTHOR:				
ADDRESSEE:				
COPYEE:				

①-4318

4222

DOWANOL PIB MIX ESTER OF 245T (ACUTE ORAL TOXICITY)

DOWANOL PIB MIX ESTER OF 245T (ACUTE ORAL TOXICITY).

DOWANOL PIB MIX ESTERS OF 245T (ACUTE ORAL TOXICITY).

DOWANOL ESTER 245T (REQUEST FOR SCREENING OR APPLICATION TESTING).

DOWANOL PIB MIX ESTER OF 245T (TOXICOLOGY WORK SHEET).

24D (CLINICAL TOXICOLOGY OF COMMERCIAL PRODUCTS)(ACUTE
POISONING)(SECTION 3 THERAPEUTICS INDEX, 79-81).
GOSSSELIN RE HODGE HC

INTERACTIONS BETWEEN PESTICIDES AND SOIL MICROORGANISMS (ANN. REV.
MICROBIOL. 15, 69-92).

RESULTS OF TCDD EFFECT ON RABBIT EARS CTTL.

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1587	12/00/67	REPORT	37
AUTHOR:	EDWARDS NT		OAK RIDGE NATL LAB	
ADDRESSEE:				
COPYEE:	EDWARDS NT		ANDREWS H	
	BELL F		BLAYLOCK BG	
	CORDEN M		CROSSLEY DA JR	
	DAHLMAN RC		DAVIS JJ	
	EGLER F		FRIBOURG H	
	HOFFMAN G		HOLTON RW	
	KAYE SV		KELLY JM	
	LARSON CE		LIVERMAN JL	
	MORGAN KZ		NATL SCIENCE FOUND	
	OLSON JS		OPSTRUP PA	
	PATTEN BC		PETERS LN	
	REITEMEIER RF		RICH S	
	SHINN AF		SHOUP CS	
	TANNER JT		THOMAS WA	
	VANDYKE GM		WEINBERG AM	
	WOLFE JN			

DOCUMENT	1588	00/00/57	REPORT	3
AUTHOR:	PURDUE AG EXP LAFAYET		ROBERTS RE	
ADDRESSEE:				
COPYEE:				

DOCUMENT	1589	06/28/67	REPORT	12
AUTHOR:	TINKER BP			
ADDRESSEE:				
COPYEE:				

DOCUMENT	1590	00/00/59	LEGAL	10
AUTHOR:				
ADDRESSEE:				
COPYEE:				

DOCUMENT	1591	03/22/66	REPORT	17
AUTHOR:	ACTA VET SCAND STOCKHOLM ERNE K			
ADDRESSEE:				
COPYEE:				

DOCUMENT	1592	09/00/67	REPORT	4
AUTHOR:	BIONETICS		FISHBEIN L	
ADDRESSEE:				
COPYEE:				

D-4369

4223

TITLE

METABOLISM OF HERBICIDES IN ECOSYSTEMS. A REVIEW (ORNL-TM-2042).
VANDYNE GM

ATON FOREST	AUERBACH SI
CLEBSCH EE	CO ST UNIV
CT AG EXP	CURLIN JW
DESELM HR	DUNAWAY PB
GORE AJ	HABER AH
HUNT G	JOSEPH A
KITCHINGS JT	KOWAL NE
MACPHERSON HG	MALONE CR
NELSON DJ	NIERING W
OR ST UNIV	OSBURN W
REED JR	REICHLE DE
RUTGERS UNIV	SEATZ L
STORY JD	STRUXNESS EG
U.S. ATOMIC ENERGY COMM	UNIV OF TN
WITHERSPOON JP	WITKAMP M

THE EFFECT OF 245T BRUSH SPRAY ON TURKEYS (POULTRY SCIENCE 36,
703-705, 570000).
ROGERS BJ

TCDD.

EXCERPTS FROM TESTIMONY REGARDING POSSIBLE PENTACHOLOPHENOL
POISONING OF MI DAIRY HERDS CCTL.

DISTRIBUTION AND ELIMINATION OF CHLORINATED PHENOXYACETIC ACIDS IN
ANIMALS (ACTA VET SCAND 7, 240-256).
NATL VETEINARY INST SWED

GAS CHROMATOGRAPHIC MEASUREMENT OF DISAPPEARANCE RATES OF 24D AND
245T ACIDS AND 24D ESTERS IN MICE (JOUR AG FOOD CHEM 15(5),
841-844).
ZIELINSKI WLJR

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1593	04/12/66	NEWS	8
AUTHOR:	ERNE K		REPORT	
ADDRESSEE:			NATL VETERINARY IN	
COPYEE:				
DOCUMENT	1594	00/00/61	REPORT	4
AUTHOR:				
ADDRESSEE:				
COPYEE:				
DOCUMENT	1595	01/00/53	REPORT	8
AUTHOR:	AMA		DRILL VA	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1596	03/22/67	REPORT	2
AUTHOR:				
ADDRESSEE:				
COPYEE:				
DOCUMENT	1597	04/20/67	REPORT	2
AUTHOR:				
ADDRESSEE:				
COPYEE:				
DOCUMENT	1598	07/06/64	REPORT	1
AUTHOR:	BLEIBERG J		BRODKIN RH	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1599	04/25/67	LETTER	4
AUTHOR:	DOW		WIDIGER A	
ADDRESSEE:	DOW		COULTER KE	
COPYEE:	DOW		BENDER SL	
	SILVERSTEIN LG		STAEHLING EC	
DOCUMENT	1600	06/04/69	LETTER	2
AUTHOR:	DOW		SILVERSTEIN LG	
ADDRESSEE:	DOW		ASADORIAN AA	
COPYEE:	DOW		DUNN FL	
	ROWE VK		SCHOBER AE	

D-4320

4224

TITLE

STUDIES ON THE ANIMAL METABOLISM OF PHENOXYACETIC HERBICIDES (ACTA VET SCAND 7, 264-271).

ST SWE

CHRONIC EFFECTS OF HERBICIDES.

TOXICITY OF 24D AND 245T, A REPORT ON THEIR ACUTE AND CHLORIC TOXICITY IN DOGS (AMA ARCHIVES OF INDUS HYGIENE AND OCCUPATIONAL MEDICINE 7, 61-67).

HIRATZKA T

TCDD SINGLE DOSE ORAL TOXICITY TO RATS.

TCDD SINGLE DOSE ORAL TOXICITY TO MALE GUINEA PIGS.

PESTICIDES, CHLORACNE, AND PORPHYRIA CUTANEA TARDA.
WILLARD JR

CHLORACNE RESEARCH PROGRAM.

HABERSTROH WH

SAUERS RC

TCDD, A POTENT ACNEGEN CTTL.

LEAVITT FC
SOLEM RH

MILLS JF

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1601	11/00/61	DATA	79

AUTHOR:	DOW	GREENHOE NC
ADDRESSEE:		
COPYEE:	DOW	BOUNDY RH
	GREENE LM	HART A
	KILIAN DJ	LUCE EN
	MCINTYRE HH	PERKINS RP
	WRIGHT N	

DOCUMENT	1602	00/00/69	REPORT	5
AUTHOR:				
ADDRESSEE:				
COPYEE:				

DOCUMENT	1603	04/09/62	REPORT	26
AUTHOR:	DOW	SEYMOUR KG		
ADDRESSEE:				
COPYEE:	DOW	BARRONS KC		
	COULTER LL	HANSON RG		
	KAGY JF	LIPPIE LJ		
	SWEZEY AW	WATSON AJ		

DOCUMENT	1604	08/00/64	REPORT	4
AUTHOR:	USDI			
ADDRESSEE:				
COPYEE:				

DOCUMENT	1605	01/00/68	REPORT	7
AUTHOR:	COPE OB	SANDERS HO		
ADDRESSEE:				
COPYEE:				

DOCUMENT	1606	04/00/66	REPORT	6
AUTHOR:	COPE OB	SANDERS HO		
ADDRESSEE:				
COPYEE:				

DOCUMENT	1607	04/00/64	REPORT	5
AUTHOR:	AG EXP WOOSTER OH	KING CC		
ADDRESSEE:				
COPYEE:				

D-4321

4225

TITLE

RESULTS OF 90 DAY DIETARY FEEDING STUDIES OF DOWANOL 97B ESTER 245T IN RATS.

ELSHERE D
JONES GD
LYNN GE
SHRADER SA

GAY HH
KAGY JF
MARTIN D
TISDALE WL

SILVEX PESTICIDE DATA REPORT.

CROSSLINKED POLY (POTASSIUM ACRYLATE) FOR SPRAY DRIFT CONTROL STATUS REPORT (TA-200).

BROWN JH
HARPER BG
RITTY PM
WILTSE MG

COLBY RW
JOHNSON JE
SHIGLEY CM

PESTICIDE WILDLIFE STUDIES, 630000. A REVIEW OF FISH AND WILDLIFE SERVICE INVESTIGATIONS DURING THE CALENDAR YEAR (FISH AND WILDLIFE SERVICE CIRCULAR 199).

THE RELATIVE TOXICITIES OF SEVERAL PESTICIDES TO NAIADS OF THREE SPECIES OF STONEFLIES (LIMNOLOGY AND OCEANOGRAPHY 13(1), 112-117).
SPORT FISHERIES AND WILD

TOXICITIES OF SEVERAL PESTICIDES OF TWO SPECIES OF CLADOCERANS (TRANSACTIONS OF THE AM FISHERIES SOCIETY 95(2), 165-169).
SPORT FISHERIES AND WILD

EFFECTS OF HERBICIDES ON HONEYBEES (GLEANINGS IN BEE CULTURE 230-233).

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1608	01/10/57	REPORT	11
AUTHOR:	SPRINGER PF		US FISH AND WILDLIFE	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1609	01/22/60	LETTER	4
AUTHOR:	DREESSEN J		NACA	
ADDRESSEE:	BUGH M		IN ST HIGHWAY DEPT	
COPYEE:				
DOCUMENT	1610	00/00/61	REPORT	27
AUTHOR:	BAUER H		BERGMAN	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1611	11/16/68	REPORT	2
AUTHOR:	CAMPBELL AD		FIRESTONE D	
	HUANG A		RESS J	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1612	07/09/59	REPORT	18
AUTHOR:	DOW		OYEN F	
ADDRESSEE:				
COPYEE:	DOW		BOUNDY RH	
DOCUMENT	1613	05/07/63	SPEC	1
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:				
DOCUMENT	1614	00/00/63	REPORT	5
AUTHOR:	DEWITT JB		MENZIE CM	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1615	00/00/60	REPORT	6
AUTHOR:	BUR OF SPORT FISHERIES A CRABTREE DG			
	GEORGE JL			
ADDRESSEE:				
COPYEE:				

D-4322

4226

TITLE

EFFECTS OF HERBICIDES AND FUNGICIDES ON WILDLIFE (NC PESTICIDE
MANUAL NC ST COL, 87-106).
SER

ALLEGED EFFECTS ON HUMANS WHEN EXPOSED TO 24D OR SIMILAR PRODUCTS
CTTL.

INDUSTRIAL POISONING IN THE MANUFACTURE OF CHLOROPHENOL COMPOUNDS
(ARCHIV FUR GWERBEPATHOLOGIE UND GWERBEHYGIENE, 18, 538-555).
SCHULZ KH SPIEGELBERG U

CHEMICAL AND TOXICOLOGICAL EVALUATIONS OF ISOLATED AND SYNTHETIC
CHLORO DERIVATIVES OF DIBENZO-P-DIOXIN (NATURE, 220, 702-703).
HEW HIGGINBOTHAM GR
VERRETT J

RESULTS OF COMPARATIVE SKIN TESTS ON 1. ESTERON BRUSH KILLER OS 2.
FORRON BRUSH KILLER 3. ESTERON 245 OS 4. FORRON 245 AT USE
CONCENTRATIONS.
WOLF MA

COULTER LL

VANVALKENBURG JW

ESTERON 245 CONCENTRATE.

EVALUATION OF CHEMICALS (TOXICITY TESTS ON BIRDS).
SPANN JW VANCE C

EFFECTS ON WILDLIFE.
DEWITT JB

FINLEY RB

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1616	00/00/62	REPORT	2
AUTHOR:	BUR OF SPORT FISHERIES A COPE OB			
ADDRESSEE:				
COPYEE:				
DOCUMENT	1617	00/00/62	REPORT	26
AUTHOR:	DALGAARDMIKKELSEN S POULSON E			
ADDRESSEE:				
COPYEE:				
DOCUMENT	1618	04/00/65	REPORT	7
AUTHOR:	CHESTERFORD PARK RES STA EDSON EF			
ADDRESSEE:				
COPYEE:				
DOCUMENT	1619	00/00/62	REPORT	2
AUTHOR:				
ADDRESSEE:				
COPYEE:				
DOCUMENT	1620	05/29/58	REPORT	8
AUTHOR:	DOW HYMAS TA			
ADDRESSEE:				
COPYEE:				
DOCUMENT	1621	03/05/65	LETTER	3
AUTHOR:	DOW		REPORT	
ADDRESSEE:	DOW		OHARE CP	
COPYEE:	DOW		GORDON HL	
	HOLDER BB		OLSON KJ	
	SILVERSTEIN LG		HOYLE HR	
			STEWART RD	
DOCUMENT	1622	03/29/65	LETTER	1
AUTHOR:	DOW		SILVERSTEIN LG	
ADDRESSEE:	DOW		ROWE VK	
COPYEE:				
DOCUMENT	1623	07/23/65	CHART	1
AUTHOR:				
ADDRESSEE:				
COPYEE:				

D-4323

4227

TITLE

SPORT FISHERY INVESTIGATIONS.

TOXICOLOGY OF HERBICIDES (PHARMACEUTICAL REVIEW 14, 225-250).
ROYAL VETERINARY AND AG

ACUTE TOXICITY DATA FOR PESTICIDES (640000) (WORLD REVIEW OF PEST
CONTROL 4(1), 36-41).
NOAKES DN SANDERSON DM

THE TOXICITY TO FISH OF DIFFERENT FORMULATIONS OF 245T, 2(24-DP)
AND SILVEX (PROC SO WEED CONF, 265-266).

TOXICITY OF HERBICIDES TO DOMESTIC ANIMALS.

THE INEFFECTIVENESS OF WASHING AS A PREVENTIVE MEASURE IN THE
FORMATION OF FOLLICULITIS IN THE RABBIT EAR FOLLOWING REPEATED
APPLICATIONS OF SYMMETRICAL TETRACHLORODIBENZO-DIOXIN.

OLSON KJ

ADAMS EM
KRAMER CO

GAY HH
ROWE VK

RESULTS OF THE RABBIT EAR TEST USING PURE SYMMETRICAL
TETRCHLOROBENZODIOXIN CTTL.

WIPE TESTS ON RENTED SPARKLER FILTERS 199 BUILDING.

DOCUMENT	UMB	DATE	TYPE	PAGES
DOCUMENT 1624	1624	04/02/54	DATA	238
AUTHOR: DOW			MCCOLLISTER DD	
ADDRESSEE:				
COPYEE:				
DOCUMENT 1625	1625	07/09/59	REPORT	5
AUTHOR: DOW			MOORE V	
WOLF MA				
ADDRESSEE:				
COPYEE: DOW			BOUNDY RH	
DOCUMENT 1626	1626	05/21/58	REPORT	3
AUTHOR: DOW			MCCOLLISTER DD	
ADDRESSEE: DOW			COULTER LL	
COPYEE:				
DOCUMENT 1627	1627	00/00/67	REPORT	3
AUTHOR: BLACK WD			CRAWFORD LM	
ADDRESSEE:				
COPYEE:				
DOCUMENT 1628	1628	00/00/47	REPORT	15
AUTHOR: DRILL VA			HIRATZKA T	
ADDRESSEE:				
COPYEE:				
DOCUMENT 1629	1629	00/00/66	REPORT	14
AUTHOR: BJORKLUND NE			ERNE K	
ADDRESSEE:				
COPYEE:				
DOCUMENT 1630	1630	02/00/50	REPORT	8
AUTHOR: FARWELL ED			GRIGSBY BH	
ADDRESSEE:				
COPYEE:				
DOCUMENT 1631	1631	01/00/53	REPORT	8
AUTHOR: DRILL VA			HIRATZKA T	
ADDRESSEE:				
COPYEE:				

D-4324

4228

TITLE

SILVEX SODIUM SALT 90-DAY DIET-RAT (K-8690-(1))(T60.14-39-1).

RESULTS OF COMPARATIVE SKIN TESTS ON ESTERON BRUSH KILLER OS FORRON
BRUSH KILLER ESTERON 245 OS FORRON 245.
OYEN F ROWE VK

COULTER LL

VANVALKENBURG JW

RESULTS OF RANGE FINDING TOXICOLOGICAL TESTS ON WEED KILLER
FORMULATION M-1094 CONTAINING A 245T ESTER.
OLSON KJ

HERBICIDE TOXICITY TO DOMESTIC ANIMALS (362-364).
UNIV OF GA

ACUTE AND CHRONIC TOXICITY OF 24D AND 245T IN DOGS.
WAYNE UNIV COL

TOXICOLOGICAL STUDIES OF PHENOXACETIC HERBICIDES IN ANIMALS (AETA
VET SCAND 660000 364-390).
NATL VETERINARY INST STO ROYAL VETERINARY COL

SOME EFFECTS OF HERBICIDES ON PASTURE AND ON GRAZING LIVESTOCK
(MICHIGAN QUATERLY BULLETIN 32 (3) 378-385).

TOXICITY OF 24D AND 245T. A REPORT ON THEIR ACUTE AND CHRONIC
TOXICITY IN DOGS (AMA ARCHIVES OF INDUSTRIAL HYGIENE AND
OCCUPATIONAL MEDICINE 7, 61-67).

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1632	00/00/63	REPORT	5
AUTHOR:	HAYES WJ		HEW	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1633	10/21/52	LETTER	1
AUTHOR:	DOW		ROWE VK	
ADDRESSEE:	DOW		BRITTON JW	
COPYEE:				
DOCUMENT	1634	02/27/59	LETTER	1
AUTHOR:	DOW		ROWE VK	
ADDRESSEE:	KLAUDER JV			
COPYEE:				
DOCUMENT	1635	01/02/59	REPORT	2
AUTHOR:	DOW		ROWE VK	
ADDRESSEE:				
COPYEE:	DOW		WHITE LC	
	COLBY RW		COULTER LL	
	GRAY HE		GREENE LM	
	HYMAS TA		JONES GD	
	LUCE EN		LYNN GE	
	STENGER VA		TISDALE WL	
DOCUMENT	1636	06/22/61	LETTER	2
AUTHOR:	KLAUDER JV			
ADDRESSEE:	DOW		ROWE VK	
COPYEE:				
DOCUMENT	1637	00/00/69	REPORT	5
AUTHOR:	DOW		KENAGA EE	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1638	03/05/62	LETTER	1
AUTHOR:	DOW		LYNN GE	
ADDRESSEE:	DOW		MCCOLLISTER DD	
COPYEE:	DOW		BARRONS KC	
	JOHNSON JE		KAGY JF	

①-4325

4229

TITLE

CLINICAL HANDBOOK ON ECONOMIC POISONS. EMERGENCY INFORMATION FOR
TREATING POISONING.

ACUTE AND CHRONIC TOXICITY OF 24D AND 245T IN DOGS.

SMITH HL

WILLIAMS GJ

KURON.

KURON (REQUEST FOR SCREENING OR APPLICATION TESTING) (LOT 500458).
WHITE LC

BARRONS KC
ELSHERE D
HAMMER OH
KAGY JF
MCINTYRE HH
WRIGHT N

BOUNDY RH
GAY HH
HART A
KILIAN DJ
PERKINS RP

A COMPILATION OF INFORMATION ON THE TOXICOLOGY OF SILVEX (REPEATED
INSULT PATCH TEST WITH 1 PER CENT AQUEOUS SOLUTION KUROSAI SL).

TORDON HERBICIDES EVALUATION OF SAFETY TO FISH AND BIRDS (DTE 25,
5-9).

DIETARY FEEDING STUDY IN RATS AND DOGS CTTL.

COLBY RW
RITTY PM

COULTER LL

NUMBER	DATE	TYPE	PAGES
DOCUMENT 1639 AUTHOR: DOW ADDRESSEE: DOW COPYEE: DOW	02/19/63	LETTER HAMMER OH WIFFEN EE LYNN GE	1
DOCUMENT 1640 AUTHOR: OLSON KJ ADDRESSEE: PROCTER AND GAMBLE COPYEE:	10/24/67	LETTER SNYDER FH	2
DOCUMENT 1641 AUTHOR: DOW ADDRESSEE: COPYEE: DOW COLBY RW HAMMER OH KAGY JF MCINTYRE HH WRIGHT N	02/22/60	REPORT JOSEPHS MJ JOSEPHS MJ ELSHERE D HART A KILIAN DJ PERKINS RP	18
DOCUMENT 1642 AUTHOR: I HCS ADDRESSEE: COPYEE:	08/20/54	CHART	7
DOCUMENT 1643 AUTHOR: DOW ADDRESSEE: DOW COPYEE: DOW	04/26/60	LETTER JOSEPHS MI ROWE VK FALSEY W	1
DOCUMENT 1644 AUTHOR: DOW ADDRESSEE: DOW COPYEE: DOW VANVALKENBURG JW	05/02/60	LETTER LYNN GE JOSEPHS MJ HYMAS VK	3
DOCUMENT 1645 AUTHOR: COPELAND JR ADDRESSEE: COPYEE: DOW EPSTEIN J KAGY JF PITMAN MOORE	09/14/61	LETTER DOW LYNN GE FALKENSTEIN WJ KILIAN DJ WHITE L	2

D-4326

4230

TITLE

CHRONIC TOXICITY OF SILVEX TO LABORATORY RATS.

MCCOLLISTER DD

DESCRIBES DOW'S USE OF BIOASSAY ON RABBITS' EARS TO DETERMINE
ACNEGENS CTTL.

RESULTS OF RANGE FINDING TOXICOLOGICAL TESTS ON AGRICULTURAL
CHEMICAL FORMULATION M1500 (SOLUTION OF SODIUM SALT OF SILVEX).

OLSON K

OYEN F

BARRONS KC

BOUNDY RH

GAY HH

GREENE LM

HYMAS TA

JONES GD

LUCE EN

LYNN GE

STENGER VA

TISDALE WL

(2-(245-TRICHLOROPHOXY) PROPIONATE) (SILVEX ESTER).

PLANS TO DROP M-1500 FOR M-1845.

LYNN GE

RITTY PM

POTASSIUM SALT OF SILVEX.

RITTY PM

ROWE VK

KURSAL SL (POTASSIUM SALT OF SILVEX).

LYNN GE

BOUNDY RH

COLBY RH

GORDON HL

HAKE CL

MULLISON WR

NORTON TR

WILSON AW

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1646	12/13/54	REPORT	10

AUTHOR:	DOW		MCCOLLISTER DD	
ADDRESSEE:				
COPYEE:	DOW		ALLINSON RL	
	BARRONS KC		BESHGETOR AW	
	COLBY RW		DAVIDSON JH	
	KAGY JF		KELLY JA	
	MACCUTCHEON SM		SUNDERLAND WW	

DOCUMENT	1647	09/20/51	REPORT	32

AUTHOR:	ADAMS		DOW	
ADDRESSEE:				
COPYEE:	DOW		BERHENKE LF	
	BRITTON JW		DAVIDSON JH	
	HEATH SB		HIRSCHKIND W	
	NELSON WL		RECHTIN HJ	

DOCUMENT	1648	00/00/51	MEMO	1

AUTHOR:
ADDRESSEE:
COPYEE:

DOCUMENT	1649	07/20/62	LETTER	2

AUTHOR:	DOW		ROWE VK	
ADDRESSEE:	DOW		WIFFEN EE	
COPYEE:	DOW		COULTER LL	

DOCUMENT	1650	00/00/69	REPORT	18

AUTHOR:
ADDRESSEE:
COPYEE:

DOCUMENT	1651	09/12/66	REPORT	9

AUTHOR:
ADDRESSEE:
COPYEE:

DOCUMENT	1652	00/00/66	REPORT	5

AUTHOR: NY ST EXP STATION AT GEN
ADDRESSEE:
COPYEE:

D-4327

4231

TITLE

RESULTS OF RANGE FINDING TOXICOLOGICAL TESTS ON M-213 (SILVEX AMINE FORMULATION).

WOLF MA

ALQUIST FN
BOUNDY RH
GAY HH
LUCE EN
WRIGHT N

BACON KD
BRITTON EC
GREENE LM
LYNN GE
WRIGHT P

RESULTS OF TOXICOLOGICAL TESTS ON ALPHA 245 TRICHLOROPHENOXY PROPIONIC ACID.

ROWE VK

BRANCH CB
DUTTON WC
KELLY JA
SOUTHWICK L

BRITTON EC
HAMMER OH
LYNN GE

SILVEX.

A COMPILATION OF INFORMATION ON THE TOXICOLOGY OF SILVEX (LETTER FROM VK ROWE TO EE WIFFEN DOW SUMMARIZING TOXICOLOGICAL INFORMATION ON KURSAL SL AND KURSAL G INCLUDING WORK ON HUMANS).

LYNN GE

ANALYSIS OF LABORATORY FINDINGS AND HEALTH HISTORY RESPONSES AMONG MEN EXPOSED TO 245T.

PHENOXY HERBICIDES IN PASTURE RANGELAND OR ALONG ROADSIDE AND 24D RESIDUES IN MILK CTTL.

PHENOXY HERBICIDES IN PASTURE AND RANGELAND OR ALONG ROADSIDE.

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1653	01/20/60	PRESENT	9
AUTHOR:	GOLDSTEIN HE		LONG JF	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1654	09/30/66	REPORT	5
AUTHOR:	USDI			
ADDRESSEE:				
COPYEE:				
DOCUMENT	1655	00/00/65	REPORT	25
AUTHOR:	USDI			
ADDRESSEE:				
COPYEE:				
DOCUMENT	1656	09/07/60	REPORT	3
AUTHOR:	DOW		WINSTON AW JR	
ADDRESSEE:	DOW		JOSEPH MJ	
COPYEE:	DOW		BARRONS KC	
	FALSEY WP		GANTZ RL	
	LEASURE JK		LIPPIE LJ	
	ROWE VK		TRUCHELUT GB	
DOCUMENT	1657	03/17/55	REPORT	5
AUTHOR:	DOW		MCCOLLISTER DD	
ADDRESSEE:				
COPYEE:	DOW		ALLINSON RL	
	BESHGETOOR AW		BOUNDY RH	
	GAY HH		GREENE LM	
	LYNN GE		MACCUTCHEON SM	
	WRIGHT P			
DOCUMENT	1658	08/30/50	REPORT	1
AUTHOR:	DOW		DRILL VA	
	WAYNE UNIV			
ADDRESSEE:				
COPYEE:	DOW		BRITTON JW	
DOCUMENT	1659	00/00/49	REPORT	4
AUTHOR:	DOW		MCCOLLISTER DD	
ADDRESSEE:				
COPYEE:				

4232

D-4328

TITLE

OBSERVATIONS ON CATTLE SHEEP AND SWINE EXPOSED TO 24D 245T AND
DALAPON HERBICIDES (PROC SWCC 13(5), 1-9) CTTL.
OH DEPT OF AG

SPORT FISHERY RESEARCH (QUARTERLY PROGRESS REPORTS).

PROGRESS IN SPORT FISHERY RESEARCH, 650000.

RESULTS OF FISH TOXICITY AND TASTE EXPERIMENTS ON TWO POTASSIUM
SALT OF SILVEX FORMULATIONS.

COULTER LL
HAMMER OH
LYNN GE
VANVALKENBURG JW

DOSSER RC
JOHNSON JE
RITTY PM

RESULTS OF RANGE FINDING TOXICOLOGICAL TESTS ON PENTAERYTHRITOL
TETRAKIS, 2-(245-TRICHLOROPHENOXY)PROPIONATE (CRI 125192).
OYEN F

ALQUIST FN
BRITTON EC
KAGY JF
SUNDERLAND WW

BACON KD
COLBY RW
LUCE EN
WRIGHT N

INTERIM REPORT ON THE ACUTE AND SUBACUTE ORAL TOXICITY OF 245T FOR
DOGS.
ROWE VK SPENCER HC

THE ACUTE ORAL TOXICITY OF 245T TO RATS, MICE, GUINEA PIGS AND
CHICKS.
ROWE VK SPENCER HC

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1660	12/00/54	REPORT	4
AUTHOR:	DOBSON N			
ADDRESSEE:				
COPYEE:				
DOCUMENT	1661	10/09/56	REPORT	4
AUTHOR:	DAVIDSON JH			
ADDRESSEE:	DOW			
COPYEE:	BECKWITH C			
	SMITH H			
DOCUMENT	1662	11/13/68	REPORT	15
AUTHOR:	DOW			
ADDRESSEE:	WATSON AJ			
COPYEE:	BARRONS KC			
	DIETER CE			
	KAGY JF			
	PERKINS RP			
	WARREN LE			
DOCUMENT	1663	09/10/58	REPORT	42
AUTHOR:	AL POLYTECHNIC INSTITUTE			
	LIPPIE LJ			
ADDRESSEE:	DOW			
COPYEE:	BARRONS KC			
	COLBY RW			
	DIETER CE			
	JOHNSON JE			
	KAGY JF			
	NUTTING HS			
	PERKINS RP			
	VANVALKENBURG JW			
DOCUMENT	1664	02/15/60	ABSTRACT	1
AUTHOR:	DOW			
ADDRESSEE:	STEVENSON GT			
COPYEE:	BARRONS KC			
	HAMMER OH			
	HINMAN CN			
	JOSEPHS ME			
	KAGY JF			
	NORTON TR			
	PERKINS RP			
	VANVALKENBURG JW			

4233
D-4329

TITLE

CHEMICAL SPRAYS AND POULTRY (THE JOURNAL OF THE MINISTRY OF AGRICULTURE 61(9), 415-418).

15TH ANNUAL OH HIGHWAY SHORT COURSE (ROI 12355).

COON ET

MCCOMB JH

A FIELD EVALUATION OF SEVERAL EXPERIMENTAL AQUATIC HERBICIDES SUPPLEMENT TO SH REPORT 391 (SH 393) (206567).

BLAIR EH
HANSON RG
LYNN GE
SWEZEY AW

COLBY RW
JOHNSON JE
NORTON TR
VANVALKENBURG

A FIELD EVALUATION OF SEVERAL EXPERIMENTAL AQUATIC HERBICIDES (SH REPORT 391)(206565).

HAMMER OH

LAWRENCE JM

BLAIR EH
HANSON RG
LYNN GE
SPALDING J

BOUNDY RH
HINMAN CW
NORTON TR
SWEZEY AW

SILVEX ADDED TO THE DRINKING WATER OF CATTLE, SHEEP, SWINE, TURKEYS, DUCKS AND CHICKENS (GH 480)(144818).

BLAIR EH
HYMAS TA
LIPPIE LJ
RAPER JT

COLBY RW
JOHNSON JE
LYNN GE
SPALDING J

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1665	12/27/68	REPORT	15
AUTHOR:	BARRONS KC		BLAIR EH	
	GRIFFIN JD		I CWH	
	I EHB		HENMAN CW	
	I CWH		DOW	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1666	11/09/65	REPORT	8
AUTHOR:	DOW		O'HARE CP	
ADDRESSEE:				
COPYEE:	DOW		BARRONS KC	
	GORDON HL		GOWELL JH	
	KAGY JF		KILIAN DJ	
	MULLISON WR		WILSON AW	
DOCUMENT	1667	02/11/59	REPORT	5
AUTHOR:				
ADDRESSEE:				
COPYEE:				
DOCUMENT	1668	02/00/50	REPORT	5
AUTHOR:	FARWELL ED		GRIGBY BH	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1669	05/17/60	REPORT	1
AUTHOR:	DOW		NORRIS MG	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1670	05/01/61	REPORT	2
AUTHOR:	DOW		NATION HA	
ADDRESSEE:				
COPYEE:	DOW		WALKER	
DOCUMENT	1671	02/00/52	REPORT	6
AUTHOR:	DOW		ROWE VK	
ADDRESSEE:				
COPYEE:				

D-4330

4234

TITLE

WHAT ARE THE ECOLOGICAL BENEFITS OF HERBICIDES FOR WOODY PLANT
CONTROL? (B-14281)(118076).

DAVIS H	DOW
I JLS	I JS
GRIFFEN JD	BLAIR EH

SKIN IRRITATION AND ACNEGENIC PROPERTIES OF VEON BRUSH KILLER, VEON
245T, TORDON 101 AND WEEDAR 245T AMINE.

OLSON KJ	OVEN F
BOUNDY RH	ELSHERE D
JOHNSTON RV	JONES GD
LYNN GE	MOSS RD
WILTSE MG	

TOXICITY TO FISH (ROI 30731).

SOME EFFECTS OF HERBICIDES ON PASTURE AND ON GRAZING LIVESTOCK (MI
AG EXP STATION QUARTERLY BULLETIN 32(3), 378-385)(ROI 30712).

PRELIMINARY RESULTS OF TOXICOLOGY TESTS WITH HERBICIDE FORMULATIONS
(ROI 43531).

NORRIS MG JR

FISH TOXICITY OF SEVERAL CHEMICAL FORMULATIONS (ROI 41626).

HEALTH HAZARDS ASSOCIATED WITH HANDLING AND USE OF HERBICIDES
(AGRICULTURAL CHEMICALS) (NE WEED CONTROL CONFERENCE NY CITY).

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1672	00/00/65	REPORT	5
AUTHOR: BUR OF COMM FISHERIES FL BUTLER PA				
ADDRESSEE:				
COPYEE:				
DOCUMENT	1673	00/00/63	REPORT	3
AUTHOR: CA INST OF TECHNOLOGY MCKEE JE				
ADDRESSEE:				
COPYEE:				
DOCUMENT	1674	02/27/69	REPORT	8
AUTHOR:				
ADDRESSEE:				
COPYEE:				
DOCUMENT	1675	03/21/69	MEMO	1
AUTHOR: DOW LENG ML				
ADDRESSEE: DOW GETZENDANER ME				
COPYEE:				
DOCUMENT	1676	03/27/69	REPORT	4
AUTHOR: DOW LENG ML				
ADDRESSEE:				
COPYEE:				
DOCUMENT	1677	00/00/69	REPORT	9
AUTHOR: RODGERS C STALLING				
ADDRESSEE:				
COPYEE:				
DOCUMENT	1678	03/13/69	LETTER	1
AUTHOR: DOW KENAGA EE				
ADDRESSEE: DOW MCCOLLISTER DD				
COPYEE:				
DOCUMENT	1679	11/11/59	REPORT	17
AUTHOR: HAERTL EJ				
ADDRESSEE:				
COPYEE: HAERTL EJ				
BIRON RA				
COLLIER BL				
FOSTER T				
HAMMER OH				
JOHNSTON H				
LYNN GE				
NUTTING HS				
ALLEN WW				
BOUNDY RH				
DOW				
GETZENDANER ME				
HANSON RG				
JOSEPHS M				
MARTIN D				
OTIS CE				

D-4331

4235

TITLE

EFFECTS OF HERBICIDES ON ESTUARINE FAUNA (SOUTHERN WEED CONTROL
CONFERENCE PROCEEDINGS 18, 576-80.

WATER QUALITY CRITERIA (CA STATE WATER QUALITY CONTROL BOARD
PUBLICATION 3-A).

PUB HEALTH SERV

WOLF HW

METABOLISM, ABSORPTION, AND EXCRETION OF 245T IN SHEEP CTTL.

REQUEST FOR DATA AND INFORMATION ON RESIDUES OF 24D IN MEAT CTTL.

24D RESIDUES IN SHEEP TISSUE (GHP551).

ANNUAL PROGRESS REPORT 690000. FISH-PESTICIDE RES LAB COLUMBIA MO.
RICHARD A. SCHOETTGER, DIRECTOR.

R&D HIGHLIGHTS.

VERSENE AND VERSENOL IN FERTILIZERS (ROI 21291).

BARRONS KC
BRITTON
FALSEY W
GIBSON JW
IRVINE MB
JH
MULLISON WR
PEARSE FS

BENDALL TL
COLBY RW
FISHER JR
GULLIKSON G
JOHNSON JE
KAGY JF
NATION HA
RAYNOR RN

	NUMBER	DATE	TYPE	PAGES
			RITTY PM SWEZEY AW WATSON AJ	ROWE VK VANHORN JC WILSON JW
DOCUMENT	1680	06/09/52	REPORT	6
AUTHOR:	BARRONS KC		DOW	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1681	08/18/55	LETTER	2
			REPORT	
AUTHOR:	DOW		ROWE VK	
ADDRESSEE:	GARMHAUSEN WG		ST OF OH DEPT OF	
COPYEE:	DOW		BARRONS KC	
	JOHNSON JE		KARLEVETZ F	
DOCUMENT	1682	05/21/57	REPORT	11
AUTHOR:	COULTER LL		DOW	
ADDRESSEE:				
COPYEE:	DOW		ALLEN HW	
	BRYANT CA		COLBY RW	
	DAVIDSON JH		FALSEY WP	
	FOSTER T		GIBSON JW	
	KELLY JA		LEASURE JK	
	MULLISON WR		NATION HA	
	RAYNOR RN		RITTY PM	
	SHELDON HW		SMITH GN	
	WARDEN RL		WARREN LE	
DOCUMENT	1683	01/10/57	REPORT	12
AUTHOR:	COULTER LL		DOW	
ADDRESSEE:				
COPYEE:	COULTER LL		DOW	
	BENDALL TL		BLAIR EH	
	BROWER HH		BRYANT CA	
	COON ET		DAVIDSON JH	
	GIBSON JW		GULLIKSON GE	
	LEASURE JK		MULLISON WR	
	PAGE TJ		PEARSE FS	
	RICHARDS WF		RITTY PM	
	SEEKER B		SMITH HL	
	WATSON AJ		WILTSE MG	

D-4332

4236

TITLE

SHIGLEY CM
VANVALKENBURG W
WILTSE MG

SPALDING JL
WARDEN RL

WILDLIFE AND WEEDKILLERS (OUTDOOR WRITERS ASSN OF AMERICA AT MIAMI,
FL ON 520609)(ROI 13573).

CALVES THOUGHT TO HAVE DIED FROM 24D POISONING FOUND TO HAVE DIED
FROM LEAD SPRAYED IN THE PASTURE (ROI 9915) CTTL.

HIGHWAY

CHEMI TROL
NORTON TR

HYMAS TA
SMITH HL

"WHAT ABOUT KURON?" (ROI 12850).

BENDALL TL
CONNOR DL
FAYERWEATHER BL
GREEN J
LYNN GE
PEARSE FS
ROWE VK
SMITH HL
WATSON AJ

BRITTON JW
COON ET
FISHER JR
GULLIKSON GE
MADDOX JF
PRESCOTT RF
SEEKER B
SOUTHWICK L
WILTSE MG

ACD PROJECT STATUS REPORT WILDLIFE HABITAT MANAGEMENT AND DOW
HERBICIDES (ROI 12611).

ALLEN WW
BRITTON EC
COLBY RW
FISHER JR
JOHNSON JE
NATION HA
PRESCOTT RF
ROWE VK
WARDEN RL

ASHWORTH RH
BRITTON JW
COLLIER BL
FOSTER T
KELLY JA
NUTTING HW
RAYNOR RN
SANFORD DW
WARREN LE

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1684	02/00/50	REPORT	8
AUTHOR:	FARWELL ED		GRIGSBY BH	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1685	00/00/68	REPORT	5
AUTHOR:	DOW		KENAGA EE	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1686	05/24/60	REPORT	14
AUTHOR:	DOW		JOSEPHS MJ	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1687	05/25/60	LETTER	2
AUTHOR:	DOW		WOLF MA	
ADDRESSEE:	DOW		RITTY PM	
COPYEE:	DOW		COULTER LL	
DOCUMENT	1688	05/11/60	REPORT	13
AUTHOR:	COULTER LL		DAVIS H	
	JOHNSON JE		MONROE E	
ADDRESSEE:	DOW		RITTY PM	
COPYEE:	ONDRUS M		PLUMMER DM	
DOCUMENT	1689	02/26/65	LETTER	1
AUTHOR:	GROTH DH		HEW PATHOLOGY	
ADDRESSEE:	THOMPSON-HAYWRD		UPTON ET	
COPYEE:	DEATLEY LS		GILL H	
DOCUMENT	1690	03/24/67	LETTER	1
AUTHOR:	DOD BDSA		ZEPP WJ	
ADDRESSEE:	DOW		HICKMAN RA	
COPYEE:				
DOCUMENT	1691	00/00/57	REPORT	5
AUTHOR:	HAMBURG-EPPENDO		KIMMIG J	
ADDRESSEE:				
COPYEE:	SCHULZ KH			

D-4333

4237

TITLE

SOME EFFECTS OF HERBICIDES ON PASTURE AND ON GRAZING LIVESTOCK (MI
AG EXP STATION QUARTERLY BULLETIN 32(3), 378-385).
MI ST UNIV

TORDON HERBICIDES-EVALUATION OF SAFETY TO FISH AND BIRDS.

POTASSASIMUM SALT OF SILVEX FOR AQUATIC WEED CONTROL
(GH-498)(144836).

COMMENTS ON BULLETIN ENTITLED 'AQUATIC VEGETATION CONTROL WITH
KURON' BY MARK G WILTSE (110141).

WILTSE MG

AQUATIC VEGETATION CONTROL WITH KURON (110141).

DOW
WILTSE MG

I TM
WOLF MA

UPDATE ON TECHNIQUE INFORMATION CTTL.

ROWE VK

ACCELERATED DELIVERY OF ORANGE CTTL.

OCCUPATIONAL CHLORACNE CAUSED BY AROMATIC CYCLIC ETHERS
(DERMATOLOGICA, 115 (1957) 540-546).

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1692	11/30/64	TEST	6

AUTHOR: DOW
ADDRESSEE:
COPYEE:

DOCUMENT	1693	00/00/69	REPORT	3

AUTHOR: DOW
ADDRESSEE:
COPYEE:

DOCUMENT	1694	03/26/65	LETTER	3

AUTHOR:	DOW	OHARE CP
ADDRESSEE:	DOW	GORDON HL
COPYEE:	ADAMS EM	GAY HH
	KRAMER CG	OLSON KJ
	SILVERSTEIN LG	STEWART RD

DOCUMENT	1695	03/20/67	ROC	3

AUTHOR:	DOW	HICKMAN RA
ADDRESSEE:		
COPYEE:	DIXON WR	GOWELL JH
	PLETCHER DE	SUNDERLAND WW

DOCUMENT	1696	05/29/67	REPORT	3

AUTHOR:	DOW	HICKMAN RA
ADDRESSEE:	DOW	BALLMAN DK
COPYEE:	BEUTEL AP	COFFEY WH
	EVERSON JW	GUNN FJ
	MILLS KA	PATTERSON RM
	SMITH A	WILLIAMS GJ

DOCUMENT	1697	04/25/67	REPORT	3

AUTHOR:	DOW	HICKMAN DK
ADDRESSEE:	DOW	BALLMAN DK
COPYEE:	BEUTEL AP	COFFEY WH
	EVERSON JW	GUNN FJ
	MILLS KA	PATTERSON RM
	SMITH LR	WILLIAMS GJ

D.4334

4238

TITLE

 THE DETERMINATION OF COMPOUNDS CAPABLE OF CAUSING CHLORACNE IN
 2,4,5-TRICHLOROPHENOL PROCESS SAMPLES BY GAS-LIQUID CHROMATOGRAPHY
 (MLW.64.19).

CHRONOLOGY OF CHLORACNE TESTING IN BRL.

THE INEFFECTIVENESS OF WASHING AS A PREVENTIVE MEASURE IN THE
 FORMATION OF FOLLICULITIS IN THE RABBIT EAR FOLLOWING REPEATED
 APPLICATIONS OF TCDD IN CORN OIL.

HOLDER BB
 ROWE VK

HOYLE HR
 SADEK SE

REPORT OF CALL BETWEEN THE GOVERNMENT AND DOW DISCUSSING DOWS
 CAPACITY AND POSSIBLE EXPANSION OF FACILITIES TO PRODUCE HERBICIDES
 FOR GOVERNMENT USE CTTL.

HANSON KY
 YANKA DE

KEIL RM

MONTHLY REPORT FOR MAY, 1967.

CRAWFORD RF
 HUGHES CB
 ROBERTSON CD
 YANKA DE

DOUGLAS B
 KNAUP LR
 RYAN WJ

MONTHLY REPORT FOR APRIL, 1967.

CRAWFORD RF
 HUGHES CB
 ROBERTSON CD
 YANKA DE

DOUGLAS B
 KNAUP LR
 RYAN WJ

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1698	11/20/67	REPORT	2
AUTHOR:	DOW		HICKMAN RA	
ADDRESSEE:	DOW		BALLMAN DK	
COPYEE:	BEUTEL AP		COFFEY WH	
	EVERSON JW		FOSTER PS	
	PATTERSON RM		QUIGLEY FK	
	RYAN WJ		SMITH A	
DOCUMENT	1699	07/07/65	TEST	4
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:				
DOCUMENT	1700	03/30/67	CONTRACT	75
AUTHOR:	MARRONE S		US ARMY BIO LAB	
ADDRESSEE:				
COPYEE:	BARRONS K		BOUNDY RH	
	LEDLIE RB		MAASBERG AT	
	MULLISON WR		PLETCHER DE	
	YANKA D			
DOCUMENT	1701	04/20/67	CONTRACT	1
AUTHOR:	DOW		HANES JH	
ADDRESSEE:				
COPYEE:	HANES JH		BARRONS K	
	LEDLIE RB		MAASBERG AT	
	MULLISON WR		PLETCHER DE	
	WRIGHT RW		YANKA D	
DOCUMENT	1702	00/00/63	CHART	3
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:	COHEN S		LYNN GE	
DOCUMENT	1703	08/30/67	REPORT	2
AUTHOR:	DOW		HICKMAN RA	
ADDRESSEE:	DOW		BALLMAN DK	
COPYEE:	BEUTEL AP		COFFEY WH	
	EVERSON JW		GUNN FJ	
	PATTERSON RM		ROADS DC	
	SMITH A		WILLIAMS GJ	

D-4335

4239

TITLE

MONTHLY REPORT FOR NOVEMBER 1967.

CRAWFORD RF
GUNN FJ
ROADS DC
YANKA DE

DOUGLAS B
KNAUP LR
ROBERTSON CD

ANALYTICAL METHOD THE DETERMINATION OF TCDD IN TRICHLOROPHENOL (GAS CHROMATOGRAPHIC METHOD) (MLW 65.10).

CONTRACT DAAA13-67-C-0137 NEGOTIATED CONTRACT APRIL 13, 1967.

DIXON W
MATHEWS C
SCHAMBRA WS

HANES JH
MORRISON IG
WRIGHT RW

RESEARCH AGREEMENT NO. DAAAA13-67-C-0137 ON FORMULATION AND TESTING FOR BIOLOGICAL ACTIVITY, A GROUP OF SOLUABLE DNBP COMPOSITIONS.

DIXON W
MATHEWS C
ROTH HL

HANMER AP
MORRISON IG
SCHAMBRA WS

SUMMARY OF ACUTE ORAL TESTS (BY INTUBATION) ON 24D AND 245T AND A NUMBER OF THEIR DERIVATIVES.

MCNAMARA B

WOLF MA

MONTHLY REPORT FOR AUGUST 1967.

CRAWFORD RF
HUGHES CB
ROBERTSON CD
YANKA DE

DOUGLAD B
KNAUP LR
RYAN WJ

DOCUMENT	1705	07/19/66	SPEC	7	MILITARY SPECIFICATION, HERBICIDE; N-BUTYL 245-TRICHLOROPHENOXYACETATE (MIL-H-51148A(MU) 661107). AMENASSN OF OFFICIAL AG CHEMISTS; AM SOCIETY FOR TESTING & MATERIALS; US PHARMACOPEIAL CONVENTION; MACK PUBLISHING; UNIFORM CLASSIFICATION COMM; US GOVT PRINTING OFF; NAVAL PUBLICATIONS & FORMS CENTER; LAPOINTE LD; DOW
AUTHOR:	DOW		HICKMAN RA		
ADDRESSEE:	DOW		BALLMAN DK		
COPYEE:	BEUTEL AP		COFFEY WH		CRAWFORD RF
	EVERSON JW		GUNN FS		HUGHES CB
	PATTERSON RM		ROADS DC		ROBERTSON CD
	SMITH A		WILLIAMS GJ		YANKA DE
					DOUGLAS B
					KNAUP LR
					RYAN WJ
DOCUMENT	1706	04/19/63	CHART	3	SUMMARY OF ACUTE ORAL TESTS (BY INTUBATION) ON 24D AND 245T AND A NUMBER OF THEIR DERIVATIVES.
AUTHOR:	DOW				
ADDRESSEE:					
COPYEE:	COHEN S		LYNN GE		MCNAMARA B
					WOLF MA
DOCUMENT	1707	09/15/65	REPORT	40	FINAL CONTRACT REPORT COVERING THE PERIOD FROM MARCH 1964 TO 15 SEPTEMBER 1965 (CONTRACT NO. DA 18-064-AMC-222(A)).
AUTHOR:	BARRONS KC		DOW		
ADDRESSEE:					
COPYEE:	DDC		U.S. ARMY BIO LABS MD		
DOCUMENT	1708	12/27/67	REPORT	3	MONTHLY REPORT FOR DECEMBER 1967.
AUTHOR:	DOW		HICKMAN RA		
ADDRESSEE:	DOW		BALLMAN DK		
COPYEE:	BEUTEL AP		COFFEY WH		CRAWFORD RF
	EVERSON JW		FOSTER PS		GUNN RJ
	PATTERSON RM		QUIGLEY FK		ROADS DC
	RYAN WJ		SMITH A		YANKA DE
					DOUGLAS B
					KNAUP LR
					ROBERTSON CD
DOCUMENT	1709	10/11/65	PRESENT	27	REPORT OF PAPERS PRESENTED AT THE THIRD CONFERENCE ON DEFOLIATION HELD AT THE U.S. ARMY BIOLOGICAL LABORATORIES, FT. DETRICK, MARYLAND, AUGUST 10-11, 1965 (GH-P278).
AUTHOR:	ABELES FB		ADDICOTT FT		AM CYANAMID
	DOW		ETHYL CORP		FMC CORP
	FRANK JR		HART WJ		HKR
	HURTT W		KLINGMAN DL		KOCH SD
	LEE WM		LEOPOLD AC		MAGEE RJ
	MON		MORRE DJ		PENNSALT CHEM
	RIDDELL JA		RIFKIN EB		RUNET VL
	UNIV OF CA		US RUBBER		USDA
	WILCOX R		WILLARD J		WISHESSER WJ
ADDRESSEE:					DEMAREE K
					FOY CL
					HOLM RE
					LEASURE JK
					MINARIK CE
					PURDUE RES FOUND
					TRUCHELUT GB
					WEIL ED

D. 4336

4240

	NUMBER	DATE	TYPE	PAGES
COPYEE:	CHAMPLAIN CE HUTCH DJ RGH WILCOX RD		EMH JOHNSTON H RHB WR	
DOCUMENT	1710	07/12/67	CONTRACT	78
AUTHOR:	MARRONE S		US ARMY BIO LAB	
ADDRESSEE:				
COPYEE:	BARKER RW GROENING WA		BARRONS KC HANES JH	
DOCUMENT	1711	03/17/67	REPORT	32
AUTHOR:	BRUYN SHAYLETT JP		DOW SAFRICA	
ADDRESSEE:				
COPYEE:	AWS DAVIDSON JH JHD JS RCH		CAB EEK JHG KCB RGH	
DOCUMENT	1712	02/05/53	REPORT	11
AUTHOR:	DOW		NATION HA	
ADDRESSEE:				
COPYEE:	ECB SOUTHWICK L		NUTTING HS TODD C	
DOCUMENT	1713	01/04/67	REPORT	9
AUTHOR:	DOW		NAULT JD	
ADDRESSEE:				
COPYEE:	AJS DOAN LA GERONIMO JO KCB TRN		CEO EEK I ERL PDL TWH	
DOCUMENT	1714	06/16/58	REPORT	8
AUTHOR:	COULTER LL		DOW	
ADDRESSEE:				
COPYEE:	ALLEN WW COON ET FOSTER T KELLY JA MCINTYRE HH RAYNOR RN SEEKER B		BRITTON JW DOSSER B GENDREGSKE SA LEASURE JK MULLISON WR RICHARD WF SMITH HL	

D-4337

4241

TITLE

GORING CA
KCB
TRN

HAMAKER JW
NORTON FH
TWH

CONTRACT DAAA13-67-C-0218 AWARD/CONTRACT.

BOUNDY RH
LEDLIE RB

GRAHAM EL
WRIGHT RW

FIELD TRIALS FOR THE CONTROL OF AMERICAN BRAMBLE (RUBUS CUNEIFOLIUS) AND LANTANA (LANTANA CAMARA) IN SOUTH AFRICA USING TORDON ALONE AND IN COMBINATION WITH 24D 245T DURING 1963 TO 1966 (CRI 146334) (GHP-467).

CAG
EHB
JLS
LLC
TWH

CTL
ERL
JPB
MGW
WPF

CHEMICAL BRUSH CONTROL ON DITCH BANKS ALONG FENCE ROWS AND IN PASTURES.

ROWE VK

SMITH A

HERBICIDAL ACTIVITY OF HERBICIDE IMIDAZOLE SALTS (REPORT NO. GS-809) (CRI 14 8626).

CTL
EHB
JDE
RCH
HRD

DEP
GEL
JWV
RLG

AQUATIC VEGETATION CONTROL WITH KURON (ACD PROJECT STATUS REPORT ROI 16793).

COLBY RW
FAYERWEATHER BL
GIBSON JW
LUTZ EM
NATION HA
RITTY PM
SWEZEY AW

CONNER DL
FISHER JR
JOHNSON JE
MADDOX JF
PEARSE FS
ROWE VK
VANVALKENBURG W

	NUMBER	DATE	TYPE	PAGES
	WARDEN RL		WATSON AJ	
DOCUMENT	1715	03/12/62	REPORT	2
AUTHOR:	ANDERSON LD		ATKINS ELJR	
	TODD FE		MCGREGOR SE	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1716	03/01/54	REPORT	4
AUTHOR:	DOW		SWEZEY AW	
ADDRESSEE:				
COPYEE:	DOW		FISHER JR	
DOCUMENT	1717	10/13/55	REPORT	32
AUTHOR:	ALQUIST FH		AM CYANAMID	
	COHEN SI		COLUMBIAN SOUTHERN CH	
	DOW		DUPONT	
	KELLY BE		KELLY JA	
	NALE TW		PACIFIC COAST BORAX	
	SOUTHWICK L		STAMLER LM	
	US RUBBER		WEEKS DC	
ADDRESSEE:				
COPYEE:	DOW		ALQUIST FN	
	COLBY RW		COLLIER B	
	GIBSON JW		GRAY HE	
	KAGY JF		LEMBRIGHT H	
	RAYNOR RA		WARDEN RL	
DOCUMENT	1718	01/26/56	PRESENT REPORT	2
AUTHOR:	SPURRIER EC			
ADDRESSEE:				
COPYEE:				
DOCUMENT	1719	02/10/59	REPORT	1
AUTHOR:	DOW		WARDEN RL	
ADDRESSEE:				
COPYEE:	DOW		CRAIN HD	
DOCUMENT	1720	07/09/65	LETTER	2
AUTHOR:	ROWE VK		DOW	
ADDRESSEE:	UNIV OF PA		KLIGMAN AM	
COPYEE:	GORDON HL		HOLDER BB	
	PETERSON JE		SILVERSTEIN L	

4242

4338

TITLE

WILSON JS

WILTSE MG

TOXICITY OF PESTICIDES TO HONEY BEES
UNIV OF CA USDA

SIXTH ANNUAL CALIFORNIA WEED CONFERENCE SACRAMENTO (ROI 4005).

FRAUCHER RS

WARREN LE

HANDBOOK OF BIOLOGICAL DATA HERBICIDES. (11593). PHYSICAL
CHEMICAL & TOXICOLOGICAL DATA ON HERBICIDES FOR THE HANDBOOK OF
BIOLOGICAL DATA, AMERICAN INSTITUTE OF BIOLOGICAL SCIENCES.

BERHENKE LF	CARLIDE AND GANNON CHEM
COX TR	DESSER RC
DUTTON WC	GALLOWHUR CHEM
KROEGER AP	MON
ROME VK	SICILIANO NJ
TRASK AD	UNION CARBIDE & CARBON
WHITE LC	WITMAN ED

BARRONS KC	BOUNDY RH
DAVIDSON JH	DIETER CE
HEATH SB	JOHNSON JE
NATION HA	NORTON TR
WATSON AJ	

LIVESTOCK POISONING FROM WEED CHEMICALS (ROI 11541).

TOXICOLOGY KURON, BARON AND RADAPON (ROI 20750).

THORSON SE

HUMAN & RABBIT TEST WITH TCDD CTTL.

ROWE VK	KRAMER
HOYLE HR	

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1721	00/00/69	REPORT	31

AUTHOR: DOW
 ADDRESSEE: EASTERN REGIONAL RENEGOT
 COPYEE:

DOCUMENT	1722	12/30/64	SPEC	1

AUTHOR: DOW
 ADDRESSEE:
 COPYEE:

DOCUMENT	1723	00/00/66	NEWS	18

AUTHOR: PENNER D
 GUNTHER FA

REPORT ASHTON FM
 DOW

ADDRESSEE:
 COPYEE:

DOCUMENT	1724	00/00/68	NEWS REPORT	5

AUTHOR: CHESTERFORD PARK RES STA JONES KH
 ADDRESSEE:
 COPYEE:

DOCUMENT	1725	02/01/69	REPORT	1

AUTHOR: DOW
 ADDRESSEE: HOPKINS J
 COPYEE: DOW

DOCUMENT	1726	03/13/53	LETTER	4

AUTHOR: DOW
 ADDRESSEE: DOW
 COPYEE: DOW

ROWE VK
 SMITH HL
 BRITTON JW

DOCUMENT	1727	03/15/54	ABSTRACT	1

AUTHOR: DOW
 ADDRESSEE:
 COPYEE:

HYMAS TA

D.4339

4243

TITLE

SUPPLEMENTAL REPORT TO THE RENEGOTIATION BOARD ON 670000
RENEGOTIABLE SALES AND PROFITS.

245 TRICHLOROPHENATE BOEHRINGER (ANALYTICAL LABORATORIES REPORT).

BIOCHEMICAL AND METABOLIC CHANGES IN PLANTS INDUCED BY
CHLOROPHENOXY HERBICIDES (FATE OF HERBICIDES IN PLANTS, AND
EXTENSIVE BIBLIOGRAPHY)(RESIDUE REVIEWS 14, 83-113).

UC DAVIS
NACA

SPRINGER VERLAG

ACUTE TOXICITY DATA FOR PESTICIDES.

NOAKES DN

SANDERSON DM

245T COMPETITIVE SAMPLE ANALYSIS.

DISCUSSION OF TOXICOLOGICAL INFORMATION RELATIVE TO DOW ESTERON
BRUSH KILLER.

JOHNSON JE

SOUTHWICK L

SUMMARY OF TOXICOLOGICAL INFORMATION ON 24D AND 245T TYPE
HERBICIDES AND AN EVALUATION OF THE HAZARDS TO LIVESTOCK ASSOCIATED
WITH THEIR USE (ACETIC ACID (245-TRICHLOROPHENOXY) TOXICITY OF
ESTERS).

ROWE VK

NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT 1728	06/15/64	ABSTRACT	1	RESULTS OF RANGE FINDING TESTS ON 245T, METHYL SULFOXIDE, POLYPROPYLENE GLYCOLS.
AUTHOR: DOW		OLSON KJ		TAYLOR ML
ADDRESSEE:				
COPYEE:				
DOCUMENT 1729	07/03/69	NEWS	1	COMMITTEE MAILES PETITIONS TO HALT PINAL DEFOLIATION.
AUTHOR:				
ADDRESSEE:				
COPYEE:				
DOCUMENT 1730	07/07/69	REPORT	4	SPRAY DAMAGE COMPLAINTS 690624 TO 690707.
AUTHOR:				
ADDRESSEE:				
COPYEE:				
DOCUMENT 1731	07/30/69	REPORT	6	USDA'S USE OF 24D, 245T AND SILVEX IN ARIZONA CTTL.
AUTHOR: FLEISCHMANN WJ				
ADDRESSEE:				
COPYEE:				
DOCUMENT 1732	02/12/60	NEWS	1	HEALTH ORGANIZATION REITERATES CALL FOR CONGRESSIONAL PROBE.
AUTHOR: AZ RECORD				
ADDRESSEE:				
COPYEE:				
DOCUMENT 1733	00/00/64	REPORT	15	24D, 245T AND RELATED CHEMICALS FOR WOODY PLANT CONTROL IN THE SOUTHEASTERN U.S. (REPORT 16).
AUTHOR: USDA		ROMANCIER RM		GA FOREST RES CNCL
ADDRESSEE:				
COPYEE:				
DOCUMENT 1734	02/26/65	LETTER	1	THANK YOU TO THA FOR SAMPLES TO BE USED IN TESTING FOR CONTAMINANTS OF 245T CTTL.
AUTHOR: GROTH DM		HEW		
ADDRESSEE: UPTON ET		THA		
COPYEE:				
DOCUMENT 1735	00/00/65	REPORT	4	24D, 245T AND RELATED CHEMICALS FOR WOODY PLANT CONTROL IN THE SE U.S. (REPORT 16).
AUTHOR: ROMANCIER RM		SE FOREST EXP STATION		USDA
ADDRESSEE:				GA FOREST RES CNCL
COPYEE:				

D.4340

4244

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1736	00/00/64	REPORT	8
AUTHOR: PALMER JS RADELEFF RD ADDRESSEE: COPYEE:				
DOCUMENT	1737	00/00/69	REPORT	26
AUTHOR: AG EXP STATION HUNTINGDO WAY JM ADDRESSEE: COPYEE:				
DOCUMENT	1738	00/00/57	REPORT	3
AUTHOR: AG EXP STATION PURDUE ROBERTS RE ADDRESSEE: COPYEE:				
DOCUMENT	1739	00/00/68	REPORT	7
AUTHOR: COURTNEY KD NIEHS ADDRESSEE: COPYEE:				
DOCUMENT	1740	00/00/69	REPORT	37
AUTHOR: FDA HEW POSSICK P SMITH D ADDRESSEE: COPYEE:				
DOCUMENT	1741	01/20/60	REPORT	9
AUTHOR: ADDRESSEE: COPYEE:				
DOCUMENT	1742	12/08/67	ABSTRACT	20
AUTHOR: ADDRESSEE: COPYEE:				

D.4341

4245

TITLE

THE TOXICOLOGIC EFFECTS OF CERTAIN FUNGICIDES AND HERBICIDES ON SHEEP AND CATTLE (NY ACAD SCI ANN 3,729-736).
USDA

TOXICITY AND HAZARDS TO MAN DOMESTIC ANIMALS AND WILDLIFE FROM SOME COMMONLY USED AUXIN HERBICIDES (RESIDUE REVIEWS 26, 37-62).

THE EFFECTS OF 245T BRUSH SPRAY ON TURKEYS (POULTRY SCIENCE 36,703-705).
ROGERS BJ

245T IN THE RAT EXCRETION PATTERN, SERUM LEVELS, PLACENTAL TRANSPORT, AND METABOLISM (PESTICIDES SYMPOSIA)(INTER AMERICAN CONF ON TOX AND OCCUPATIONAL MEDICINE, UNIV OF MIAMI, 277-283).

A HEALTH SURVEY OF WORKERS IN A 24D AND 245T PLANT, WITH SPECIAL ATTENTION TO CHLORACNE, PORPHYRIA CUTANEA TARDA AND PSYCHOLOGIC PARAMETERS.
METTER G POLAND AP

EFFECTS OF HERBICIDES ON LIVESTOCK (SOUTHERN WEED CONF 600120) CTTL.

PETITION FOR THE ESTABLISHMENT OF TOLERANCES FOR THE PESTICIDE CHEMICAL, (245T) ON RAW AGRICULTURAL COMMODITIES, SEC C, FULL REPORTS OF INVESTIGATIONS RE 245T(VOLUME 2)(245T CANCELLATION PROCEEDINGS, SUMMARIES OF DOW'S SUBMISSIONS TO THE EPA, 1).

NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT 1743	00/00/57	REPORT	26	CLINICAL AND EXPERIMENTAL INVESTIGATIONS CONCERNING THE ETIOLOGY OF CHLORACNE (ARCH KLIN EXP. DERM 206, 589-596).
AUTHOR: SCHULZ KH		SLA TRANSLATIONS CENTER		
ADDRESSEE:				
COPYEE:				
DOCUMENT 1744	12/00/67	AUTH REPORT	20	PHENOXY HERBICIDE RESIDUES AND THEIR PERSISTENCE.
AUTHOR: DOCKTER		GADBERRY HM		
MIDWEST RES INST		GOODMAN LH		
ADDRESSSEE: DEPT OF THE ARMY		HOUSE WB		
COPYEE:				
DOCUMENT 1745	00/00/69	CHART	1	PRESENCE OF CHLORACNEGEN AND TCDD IN 245T FROM VARIOUS MANUFACTURERS.
AUTHOR:				
ADDRESSEE:				
COPYEE:				
DOCUMENT 1746	00/00/65	REPORT	6	CLINICAL PICTURE AND ETIOLOGY OF CHLORACNE.
AUTHOR: SCULTZ KH		STS SCIENTIFIC TRANSLATI UNIV DERMATOLOGY CLINIC		
ADDRESSSEE:				
COPYEE:				
DOCUMENT 1747	09/27/68	NEWS	2	CHEMICAL AND TOXICOLOGICAL EVALUATIONS OF ISOLATED AND SYNTHETIC CHLORO DERIVATIVES OF DIBENZO-P-DIOXIN.
AUTHOR: CAMPBELL AD		REPORT		
HUANG A		FIRESTONE D		
ADDRESSSEE:		VERRETT J		
COPYEE:		HIGGINBOTHAM GR		
DOCUMENT 1748	09/19/66	REPORT	4	OCCUPATIONAL CHLORACNE (PROCEEDINGS INTL CONGRESS ON OCCUPATIONAL HEALTH, 753-755)(VIENNA, 660919 TO 660924).
AUTHOR: BIRMINGHAM DJ		HEW		
ADDRESSSEE:		KEY MM		
COPYEE:		WAYNE ST UNIV		
DOCUMENT 1749	02/11/67	PROC	2	PREPARATION OF TRICHLOROPHENOXY ACETIC ACID AVOIDING THE FORMATION OF CHLORACNE EXCITERS.
AUTHOR: WEYLAND				
ADDRESSSEE:				
COPYEE:				

D.4342

4246

DOCUMENT	NO	DATE	TYPE	PAGES
DOCUMENT 1750	1750	02/11/67	LETTER	1
AUTHOR: CH BOEHRINGER SOHN				
ADDRESSEE: DOW				
COPYEE:				

DOCUMENT 1751	1751	05/20/61	REPORT	10

AUTHOR: BAUER H	HAMBURG
ADDRESSEE:	
COPYEE:	

DOCUMENT 1752	1752	02/15/57	LETTER	2
AUTHOR: DOW				
ADDRESSEE: DOW				
COPYEE: DOW				
MCCOY WJ				
ROWE VK				
DIXON WR				
CORBIN WL				
PLETCHER DE				

DOCUMENT 1753	1753	02/22/65	LETTER	3
AUTHOR: DOW				
ADDRESSEE: DOW				
COPYEE: DOW				
PLETCHER DE				
GILL HH				
PLETCHER DE				

DOCUMENT 1754	1754	00/00/69	REPORT	3
AUTHOR:				
ADDRESSEE:				
COPYEE:				

DOCUMENT 1755	1755	00/00/69	REPORT	15
AUTHOR:				
ADDRESSEE:				
COPYEE:				

DOCUMENT 1756	1756	00/00/53	REPORT	2
AUTHOR:				
ADDRESSEE:				
COPYEE:				

D-4343

4247

OCCUPATIONAL INTOXICATION OCCURRING IN THE PRODUCTION OF CHLOROPHENOL COMPOUNDS (EFFECTS OF 245T ON MAN AND THE ENVIRONMENT)(HEARINGS BEFORE THE SUBCOMMITTEE ON ENERGY, NATURAL RESOURCES, AND THE ENVIRONMENT OF THE COMMITTEE ON COMMERCE UNITED STATES SENATE NINETYFIRST CONGRESS SECOND SESSION ON EFFECTS OF 245T ON MAN AND THE ENVIRONMENT. 700407 AND 700415. SERIAL 91-60, 241-249).

SPIEGELBERG U

HOLDER BB

LYNN GE
DOEDENS JD

TCDD UNLIKELY TO BE ENCOUNTERED BY ANIMAL OR MAN IN SUFFICIENT
DOSAGE TO CAUSE TOXIC REACTION CTTL.

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1757	00/00/69	MEMO	21

AUTHOR:
ADDRESSEE:
COPYEE:

DOCUMENT	1758	00/00/65	REPORT	6

AUTHOR: SCIENTIFIC TRANSLATION S SCULTZ KH
ADDRESSEE:
COPYEE:

DOCUMENT	1759	06/00/63	NEWS	5
			REPORT	

AUTHOR:
ADDRESSEE:
COPYEE:

DOCUMENT	1760	06/26/62	REPORT	5

AUTHOR: JONES EL KRIZEK H
ADDRESSEE:
COPYEE:

DOCUMENT	1761	00/00/68	REPORT	3

AUTHOR: BLUMENTHAL R
ADDRESSEE:
COPYEE:

DOCUMENT	1762	09/00/60	REPORT	10

AUTHOR: DANIELSON LL SHEETS TJ
ADDRESSEE:
COPYEE:

DOCUMENT	1763	00/00/69	REPORT	4

AUTHOR: BERG GG MILLER MW
ADDRESSEE:
COPYEE:

D.4344

4248

TITLE

SUMMARY AND CONCLUSIONS (APPENDIX 2) (REPORT OF THE ADVISORY PANEL ON TERATOGENICITY OF PEST) (EFFECTS OF 245T ON MAN AND THE ENVIRONMENT).

CLINICAL PICTURE AND ETIOLOGY OF CHLORACNE (EFFECTS OF 245T ON MAN AND THE ENVIRONMENT).

UNIV DERMATOLOGY CLINIC

INDUSTRIALLY ACQUIRED PORPHYRIA (EFFECTS OF 245T ON MAN AND THE ENVIRONMENT).

A TECHNIC FOR TESTING ACNEGENIC POTENCY IN RABBITS, APPLIED TO THE POTENT ACNEGEN TCDD (PRESENTED AT THE TWENTY-THIRD ANNUAL MEETING OF THE SOCIETY FOR INVESTIGATIVE DERMATOLOGY) (EFFECTS OF 245T ON MAN AND THE ENVIRONMENT).

UNIV OF CHICAGO

U.S. SHOWS SIGNS OF CONCERN OVER EFFECT IN VIETNAM OF 9 YEAR DEFOLIATION PROGRAM (EFFECTS OF 245T ON MAN AND THE ENVIRONMENT).

HERBICIDES IN SOILS (ARS 20-9, 170-181) (EFFECTS OF 245T ON MAN AND THE ENVIRONMENT).

USDA

SOIL PERSISTENCE OF 245T (CHEMICAL FALLOUT CURRENT RESEARCH ON PERSISTENT PESTICIDES).

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1764	01/00/61	PRESENT	9
AUTHOR:	DOW		REPORT	
ADDRESSEE:			RITTY PM	
COPYEE:				
DOCUMENT	1765	00/00/69	REPORT	7
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:				
DOCUMENT	1766	00/00/69	REPORT	27
AUTHOR:				
ADDRESSEE:				
COPYEE:				
DOCUMENT	1767	10/03/63	REPORT	16
AUTHOR:	GEWERBEHYGIENISCH PHARMA OETTEL H			
ADDRESSEE:				
COPYEE:				
DOCUMENT	1768	00/00/60	REPORT	10
AUTHOR:	CORNELL U AG DP		WHITESIDE JS	
ADDRESSEE:				
COPYEE:	ALEXANDER M		LICHY CT	
DOCUMENT	1769	09/28/64	REPORT	1
AUTHOR:	DOW		LUECK AF	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1770	01/12/65	REPORT	10
AUTHOR:	GROTH DH		HEW PUB HLTH	
ADDRESSEE:	HEW PUB HLTH		HEW PUB HLTH SERV	
COPYEE:	CHRISTIAN D		KRAUS GE	
DOCUMENT	1771	00/00/69	REPORT	5
AUTHOR:	DOW		KENAGA EE	
ADDRESSEE:				
COPYEE:				

D.4345

4249

TITLE

WHAT HAPPENS TO PHENOXY HERBICIDES WHEN APPLIED TO A WATERSHED AREA
(NE WEED CONTROL CONF).

WINSTON AN

DEFOLIATION, THE COSTS THAT LINGER.

SUPPLEMENTAL REPORT TO THE RENEGOTIATION BOARD ON 670000
RENEGOTIABLE SALES AND PROFITS.

NEUERE ERKENNTNISSE UBER GESUNDHEITSGEFAHRLICHE ARBEITSSTOFFE
(MODERNE UNFALLVERHUTUNG HEFT 8).

MEASUREMENT OF MICROBIOLOGICAL EFFECTS OF HERBICIDES (WEEDS
8;204-213, 1960).

LYNN GE

ROWE VK

CHLORACNE STATUS REPORT 640700 TO 640900.

IDENTIFICATION OF THE TOXIC FACTOR IN 245T.

TORDON HERBICIDES-EVALUATION OF SAFETY OF FISH & BIRDS (DTE 25(1),
5-9).

DOCUMENT	1772	10/00/51	REPORT	8
AUTHOR:	DOW		HYMAS TA	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1773	09/20/55	TECH	1
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:				
DOCUMENT	1774	08/18/54	TECH	2
AUTHOR:	DOW		I HRH	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1775	00/00/69	ABSTRACT	1
AUTHOR:	BELYAVSKAYA LI		IZD SARATOV UNIV	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1776	11/09/65	REPORT	11
AUTHOR:	DOW		LYNN GE	
ADDRESSEE:	OYEN F			
COPYEE:	DOW		LYNN GE	
	ELSHERE D		GORDON HL	
	JONES GD		KAGY JF	
	MULLISON WR		WILSON AW	
DOCUMENT	1777	05/19/60	REPORT	12
AUTHOR:	DOW		OLSON KJ	
ADDRESSEE:				
COPYEE:	DOW		RITTY PM	
	COLBY RW		ELSHERE D	
	HAMMER OH		HART A	
	KAGY JF		KILIAN DJ	
	MCINTYRE HH		PERKINS RP	
	WRIGHT N			

D.4346

4250

TIT -

SUMMARY OF TOXICOLOGICAL INFORMATION ON 24D & 245T TYPE HERBICIDES
& AN EVALUATION OF THE HAZARDS TO LIVESTOCK ASSOCIATED WITH THEIR
USE (AMERICAN JOURNAL OF VETERINARY RESEARCH 15(57), 622-629).
ROWE VK

ISOPROPYLESTER 24D, ISOPROPYL ESTER.

ACID SLURRY.
PETERSON J

TOXIC EFFECT OF SOME HERBICIDES ON FISH AND AQUATIC
INVERTEBRATES(VIDOVOI SOSTAV EKOL PROD GIDROBIONTOV VOLGOGRAD
VODOKHRAN 93(8)) (CHEMICAL ABSTRACTS, VOL. 72, 1970, PG 240)
KONSTANTINOV AS KONSTANTINOVA NS

SKIN IRRITATION AND ACNEGENIC PROPERTIES OF VEON BRUSH KILLER, VEON
245T, TORDON 101 AND WEEDAR 245T AMINE (BIOCHEMICAL RES LAB) (BC
T2.2-139-2).
OHARE CP OLSON KJ

BARRONS KC	BOUNDY RH
GOWELL JH	JOHNSTON RV
KILIAN DJ	MOSS RD
WILTSE MG	

RESULTS OF RANGE FINDING TOXICOLOGICAL TESTS ON AGRICULTURAL
CHEMICAL FORMULATION M-1677 (BIOMEDICAL RES LAB) (BC T2.30-180-1).
OYEN F RITTY PM

BARRONS KC	BOUNDY RH
GAY HH	GREENE LM
HYMAS TA	JONES OD
LUCE EN	LYNN GE
STENGER VA	TISDALE WL

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1778	03/09/65	REPORT	10

AUTHOR:	DOW	LYNN GE
	OYEN F	
ADDRESSEE:		
COPYEE:	DOW	LYNN GE
	ELSHERE D	GORDON HL
	JONES GD	KAGY JF
	MULLISON WR	WILSON AW

DOCUMENT	1779	07/06/59	LETTER	2

AUTHOR:	DOW	WOLF MA
ADDRESSEE:	DOW	COULTER LL
COPYEE:		

DOCUMENT	1780	05/10/57	REPORT	1

AUTHOR:	DOW
ADDRESSEE:	
COPYEE:	

DOCUMENT	1781	05/20/57	REPORT	1

AUTHOR:	DOW	I DB
ADDRESSEE:		
COPYEE:		

DOCUMENT	1782	05/20/57	REPORT	1

AUTHOR:	DOW
ADDRESSEE:	
COPYEE:	

DOCUMENT	1783	11/20/57	REPORT	5

AUTHOR:	DOW	HOYLE HR
ADDRESSEE:		
COPYEE:	DOW	ALLINSON RL
	COLBY RW	ELSHERE D
	GREENE LM	HART A
	KILIAN DJ	LUCE EN
	MUSSELL DR	PERKINS RP
	WRIGHT N	

D.4347

4251

TITLE

SKIN IRRITATION AND ACNEGENIC PROPERTIES OF VEON BRUSH KILLER, VEON 245T, TORDON 101 AND WEEDAR 245T AMINE (BIOCHEMICAL RES LAB) (BC T2.2-139-2).

OHARE CP

OLSON KJ

BARRONS KC
GONELL JH
KILIAN DJ
WILTSE MG

BOUNDY RH
JOHNSTON RV
MOSS RD

ESTERON FORMULATIONS MIXED WITH FUEL OIL CONSIDERED MORE IRRITATING THAN FORRON OR ESTERON FORMULATIONS DILUTED WITH WATER CTTL.

SAMPLE 2 M-1116.DILUTION T2.30-101-1 SKIN CONTACT IRRIGATION.

SAMPLE 2 M-1116 DILUTION(T2.30-101-1)(EYE CONTACT TEST).

SAMPLE 2, M-1116, DILUTION C-1-14-100(T2.30-101-1)(TOXICOLOGY WORK SHEET).

M-1116 DILUTION C1-14-100 (DATA SHEET OF PROPERTIES, HEALTH, AND PRECAUTIONS FOR SAFE HANDLING OF MATERIALS).

MCCOLLISTER DD

OLSON KJ

BESHGETOOR AW
GAY HH
HYMAS TA
LYNN GE
SCOLES GW

BOUNDY RH
GRAY HE
KAGY JF
MCINTYRE HH
TISDALE WL

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1784	11/30/57	REPORT	2
AUTHOR:	DOW		MCCOLLISTER DD	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1785	04/07/60	MEMO	1
AUTHOR:	DOW		WOLF MA	
ADDRESSEE:	DOW		MCINTYRE HH	
COPYEE:	DOW		WOLF MA	
DOCUMENT	1786	10/00/54	NEWS	8
			REPORT	
AUTHOR:	DOW		HYMAS TA	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1787	08/10/67	REPORT	33
AUTHOR:	BUERGE J		DUNN FL	
	SADEK SE		TINKER B	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1788	00/00/65	TEST	1
AUTHOR:	DOW		ROWE VK	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1789	07/09/65	LETTER	2
AUTHOR:	DOW		ROWE VK	
ADDRESSEE:	HOSPITAL OF UNIV OF PA		KLIGMAN AM	
COPYEE:	DOW		ROWE VK	
	HOYLE HR		KRAMER CG	
DOCUMENT	1790	06/22/67	CHART REPORT	1
AUTHOR:	DOW		ELLIS SD	
ADDRESSEE:				
COPYEE:				

D.4348

4252

TITLE

RESULTS OF RANGE FINDING TOXICOLOGICAL TESTS ON INVERTON
(M-1116)(DILUTION C1-14-100)(T2.30-101-1).
OLSON KJ

COMMENTS ON THE LETTER FROM WEIL CONCERNING ESTERON 99 CONCENTRATE
AND DOW 245T AMINE WEED KILLER.

SUMMARY OF TOXICOLOGICAL INFORMATION ON 24D AND 245T TYPE
HERBICIDES AND AN EVALUATION OF THE HAZARDS TO LIVESTOCK ASSOCIATED
WITH THEIR USE(AM JOUR OF VETERINARY RES 15(57), 622-629).

ROWE VK

REPORT ON HISTOPATHOLOGIC EXAMINATION OF RAT TISSUES TCDD.
L MYER MOSS M

SUGGESTED PROTOCOL FOR STUDIES ON HUMAN SUBJECTS TO DETERMINE THE
ACNEGENIC POTENTIAL OF TCDD AND TO STUDY THE PATHOGENESIS OF
CHEMICALLY INDUCED ACNE.

COVER LETTER FOR PROTOCOL ON TCDD STUDIES WITH HUMAN SUBJECTS
CTTL. STUDIES ON HUMAN SUBJECTS CTTL.

GORDON HL
PETERSON JE

HOLDER BB
SILVERSTEIN L

CLINICAL CHEMISTRY(TCDD)(66681-1).

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1791	08/08/67	CHART REPORT	1
AUTHOR:	BUERGE JF		DOW	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1792	08/10/67	REPORT	1
AUTHOR:	BUERGE JF		DOW	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1793	06/19/67	CHART REPORT	2
AUTHOR:	DOW		TINKER BP	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1794	00/00/67	CHART REPORT	8
AUTHOR:				
ADDRESSEE:				
COPYEE:				
DOCUMENT	1795	00/00/67	REPORT	9
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:				
DOCUMENT	1796	12/02/66	CHART REPORT	3
AUTHOR:	DOW		OHARE CP	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1797	01/10/67	REPORT	1
AUTHOR:	DOW		OHARE CP	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1798	01/10/67	REPORT	1
AUTHOR:	DOW		OHARE CP	
ADDRESSEE:				
COPYEE:				

D.4349

4253

TITLE

SUMMARY OF HEMATOLOGY(TCDD)(66681-1).

HEMATOLOGY SUMMARY(TCDD)(CLASS 1)(RABBITS, ACUTE ORAL) (66681-1).
OYEN F

TCDD(66681-1).

SUMMARY OF HEMATOLOGY(TCDD)(66681-1) CTTL.

SUMMARY OF EFFECT OF TCDD ON RABBITS(ACUTE ORAL)(66681-1).

SUMMARY OF HEMATOLOGY(TCDD)(66681-1).

BONE MARROW SUMMARY(TCDD)(66681-1).

HEMATOLOGY SUMMARY(TCDD)(66681-1).
SADEK S

NUMBER	DATE	TYPE	PAGES
DOCUMENT 1799 AUTHOR: DOW ADDRESSEE: COPYEE:	11/07/66	CHART REPORT ELLIS SD	1
DOCUMENT 1800 AUTHOR: DOW ADDRESSEE: COPYEE:	10/28/66	REPORT OYEN F	2
DOCUMENT 1801 AUTHOR: DOW ADDRESSEE: COPYEE:	10/27/66	REPORT SADEK SE	1
DOCUMENT 1802 AUTHOR: DOW ADDRESSEE: COPYEE:	11/04/66	CHART REPORT OYEN F	3
DOCUMENT 1803 AUTHOR: CRAWER EW ADDRESSEE: COPYEE:	11/04/66	CHART REPORT DOW	2
DOCUMENT 1804 AUTHOR: DOW ADDRESSEE: COPYEE:	11/04/66	REPORT OYEN F	1
DOCUMENT 1805 AUTHOR: DOW ADDRESSEE: COPYEE:	11/04/66	CHART REPORT TINKER BP	13
DOCUMENT 1806 AUTHOR: DOW ADDRESSEE: COPYEE:	04/21/67	REPORT TINKER BP	1

D.4350

4254

TITLE

CLINICAL CHEMISTRY(TCDD)(66681-1).

KOSES AA

MICRO PATHOLOGICAL FINDINGS(TCDD)(66681-1) CTTL.

SUMMARY OF GROSS MICRO PATHOLOGICAL FINDINGS(TCDD)(66681-1).

SUMMARY OF GROSS & MICRO PATHOLOGY(TCDD)(66681-1).

ORGAN WEIGHT SUMMARY(TCDD)(66681-1).

TCDD(66681-1).

TCDD(66681-1).

TCDD(66681-1).

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1816	12/03/64	TECH	1
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:				
DOCUMENT	1817	08/10/67	DATA	159
			REPORT	
AUTHOR:	SADEK SE			
ADDRESSEE:				
COPYEE:				
DOCUMENT	1818	02/27/61	REPORT	1
AUTHOR:	DOW		OLSON K	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1819	00/00/61	REPORT	6
AUTHOR:	DOW		STEVENSON HJ	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1820	03/06/61	REPORT	1
AUTHOR:	DOW		OLSON K	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1821	05/03/54	REPORT	35
AUTHOR:	DOW		MCCOLLISTER DD	
ADDRESSEE:				
COPYEE:	DOW		ALLINSON RL	
	BARRONS KC		BESHGETOOR	
	COLBY RW		DAVIDSON JH	
	JOHNSTON H		KAGY JF	
	LYNN GE		MACCUTCHEON SM	
	WHITE LC		WRIGHT N	
DOCUMENT	1822	00/00/69	ABSTRACT	1
AUTHOR:	BELYAVSKAYA LI		KONSTANTINOV AS	
ADDRESSEE:				
COPYEE:				

4255
D.4351

TITLE

TCDD(TOXICOLOGY WORK SHEET)(66681-1).

REPORT ON HISTOPATHOLOGIC EXAMINATION OF RABBIT TISSUES TCDD
(T36.25-66681-1).

DOWANOL PIB MIX ESTERS OF 245T(EYE CONTACT TEST).

DOWANOL PIB MIX ESTER OF 245T(ACUTE ORAL TOXICITY).
TOMPSON E

DOWANOL PIB MIX ESTER OF 245T (TOXICOLOGY WORK SHEET).

RESULTS OF RANGE FINDING TOXICOLOGICAL TESTS ON BUTYL (AND
ISOBUTYL)(245 TRICHLOROPHENOXY) ACETATE.
OYEN F

ALQUIST FN
BOUNDY RH
GAY HH
KELLY JA
MARTIN D
WRIGHT P

BACON KD
BRITTON EC
GREENE LM
LUCE EN
SUNDERLAND WW

TOXIC EFFECT OF SOME HERBICIDES ON FISH AND AQUATIC INVERTEBRATES
(VIDOVOI SOSTAV EKOL PROD GIDROBIONTOV VOLGOGRAD VODOKHRAN
93(8)(RUSS).
KONSTANTINOVA NS USSR

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1823	11/23/66	REPORT	5
AUTHOR:	BT		DOW	
ADDRESSEE:				
COPYEE:	DOW		SILVERSTEIN LG	
DOCUMENT	1824	11/09/66	REPORT	3
AUTHOR:	DOW		I BT	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1825	11/17/54	REPORT	33
AUTHOR:	BARRONS KC LYNN GE		COULTER LL	
ADDRESSEE:				
COPYEE:	BARRONS KC ALQUIST FN BRUST HF FAYERWEATHER BL KAGY JF NORTON TR SOUTHWICK L		DOW BOUNDY RH COLBY RW GIBSON JW KELLY JA NUTTING HS SWEZEY AW	
DOCUMENT	1826	08/24/53	LETTER	1
AUTHOR:	JOHNSON JE		DOW	
ADDRESSEE:	ROWE VK		DOW	
COPYEE:	BARRONS KC KAGY JF		LYNN GE ALQUIST FN	
DOCUMENT	1827	00/00/57	ABSTRACT	1
AUTHOR:	DERMATOLOGICA		IND HYGIENE DIGEST	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1828	12/00/59	REPORT	3
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:				
DOCUMENT	1829	06/01/55	TECH	1
AUTHOR:	DOW		I HRH	
ADDRESSEE:				
COPYEE:				

4352

4256

TITLE

DIRECT ESTER PLANT 489 BLDG PROCESS SAMPLES (REQUEST FOR SCREENING AND APPLICATION TESTING).

BUTYL ESTER OF 245T 489 BLDG DIRECT ESTER PROCESS.

ERBON SOIL STERILANT.

DOW

JOHNSON JE

JOHNSON JE
BRITTON EC
COLLIER BL
GRAY HE
MADDOX JF
RAYNOR RN
WATSON AJ

LYNN GE
BRITTON JW
DAVIDSON JH
HEATH SB
NATION HA
ROWE VK

POTENTIAL USES OF NEW AGRICULTURAL PRODUCT K11,354.

SPENCER HC

DOW

OCCUPATIONAL ACNE (SO CALLED CHLORACNE) CAUSED BY AROMATIC CYCLIC ETHERS (DERMATOLOGICA 115, 540-546) (INDUSTRIAL HYGIENE DIGEST 590100).

KIMMIG J

SCHULZ KH

ESTERON 245 DS SUMMARY OF TOXICOLOGICAL INFORMATION ON AND PRACTICAL CONSIDERATIONS IN ITS HANDLING AND USE (BIOCHEM RES LAB).

245T DOWANOL 97B ESTER (T25.14-106-1).

WOLF MA

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1830	04/26/57	TECH	1
AUTHOR:	DOW		HOYLE HR	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1831	10/10/50	REPORT	5
AUTHOR:	ADAMS DW		DOW	
	SPENCER HC		STREETER LE	
ADDRESSEE:				
COPYEE:	DOW		ALLEN WW	
	DUTTON WC		IRISH DD	
DOCUMENT	1832	05/17/49	REPORT	1
AUTHOR:	DOW		WYSE H	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1833	04/01/49	REPORT	4
AUTHOR:	DOW		WYSE H	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1834	03/21/49	REPORT	1
AUTHOR:	DOW		WYSE H	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1835	04/12/49	REPORT	1
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:				
DOCUMENT	1836	03/09/49	AUTH	1
AUTHOR:	DOW		I HAS	
	ROWE VK		WHITE L	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1837	12/00/49	REPORT	17
AUTHOR:	DOW		ROWE VK	
ADDRESSEE:				
COPYEE:				

14353

4257

TITLE

DOWANOL ESTER OF 245T.
ROWE VK

RESULTS OF SKIN IRRITATION AND SKIN SENSITIZATION TESTS CONDUCTED
ON HUMAN SUBJECTS WITH 24D DOWANOL 97B ESTER (T25.14-97-1).
MCCOLLISTER DD ROWE VK

BRITTON JW
KAGY JF

DOSSER RC
LYNN GE

K7559-2 MIXED AMYL ESTER OF 245T (SINGLE ABSORPTION EXPOSURE
RECORD).

K7559-2 MIXED AMYL ESTER OF 245T(SKIN IRRITATION).

MIXED AMYL ESTER OF 245T.

K7559-2 MIXED AMYL ESTER OF 245T (ACUTE ORAL TOXICITY).

MIXED AMYL ESTER OF 245T.
IRISH

MCCOLLISTER DD

K-6277-4(245T ISOPROPYL ESTER)(ACUTE ORAL TOXICITY).
WYSE H

	NUMBER	DATE	TYPE	PAGES
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	1838 DOW	05/17/49	REPORT WYSE H	1
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	1839 DOW	03/21/49	REPORT WYSE H	3
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	1840 DOW	04/14/49	REPORT WYSE H	1
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	1841 DOW MCCOLLISTER DD	02/25/49	AUTH I HCS ROWE VK	1
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	1842	02/00/50	REPORT DEPT OF BOTANY & PLAINT FAREWELL ED	8
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	1843 DOW MI STATE COLLEGE	06/10/49	CONTRACT	5
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	1844 DOW ROWE VK	07/01/49	REPORT I DDM	1
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	1845 ADAMS CM	01/20/48	TECH DOW	2

①-4354

4258

TITLE

SINGLE ABSORPTION EXPOSURE RECORD.

ISOPROPYL ESTER OF 245T.

K6277-4 ISOPROPYL ESTER OF 245T (ACUTE ORAL TOXICITY).

ISOPROPYL ESTER OF 245T.

I RM
WHITE L

IRISH

SOME EFFECTS OF HERBICIDES ON PASTURE AND ON GRAZING LIVESTOCK(MI
AG EXP STATION QUARTERLY BULLETIN 32(3), 378-385).
GRIGSBY BH

MI STATE COLLEGE COOPERATIVE RES AGREEMENT.

NEED KILLERS (REQUEST FOR BIOLOGICAL TEST).

I EWA

I HCS

RESULTS OF ACUTE ORAL TESTS ON (1) METHYL ESTER OF 245T, (2) ETHYL
SALICYLATE, (3) DELTA-HYDROXY QUINOLINE, (4) ALPHA-BROMONAPHTHALENE
(T2.2-27-2).
ROWE VK

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1846	00/00/69	ABSTRACT	1

AUTHOR: BELYAUSKAYA LI KONSTANTINOV AS
 ADDRESSEE:
 COPYEE:

DOCUMENT	1847	00/00/69	REPORT	26

AUTHOR: MONKS WOOD EXPERIMENTAL WAY JM
 ADDRESSEE:
 COPYEE:

DOCUMENT	1848	08/00/68	ABSTRACT	1

AUTHOR: DUNSCOMBE WK
 ADDRESSEE:
 COPYEE:

DOCUMENT	1849	04/00/52	REPORT	7

AUTHOR: FDA LEHMAN AJ
 ADDRESSEE:
 COPYEE:

DOCUMENT	1850	10/00/51	REPORT	8

AUTHOR: FDA LEHMAN AJ
 ADDRESSEE:
 COPYEE:

DOCUMENT	1851	10/02/50	REPORT	1

AUTHOR:
 ADDRESSEE:
 COPYEE:

DOCUMENT	1852	10/21/52	LETTER	1

AUTHOR: DOW ROWE VK
 ADDRESSEE: BRITTON JW SMITH HL
 COPYEE:

174355
 4259

TITLE

 TOXIC EFFECT OF SOME HERBICIDE ON FISH AND AQUATIC INVERTEBRATES
 (VIDOVOI SOSTAV, EKOL PROD GIDROBIONTOV VOLGOGRAD VODOKHRAN,
 93-98)(RUSSIAN).
 KONSTANTINOVA NS USSR

TOXICITY AND HAZARDS TO MAN, DOMESTIC ANIMALS, AND WILDLIFE FROM
 SOME COMMONLY USED AUXIN HERBICIDES (RESIDUE REVIEWS 26, 37-62).

OCCUPATIONAL ACNE, 5 CASES CAUSED BY WEEDKILLERS (MEDICINA CUTANEA
 1(3), 225-231 660000).

CHEMICALS IN FOODS, A REPORT TO THE ASSOCIATION OF FOOD AND DRUG
 OFFICIALS ON CURRENT DEVELOPMENTS, PART 2, PESTICIDES, SECTION 3,
 SUBACUTE AND CHRONIC TOXICITY (ASSN OF FOOD & DRUG OFFICIALS OF THE
 U.S. 16 (2), 47-53).

CHEMICALS IN FOODS, A REPORT TO THE ASSOCIATION OF FOOD AND DRUG
 OFFICIALS ON CURRENT DEVELOPMENTS (PART 2 PESTICIDES)(ASSN OF FOOD
 & DRUG OFFICALS OF THE U.S. 15(4)).

ODOR THRESHOLDS, FISH TOXICITY AND PROPERTIES OF WATER AS FOLLOWING
 CONCENTRATIONS OF 245T CTTL.

PAPER ENTITLED "ACUTE AND CHRONIC TOXICITY OF 24D AND 245T IN DOGS"
 BY DRILL AND HIRATZKA.

WILLIAMS GJ

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1853	12/15/49	LETTER	5
AUTHOR:	DOW		ROWE VK	
ADDRESSEE:	DRILL VA		WAYNE UNIV	
COPYEE:				
DOCUMENT	1854	02/24/49	AUTH	1
AUTHOR:	DOW		DRILL VA	
	SPENCER HC			
ADDRESSEE:				
COPYEE:				
DOCUMENT	1855	08/31/50	REPORT	2
AUTHOR:	DOW		DRILL VA	
ADDRESSEE:	BRITTON JW			
COPYEE:	DOW		SPENCER HC	
DOCUMENT	1856	07/17/50	LEGAL	1
AUTHOR:	REEVES FC			
ADDRESSEE:				
COPYEE:				
DOCUMENT	1857	00/00/46	REPORT	12
AUTHOR:	DRILL VA		WAYNE UNIV	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1858	03/10/49	AUTH	6
AUTHOR:	DOW		IRISH	
	SPENCER HC		SPENCER HK	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1859	02/02/50	REPORT	9
AUTHOR:	MCCOLLISTER DD		ROWE VK	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1860	12/29/49	AUTH	7
AUTHOR:	DOW		MCCOLLISTER DD	
	WYSE H			
ADDRESSEE:				
COPYEE:				

D.4356

4260

TITLE

TOXICITY OF 24D AND 245T (SUGGESTED PROCEDURES FOR TESTING TOXICITY IN DOGS) CTTL.

245T REQUEST FOR BIOLOGICAL TEST TO BIOCHEMICAL RESEARCH LABORATORY.
MCCOLLISTER DD ROWE VK

INTERIM REPORT ON THE ACUTE AND SUBACUTE ORAL TOXICITY OF 245T FOR DOGS.
ROWE VK

NOTARY WITNESSES VICTOR DRILL AS AUTHOR OF RESEARCH REPORT CTTL.

ACUTE AND SUB-ACUTE ORAL TOXICITY OF 245T FOR DOGS.

245T (REQUEST FOR BIOLOGICAL TEST).
MCCOLLISTER DD ROWE VK
WHITE L WYSE H

THE ACUTE ORAL TOXICITY OF 245T TO RATS, MICE, GUINEA PIGS AND CHICKS CTTL.
SPENCER HC

THE ACUTE ORAL TOXICITY OF 245T TO RATS, MICE, GUINEA PIGS AND CHICKS CTTL.
ROWE VK SPENCER HC

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1861	08/15/50	REPORT	8
AUTHOR:	DOW		ROWE VK	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1862	08/15/50	REPORT	4
AUTHOR:	DOW		MCCOLLISTER DD	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1863	00/00/50	REPORT	3
AUTHOR:				
ADDRESSEE:				
COPYEE:				
DOCUMENT	1864	00/00/50	REPORT	2
AUTHOR:	FARWELL ED		GRIGSBY BH	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1865	08/08/45	REPORT	11
AUTHOR:	DOW		GEISEL C	
ADDRESSEE:	ALLEN WW		VEAZEY WR	
COPYEE:	DOW		ADAMS CW	
DOCUMENT	1866	01/06/53	LETTER	2
AUTHOR:	DOW		ROWE VK	
ADDRESSEE:	DOW		SUNDERLAND WW	
COPYEE:				
DOCUMENT	1867	04/30/58	LABEL	1
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:				
DOCUMENT	1868	09/20/51	REPORT	32
AUTHOR:	DOW		MCCOLLISTER DD	
ADDRESSEE:				
COPYEE:	DOW		ADAMS A	
	BRITTON EC		BRITTON JW	
	HAMMER OH		HEATH SB	
	LYNN GE		NELSON WL	
	SUNDERLAND WW			

1-4357

4261

TITLE

THE ACUTE ORAL TOXICITY OF 245T TO RATS, MICE, GUINEA PIGS AND
CHICKS CTTL.
SPENCER HC

THE ACUTE ORAL TOXICITY OF 245T TO RATS, MICE, GUINEA PIGS AND
CHICKS.
ROWE VK SPENCER HC

DOW 245T (ESTERON 245).

PROGRESS REPORT ON DAIRY CATTLE HERBICIDE FEEDING EXPERIMENT.
JENSEN JM MI AG EXPERIMENT STATION

TOXICITY OF 245T.
ROWE VK

24D AND 245T LABELS.

24D AND RELATED TYPE HERBICIDES(TOXICOLOGICAL INFORMATION AND
SUGGESTIONS REGARDING TREATMENT FOR PERSONS SWALLOWING 24D AND
RELATED TYPE HERBICIDES).

RESULTS OF TOXICOLOGICAL TEST ON ALPHA 245 TRICHLOROPHENOXY
PROPIONIC ACID (T23.14-15-1).
ROWE VK

BERHENKE L
DAVIDSON JH
HIRSCHKIND W
RECHTIN HJ

BRANCH CB
DUTTON WC
KELLY JA
SOUTHWICK L

NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT 1869 AUTHOR: APPLEBAUM IL ADDRESSEE: COPYEE:	06/00/64	ABSTRACT BLEIBERG J	1	INDUSTRIALLY ACQUIRED PORPHYRIN (ARCH DERMAT 89(6), 793-797). BRODKIN R WALLEN M
DOCUMENT 1870 AUTHOR: ALEXANDER HC ADDRESSEE: COPYEE: ALEXANDER HC BEK CM HAMILTON CE SCHAFER RB WAAS WE	10/01/65	REPORT DOW ADAMS EM CRI MIDLAND TX WESTERN ILGENFRITZ EM SERCU CL	4	THE POLLUTIONAL EVALUATION OF COMPOUNDS WITH 'RED FLAG' DESIGNATIONS. MAXEY JS BAKER R DYLENSKI SW KELLY JA SHANNON ES BATCHELDER TB GRUBE JR NOVAK RG TEAL JL
DOCUMENT 1871 AUTHOR: ADDRESSEE: COPYEE:	00/00/69	DATA REPORT	21	RESULTS OF 78 WIPE TESTS PERFORMED AT 265 & 636 BUILDINGS AND ON SEVERAL PESTICIDE RELATED COMPOUNDS.
DOCUMENT 1872 AUTHOR: DOW ADDRESSEE: COPYEE:	02/20/65	REPORT SADEK SE	4	REPORT ON EXAMINATION OF RABBIT EAR SKIN AND LIVERS.
DOCUMENT 1873 AUTHOR: DOW ADDRESSEE: COPYEE: I PJG	07/24/68	MEMO GEHRING PJ	1	CONFIRMATION OF DOG POISONING FOLLOWING ORAL INGESTION OF 24D AND 245T CTTL.
DOCUMENT 1874 AUTHOR: IND TOX LAB ADDRESSEE: DOW COPYEE:	06/26/50	LETTER SHELANSKI HA ROWE VK	3	2JD AND 245T PROVEN NOT TO BE SKIN SENSITIZERS IN PATCH TEST WITH 100 MALES AND 100 FEMALES CTTL.
DOCUMENT 1875 AUTHOR: DOW ADDRESSEE: BAVER LD COPYEE: DOW LEGASSEY DJ	02/01/63	LETTER ROWE VK EXPERIMENT STATION ROWE VK	7	INFORMATION ON DIFFERENT TOXICOLOGICAL STUDIES PERFORMED ON PENTACHLOROPHENOL, 24D, 245T CTTL. ALLEN HW FURMAN FS

D-4358

4262

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1876	11/02/62	LETTER	2
AUTHOR:	DOW		ROWE VK	
ADDRESSEE:	EMPLOYERS MUTUAL OF WAUS		MULLINS GW	
COPYEE:	DOW		ROWE VK	
DOCUMENT	1877	10/26/62	LETTER	1
AUTHOR:	EMPLOYERS MUTUAL OF WAUS		MULLINS G	
ADDRESSEE:	DOW		ROWE VK	
COPYEE:				
DOCUMENT	1878	03/31/58	LETTER	1
AUTHOR:	DOW		ROWE VK	
ADDRESSEE:	KOHN CM		PROFESSIONAL BLDG	
COPYEE:	DOW		ROWE VK	
DOCUMENT	1879	06/11/56	LETTER	5
AUTHOR:	DOW		ROWE VK	
ADDRESSEE:	COON ET			
COPYEE:	DOW		ROWE VK	
	BENDALL TR		COULTER LL	
DOCUMENT	1880	00/00/50	NEWS	2
AUTHOR:	ONTARIO AG COL		SMITH MV	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1881	03/03/53	LETTER	2
AUTHOR:	DOW		ROWE VK	
ADDRESSEE:	BOURBON COUNTY HOSPITAL		KINNAIRD BW	
COPYEE:	DOW		ROWE VK	
DOCUMENT	1882	12/19/52	LETTER	2
AUTHOR:	DOW		ROWK VK	
ADDRESSEE:	USDA		WARD JC	
COPYEE:	SUNDERLAND WW			
DOCUMENT	1883	12/14/50	REPORT	5
AUTHOR:	WILLARD CJ			
ADDRESSEE:				
COPYEE:				

104359

4263

TITLE

INFORMATION REGARDING THE TOXICITY OF 24D & 245T CTTL.

KOEHLINGER DG

KRAMER CG

INFORMATION REQUEST ON THE TOXICITY OF 24D & 245T TO AID IN THE
DEFENSE OF AN INSURANCE CLAIM CTTL.

LABORATORY DATA ON 24D AND 245T SHOWED A FEW CASES OF DERMATITIS
CTTL.

TOXICITY OF 24D TO BEES.

BARRONS KC
DAVIDSON JH

BECKWITH CL
MCCOMB JR

WEED KILLING SPRAYS VS BEES (CANADIAN BEE JOUR).

IDENTIFICATION AND TREATMENT OF INJURIES CAUSED TO PERSONS HANDLING
24D AND 245T CTTL.

GAY HH

EFFECT OF DOW HERBICIDES ON EYES CTTL.

INDIRECT EFFECTS OF HERBICIDES (NORTH CENTRAL WEED CENTRAL
CONTROL CONF 501212 TO 501214).

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1884	07/18/51	LETTER	2
AUTHOR:	DOW		SOUTHWICK L	
ADDRESSEE:	EASTERN STATES FARMERS E		HOVEY CL	
COPYEE:	DOW		ALLEN WW	
DOCUMENT	1885	04/17/51	LETTER	2
AUTHOR:	DOW		ROWE VK	
ADDRESSEE:	MO ST HIGHWAY DEPT		REAGEL FV	
COPYEE:	DOW		BRANCH CB	
	SMITH HL		WILLIAMS GJ	
DOCUMENT	1886	04/02/51	LETTER	1
AUTHOR:	MO ST HIGHWAY DEPT		REAGEL FV	
ADDRESSEE:	COULTER LL		DOW	
COPYEE:				
DOCUMENT	1887	02/00/50	REPORT	7
AUTHOR:	WILLARD CJ			
ADDRESSEE:				
COPYEE:				
DOCUMENT	1888	12/09/49	LETTER	2
AUTHOR:	DOW		ROWE VK	
ADDRESSEE:	SMITH HL			
COPYEE:	DOW		SOUTHWICK L	
DOCUMENT	1889	09/08/49	CHART	2
AUTHOR:				
ADDRESSEE:				
COPYEE:				
DOCUMENT	1890	05/05/49	LETTER	3
AUTHOR:	DOW		ROWE VK	
ADDRESSEE:	DEPT OF HEALTH CAN		SUTHERLAND RB	
COPYEE:	ALLEN WW		FERGUSON RM	
DOCUMENT	1891	12/14/65	LETTER	1
AUTHOR:	DOW		ROWE VK	
ADDRESSEE:	BILLINGS CE JR		OH ST UNIV	
COPYEE:	DOW		ROWE VK	

D-4360

4264

TITLE

INDIRECT POISONING EFFECT OF 24D SPRAYING CTTL.

BRYANT C

ROWE VK

24D, 245T AND TCA NOT RESPONSIBLE TO SKIN IRRITATIONS CTTL.

COULTER LL

GAY HH

TOXICITY OF 24D, 245T AND TCA IN RELATION TO SKIN IRRITATION CTTL.

INDIRECT EFFECTS OF HERBICIDES.

TOXICITY OF 24D & 245T.

TOXICOLOGY TESTS CTTL.

TOXICITY OF 24D AND RELATED MATERIALS. REFERENCES FOR ADDITIONAL SOURCES OF DETAILED INFORMATION CTTL.

WILLIAMS GJ

DISAGREEMENT OF CLAIMS THAT CASUAL EXPOSURE TO 24D OR 245T CAUSED SEVERE BURNS CTTL.

GORDON HL

NUMBER	DATE	TYPE	PAGES
DOCUMENT 1892 AUTHOR: DOW ADDRESSEE: DOW COPYEE: DOW	10/31/58	LETTER MULLISON WR MCCOLLISTER DD COULTER LL	1
DOCUMENT 1893 AUTHOR: COULTER LL ADDRESSEE: MO ST HIGHWAY DEPT COPYEE: DOW	04/09/51	LETTER DOW REAGEL FV LYNN GE	1
DOCUMENT 1894 AUTHOR: DOW ADDRESSEE: DOW COPYEE:	10/24/67	LETTER OLSON KJ PROCTER & GAMBLE	2
DOCUMENT 1895 AUTHOR: BILLINGS CE JR ADDRESSEE: DOW COPYEE:	11/12/65	LETTER OH ST UNIV ROWE VK	1
DOCUMENT 1896 AUTHOR: DOW ADDRESSEE: DOW COPYEE: DOW	03/22/65	LETTER WOLF MA GORDON HL WOLF MA	1
DOCUMENT 1897 AUTHOR: DOW ADDRESSEE: DOW COPYEE: DOW	09/08/58	LETTER TATTERSHALL JT ASHWORTH RH TATTERSHALL JT	2
DOCUMENT 1898 AUTHOR: HYMAZ TA ADDRESSEE: DOW COPYEE: DOW	07/11/58	LETTER NATION HA COULTER LL	1
DOCUMENT 1899 AUTHOR: COULTER LL ADDRESSEE: MO ST HIGHWAY DEPT COPYEE: DOW	04/09/51	LETTER DOW REAGEL FV LYNN GE	1
DOCUMENT 1900 AUTHOR: MO ST HIGHWAY DEPT ADDRESSEE: COULTER LL COPYEE:	04/02/51	LETTER REAGEL FV DOW	1

TITLE

24D AND 245T WEEDKILLERS AS SNAKICIDES.

SANTAMARIA R

SMITH FB

TOXICITY OF 24D AND 245T CTTL.

ACNEGENS AND LABORATORY METHODS FOR EVALUATING THEM CTTL.

ROWE VK

SNYDER FH

REQUEST FOR TOXICOLOGICAL RESPONSES TO CASUAL EXPOSURE TO 24D AND 245T CTTL.

TOXICOLOGICAL INFORMATION ON 24D AND 245T FOR G.E. OLESON.

24D AND 245T TOXICITY ON SHEEP.

FOSTER WH

LETTER OF JUNE 16 TO DR K.M. AUTERY, THE EFFECT OF INSECTICIDES AND HERBICIDES ON THE RUMEN OF CATTLE.

OTIS CE

ROWE VK

REGARDING REQUEST FOR TOXICITY INFORMATION ON 24D AND 245T CTTL.

MATERIALS HANDLING HERBICIDES.

NUMBER	DATE	TYPE	PAGES
DOCUMENT 1901 AUTHOR: DOW ADDRESSEE: DOW COPYEE:	11/09/56	ROC JONES WP COON RT	1
DOCUMENT 1902 AUTHOR: DOW ADDRESSEE: DOW COPYEE: DOW	09/03/54	LETTER ROWE VK CLOFT HF ROWE VK	1
DOCUMENT 1903 AUTHOR: INGALLS WL ADDRESSEE: FENSTERMAKER PE COPYEE:	06/21/50	LETTER	1
DOCUMENT 1904 AUTHOR: DOW ADDRESSEE: DOW COPYEE:	06/29/49	LETTER ROWE VK SOUTHWICK L	2
DOCUMENT 1905 AUTHOR: MONONGAHEKA POWER ADDRESSEE: AG CHEM SECTION COPYEE:	07/06/48	LETTER RUSSELL SS DOW	1
DOCUMENT 1906 AUTHOR: DOW ADDRESSEE: DOW COPYEE:	07/14/48	LETTER ROWE VK ROEHM LS	1
DOCUMENT 1907 AUTHOR: IND TOX LAB ADDRESSEE: DOW COPYEE:	06/26/50	LETTER SHELANSKI HA ROWE VK	3
DOCUMENT 1908 AUTHOR: KLAUDER JV ADDRESSEE: IND TOX LAB COPYEE:	06/28/50	LETTER SHELANSKI HA	1
DOCUMENT 1909 AUTHOR: DOW ADDRESSEE: DOW COPYEE: DOW KELLY JA	10/19/53	LETTER ROWE VK COULTER LL ROWE VK LYNN GE	1

D-4362

4266

TITLE

TOXIC EFFECTS OF 245T ON TURKEYS CTTL.

SMITH HL

WALLBERG JH

24D, 245T OFF FLAVORS IN MILK.

BENDALL F

SMITH HL

SHEEP MAY HAVE DIED FROM INGESTING 245T CTTL.

TOXICITY OF 245T.

VEGATATION CONTROL.

DEATH OF CHICKENS FROM SPRAYING BRUSH WITH ESTERON 44 AND 245.

REPORT ON PATCH TEST CTTL.

PATCH TEST ON COMPOUNDS REPORT CTTL.

K9151 AND K12894.

BARRONS KC

JOHNSON JE

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1910	07/21/66	LETTER	2
AUTHOR:	DOW		ROWE VK	
ADDRESSEE:	NAS		WANDS RC	
COPYEE:	DOW		LYNN GE	
DOCUMENT	1911	09/07/49	LETTER	1
AUTHOR:	DOW		ROWE VK	
ADDRESSEE:	FERGUSON RM			
COPYEE:	DOW		ATKEY JM	
DOCUMENT	1912	03/16/49	LETTER	1
AUTHOR:	DOW		ROWE VK	
ADDRESSEE:	AM MUTUAL LIABILITY INSU		THOMPSON EW	
COPYEE:	ALLEN HW			
DOCUMENT	1913	07/24/68	MEMO	1
AUTHOR:	DOW		GEHRING PJ	
ADDRESSEE:				
COPYEE:	DOW		GEHRING PJ	
DOCUMENT	1914	07/26/68	LETTER	1
AUTHOR:	DOW		KENAGA EE	
ADDRESSEE:	CUTTING ME			
COPYEE:	DOW		ROWE VK	
DOCUMENT	1915	08/02/57	LETTER	2
AUTHOR:	DOW		WOLF MA	
ADDRESSEE:	AG CHEM SALES		BRYANT C	
COPYEE:	DOW		ROWE VK	
DOCUMENT	1916	06/25/64	LETTER	2
AUTHOR:	DOW		ROWE VK	
ADDRESSEE:	DINMAN BD		OH ST UNIV	
COPYEE:	DOW		ROWE VK	
DOCUMENT	1917	09/13/63	REPORT	3
AUTHOR:	DOW		WOLF MA	
ADDRESSEE:	DOW		COULTER LL	
COPYEE:	DOW		WOLF MA	
DOCUMENT	1918	03/18/55	LETTER	2
AUTHOR:	DOW		WOLF MA	
ADDRESSEE:	DOW		SOUTHWICK L	
COPYEE:				

D.4363

4267

TITLE

INFORMATION ON THE ISO-OCTYL ESTER OF 245T CTTL.

TOXICITY OF 24D ESTERS.

CLOSS RC

SOUTHWICK L

ESTERON 44 AND ESTERON 245 POSE NO HEALTH HAZARDS CTTL.

MEMO CONFIRMING DOG'S CONDITION WAS CONSISTENT WITH 24D AND 245T
POISONING CTTL.

245T TOXICITY TO FISH CTTL.

TOXICITY OF 24D AND 245T TO TROUT.

REPLY TO DINMAN'S 640616 LETTER INQUIRING ABOUT THE TOXICITY OF
245T CTTL.

INFORMATION FOR DR. J.A. SPENCE, STANDARD OIL CO. OF CA.

TOXICOLOGICAL COMPARISON OF 24D, 245T, AND SILVEX.

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1919	04/12/54	LETTER	1
AUTHOR:	GAY HH			
ADDRESSEE:	PURDUE UNIV		VANDEMARK JS	
COPYEE:				
DOCUMENT	1920	04/02/54	LETTER	1
AUTHOR:	DOW		ROWE VK	
ADDRESSEE:	PURDUE UNIV		VANDEMARK JS	
COPYEE:	DOW		ROWE VK	
	WILLIAMS GJ			
DOCUMENT	1921	03/24/54	LETTER	1
AUTHOR:	PURDUE UNIV		VANDEMARK JS	
ADDRESSEE:	DOW		ROWE VK	
COPYEE:				
DOCUMENT	1922	07/27/53	LETTER	5
AUTHOR:	DOW		ROWE VK	
ADDRESSEE:	MARX EE JR			
COPYEE:	DOW		BENDAL TL	
	SOUTHWICK L		WILLIAMS GJ	
DOCUMENT	1923	06/23/53	LETTER	1
AUTHOR:	DOW		ROWE VK	
ADDRESSEE:	LUCAS TREE EXPERT		SICKMAN WL	
COPYEE:	BENDALL T		CLOFT HF	
DOCUMENT	1924	04/17/51	LETTER	2
AUTHOR:	DOW		ROWE VK	
ADDRESSEE:	MO ST HIGHWAY DEPT		REAGEL FV	
COPYEE:	DOW		BRANCH CB	
	SMITH HL		WILLIAMS GJ	
DOCUMENT	1925	07/13/50	LETTER	2
AUTHOR:	OH ST UNIV		WILLARD CJ	
ADDRESSEE:	DOW		SOUTHWICK L	
COPYEE:	DOW		ALLEN W	
	WILLIAMS GJ			

D-4364

4268

TITLE

IN REGARDS TO MAYFIELDS DERMATOSIS REACTION TO 245T CTTL.

IN REGARDS TO MR MAYFIELDS DERMATITIS ALLEGEDLY DUE TO CONTACT WITH
245T CTTL.

GAY HH

SMITH HL

NEED TREATMENT FOR TOXICOLOGICAL REACTION TO SKIN FROM 245T CTTL.

TOXICOLOGICAL PROPERTIES OF 245T AND 24D CTTL.

KRINER RH

SMITH HL

EYE CONTACT WITH A 245T SOLUTION REQUIRES IMMEDIATE FLUSHING OF THE
EYE AND ADDITIONAL MEDICAL ATTENTION TO MINIMIZE EYE IRRITATION AND
ACCELERATE HEALING CTTL.

GAY HH

SMITH HL

SODIUM TCA IS MORE LIKELY TO CAUSE SKIN IRRITATION THAN 24D OR 245T
BECAUSE IT IS USED IN HIGHER CONCENTRATIONS AND IT IS INHERENTLY
MORE IRRITATING CTTL.

COULTER LL

GAY HH

24D USE ON VEGETATION IS DETERMINED NOT TO BE THE CAUSE BEHIND THE
DEATH OF GRAZING SHEEP CTTL.

DOUST AF

ROWE VK

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1926	07/24/50	LETTER	2
AUTHOR:	DOW		SOUTHWICK L	
ADDRESSEE:	FISCHER PJ		SOUTH CENTRAL RURAL	
COPYEE:	SHELL K			
DOCUMENT	1927	11/28/49	LETTER	1
AUTHOR:	DOW		SOUTHWICK L	
ADDRESSEE:	DEE WE		USDA	
COPYEE:	ROWE VK			
DOCUMENT	1928	06/29/49	LETTER	2
AUTHOR:	DOW		ROWE VK	
ADDRESSEE:	DOW		SOUTHWICK L	
COPYEE:				
DOCUMENT	1929	04/28/48	LETTER	2
AUTHOR:	DOW		SOUTHWICK L	
ADDRESSEE:	DOW		SISSON HA JR	
COPYEE:	DOW		IRISH DD	
DOCUMENT	1930	06/01/55	TECH	2
AUTHOR:	DOW		WOLF MA	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1931	12/21/65	REPORT	5
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:				
DOCUMENT	1932	00/00/65	REPORT	14
AUTHOR:				
ADDRESSEE:				
COPYEE:				
DOCUMENT	1933	01/23/69	REPORT	16
AUTHOR:	DOW		NORRIS JM	
ADDRESSEE:				
COPYEE:				

14365

4269

TITLE

24D AND 245T SPRAYED VEGETATION DOES NOT INJURIOUS EFFECT WHEN
EATEN BY LIVESTOCK CTTL.

ELEC

LITTLE HAZARD FROM THE USE OF 245T IN PASTURES WHEN USED AS
RECOMMENDED CTTL.

TESTS REVEAL 245T TO BE LOW IN TOXICITY BUT EVIDENCE DOES NOT SHOW
IT TO BE SAFE FOR USE ON FOOD PRODUCTS (TOXICITY OF 245T) CTTL.

DETAILS ABOUT VARIOUS HERBICIDES TO MIX FOR EFFECTIVE APPLICATION
AND THOSE HERBICIDES NOT TO MIX CTTL.

ESTERON 245.

CHEMICALS 245T ISOOCTYL ESTER REQUEST FOR SCREENING OR APPLICATION
TESTING.

TOXICITY OF CHLORINATED PHENOXYALKYL ACIDS TO MAN AND EXPERIMENTAL
ANIMALS CTTL.

TOXICOLOGICAL PROPERTIES OF TORDON 124V BRUSH KILLER.

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1934	00/00/68	MEMO	1
AUTHOR:				
ADDRESSEE:				
COPYEE:				
DOCUMENT	1935	01/17/67	CHART	1
AUTHOR: DOW		SILVERSTEIN		
ADDRESSEE:				
COPYEE:				
DOCUMENT	1936	01/17/67	LETTER	1
AUTHOR: DOW		SILVERSTEIN LG		
ADDRESSEE: GILMAN H		IA ST UNIV		
COPYEE:				
DOCUMENT	1937	02/15/67	LETTER	2
AUTHOR:				
ADDRESSEE: DIXON WR		DOW		
COPYEE: DOW		CORBIN WL		
MCCOY WJ		PLETCHER DE		
DOCUMENT	1938	07/01/54	REPORT	22
AUTHOR: BUCKLEY WR		KEHOE RA		
SUSKIND R		UNIV OF CINCINNATI		
ADDRESSEE:				
COPYEE:				
DOCUMENT	1939	00/00/68	ABSTRACT	2
AUTHOR: CHRISTOFANO EE		FANCHER OE		
IND BIOTEST LAB		KEPLINGER ML		
ADDRESSEE:				
COPYEE:				
DOCUMENT	1940	00/00/66	NEWS REPORT	17
AUTHOR: BLUMS ZB		CENTRO DERMATOLOGICA		
ADDRESSEE:				
COPYEE:				

4270
D.4366

TITLE

TOXICITY(VOLUME 1).

FOLLICULITIS RESPONSE OF THE RABBIT EAR TO SINGLE APPLICATION OF
TCDD (TC) AND TCDD (TB). TABLE.

BRIEF REVIEW OF BIOASSAY RESULTS USING TCDD AND
2378-TETRABROMODIBENZO-P-DIOXIN CTTL.

TRICHLOROPHENOL ACCIDENT AT TCC, ST LOUIS, MO, INCIDENTS OF
CHLORACNE, AND CLEANUP EFFORTS CTTL.

COWELL JH

HOLDER BB

THE CUTANEOUS AND TOXICOLOGICAL APPRAISAL OF PRODUCTS EVOLVED IN
THE 245T SYNTHESIS SUBMITTED BY MON, NITRO, WV.
KETTERING LAB MON
WALKER M

INFLUENCE OF DIOXIN ON LIVER FUNCTION IN THE RABBIT.
FRAWLEY JP HER
SCHOENIG GP

CLINICAL STUDIES OCCUPATIONAL ACNE (MEDICINA CUTANEA 3, 225-232).
FED LONDONO F

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1941	00/00/67	ABSTRACT	1
			NEWS	
AUTHOR:	C&EN NEWS			
ADDRESSEE:				
COPYEE:				
DOCUMENT	1942	07/28/67	LETTER	1
AUTHOR:	CHRISTOFANO EE		HER	
ADDRESSEE:	DOW		ROWE VK	
COPYEE:				
DOCUMENT	1943	08/10/67	LETTER	1
AUTHOR:	CHRISTOFANO EE		HER	
ADDRESSEE:	DOW		ROWE VK	
COPYEE:				
DOCUMENT	1944	00/00/48	REPORT	14
AUTHOR:	FAREWELL ED		GRISBY BH	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1945	06/02/49	LETTER	5
AUTHOR:	ALLEN WW		DOW	
ADDRESSEE:	DOW		BALLMAN DK	
COPYEE:	IRISH DD			
DOCUMENT	1946	03/09/49	TEST	8
AUTHOR:	DOW		MCCOLLISTER DD	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1947	08/29/50	REPORT	2
AUTHOR:	DOW		ROWE VK	
ADDRESSEE:	DOW		ALLEN WW	
	BRITTON JW		DOSSER RC	
	KAGY JF		LYNN GE	
COPYEE:				
DOCUMENT	1948	03/09/49	TEST	24
AUTHOR:	DOW		MCCOLLISTER DD	
ADDRESSEE:				
COPYEE:				

D-4367

4271

TITLE

SEARCH FOR CHICK EDEMA FACTOR (1356. CHICK EDEMA FACTOR
BREAKTHROUGH)(C&EN 45(5), 10)(BIBRA INFO BULLETIN 6, 97).

CHICK EDEMA STUDIES WITH TCDD CTTL.

SOURCES OF CHLORINATED DIBENZODIOXIN IN CHICKEN FEED CTTL.

SOME EFFECTS OF HERBICIDES ON GRAZING LIVESTOCK.

AUTHORIZATION FOR THE STUDY OF POSSIBLE TOXICITY OF DOW WEEDS AND
GRASS KILLERS TO FARM ANIMALS TO BE CONDUCTED BY MICHIGAN STATE
EXPERIMENT STATION.

MIXED AMYL ESTER OF 245T REQUEST FOR BIOLOGICAL TEST.
SPENCER HC

RESULTS OF RANGE FINDING TOXICOLOGICAL TESTS ON THE MIXED AMYL
ESTER OF 245T.

SPENCER HC
BARRONS KC
DUTTON WC

BRITTON DIV
IRISH DD

ISOPROPYL ESTER OF 245T REQUEST FOR BIOLOGICAL TEST.
SPENCER HC

NUMBER	DATE	TYPE	PAGES
DOCUMENT 1949	08/28/50	DISTRB REPORT	4
AUTHOR: DOW		ROWE VK	
ADDRESSEE: DOW		ALLEN WW	
DOSSER RC		DUTTON WC	
LYNN GE			
COPYEE:			
DOCUMENT 1950	01/19/48	REPORT	3
AUTHOR: DOW		ROWE VK	
ADDRESSEE:			
COPYEE:			
DOCUMENT 1951	06/26/46	TEST	2
AUTHOR: I BLP		I HAS	
ADDRESSEE:			
COPYEE:			
DOCUMENT 1952	10/02/50	REPORT	1
AUTHOR:			
ADDRESSEE:			
COPYEE:			
DOCUMENT 1953	01/06/53	LETTER	2
AUTHOR: DOW		ROWE VK	
ADDRESSEE: DOW		SUNDERLAND WW	
COPYEE:			
DOCUMENT 1954	03/26/64	REPORT	15
AUTHOR: HOYLE HR		OLSON KJ	
ADDRESSEE:			
COPYEE:			
DOCUMENT 1955	04/04/64	DISTRB REPORT	4
AUTHOR: DOW		HOLDEMAN GE	
TAYLOR ML			
ADDRESSEE:			
COPYEE: DOW		BOUNDY RH	
GORDON HL		GREENE LM	
HOLDMAN GE		JONES GD	
KOERKER FW		LUCE EN	
NORTON TR		PITMAN MOORE	
WRIGHT N			

D.4368

4272

TITLE

RESULTS OF TOXICOLOGICAL TESTS ON 245T ISOPROPYL ESTER.

SPENCER HC
BARRONS KC
IRISH DD

BRITTON JW
KAGY JF

RESULTS OF ACUTE ORAL TESTS ON METHYL ESTER OF 245T ETHYL
SALICYLATE 8-HYDROXY QUINOLINE A-BROMONAPHTHALENE.

REQUEST FOR BIOLOGICAL TEST (BIOCHEM FILE T2514-11).

I JB

245T.

24D AND 245T LABELS.

245T DATA SHEET OF PROPERTIES, HEALTH HAZARDS, AND PRECAUTIONS FOR
SAFE HANDLING OF MATERIALS.

OYEN F

TAYLOR ML

RESULTS OF RANGE FINDING TOXICOLOGICAL TESTS ON 245T.

OLSON KJ

OYEN F

ELSHERE D
HAKE CL
KAGY JF
LYNN GE
SHRADER SA

EPSTEIN J
HART A
KILIAN DJ
MCINTYRE HH
WILSON AW

NUMBER	DATE	TYPE	PAGES
DOCUMENT 1956 AUTHOR: DOW ADDRESSEE: DOW COPYEE:	07/06/59	LETTER WOLF MA COULTER LL	2
DOCUMENT 1957 AUTHOR: Kligman AM ADDRESSEE: DOW COPYEE:	12/21/64	REPORT UNIV OF PA ROWE VK	4
DOCUMENT 1958 AUTHOR: DOW ADDRESSEE: DOW COPYEE: HOLDER BB SILVERSTEIN LG	03/15/65	LETTER REPORT OHARE CP GORDON HL OHARE CP HOYLE HR STEWART RD	4
DOCUMENT 1959 AUTHOR: DOW ADDRESSEE: COPYEE:	09/29/65	CHART OHARE C	1
DOCUMENT 1960 AUTHOR: DOW ADDRESSEE: TIMM W COPYEE:	02/25/65	LETTER	1
DOCUMENT 1961 AUTHOR: CORNELL ADDRESSEE: COPYEE:	00/00/67	REPORT LISK DJ	4
DOCUMENT 1962 AUTHOR: KRAUSCHE KK ADDRESSEE: NACA IND TASK FORCE ON P COPYEE:	04/10/68	LETTER NACA	1

D-4369

4273

TITLE

RABBIT TOX TEST SUMMARY REPORT CTTL.

PATHOGENESIS OF CHEMICALLY INDUCED ACNE.

THE FORMATION OF FOLLICULITIS IN THE RABBIT EAR FOLLOWING A SINGLE SUBCUTANEOUS INJECTION OF SYMMETRICAL TETRACHLORODIBENZODIOXIN IN BENZENE.

OLSON KJ

ADAMS EM
KRAMER CG

GAY HH
ROWE VK

TOXICOLOGICAL TEST OF APPLIED VEON BRUSH KILLER, VEON 245T, TORDON 101, AND WEEDAR 245T AMINE CTTL.

STATUS OF DIRECT ESTER PROCESS.

FATE OF ATRAZINE, KURON, SILVEX, AND 245T IN THE DAIRY COW (JOUR DAIRY SCIENCE 47, 1267-1270)(TA50.01.P4)(PP8F0669).

STJOHN LE JR

WAGNER DG

FDA LETTER ON PESTICIDE PETITION REQUESTING TOLERANCES FOR RESIDUES OF 245T.

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1963	02/21/65	PRESENT	10
AUTHOR:	KLINGMAN DL		REPORT	
ADDRESSEE:			USDA ARS	
COPYEE:				
DOCUMENT	1964	10/00/54	REPORT	10
AUTHOR:	DOW		HYMAS TA	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1965	10/00/54	REPORT	9
AUTHOR:	DOW		HYMAS TA	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1966	02/00/50	REPORT	9
AUTHOR:	AG EXP STATION MI		FARWELL ED	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1967	00/00/66	NEWS	1
AUTHOR:	ENVIRONMENT			
ADDRESSEE:				
COPYEE:				
DOCUMENT	1968	00/00/66	REPORT	2
AUTHOR:	SUND JM			
ADDRESSEE:				
COPYEE:				
DOCUMENT	1969	00/00/68	REPORT	8
AUTHOR:	KLINE JR		U.S. ATOMIC ENERGY	
ADDRESSEE:				
COPYEE:				

D.4370

4274

TITLE

RESEARCH ON CONTROL OF WEEDS AND BRUSH ON RANGELAND (TX AG AVIATION
CONF AND SHORT COURSE ON PEST CONTROL 650221 TO 650223)(TORDON 101
MIXTURE TI COMPILATION PA2.08.S6).

SUMMARY OF TOXICOLOGICAL INFORMATION ON 24D AND 245T TYPE
HERBICIDES AND AN EVALUATION OF THE HAZARDS TO LIVESTOCK ASSOCIATED
WITH THEIR USE (AM JOUR OF VETERINARY RES 15(57), 622-629).
ROWE VK

SUMMARY OF TOXICOLOGICAL INFORMATION ON 24D AND 245T TYPE
HERBICIDES AND AN EVALUATION OF THE HAZARDS TO LIVESTOCK ASSOCIATED
WITH THEIR USE(AM JOUR OF VETERINARY RES 15(57), 622-629)(DA
1.00SL).
ROWE VK

SOME EFFECTS OF HERBICIDES ON PASTURE AND ON GRAZING LIVESTOCK(MI
AG EXP STATION QUARTERLY BULLETIN 32(3), 378-385) (DA 1.00SL).
GRIGSBY BH

DIOXIN IN 245T MAY CAUSE LIVER CANCER AND COURT ORDERS EPA TO MAKE
DECISION ON BAN OF 245T IN RICE (ENVIRONMENT 14(7), 24) CTTL.

MYSTERY OF ABORTIONS IN CATTLE SOLVED WITH HERBICIDES.

TESTIMONY ON USE OF THE HERBICIDE 245T FOR VEGETATION MANAGEMENT IN
COOK TRANSMISSION CORRIDORS.

COMM

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1970	07/00/59	REPORT	4
AUTHOR:	SUND JM		WI AG EXP STATN	
ADDRESSEE:				
COPYEE:	BARRONS KC GEHRING P		BLAIR E GORING C	
DOCUMENT	1971	00/00/69	REPORT	26
AUTHOR:	MONKS WOOD EXP STATION E WAY JM			
ADDRESSEE:				
COPYEE:				
DOCUMENT	1972	06/00/69	REPORT	14
AUTHOR:	BATES RR HART ER MITCHELL I PETRUCELLI L		FALK HL INNES JRM NATIONAL CANCER INST ULLAND BM	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1973	00/00/11	REPORT	24
AUTHOR:	DOW SPARSCHU GL		DUNN FL	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1974	00/00/68	REPORT	3
AUTHOR:	NEWTON M		NORRIS LA	
ADDRESSEE:				
COPYEE:				
DOCUMENT	1975	00/00/69	REPORT	2
AUTHOR:				
ADDRESSEE:				
COPYEE:				
DOCUMENT	1976	04/16/68	LETTER	2
AUTHOR:	HEW		STOKES W	
ADDRESSEE:	DUNN CL		NACA IND TASK FORCE	
COPYEE:	USDA ARS			

4341

4275

TITLE

CONTROL NEEDS TO PREVENT LOWLAND ABORTION IN CATTLE (DOWN TO EARTH: 10-13, 1959).

DAVIDSON J
WRIGHT MJ

DONALDS J

TOXICITY AND HAZARDS TO MAN, DOMESTIC ANIMALS, AND WILDLIFE FROM SOME COMMONLY USED AUXIN HERBICIDES (RESIDUE REVIEWS 26, 37-62).

BIOASSAY OF PESTICIDES AND INDUSTRIAL CHEMICALS FOR TUMORIGENICITY IN MICE PRELIMINARY NOTE (JOUR OF THE CANCER INST 42(6), 1101-1114).

FISHBEIN L
KLEIN M
PALLOTA AJ
VALERIO MG

GART JJ
LITTON INDUSTRIES
PETERS J

THE EFFECTS OF VARIOUS DOSES OF TCDD ADMINISTERED WITH 245T ON RAT FETAL DEVELOPMENT.

LISOWE RW

ROWE VK

HERBICIDE RESIDUES IN BLACKTAIL DEER FROM FORESTS TREATED WITH 245T AND ATRAZINE (PROCEEDINGS FROM SOUTHERN SOCIETY OF WEED SCIENCE 680000).

OR ST UNIV

245T, 2-ETHYLEXYL ESTER.

PESTICIDE PETITION 8F0675 REQUESTING TOLERANCES FOR RESIDUES OF HERBICIDE SILVEX CTTL.

NUMBER	DATE	TYPE	PAGES
DOCUMENT 1977	04/18/68	LETTER	2
AUTHOR: KRAUSCHE KK NACA ADDRESSEE: MEMBERS OF IND TASK FORC COPYEE:			
DOCUMENT 1978	04/08/68	LETTER	2
AUTHOR: BAKER DM JR HEW ADDRESSEE: DUNN CL NACA IND TASK FORCE COPYEE: USDA ARS			
DOCUMENT 1979	00/00/50	REPORT	5
AUTHOR: DOW MCCOLLISTER DD ADDRESSEE: COPYEE:			
DOCUMENT 1980	00/00/50	REPORT	12
AUTHOR: DRILL VA WAYNE UNIV COL OF ME ADDRESSEE: COPYEE:			
DOCUMENT 1981	08/00/50	REPORT	5
AUTHOR: DOW ADDRESSEE: COPYEE:			
DOCUMENT 1982	07/00/63	MEMO	1
AUTHOR: DOW ADDRESSEE: COPYEE:			
DOCUMENT 1983	07/20/62	LETTER	3
AUTHOR: DOW ROWE VK ADDRESSEE: DOW WIFFEN EE COPYEE: DOW COULTER LL			
DOCUMENT 1984	05/13/60	LETTER	2
AUTHOR: DOW HARDY JL ADDRESSEE: DOW JOSEPHS MJ COPYEE: DOW FALSEY WP			

D4372

4276

TITLE

FDA LETTERS ON PESTICIDE PETITIONS REQUESTING TOLERANCES FOR
RESIDUES OF 24D, SILVEX, MCPA, AND 245T.

PESTICIDE PETITION 8F0669 REQUESTING TOLERANCES FOR RESIDUES OF
HERBICIDE 245T CTTL.

THE ACUTE ORAL TOXICITY OF 245T TO RATS, MICE, GUINEA PIGS AND
CHICKS.

ROWE VK

SPENCER HC

ACUTE AND SUBACUTE ORAL TOXICITY OF 245T FOR DOGS.
DICI

RESULTS OF TOXICOLOGICAL TESTS ON 245T.

A COMPILATION OF TOXICOLOGICAL INFORMATION REGARDING 245T.

TOXICOLOGICAL INFORMATION CONCERNING KUROSAL SL AND KUROSAL G.

LYNN GE

TOXICITY OF M-1845 (POTASSIUM D-(245-TRICHLOROPHENOXY)-PROPIONATE
TO LAKE EMERALD SHINERS.

KENAGA EE

RITTY PM

NUMBER	DATE	TYPE	PAGES
DOCUMENT 1985 AUTHOR: DOW ADDRESSEE: COPYEE:	12/00/64	REPORT	13
DOCUMENT 1986 AUTHOR: DOW ADDRESSEE: COPYEE:	12/00/64	REPORT	8
DOCUMENT 1987 AUTHOR: DOW ADDRESSEE: DOW COPYEE: DOW	10/21/53	LETTER WINSTON AW JR DRESSEL GF BRITTON JW	2
DOCUMENT 1988 AUTHOR: RAYNOR RN ADDRESSEE: DOW COPYEE: DOW	11/21/60	LETTER WARREN LE COULTER LL	2
DOCUMENT 1989 AUTHOR: LOWE JI ADDRESSEE: DOW COPYEE:	06/12/62	LETTER USDI RITTY PM	1
DOCUMENT 1990 AUTHOR: DAVIDSON JH ADDRESSEE: DOW COPYEE: DOW RIDNER JM	06/21/68	LETTER DOW FERGUSON H BRYANT CA WATSON JA	1
DOCUMENT 1991 AUTHOR: DAVIDSON JH ADDRESSEE: DOW COPYEE: DOW	10/16/68	LETTER DOW MCCOLLISTER DD HANSON RG	1
DOCUMENT 1992 AUTHOR: DOW ADDRESSEE: DOW COPYEE: DOW WELTON JD	10/18/68	LETTER HAMMER OH DAVIDSON JH HANSON RG WILTSE MG	2

①
4373

4277

TITLE

ACUTE AND SEMICHRONIC TOXICITY OF "SILVEX" TO LABORATORY RATS.

COMPILATION OF INFORMATION CONCERNING THE TOXICOLOGY AND
PERSISTENCE OF SILVEX (2-(245-TRICHLOROPHENOXY) PROPIONIC ACID).

MINNOW TOXICITY OF MATERIAL USED IN WEED KILLERS.

HARLOW IF

ROWE VK

TOXICITY DATA ON 24D AND RELATED MATERIALS CTTL.

RITTY PM

SWEZEY AW

REQUEST FOR INFORMATION ON FISH TOXICOLOGY STUDIES DONE BY DOW,
RESULTS OF USDI TESTS CTTL.

ENCLOSES SEVERAL PIECES OF LITERATURE DEALING WITH TOXICOLOGICAL
ASPECTS OF SILVEX.

HAMMER OH
WILTSE MG

MCCOY WJ

DIA REGISTRATION FOR SILVEX.

WELTON JD

WILTSE MG

SILVEX TOXICITY TO FISH INQUIRY BY DIA.
I CJS

KENAGA EE

MCCOLLISTER DD

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	1993	12/23/64	LETTER	1
AUTHOR:	DOW	GM	USDA ARS	
ADDRESSEE:	DOW		SACHS SB	
COPYEE:				
DOCUMENT	1994	12/29/66	MEMO REPORT	7
AUTHOR:	DOW		LENG ML	
ADDRESSEE:	DOW		BARRONS KC	
	MCCOY WJ		WATSON AJ	
COPYEE:				
DOCUMENT	1995	03/26/60	ABSTRACT	1
AUTHOR:	DOW		GETZENDANER ME	
ADDRESSEE:				
COPYEE:	DOW		BARRON KC	
	I GEL		I JFK	
	I LJL		I MJJ	
	I RWC		I TRN	
	RITTY PM			
DOCUMENT	1996	03/18/69	LETTER	6
AUTHOR:	DOW		MCCOLLISTER DD	
ADDRESSEE:	DUNN CL		HER	
COPYEE:	DOW		BLAIR EH	
	LYNN GE		MOSS RD	
DOCUMENT	1997	03/04/69	LETTER	2
AUTHOR:	KLINGMAN DL		USDA ARS	
ADDRESSEE:	DUNN CL		HER	
COPYEE:	DANIELSON LL		RADELEFF R	
DOCUMENT	1998	09/26/68	MINUTES	1
AUTHOR:	NACA IND TASK FORCE	ON P		
ADDRESSEE:				
COPYEE:				
DOCUMENT	1999	11/27/67	LETTER	2
AUTHOR:	DUNN CL		HER	
ADDRESSEE:	HAYS H		USDA	
COPYEE:	ANDERSON RJ		DANIELSON	

14374

4278

TITLE

KURON BRUSH KILLER REGISTRATION NUMBER 464-162 WITH LETTER OF
641110.

KURON BRUSH KILLER NO RESIDUE REGISTRATIONS.

GETZENDANER ME
WILTSE MG

LYNN GE

A RESIDUE STUDY OF SILVEX IN FISH LIVING IN KURON CONTAINING WATER
(REPORT GH-490).

BLAIR EH
I JS
I OHH
JOHNSON JE

I CWH
I JWV
I RPP
LYNN GE

THOUGHTS ON THE PROTOCOL FOR THE STUDY IN CATTLE AND SHEEP TO
SUPPORT THE RANGELAND AND PASTURE GRASS USE OF PHENOXY HERBICIDES
CTTL.

NACA
BYRD BC

DAVIDSON JH

FEEDING TRIAL OF HERBICIDE TREATED GRASSES TO TEST ANIMALS CTTL.

USDA

INDUSTRY TASK FORCE MEETING OF 680926 CTTL.

NACA REQUESTS EXTENSION ON PHENOXY REGISTRATION CTTL.

IRVING GW

USDA ARS

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2000	11/27/67	LETTER	2
AUTHOR:	DUNN CL		HER	
ADDRESSEE:	HAYS H		USDA	
COPYEE:	ANDERSON RJ		DANIELSON LL	
DOCUMENT	2001	10/29/68	LETTER	3
AUTHOR:	DUNN CL		HER	
ADDRESSEE:	HAYS H		USDA ARS	
COPYEE:	USDA ARS		DANIELSON LL	
DOCUMENT	2002	01/09/69	LETTER	2
			MINUTES	
AUTHOR:	DUNN CL		NACA	
ADDRESSEE:	NACA IND TASK FORCE ON P			
COPYEE:				
DOCUMENT	2003	01/28/69	MINUTES	3
AUTHOR:				
ADDRESSEE:				
COPYEE:				
DOCUMENT	2004	03/04/69	LETTER	2
AUTHOR:	KLINGMAN DL		USDA	
ADDRESSEE:	DUNN CL		HER	
COPYEE:	DANIELSON LL		RADELEFF R	
DOCUMENT	2005	03/11/69	LETTER	3
AUTHOR:	DOW		GETZENDANER ME	
ADDRESSEE:	DOW		MCCOLLISTER DD	
COPYEE:	DOW		BYRD BC	
	MOSS RD			
DOCUMENT	2006	01/20/69	LETTER	2
AUTHOR:	DOW		LENG ML	
ADDRESSEE:	LISK DL		NY ST COL OF AG	
COPYEE:	DOW		MCCOLLISTER DD	
DOCUMENT	2007	06/09/55	LETTER	2
AUTHOR:	DOW		LYNN GE	
ADDRESSEE:	HEW		RANKIN WB	
COPYEE:	DOW		DREESSEN J	

124375

4279

TITLE

NACA REQUESTS EXTENSION OF PHENOXY REGISTRATION CTTL.
NACA

IRVING GW

USDA ARS

NACA ASKS FOR RESIDUE TOLERANCES FOR MEAT INSTEAD OF GRASS CTTL.
NACA

TASK FORCE MEETING, WASHINGTON 690128.

ITFPHT MEETING OF 690128 CTTL.

DISCUSSION OF PROPOSED FEEDING TESTS OF PHENOXIES ON LIVESTOCK CTTL.
USDA ARS

MEAT STUDY FOR PHENOXY HERBICIDES.

DAVIDSON JH

LYNN GE

REQUEST DATA TO SUPPORT TOLERANCE PETITIONS FOR 24D, 245T, MCPA AND
SILVEX FOR TREATMENT OF GRASSES CTTL.

RESIDUES OF 24D, 245T, AND MCP ON PASTURE AND RANGE FORAGE
RESULTING FROM WEEDKILLING APPLICATIONS CTTL.

KOEHLER HC

SUNDERLAND WW

NUMBER	DATE	TYPE	PAGES
DOCUMENT 2008	10/13/58	LETTER	5
AUTHOR: DREESSEN J ADDRESSEE: NACA COPYEE: NACA HITCHNER			
DOCUMENT 2009	03/26/65	NEWS	1
AUTHOR: AG EXTEN SER ID ADDRESSEE: UNIV OF ID COPYEE:			
DOCUMENT 2010	04/02/65	LETTER	1
AUTHOR: DOW ADDRESSEE: DOW COPYEE: SUNDERLAND WW LYNN GE			
DOCUMENT 2011	09/27/67	REPORT	1
AUTHOR: DOW ADDRESSEE: LENG ML COPYEE:			
DOCUMENT 2012	08/00/68	REPORT	7
AUTHOR: COURTNEY KD ADDRESSEE: COPYEE:			
DOCUMENT 2013	11/27/61	REPORT	10
AUTHOR: DOW ADDRESSEE: COPYEE: DOW ELSHERE D HART A LUCE EN SHRADER SA GREENHOE NC BARRONS KC FALKENSTEIN WJ JONES GD LYNN GE TISDALE WL			
DOCUMENT 2014	12/06/66	LETTER	1
AUTHOR: DOW ADDRESSEE: DOW COPYEE: DOW GETZENDANER ME BROWN FG DAVIDSON JH			
DOCUMENT 2015	07/00/68	REPORT	58
AUTHOR: DOW ADDRESSEE: LENG ML COPYEE:			

4376
 4280

TITLE

JULY 28 CONFERENCE WITH USDA AND FDA ON THE USE OF 24D AND 245T ON GRAZING LANDS.

NEW RULING ON 24D(THE WEED FIGHTER NO. 43).

24D ON PASTURES.

INTERPRETATION OF DATA ON TOXICITY OF 24D FOR LIVESTOCK.

245T IN THE RAT EXCRETION PATTERN SERUM LEVELS PLACENTAL TRANSPORT AND METABOLISM (PESTICIDES SYMPOSIA 277-283)(INTERAMERICAN CONFERENCES ON TOXICOLOGY AND OCCUPATIONAL MEDICINE MIAMI FL).

RESULTS OF 90 DAY DIETARY FEEDING STUDIES ON DOWANOL 97B ESTER 245-T IN RATS.

MCCOLLISTER DD

BOUNDY RH
GAY HH
KAGY JF
MCINTYRE HH
WRIGHT N

COLBY RW
GREENE LM
KILIAN DJ
PERKINS RP

TCDD TOXICITY.

LENG ML

MCCOLLISTER DD

REVIEW ON THE METABOLISM OF PHENOXY COMPOUNDS IN PLANTS & ANIMALS.

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2016	06/03/68	TELECON	1
AUTHOR:	DOW		LENG ML	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2017	05/24/68	LETTER	2
AUTHOR:	DOW		LENG ML	
ADDRESSEE:	CORNELL		STJOHN LE JR	
COPYEE:	DOW		MCCOLLISTER DD	
DOCUMENT	2018	08/29/68	MEMO	1
AUTHOR:	DOW		LENG ML	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2019	07/00/68	REPORT	4
AUTHOR:	DOW		LENG ML	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2020	07/00/68	REPORT	4
AUTHOR:	DOW		LENG ML	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2021	07/00/68	REPORT	31
AUTHOR:	DOW		LENG ML	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2022	08/00/68	CHART	5
			PRESENT REPORT	
AUTHOR:	COURTNEY KD			
ADDRESSEE:				
COPYEE:				

D.4377

4281

TITLE

PHONE CALL FROM DON LISK STATING THE 306 MG HE RECOVERED WAS IN TERM OF SILVEX, THEREFORE HE RECOVERED 1021 PERCENT OF THE ESTER.

LETTER REQUESTING FURTHER INFORMATION TO CLARIFY ARTICLE ON FATE OF KURON IN THE DAIRY COW CTTL.

CHANGES IN MANUSCRIPT ON METABOLISM OF PHENOXY COMPOUNDS.

REVIEW ON THE METABOLISM OF PHENOXY COMPOUNDS IN PLANTS AND ANIMALS. 3. RECENT RESIDUE STUDIES BY NEWER METHODS.

REVIEW ON THE METABOLISM OF PHENOXY COMPOUNDS IN PLANTS AND ANIMALS. 2. METABOLISM IN ANIMALS.

REVIEW ON THE METABOLISM OF PHENOXY COMPOUNDS IN PLANTS AND ANIMALS. 1. METABOLISM IN PLANTS.

PESTICIDES SYMPOSIA 245T IN THE RAT EXCRETION PATTERN, SERUM LEVELS, PLACENTAL TRANSPORT, AND METABOLISM (COLLECTION OF PAPERS PRESENTED AT INTER-AMERICAN CONFERENCES ON TOXICOLOGY AND OCCUPATIONAL MEDICINE UNIVERSITY OF MIAMI SCHOOL OF MEDICINE, MIAMI, FL) (SIXTH CONFERENCE 680800) (SEVENTH CONFERENCE 700800).

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2023	12/00/68	REPORT	1
AUTHOR:	DOW		LENG ML	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2024	03/04/69	LETTER	2
AUTHOR:	KLINGMAN DL		USDA	
ADDRESSEE:	DUNN CL		HERCULES	
COPYEE:	DANIELSON LL		RADELEFF R	
DOCUMENT	2025	06/00/69	REPORT	4
AUTHOR:				
ADDRESSEE:				
COPYEE:				
DOCUMENT	2026	09/00/68	REPORT	19
AUTHOR:	BYRD BC		DAVIDSON JH	
	KENAGA EE		LENG ML	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2027	06/28/67	DATA	12
AUTHOR:	DOW		TINKER BP	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2028	06/29/54	REPORT	7
AUTHOR:	DOW		MCCOLLISTER DD	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2029	11/13/58	REPORT	15
AUTHOR:	DOW		WATSON AJ	
ADDRESSEE:				
COPYEE:	DOW		BARRONS KC	
	DIETER CE		HAMMER OH	
	KAGY JF		LAWRENCE JM	
	NORTON TR		PERKINS RP	
	VANVOLKENBURG JW		WARREN LE	

1-4378

4282

TITLE

DEFICIENCIES IN RESIDUE DATA FOR SILVEX LISTED BY REVIEWERS (1) AND (2).

POSSIBLE CHANGE IN FEEDING TEST OF PGBE ESTERS OF SILVEX DUE TO THE DIFFERENCE IN MOISTURE CONTENT OF THE HAY CTTL.

PROTOCOL FOR PHENOXY HERBICIDE ANIMAL FEEDING STUDY.

A CRITIQUE OF PICLORAM IN VIETNAM (SCIENTIST AND CITIZEN).
DOW HANSEN JC

LD50 TCDD TOXICITY STUDIES ON RATS CTTL.

RESULTS OF RANGE FINDING TOXICOLOGICAL TESTS ON
ALPHA-(245-TRICHLOROPHENOXY) PROPIONIC ACID (MONO, DI, TRIPROPYLENE
GLYCOL BUTYL ETHER (B)) ESTER (T25.14-184-1).
OYEN F

A FIELD EVALUATION OF SEVERAL EXPERIMENTAL EQUATIC HERBICIDES.
SUPPLEMENT TO SH-REPORT 391 (SH-393).

BLAIR EH
HANSON RG
LIPPIE LJ
SPALDING J

COLBY RW
JOHNSON JE
LYNN GE
SWEZEY AW

NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT 2030	10/00/54	REPORT	8	SUMMARY OF TOXICOLOGICAL INFORMATION OF 24D AND 245T TYPE HERBICIDES AND AN EVALUATION OF THE HAZARDS TO LIVESTOCK ASSOCIATED WITH THEIR USE (AMERICAN JOURNAL OF VETERINARY RESEARCH 15(57), 622-629).
AUTHOR: DOW		HYMAS TA		ROWE VK
ADDRESSEE:				
COPYEE:				
DOCUMENT 2031	00/00/61	CHART	8	PESTICIDE WILDLIFE STUDIES A REVIEW OF FISH AND WILDLIFE SERVICE INVESTIGATIONS DURING 610000 AND 620000.
AUTHOR: UDUALL SL		REPORT		
ADDRESSEE:		US DEPT OF THE INTERIOR		
COPYEE:				
DOCUMENT 2032	00/00/62	REPORT	2	TOXICITY TO FISH OF DIFFERENT FORMULATIONS OF 245T, 2-(24-DP) AND SILVEX.
AUTHOR: HUGHES JS		LA WILDLIFE & FISHERIES		
ADDRESSEE:				
COPYEE:				
DOCUMENT 2033	03/07/60	LETTER REPORT	3	FURTHER STUDY ON THE FISH TOXICITY OF AQUATIC WEED KILLER MATERIALS.
AUTHOR: DOW		WINSTON AW JR		
ADDRESSEE: DOW		RITTY PM		
COPYEE: DOW		COULTER LL		
JOSEPHS MJ		LYNN GE		
		DOSSER RC		JOHNSON JE
		TRUCHELOT GB		VANVALKENBURG JW
DOCUMENT 2034	04/16/62	REPORT	4	VARIATIONS IN TOXICITY TO BLUEGILL SUNFISH OF PHENOXY HERBICIDES (WEEDS 11, 50-53).
AUTHOR: DAVIS JT		HUGHES JS		LA WILD LIFE & FISHERIES
ADDRESSEE:				
COPYEE:				
DOCUMENT 2035	00/00/64	REPORT	4	FATE OF ATRAZINE, KURON, SILVEX, AND 245T IN THE DAIRY COW (JOURNAL OF DAIRY SCIENCE, 1267-1270).
AUTHOR: CORNELL UNIV		LISK DJ		
ADDRESSEE:				
COPYEE:				
				STJOHN LE JR
				WAGNER DO
DOCUMENT 2036	03/08/63	ABSTRACT	1	A PHARMACOTOXICOLOGIC PROFILE OF PROPIONIC ACID 2-(245-TRICHLOROPHENOXY) (K39291).
AUTHOR: BRISCOE JR		DOW		WARREN LE
ADDRESSEE:				
COPYEE: DOW		CHENOWETH MB		FLETCHER RO
JARVIS AE		JOHNSON JE		LYNN GE
SHEA PJ		STOCK B		SWEZEY A
WILTSE MG				HINMAN CW
				RITTY PM
				TOMITA M

D-4379

4283

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2037	05/28/59	REPORT	2
AUTHOR: DOW ADDRESSEE: COPYEE:				
DOCUMENT	2038	01/17/62	TECH	4
AUTHOR: DOW ADDRESSEE: OLSEN KJ COPYEE: DOW LYNN GE				
DOCUMENT	2039	04/15/63	REPORT	2
AUTHOR: DOW ADDRESSEE: OLSON KJ COPYEE: DOW OLSON KJ BROWN R ELSHERE D GREENE LM HART A KILIAN DJ LUCE EN MULLISON WR NASH HA SHRADER SA WILSON AW				
DOCUMENT	2040	04/08/65	CHART	50
REPORT DOW AUTHOR: BROWN MT ADDRESSEE: COPYEE:				
DOCUMENT	2041	06/06/68	LETTER	1
AUTHOR: LISK DJ ADDRESSEE: DOW NY STATE COL OF AG COPYEE: LENG ML				
DOCUMENT	2042	00/00/66	REPORT	4
AUTHOR: BOWERS JB ADDRESSEE: CROSY DG COPYEE:				
DOCUMENT	2043	00/00/66	REPORT	9
AUTHOR: MENZIE CM ADDRESSEE: COPYEE:				

084380
 4284

TITLE

KURON TOXICOLOGICAL INFORMATION AND SUGGESTIONS REGARDING TREATMENT
FOR PERSONS SWALLOWING KURON.

RESULTS OF RANGE FINDING TOXICOLOGICAL TESTS ON AGRICULTURAL
CHEMICAL FORMULATION M-2121 CONTAINING 50 PERCENT SILVEX EQUIVALENT.
OYEN F

RESULTS OF RANGE FINDING TOXICOLOGICAL TESTS ON AGRICULTURAL
CHEMICAL FORMULATION M-2303 (CONTAINS DISODIUM ENDOTHAL AND
POTASSIUM SALT OF SILVEX ON ATTACLAY).
OYEN F

BARRONS KC
FALKENSTEIN WJ
JONES GD
LYNN GE
NORTON TR
WILTSIE M

BOUNDY RH
GAYHH
KAGY JF
MCINTYRE HH
SCOLES G
WRIGHT N

RESULTS OF A TWO YEAR DIETARY FEEDING STUDY IN DOGS OF KUROSAI SL
(POTASSIUM SALT OF SILVEX).

MCCOLLISTER DD

ACKNOWLEDGEMENT OF CORRECTIONS NEEDED IN COW FEEDING STUDY CTTL.

DETERMINATION OF 24D RESIDUES IN ANIMAL PRODUCTS (BULLETIN OF ENV
CONTAMINATION AND TOXICOLOGY 1(3), 104-107).
UC DAVIS

METABOLISM OF PESTICIDES (USDI FISH AND WILDLIFE SERVICE BUREAU OF
SPORT FISHERIES AND WILDLIFE SPECIAL SCIENTIFIC REPORT WILDLIFE 96,
61-69).

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2044	00/00/68	REPORT	10
AUTHOR:				
ADDRESSEE:				
COPYEE:				
DOCUMENT	2045	01/00/53	REPORT	8
AUTHOR: DRILL VA		HIRATZKA T		
ADDRESSEE:				
COPYEE:				
DOCUMENT	2046	00/00/69	LETTER REPORT	1
AUTHOR: BARRONS KC		CHESSIN M		
UNIV MT		WILLIS EO		
ADDRESSEE:				
COPYEE:				
DOCUMENT	2047	07/13/50	REPORT	40
AUTHOR: BEGIN LE		BERHENKE LF		
ADDRESSEE:				
COPYEE: DOW		DANKERT LJ		
THURBER WS				
DOCUMENT	2048	00/00/54	REPORT	4
AUTHOR: DOW		HYMAS TA		
ADDRESSEE:				
COPYEE:				
DOCUMENT	2049	11/29/60	PRESENT REPORT	5
AUTHOR: DOW		RITTY PM		
ADDRESSEE:				
COPYEE:				
DOCUMENT	2050	10/00/54	REPORT	4
AUTHOR: DOW		ROWE VK		
ADDRESSEE:				
COPYEE: HYMAS TA				

4285
18381

TITLE

 REVIEW ON THE METABOLISM OF PHENOXY COMPOUNDS IN PLANTS AND ANIMALS.

TOXICITY OF 24D AND 245T. A REPORT ON THEIR ACUTE AND CHRONIC
 TOXICITY IN DOGS (AMA ARCHIVES OF INDUSTRIAL HYGIENE AND
 OCCUPATIONAL MEDICINE 7, 61-67).
 WAYNE UNIV

CONTROVERSIAL USES OF HERBICIDES (SCIENCE 166, 310).

DOW OBERLIN COL

THE PREPARATION OF ARYLOXYACETIC, ARYLOXYPROPIONIC AND
 ARYLOXYBUTYRIC ACIDS (REPORT NO. 1981).
 DOW WILLIAMS BM

DOSSER RC HIRSCHKIND W

SUMMARY OF TOXICOLOGICAL INFORMATION ON 24D AND 245T TYPE
 HERBICIDES AND AN EVALUATION OF THE HAZARDS TO LIVESTOCK ASSOCIATED
 WITH THEIR USE.
 ROWE VK

HORMONE HERBICIDES (NC CONFERENCE ON WOODY PLANT CONTROL, RALEIGH,
 NC).

SUMMARY OF TOXICOLOGICAL INFORMATION ON 24D AND 245T TYPE
 HERBICIDES AND AN EVALUATION OF THE HAZARDS TO LIVESTOCK ASSOCIATED
 WITH THEIR USE (DOWN TO EARTH, FORM IN 478-255).

NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT 2051	00/00/64	REPORT	6	TOXICOLOGIC EFFECTS OF SILVEX ON YEARLING CATTLE (JAVMA 144 (7), 750-755).
AUTHOR: CLARK DE		HUNT LM		PALMER JS
ADDRESSEE:				
COPYEE:				
DOCUMENT 2052	07/00/68	REPORT	57	REVIEW ON THE METABOLISM OF PHENOXY COMPOUNDS IN PLANTS AND ANIMALS.
AUTHOR: DOW		LENG ML		
ADDRESSEE:				
COPYEE:				
DOCUMENT 2053	05/00/69	REPORT	27	THE TOXICITY OF SOME ORGANIC HERBICIDES TO CATTLE, SHEEP, AND CHICKENS. PRODUCTION RESEARCH REPORT NO. 106 (USDA).
AUTHOR: AG RESEARCH SERVICE, USD		PALMER JS		RADELEFF RD
ADDRESSEE:				
COPYEE:				
DOCUMENT 2054	12/07/53	REPORT	18	THE RESPONSE OF COTTON TO ALPHA(245-TRICHLOROPHENOXY) PROPIONIC ACID AND SEVERAL OTHER GROWTH REGULATORS (SH-348).
AUTHOR: DOW		WATSON AJ		
ADDRESSEE:				
COPYEE: DOW		ALQUIST FN		BOUNDY RH
COLLIER BL		COULTER LL		DAVIDSON JH
FAYERWEATHER BL		GIBSON JW		KAGY JF
MULLISON WR		NATION HA		RAYNOR RN
				BRITTON EC
				DUTTON WC
				KELLY JA
				SOUTHWICK L
DOCUMENT 2055	00/00/65	REPORT	3	EFFECTS OF THE HERBICIDE 245T ON BREEDING BIRD POPULATIONS (PROC. OKLA. ACAD. SCI., 235-237).
AUTHOR: MARTIN RP		OK ST UNIV		
ADDRESSEE:				
COPYEE:				
DOCUMENT 2056	00/00/69	REPORT	26	TOXICITY AND HAZARDS TO MAN, DOMESTIC ANIMALS, AND WILDLIFE FOR SOME COMMONLY USED AUXIN HERBICIDES (RESIDUE REVIEWS 26, 37-62).
AUTHOR: MONKS WOOD EXPERIMENTAL		MONKS WOOD EXPERIMENTAL		NATURE CONSERVANCY
ADDRESSEE:				WAY JM
COPYEE:				
DOCUMENT 2057	03/26/69	REPORT	3	DETERMINATION OF 245T ACID AND ITS PROPYLENE GLYCOL BUTYL ETHER ESTERS IN ANIMAL TISSUE, BLOOD, AND URINE (JOUR AG FD CHEM 17(6) 1168-1170, 691100).
AUTHOR: CLARK DE		USDA		
ADDRESSEE:				
COPYEE:				

D.4382

4286

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2058	00/00/68	REPORT	14
AUTHOR:	BATES RR		COURTNEY DK	
	HOGAN MD		MITCHELL I	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2059	09/14/51	TEST	5
AUTHOR:	ADAMS EW		DOW	
ADDRESSEE:				
COPYEE:	DOW		BERHENKE LF	
	BRITTON JW		DAVIDSON JH	
	HEATH SB		HIRSCHKIND W	
	RECHTIN HJ		SOUTHWICK L	
DOCUMENT	2060	06/19/62	REPORT	67
AUTHOR:	CALANDRA JC		INDUSTRIAL BIOTEST	
ADDRESSEE:	DOW			
COPYEE:				
DOCUMENT	2061	12/18/58	CHART	7
			REPORT	
AUTHOR:	DOW		LOCKWOOD DT	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2062	10/30/63	CHART	25
			REPORT	
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:				
DOCUMENT	2063	10/26/61	DISTRB	18
			REPORT	
AUTHOR:	OLSON KJ		OYEN F	
ADDRESSEE:	BARRONS KC		BOUNDY RH	
	ELSHERE D		FALKENSTEIN W	
	HART A		JONES GD	
	LUCE EN		LYNN GE	
	SHRADER SA		TISDALE WL	
COPYEE:				

14383

4287

TITLE

TERATOGENIC EVALUATION OF 245T.FALK HL
NATL CANCER INSTGAYLOR DW
NIEHSRESULTS OF TOXICOLOGICAL TESTS ON
ALPHA-245-TRICHLOROPHENOXYPROPIONIC ACID.
ROWE VKBRANCH CB
DUTTON WC
KELLY JA
SUNDERLAND WWBRITTON EC
HAMMER CH
NELSON WLRESULTS OF 90 DAY DIETARY FEEDING OF THE PROPYLENE GLYCOL ISOBUTYL
ETHER ESTER OF SILVEX (DOWCO 171) TO RATS.
LABS KAY JHRESULTS OF 90 DAY DIETARY FEEDING STUDIES OF DOWANOL 97B ESTER OF
SILVEX (KURON) TO RATS (K 9151-1)(CRI 125185).

MCCOLLISTER DD

RESULTS OF 89 DAY DIETARY FEEDING STUDIES KUROSAI SL IN BEAGLE
HOUNDS.RESULTS OF RANGE FINDING TOXICOLOGICAL TESTS ON POLYPROPYLENE
GLYCOL ISOBUTYL ETHER MIX ESTERS OF SILVEX (K NO. 44181-1).COLBY RW
GAY HH
KAGY JF
MCINTYRE HH
WHITE LCDOW
GREENE LM
KILIAN DJ
PERKINS RP
WRIGHT N

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2064	10/26/54	CHART REPORT	14
AUTHOR: ADDRESSEE: COPYEE:				
DOCUMENT	2065	01/06/54	CHART	9
AUTHOR: ADDRESSEE: COPYEE:				
DOCUMENT	2066	01/06/54	CHART	3
AUTHOR: ADDRESSEE: COPYEE:				
DOCUMENT	2067	12/30/53	CHART	3
AUTHOR: ADDRESSEE: COPYEE:				
DOCUMENT	2068	01/06/54	CHART WOLF MA	6
AUTHOR: DOW ADDRESSEE: COPYEE:				
DOCUMENT	2069	03/19/59	LETTER	6
AUTHOR: KLAUDER JV ADDRESSEE: DOW COPYEE: ROWE VK				
DOCUMENT	2070	00/00/61	MEMO	1
AUTHOR: ADDRESSEE: COPYEE:				
DOCUMENT	2071	02/27/69	REPORT	2
AUTHOR: DOW ADDRESSEE: COPYEE: DOW				
1.4384 4288 BIDLACK HD HANSEN RG I FHD I PDL I VKS MUSSELL DR SHAVER RJ KENAGA EE ABLARD KD BYRD BC I AJB I JFK I RDM LENG ML RIDNER JM SHELDON HW				

TITLE

ACUTE AND SEMI-CHRONIC TOXICITY OF SILVEX TO LABORATORY RATS.

M-213 (SKIN IRRITATION).

M-213.

M-213 (ACUTE ORAL TOXICITY).

M-213 (ACUTE ORAL TOXICITY).

RESULTS OF REPEATED INSULT METHOD OF PATCH TEST WITH KURON CTTL.

RESPONSE OF HUMANS TO KURON AND OTHER FORMULATIONS OF SILVEX.

THE TOXICITY OF 24D 245T SILVEX MCPA DALAPON ERBON TCA PICLORAM
DNBP AND THEIR DERIVATIVES AND FORMULATIONS TO FISH AND OTHER
AQUATIC ORGANISMS (GH-P-581).

MCCOLLISTER DD

ALEXANDER H
DAVIDSON JH
I AWS
I JHG
I RVJ
LYNN GE
RITTY PM
SOUTHWICK L

BARRONS KC
DUDDLES O
I ERL
I MAW
I TAH
MCCOY WJ
SHANNON E
SURGEON DK

NUMBER	DATE	TYPE	PAGES	TITLE
TEAL J		WATSON AJ		WILLIAMS CS
WILLIAMS RT				
DOCUMENT 2072	00/00/69	REPORT	14	BIOSSAY OF PESTICIDES AND INDUSTRIAL CHEMICALS FOR TUMORIGENICITY IN MICE A PRELIMINARY NOTE (JOUR NATL CANCER INST 42, 1101-1114).
AUTHOR:	BATES RR	BIONETICS		BIONETICS RESEARCH LABOR FALK HL
	FISHBEIN L	GART JJ		HART ER
	KLEIN M	MITCHELL I		NATL CANCER INST
	PETERS J	PETRUCELLI L		ULLAND BM
ADDRESSEE:				INNES JRM
COPYEE:				PALLOTTA AJ
				VALERIO MG
DOCUMENT 2073	10/21/68	REPORT	59	REVIEW ON THE METABOLISM OF PHENOXY COMPOUNDS IN PLANTS AND ANIMALS (GH-P 551).
AUTHOR:	DOW	LENG ML		MCCOLLISTER DD
ADDRESSEE:				
COPYEE:	DOW	BARRONS KC		DAVIDSON JH
	HEALY MJ	I AJB		I CEC
	I DDD	I DWO		I EHB
	I GDJ	I GNS		I JHG
	I WRB	IREN		JENSEN DJ
	KENAGA EE	LANING ER		LYNN GE
	RAYNOR RN	SOUTHWICK L		WATSON AJ
				GETZENDANER ME
				I CWH
				I FHD
				I RJS
				JOHNSON JE
				MOSS RD
				WILLIAMS CS
DOCUMENT 2074	11/27/69	NEWS	2	PINAL PEOPLE PLAN SUIT OVER HERBICIDES (TUCSON DAILY CITIZEN, 2).
AUTHOR:				
ADDRESSEE:				
COPYEE:				
DOCUMENT 2075	01/07/59	REPORT	5	THE USE OF HERBICIDES IN NATURE SANCTUARY MANAGEMENT (PROCEEDINGS OF THE THIRTEENTH ANNUAL MEETING OF THE NE WEED CONTROL CONFERENCE 590107, 590108 AND 590109).
AUTHOR:	DECKER E	WESTMORELAND SANCTUARY		
ADDRESSEE:				
COPYEE:				
DOCUMENT 2076	00/00/59	REPORT	5	THE ROLE OF HERBICIDES IN WILDLIFE MANAGEMENT (HERBICIDES IN VEGETATION MGNT 1422-1426).
AUTHOR:	CAIN SA	LEONARD JW		MI DEPT OF CONSERVATION UNIV OF MI
ADDRESSEE:				
COPYEE:				
DOCUMENT 2077	09/17/53	REPORT	9	HERBICIDAL ACTIVITY RESULTING FROM VOLATILITIES OF SEVERAL CHLOROPHENOXY ACID ESTERS (REPORT NO. 196).
AUTHOR:	DOW	NORTON TR		TOORNMAN BV
ADDRESSEE:				
COPYEE:	DOW	BOUNDY RH		BRITTON BC
	DUTTON WC	FAYERWEATHER BL		KAGY JF
	NUTTING HS			DAVIDSON JH
				KELLY JA

4289

D4385

NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT 2078	08/02/51	REPORT	13	AN EVALUATION OF 24D VOLATILITY AS A SOURCE OF 24D CONTAMINATION TO DESIRABLE PLANTS.
AUTHOR: DOW		GREENHAGEN RH		MULLISON WR
ADDRESSEE:				
COPYEE: DOW		ALQUIST FN		BRANCH CB
BRITTON JW		CONNER DL		DAVIDSON JH
FAYERWEATHER BF		KAGY JF		KELLY JA
SOUTHWICK L				BRITTON EC
				DUTTON WC
				SMITH H
DOCUMENT 2079	10/00/60	REPORT	23	THE EFFECT OF HERBICIDES ON SOIL MICROORGANISMS (HERBICIDES & THE SOIL 601000).
AUTHOR: FLETCHER WW		WEST OF SCOTLAND AG COL		
ADDRESSEE:				
COPYEE:				
DOCUMENT 2080	00/00/66	REPORT	17	DISTRIBUTION AND ELIMINATION OF CHLORINATED PHENOXYACETIC ACIDS IN ANIMALS (ACTA VET SCAND 7, 240-250).
AUTHOR: ERNE K		NATL VETERINARY INST		SWE
ADDRESSEE:				
COPYEE:				
DOCUMENT 2081	01/05/51	REPORT	11	COMPARATIVE HERBICIDAL EFFECTIVENESS OF CERTAIN ALKYL AND GLYCOL ESTERS OF 24D AND 245T (NORTHEASTERN WEED CONTROL CONFERENCE, NEW YORK, 510103 TO 510105).
AUTHOR: BARRONS KC		COULTER LL		DOW
ADDRESSEE:				MULLISON WR
COPYEE:				
DOCUMENT 2082	01/22/60	LETTER	4	NACA'S NEGATIVE RESPONSE TO MAYO CLINIC DOCTORS STATEMENT RE ALLEGED EFFECTS OF 24D ON HUMANS CTTL.
AUTHOR: DREESSEN J		NATL AG CHEM ASSN		
ADDRESSEE: BUGH M		IN ST HIGHWAY DEPT		
COPYEE:				
DOCUMENT 2083	01/07/53	REPORT	4	HERBICIDAL POISONING OF LIVESTOCK (PROCEEDINGS OF THE SEVENTH ANNUAL MEETING SUPPLEMENT OF THE NORTHEASTERN WEED CONTROL CONFERENCE 530107, 530108, 530109).
AUTHOR: CORNELL		FERTIG SN		
ADDRESSEE:				
COPYEE:				
DOCUMENT 2084	00/00/65	REPORT	3	EFFECTS OF SOME HERBICIDES ON FERTILIZED FISH EGGS AND FRY (TRANSACTIONS OF THE AMERICAN FISHERIES SOCIETY 96(4), 414-416).
AUTHOR: HILTIBRAN RC		IL NATURAL HISTORY SURVE		
ADDRESSEE:				
COPYEE:				

4386

4290

NUMBER	DATE	TYPE	PAGES
DOCUMENT 2085 AUTHOR: DOW ADDRESSEE: COPYEE:	00/00/56	REPORT WARDEN RL	5
DOCUMENT 2086 AUTHOR: DUPONT ADDRESSEE: COPYEE:	01/24/52	ABSTRACT PRESENT GRASSELLI CHEM	2
DOCUMENT 2087 AUTHOR: DUPONT ADDRESSEE: COPYEE:	10/00/51	ABSTRACT GRASSELLI CHEM	1
DOCUMENT 2088 AUTHOR: DUPONT ADDRESSEE: COPYEE:	02/00/50	ABSTRACT FARWELL ED	1
DOCUMENT 2089 AUTHOR: FERTIG SN ADDRESSEE: COPYEE:	05/00/53	REPORT NY ST COL OF AG	7
DOCUMENT 2090 AUTHOR: ERICKSON LC ADDRESSEE: COPYEE:	09/00/67	REPORT HIGGINS RE	4
DOCUMENT 2091 AUTHOR: BJORKLUND NE ADDRESSEE: COPYEE:	06/29/66	REPORT ERNE K	14
DOCUMENT 2092 AUTHOR: DRILL VA ADDRESSEE: COPYEE:	00/00/53	REPORT HIRATZKA T	7

4291
D4387

TITLE

TOXICITY OF 24D TO BEES.

SUMMARIES OF PRESENTATIONS (FOURTH IL CUSTOM SPRAY OPERATIONS
TRAINING SCHOOL, 520124 TO 520125, URBANA IL).

STAHLER LM

(ASSOC FOOD & DRUG OFFICE OF U.S. 15, 122-133).
LEHMAN AJ

MI QUARTERLY BULLETIN 32, 378-385.
GRASSELLI CHEM GRIGSBY BH

HERBICIDAL POISONING OF LIVESTOCK (REA BULLETIN 169-7).

HERBICIDES (HOW POISONOUS ARE THEY) (CURRENT INFORMATION SERIES).
ID AG EXTENSION SERVICE SEELY CI

TOXICOLOGICAL STUDIES OF PHENOXYACETIC HERBICIDES IN ANIMALS (ACTA
VET. SCAND. 7, 364-390).
NATL VETERINARY INSTITUT ROYAL VET COL SWEDEN

TOXICITY OF 24D AND 245T. A REPORT ON THEIR ACUTE AND CHRONIC
TOXICITY IN DOGS (INDUSTRIAL HYGIENE AND OCCUPATIONAL MEDICINE,
61-67).
WAYNE UNIV COL OF MEDICI

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2093	05/29/58	PRESENT	8
AUTHOR:	DOW		HYMAS TA	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2094	04/29/69	REPORT	14
AUTHOR:	BATES RR GART JJ MITCHELL I PETRUCELLI L		BIONETICS HART ER NATL CANCER INST ULLAND BM	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2095	00/00/57	CHART	1
AUTHOR:				
ADDRESSEE:				
COPYEE:				
DOCUMENT	2096	04/01/68	REPORT	3
AUTHOR:	FED WATER POLLUTION CONT			
ADDRESSEE:				
COPYEE:				
DOCUMENT	2097	01/25/60	REPORT	4
AUTHOR:	DOW		WOLF MA	
ADDRESSEE:				
COPYEE:	DOW ELSHERE D HART A KILIAN DJ PERKINS RP		BARRONS KC GAY HH HYMAS TA LUCE EN STENGER VA	
DOCUMENT	2098	08/30/50	REPORT	2
AUTHOR:	DOW		DRILL VA	
ADDRESSEE:				
COPYEE:	DOW		BRITTON JW	
DOCUMENT	2099	08/23/50	REPORT	4
AUTHOR:	DOW		ROWE VK	
ADDRESSEE:				
COPYEE:	DOW DUTTON WC LYNN GE		ALLEN WW HIRSCHFIELD SUNDERLAND WW	

124388
4292

TITLE

TOXICITY OF HERBICIDES TO DOMESTIC ANIMALS (ACD FILE HG-51).

BIOASSAY OF PESTICIDES AND INDUSTRIAL CHEMICALS FOR TUMORIGENICITY
IN MICE. A PRELIMINARY NOTE.

FALK HL	FISHBEIN L
INNES JRM	KLEIN M
PALLOTTA AJ	PETERS J
VALERIO MG	

RELATIVE TOXICITY OF SOME HERBICIDES TO RATS.

WATER QUALITY CRITERIA(REPORT OF THE NATL TECH ADVISORY COMM TO THE
SECRETARY OF THE INTERIOR).

RESULTS OF RANGE FINDING TOXICOLOGICAL TESTS ON ESTERON 245 OS
(M-1257). (BC T2.30-167-1)(12 2182).

BOUNDY RH	COLBY RW
GREENE LM	HAMMER OH
JONES GD	KAGY JF
LYNN GE	MCINTYRE HH
TISDALE WL	WRIGHT N

INTERIM REPORT ON THE ACUTE AND SUBACUTE ORAL TOXICITY OF 245T ACID
FOR DOGS (BC T23.14-23-4)(12 5105).
ROWE VK WAYNE UNIV

RESULTS OF TOXICOLOGICAL TESTS ON 245T (12 5104)(BC T23.14-23-2 &
3).

BRITTON JW	DOSSER RC
IRISH DD	KAGY JF

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2100	04/06/62	REPORT	19
AUTHOR:	DOW		LANING ER	
ADDRESSEE:				
COPYEE:	AJW		AWS	
	GEL		HJ	
	JKL		JLS	
	LAD		LEW	
	QHH		RGH	
	RWC		TRN	
DOCUMENT	2101	00/00/67	NEWS	1
AUTHOR:				
ADDRESSEE:				
COPYEE:				
DOCUMENT	2102	00/00/66	ABSTRACT	1
AUTHOR:	CHEM ABSTRACTS		INST WASSER BODEN	
	RYAN RW			
ADDRESSEE:				
COPYEE:				
DOCUMENT	2103	00/00/65	ABSTRACT	1
AUTHOR:	CHEM ABSTRACTS		KAYSER H	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2104	00/00/62	ABSTRACT	1
AUTHOR:	ANDERSON A		CHEM ABSTRACTS	
	KIVIMAE A		WADNE C	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2105	00/00/63	ABSTRACT	1
AUTHOR:	CHEM ABSTRACTS		COLLIER C	
	LA WILD LIFE & FISHERIES			
ADDRESSEE:				
COPYEE:				

14389

4293

TITLE

WOODY PLANT CONTROL WITH THREE CHLOROPICOLINIC ACIDS (CRI 148317)
(GS-503).

EHB
JAK
JWV
LJL
RHB
WR

FHN
JEJ
KCB
LTH
RPP

VIETNAM DEFOLIATION GETS RIGHT OF WAY CHEMICALS.

TOXICITY OF HERBICIDES TO AQUATIC LIFE. ANIMALS USED AS FISH FOOD
(GAS-WASSERFACH 107(10), 256-260)(CHEM ABSTRACTS).
LUFTHY KAYSER H LUEDEMANN D

TOXICITY OF HERBICIDES TO AQUATIC LIFE. TOXICITY TO FISH
(GAS-WASSERFACH 106(8), 220-223)(CHEM ABSTRACTS 62, 13778).
LUEDEMANN D RYAN RW

THE TOXICITY OF SOME HERBICIDES TO CHICKS (KGL LANTBRUKSHOGSKOL OCH
ST LANTBRUKSFORSOK, ST HUSDJURSFORSOK SARTRYCK OCH FORHANDSMEDD
155, 18)(CHEM ABSTRATS 59, 5547-5548, 630000).
DAHL S INST TECHNOL STOCKHOLM

VARIATIONS IN TOXICITY TO BLUEGILL SUNFISH OF PHENOXY HERBICIDES
(WEEDS 11(1), 50-53)(CHEM ABSTRACTS 58, 10553).
DAVIS JT HUGHES JS

NUMBER	DATE	TYPE	PAGES	TITLE
OCUMENT 2106	00/00/61	ABSTRACT	1	TOXICITY OF INSECTICIDES USED FOR PARASITE CONTROL IN PLANT PROTECTION (FINSK VETERINARSTIDSKR 67(1), 7-8, 13-18, 21-26)(CHEM ABSTRACTS 58, 3813).
UTHOR: CHEM ABSTRACTS		DYBING O		LAAKSO TM NORGES VETERINAERHOGSKUL
DDRESSEE:				
OPYEE:				
OCUMENT 2107	00/00/61	ABSTRACT	1	POTENTIAL ANTICANCER AGENTS. NONCLASSICAL ANTIMETABOLITES. SOME FACTORS IN THE DESIGN OF EXOALKYLATING ENZYME INHIBITORS PARTICULARLY OF LACTIC DEHYDROGENASE (JOUR MED PHARM CHEM 11, 633-657, 600000)(CHEM ABSTRACTS 55, 12662).
UTHOR: BAKER BR		CHEM ABSTRACTS		LEE HW MARTINEZ AP
DDRESSEE: SKINNER WA		STANFORD RESARCH INST CA	TEERI AE	TONG E
OPYEE:				
OCUMENT 2108	00/00/61	ABSTRACT	2	OBSERVATIONS ON CATTLE SHEEP AND SWINE EXPOSED TO 24D 245T AND DALAPON HERBICIDES (PROC SOUTHERN WEED CONF, 13TH, 600000, 5-11)(CHEM ABSTRACTS 55, 8740-8741).
UTHOR: CHEM ABSTRACTS		GOLDSTEIN HE		JACOBSON M LONG JF
DDRESSEE: OH DEPT OF AGR				
OPYEE:				
OCUMENT 2109	00/00/60	ABSTRACT	1	TOXICITY OF PRESENT DAY PESTICIDES FOR FISH. THE TOXICITY OF SOME HERBICIDES TO FISH (PLANZENKRANKH PHLANZENSCHUTZ 67, 150-153)(CHEM ABSTRACT 54, 25535).
UTHOR: BODENSTEIN G		CHEM ABSTRACTS		FIRMA CH BOEHRINGER SOHN GREEN EL
DDRESSEE: MULLERBASTGEN G				
OPYEE:				
OCUMENT 2110	00/00/54	ABSTRACT	1	SUMMARY OF TOXICOLOGICAL INFORMATION ON 24D AND 245T TYPE HERBICIDES AND AN EVALUATION OF THE HAZARDS TO LIVESTOCK ASSOCIATED WITH THEIR USE (AM JOUR VET RES 15, 622-629)(CHEM ABSTRACTS 49, 1974).
UTHOR: CHEM ABSTRACTS		DOW		HYMAS TA ROWE VK
DDRESSEE: SEIDEN R				
OPYEE:				
OCUMENT 2111	00/00/53	ABSTRACT	1	TOXICITY OF 24D AND 245T. A REPORT ON THEIR ACUTE AND CHRONIC TOXICITY IN DOGS (ARCH IND HYG OCCUPATIONAL MED 7, 61-67)(CHEM ABSTRACTS 47, 12618).
UTHOR: CAMPBELL CL		CHEM ABSTRACTS		DRILL VA HIRATZKA T
DDRESSEE: WAYNE UNIV				
OPYEE:				

4390

4294

NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT 2112	00/00/52	ABSTRACT	3	CHEMICALS IN FOODS. A REPORT TO THE ASSOCIATION OF FOOD AND DRUG OFFICIALS ON CURRENT DEVELOPMENTS (ASSOC FOOD & DRUG OFFICIALS U.S. QUART BULL 15, 82-89, 510000)(CHEM ABSTRACTS 46, 2701-2704). LEHMAN AJ SUMERFORD WT
AUTHOR: CHEM ABSTRACTS ADDRESSEE: FDA COPYEE:				
DOCUMENT 2113	02/00/68	REPORT	13	CLINICAL PICTURE AND ETIOLOGY OF CHLORANCE ARBEITSMEDIZIN-SOZIALMEDIZIN-ARBEITSHYGIENE 3(2), 25-29).
AUTHOR: SCHULTZ KH ADDRESSEE: UNIV DERMATOLOGY CLINIC COPYEE:				
DOCUMENT 2114	00/00/57	NEWS REPORT	9	REMARKS ON HALOGEN ACNE (LE JOUR DE MEDECINE DE LYON 38, 899-903).
AUTHOR: COLOMB L ADDRESSEE: DUGOIS P COPYEE:				
DOCUMENT 2115	08/00/68	REPORT	74	EVALUATION OF CARCINOGENIC, TERATOGENIC, AND MUTAGENIC ACTIVITIES OF SELECTED PESTICIDES AND INDUSTRIAL CHEMICALS VOLUME 1 CARCINOGENIC STUDY. KOTIN P NIEHS
AUTHOR: BIONETICS HART RE ADDRESSEE: NIEHS FALK H COPYEE: INNES JRM PALLOTTA AJ				
DOCUMENT 2116	05/00/65	REPORT	48	AERIAL APPLICATION OF AGRICULTURAL CHEMICALS (USDA AG HANDBOOK 287).
AUTHOR: USDA ADDRESSEE: COPYEE:				
DOCUMENT 2117	00/00/66	REPORT	9	STUDIES ON THE ANIMAL METABOLISM OF PHENOXYACETIC HERBICIDES (ACTA VET. SCAND. 7, 264-271).
AUTHOR: ERNE K ADDRESSEE: NATL VETERINARY INST SWE COPYEE:				
DOCUMENT 2118	00/00/66	REPORT	20	DETERMINATION OF PHENOXYACETIC HERBICIDE RESIDUES IN BIOLOGICAL MATERIALS (ACTA VET. SCAND. 7, 77-96).
AUTHOR: ERNE K ADDRESSEE: NATL VETERINARY INST SWE COPYEE:				

14391

4295

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2119	00/00/66	REPORT	39
AUTHOR:	ERNE K		NATL VETERINARY INST	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2120	12/01/67	ABSTRACT	2
AUTHOR:	DOCKTER KW		GADBERRY HM	
	MIDWEST RES INST			
ADDRESSEE:	DOD			
COPYEE:				
DOCUMENT	2121	12/01/67	CHART	3
			REPORT	
AUTHOR:	DAY BE		GERRISH OB	
	JENKINS JH		MC FARLANE JO	
	UC RIVERSIDE		UNIV OF GA	
ADDRESSEE:	DOD			
COPYEE:				
DOCUMENT	2122	12/01/67	REPORT	37
AUTHOR:	DAY BE		DOCKTER KW	
	GOODSON LH		HENDERSON NC	
	MC FARLANE JO		MIDWEST RES INST	
	UNIV OF GA		UNIV OF MO	
ADDRESSEE:	DOD			
COPYEE:				
DOCUMENT	2123	12/01/67	REPORT	6
AUTHOR:	DAY BE		DOCKTER KW	
	GOODSON LH		HENDERSON NC	
	MC FARLANE JO		MIDWEST RES INST	
	UNIV OF GA		UNIV OF MO	
ADDRESSEE:	DOD			
COPYEE:				

①4392

4296

TITLE

STUDIES ON THE ANALYTICAL CHEMISTRY AND TOXICOLOGY OF PHENOXY
HERBICIDES.
SWE

ASSESSMENT OF ECOLOGICAL EFFECTS OF EXTENSIVE OR REPEATED USE OF
HERBICIDES (DOCUMENT CONTROL DATA, R&D).
GOODSON LH HOUSE WB

SOIL ORGANISMS WHICH DECOMPOSE HERBICIDES (TABLE A-6) (ASSESSMENT
OF ECOLOGICAL EFFECTS OF EXTENSIVE OR REPEATED USE OF HERBICIDES,
FINAL REPORT).

HENDERSON NC
MIDWEST RES INST
UNIV OF MO

HOUSE HB
RINGLE DA

ECOLOGICAL CONSEQUENCES OF HERBICIDE USE (ASSESSMENT OF ECOLOGICAL
EFFECTS OF EXTENSIVE OR REPEATED USE OF HERBICIDES, FINAL REPORT).

GADBERRY HM
HOUSE HB
RINGLE DA

GERRISH OB
JENKINS JH
UC RIVERSIDE

SOME FACTORS DETERMINING THE FATE OF HERBICIDES, TEMPERATURE
(ASSESSMENT OF ECOLOGICAL EFFECTS OF EXTENSIVE OR REPEATED USE OF
HERBICIDES, FINAL REPORT).

GADBERRY HM
HOUSE HB
RINGLE DA

GERRISH OB
JENKINS JH
UC RIVERSIDE

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2124	12/01/67	REPORT	3

AUTHOR: DAY BE DOCKTER KW
GOODSON LH HENDERSON NC
MCFARLANE JO MIDWEST RES INST
UNIV OF GA UNIV OF MO

ADDRESSEE: DOD
COPYEE:

DOCUMENT	2125	12/01/67	REPORT	7

AUTHOR: DAY BE DOCKTER KW
GOODSON LH HENDERSON NC
MCFARLANE JO MIDWEST RES INST
UNIV OF GA UNIV OF MO

ADDRESSEE: DOD
COPYEE:

DOCUMENT	2126	12/01/67	REPORT	3

AUTHOR: DAY BE DOCKTER KW
GOODSON LH HENDERSON NC
MCFARLANE JO MIDWEST RES INST
UNIV OF GA UNIV OF MO

ADDRESSEE: DOD
COPYEE:

DOCUMENT	2127	12/01/67	REPORT	3

AUTHOR: DAY BE DOCKTER KW
GOODSON LH HENDERSON NC
MCFARLANE JO MIDWEST RES INST
UNIV OF GA UNIV OF MO

ADDRESSEE: DOD
COPYEE:

DOCUMENT	2128	12/01/67	CHART	1

AUTHOR: DAY BE DOCKTER KW
GOODSON LH HENDERSON NC
MCFARLANE JO MIDWEST RES INST
UNIV OF GA UNIV OF MO

ADDRESSEE: DOD
COPYEE:

4393

4297

TITLE

HERBICIDE RESIDUES AND THEIR PERSISTENCE IN VEGETATION,
CHLOROPHENOXY ACIDS (ASSESSMENT OF ECOLOGICAL EFFECTS OF EXTENSIVE
OR REPEATED USE OF HERBICIDES, FINAL REPORT).

GADBERRY HM
HOUSE HB
RINGLE DA

GERRISH OB
JENKINS JH
UC RIVERSIDE

TOXIC EFFECTS OF HERBICIDES (MUTAGENIC EFFECTS ON PLANTS, INSECT
DEVELOPMENT, CONCENTRATION IN FOOD CHAINS, HERBICIDE SPRAYING
EFFECTS ON MAN) (ASSESSMENT OF ECOLOGICAL EFFECTS OF EXTENSIVE OR
REPEATED USE OF HERBICIDES, FINAL REPORT) CCTL.

GADBERRY HM
HOUSE HB
RINGLE DA

GERRISH OB
JENKINS JH
UC RIVERSIDE

EFFECTS OF HERBICIDES ON MICROORGANISMS (ASSESSMENT OF ECOLOGICAL
EFFECTS OF EXTENSIVE OR REPEATED USE OF HERBICIDES, FINAL REPORT).

GADBERRY HM
HOUSE HB
RINGLE DA

GERRISH OB
JENKINS JH
UC RIVERSIDE

TOXICOLOGICAL EFFECTS OF HERBICIDES, SILVEX (ASSESSMENT OF
ECOLOGICAL EFFECTS OF EXTENSIVE OR REPEATED USE OF HERBICIDES,
FINAL REPORT).

GADBERRY HM
HOUSE HB
RINGLE DA

GERRISH OB
JENKINS JH
UC RIVERSIDE

TOXICITY OF HERBICIDES TO ESTUARINE ORGANISMS (ASSESSMENT OF
ECOLOGICAL EFFECTS OF EXTENSIVE OR REPEATED USE OF HERBICIDES FINAL
REPORT).

GADBERRY HM
HOUSE HB
RINGLE DA

GERRISH OB
JENKINS JH
UC RIVERSIDE

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2129	12/01/67	REPORT	22

AUTHOR: DAY BE DOCKTER KW
GOODSON LH HENDERSON NC
MACFARLANE JO MIDWEST RES INST
UNIV OF GA UNIV OF MO
ADDRESSEE: DOD
COPYEE:

DOCUMENT	2130	12/01/67	REPORT	70

AUTHOR: DAY BE DOCKTER KW
GOODSON LH HENDERSON NC
MACFARLANE JO MIDWEST RES INST
UNIV OF GA UNIV OF MO
ADDRESSEE: DOD
COPYEE:

DOCUMENT	2131	08/00/50	REPORT	4

AUTHOR: DOW
ADDRESSEE:
COPYEE:

DOCUMENT	2132	00/00/50	REPORT	5

AUTHOR: DOW MCCOLLISTER DD
ADDRESSEE:
COPYEE:

DOCUMENT	2133	12/08/67	REPORT	15

AUTHOR:
ADDRESSEE:
COPYEE:

DOCUMENT	2134	00/00/57	REPORT	5

AUTHOR: INTL INFORMATION CLEARIN KIMMIG J
ADDRESSEE: DOW SAUERS R
COPYEE:

4394

4298

TITLE

HERBICIDE APPLICATION ON WATERWAYS, PONDS, LAKES AND RESERVOIRS
(ASSESSMENT OF ECOLOGICAL EFFECTS OF EXTENSIVE OR REPEATED USE OF
HERBICIDES, FINAL REPORT).

GADBERRY HM
HOUSE WB
RINGLE DA

GERRISH OB
JENKINS JH
UC RIVERSIDE

HERBICIDE APPLICATION ON VARIOUS LAND AREAS (ASSESSMENT OF
ECOLOGICAL EFFECTS OF EXTENSIVE OR REPEATED USE OF HERBICIDES,
FINAL REPORT).

GADBERRY HM
HOUSE WB
RINGLE DA

GERRISH OB
JENKINS JH
UC RIVERSIDE

RESULTS OF TOXICOLOGICAL TESTS ON 245T.

THE ACUTE ORAL TOXICITY OF 245T TO RATS, MICE, GUINEA PIGS AND
CHICKS.

ROWE VK

SPENCER HC

PETITION FOR THE ESTABLISHMENT OF TOLERANCES FOR THE PESTICIDE
CHEMICAL, 245T ON RAW AGRICULTURAL COMMODITIES. SECTION C FULL
REPORTS OF INVESTIGATIONS MADE WITH RESPECT TO THE SAFETY OF THE
PESTICIDE CHEMICAL, 245T.

CHLORINATED AROMATIC CYCLIC ETHER AS CAUSE OF SO CALLED CHLORACNE
(NATURWISSENSCHAFTEN 44, 337-338).

SCHULZ KH

UNIV SKIN CLINIC WGERM

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2135	00/00/69	REPORT	4
AUTHOR: DARTMOUTH MEDICAL SCHOOL GOSSELIN RE				
ADDRESSEE:				
COPYEE:				
DOCUMENT	2136	05/20/61	REPORT	9
AUTHOR: BAUER H SCHULZ KH				
ADDRESSEE:				
COPYEE:				
DOCUMENT	2137	00/00/57	REPORT	8
AUTHOR: SCHULZ KH WGERM				
ADDRESSEE:				
COPYEE:				
DOCUMENT	2138	00/00/53	REPORT	7
AUTHOR: DRILL VA HIRATZKA T				
ADDRESSEE:				
COPYEE:				
DOCUMENT	2139	00/00/53	REPORT	10
AUTHOR: CROKER BH UNIV OF SHEFFIELD				
ADDRESSEE:				
COPYEE:				
DOCUMENT	2140	00/00/69	REPORT	16
AUTHOR: ANH TK BA HV				
TRA DX TUNG TT				
ADDRESSEE:				
COPYEE:				
DOCUMENT	2141	06/18/80	REPORT	45
AUTHOR: HAZARD ALERT SYSTEM CA DEPT OF HEALTH CA				
ADDRESSEE:				
COPYEE:				

24395
4299

24D(24D)(CLINICAL TOXICOLOGY OF COMMERCIAL PRODUCTS, ACUTE
POISONING SECTION 3 THERAPEUTICS INDEX, 79-81).
SMITH RP

BERUFLICHE VERGIFTUNGEN BEI DER HERSTELLUNG VON
CHLORPHENOL-VERBINDUNGEN(ARCHIV FUR GEWERBEPATHOLOGIE UND
GEWERBEHYGIENE 18, 538-555).
SPIEGELBERG U UNIVERSITATS KRANKENHAUS

UNTERSUCHUNGEN ZUR ATIOLOGIE DER CHLORACNE(ARCHIV FUR KLINISCHE UND
EXPERIMENTELLE DERMATOLOGIE 206, 589-596).

TOXICITY OF 24D AND 245T. A REPORT ON THEIR ACUTE AND CHRONIC
TOXICITY IN DOGS (IND. HYGIENE AND OCCUPATIONAL MEDICINE 7(61),
61-67).
WAYNE UNIV COL OF MEDICI

EFFECTS OF 24D AND 245T ON MITOSIS IN ALLIUM CEPA (BOTANICAL
GAZETTE 114, 274-283).

ENG

LES EFFETS CLINIQUES DE LUTILISATION MASSIVE ET CONTINUE DE
DEFOLIANIS SUR LA POPULATION CIVILE (ETUDE LIMINAIRE).
DELEGATION DE LA RDVN HUYEN NX
TUYEN BQ

24D EVALUATION OF THE HUMAN HEALTH HAZARDS.
DEPT OF IND RELATIONS CA

NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT 2142	08/22/80	MEMO REPORT	9	CLINIC FOR DELAYED CONSEQUENCES OF ACUTE CONTAMINATION FROM 24D.
AUTHOR: BEZUGLYI VP ADDRESSEE: COPYEE:				
DOCUMENT 2143	08/00/68	PRESENT REPORT	7	245T IN THE RAT EXCRETION PATTERN, SERUM LEVELS, PLACENTAL TRANSPORT, AND METABOLISM (PESTICIDES SYMPOSIA)(INTER AMERICAN CONFERENCE ON TOXICOLOGY AND OCCUPATIONAL MEDICINE, UNIV OF MIAMI).
AUTHOR: COURTNEY KD ADDRESSEE: COPYEE:				
DOCUMENT 2144	04/00/52	REPORT	15	WHAT ARE PESTICIDES DOING TO HUMAN BEINGS? (MODERN NUTRITION MAGAZINE 1-14, 520400, 520900, AND 521200).
AUTHOR: KNIGHT GF ADDRESSEE: COPYEE:				
DOCUMENT 2145	00/00/65	REPORT	9	THE GROWTH IN VITRO OF MICRO-ORGANISMS IN THE PRESENCE OF SUBSTITUTED PHENOXYACETIC AND PHENOXYBUTYRIC ACIDS (WEED RES 5; 266-274).
AUTHOR: FLETCHER WW ADDRESSEE: COPYEE:				
DOCUMENT 2146	07/20/66	REPORT	20	REPORT ON THE FORMATION OF CHLORACNE EXCITERS IN THE PRODUCTION OF 245 TRICHLOROPHENOL (CRI 183451).
AUTHOR: COLLINS L SALAS F ADDRESSEE: COPYEE:				
DOCUMENT 2147	05/20/55	REPORT	8	RESULTS OF RANGE FINDING TOXICOLOGICAL TESTS ON 245T DOWANOL 97B ESTER (T25.14-106-1) (CRI 125180).
AUTHOR: DOW ADDRESSEE: COPYEE:				
MCCOLLISTER DD ALLINSON BESHGETEER AW DAVIDSON JH KELLY JA MACCUTCHEEN WRIGHT P				
ALQUIST FN BOUNDY RH GAY HH KILIAN DJ SUNDERLAND WW				
BACON KD BRITTON EC GREENE LM LUCE EN WHITE LC				

4300
14396

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2148	08/24/50	REPORT	4
AUTHOR:	ADAMS DW		DOW	
ADDRESSEE:	DOW		ALLEN WW	
	DOSSER RC		DUTTON WC	
COPYEE:	LYNN GE			
DOCUMENT	2149	06/19/62	REPORT	67
AUTHOR:	CALANDRA JC		DOW	
	MCCOLLISTER DD			
ADDRESSEE:				
COPYEE:	DOW		BARRONS KC	
	COLBY RW		DOSSER RC	
	GREENE LM		HART A	
	KILIAN DJ		LUCE EN	
	NASH HA		PERKINS RP	
	VANVALKENBURG W		WRIGHT N	
DOCUMENT	2150	12/16/49	REPORT	16
AUTHOR:	DOW		DRILL VA	
ADDRESSEE:	DOW		BRITTON JW	
COPYEE:	DOW		BRITTON JW	
	BOUNDY FH		DOSSER RC	
	KELLY JA		LYNN GE	
DOCUMENT	2151	07/29/54	REPORT	9
AUTHOR:	DOW		MCCOLLISTER DD	
ADDRESSEE:				
COPYEE:	DOW		ALLISON RL	
	BESHGETOOR AW		BOUNDY RH	
	GREENE LM		KAGY JF	
	LYNN GE		MACUTCHEON SM	
	WRIGHT P			
DOCUMENT	2152	00/00/54	REPORT	8
AUTHOR:	DOW		HYMAS TA	
ADDRESSEE:				
COPYEE:				

4301
D4397

TITLE

RESULTS OF RANGE FINDING TOXICOLOGICAL TESTS ON ESTERONS 245T AND 24D (BRUSH KILLER) (T25.14-86-1) (CRI 125176).

ROWE VK	
BARRONS KC	BRITTON JH
IRISH DD	KAGY JF

RESULTS OF 90 DAY DIETARY FEEDING OF PROPYLENE GLYCOL ISOBUTYL ETHER ESTER OF SILVEX (DOWCO 171) TO RATS (CRI 125199).

IND BIOTEST LAB	KAY JH

BOUNDY RH	BROWN R
FALKENSTEIN WJ	GAY HH
JONES GD	KAGY JF
LYNN GE	MCINTYRE HH
SHRADER SA	TISDALE WL

INTERIN REPORT ON THE ACUTE AND SUBACUTE ORAL TOXICITY OF 245T FOR DOGS (T23.14-23-4) (CRI 125105).

ROWE VK	WAYNE UNIV

ALQUIST FN	BARRONS KC
GAY HH	KAGY JF
MACCUTCHEN SM	SUNDERLAND WW

RESULTS OF RANGE FINDING TOXICOLOGICAL TESTS ON BUTYL (AND ISOBUTYL) ALPHA (245TRICHLOROPHENOXY) PROPIONATE (T25.14-236-1)(CRI 12 5187).

OYEN F

ALQUIST PN	BACON KD
BRITTON EC	GAY HH
KELLY JA	LUCE EN
SUNDERLAND WW	WRIGHT N

SUMMARY OF TOXICOLOGICAL INFORMATION ON 24D AND 245T TYPE HERBICIDES AND AN EVALUATION OF THE HAZARDS TO LIVESTOCK ASSOCIATED WITH THEIR USE (AM JOUR OF VETERINARY RES 15(57), 622-629).

ROWE VK

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2153	00/00/65	REPORT	20
AUTHOR:	DOW		OYEN F	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2154	00/00/65	REPORT	15
AUTHOR:	DOW		OYEN F	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2155	10/25/65	REPORT	20
AUTHOR:	DOW		DUNN FL	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2156	05/00/69	CHART	2
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:				
DOCUMENT	2157	07/08/57	REPORT	15
AUTHOR:	COULTER LL		DOW	
ADDRESSEE:				
COPYEE:	DOW		LYNN GE	
	BOUNDY RH		BRITTON JW	
	HAMMER OH		JOHNSON JE	
	LANG HC		MULLISON WR	
DOCUMENT	2158	02/26/68	LETTER	2
AUTHOR:	BOEHRINGER W		CH BOEHRINGER SOHN	
	TOLKMITH H			
ADDRESSEE:	TRAPP W			
COPYEE:				
DOCUMENT	2159	02/15/67	LETTER	2
AUTHOR:	DOW		ROWE VK	
ADDRESSEE:	DOW		DIXON WR	
COPYEE:	CORBIN WL		GOWELL JM	
	PLETCHER DE			

14398

4302

TITLE

REPORT OF INDIVIDUAL MICROSCOPIC EXAMINATION OF TISSUES FROM MALE AND FEMALE RATS MAINTAINED FOR TWO YEARS ON DIETS CONTAINING KUROSAI SL.

SUMMARY OF PATHOLOGY ON MALE AND FEMALE RATS FED KUROSAI SL IN THE DIET FOR 18 MONTHS.

TCDBD.

I JPM

TINKER B

COMPARISON OF ACUTE ORAL TOXICITIES OF HERBICIDE FORMULATIONS IN SMALL ANIMALS.

INVERT EMULSION FORMULATIONS OF HALOPHENOXY AKLYL ACIDS AND ESTERS FOR WEED AND BRUSH CONTROL, REVIEW OF STATUS FOR ADVANCEMENT TO STAGE 4 (REPORT AD-20).

LYNN GE

ALLEN WW
COLBY RW
KAGY JF
PRESCOTT RF

BARRONS KC
FAYERWEATHER BL
KELLY JA
ROWE VK

CH BOEHRINGER SOHN PROGRESS CONCERNING CHLORACNE ACTIVE MATERIALS CTTL.

DOW

MERZ H

TCC (ST LOUIS, MO) PHONED DOW ASKING FOR ADVICE ON PLANT SAFETY FOLLOWING A CHLORACNE OUTBREAK CTTL.

HOLDER BB

MCCOY WJ

DOCUMENT	NUMBER	DATE	TYPE	PAGES
	2160	05/12/65	REPORT	1
AUTHOR:	DOW		OHARE CP	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2161	04/01/65	REPORT	1
AUTHOR:	DOW		OHARE CP	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2162	05/12/65	REPORT	1
AUTHOR:	DOW		OHARE CP	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2163	04/01/65	REPORT	1
AUTHOR:	DOW		OHARE CP	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2164	04/15/65	REPORT	1
AUTHOR:	DOW		OHARE CP	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2165	03/26/65	REPORT	1
AUTHOR:	DOW		OHARE CP	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2166	06/01/65	REPORT	1
AUTHOR:	DOW		OHARA CP	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2167	05/12/65	REPORT	1
AUTHOR:	DOW		OHARE CP	
ADDRESSEE:				
COPYEE:				

4303
 24399

TITLE

245 CL3PHENOL (CHCL3 EXTRACT) 3-2-'65 0.01 PPM SYM. DIOXIN (1:1 DIOXIN CONC).

245 CL3PHENOL (CHCL3) EXTRACT 3-2-65 0.01 PPM. SYM. DIOXIN 1:1 DIOXIN CONC.

245 CL3PHENOL (DISTILLED) 3-2-'65 0.01 PPM SYM. DIOXIN.

245 CL3PHENOL (DISTILLED) 3/2/65 0.01 PPM SYM DIOXIN (ENTIRE SAMPLE).

245T ACID (10AW13) SOLID 1.0 PPM SYM. DIOXIN (ENTIRE SAMPLE).

245T ACID CHCL3 EXTRACT (10AW13) 0.20 PPM SYM. DIOXIN 1:1 DIOXIN CONC.

245T ACID (10AW13) SOLID 0.04 PPM SYMMETRICAL DIOXIN (ENTIRE SAMPLE).

245T ACID (10AW13) SOLID 0.01 PPM SYM. DIOXIN (ENTIRE SAMPLE).

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2168	04/01/65	REPORT	1
AUTHOR:	DOW		OHARE CP	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2169	03/30/65	REPORT	1
AUTHOR:	DOW		OHARE CP	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2170	07/01/65	REPORT	1
AUTHOR:	DOW		MUTCHLER JE	
ADDRESSEE:	DOW		SILVERSTEIN LG	
COPYEE:				
DOCUMENT	2171	06/17/65	REPORT	1
AUTHOR:	DOW		MUTCHLER JE	
ADDRESSEE:	DOW		SILVERSTEIN LG	
COPYEE:				
DOCUMENT	2172	06/24/65	LETTER	1
AUTHOR:				
ADDRESSEE:	DOW		MULHOLLAND R	
COPYEE:				
DOCUMENT	2173	05/04/65	MINUTES	2
AUTHOR:	DOW		WHITE LC	
ADDRESSEE:				
COPYEE:	DOSSER RC		SMITH HA	
DOCUMENT	2174	02/16/65	LETTER	2
AUTHOR:	DOEDENS JD		DOW	
ADDRESSEE:	DOW		FEINAUER HW	
	HUTCHENREUTHER C		OTIS CE	
	SMILEY RN		STAEHLING EC	
COPYEE:				
DOCUMENT	2175	00/00/69	REPORT	3
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:				

14400

4304

TITLE

245T ACID (10AW13) SOLID. 0.01 PPM SYMMETRICAL DIOXIN (ENTIRE SAMPLE).

245T ACID CHCL3 EXTRACT (10AW13) STARTING MATERIAL (1:1 DIOXIN CONC.).

245T FROM 267 BLDG (REQUEST FOR SCREENING OR APPLICATION TESTING).

245T FROM 267 BLDG (REQUEST FOR SCREENING OR APPLICATION TESTING).

245-TRICHLOROPHENOL, THE "T" ACIDS AND ASSOCIATED ACNEGENS.

245T PRODUCT SPECIFICATION.

245-TRICHLOROPHENOL.

GRANT LB
RILEY FH
TUCKER JC

HARRIS JW
SILVERSTEIN L

CHRONOLOGY OF CHLORACNE TESTING IN BRL.

NUMBER	DATE	TYPE	PAGES
DOCUMENT 2176	03/10/65	LETTER	2
AUTHOR: DOW		SILVERSTEIN LG	
ADDRESSEE: DOW		AMSTUTZ FC	
DEODENS JD		FEINAUER HW	
HANSEN KY		HARRIS JW	
HUTCHENREUTHER CO		LYNN GE	
PALEY WB		PLETCHER DE	
SMILEY RN		STAEHLING EC	
COPYEE:			
DOCUMENT 2177	03/16/49	LETTER	1
AUTHOR: DOW		ROWE VK	
ADDRESSEE: AM MUTUAL LIABI		THOMPSON EW	
COPYEE: ALLEN WW			
DOCUMENT 2178	05/11/50	LETTER	1
AUTHOR: DOW		ROWE VK	
ADDRESSEE: DOW		BROADBENT RW	
COPYEE:			
DOCUMENT 2179	09/13/56	LETTER	2
AUTHOR: DOW		ROWE VK	
ADDRESSEE: CHEMI TROL CHEM		KARLOVETZ F	
COPYEE: CONNER DL		MCCOY KW	
DOCUMENT 2180	09/30/55	LETTER	5
AUTHOR: DOW		ROWE VK	
ADDRESSEE: CHEMI TROL CO		KARLOVETZ F	
COPYEE: BRYANT CA		CONNER D	
DOCUMENT 2181	03/25/54	LETTER	2
AUTHOR: BECKWITH C		DOW	
ADDRESSEE: DOW		SMITH H	
COPYEE: KARLOVETZ F		ROWE VK	
YEST FH			
DOCUMENT 2182	01/19/62	LETTER	1
AUTHOR: DOW		REED DL	
ADDRESSEE: DENTE J		SORDONI CONSTRU	
COPYEE: MCCOY WJ		RITTY PM	

104401

4305

TITLE

HAZARD OF MONSANTO T ACID.

BARRONS KC
GILL WH
HOFF RC
MCCOY WJ
RILEY FH
TUCKER JC

CORBIN WL
GRANT LB
HOYLE HR
OTIS CE
ROWE VK
WILTSE MG

EXPERIMENTAL STUDIES ON LABORATORY ANIMALS CTTL.

REQUEST FOR SAMPLES TO BE SENT TO MI ST COL FOR TESTS ON MILK
CATTLE CTTL.

CONTAMINATION OF GRIFFITH STREAM BY CHEMITROL SPRAYING FROM TRUCK
CTTL.

CHEMITROL CHEM

HERBICIDAL POISONING CTTL.

HYMAS TA

CHEMI-TROL CHEMICAL COMPANY.

SANFORD D

SOUTHWICK L

DOW FEELS NO RELATION BETWEEN KURON WATER MIXTURE EXPOSURE AND
TRACHEITIS CTTL.

SORDONI CONSTRUCTION
ROWE VK

WALLBERG JH

NUMBER	DATE	TYPE	PAGES
DOCUMENT 2183	07/09/65	LETTER	2
AUTHOR: DOW		ROWE VK	
ADDRESSEE: HOSPITAL UN PA		KLIGMAN AM	
COPYEE: GORDON PJ		HOLDER BB	
PETERSON JE		SILVERSTEIN L	
DOCUMENT 2184	08/07/62	LETTER	3
AUTHOR: DOW		HAMMER OH	
ADDRESSEE: PETERS DJ		VA ELECTRIC POW	
COPYEE: COULTER LL		HUNT M	
SURGEON D		WILTSE MG	
DOCUMENT 2185	05/09/56	MINUTES	3
AUTHOR: DOW		MCCOLLISTER DD	
ADDRESSEE:			
COPYEE:			
DOCUMENT 2186	03/29/65	MINUTES	6
AUTHOR: DOW		SILVERSTEIN LG	
ADDRESSEE: DOW		ROWE VK	
COPYEE: ROWE VK		AMSTUTZ FC	
DOEDENS JD		FALSEY WP	
GRANT LB		HABERSTROH W	
HOFF RC		HOLDER BB	
IRISH DD		LYNN GE	
PETERSON JE		PLETCHER DE	
SMILEY RN		STAEHLING EC	
DOCUMENT 2187	06/06/65	REPORT	1
AUTHOR: DOW		OHARE CP	
ADDRESSEE:			
COPYEE:			
DOCUMENT 2188	04/06/65	REPORT	1
AUTHOR: DOW		OHARE CP	
ADDRESSEE:			
COPYEE:			
DOCUMENT 2189	04/06/65	REPORT	1
AUTHOR: DOW		OHARE CP	
ADDRESSEE:			
COPYEE:			
DOCUMENT 2190	03/25/65	REPORT	1
AUTHOR: DOW		OHARE CP	
ADDRESSEE:			
COPYEE:			

4306

4402

TITLE

TCDD SAMPLE AND TOXICITY INFORMATION CTTL.

UNIV OF PA
HOYLE HR

KRAMER CG

GARLON USE ON VEGETATION AT POWER DAM CTTL.

VA ELECTRIC POWER
MCCOLLISTER DD

SCHWARTZBECK RA

STATUS OF SILVEX CTTL.

REPORT ON THE CHLORACNE PROBLEM MEETING ON 650324.

BARRONS KC
FEINAUER HW
HANSEN KY
HOYLE NR
MCCOY WJ
RILEY FH
TUCKER JC

CORBIN WL
GILL WM
HARRIS JW
HUTCHENREUTHER C
OTIS CE
SADEK SE
WILTSE MG

BUTYL ESTER OF 245T (10AW13).

BUTYL ESTER OF 245T (10AW13).

BUTYL ESTER OF 245T (10AW13).

245-TRICHLOROPHENOL (CHLOROFORM EXTRACT).

	NUMBER	DATE	TYPE	PAGES
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	2191 DOW	04/01/65	REPORT OFFANE CP	1
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	2192 DOW	05/12/65	REPORT OHARE CP	1
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	2193 DOW	00/00/65	REPORT OHARE CP	1
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	2194 DOW	06/01/65	REPORT OHARE CP	1
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	2195 DOW DOW KARLOVETZ F	08/16/56	LETTER MCCOY KH ROWE VK	2
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	2196 DOW CHEMI-TROL CO BRYANT CA	09/30/55	LETTER ROWE VK HARLEVETZ F CONNER P	5
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	2197 DOW BARRONS KC NORTON TR	08/04/55	REPORT ROWE VK HYMAS TA WILLIAMS GJ	5
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	2198 DOW DOW	08/03/59	LETTER MUNSON NH ROWE VK	1

14403

4307

TITLE

245-TRICHLOROPHENOL (SKIN CONTACT IRRITATION).

245-TRICHLOROPHENOL (DISTILLED)(SKIN CONTACT IRRITATION).

245-TRICHLOROPHENOL (SKIN CONTACT IRRITATION).

245-TRICHLOROPHENOL (SKIN CONTACT IRRITATION).

COMPLAINT OF FISH POND POISONING AFTER ESTERON TEN-TEN AND ESTERON
245 ROW SPRAYING CTTL.

ESTERON BRUSH KILLER ALLEGED CASE OF LIVESTOCK POISONING CTTL.

HYMAS TA

INFORMATION RELATIVE TO ILLNESS TO CATTLE ON THE ALBERT SCHMUCKER
FARM THREE MILES NORTH OF HARBOR BEACH, MICHIGAN.

JOHNSON JE

LEASURE K

ALLEGED INJURY TO CATTLE FROM USE OF 245 BRUSH KILLER CTTL.

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2199	11/17/55	MINUTES	2
AUTHOR:	DOW		LYNN GE	
ADDRESSEE:	DOW		ROWE VK	
COPYEE:	BARRONS KC		IRISH DD	
DOCUMENT	2200	08/06/64	LETTER	1
AUTHOR:	DOW		MCCOY WJ	
ADDRESSEE:	DOW		COULTER LL	
	LYNCH B		OCONNOR JN	
COPYEE:				
DOCUMENT	2201	09/16/54	LETTER	1
AUTHOR:	DOUGLAS CM		IL CNTY ELECTRI	
ADDRESSEE:	DOW		ROWE VK	
COPYEE:				
DOCUMENT	2202	09/01/54	LETTER	1
AUTHOR:	DOW		ROWE VK	
ADDRESSEE:	DOUGLAS CM		IL CNTY ELECTRI	
COPYEE:	CRANDALL HA		SMITH HL	
DOCUMENT	2203	08/27/54	LETTER	1
AUTHOR:	CRANDALL RA		DOW	
ADDRESSEE:	DOUGLAS CM		IL CNTY ELECTRI	
COPYEE:	ROWE VK			
DOCUMENT	2204	07/13/54	LETTER	1
AUTHOR:	CONNER DL		DOW	
ADDRESSEE:	LAMBETH NL		N AMERICA COMP	
COPYEE:	ROWE VK		SMITH H	
DOCUMENT	2205	07/12/54	LETTER	1
AUTHOR:	DOW		ROWE VK	
ADDRESSEE:	DOW		CONNER D	
COPYEE:	SMITH HL			
DOCUMENT	2206	09/01/53	LETTER	1
AUTHOR:	DOW		WILLIAMS GJ	
ADDRESSEE:	CALLOWAY JB		RURAL ELECTR KY	
COPYEE:	ROWE VK		SMITH HI	

4308
7404

TITLE

MEMORANDUM ON CONFERENCE CONCERNING TOXICOLOGICAL WORK REQUIREMENTS
FOR AGRICULTURAL CHEMICAL RESEARCH - NOVEMBER 2, 1955.

JOHNSON JE

THREE DEAD HOGS AFTER RIGHT OF WAY SPRAYING WITH ESTERON BRUSH
KILLER CTTL.

HYMAS TA
ROWE VK

JOHNSTON RV
WILTIE M

MONROE COUNTY ELECTRIC COOPERATIVE REQUESTS INFORMATION ON ESTERON
BRUSH KILLER ON SKIN AND LUNG TISSUES OF HUMAN BEINGS CTTL.
MONROE COUNTY ELECTRIC C

STATES THAT NO COMPLAINTS HAVE BEEN RECEIVED FROM ESTERON BRUSH
KILLER SPRAY DRIFT UPON SKIN AND LUNG TISSUE OF CATTLE CTTL.

MONROE COUNTY ELECTRIC C

REQUESTS INFORMATION ON POSSIBLE INJURIES TO SKIN AND LUNG TISSUE
FROM DRIFT OF ESTERON BRUSH KILLER CTTL.

MONROE COUNTY ELECTRIC

936L1690-A VAN WORMER & BLACK, INC. E.W GAY - PD AUGUST, 1953.

NORTH AM CO

REGARDING 936L1690-A, VAN WORMER AND BLACK, INC. E.W GAY - PD,
AUGUST, 1953.

ASSURES OF THE SAFETY OF ESTERON BRUSH KILLER ON FISH AND LIVESTOCK
BASED ON EXTENSIVE LABORATORY TESTS CTTL.

FARMERS RURAL ELECTRIC C

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2207	07/17/53	LETTER	1
AUTHOR:	DOW		ROWE VK	
ADDRESSEE:	BARRICK FP		C&O RAILROAD	
COPYEE:	QUARLES JP		SMITH HL	
DOCUMENT	2208	05/01/53	LETTER	1
AUTHOR:	CRAIN HD		DOW	
ADDRESSEE:	DOW		ROWE VK	
COPYEE:	DIETZEL AL			
DOCUMENT	2209	06/25/52	LETTER	2
AUTHOR:	DOW		ROWE VK	
ADDRESSEE:	DOW		SANFORD D	
COPYEE:	BRITTON JW		PETERSON FC	
DOCUMENT	2210	02/18/52	ROC	2
AUTHOR:	DOW		SIMSON HA	
ADDRESSEE:				
COPYEE:	ROWE VK		SMITH HL	
DOCUMENT	2211	02/01/52	LETTER	2
AUTHOR:	DOW		ROWE VK	
ADDRESSEE:	DOW		SMITH HL	
COPYEE:				
DOCUMENT	2212	10/12/59	LETTER	1
AUTHOR:	DOW		GORDON HL	
ADDRESSEE:	DOW		MILLER DN	
COPYEE:	ROWE VK		WIFFEN EE	
DOCUMENT	2213	02/13/56	LETTER	1
AUTHOR:	DOW		ROWE VK	
ADDRESSEE:	DOW		COULTER LL	
COPYEE:	FLETCHER FW			
DOCUMENT	2214	11/24/59	ABSTRACT	1
AUTHOR:	DOW		WINSTON AW	
ADDRESSEE:	DOW		JOSEPHS MJ	
COPYEE:	COULTER LL		ROWE VK	

4309
 24405

TITLE

ASSURES THERE IS NO HAZARD TO LIVESTOCK FROM DRIFT OF DOW ESTERON
BRUSH KILLER AFTER RIGHT OF WAY SPRAYING CTTL.

MISSOURI STATE HIGHWAY DEPARTMENT, KANSAS CITY, MISSOURI.

DEATH OF SHEEP AND CATTLE ALLEGEDLY DUE TO BRUSH KILLER.

WILLIAMS GJ

PA POWER & LIGHT CO (CHEM SALESMANS CALL REPORT).

RESPONSE TO INQUIRY ABOUT THE TOXICITY OF VARIOUS PRODUCTS CTTL.

NO EVIDENCE THAT ESTERON BRUSH KILLER MAY CAUSE PANCREATIC TOXICITY
CTTL.

RECOMMEND THAT APPLICATION PROCEDURE PROPOSED SHOULD NOT BE USED
BECAUSE OF POSSIBLE HEALTH HAZARDS CTTL.

ONE MONTH EXPOSURE OF FISH TO M-1500 FORMULATION OF SILVEX, SODIUM
SALT.

DOW
DOW
DOW

	NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	2215 DOW HUNT FM ROWE VK	11/02/62	REPORT HCA JSM SURGEON DK	1	VEON BK LOT 880412. DOW KOEHLINGER DG WILMETH P RITTY PM WINSTON AW
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	2216 DOEDENS JD DOW GRANT LB OTIS CE STAEHLING EC	02/16/65	LETTER DOW BAILEY C HARRIS JW RILEY FH TUCKER JC	2	DECISION TO INFORM CUSTOMERS OF THE CONTAMINANTS IN TRICHLOROPHENOL. COSGEN G HOFF R SILVERSTEIN L FEINAUER HW HUTCHENREUTHER CO SMILEY RN
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	2217 DOW BARRONS KC	03/02/65	MINUTES LYNN GE CORBIN WL	2	MINUTES OF "EXCITER" PROBLEM MEETING, FEBRUARY 24, 1965. HOYLE HR
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	2218 DOW ALLINSON RL BOUNDY RH KAGY JF MACCUTCHEON SM WRIGHT P	07/29/54	REPORT OYEN F ALQUIST FN BRITTON EC KELLY JA MCCOLLISTER DD	9	RESULTS OF RANGE FINDING TOXICOLOGICAL TESTS ON BUTYL (AND ISOBUTYL) A - (2,4,5-TRICHLOROPHENOXY) PROPIONATE (T25.14-236-1). BACON KD GAY HH LUCE EN SUNDERLAND WW BESHGETOOR AW GREENE LM LYNN GE WRIGHT N
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	2219 DRILL VA DOW BIOCHEM RES ALQUIST FN CRI KELLY JA TEXAS FILE A	08/30/50	REPORT WAYNE U MEDICIN ROWE VK BARRONS KC DOSSER RC LYNN GE WESTERN CENTRAL RES FILE	14	ACUTE AND SUB-ACUTE ORAL TOXICITY OF 245T FOR DOGS. BOUNDY RH GAY HH MACCUTCHEON SM BRITTON EC KAGY JF SUNDERLAND WW
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	2220 OLOF	00/00/64	REPORT SCIENTIFIC TRANSLATION S	6	DEFOLIATING AGENT - OUR NEW THREAT TO THE ENVIRONMENT? RESEARCH UNCERTAIN.
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	2221 DOW MCCOLLISTER DD	07/13/59	PROC WOLF MA	2	RESULTS OF RANGE FINDING TOXICOLOGICAL TESTS ON FORRON 245T.

4310
14406

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2222	00/00/69	REPORT	1
AUTHOR: DOW				
ADDRESSEE:				
COPYEE:				
DOCUMENT	2223	02/27/69	SPEC	1
AUTHOR: DOW				
ADDRESSEE:				
COPYEE: BLAIR EH GOWELL JH				
JOHNSON JE LINDSAY D				
SHELDON HW WILLIAMS RT				
DOCUMENT	2224	03/04/69	LETTER	20
AUTHOR: KLINGMAN DL				
ADDRESSEE: DUNN CL				
COPYEE: DANIELSON LL				
USDA				
HER				
RADELEFF				
DOCUMENT	2225	08/25/45	REPORT	9
AUTHOR: DOW				
ADDRESSEE: GEISEL C				
COPYEE: ADAMS W				
VEAZEY WR				
ALLEN WW				
DOCUMENT	2226	08/23/50	REPORT	7
AUTHOR: DOW				
ADDRESSEE: ROWE VK				
COPYEE: ALLEN WW				
HAUS DW				
SUNDERLAND WW				
BRITTON JW				
IRISH DD				
DOCUMENT	2227	00/00/57	NEWS	9
AUTHOR: ARCH KLIN EXP				
ADDRESSEE: SCHULZ KH				
COPYEE:				
DOCUMENT	2228	00/00/50	REPORT	4
AUTHOR: DOW				
ADDRESSEE: ROWE VK				
COPYEE: MCCOLLISTER DD				
SPENCER HC				

14407

4311

TITLE

PRESENCE OF CHLORACNEGEN AND TCDD IN 245T FROM VARIOUS
MANUFACTURERS.

SALES SPECIFICATION 245T.

HAYS HW
LYNN GE

HOLDEMAN GE
NAEGELE RE

DISCUSSION OF THE AMOUNT OF SILVEX THAT WILL BE REQUIRED TO ACHIEVE
THE CONCENTRATIONS REQUIRED IN THE FEEDING STUDIES.

TOXICITY OF 245T.

CG

ROWE VK

RESULTS OF TOXICOLOGICAL TESTS ON 245T.

DOSSER RC
KAGY JF

DUTTON WC
LYNN GE

CLINICAL AND EXPERIMENTAL INVESTIGATIONS CONCERNING THE ETIOLOGY OF
CHLORACNE (ARCH KLIN EXP DERM 206, 589-596).

THE ACUTE ORAL TOXICITY OF 245T TO RATS, MICE, GUINEA PIGS AND
CHICKS.

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2229	03/15/45	REPORT	10
AUTHOR:	DOW		GEISEL C	
ADDRESSEE:	DOW		ALLEN WW	
COPYEE:				
DOCUMENT	2230	10/26/54	REPORT	13
AUTHOR:	DOW		MCCOLLISTER DD	
ADDRESSEE:			ROWE VK	
COPYEE:	OYEN F			
DOCUMENT	2231	03/24/54	LETTER	1
AUTHOR:	DOW		LYNN GE	
ADDRESSEE:	DOW		ROWE VK	
COPYEE:				
DOCUMENT	2232	04/27/54	REPORT	1
AUTHOR:	DOW		WHITE L	
ADDRESSEE:			ROWE VK	
COPYEE:	MCCOLLISTER DD			
DOCUMENT	2233	10/26/54	REPORT	12
AUTHOR:	DOW		MCCOLLISTER DD	
ADDRESSEE:			BARRONS KC	
COPYEE:	ALQUIST FN		GAY HH	
	DOSSER RC		MACCUTCHEON SM	
	LYNN GE			
	SUNDERLAND WW			
DOCUMENT	2234	11/14/61	REPORT	21
AUTHOR:	DOW		OYEN F	
ADDRESSEE:				
COPYEE:	MCCOLLISTER DD			
DOCUMENT	2235	03/05/64	AUTH	1
AUTHOR:	DOW		MCCOY WJ	
ADDRESSEE:			ROWE VK	
COPYEE:	DUNN L			
DOCUMENT	2236	08/23/61	LETTER	1
AUTHOR:	DOW		LYNN GE	
ADDRESSEE:	DOW		ROWE VK	
COPYEE:				

204408

4312

TITLE

TOXICITY OF 245T.

ROWE VK

VEAZEY WR

RESULTS OF ACUTE AND SEMI-CHRONIC ORAL TOXICITY TESTS WITH RATS FED "SILVEX," OR 245TP.

RECOMMENDS 245TP FEEDING TESTS TO DETERMINE CHRONIC TOXICITY RELATIVE TO USE ON RICE CTTL.

245TP.

RESULTS OF ACUTE AND SEMI-CHRONIC ORAL TOXICITY TESTS WITH RATS FED "SILVEX" OR 245TP.

BOUNDY RH
KAGY JF
OYEN F

BRITTON EC
KELLY JA
ROWE VK

SUMMARY OF PATHOLOGY ON ANIMALS FED DOWANOL ESTER OF 245T IN THE DIET FOR 90 DAYS.

BUTOXY ETHANOL ESTER-245T ACID.

STAGE FILE - SILVEX.

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2237	06/22/61	REPORT	2
AUTHOR:	KLAUDER JV			
ADDRESSEE:	DOW		ROWE VK	
COPYEE:				
DOCUMENT	2238	06/09/61	REPORT	1
AUTHOR:	KLAUDER JV			
ADDRESSEE:	DOW		ROWE VK	
COPYEE:				
DOCUMENT	2239	05/22/61	REPORT	1
AUTHOR:	KLAUDER JV			
ADDRESSEE:	DOW		ROWE	
COPYEE:				
DOCUMENT	2240	05/12/61	LETTER	1
AUTHOR:	DOW		ROWE VK	
ADDRESSEE:	KLAUDER JV			
COPYEE:				
DOCUMENT	2241	05/03/61	LETTER	1
AUTHOR:	KLAUDER JV			
ADDRESSEE:	DOW		ROWE VK	
COPYEE:				
DOCUMENT	2242	04/05/61	LETTER	1
AUTHOR:	DOW		ROWE VK	
ADDRESSEE:	DOW		LYNN GE	
COPYEE:				
DOCUMENT	2243	04/11/61	LETTER	1
AUTHOR:	DOW		LYNN GE	
ADDRESSEE:	DOW		ROWE VK	
COPYEE:	JOHNSON JE		LEASURE JK	
DOCUMENT	2244	04/24/61	LETTER	1
AUTHOR:	DOW		ROWE VK	
ADDRESSEE:	KLAUDER JV			
COPYEE:				
DOCUMENT	2245	07/06/59	REPORT	15
AUTHOR:	OYEN F			
ADDRESSEE:				
COPYEE:	MCCOLLISTER DD			

24409

4313

TITLE

REPORTS FINAL RESULTS OF KUROSAL SL SKIN TESTS CTTL.

KUROSAL SL SKIN APPLICATIONS CTTL.

KUROSAL SL PATCH TEST STUDY CTTL.

KUROSAL SL IRRITATION STUDY CTTL.

KUROSAL SL SKIN STUDIES CTTL.

245TP SKIN SENSITIZATION STUDIES DONE ON HUMANS CTTL.

REQUESTS KUROSAL SL SAMPLE FOR HUMAN SKIN SENSITIZATION STUDIES
CTTL.

RITTY PM

VANVALKENBURG JW

KUROSAL SL SKIN IRRITATION & SENSITIZATION STUDIES CTTL.

SUMMARY OF PATHOLOGY ON MALE AND FEMALE RATS FED DOWANOL 97B ESTER
OF SILVEX IN THE DIET FOR THREE MONTHS.

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2246	11/05/59	REPORT	8
AUTHOR:	DOW		LOCKWOOD DT	
ADDRESSEE:				
COPYEE:	BARRONS K GAY HH HYMAS TA LUCE EN PERKINS RD		BOUNDY RH GREENE LM JONES GD LYNN GE STENGER VA	
DOCUMENT	2247	12/27/60	REPORT	15
AUTHOR:	DOW		JOSEPHS MJ	
ADDRESSEE:				
COPYEE:	AJW ENB JFK LEW PR TAH		AWS GEL JS LJL RGH TRW	
DOCUMENT	2248	02/27/61	LETTER	1
AUTHOR:	DOW		LYNN GE	
ADDRESSEE:	DOW		ROWE VK	
COPYEE:	DOSSER RC DOW		JOHNSON JE	
DOCUMENT	2249	08/18/61	AUTH	1
AUTHOR:	DOW		ROWE VK	
ADDRESSEE:	DOW		LYNN GE	
COPYEE:				
DOCUMENT	2250	04/26/62	REPORT	69
AUTHOR:	IND BIOTEST LAB		KAY JH	
ADDRESSEE:				
COPYEE:	BARRONS K COLBY RW GREENE LM KILIAN DJ MCINTYRE HH TISDALE WL		BOUNDY RH DOSSER RC HART A LUCE EN NASH HA VANVALKENBURG W	
DOCUMENT	2251	03/04/69	LETTER	2
AUTHOR:	KLINGMAN DL		USDA AR	
ADDRESSEE:	DUNN CL		HERCULES INC	
COPYEE:	DANIELSON LL		RADELEFF R	

4314
 24410

TITLE

RESULTS OF 90 DAY DIETARY FEEDING STUDIES OF DOWANOL 97B ESTER OF SILVEX (KURON) TO RATS.

COLBY RW
HAMMER OH
KAGY JF
MCCOLLISTER DD
TISDALE WL

ELSHERE D
HART A
KILIAN DJ
MCINTYRE HH
WRIGHT N

POTASSIUM SALT OF SILVEX FOR AQUATIC WEED CONTROL.

CED
JAK
JWV
LLC
RPP
VKR

CWH
JEJ
KCB
OHH
RWC
WRM

REQUEST FOR MORE TOXICITY TESTS CTTL.

SOUTHWICK L

VANVALKENBURG W

PROPYLENEGLYCOL ISOBUTYL ETHER ESTER OF SILVEX.

REPORT TO DOW CHEMICAL COMPANY 90-DAY SUBACUTE ORAL TOXICITY OF DOWCO 171 ALBINO RATS.

DOW

IND BIO TEST LAB

BROWN R
FALKENSTEIN WJ
JONES GD
LYNN GE
PERKINS RP
WRIGHT N

CALENDRA JC
GAY HH
KAGY JF
MCCOLLISTER DD
SHRADER SA
DOW

CONSIDERATION OF MOSITURE PERCENTAGE IN HAY NECESSARY TO CORRECTLY CALCULATE MG PER KG SILVEX CTTL.

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2252	05/24/68	LETTER	2
AUTHOR:	DOW		LENG ML	
ADDRESSEE:	CORNELL UNIV		STJOHN LE	
COPYEE:	CLARK DE		GETZENDANER ME	
DOCUMENT	2253	06/06/68	LETTER	1
AUTHOR:	CORNELL UNIV		LISK DJ	
ADDRESSEE:	DOW		LENG ML	
COPYEE:	CLARK DE		EPAPA	
DOCUMENT	2254	08/20/65	LETTER	1
AUTHOR:	DOW		LYNN GE	
ADDRESSEE:	DOW		ROWE VK	
COPYEE:	GOWELL JH		LOUIE	
DOCUMENT	2255	03/11/65	REPORT	17
AUTHOR:	DOW		SILVERSTEIN L	
ADDRESSEE:				
COPYEE:	BAILEY LUECK		GOERGEN SCULAT	
DOCUMENT	2256	10/24/67	LETTER	2
AUTHOR:	DOW		OLSON KJ	
ADDRESSEE:	PROCTOR&GAMBLE		SNYDER FH	
COPYEE:	ROWE VK			
DOCUMENT	2257	00/00/57	PRESENT	17
AUTHOR:	DOW		NORRIS JM	
ADDRESSEE:	DOW			
COPYEE:	DAVIDSON JH		WESSEL M	
DOCUMENT	2258	00/00/67	REPORT	4
AUTHOR:	DOW			
ADDRESSEE:	DOW			
COPYEE:	BURGER EJ		JOHNSON JE	
	ROBINSON VB		ROWE VK	
DOCUMENT	2259	03/01/65	REPORT	2
AUTHOR:				
ADDRESSEE:				
COPYEE:				

14411

4315

TITLE

QUESTIONS CALCULATION OF THE AMOUNT OF SILVEX EXCRETED IN
METABOLISM STUDY CTTL.

LISK DJ

MCCOLLISTER DD

LETTER OF APOLOGY FOR MISTAKE IN CALCULATING PERCENT SILVEX
EXCRETED IN COW FEEDING STUDY CTTL.

GETZENDANER ME

MCCOLLISTER DD

REQUEST FOR SKIN TOXICITY TESTS IN RESPONSE TO CUSTOMER COMPLAINT
OF SKIN RASH WHEN USING A 2PRODUCT MIXTURE CTTL.

DOW

DOW

WILTSE MG

DOW

THE CHLORACNE PROBLEM - BIOCHEM'S CONTRIBUTION.

HUTCHENREUTHER
STAEHLING

KELLY J

RESPONSE TO QUESTIONS ON ACNEGENS AND LABORATORY METHODS CTTL.

TOXICOLOGY STUDIES ON CHLORINATED DIBENZO-P-DIOXINS IN LABORATORY
ANIMALS DRAFT PREPARED AT THE REQUEST OF COUNSEL FOR THE PURPOSE OF
HEARING PREPARATION.

TCDD SINGLE DOSE ORAL TOXICITY.

LYNN GE

MCCOLLISTER DD

TRICHLOROPHENOL SUMMARY.

DOCUMENT	260	08/27/50	REPORT	4
AUTHOR:	DOW		ROWE VK	
ADDRESSEE:				
COPYEE:	ALLAN WM DUTTON WC		BARRONS KP IRISH DD	
DOCUMENT	2261	01/17/56	REPORT	9
AUTHOR:	DOW		TORKELSON TR	
ADDRESSEE:				
COPYEE:	ALLINSON RL BOUNDY RH GAY HH KAGY JF MCCOLLISTER DD		ALQUIST FN BRITTON EC GREENE LM KILIAN DJ MCCUTCHEON SM	
DOCUMENT	2262	06/22/61	REPORT	2
AUTHOR:	KLAUDER JV			
ADDRESSEE:	DOW		ROWE VK	
COPYEE:	LENG ML			
DOCUMENT	2263	06/17/65	AUTH	2
AUTHOR:	DOW		MONROE E	
ADDRESSEE:	DOW		GREENE LM	
COPYEE:	BAUMAN WC		KOERKER FW	
DOCUMENT	2264	12/22/64	REPORT	7
AUTHOR:	DOW		GILL HH	
ADDRESSEE:				
COPYEE:	COULTER KE GREENE LM KALLOS GJ SAUERS RC THORSBERG TF		ERBLE R HABERSTROH WH KEY M SHRADER SA NIDIGER AH	
DOCUMENT	2265	05/04/65	AUTH	2
AUTHOR:	DOW		MONROE E	
ADDRESSEE:	DOW		GREENE LM	
COPYEE:	BAUMAN WC		GILL HH	

14412

4316

RESULTS OF RANDOM FINDING TOXICOLOGICAL TESTS ON THE N-ETHYL AMYL
ESTER OF 245T.

BRITTON JW
KAGY JF

DOSSER RC
LYNN GE

RESULTS OF RANGE FINDING TOXICOLOGICAL TESTS ON
4-(2,4,5-TRICHLOROPHENOXY) BUTYRIC ACID.

BEGIN L
COLBY RW
HART A
LUCE EN
SUNDERLAND WW

BESHOETOOR AW
ELSHERE D
HOYLE HR
LYNN GE
WRIGHT N

KUROSAL SL PATCH TEST SHOWED NO PRIMARY IRRITANT, FATIGUEING, OR
ALLERGENIC ACTION CTTL.

DOW

THE ANALYTICAL METHOD, THE DETERMINATION OF TCDD IN 245T BY GAS
LIQUID CHROMATOGRAPHY, IS APPROVED FOR OUTSIDE DISTRIBUTION CTTL.

WOLF M

THE ANALYSIS OF CAUSTIC INSOLUBLE OILS AND PROCESS SAMPLES FROM THE
245-TRICHLOROPHENOL PROCESS FOR COMPOUNDS CAPABLE OF CAUSING
CHLOROACNE, PRINCIPALLY TCDD ARW.64.6.

ERLEY DS
HOLMES RD
LUCE KN
SILVERSTEIN L
WRIGHT N

GOERGEN GG
HOYLE HR
OLSON KJ
SKELLY NE

THE DETERMINATION OF COMPOUNDS CAPABLE OF CAUSING CHLOROACNE IN
245-TRICHLOROPHENOL PROCESS SAMPLES BY GLC (ROUTING SHEET FOR THE
RELEASE OF TECHNICAL INFORMATION AND LETTER OF APPROVAL) CTTL.

KOERHER FW

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2266	04/07/65	TEST	5
AUTHOR:	DOW		GILL HH	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2267	00/00/65	CHART	1
AUTHOR:	DOW		LENG ML	
ADDRESSEE:				
COPYEE:	COULTER LL MURPHY A		HAMAGUCHI H	
DOCUMENT	2268	03/10/65	REPORT	17
AUTHOR:	DOW		SILVERSTEIN L	
ADDRESSEE:				
COPYEE:	AMSTUTZ F KELLY J SCULATTI		BAILEY LUECK AF SHANNON	
DOCUMENT	2269	04/17/78	TEST	14
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:				
DOCUMENT	2270	07/08/63	REPORT	6
AUTHOR:	IND BIOTEST LAB		KAY JH	
ADDRESSEE:	DOW			
COPYEE:				
DOCUMENT	2271	01/08/63	REPORT	8
AUTHOR:	HILL TOP RES INST			
ADDRESSEE:	DOW			
COPYEE:				
DOCUMENT	2272	00/00/78	REPORT	22
AUTHOR:	HARRIS MW NIEHS		HASEMAN JK	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2273	01/00/79	REPORT	81
AUTHOR:	GIVAUDAN RES SAMBETH J		HOFFMAN LAROCHE WIPF H	
ADDRESSEE:				
COPYEE:				

24413

4317

TITLE

THE DETERMINATION OF COMPOUNDS CAPABLE OF CAUSING CHLOROACNE
(CHLORACNE) IN 245-TRICHLOROPHENOL PROCESS MLW 64.19.

SUMMARY OF TOXICOLOGICAL DATA ON SILVEX IN RATS AND DOGS.
DOW

JANTZ OK

MCCOLLISTER DD

EARLY DOW HISTORY OF THE CHLORACNE PROBLEM-BIOCHEM'S CONTRIBUTION.

GOERGEN
LYNN GE
STAEHLING EC

HUTCHENREUTHER CO
SCULATI

ANALYTICAL METHOD TORDON 155 MIXTURE HERBICIDE (METHOD 87125B).

HUMAN REPEATED INSULT PATCH TEST ON TORDON 22K.
QUACK BM

REPEATED INSULT PATCH TEST OF M-2431 AND THREE OTHER UNRELATED
MATERIALS.

THE COMPARATIVE TOXICITY OF CHLORINATED DIBENZO-P-DIOXINS IN MICE
AND GUINEA PIGS (TOX AND APPLIED PHARMACOLOGY 44, 335-356).
MCCONNELL EE MOORE JA

THE SEVESO ACCIDENT ITS NATURE, EXTENT AND CONSEQUENCES.
HOMBERGER E REGGIANI G

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2274	00/00/00	PROMO	2
AUTHOR:	NW COALTN ALT PEST			
ADDRESSEE:				
COPYEE:				
DOCUMENT	2275	06/17/79	NEWS	1
AUTHOR:	HORNBLOWER M			
ADDRESSEE:	LA TIMES WA POST			
COPYEE:				
DOCUMENT	2276	06/24/80	NEWS	1
AUTHOR:	LOS ANGELES TIMES			
ADDRESSEE:	TAYLOR RB			
COPYEE:				
DOCUMENT	2277	10/26/66	CHART	4
AUTHOR:				
ADDRESSEE:				
COPYEE:				
DOCUMENT	2278	00/00/78	REPORT	5
AUTHOR:	USDA			
ADDRESSEE:				
COPYEE:				
DOCUMENT	2279	00/00/57	REPORT	5
AUTHOR:	KIMMIG J			
ADDRESSEE:	SCHULTZ KH			
COPYEE:				
DOCUMENT	2280	00/00/00	REPORT	3
AUTHOR:	CROW KD			
ADDRESSEE:				
COPYEE:				
DOCUMENT	2281	06/12/79	LETTER	1
AUTHOR:	SEARS JG			
ADDRESSEE:	SCHROETER RH			
COPYEE:	DOW LAFOLLETTE			

14414

4318

TITLE

BOYCOTT DOW (NW COALTN ALT TO PEST).

ENVIRONMENTAL FORCES GROW, GAIN STRENGTH (THE SUNDAY OREGONIAN,
A13).
SERVICE

STATE WARNING ON 24D HERBICIDE EXPOSURE ISSUED (LOS ANGELES TIMES).

CHROMATOGRAMS FROM SILVEX DETERMINATIONS CTTL.

VEGETATION MANAGEMENT WITH HERBICIDES; PACIFIC NORTHWEST REGION
FOREST SERVICE, USDA, VOL 1 (TOXICITY OF TCDD).

OCCUPATIONAL ACNE SO CALLED CHLORACNE DUE TO CHLORINATED AROMATIC
CYCLIC ETHERS (DERMATOLOGICA 115: 540-546, GERMAN)(TRANSLATED FOR
THE TRANSLATION BRANCH TECHNICAL SERVICES DIVISION SCHOOL OF
AEROSPACE MEDICINE, BROOKS AFB, TX).

DR CROW'S RESULTS OF STUDIES.

FINAL DOCUMENTS IN RESPONSE TO SHOECRAFT REQUEST CTTL.

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2282	06/07/79	LETTER	2
AUTHOR:	SEARS JO		DOW	
ADDRESSEE:	SCHROETER RH		LAFOLLETTE	
COPYEE:				
DOCUMENT	2283	00/00/79	REPORT	7
AUTHOR:	TAYLOR JS		CLEVELAND CLINIC	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2284	07/09/75	SPEC	1
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:				
DOCUMENT	2285	02/00/53	LABEL	1
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:				
DOCUMENT	2286	02/00/53	LABEL	1
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:				
DOCUMENT	2287	07/00/64	LABEL	4
AUTHOR:	DOW		DOW	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2288	07/00/66	LABEL	4
AUTHOR:	DOW		DOW	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2289	11/00/67	LABEL	2
AUTHOR:	DOW		DOW	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2290	03/00/66	LABEL	1
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:	DOW		MCINTYRE HH	

4319
D415

TITLE

BILLIE SHOECRAFT.

ENVIRONMENTAL CHLORACNE UPDATE AND OVERVIEW.
FOUND

24D (SALES SPECIFICATION 20683).

BRUSH KILLER 50-50.

BRUSH KILLER T.

ESTERON BRUSH KILLER O.S.

ESTERON BRUSH KILLER O.S.

MICHIGAN BK 1 BRUSH KILLER.

SILVEX.

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2291	01/00/72	REPORT	6
AUTHOR:	ATKINS LM		GADSDEN RH	
	WALKER EM JR			
ADDRESSEE:				
COPYEE:				
DOCUMENT	2292	00/00/50	REPORT	5
AUTHOR:	DOW		MCCOLLISTER DD	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2293	08/23/71	REPORT	50
AUTHOR:	BRADY TP		BRIGGS PR	
	RAINS RC			
ADDRESSEE:				
COPYEE:	DOW		AERSTIN FG	
	BOWMAN CW		COKER WP	
	DEMOTT DN		DONALDS JE	
	FREVEL LK		GASKA RA	
	GUM WF		HAKE CL	
	HOYLE HR		JOHNSON NE	
	KELLY ME		LAKE DE	
	MCCOY CE		MOSS RD	
	NUMMY WR		OSBORNE DW	
	PRUITT ME		PUMPELLY CT	
	SHADOFF LA		SHEETZ DP	
	STEHL RH		TREE RM	
DOCUMENT	2294	10/13/71	ABSTRACT	1
AUTHOR:	DOW		ENS LA	
ADDRESSEE:				
COPYEE:	DOW		BLAIR EH	
	BREDEWEG RA		BRIGGS PR	
	FAUVER VA		GEHRING PJ	
	JEZIC Z		JOHNSON JE	
	LANGER HG		LYNN GE	
	MCGEE TW		MUELDER WH	
	NORRIS JM		NORTH PP	
	PIPER WN		PUMPELLY CT	
	ROSE JQ		ROWE VK	
	SHADOFF LA		SHEETZ DP	
	STEHL RH		STRUTHERS JA	
	VANREMOORTERE FP		WILKE E	

4320

D-4416

TITLE

SOME EFFECTS OF 24D AND 245T ON EHRlich ASCITES TUMOR CELLS IN VIVO
AND IN VITRO (IND MEDICINE 41(1), 22-27).
GALE GR MEDICAL UNIV OF SC

THE ACUTE ORAL TOXICITY OF 245T TO RATS, MICE, GUINEA PIGS AND
CHICKS.
ROWE VK SPENCER HC

THERMAL CHEMISTRY OF 24D AND 245T (NVA-16)(CRI 713986).
DOW LANGER HG

BLAIR EH
CRUMMETT WB
ENGIBOUS DL
GEHRING PJ
HINMAN CW
JOHNSON RL
LEAVITT FC
MUELDER HW
PETERSON LI
ROWE VK
SILVERSTEIN LG
WHITE HC

BLUE RD
DELINE DD
FERNANDEZ JB
GILL HH
HOUTMAN T
KEITH JR
LYNN GE
NAEGELE RE
PLEPYS RA
SEIDEL EM
SNYDER RE

ORIGIN AND FATE OF THE CHLORODIOXINS, ABSTRACTS FROM A SYMPOSIUM AT
THE 162ND NATIONAL ACS MEETING, WASHINGTON, D.C., 710916 TO 710917
(OC 710005-3)(715305).
PIERCE JK

BOER FP
CRUMMETT WB
GLEDHILL JR
JOHNSON RL
MAROUCHOC SR
NELSON DA
PAPENFUSS RR
RINN HW
SCHWETZ BA
SNYDER RE
THEIS JM
WOODWARD RE

BRADY TP
DALMAN GW
GUM WF
KEITH JR
MATALON R
NEUMANN MA
PETERSON LI
ROBERTS RW
SEIDEL EM
SPARSCHU GL
TREE RM
YOUNG AE

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2295	10/13/71	REPORT	16

AUTHOR:	DOW	ENS LA
ADDRESSEE:		
COPYEE:	DOW	BLAIR EH
	FAUVER VA	GEHRING PJ
	LANGER HG	MUELDER WW
	PIPER WN	ROWE VK
	YOUNG AE	

DOCUMENT	2296	06/27/73	LETTER	2
AUTHOR:	DOW		MULLISON WR	
ADDRESSEE:	EPA		MOUNTFORT RF	
COPYEE:	DOW		FLANNERY RF	
	MCCOLLISTER DD		MCCUTCHEN LR	

DOCUMENT	2297	00/00/00	MEMO	1

AUTHOR:
ADDRESSEE:
COPYEE:

DOCUMENT	2298	00/00/00	LEGAL	8

AUTHOR:
ADDRESSEE:
COPYEE:

MEMO

DOCUMENT	2299	08/00/67	LABEL	2
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:				

DOCUMENT	2300	00/00/00	LABEL	2
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:				

DOCUMENT	2301	07/00/65	LABEL	4
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:				

D-447

4321

TITLE

ORIGIN AND FATE OF THE CHLORODIOXINS, ABSTRACTS FROM A SYMPOSIUM AT THE 162ND NATIONAL ACS MEETING, WASHINGTON, D.C., 710916 TO 710917 (OC 710005-3)(715305).

PIERCE JK

BOER FP
JOHNSON JE
PAPENFUSS RR
SPARSCHU GL

CRUMMETT WB
JOHNSON RL
PETERSON LI
STEHL RH

KURON WEED AND BRUSH KILLER, EPA REG 464-162, YOUR LETTER OF 730501.

KENAGA EE
SOUTHWICK L

LENG ML

COLOR SLIDE PRINTS TAKEN BY DOCTOR WAYNE BINNS DURING INSPECTION IN FEBRUARY, 1970 (700200) AT HERBICIDE SPRAY PROJECT AREA NEAR GLOBE, AZ.

COLOR SLIDE PRINTS OF BILLIE AND WILLARD SHOECRAFT PROPERTY ON ICE HOUSE CANYON ROAD SOUTH OF GLOBE, AZ (TAKEN BY DOCTOR CHESTER R LEATHERS ON DATES INDICATED).

KURON (WEED AND BRUSH KILLER).

ESTERON 99 (CONCENTRATE WEED KILLER).

KURON BRUSH KILLER.

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2308	05/13/75	REPORT	48

AUTHOR:	DOW	GEHRING PJ
	ROSE JQ	WENTZLER TH
ADDRESSEE:		
COPYEE:	DOW	BLAIR EH
	FREVEL LK	GORDON HL
	KILIAN DJ	KIMMEL CE
	MCCOLLISTER DD	MOOLENAAR RJ
	PULLIN T	RINZEMA L

DOCUMENT	2309	04/20/71	REPORT	1
AUTHOR:	DOW		GEHRING PJ	
ADDRESSEE:				
COPYEE:	DOW		GEHRING PJ	
	BLAIR EH		BURGERT BE	
	GORDON HL		GORING CA	
	JOHNSON JE		KILIAN DJ	
	MCCOLLISTER DD		MCINTYRE MM	
	ROWE VK		SCHWARZ AJ	

DOCUMENT	2310	02/09/76	REPORT	19
AUTHOR:	BLAU GE		BRAUN WH	
	LEBEAU JE		SAUERHOFF MW	
ADDRESSEE:				
COPYEE:	BRAUN WH		DOW	
	SAUERHOFF MW		BLAIR EH	
	DAVIDSON JH		DISHBURGER HJ	
	GORDON HL		GORING CA	
	HEFNER RE		HINMAN CW	
	JENSEN DJ		JERSEY GC	
	KOCIBA RJ		LANGNER R	
	MCKENNA MJ		MULLISON WR	
	OLSON KJ		OLSON RD	
	RAMPY LW		RAMSEY JC	
	SCHARNWEBER HC		SCHOBER AE	
	SOUTHWICK L		SWANK MG	
	WATANABE PG		WATSON AJ	

DOCUMENT	2311	12/11/70	REPORT	1
AUTHOR:	ANILINE O		DOW	
ADDRESSEE:				
COPYEE:	ANILINE O		DOW	
	BURGERT BE		CLEGG DH	
	GORDON HL		GORING CA	
	KILIAN DJ		KIMMEL CE	
	MCCOLLISTER DD		MCINTYRE HH	
	ROBINSON VB		SCHWARZ AJ	

24418

4322

TITLE

THE FATE OF TCDD FOLLOWING SINGLE AND REPEATED ORAL DOSES TO THE RAT (NBK 110)(PRESENTED TO SOCIETY OF TOX, FOURTEENTH ANNUAL MEETING, 750300, WILLIAMSBURG, VA).

HUMMEL RA

RAMSEY JC

BURGERT BE
HOLDER BB
LEAVITT FC
OLSON RD
ROBINSON VB

CARLETON RE
HORVATH B
MACCUTCHEON SM
PRUITT ME
SHAVER RJ

CHLORACNE STUDY CONDUCTED ON TCDD (NB T36 25-66681-17)(CRI 71-1805).
NORRIS JM

NORRIS JM
EDWARDS H
HOLDER BB
KIMMEL CE
PITCHFORTH L
SILVERSTEIN L

AXE ED
FREVEL LK
HORVATH B
MACCUTCHEON SM
ROBINSON VB

THE FATE OF 24D FOLLOWING ORAL ADMINISTRATION TO MAN(K-002372).
DOW GEHRING PJ

GEHRING PJ
BROWN S
FIKE R
GROVES KO
HOYLE HR
JOHNSTON CV
LENG ML
MURRAY FJ
PULLIN T
RAPP DE
SCHWETZ BA
THOMPSON CF
WOLF MA

LEBEAU JE
DANIEL RL
GETZENDANER ME
HEEG JF
HUMISTON CG
KILIAN DJ
MCCOLLISTER DD
NORRIS JM
QUAST JF
RONE VK
SCORY LK
TORKELSON TR
YOUNG JD

CHLORACNE STUDY CONDUCTED ON HEXACHLORODIBENZO-P-DIOXIN (BC T36.25-84763-3).

GEHRING PJ

NORRIS JM

BARTON J
EDWARDS H
HOLDER BB
LLOYD BH
MORSE D

BLAIR EH
FREVEL LK
JOHNSON JE
MACCUTCHEON SM
PITCHFORTH L

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2312	11/03/70	REPORT	1
AUTHOR:	ANILINE O		DOW	
ADDRESSEE:				
COPYEE:	ANILINE O		DOW	
	BURGERT BE		CLEGG DH	
	GORDON HL		GORING CA	
	KILIAN DJ		KIMMEL CE	
	MCCOLLISTER DD		MCINTYRE HH	
	ROBINSON VB		SCHWARZ AJ	
DOCUMENT	2313	09/10/70	REPORT	1
AUTHOR:	DOW		GEHRING PJ	
ADDRESSEE:				
COPYEE:	DOW		PLEPYS RA	
	BURGERT BE		CLEGG DH	
	GORDON HL		GORING CA	
	KILIAN DJ		KIMMEL CE	
	MCCOLLISTER DD		MCINTYRE HH	
	ROBINSON VB		SCHWARZ AJ	
DOCUMENT	2314	11/04/70	REPORT	1
AUTHOR:	ANILINE O		DOW	
ADDRESSEE:				
COPYEE:	ANILINE O		DOW	
	BURGERT BE		CLEGG DH	
	FREVEL LK		GORDON HL	
	JOHNSON JE		KILIAN DJ	
	MACCUTCHEON SM		MCCOLLISTER DD	
	PITCHFORTH BH		ROBINSON VB	
DOCUMENT	2315	02/19/71	LETTER	1
AUTHOR:	DOW		GEHRING PJ	
ADDRESSEE:	DOW		GORDON HL	
	KRAMER CG		ROWE VK	
COPYEE:				
DOCUMENT	2316	09/02/70	REPORT	25
AUTHOR:	DOW		VK	
	BOURNE JE		GEHRING PJ	
ADDRESSEE:				
COPYEE:	BOURNE JE		GEHRING PJ	
	NORRIS JM		SHADOFF L	

D.4419

4323

TITLE

CHLORACNE STUDIES CONDUCTED ON HEXACHLORODIBENZO-P-DIOXIN (BC T36.25-84763-2).

GEHRING PJ

NORRIS JM

BARTON J
EDWARDS H
HOLDER BB
LLOYD BH
MORSE D

BLAIR EH
FREVEL LK
JOHNSON JE
MACCUTCHEON SM
PITCHFORTH L

CHLORACNE STUDIES CONDUCTED ON HEXACHLORO-DIBENZO-P-DIOXIN (BC T36.25-84763-1).

NORRIS JM

PLEPYS RA

BARTON J
EDWARDS H
HOLDER BB
LLOYD BH
MORSE D

BLAIR EH
FREVEL LK
JOHNSON JE
MACCUTCHEON SM
PITCHFORTH L

ACUTE ORAL LETHALITY AND CHLORACNE STUDIES CONDUCTED ON OCTOCHLORODIBENZO-P-DIOXIN (BC T36 25-54762-4).

GEHRING PJ

NORRIS JM

BARTON J
EDWARDS H
GORING CA
KIMMEL CE
MCINTYRE HH
ROWE VK

BLAIR EH
FERNANDEZ JB
HOLDER BB
LLOYD BH
MORSE D
SCHWARZ AJ

SUGGESTED PROTOCOL FOR THE CONSUMPTION OF 24D AND 245T CTTL.

HINMAN CW

JOHNSON JE

TCDD.

DOW
NORRIS JM

SPARSCHU GL

KOCIBA RJ
SPARSCHU GL

MUELDER WW

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2317	08/20/79	REPORT	41

AUTHOR:	DOW	GEHRING PJ
	SHARMA RP	SHARMA RP
	SCHNETZ BA	DOW
ADDRESSEE:		
COPYEE:	DOW	GEHRING PJ
	BARNARD S	BETSO JE
	BUREK JD	CRUMMETT WB
	DELINE DD	DISHBURGER HJ
	HEFNER RE	HENRY H
	JOHNSON RL	LANGNER RR
	LENG ML	MANSTON J
	NORRIS JM	OLSON RD
	RINZEMA LC	ROWE VK
	THOMPSON DJ	TRAYNOR MJ
	WATANABE PG	

DOCUMENT	2318	08/20/79	REPORT	22

AUTHOR:	DOW	GEHRING PJ
	SHARMA RP	SHARMA RP
	SCHNETZ B	DOW
ADDRESSEE:		
COPYEE:	DOW	GEHRING PJ
	BARNARD S	BETSO JE
	BUREK JD	CRUMMETT WB
	DELINE DD	DISHBURGER HJ
	HEFNER RE	HOLDER BB
	LANGNER RR	LAPE RL
	MANSTON J	MCCOLLISTER DD
	OLSON RD	RAMSEY JC
	ROWE VK	SCHARNWEBER HC
	TRAYNOR MJ	ULRICH JR

DOCUMENT	2319	02/27/78	REPORT	172

AUTHOR:	BLOGG CD	DOW
	MURRAY FJ	NITSCHKE DD
	SMITH FA	
ADDRESSEE:		
COPYEE:	BLOGG CD	DOW
	MURRAY FJ	RAO KS
	BARNARD S	BLAIR EH
	DAVIDSON JH	DAVIS RA
	GEHRING PJ	GETZENDANER ME
	HENRY H	HOLDER BB
	KOCIBA RJ	LANGNER RR
	LENG ML	MANSTON J
	MURRAY JS	NITSCHKE KD
	PILNY MK	RAMSEY JC
	SCHARNWEBER HC	SCHLACHTER MM
	ULRICH JR	VERSCHUUREN HG

D.4420

4324

TITLE

**IMMUNOTOXICOLOGIC STUDIES INVOLVING TCDD IN MICE AND RABBITS
(REPORT HET-K-66681-(36))(CRI 795145).**

KOCIBA RJ
KOCIBA RJ

SCHWETZ BA
GEHRING PJ

KOCIBA RJ
BLAIR EH
DAVIDSON JD
GETZENDANER ME
HOLDER BB
LAPE RL
MCCOLLISTER DD
RAMSEY JC
SCALACHTER MM
ULRICH JR

SCHWETZ BA
BLOGG CD
DAVIS RA
GLEESON JG
JOHNS DB
LEBEAU JE
NITSCHKE KD
RAO KS
SCHARNWEBER HC
VRANISH SR

**REVERSAL OF IMMUNOLOGIC TOXICOLOGIC EFFECTS OF A SINGLE EXPOSURE OF
TCDD IN MICE (R&D REPORTS)(794930).**

KOCIBA RJ
KOCIBA RJ

SCHWETZ BA
GEHRING PJ

KOCIBA RJ
BLAIR EH
DAVIDSON JH
GETZENDANER ME
JOHNS DB
LEBEAU JE
NITSCHKE KD
RAO KS
SCHLACHTER MM
VERSCHUUREN HG

SCHWETZ BA
BLOGG CD
DAVIS RA
GLEESON JG
JOHNSON RL
LENG ML
NORRIS JM
RINZEMA LC
THOMPSON DJ
WATANABE PG

**THREE GENERATION REPRODUCTION STUDY OF RATS INGESTING TCDD (R&D
REPORT)(HET K-66681-(29))(CRI 783984).**

HUMISTON CG
RAO KS

JOHN JA
SCHWETZ BA

HUMISTON CG
SCHWETZ BA
CRAWFORD AA
DELINE DD
GLEESON JG
JOHNS DB
LAPE RL
MCCOLLISTER DD
NORRIS JM
RINZEMA L
THOMPSON DJ
WATANABE PG

JOHN JA
SMITH FA
CRUMMETT WB
DISHBURGER HJ
HEFNER RE
JOHNSON RL
LEBEAU JE
MURPHY PM
OLSON RD
ROWE VK
TRAYNOR MJ

NUMBER	DATE	TYPE	PAGES
DOCUMENT 2320	00/00/73	NEWS	15
AUTHOR: DOW NORRIS JM		REPORT EMERSON JL ROWE VK	
ADDRESSEE: COPYEE:			
DOCUMENT 2321	09/00/73	REPORT	14
AUTHOR: DOW NORRIS JM		EMERSON JL ROWE VK	
ADDRESSEE: COPYEE:			
DOCUMENT 2322	00/00/73	NEWS	11
AUTHOR: DOW ROWE VK		REPORT GEHRING PJ SCHWETZ BA	
ADDRESSEE: COPYEE:			
DOCUMENT 2323	11/00/73	REPORT	11
AUTHOR: DOW ROWE VK		GEHRING PJ SCHWETZ BA	
ADDRESSEE: COPYEE:			
DOCUMENT 2324	01/16/76	ABSTRACT	1
AUTHOR: DOW SMITH FA		GEHRING PJ	
ADDRESSEE: COPYEE:			
DOW CRUMMETT WB		BLAIR EH	
HEFNER RE		DAVIDSON JH	
JOHNSON JE		HOLDER BB	
KILIAN DJ		JOHNSON RL	
LEAVITT FC		KIMMEL CE	
MINTZ MJ		LENG ML	
PARSEY ES		MOOLENAAR RJ	
ROBINSON VB		PRUITT ME	
THOMPSON DJ		ROWE VK	
		WARNER SB	

14421

4325

TITLE

TOXICOLOGY OF CHLORINATED DIBENZO-P-DIOXINS (ADVANCES IN CHEMISTRY
SERIES(120) 721024).

GEHRING PJ
SCHWETZ BA

GERBIG CG
SPARSCHU GL

TOXICOLOGY OF CHLORINATED DIBENZO-P-DIOXINS (ENVIRONMENTAL HEALTH
PERSPECTIVES (5), 730900).

GEHRING PJ
SCHWETZ BA

GERBIG CG
SPARSCHU GL

THE FATE OF 245T FOLLOWING ORAL ADMINISTRATION TO MAN (TOX &
APPLIED PHARMACOLOGY 26(3), 352-361).

KRAMER CG

ROSE JQ

THE FATE OF 245T FOLLOWING ORAL ADMINISTRATION TO MAN (JOUR OF TOX
AND APPLIED PHARMACOLOGY 26(3), 352-361).

KRAMER CG

ROSE JQ

TERATOGENICITY OF TCDD IN CF-1 MICE(TOX RES LAB).

NITSCHKE KD

SCHWETZ BA

BURGERT BE
DISHBURGER HJ
HORVATH B
JOHNSTON RV
KOCIBA RJ
LYNN GE
MUELDER W
PULLIN T
SCHARNWEBER HC
WESSEL MR

CRI
GORDON HL
HOUSE RJ
KAYE SCHOLER
LANGNER RR
MCCOLLISTER DD
OLSON RD
RINZEMA L
SPENCER HC
YATES WM

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2325	08/24/71	ABSTRACT	1

AUTHOR:	DOW	GEHRING PJ
	SPARSCHU GL	
ADDRESSEE:		
COPYEE:	DOW	GEHRING PJ
	BLAIR EH	BURGERT BE
	GORDON HL	GORING CA
	JOHNSON JE	KILIAN DJ
	MCCOLLISTER DD	MCINTYRE HH
	SCHWARZ AJ	SHAVER RJ

DOCUMENT	2326	02/27/78	ABSTRACT	173

		REPORT
AUTHOR:	BLOGG CD	DOW
	KOCIBA RJ	MURRAY FJ
	SCHWETZ BA	SMITH FA
ADDRESSEE:		
COPYEE:	BLOGG CD	DOW
	KOCIBA RJ	MURRAY FJ
	SMITH FA	AXE RD
	BEARDEN CR	BLAIR EH
	BROWER HH	BUREK JD
	CAPUTO R	CARLETON RE
	CRUMMETT WB	DAIGRE GW
	DAVIS RA	DEGESERO RD
	ENGIBOUS DL	GEHRING PJ
	GRAHAM DL	GRIESS GA
	HENRY H	HOERGER FD
	HYDE MA	JACKSON L
	JOHNSON RL	JOHNSTON RV
	KIMMEL CE	LANGNER RR
	LEBEAU JE	LENG ML
	MACGOWAN CF	MACKEY JC
	MCCOLLISTER DD	MCFEDRIES R JR
	MOOLENAAR RJ	MOORE JH
	MURRAY N	NICHOLS JL
	NOLAN RJ	NORRIS JM
	OLSON KJ	OLSON RD
	PRUITT ME	PUMPELLY CT
	RAMPY LW	RAMSEY JC
	ROBERTS DJ	ROBINSON VB
	SCHAFER AW	SCHARNWIEBER HC
	SERCU CL	SHAVER RJ
	THOMPSON DJ	TODD LM
	VERSCHUUREN HG	VRANISH SR
	WATANABE PG	YOCUM RH

14422

4326

TITLE

THE EFFECTS OF 24D AND ESTERS OF 24D ON RAT EMBRYONAL, FETAL AND
NEONATAL GROWTH AND DEVELOPMENT.

LYNN GE

SCHWETZ BA

LYNN GE
EDWARDS H
HOLDER BB
KIMMEL LE
PITCHFORTH L
SILVERSTEIN L

AXE FD
FREVEL LK
HORVATH B
MACCUTCHEON SM
ROBINSON VB
WILLIAMS CS

THREE GENERATION REPRODUCTION STUDY OF RATS INGESTING TCDD (HET
K-66681-(29)).

HUMISTON CG
NITSCHKE DD

JOHN JA
RAO KS

HUMISTON CG
RAO KS
BARNARD S
BRAUN WH
BURGERT BE
CARLSON RG
DANIEL RL
DELINE DD
GETZENDANER ME
HALPHEN CE
HOLDER BB
JERSEY GC
KELLY ME
LAPE RL
LIU G
MANSTON J
MCINTIRE OR
MURPHY PM
NIELSEN WH
NOWAK RM
PTLNY MK
QUAST JF
REUVERS H
ROGERS WA
SCHLACHTER MM
SHEETZ DP
TRAYNOR MJ
WACHOB WW
YOUNG DJ

JOHN JA
SCHWETZ BA
BEAMER WH
BRAUNLICH FH
CALDWELL CE
CRAWFORD AA
DAVIDSON JD
DISHBURGER HJ
GLEESON JG
HEFNER RE
HORVATH BS
JOHNS DB
KILIAN DJ
LEAVITT FC
MAASBERG AT
MCCLURE HH
MCKENNA MJ
MURRAY JS
NITSCHKE KD
NUMMY WR
POTTS WJ
RABOLD CP
RINZEMA L
ROWE VK
SCHNEIDER JA
THOMPSON CF
ULRICH JR
WARNER SD
YOUNG JD

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2327	06/21/73	REPORT	2
AUTHOR:	DOW		SCHWETZ BA	
ADDRESSEE:	DOW		LENG ML	
COPYEE:	GEHRING PJ		NORRIS JM	
DOCUMENT	2328	11/21/73	REPORT	16
AUTHOR:	DOW		SCHWETZ BA	
ADDRESSEE:	DOW			
COPYEE:	BLAIR EH		BURGERT BE	
	GEHRING PJ		GORDON HL	
	HORVATH BS		HOUSE RJ	
	LEAVITT FC		MACCUTCHEON SM	
	MOOLENAAR RJ		OLSON RD	
	ROBINSON VB		SHAVER RJ	
DOCUMENT	2329	11/21/73	ABSTRACT	1
AUTHOR:	DOW		SCHWETZ BA	
ADDRESSEE:	DOW			
COPYEE:	BLAIR EH		BURGERT BE	
	GEHRING PJ		GORDON HL	
	HORVATH BS		HOUSE RJ	
	LEAVITT FC		MACCUTCHEON SM	
	MOOLENAAR FJ		OLSON RD	
	ROBINSON VB		SHAVER RJ	
DOCUMENT	2330	02/25/74	PRESENT	101
AUTHOR:	DOW		SCHWETZ BA	
ADDRESSEE:	DOW			
COPYEE:				
DOCUMENT	2331	11/21/73	REPORT	17
AUTHOR:	DOW		SCHWETZ BA	
ADDRESSEE:				
COPYEE:	BLAIR EH		BURGET BE	
	GEHRING PJ		GORDON HL	
	HORVATH B		HOUSE RJ	
	LEAVITT FC		LENG ML	
	MCINTYRE HH		MOOLENAAR RJ	
	RINZEMA L		ROBINSON VB	
DOCUMENT	2332	00/00/78	REPORT	3
AUTHOR:	COOK RR		DOW	
	TOWNSEND JC			
ADDRESSEE:				
COPYEE:				

1.4423
4327

TITLE

LETTER REPORT: LD50 OF TCDD IN GUINEA PIGS.

ROWE VK

PLACENTAL TRANSFER OF 24D AND 245T IN PREGNANT RATS.

DOW

EDWARDS H
GORING CA
KILIAN DJ
MCCOLLISTER DD
PRUITT ME

FREVEL LK
HOLDER BB
KIMMEL CE
MCINTYRE HH
RINZEMA LC

PLACENTAL TRANSFER OF 24D AND 245T IN PREGNANT RATS.

DOW

EDWARDS H
GORING CA
KILIAN D
MCCOLLISTER DD
PRUITT ME
DOW

FREVEL LK
HOLDER BB
KIMMEL CE
MCINTYRE HH
RINZEMA LC

TESTIMONY FOR 245T HEARING: TERATOGENIC POTENTIAL OF 245T AND
CHLORINATED DIBENZO-P-DIOXINS.

PLACENTAL TRANSFER OF 24D AND 245T IN PREGNANT RATS NBT
23.14-11-(16) NBT 23.14-23-(24).

EDWARDS H
GORING CA
KILIAN DJ
MCCOLLISTER DD
OLSON RD
SHAVER RJ

FREVEL LK
HOLDER BB
KIMMEL CE
MCCUTCHEON SM
PRUITT ME

MORTALITY EXPERIENCE OF EMPLOYEES EXPOSED TO TCDD.
OTT MG SILVERSTEIN LG

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2333	11/12/59	REPORT	10
AUTHOR:	COULTER LL HILTON HF MONROE E		DAVIDSON JH I APF PUBLIC SERVICE OF I	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2334	07/00/71	REPORT	7
AUTHOR:	DOW		JOHNSON JE	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2335	01/10/55	REPORT	6
AUTHOR:	DOW		JOHNSON JE	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2336	07/01/52	REPORT	13
AUTHOR:	DOW		JOHNSON JE	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2337	00/00/00	REPORT	12
AUTHOR:	DOW		JOHNSON JE	
ADDRESSEE:				
COPYEE:	HINMAN CW			
DOCUMENT	2338	03/27/72	TECH	2
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:				
DOCUMENT	2339	01/08/80	TECH	3
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:				
DOCUMENT	2340	07/01/78	AUTH	4
			TECH	
AUTHOR:	ALBRECHT KEELER P MCCOLLISTER DD STEARNS WJ WOODS CD		DOW KEENEY N MULLISON WR TAITS SR	
ADDRESSEE:				
COPYEE:				

TITLE

PRELIMINARY OBSERVATIONS ON THE USE OF SILVEX GRANULES FOR BRUSH
CONTROL ON RIGHTS OF WAY (109824).

DOW HAERTL EJ
I JLS JOHNSON JE

SAFETY IN THE DEVELOPMENT OF HERBICIDES(DTE 27(11), 1-7).

THE RESPONSE OF COTTON TO LOW RATES OF 24D, 245T, MCP AND SILVEX.
WATSON AJ

WEED CONTROL IN SOYBEANS (REPORT 314).
LYNN GE WATSON AJ

HUMAN TOLERANCE OF 24D AND 245T.

ESTERON 245 BRUSH KILLER (MATERIAL SAFETY DATA SHEET).

ESTERON 245 BRUSH AND WEED KILLER(PRODUCT CODE 28749)(MATERIAL
SAFETY DATA SHEET).

ESTERON 245 BRUSH AND WEED KILLER(PRODUCT CODE 28749)(MATERIAL
SAFETY DATA SHEET).

GOLD W
KING EJ
SMITH LL
VACARRO J

JANTZ OK
LANHAM J
SPEER LH
WOLF MA

NUMBER	DATE	TYPE	PAGES
DOCUMENT 2341	04/01/78	TECH	2
AUTHOR: DOW ADDRESSEE: COPYEE:			
DOCUMENT 2342	12/01/77	TECH	2
AUTHOR: DOW ADDRESSEE: COPYEE:			
DOCUMENT 2343	03/21/79	LETTER	2
AUTHOR: DOW		TALCOTT AT	
ADDRESSEE: ST DEPT OF AG			
COPYEE:			
DOCUMENT 2344	08/27/82	TECH	1
AUTHOR: DOW ADDRESSEE: COPYEE:			
DOCUMENT 2345	02/09/76	REPORT	16
AUTHOR: DOW		WARREN LE	
ADDRESSEE:			
COPYEE: DOW		WILLIAMS CS	
GERONIMO J		GORING CA	
HEFNER RE		LINCE M	
MOSS RD		REGAN JB	
WRIGHT WG			
DOCUMENT 2346	05/16/73	REPORT	3
AUTHOR: DOW ADDRESSEE: COPYEE:			
DOCUMENT 2347	03/31/76	REPORT	11
AUTHOR: ADDRESSEE: COPYEE:			
BYRD BC		COLBY RW	
GERONIMO J		GORING CA	
HEFNER RE		HOLMSEM TW	
MOSS RD		PRUITT ME	
RYDER JC		SAUNDERS ES	
WILLIAMS CS		WRIGHT WG	

D.4425

4329

TITLE

ESTERON 245 BRUSH AND WEED KILLER (PRODUCT CODE 28749) (MATERIAL DATA SAFETY SHEET).

ESTERON 245 BRUSH AND WEED KILLER (PRODUCT CODE 28749) (MATERIAL SAFETY DATA SHEET).

SUPPLEMENTAL LABELING 245T AND SILVEX PRODUCTS.

EMERGENCY RESPONSE INFORMATION SHEET. ESTERON 245 BRUSH KILLER.

CONTROL OF WOODY PLANT BY BASAL APPLICATIONS OF TRICLOPYR, PICLORAM AND 245T (REPORT GH-P 940) (761266).
WILLIAMS CS

BYRD BC
GRUMBLES JB
LUDWIG PD
RITTY PM

FEARS RD
HANSON RG
MCCOLLISTER DD
RYDER JC

ESTERON BRUSH KILLER (REGISTRATION STATUS REPORT).

EVALUATION OF TORDON 155 MIXTURE AND TRICLOPYR (M-4021) APPLIED AS A BASAL APPLICATION FOR WOODY PLANT CONTROL IN WS AND MN IN 740000.

DOW
GRUMBLES JB
LICHY CT
REGAN JB
SMITH LL

FEARS RD
HANSON RG
MCCOLLISTER DD
RITTY PM
WARREN LE

	NUMBER	DATE	TYPE	PAGES
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	2348 DOW	03/18/78	REPORT FISHBECK WA	1
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	2349 DOW	03/22/79	REPORT	2
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	2350 CHENOWETH MB	05/31/78	REPORT DOW	4
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	2351 DOW	08/09/71	REPORT NORRIS JM	2
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	2352 DOW EPA ROSS RT	03/22/76	LETTER REPORT LENG ML MOUNTFORT RF	2
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	2353 NORRIS JM KEELER P CALDWELL B	08/08/81	MEDREC MEMO TELECON DOW LANHAM JM LEE B	10
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	2354 DOW	06/24/80	REPORT TECH KEELER P	2
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	2355 MAYER A	10/21/80	NEWS EDMONTON JOUR	1

D.4426

TITLE

ESTERON 245 BRUSH KILLER (MEDICAL INFO).
KEELER P

ESTERON 245 BRUSH KILLER (EMERGENCY RESPONSE INFORMATION SHEET).

ESTERON BRUSHKILLER (MEDICAL INFORMATION)(M03507).
FISHBECK WA KEELER P

ESTERON BRUSH KILLER M3507.

PESTICIDE PETITION 8F0675 FOOD ADDITIVE PETITION 2H5001.

EXPOSURE TO ESTERON 245 & MEDICAL INFORMATION CTTL.

BLACKHURST B	GONDEK
WEED JM	HOYLE HR
ZWEIGLE R	KOLESAR

TOXICOLOGY ANTICIPATED HUMAN RESPONSE ESTERON 245 BRUSH & WEED
KILLER (M 3506)(MEDICAL INFORMATION).

LANHAM JM

FARM CHEMICALS SAFETY TESTS FAULTY (EDMONTON JOUR).

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2356	00/00/79	LEGAL	44
AUTHOR:	GIVAUDAN		REPORT	
	SAMBETH J		HOFFMANN LAROCHE	
ADDRESSEE:			WIPF HK	
COPYEE:				
DOCUMENT	2357	10/25/80	NEWS	1
AUTHOR:	HAMILTON SPECTATOR		STEWART B	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2358	08/22/78	REPORT	21
AUTHOR:	BRAUN WH		DOW	
	SMITH FA			
ADDRESSEE:				
COPYEE:	BRAUN WH		DOW	
	BLAIR EH		BUREK JD	
	DAVIDSON JH		DAVIS RA	
	GEHRING PJ		GETZENDANER ME	
	HENRY H		HOLDER BB	
	JOHNS DB		JOHNSON RL	
	LEBEAU JE		LENG ML	
	MCKENNA MJ		MURPHY FJ	
	OLSON RD		QUAST JF	
	RINZEMA L		ROWE VK	
	TRAYNOR MJ		ULRICH JR	
	WATANABE PG		YOUNG JD	
DOCUMENT	2359	01/00/80	REPORT	4
AUTHOR:	DOW		HOLDER BB	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2360	05/00/69	REPORT	8
AUTHOR:	PALMER JS		RADELEFF RD	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2361	00/00/70	REPORT	3
AUTHOR:	LEA & FEBIGER		RADELEFF RD	
ADDRESSEE:				
COPYEE:				

4331

4427

TITLE

THE SEVESO ACCIDENT; ITS NATURE, EXTENT AND CONSEQUENCES (ANN OCCUP
HYG, 22, 327-368).

HOMBERGER E

REGGIANI G

MINISTRY TESTING DEADLY CHEMICAL FOUND IN 24D WEEDKILLER (HAMILTON
SPECTATOR).

TCDD TISSUE DISTRIBUTION AND EXCRETION FOLLOWING A SINGLE ORAL DOSE
IN FEMALE GUINEA PIGS R&D REPORT K-66601-137 (CRI 791735).

HEFNER JG

NOLAN RJ

NOLAN RJ
CRUMMETT WB
DELINE DD
GLEESON JG
HUMISTON CG
LANGNER RR
MANSTON J
MURPHY PM
RAMPY LW
SCHARNWEBER HC
VERSCHUUREN HG

BARNARD S
DAVIDSON JD
DISHBURGER HJ
HEFNER RE
JERSEY GC
LAPE RL
MCCOLLISTER DD
NORRIS JM
RAMSEY JC
SCHWETZ BA
WARNER SD

A MORTALITY ANALYSIS OF EMPLOYEES ENGAGED IN THE MANUFACTURE OF
245T (JOUR OF OCCUPATIONAL MEDICINE 22(1), 47-50).

OLSON RD

OTT MG

THE TOXICITY OF SOME ORGANIC HERBICIDES TO CATTLE, SHEEP AND
CHICKENS (PRODUCTION RES REPORT 106)(SA50.00.01.P1)(PP8F0675).
USDA ARS

SILVEX KURON (VETERINARY TOX, 269-271)(SA50.00.01.P1). (PP8F0675).

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2362	09/10/70	REPORT	18

AUTHOR: DOW
 ADDRESSEE:
 COPYEE: LENG ML

DOCUMENT	2363	00/00/61	REPORT	6
AUTHOR:	MONARCA G		DIVITO G	
ADDRESSEE:				
COPYEE:				

DOCUMENT	2364	01/23/68	REPORT	2
AUTHOR:	KLIGMAN AM		U PA HOSPITAL	
ADDRESSEE:	DOW		ROWE VK	
COPYEE:				

DOCUMENT	2365	04/23/59	REPORT	20
AUTHOR:	DOW		WOLF MA	
ADDRESSEE:				
COPYEE:	DOW		ATHAY RM	
	COLBY RW		ELSHERE D	
	GREENE LM		HAMMER OH	
	JONES GD		KAGY JF	
	LYNN GE		MCCOLLISTER DD	
	STENGER VA		TISDALE WL	

DOCUMENT	2366	12/20/57	REPORT	9
AUTHOR:	DOW		MCCOLLISTER DD	
ADDRESSEE:				
COPYEE:	DOW		ALLINSON RL	
	COLBY RW		COULTER LL	
	GRAY HE		GRFENE LM	
	JONES GD		KAGY JF	
	LYNN GE		MCINTYRE HH	
	SCOLES GW		TISDALE WL	

DOCUMENT	2367	03/25/53	TEST	21
AUTHOR:	DOW		I HCS	
ADDRESSEE:				
COPYEE:				

1.4428

4332

TITLE

PETITION FOR THE ESTABLISHMENT OF TOLERANCES FOR THE PESTICIDE
CHEMICAL 2(245-TRICHLOROPHENOXY) PROPIONIC ACID ON RAW AGRICULTURAL
COMMODITIES (FULL REPORTS OF INVESTIGATIONS MADE WITH RESPECT TO
THE SAFETY OF THE PESTICIDE CHEMICAL 2(245-TRICHLOROPHENOXY)
PROPIONIC ACID (SA50.00.01.P1)(PP8F0675).

ACUTE POISONING FROM WEED KILLER 24D (FOLIA MEDICA 44, 480-485).
UNIV DI PAVITA FOLIA MEDICA

FOLLOW UP INFORMATION ON STUDY OF CHLORACNE BY DR KLIGMAN CTTL.

RESULTS OF RANGE FINDING TOXICOLOGICAL TESTS ON FORRON BRUSH
KILLER(M-1368) (T2.30-123-1).

BARRONS KC
GAY HH
HART A
KILIAN DJ
MCINTYRE HH
VANVALKENBURG W

BOUNDY RH
GRAY HE
HYMAS TA
LUCE EN
PERKINS RP
WRIGHT N

RESULTS OF RANGE FINDING TOXICOLOGICAL TESTS ON INVERTON (BRUSH
KILLER). T2.30-101-1.
OLSON KJ

BESHGETOOR AM
ELSHERE D
HART A
KILIAN DJ
MUSSELL DR
WRIGHT N

BOUNDY RH
GAY HH
HYMAS TA
LUCE EN
PERKINS RP

TOXICITY OF DOW BRUSH KILLER 50-50 (T2.30-28-1).
ROWE VK WOLF MA

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2368	10/29/53	REPORT	7
AUTHOR:	ADAMS EM		DOW	
	OYEN F			
ADDRESSEE:				
COPYEE:	DOW		ALLEN WW	
	BARRONS KC		BESHGETOOR AW	
	DAVIDSON JH		DUTTON WC	
	KAGY JF		LUCE EN	
	PRESCOTT RF		SUNDERLAND WW	
DOCUMENT	2369	04/12/56	TECH	2
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:				
DOCUMENT	2370	04/15/69	REPORT	2
AUTHOR:	BEAUCHAMP RR		DOW	
ADDRESSEE:				
COPYEE:	BEAUCHAMP RR		DOW	
	BLAIR EH		BURGERT DE	
	GORDON HL		HOLDER BB	
	KILIAN DJ		KIMMEL CE	
	MCCOLLISTER DD		MCINTYRE HH	
	SCHWARZ AJ		WRIGHT N	
DOCUMENT	2371	04/17/69	REPORT	6
AUTHOR:	DOW		NORRIS JM	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2372	01/26/60	REPORT	2
AUTHOR:	HOYLE HR		OYEN F	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2373	02/23/60	REPORT	19
AUTHOR:	DOW		OLSON KJ	
ADDRESSEE:				
COPYEE:	DOW		BARRONS KC	
	ELSHERE D		GAY HH	
	HART A		HYMAS TA	
	KILIAN DJ		LUCE EN	
	PERKINS RP		SCOLES GW	
	WRIGHT N			

D.4429

4333

TITLE

RESULTS OF RANGE FINDING TOXICOLOGICAL TESTS ON DOW BRUSH KILLER 50-50.

ESLUNN E

MAXEY JS

ALLINSON RL
BOUNDY RH
GAY HH
LYNN GE
WHITE LC

ALQUIST FN
BRITTON EC
GREENE LM
MACCUTCHEON SM
WRIGHT P

ESTERON BRUSH KILLER OS M-726 (T2.30-71-1).

M-3401 BRUSH KILLER A TORDON ACID FORMULATION (BC T2.MO-3401-2).

NORRIS JM

TORKELSON TR

AXE FD
EDWARDS H
JOHNSON JE
LLOYD BH
MORSE D

BARRON J
ELSHERE D
KAGY JF
MACCUTCHEAN SM
ROBINSON VB

TOXICOLOGICAL PROPERTIES OF M-3401 BRUSH KILLER-A TORDON ACID FORMULATION.

M-1684 ESTERON BRUSH KILLER TYPE (DATA SHEET OF PROPERTIES, HEALTH HAZARDS, AND PRECAUTIONS FOR SAFE HANDLING OF MATERIALS).

OLSON KJ

DOW

RESULTS OF RANGE FINDING TOXICOLOGICAL TESTS ON AGRICULTURAL CHEMICAL FORMULATION M-1684 (ESTERON BRUSH KILLER TYPE).

OYEN F

BOUNDY RH
GREENE LM
JONES GD
LYNN GE
STENGER VA

COLBY RW
HAMMER OH
KAGY JF
MCINTYRE HH
TISDALE WL

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2374	05/06/59	REPORT	26

AUTHOR:	DOW	MCCOLLISTER DD
ADDRESSEE:		
COPYEE:	DOW	BARRONS KC
	ELSHERE D	GAY HH
	HAMMER OH	HART A
	KAGY JF	KILIAN DJ
	MCINTYRE HH	PERKINS RP
	VANVALKENBURG JW	WRIGHT N

DOCUMENT	2375	07/02/56	REPORT	21

AUTHOR:	DOW	MCCOLLISTER DD
ADDRESSEE:		
COPYEE:	DOW	ALLINSON RL
	BESHGETOOR AW	BOUNDY RH
	ELSHERE D	GAY HH
	KAGY JF	KELLY JA
	LYNN GE	MACCUTCHEON SM

DOCUMENT	2376	10/30/53	REPORT	28

AUTHOR:	ADAMS EM	OYEN F
ADDRESSEE:		
COPYEE:	ALLEN WW	ALLINSON RL
	BESHGETOOR AW	BOUNDY RH
	DOW	DUTTON WC
	KAGY JF	LUCE EN
	PRESCOTT RF	SUNDERLAND WW

DOCUMENT	2377	00/00/78	REPORT	17

AUTHOR:	
ADDRESSEE:	
COPYEE:	

DOCUMENT	2378	11/22/57	REPORT	23

AUTHOR:	DOW	MCCOLLISTER DD
ADDRESSEE:		
COPYEE:	DOW	ALLINSON RL
	BOUNDY RH	COLBY RW
	GAY HH	GREENE LM
	JONES GD	KILIAN DJ
	MCINTYRE HH	MUSSELL DR
	WHITE LC	WRIGHT N

D.4430

4334

TITLE

RESULTS OF RANGE FINDING TOXICOLOGICAL TESTS ON M-1447 AND M-1443
WEED KILLER FORMULATIONS (SIMILAR TO ESTERON 245 OS AND ESTERON
BRUSH KILLER OS RESPECTIVELY).
WOLF MA

BOUNDY RH
GRAY HE
HYMAS TA
LUCE EN
STENGER VA

COLBY RW
GREENE LM
JONES GD
LYNN GE
TISDALE WL

RESULTS OF RANGE FINDING TOXICOLOGICAL TESTS ON ESTERON BRUSH
KILLER O.S. (M-726).
OLSON KJ

ALQUIST FN
BRITTON EC
GREENE LM
KILIAN DJ
SUNDERLAND WW

BARRONS KC
COLBY RW
HART A
LUCE EN
WRIGHT N

RESULTS OF RANGE FINDING TOXICOLOGICAL TESTS ON DOW BRUSH KILLER T.

ALQUIST FN
BRITTON EC
GAY HH
LYNN GE
WHITE L

BARRONS KC
DAVIDSON JH
GREENE LM
MACCUTCHEON SM
WRIGHT P

AN EVALUATION OF 24D DATA.

RESULTS OF RANGE FINDING TOXICOLOGICAL TESTS ON BRUSH KILLER X,
WEED KILLER X, AND BRUSH KILLER TX.
OLSON KJ

ATHAY RM
DOSSER RC
HART A
LUCE EN
PERKINS RP

BESHGETOOR AW
ELSHERE D
HYMAS TA
MARTIN D
TISDALE WL

NUMBER	DATE	TYPE	PAGES
DOCUMENT 2379	01/22/59	TECH	2
AUTHOR: DOW ADDRESSEE: COPYEE: HOYLE HR			
DOCUMENT 2380	12/27/61	TECH	2
AUTHOR: DOW ADDRESSEE: OLSON KJ COPYEE: HOYLE HR OYEN F			
DOCUMENT 2381	07/06/79	REPORT	38
AUTHOR: BOHL RW ADDRESSEE: DAVEY KF COPYEE: DOW HEINZE BA MELCHER RO RAMPY BRADLEY TD KMETKO MOREHOUSE DS RAPP			
DOCUMENT 2382	12/30/81	MEDREC	3
AUTHOR: DOW LANHAM JM ADDRESSEE: COPYEE: KEELER P			
DOCUMENT 2383	11/29/53	REPORT	7
AUTHOR: DOW ADDRESSEE: OYEN F COPYEE: ADAMS EM BARRONS KC DAVIDSON JH KAGY JF PRESCOTT RF ALLEN WW BESHGETOOR AW DUTTON WC LUCE EN SUNDERLAND WW			
DOCUMENT 2384	01/10/78	REPORT	7
AUTHOR: ARSTILA AU ADDRESSEE: COPYEE: SORVARI TE			

154431

4335

T1 E

FORRON BRUSH KILLER (DATA SHEET OF PROPERTIES HEALTH HAZARDS AND
PRECAUTIONS FOR SAFE HANDLING OF MATERIALS).
MCCOLLISTER DD WOLF MA

SILVEX ACID M-2121. DATA SHEET OF PROPERTIES, HEALTH HAZARDS, AND
PRECAUTIONS FOR SAFE HANDLING OF MATERIALS.

COMPREHENSIVE SURVEY OF EMPLOYEES EXPOSURES TO AIRBORNE
CONTAMINANTS IN THE MI DIV 24D PLANT, 489 BUILDING, 771000 TO
790300 (HEH23.14-11-2(8)).
DOW

BUZZELLI DT
KOLESAR RC
OLSON RD
SCHNEIDER EJ

DERSNAH BE
LANGNER RR
OWEN PW
SILVERSTEIN

MEDICAL INFORMATION ON ESTERON 245 CTTL.
FISHBECK WA SCHARNWEBER HC

RESULTS OF RANGE FINDING TOXICOLOGICAL TESTS ON DOW BRUSH KILLER T.

ALLINSON RL
BOUNDY RH
GAY HH
LYNN GE
WHITE L

ALQUIST FN
BRITTON EC
GREENE LN
MACCUTCHEON SM
WRIGHT P

AN EPIDEMIOLOGICAL FEASIBILITY STUDY ON THE EFFECTS OF TCDD ON
FINNISH FORESTRY, ROAD AND RAILWAY WORKERS (PRELIMINARY
FINDINGS)(IARC MTG ON DIBENZODIOXINS AND DIBENZOFURANS, 780110 TO
780111, LYON, FRANCE).
UNIV OF JYVASKYL FIN

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2385	00/00/00	NEWS	1
AUTHOR:	CANADIAN UNION OF PUBLIC			
ADDRESSEE:				
COPYEE:				
DOCUMENT	2386	10/27/80	NEWS	2
AUTHOR:	CBC RADIO		SAFE S	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2387	10/24/80	MEMO	1
AUTHOR:	CANADIAN AG CHEM ASSN		CHEVALIER J	
ADDRESSEE:	CANADIAN AG CHEM ASSN		BD OF DIRECTORS	
COPYEE:				
DOCUMENT	2388	00/00/00	NEWS	1
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:				
DOCUMENT	2389	10/24/80	NEWS	2
AUTHOR:	DEPT OF AG CAN		ORMROD W	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2390	10/12/73	LETTER	1
AUTHOR:	DOW		MULLISON WR	
ADDRESSEE:	EPA		MOUNTFORT RF	
COPYEE:	HEIN ND		LENG ML	
	STRINGER WM		WATSON AJ	
DOCUMENT	2391	00/00/00	LABEL	2
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:				
DOCUMENT	2392	07/11/66	LABEL	1
AUTHOR:				
ADDRESSEE:				
COPYEE:				
DOCUMENT	2393	10/30/80	NEWS	1
AUTHOR:	STEPHENS R		GLOBE AND MAIL	
ADDRESSEE:				
COPYEE:				

TITLE

BEWARE OF THE WEED KILLER 245T AND 245TP (HEALTH & SAFETY ALERT 3).

DIOXIN LEVELS IN 24D AND 245T (CBC 'RADIO NOON').
UNIV OF GUELPH

24D ISSUE.

MEMBERSHIP

PROVINCIAL CNCL EXECUTIV

24D TESTS.

KURON BRUSH KILLER EPA REG 464-162 YOUR LETTER OF 730813.

MCCOLLISTER DD

SOUTHWICK L

KURON BRUSH KILLER.

KURON PROPOSED REVISIONS.

EMPLOYERS WITHHOLD TRUTH ABOUT TOXICS, MD WARNS WORKERS (THE GLOBE
AND MAIL MAIL).

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2394	12/00/79	ABSTRACT	1

AUTHOR: ELO HA
 ADDRESSEE:
 COPYEE:

PRINT
 YLITALO P

DOCUMENT	2395	00/00/77	ABSTRACT	1

AUTHOR: ELO H
 ADDRESSEE:
 COPYEE:

PRINT
 YLITALO P

DOCUMENT	2396	12/00/77	ABSTRACT	1

AUTHOR: AHMED FE
 ADDRESSEE:
 COPYEE:

PRINT
 LEWIS NJ

DOCUMENT	2397	12/00/77	ABSTRACT	1

AUTHOR: YOUNG JF
 ADDRESSEE:
 COPYEE:

PRINT
 HALEY TJ

DOCUMENT	2398	00/00/77	ABSTRACT	1

AUTHOR: PARK J
 ADDRESSEE:
 COPYEE:

PRINT
 DARRIEN I

1.4433

4337

TITLE

DISTRIBUTION OF 2-METHYL-4-CHLOROPHENOXYACETIC ACID AND 24D IN MALE RATS EVIDENCE FOR THE INVOLVEMENT OF THE CENTRAL NERVOUS SYSTEM IN THEIR TOXICITY (TOX APPL PHARMACOL 51(3), 439-446)(THIS IS AN OFFLINE BIBLIOGRAPHIC CITATION LIST GENERATED BY MEDLARS 2 N.L.M.'S NATL INTERACTIVE RETRIEVAL SERVICE).

TOX APPL PHARMACOL

SUBSTANTIAL INCREASE IN THE LEVELS OF CHLOROPHENOXYACETIC ACIDS IN THE CNS OF RATS AS A RESULT OF SEVERE INTOXICATION (ACTA PHARMACOL TOX (KBH) 41(3), 280-284)(THIS IS AN OFFLINE CITATION LIST GENERATED BY MEDLARS 2 N.L.M.'S NATL INTERACTIVE RETRIEVAL SERVICE)

ACTA PHARMACOL TOX

PESTICIDE INDUCED OUABAIN RESISTANT MUTANTS IN CHINESE HAMSTER V79 CELLS (CHEM BIO INTERACT 19(3), 369-374)(THIS IS AN OFFLINE BIBLIOGRAPHIC CITATION LIST GENERATED BY MEDLARS 2 N.L.M.'S NATL INTERACTIVE RETRIEVAL SERVICE).

HART RW

CHEM BIO INTERACT

PHARMACOKINETIC STUDY OF A PATIENT INTOXICATED WITH 24D AND 2-METHOXY-36-DICHLOROBENZOIC ACID (CLIN TOX 11(5), 489-500)(THIS IS AN OFFLINE BIBLIOGRAPHIC CITATION LIST GENERATED BY MEDLARS 2 N.L.M.'S NATL INTERACTIVE RETRIEVAL SERVICE).

CLIN TOX

PHARMACOKINETIC STUDIES IN SEVERE INTOXICATION WITH 24D AND MECOPROP (CLINICAL TOXICOLOGY AMSTERDAM, EXCERPTA MEDICA, 154-155) (W3 EX89 417 1976)(THIS IS AN OFFLINE BIBLIOGRAPHIC CITATION LIST GENERATED BY MEDLARS 2 N.L.M.'S NATL INTERACTIVE RETRIEVAL SERVICE)

PRESCOTT LF

EXCERPTA MEDICA

NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT 2399	12/00/76	ABSTRACT	1	EFFECTS OF 24D (SODIUM SALT) ON REPRODUCTIVE PROCESSES IN MICE (NUOVI ANN IG MICROBIO 27(6), 569-584)(THIS IS AN OFFLINE BIBLIOGRAPHIC CITATION LIST GENERATED BY MEDLARS 2 N.L.M.'S NATL INTERACTIVE RETRIEVAL SERVICES).
AUTHOR:	CENCI P	PRINT	CAVAZZINI G	CORRADINI L
ADDRESSEE:	NUOVI ANN IG MICROBIO			MARCATI F
COPYEE:				
DOCUMENT 2400	00/00/74	ABSTRACT	1	EFFECT OF PRODUCTS OF ORGANOCHLORINE HERBICIDE OF PRODUCTION ON SPECIFIC FUNCTIONS OF THE FEMALE BODY (GIG TR SOSTOYANIA SPETSIFICHESKIKH FUNKTS RAB NEFTEKHIM KHIM PROM STI 187-190).
AUTHOR:	ELINA VA		UFIM INST GIG PROFZABOL	
ADDRESSEE:				
COPYEE:				
DOCUMENT 2401	01/00/80	NEWS	20	ACUTE HUMAN EXPOSURE TO TCDD IN SEVESO, ITALY (JOUR OF TOX AND ENVIRON HEALTH 6(1), 27-43).
AUTHOR:	HOFFMANN LAROCHE	REPORT	REGGIANI G	
ADDRESSEE:				
COPYEE:				
DOCUMENT 2402	02/10/62	NEWS	8	NEW EVIDENCE CONCERNING THE NERVOUS SITE OF ACTION OF A CHEMICAL HERBICIDE CAUSING PROFESSIONAL INTOXICATION (ACTA PHYSIOLOGIA 22, 73-80).
AUTHOR:	DESI I	REPORT	SOS J	NIKOLITS I
ADDRESSEE:	MED UNIV BUDAPEST HUNGAR			INST OF PATHOPHYSIOLOGY
COPYEE:				
DOCUMENT 2403	09/12/68	REPORT	27	PETITIONS FOR THE ESTABLISHMENT OF TOLERANCES ON RAW AGRICULTURAL COMMODITIES FOR THE PESTICIDE CHEMICALS (SUPPLEMENT)(SECTION C; METABOLISM).
AUTHOR:	LENG ML		DOW	
ADDRESSEE:				
COPYEE:				
DOCUMENT 2404	00/00/73	REPORT	7	THERMAL CHEMISTRY OF CHLORINATED PHENOLS CHLORODIOXINS ORIGIN AND FATE (ADVANCES IN CHEMISTRY SERIES (120), 26-32).
AUTHOR:	BRADY TP		BRIGGS PR	DALTON LA
ADDRESSEE:	LANGER HG		SHANNON TW	DOW
COPYEE:				

AUTHOR: KEARNEY PC
ADDRESSEE:
COPYEE:

DOCUMENT 2406 09/18/80 LEGIS

3

SUPPLEMENTAL SUBMISSION OF PHILIP C. KEARNEYS APPENDIX 1 ON BEHALF OF THE SECRETARY OF AGRICULTURE FOR THE U.S. (DOW, ET AL., PETITIONERS)(DOCKET NO. 415, ET AL.)(EPA BEFORE THE ADMINISTRATOR)(PHILIP KEARNEY EXHIBITS).
USDA WENKER JA

AUTHOR: BREINHOLT MM
ADDRESSEE: DOW
COPYEE:

JACKSON TG

DOCUMENT 2407 00/00/00
AUTHOR: LYMAN FL
ADDRESSEE: LAFOLLETTE JOHN
COPYEE:

QUES

14

SYMPTON SILVEX TCDD.

LAFOLLETTE JOHNSON

DOCUMENT 2408 00/00/00
AUTHOR: LYMAN FL
ADDRESSEE:
COPYEE:

REPORT

1

COMMENTS ON SILVEX AND TCDD SYMPTOMS.

DOCUMENT 2409 07/13/83

MEMO

11

AGENT ORANGE TOXICITY; A QUANTITATIVE PERSPECTIVE (HUMAN TOX 1, 31-39).

AUTHOR: STEVENS KM
ADDRESSEE:
COPYEE:

REPORT

STATE UNIV OF NY

DOCUMENT 2410 11/26/77
AUTHOR: FISHER P
ADDRESSEE: LECONCOURS MEDICAL, PARI
COPYEE:

REPORT

18

EMBRYO PROBLEMS POSED BY THE SEVESO ACCIDENT.
LAB OF EMBRYOLOGY PARI TUCHMANNDUPLESSIS H

DOCUMENT 2411 12/21/71
AUTHOR: DOW
ADDRESSEE: DOW
COPYEE: ROWE VK

REPORT

11

FDA TERATOLOGY STUDIES ON 245T AND SILVEX.

MCCOLLISTER DD
GEHRING PJ

LYNN GE

ROBINSON VB

104435

4339

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2412	12/13/76	REPORT	26

AUTHOR: BLAU GE BRAUN WH
 ADDRESSEE: SAUERHOFF MW
 COPYEE:

DOCUMENT	2413	00/00/79	REPORT	18
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:				

DOCUMENT	2414	04/00/73	REPORT	10
AUTHOR:	ERNE K		NORDKVIST M	
ADDRESSEE:				
COPYEE:				

DOCUMENT	2415	00/00/00	REPORT	8

AUTHOR: PALMER JS RADELEFF RD
 ADDRESSEE:
 COPYEE:

DOCUMENT	2416	12/00/80	NEWS	3
AUTHOR:	BIBRA BULLETIN		LAKE BO	
ADDRESSEE:				
COPYEE:				

DOCUMENT	2417	07/28/78	REPORT	10
AUTHOR:	DOW		GANTZ RL	
ADDRESSEE:				
COPYEE:	DOW GARFIELD EL		BRAUN WH LENG ML	

DOCUMENT	2418	03/21/78	REPORT	17
AUTHOR:	DOW		HOLDER BB	
ADDRESSEE:				
COPYEE:				

0.4436
 4340

TITLE

THE FATE OF SILVEX FOLLOWING ORAL ADMINISTRATION TO HUMANS (JOUR OF TOX & ENVIRON HEALTH)(PRESENTED ANNUAL MEETING SOCIETY OF TOX, TORONTO, 770300)(770164).

DOW

GORDON HL

AN EVALUATION OF 24D.

TOXICITY STUDIES WITH PHENOXY HERBICIDES ON REINDEER (HORMOSLYR RESEARCH WITH REINDEER).

THE TOXICOLOGIC EFFECTS OF CERTAIN FUNGICIDES AND HERBICIDES ON SHEEP AND CATTLE (ANNALS NY ACADEMY OF SCIENCES, 729-736)(PETITION FOR THE ESTABLISHMENT OF TOLERANCES FOR THE PESTICIDE CHEMICAL, 245T ON RAW AGRICULTURAL COMMODITIES, SECTION C, FULL REPORTS OF INVESTIGATIONS MADE WITH RESPECT TO THE SAFETY OF THE PESTICIDE CHEMICAL, 245T).

USDA

DIOXIN, INDUCTION OF XENOBIOTIC METABOLISM 2(BIBRA BULLETIN, 503-505).

DETERMINATION OF PHENOXY HERBICIDES IN URINE AND BLOOD SAMPLES FROM 245T PLANT PERSONNEL TWO (ANALYTICAL REPORT, AL 78-50668).

LANGHORST ML

CHENOWETH MB
MCCARTY LP

CRUMMETT WB
SAUNDERS JH

A LONGEVITY SURVEY OF EMPLOYEES EXPOSED TO 245T.
OLSON RD OTT MG

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2419	12/19/78	REPORT	21
AUTHOR:				
ADDRESSEE:				
COPYEE:	DAVIDSON JH JOHNSON R WARREN LE		DOW KOCIBA RJ	
DOCUMENT	2420	11/00/80	NEWS	21
AUTHOR:	HUFF JE SARACCI R		REPORT INTL AGENCY FOR RES TOMATIS L	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2421	01/00/80	NEWS	4
AUTHOR:	DOW		HOLDER BB	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2422	01/28/80	REPORT	3
AUTHOR:	NATL FARMERS UNION			
ADDRESSEE:	COSTLE D		EPA	
COPYEE:				
DOCUMENT	2423	01/00/80	REPORT	4
AUTHOR:	DOW		HOLDER BB	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2424	08/28/78	LETTER	1
AUTHOR:	FOE			
ADDRESSEE:	EPA		JELLENICK S	
COPYEE:				
DOCUMENT	2425	12/00/76	REPORT	5
AUTHOR:	OU LT		SIKKA HC	
ADDRESSEE:				
COPYEE:				

D.4437

4341

TITLE

ASSESSMENT OF HAZARDS ASSOCIATED WITH THE USE OF 245T, 24D AND SILVEX IN REFORESTATION PRACTICES.

HOLDER B
MORGAN A

HOLDER BB
SCHWETZ B

LONG-TERM HAZARDS OF POLYCHLORINATED DIBENZODIOXINS AND POLYCHLORINATED DIBENZOFURANS (ENVIRON HEALTH PERSPECTIVES 36, 221-240).

ON C MOORE JA

NATL TOX PROGRAM

A MORTALITY ANALYSIS OF EMPLOYEES ENGAGED IN THE MANUFACTURE OF 245T (REPRINTED FROM JOURNAL OF OCCUPATIONAL MEDICINE 22(1), 47-50)
OLSON RD OTT MG

RESOLUTION ON CONSOLIDATED HEARINGS ON CANCELLATION OF THE EPA REGISTRATION OF 245T AND SILVEX HERBICIDES (FIFRA DOCKET 415 ET AL)

A MORTALITY ANALYSIS OF EMPLOYEES ENGAGED IN THE MANUFACTURE OF 245T (JOUR OF OCCUPATIONAL MEDICINE 22(1), 47-50).
OLSON RD OTT MG

EPA SHOULD TAKE PUBLIC HEALTH ACTION CTTL.

EXTENSIVE DEGRADATION OF SILVEX BY SYNERGISTIC ACTION OF AQUATIC MICROORGANISMS.
SYRACUSE UNIV RES CORP N

NUMBER	DATE	TYPE	PAGES
DOCUMENT 2426	04/21/72	NEWS REPORT	1
AUTHOR: ADDRESSEE: COPYEE:			
DOCUMENT 2427	11/09/77	LETTER	1
AUTHOR: DOW		MULLISON WR	
ADDRESSEE: EPA		MOUNTFORT RF	
COPYEE: DOW		COOK COL	
DOCUMENT 2428	09/26/78	REPORT	65
AUTHOR: ADDRESSEE: COPYEE:			
DOCUMENT 2429	10/25/71	ABSTRACT	1
AUTHOR: DOW		NORRIS JM	
ADDRESSEE:			
COPYEE: DOW		AXE FD	
EDWARDS H		FREVEL LK	
GORING CA		HOLDER BB	
KILIAN DJ		KIMMEL CE	
MCINTYRE		PITCHFORTH L	
SHAVER RJ		SILVERSTEIN L	
DOCUMENT 2430	03/01/71	AUTH	1
AUTHOR: DOW			
ADDRESSEE:			
COPYEE: DOW		GEHRING PJ	
DOCUMENT 2431	03/19/75	REPORT	1
AUTHOR: DOW		KEELER PA	
ADDRESSEE:			
COPYEE: DOW		VACCARO J	
CARLETON RE		FREVEL LK	
HORVATH B		HUMISTON C	
KOCIBA RJ		LEAVITT FC	
MOOLENAAR		OLSON RD	
RAMPY LW		RINZEMA L	
DOCUMENT 2432	05/11/80	NEWS	1
AUTHOR: BRINEY WF			
ADDRESSEE:			
COPYEE:			

D.4438

4342

TITLE

DOW REDEFINES WORD IT DOESN'T LIKE (SCIENCE 176, 262).

IR4 PETITION 4E1476 REGARDING THE USE OF SILVEX ON CITRUS.

LENG ML

MARKLE GM

REPORT OF THE CONSULTATIVE COUNCIL ON CONGENITAL ABNORMALITIES IN
THE YARRAM DISTRICT.

EYE IRRITATION STUDY ON TCDD (CHEM BIO RES).

BLAIR EH
GEHRING PJ
HORVATH B
MACCUTCHEON SM
ROBINSON VB

BURGERT BE
GORDON HL
JOHNSON JE
MCCOLLISTER DD
SCHWARZ AJ

TCDD (REQUEST FOR PRELIMINARY TOX STUDIES).

I VK

NORRIS JM

WIPE SAMPLES FROM 1803 BUILDING TCDD FEEDING STUDY (TOX PROPERTIES
AND IND HANDLING HAZARDS OF).

OLSON KJ

VACCARO J

BLAIR EH
GORDON HL
KILIAN DJ
MACCUTCHEON SM
PRUITT ME
ROBINSON VB

BURGERT BE
HOLDER BB
KIMMEL CE
MCCOLLISTER DD
PULLIN T
SHAVER RJ

DONT SPRAY POISON (PRESCOTT COURIER 800511).

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2433	05/01/80	NEWS	1
AUTHOR:	HAMMOND	VINDICATOR	MCMAHON BT	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2434	07/10/80	REPORT	6
AUTHOR:	FRIENDS OF THE EARTH		JANSSON E	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2435	00/00/00	ABSTRACT	1
AUTHOR:	GAINES TB		HIGHMAN B	
	UNIV OF AR COL OF MEDICI			
ADDRESSEE:				
COPYEE:				
DOCUMENT	2436	00/00/78	NEWS	12
			REPORT	
AUTHOR:	ENGEL HWB		JANSEN LMV	
	NATL INST OF PUBLIC HEAL		VOS JG	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2437	09/01/80	NEWS	2
AUTHOR:	GRAPEVINE		WRIGHT T	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2438	00/00/77	REPORT	7
AUTHOR:	DEPT OF ONCOLOGY UMEA		HARDELL L	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2439	04/27/78	REPORT	15
AUTHOR:	DOW		GLAS RD	
ADDRESSEE:				
COPYEE:				

D.4439

4343

TITLE

POISON HITS PARISH (HAMMOND VINDICATOR).

PETITION AGAINST THE USE OF 24D BECAUSE OF IS TOXIC NATURE AND HAZARD TO PUBLIC HEALTH CTTL.

RENAL ALKALINE PHOSPHATASE ACTIVITY IN FETAL OFFSPRING OF MATERNAL MICE GIVEN 245T (ABSTRACTS FIFTEENTH ANNUAL MEETING, 145).
NATL CENTER FOR TOX RES SCHUMACHER HJ

STUDIES ON TCDD INDUCED IMMUNE SUPPRESSION AND DECREASED RESISTANCE TO INFECTION, ENDOTOXIN HYPERSENSITIVITY, SERUM ZINC CONCENTRATIONS AND EFFECT OF THYMOSIN TREATMENT (TOX 9, 75-86).

KREEFTENBERG JG

MINDERHOUD A

CONFESSIONS OF AN EXLAWN SPRAYER (GRAPEVINE, 50).

MALIGNANT MESENCHYMAL TUMORS AND EXPOSURE TO PHENOXY ACIDS A CLINICAL OBSERVATION (LAKARTIDNINGEN 74(33), 2753-2754).

DETERMINATION OF RESIDUES OF MCPA TRICLOPYR 24D, 245T AND SILVEX IN BLOOD AND URINE BY ELECTRON CAPTURE GAS CHROMATOGRAPHY.

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2440	09/00/76	NEWS	4
AUTHOR: HONOROF I				
ADDRESSEE:				
COPYEE:				
DOCUMENT	2441	00/00/78	REPORT	13
AUTHOR: BOSSHARDT HP BUSER HR				
SWISS FED RES STATION UNIV OF UMEA				
ADDRESSEE:				
COPYEE:				
DOCUMENT	2442	08/14/80	NEWS	4
AUTHOR: NFPA				
ADDRESSEE:				
COPYEE:				
DOCUMENT	2443	00/00/78	REPORT	28
AUTHOR: AG ENVIRON QUALITY INST BEALL ML JR				
ADDRESSEE:				
COPYEE:				
DOCUMENT	2444	00/00/78	ABSTRACT	1
AUTHOR: ISENSEE AR USDA				
ADDRESSEE:				
COPYEE:				
DOCUMENT	2445	08/24/74	REPORT	1
AUTHOR: DONNELL HD MO DEPT HEALTH AND				
ADDRESSEE:				
COPYEE:				
DOCUMENT	2446	02/07/77	REPORT	8
AUTHOR: RAMEL C				
ADDRESSEE:				
COPYEE:				

D4440

4344

THE MOMENTUM OF IGNORANCE (REPORT TO THE CONSUMER 6(134).

FORMATION OF POLYCHLORINATED DIBENZO-P-DIOXINS (PCDDS) AND
DIBENZOFURANS (PCDFS) BY BURNING OR HEATING CHLOROPHENATES
(CHEMOSPHERE 2, 269-281)(PESTICIDES ABSTRACTS 3, 269-281).
MARKLUND S RAPPE C

FOREST CHEMICALS NEWS 2(6).

FINAL REPORT ON TCDD APPLIED WITH SILVEX TO TURF IN
MICROAGROECOSYSTEMS (AN INTERAGENCY AGREEMENT BETWEEN THE EPA AND
THE USDA).
NASH RG

BIOACCUMULATION OF TCDD (ECOL BULLETIN 27, 255).

ILLNESS ASSOCIATED WITH TCDD CONTAMINATED SOIL MO (COMMUNICABLE
DISEASE CENTER MORBIDITY AND MORTALITY WEEKLY REPORT).
WELFA

CHLORINATED PHENOXY ACIDS AND THEIR DIOXINS. MODE OF ACTION,
HEALTH RISKS AND ENVIRONMENTAL EFFECTS (ECOLOGICAL BULLETINS
27)(SWEDISH NATURAL SCIENCE RESEARCH COUNCIL).

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2454	00/00/70	ABSTRACT	8
AUTHOR:	COURTNEY KD		CHART	
ADDRESSEE:			EPA	
COPYEE:				
DOCUMENT	2455	00/00/77	REPORT	5
AUTHOR:	KEARNEY PC		MENZER RE	
ADDRESSEE:	UNIV OF MD		USDA	
COPYEE:				
DOCUMENT	2456	01/10/78	REPORT	8
AUTHOR:	MOORE JA			
ADDRESSEE:				
COPYEE:				
DOCUMENT	2457	00/00/74	REPORT	23
AUTHOR:	BOHME C		FED HEALTH OFF WGERM	
ADDRESSEE:	RALPH MCELROY CO			
COPYEE:	DOW		GEHRING PJ	
DOCUMENT	2458	12/00/74	REPORT	2
AUTHOR:	DOW		LENG ML	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2459	08/17/79	NEWS	4
AUTHOR:	GUNBY P		JAMA	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2460	06/12/79	REPORT	24
AUTHOR:	REUBER MD			
ADDRESSEE:				
COPYEE:				

114441

4345

TITLE

PRENATAL EFFECTS OF HERBICIDES, EVALUATION BY THE PRENATAL
DEVELOPMENT INDEX (ENVIRON CONTAMINATION & TOX 5(4).

TCDD IN VITRO BINDING TO RAT LIVER MICROSOMES(BULLETIN OF ENVIRON
CONTAMINATION & TOX 18(1), 9-13).
NELSON JO PLIMMER JR

COMPARATIVE TOXICITY OF DIBENZODIOXINS AND DIBENZOFURANS (IARC
MEETING ON DIBENZODIOXINS AND DIBENZOFURANS 780110 TO 780111 LYON,
FRANCE).

THE METABOLISM OF 245T AND 24D IN RATS AND MICE(ARCHIVES OF TOX 32,
217-225) (WGERM).
GRUNOW W MCELROY R

AMENDMENT TO PP 8F0675 REQUESTING TOLERANCES FOR SILVEX
2-(245-TRICHLOROPHOXY) PROPIONIC ACID IN FOOD AND FORAGE CROPS
MEAT AND MILK.

PLENTY OF FUEL FOR AGENT ORANGE DISPUTE MEDICAL NEWS (JAMA 242(7),
593-597).

CARCINOGENICITY OF 24D.

NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT 2467	03/01/78	REPORT	4	SYMPOSIUM ON USE OF HERBICIDES IN FORESTRY (24D, 245T, SILVEX, TCDD)(USDA/EPA/CITIZENS GROUPS).
AUTHOR: DOW		LENG ML		
ADDRESSEE:				
COPYEE:	BEACHELL J	BLAIR EH	CRUMMETT WB	DAVIDSON JH
	DISHBURGER HJ	DONALDS JE	GEHRING PJ	GETZENDANER ME
	GRAY JA	HANSEN JC	HEFNER RE	HOERGER FD
	JANTZ OK	JENSEN DJ	KARWAL JH	KOCIBA RJ
	MCCOLLISTER DD	MOSS RD	MULLISON WR	SEWARD WB
	SHADOFF LA	SMITH LL	STEARNS WJ	TRAYNOR MJ
	WARD WH	WARREN LE	WESSEL MR	
DOCUMENT 2468	09/21/76	REPORT	24	COMPARATIVE METABOLISM OF PHENOXY HERBICIDES IN ANIMALS.
AUTHOR: DOW		LENG ML		
ADDRESSEE:				
COPYEE:				
DOCUMENT 2469	00/00/70	ABSTRACT	1	TOXIC EFFECT OF SOME HERBICIDES ON FISH AND AQUATIC INVERTEBRATES (VIDOVOI SOSTAV EKOL PROD GIDROBIONTOV VOLGOGRAD VODOKHRAN 690000, 93-98)(CHEM ABSTRACTS 72, 240).
AUTHOR: BELYAVSKAYA L		CHEM ABSTRACTS		KONSTANTINOV AS KONSTANTINOVA NS
ADDRESSEE: RAMAN SK				
COPYEE:				
DOCUMENT 2470	00/00/77	REPORT	6	TRANSPLACENTAL INDUCTION OF MIXED FUNCTION OXYGENASES IN EXTRA HEPATIC TISSUES BY TCDD (BIOCHEMICAL PHARMACOLOGY 26, 1383-1388).
AUTHOR: BERRY DL		BRACKEN WM		EAST TN RES CENTER JUCHAU MR
	NAMKUNG MJ	OAK RIDGE NATL LAB		SLAGA TJ UNIV WA
	WILSON NM	ZACHARIAH PK		
ADDRESSEE:				
COPYEE:				
DOCUMENT 2471	06/16/80	REPORT	45	24D. EVALUATION OF THE HUMAN HEALTH HAZARDS.
AUTHOR: DEPT OF HEALTH SERVICES		DEPT OF IND RELATIONS		
ADDRESSEE:				
COPYEE:				
DOCUMENT 2472	11/09/70	REPORT	9	STUDY OF THE TERATOGENICITY OF TCDD IN THE RAT(FD COSMET TOX 9, 405-412).
AUTHOR: DOW		DUNN FL		ROWE VK SPARSCHU GL
ADDRESSEE:				
COPYEE:				

D.4442

4346

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2473	06/25/80	LETTER	1
AUTHOR: DEPT OF HEALTH SERVICES/ LAPPE M				
ADDRESSEE: LOS ANGELES TIMES				
COPYEE:				
DOCUMENT	2474	00/00/78	REPORT	44
AUTHOR:	HUFF JE		INTL AGENCY	FOR RES
	PISA UNIV		WASSOM JS	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2475	00/00/00	REPORT	3
AUTHOR:	DOW		HOLMES RD	
	WALKER RE			
ADDRESSEE:				
COPYEE:				
DOCUMENT	2476	09/22/67	MEMO	1
AUTHOR: DOW				
ADDRESSEE: HERITIER WJ				
COPYEE:				
DOCUMENT	2477	11/08/67	LETTER	1
AUTHOR:	COLLINS B		DOW	
ADDRESSEE:	DOW		ARGYLE B	
COPYEE:				
DOCUMENT	2478	10/26/67	LETTER	1
AUTHOR:	DOW		HOLDER BB	
ADDRESSEE:	DOW		HERITIER WJ	
COPYEE:				
DOCUMENT	2479	12/27/67	MINUTES	5
AUTHOR:	DOW		HERITIER WH	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2480	09/22/67	MINUTES	1
AUTHOR:	DOW		HERITIER WJ	
ADDRESSEE:				
COPYEE:				

1.4443

4347

TITLE

WOULD LIKE TO CORRECT ERRONEOUS IMPRESSION ABOUT 24D LEFT LOS
ANGELES TIMES ARTICLE CTTL.

A REVIEW OF THE GENETIC TOXICOLOGY OF CHLORINATED DIBENZO-P-DIOXINS.
ON C LOPRIENO N OAK RIDGE NATL LAB

CHLORACNE PROBLEM IN 199 BUILDING.
LUECK AF SILVERSTEIN LG

ALL FINISH PRODUCT LINES OR EQUIPMENT CAN BE SALVAGED WHEN
DEMOLISHING 199 BLDG BUT ANY LINES OR EQUIPMENT THAT HANDLED CRUDE
PRODUCT OR PHENATE OIL MUST BE BURIED CTTL.

REMOVAL OF TRICHLOROPHENOL EQUIPMENT 199 BUILDING.

CHLORACNE 199 BUILDING DEMOLITION.

REMOVAL OF TRICHLOROPHENOL PROCESS EQUIPMENT AT 199 BUILDING.

MEETING 199 BUILDING FRIDAY 670922 ONE O'CLOCK PM.

	NUMBER	DATE	TYPE	PAGES
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	2481 DOW	00/00/00	REPORT	1
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	2482 DOW	09/11/67	MEMO F DICK F DAN	2
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	2483 DELVAUX EL UNIVERSITE CATHOLIQUE DE VERSTRAETE J	00/00/75	NEWS REPORT DESART F	21
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	2484 BLACK C CRUMMETT W FREDERICK D JOHNS H MAIN R ROSS R TSCHIRLEY F WOLCOTT O	00/00/00	REPORT BLAIR E DAVIDSON JH GEHRING P JONES G MCCREDIE B ROWE VK VRANISH S	2
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	2485 DOW COLBY RW LIPPIE LJ ROWE VK	04/16/58	REPORT HYMAS TA BARRONS KC COULTER LL LYNN GE SPALDING J	3
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	2486 DOW	09/23/60	LETTER ROWE VK MAXWELL JL	2
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	2487 DOW BRITTON JW	03/13/53	LETTER ROWE VK SMITH HL JOHNSON JE	4

TITLE

TCP REMOVAL PLAN JOB 71790.

199 BUILDING REMOVAL TRICHLOROPHENOL EQUIPMENT(JOB NO 71790).

LES POLYCHLORO DIBENZO-P-DIOXINS (TOX 3(2), 187-206).

GOFFIN G

HAUTFENNE A

TWELVE WISE MEN GIVE 24D AND 245T A CLEAN BILL OF HEALTH.

BYRD B
DAY B
GRAHAM D
KEARNEY P
MORGAN A
SCHWETZ B
WARREN LCOLBY R
DONALDS J
HOERGER F
LENG M
MOSS R
TRAYNOR M
WESELOH J

INVERTON (BRUSH KILLER) HAY SPRAY, CATTLE FEEDING TEST (GH REPOT NO 397).

STEVENSON GT

BLAIR EH
JOHNSON JE
NORTON TR
VANVALKENBURG JWBOUNDY RH
KAGY JF
NUTTING HS

TOXICOLOGICAL INFORMATION ON SILVEX AND GARLON CTTL.

DISCUSSION OF TOXICOLOGICAL INFORMATION RELATIVE TO DOW ESTERON
BRUSH KILLER.

SOUTHWICK L

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2488	06/27/52	LETTER	2
AUTHOR:	DOW		ROWE VK	
ADDRESSEE:	BRYAN HL		WEST MERCANTILE	
COPYEE:				
DOCUMENT	2489	04/00/59	NEWS	3
AUTHOR:	DOW		SEEKER B	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2490	05/06/75	REPORT	10
AUTHOR:	DOW		SAUERHOFF MW	
ADDRESSEE:				
COPYEE:	BRAUN WH		DAVIDSON JH	
	HEEG		HOOVER	
	KOCIBA RJ		LEBEAU JE	
	MCKENNA MJ		MURRAY FJ	
	POTTS WJ		QUAST JF	
	ROWE VK		SCHWETZ BA	
	YOUNG			
DOCUMENT	2491	05/21/74	REPORT	9
AUTHOR:	DOW		LENG ML	
ADDRESSEE:	DOW		DAVIDSON JH	
COPYEE:	BLAIR EH		FEIGELSON MC	
	THEIS JM		TRAYNOR MJ	
DOCUMENT	2492	06/28/77	REPORT	20
AUTHOR:	DOW		OTT MG	
ADDRESSEE:				
COPYEE:	BLAIR EH		GLEESON JG	
	OLSON RD		SCHARNWEBER HC	
DOCUMENT	2493	03/02/65	LETTER	1
AUTHOR:	DEPT OF HEALTH-MI		SCOVILL RG	
ADDRESSEE:	DOW		SILVERSTEIN L	
COPYEE:				

4349

D 4445

TITLE

COMPOSITION OF DOW ESTERON BRUSH KILLER AND REQUEST FOR ALL
INFORMATION REGARDING PENDING LAWSUIT CTTL.

WESTERN MERCANTILE

END TO WATER WEEDS KURON OFFERS A CONTROL FOR UNWANTED VEGETATION
IN LAKES AND PONDS (DOW DIAMOND).

PHARMACOKINETIC STUDIES OF SILVEX IN MAN.

GEHRING PJ
HUMISTON CG
LENG ML
NORRIS
RAMPY LW
WATANABE PG

GORDON HL
JERSEY GC
LEONG
OLSON
RAMSEY JC
WOLF

SILVEX AND ERBON - REGISTRATION AND TOXICOLOGY.

DOW
DOW
LYNN GE
WESSEL MR

MCCOLLISTER DD
WILLIAMS CS

A LONGEVITY SURVEY OF EMPLOYEES EXPOSED TO 245TP 77-7-5:01.

HOLDER BB
WALKER S

JOHNS DB

EMPLOYEE MANAGEMENT MEETING ON 650119 CONCERNING PRECAUTIONS TO
MINIMIZE TRICHLOROPHENOL CONTAMINANT EXPOSURE CTTL.

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2494	10/03/77	REPORT	29

AUTHOR:	BEYER JE	DOW
ADDRESSEE:		
COPYEE:	AXE RD	BARNARD S
	BLAIR EH	BLOGG CD
	BROWER HH	BUREK JD
	CAPUTO R	CARLETON RE
	DANIEL RL	DAVIDSON JD
	DELINE DD	DIAGRE GW
	GEHRING PJ	GETZENDANER M
	GRIESS GA	HALPHEN CE
	HOERGER FD	HOLDER BB
	HYDE MA	JACKSON L
	JOHNSON RL	JOHNSTON RV
	KIMMEL CE	KOCIBA RJ
	LEAVITT FC	LEBEAU JE
	MAASBERG AT	MACGOWAN CF
	MCCLURE HH	MCCOLLISTER DD
	MCKENNA MJ	MOOLENAAR RJ
	MURRAY FJ	MURRAY N
	NOLAN RJ	NORRIS JM
	OLSON KJ	OLSON RD
	PUMPEL CT	QUAST JF
	RAMSEY JC	REUVERS H
	ROBINSON VB	ROGERS WA
	SCHARNWEBER HC	SCHNEIDER JA
	SHAYER RJ	SHEETZ DP
	TRAYNOR M	ULRICH JR
	WACHOB WW	WARNER SD
	YOUNG DJ	YOUNG JD

DOCUMENT	2495	08/10/76	REPORT	2
AUTHOR:	DOW		LENG ML	
ADDRESSEE:	DOW		SAUERHOFF MW	
COPYEE:	BLAIR EH		BLAU GE	
	GEHRING PJ		GORDON HL	
	SCHWETZ BA			

DOCUMENT	2496	08/20/79	REPORT	41
AUTHOR:	DOW		SHARMA RP	
ADDRESSEE:				
COPYEE:	AXE RD		BARNARD S	
	BETSO JE		BLAIR EH	
	BRAUNLICH FH		BROWER HH	
	CALDWELL CE		CAPUTO R	
	CRUMMETT WB		DAIGRE GW	
	DAVIS RA		DEGESERO RD	
	ENGIBOUS DL		GEHRING PJ	
	GRAHAM DL		GRIESS GA	
	HENRY H		HOERGER FD	
	HYDE MA		JACKSON L	
	JOHNS DB		JOHNSON RL	
	KELLY ME		KIMMEL CE	

14446
4350

TITLE

AN ULTRASTRUCTURAL EVALUATION OF LIVER CELLS ON DIETS CONTAINING TCDD.

BEAMER WH
BRAUN WH
BURGERT BE
CARLSON RG
DAVIS RA
DISHBURGER H
GLEESON J
HEFNER RE
HORVATH BS
JERSEY GC
KELLY ME
LANGNER RR
LENG M
MACKEY JC
MCFEDRIES R
MOORE JH
NICHOLS JL
NOWAK RM
POTTS WJ
RABOLD GP
RINZEMA L
ROWE VK
SCHWETZ BA
THOMPSON CF
VERSCHUUREN H
WATANABE PG

BEARDEN CR
BRAUNLICH FH
CALDWELL CE
CRUMMETT WB
DEGESERO RD
ENGIBOUS DL
GRAHAM DL
HENRY H
HUMISTON CG
JOHNS DB
KILIAN DJ
LAPE RL
LIU G
MANSTON J
MCINTIRE OR
MURPHY PM
NIELSEN WH
NUMMY WR
PRUITT ME
RAMPY LW
ROBERTS DJ
SCHAFER AW
SERCU CL
TODD LM
VRANISH SM
YOCUM RH

REPORT ON SILVEX IN HUMANS.

CHENOWETH MB
LEBEAU JE

DAVIDSON JH
MCCOLLISTER DD

IMMUNOTOXICOLOGIC STUDIES INVOLVING TCDD IN MICE AND RABBITS.

BEAMER WH
BLOGG CD
BUREK JD
CARLETON RE
DANIEL RL
DELINE DD
GETZENDANER ME
HALPHEN CE
HOLDER BB
JERSEY GC
JOHNSON S
KOCIBA RJ

BEARDEN CR
BRAUN WH
BURGERT BE
CARLSON RG
DAVIDSON JD
DISHBURGER HJ
GLEESON JG
HEFNER RE
HORVATH BS
JOHN JA
JOHNSTON RV
LANGHERRR

NUMBER	DATE	TYPE	PAGES
		LAPE RL	LEAVITT FC
		LIU G	MAASBERG AT
		MANSTON J	MCCLURE HH
		MCKENNA MJ	MOOLENAAR RJ
		NICHOLS JL	NIELSEN WH
		NORRIS JM	NOWAK RM
		OLSON RD	POTTS WJ
		QUAST LF	RADOLD CP
		RAO KS	REUVERS H
		ROBINSON VB	ROGERS WA
		SCHARNWEBER HC	SCHLACHTER MM
		SERCU CL	SHAYER RJ
		THOMPSON DJ	TODD LM
		VERSCHUUREN H	VRANISH SM
		WATANABE PG	YOCUM RH

DOCUMENT 2497 02/12/73 NEWS 9
 AUTHOR: BOSSHARDT HP NEUE ZURCHER ZT
 ADDRESSEE:
 COPYEE: BLAIR EH DAVIDSON JH
 LYNN GE OCONNOR JN
 STEHL RH WESSEL MR

DOCUMENT 2498 01/18/72 REPORT 5
 AUTHOR: WILSON JG
 ADDRESSEE:
 COPYEE:

DOCUMENT 2499 10/06/72 ABSTRACT 4
 LEGAL
 REPORT
 AUTHOR: DOW SCHWETZ BA
 ADDRESSEE:
 COPYEE:

DOCUMENT 2500 12/01/75 REPORT 39
 AUTHOR: DOW SAUERHOFF MW
 ADDRESSEE: DOW BLAIR EH
 COPYEE: SAUERHOFF MW BRAUM WH
 DANIEL RL DAVIDSON JH
 GEHRING PJ GORDON HL
 HEEG JF HEFNER RE
 HUMISTON CG JENSEN DJ
 KILIAN DJ KOCIBA RJ
 LENG ML MCCOLLISTER DD
 MURRAY FJ NORRIS JM
 PULLIN T QUAST JF
 RAPP DE ROWE VK
 SHOBER AE SKORY LK
 TORKELSON TR WATANABE PG

24447
 4351

TITLE

LEBEAU JE
MACGOWAN CF
MCCOLLISTER DD
MOORE JH
NITSCHKE KD
NUMMY WR
PRUITT ME
RAMPY LW
RINZEMA LC
ROWE VK
SCHNEIDER JA
SHEETZ DP
TRAYNOR MJ
WACHOB WN
YOUNG DJ

LENG ML
MACKEY JC
MCFEDRIES R
MURRAY N
NOLAN RJ
OLSON KJ
PUMPELLE CT
RAMSEY JC
ROBERTS DJ
SCHAFER AW
SCHWETZ BA
THOMPSON CF
ULRICH JR
WARNER SD

DIOXINS - INSIDIOUS POISONS IN OUR ENVIRONMENT.

FISHER P
ROWE VK

HANSEN JC
SCHOBBER AE

TERATOLOGICAL POTENTIAL OF 245T (DOWN TO EARTH 28(4) 730400)
(SOUTHERN WEED SCIENCE SOCIETY, DALLAS TX).

SUMMARY TERATOLOGY.

THE DOSE - DEPENDENT PHARMACOKINETIC PROFILE OF SILVEX FOLLOWING
INTRAVENOUS ADMINISTRATION IN RATS.

BRAUN WH
DISHBURGER HJ
GORING CA
HINMAN CH
JERSEY GC
LANGNER R
MCKENNA MJ
OLSON KJ
RAMPY LW
SCHARNEBER HC
SOUTHWICK L
WATSON AJ

BROWN S
FIKE R
GROVES K
HOYLE HR
JOHNSTON CV
LEBEAU JE
MULLISON WR
OLSON RD
RAMSEY JC
SCHWETZ BA
SWANK MG
WOLF MA

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2505	08/25/71	REPORT	19
AUTHOR:	DOW		PIPER WN	
ADDRESSEE:				
COPYEE:	BLAIR EH		BLUE RD	
	DUNN EE		GEHRING PJ	
	HUMISTON CG		JOHNSON JE	
	KOCIBA RJ		LENG ML	
	MCCOLLISTER DD		MCCOLLISTER SB	
	NUMMY WR		ORIEL PJ	
	REITZ RH		RILEY WH	
	SCHWETZ BA		SMITH GN	
	TORKELSON TR		WOLF MA	
DOCUMENT	2506	09/09/70	REPORT	4
AUTHOR:	BOURNE JE		DOW	
ADDRESSEE:				
COPYEE:	GEHRING PJ		NORRIS JM	
DOCUMENT	2507	10/02/70	AUTH	2
AUTHOR:	ROWE VK			
ADDRESSEE:				
COPYEE:	GEHRING PJ			
DOCUMENT	2508	11/08/78	LETTER	2
AUTHOR:	DOW		ROWE VK	
ADDRESSEE:	MT SINAI SCH MD		SELIKOFF IJ	
COPYEE:	BLAIR EH		CRUMMETT WB	
	GEHRING PJ		HOLDER BB	
DOCUMENT	2509	05/00/78	REPORT	139
AUTHOR:	DOST FN		OR STATE UNIV	
ADDRESSEE:	USDA FS			
COPYEE:	BETSO J		DAVIDSON JH	
	LENG ML		MCCOLLISTER DD	
	TRAYNOR MJ			
DOCUMENT	2510	02/00/78	REPORT	73
AUTHOR:	DOST FN		OR STATE UNIV	
ADDRESSEE:	USDA FS			
COPYEE:	DAVIDSON JH		HOLDER B	
	MORGAN A		SCHWETZ B	
DOCUMENT	2511	06/03/74	REPORT	5
AUTHOR:	DOW		WOLF MA	
ADDRESSEE:	DOW		LYNN GE	
COPYEE:	BLAIR EH		CRUMMETT WB	
	TRAYNOR MJ		WESSEL MR	

TITLE

EXCRETION AND TISSUE DISTRIBUTION OF TCDD IN THE RAT 1.

BRANSON DR	CHENOWETH MB
HINMAN CW	HOLMSEN TW
JOHNSTON C	JOHNSTON RV
LEONG BK	MCCARTY LP
MCDERMOTT RD	MOSS RD
OSBORNE DW	PRUITT ME
ROSE J	ROWE VK
SPENCER HC	STRYCKER SJ

PROPOSED ACUTE ORAL LD50 FEEDING STUDY ON TWO SAMPLES OF TCDD.

ROWE VK

TCDD (REQUEST FOR PRELIMINARY TOXICOLOGICAL STUDIES) CTTL.

SEMINAR ON PHENOXY HERBICIDES BACKGROUND PLANNING CTTL.

DAVIDSON JH	DONALDS JE
KOCIBA RJ	SCHWETZ BA

TOXICOLOGY OF PHENOXY HERBICIDES AND HAZARD ASSESSMENT OF THEIR USE
IN REFORESTATION.
USDA

KOCIBA RJ	LEISZ DR
SCHWETZ BA	SMITH LL

TOXICOLOGY OF PHENOXY HERBICIDES AND TCDD.

JOHNSON R	KOCIBA R
WARREN LE	

TOXICOLOGY OF POSSIBLE CONTAMINANTS IN 245T.

DOW	
DOW	
DAVIDSON J	GEHRING PJ
DOW	

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2512	00/00/73	REPORT	5

AUTHOR: ALLEN JR FIRESTONE D
 UNIV OF WI
 ADDRESSEE:
 COPYEE:

DOCUMENT	2513	08/20/79	REPORT	22

AUTHOR:	DOW	SHARMA RP
ADDRESSEE:		
COPYEE:	AXE RD	BARNARD S
	BETSO JE	BLAIR EH
	BRAUNLICH FH	BROWER HH
	CALDWELL CE	CAPUTO R
	CRUMMETT WB	DAIGRE GW
	DAVIS RA	DEGESERO RD
	ENGIBOUS DL	GEHRING PJ
	GRAHAM DL	GRIESS GA
	HENRY H	HOERGER FD
	HYDE MA	JACKSON L
	JOHNS DB	JOHNSON RL
	KELLY ME	KIMMEL CE
	LAPE RL	LEAVITT FC
	LIU G	MAASBERG AT
	MANSTON J	MCCLURE HH
	MCKENNA MJ	MOOLENAAR RJ
	NICHOLS JL	NIELSEN WH
	NORRIS JM	NOWAK RM
	OLSON RD	POTTS WJ
	QUAST JF	RABOLD CP
	RAO KS	REUVERS H
	ROBINSON VB	ROGERS WA
	SCHARNWEBER HC	SCHLACHTER MM
	SERCU CL	SHAVER RJ
	THOMPSON DJ	TODD LM
	VERSCHUUREN H	VRANISH SM
	WATANABE PG	YOCUM RH

DOCUMENT	2514	10/08/71	REPORT TEST	7

AUTHOR: BLOSSER K DOW
 MOSS RD WOLF MA
 ADDRESSEE:
 COPYEE:

DOCUMENT	2515	00/00/67	LABEL	2

AUTHOR: DOW
 ADDRESSEE:
 COPYEE:

TITLE

STUDIES OF THE CHICK EDEMA DISEASE TOXICITY OF CHICK EDEMA FACTORS
IN THE CHICK CHICK EMBRYO AND MONKEY (POULTRY SCIENCE 52,
1637-1641).

FLICK DF

RESS J

REVERSAL OF IMMUNOLOGIC AND TOXICOLOGIC EFFECTS OF A SINGLE
EXPOSURE OF TCCD IN MICE.

DOW

BEAMER WH
BLOGG CD
BUREK JD
CARLETON RE
DANIEL RL
DELINE DD
GETZENDANER M
HALPHEN CE
HOLDER BB
JERSEY GC
JOHNSON S
KOCIBA RJ
LEBEAU JE
MACGOWAN CF
MCCOLLISTER DD
MOORE JH
NITSCHKE KD
NUMMY WR
PRUITT ME
RAMPY LW
RINZEMA LC
ROWE VK
SCHNEIDER JA
SHEETZ DP
TRAYNOR MJ
WACHOB WH
YOUNG DJ

BEARDEN CR
BRAUN WH
BURGERT BE
CARLSON RG
DAVIDSON JD
DISHBURGER HJ
GLEESON JG
HEFNER RE
HORVATH BS
JOHN JA
JOHNSTON RV
LANGNER RR
LENG ME
MACKEY JC
MCFEDRIES R
MURRAY N
NOLAN RJ
OLSON KJ
PUMPELLY CT
RAMSEY JC
ROBERTS DJ
SCHAFER AW
SCHWETZ BA
THOMPSON CF
ULRICH JR
WARNER SD

ANALYTICAL METHOD REDDON BRUSH KILLER (METHOD 70849).

KOERKER FH

LOUCKS MF

KURON WEED AND BRUSH KILLER.

	NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	2516 CHIPMAN	00/00/00	LABEL	1	LOW VOLATILE BRUSH KILLER NO. 2 (CHIPMAN)(PRODUCT 112).
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	2517 THA	00/00/00	LABEL	1	DED-2 LV-9 BRUSH KILLER.
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	2518 BJORKLUND N	00/00/71	REPORT ERNE K	15	PHENOXY-ACID-INDUCED RENAL CHANGES IN THE CHICKEN. 1. ULTRASTRUCTURE (ACTA VET. SCAND. 12, 243-256). NATL VETERINARY INST SWE ROYAL VETERINARY COL SWE
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	2519 ERNE K	00/00/66	REPORT NATL VETERINARY INST SWE	18	DISTRIBUTION AND ELIMINATION OF CHLORINATED PHENOXYACETIC ACIDS IN ANIMALS (ACTA VET SCAND 7, 240-256).
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	2520 ERNE K	00/00/63	REPORT ST VETERINARY MED INST S	15	DETECTION AND DETERMINATION OF CHLOROPHENOXYACETIC ACID DERIVATIVES IN WATER. (ACTA CHEM. SCAND. 17(6), 1663-1676).
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	2521 DOW	03/29/78	CHART WHITE RW	1	FINNIGAN 400 MASS SPECTROMETER LSI-11 BACK PANEL LAYOUT.
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	2522 DOW	02/14/74	TEST	14	DETERMINATION OF TCDD IN FISH AND SOIL.
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	2523 DOW	11/02/78	TEST	32	STACK GAS SAMPLING PROCEDURE FOR THE DETERMINATION OF CHLORINATED DIOXIN EMISSIONS FROM STATIONARY SOURCES (ML-AM 78-64).

14450

4354

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2524	06/09/78	LETTER	16
AUTHOR:	DOW		GLEDHILL JR	
ADDRESSEE:	DNR MI		HESSE J	
COPYEE:				
DOCUMENT	2525	04/00/71	NEWS	6
AUTHOR:	DOW		WILLIAMS CS	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2526	02/22/65	MINUTES	3
AUTHOR:	DOW		PLETCHER DE	
ADDRESSEE:				
COPYEE:	DOW		DOEDENS JD	
DOCUMENT	2527	10/10/78	TEST	25
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:				
DOCUMENT	2528	06/22/78	REPORT	5
AUTHOR:				
ADDRESSEE:				
COPYEE:				
DOCUMENT	2529	11/28/77	TEST	7
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:				
DOCUMENT	2530	12/30/64	LETTER	1
AUTHOR:	DOW		HAMMER OH	
ADDRESSEE:	DOWNARD GM		USDA	
COPYEE:	DOW		LYNN GE	
DOCUMENT	2531	11/00/67	LABEL	1
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:				

TITLE

REPORT ON STUDIES RELATED TO THE QUESTION OF POSSIBLE PRESENCE OF CHLORODIOXINS IN TITTABAWASSEE RIVER SEDIMENTS & FISH CTTL.

THE STATUS OF 24D, 245T, SILVEX AND MCPA HERBICIDES (DOWN TO EARTH 26(4): 12-15, 1971).

EXCITER PROBLEM MEETING 650218.

DETERMINATION OF TETRA, HEXA, HEPTA, AND OCTACHLORODIBENZO-P-DIOXINS IN SOL SOIL, DUST, AND PARTICULATE SAMPLES.

ENVIRONMENTAL SAMPLING AND ANALYSIS PLAN FOR THE EVALUATION OF ORGANIC RESIDUES IN FISH OF THE TITTABAWASSEE AND SAGINAW RIVERS AND THE SAGINAW BAY.

DETERMINATION OF TCDD IN HIPE TEST SAMPLES ANALYTICAL METHOD (ML-AM 77-51).

PROPOSED USE OF KURON ON SUGAR CANE IN FL (KURON REGISTRATION 464-162).

SACHS SB

SUNDERLAND WW

KURON WEED AND BRUSH KILLER.

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2576	07/14/82	LETTER	1
AUTHOR:	SCHOBER AE		DOW	
ADDRESSEE:	EPA		MOUNTFORT R	
COPYEE:	ROSS E		BUZZELLI D	
DOCUMENT	2577	06/14/82	LETTER	1
AUTHOR:	EPA		MOUNTFORT RF	
ADDRESSEE:	SCHOBER AE		DOW	
COPYEE:				
DOCUMENT	2578	05/30/80	CHART DATA REPORT	30
AUTHOR:	KOCIBA RJ OLSON KJ		DOW RAO KS	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2579	05/30/80	CHART DATA REPORT	3
AUTHOR:	KOCIBA RJ OLSON KJ		DOW RA O KS	
ADDRESSEE:	WESELOH JW			
COPYEE:	KOCIBA RJ CAPUTO R HENK JW LOCKWOOD DD		SCHWETZ BA CHENOWETH MB KOLE SAR RC MORRISON LG	
DOCUMENT	2580	02/08/72	REPORT	40
AUTHOR:	JOHNSON JE		DOW	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2581	08/03/82	PROC TECH	8
AUTHOR:	DOW		MUJICA ML	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2582	08/08/83	LEGAL	1
AUTHOR:	DOW		FALLA EC	
ADDRESSEE:	REPUBLICA COSTA RICA			
COPYEE:				

D.4452

4356

TITLE

ESTERON 245 BE, EPA REG 464-574, YOUR LETTER OF MAY 13, 1982 (820513).

CONYERS E

DESCRIPTION OF ANALYTICAL METHOD FOR TCDD, ESTERON 245 BE EPA REGISTRATION 464-574, YOUR SUBMISSION OF JULY 14, 1982 (820714).

TCDD ACUTE ORAL TOXICITY IN HAMSTERS.

HENCK JW

NEW MA

TCDD ACUTE ORAL TOXICITY IN HAMSTERS.

HENCK JW

NEW MA

BOHL RA
DOMBROWSKI SA
KOPPELMANN H
OLSON RA

BRANSON
FISHBECK W
LANHAM JM
RAMPY LW

HERBICIDES.

ANALYTICAL METHOD ESTERON 245C HERBICIDE.

CERTIFICATE FOR DIOXIN CONTENT IN ESTERON 245, ESTERON C, ESTERON 50-25 CTTL.
CARLSON KS

NUMBER	DATE	TYPE	PAGES
DOCUMENT 2583 AUTHOR: DOW ADDRESSEE: PERCOSSI H COPYEE:	04/00/83	MEMO MESTRE S	1
DOCUMENT 2584 AUTHOR: DOW ADDRESSEE: COPYEE:	00/00/83	MEMO	1
DOCUMENT 2585 AUTHOR: DOW ADDRESSEE: COPYEE:	07/28/83	TELECON WOODWARD RE	1
DOCUMENT 2586 AUTHOR: DOW ADDRESSEE: COPYEE:	08/03/83	SPEC TEST CERASO JM	1
DOCUMENT 2587 AUTHOR: DOW ADDRESSEE: COPYEE:	00/00/83	LEGAL	1
DOCUMENT 2588 AUTHOR: BRAUN WH HERMANN EA ADDRESSEE: DOW COPYEE: BRAUN WH MCCOLLISTER DD SHEETZ DP DONALDS JE LUOMA EV SCHWETZ BA	12/09/80	REPORT TEST NOLAN RJ RAMSEY JC CRUMMETT WB NOLAN RJ VERSCHUUREN HG; GEHRING PJ SCHAFFER AW WATSON AJ	34
DOCUMENT 2589 AUTHOR: NOLAN RJ RAMSEY JC ADDRESSEE: DOW COPYEE: LOOK AT MCCLURE HH MOOLENAAR RJ NUMMY WR RAMPY LW REUVERS SAUNDERS JH TALCOTT AT	12/09/80	ABSTRACT DOW LYONS KL MCDANIELS GD NENBY HE OLSON KJ RAMSEY JC RINZEMA SCHNEIDER EJ THOMPSON CF	1

1.4453

4357

TITLE

COMMENTS ON ESTERON 245 & TORDON 225E CTTL.

COMMENTS ON TORDON 225E & ESTERON 245 CTTL.

COMMENTS ON SAMPLE OF ESTERON 245 C CTTL.

CERTIFICATE OF ANALYSIS FOR ESTERON 245 CTTL.

CERTIFICATE FOR DIOXIN CONTENTS IN ESTERON 245 CTTL.

PHARMACOKINETICS OF 24D IN FISCHER 344 RATS.

DOW
HOOVER WE

SMITH FA

HEFNER RE
NORRIS JM
VRANISH SR;
KOCIBA RJ
SCHARNWEBER HC
WESELOH JWHOERGER FD
OLSON RD
DAVIDSON JH
LENG ML
SCHOBBER AE

PHARMACOKINETICS OF 24D IN FISCHER 344 RATS.

SMITH FA

HERMANN EA

MACGOWAN CF
MCFEDRIES R JR
NICHOLS JL
PARENTI F
RAO KS
ROGERS WA
SHELTON LG
TOD LMMACKEY JC
MCKENNA MJ
NOWAK RM
PUMPELLE CT
RAUSCH DA
ROZAS EA
SWANK MG
VENABLE JR

NUMBER	DATE	TYPE	PAGES

WARNER SD
 YOCUM RH
 GORZINSKI SJ
 HOOVER WE
 KAGEL RO
 LANCINI G
 LEHMAN FR
 BEARDEN CR
 BURGESS KL
 CORSON FP
 DICKSON G
 FISHBECK WA

WATANABLE
 YOUNG DM
 GRAHAM DL
 HYLTON DB
 KELLY ME
 LANGNER RR
 LIU G
 BRADLEY TD
 CALDWELL BO
 CURRIER MF
 DOSTAL RL
 FLORES GF

DOCUMENT	2590	00/00/82	NEWS REPORT	20
AUTHOR:	KOCIBA RJ		SCHWETZ BA	
ADDRESSEE:				
COPYEE:				

DOCUMENT	2591	11/09/81	LABEL	2
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:				

DOCUMENT	2592	11/09/81	AUTH LABEL	1
AUTHOR:				
ADDRESSEE:				
COPYEE:				

DOCUMENT	2593	11/09/81	AUTH	1
AUTHOR:				
ADDRESSEE:				
COPYEE:				

DOCUMENT	2594	11/09/81	LETTER	1
AUTHOR:	SCHOBER AE		DOW	
ADDRESSEE:	EPA		MOUNTFORT R	
COPYEE:	LANING ER		WOODS CD	

DOCUMENT	2595	03/02/82	LETTER	1
AUTHOR:	MARSHALL FARMERS COOP		HOLLIDAY V	
ADDRESSEE:				
COPYEE:				

24454
 4358

TITLE

WRIGHT LF	WROBLEWSKI DJ
GAY PC	GERARDO RA
HALPHEN CE	HERMANN EA
JACKSON JE	JERSEY GC
KLUMB GA	KOLESAR RC
LANHAM JM	LEE JR
ADCOCK LD	AXE FD
BRAUNLICH FH	BURGERT BE
CAPUTO R	CHEN WC
DANIEL RL	DAVIS KR
EILERS RJ	ENGIBOUS DL

TOXICITY OF TCDD (DRUG METABOLISM REVIEWS 13(3), 387-406).

DOW

ESTERON 245 HERBICIDE.

ESTERON 245BE LABEL TECHNICAL DATA.

ESTERON 245BE CERTIFICATION STATEMENT.

ESTERON 245BE APPLICATION FOR NEW REGISTRATION.

GOODMAN CH

YTZEN GL

NOTICE OF SUSPENSION FROM SALE. ESTERON 245T.
DEPT AG & IND AL

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2596	03/24/82	LETTER	1
AUTHOR:	DOW		CONTINO JO	
ADDRESSEE:	MARSHALL FARMERS CO-OP			
COPYEE:				
DOCUMENT	2597	02/19/82	REPORT	13
AUTHOR:	SAFE S BANDIERA S		ROBERTSON L SAFE L	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2598	00/00/00	REPORT TECH	11
AUTHOR:	POIGER H		BUSER HR	
ADDRESSEE:				
COPYEE:	BRAUN WH WATANBE P		GEHRING PJ RAO KS	
DOCUMENT	2599	11/00/81	SPEC	1
AUTHOR:	DRENCKPOHL JW		YTZEN J	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2600	03/25/82	SPEC	1
AUTHOR:	DRENCKPOHL JW YTZEN GL		GANTZ RL SCHULTZ J	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2601	09/23/80	SPEC	3
AUTHOR:				
ADDRESSEE:				
COPYEE:	COOK RR SCHOBER AE ISENBARGER B		DRENCKPOHL JW WOODS J KING EJ	
DOCUMENT	2602	04/16/82	SPEC	2
AUTHOR:	WOODS J			
ADDRESSEE:				
COPYEE:				
DOCUMENT	2603	10/16/81	SPEC	1
AUTHOR:	DOW		WOODS J	
ADDRESSEE:				
COPYEE:	DRENCKPOHL JW SKURSKI M		GANTZ RL ISENBARGER B	

10.4455

4359

TITLE

 STICKER & COPY OF LATEST SPECIMEN LABEL FOR ESTERON 245 CTTL.

PCDDS & RELATED COMPOUNDS - METABOLISM AND BIOCHEMISTRY.
 SAWYER T PARKINSON A
 CAMPBELL M

STRUCTURE ELUCIDATION OF MAMMALIAN TCDD METABOLITES.

SCHWETZ BA RAMSEY J

SALES SPECIFICATION. ESTERON 245 BE HERBICIDE.
 ISENBARGER B

SALES SPECIFICATION. ESTERON 245 BE HERBICIDE.
 CONTINO J WOODS JS

PRODUCTION SPECIFICATION. ESTERON 245 BE HERBICIDE.

GANTZ RL GLEDHILL JR
 TICHON J SKURSKI M

MFG SPECIFICATION. ESTERON 245 BE HERBICIDE.

MFG SPECIFICATION. ESTERON 245 BE HERBICIDE.

GLEDHILL JR TICHON J

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2604	04/13/82	SPEC	2
AUTHOR:	DRENCKPOHL JW		GANTZ RL	
ADDRESSEE:	SCHULTZ J		CONTINO J	
COPYEE:				
DOCUMENT	2605	03/00/82	SPEC	2
AUTHOR:	GLEDHILL JR		DOW	
ADDRESSEE:	ISENBURGER B			
COPYEE:				
DOCUMENT	2606	05/24/82	SPEC	2
AUTHOR:	DRENCKPOHL JW		GANTZ RL	
ADDRESSEE:	DOW		GOLD WL	
COPYEE:	SKURSKI MJ		WOODS JS	
DOCUMENT	2607	04/05/83	PRINT SPEC	1
AUTHOR:	DELISLE NG		DRENCKPOHL JW	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2608	04/05/83	PRINT SPEC	1
AUTHOR:	DRENCKPOHL JW		DOW	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2609	02/02/82	SPEC	1
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:				
DOCUMENT	2610	04/08/82	PRINT SPEC	2
AUTHOR:	DRENCKPOHL JW		GOLD WL	
ADDRESSEE:	ROLDAN J		RAMIREZ C	
COPYEE:	RUIZ A		ORLANDI A	

14456

4360

TITLE

QUALITY ASSURANCE PRODUCTION SPECIFICATION. ESTERON 245 BE
HERBICIDE.

SCHOBER AE
I DWD

DOW

QUALITY ASSURANCE PRODUCTION SPECIFICATION. ESTERON 245 BE
HERBICIDE.

TICHON JM

SHURSHI MJ

QUALITY ASSURANCE PRODUCTION SPECIFICATION. ESTERON 245 BE
HERBICIDE.

GLEDHILL JR
ISENBARGER B
SCHULTZ JA

SCHOBER AE
TICHON JM
CONTINO JG

ESTERON 245 BE HERBICIDE RAW MATERIAL SPECIFICATION CTTL.

DOW

GOLD WL

ESTERON 245 BE HERBICIDE RAW MATERIAL SPECIFICATION CTTL.

GOLD WL

PRODUCTION SPECIFICATION FOR ESTERON 245C HERBICIDE.

ESTERON 245C HERBICIDE PRODUCT SPECIFICATION CTTL.

WOODS JS
DEMUJICA MLB

GILCHRIST J
CASTRO A

NUMBER	DATE	TYPE	PAGES
DOCUMENT 2611	07/27/82	PRINT SPEC	3
AUTHOR: DRENCKPOHL JW WOODS JS DEMUJICA MLB		FRASER JM GILCHRIST J CASTRO A	
ADDRESSEE: COPYEE:			
DOCUMENT 2612	03/01/83	LABEL	1
AUTHOR: ADDRESSEE: COPYEE:			
DOCUMENT 2613	00/00/81	REPORT	49
AUTHOR: FAGAN ADDRESSEE: KOCIBA RJ COPYEE:		POLLAK JK	
DOCUMENT 2614	08/00/83	REPORT	33
AUTHOR: ADDRESSEE: COPYEE:			
DOCUMENT 2615	08/00/83	REPORT	2
AUTHOR: CHARLTON RW ADDRESSEE: COPYEE:		DOW	
DOCUMENT 2616	00/00/77	REPORT	6
AUTHOR: NAS LOWERRE RW ADDRESSEE: COPYEE:		KARCH NJ MCCRAY LE	
DOCUMENT 2617	04/22/83	TEST	1
AUTHOR: DOW ADDRESSEE: COPYEE:		GIRARDIN D	
DOCUMENT 2618	03/19/82	LETTER	2
AUTHOR: DOW ADDRESSEE: SCHOBBER AE COPYEE: GOODMAN CH		BUZZELLI DT DOW TICHON J	

4361

104457

III

ESTERON 245C HEARBICIDE QACACI SPECIFICATION CONFIRMATION CTTL.

DOW
ROLDAN J
RUIZ A

GOLD WL
RAMIREZ C
ORLANDI A

ESTERON 245 BE LABEL CTTL.

THE EFFECT OF THE PHENOXYACETIC ACID HERBICIDES 245T & 24D AS
ASCERTAINED BY DIRECT EXPERIMENTATION.
UNIV OF SYDNEY AUSTRAL

DIOXIN & HUMAN HEALTH.

DOW HEALTH & ENVIRONMENTAL INFORMATION DIOXIN & HUMAN HEALTH
EXECUTIVE SUMMARY.

DECISION MAKING IN THE EPA.

BURT RE
ARNOLD JR

KASPER RG

DETERMINATION OF TCDD IN ESTERON 245 BRUSH & WEED KILLER.

I JMC

ESTERON 245 BE-TCDD ANALYSIS.

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2619	11/05/81	MEMO	1
AUTHOR:	GANTZ RL		DOW	
ADDRESSEE:	TOWNSEND J			
COPYEE:				
DOCUMENT	2620	02/21/83	MEMO	1
AUTHOR:	DOW		HAVEL JJ	
ADDRESSEE:	GANTZ RL		DOW	
COPYEE:	SCHOBER AE			
DOCUMENT	2621	02/16/83	MEMO	1
AUTHOR:	GANTZ RL		DOW	
ADDRESSEE:	DOW		HAVEL JJ	
COPYEE:	LANING ER		SCHOBER AE	
DOCUMENT	2622	02/23/83	MEMO	1
AUTHOR:	GANTZ RL		DOW	
ADDRESSEE:	DOW		YTZEN GL	
COPYEE:				
DOCUMENT	2623	05/19/82	TECH	3
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:				
DOCUMENT	2624	04/21/78	LEGIS	36
AUTHOR:	EPA			
ADDRESSEE:				
COPYEE:				
DOCUMENT	2625	07/00/72	NEWS	9
AUTHOR:	LENG ML		DOW	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2626	02/00/79	REPORT	2
AUTHOR:	LENG ML		DOW	
ADDRESSEE:				
COPYEE:				

854458

4362

TITLE

 CONCERNS MATERIAL SAFETY DATA SHEET FOR ESTERON 245 CTTL.

USE DIRECTIONS FOR ESTERON 245BE (EARLY 1982 (820000) PRODUCTION).

FIELD SOLUTION TO PRESCRIBE FOR ESTERON 245 BE HERBICIDE QUALITY COMPLAINTS.

TICHON JM

YTZEN GL

MIXING GUIDELINES FOR UTILIZING PREVIOUSLY UNRETURNED ESTERON 245 BE HERBICIDE IF QUALITY COMPLAINTS ARISE IN 1983 (830000).

ESTERON 245BE HERBICIDE MATERIAL SAFETY DATA SHEET.

PESTICIDES PROGRAMS REBUTTABLE PRESUMPTION AGAINST REGISTRATION & CONTINUED REGISTRATION OF PESTICIDE PRODUCTS CONTAINING 245T (FED REGISTER 43(78), 17116-17147).

RESIDUES IN MILK & MEAT & SAFETY TO LIVESTOCK FROM THE USE OF PHENOXY HERBICIDES IN PASTURE & RANGELAND (DTE 28(1), 12-20).

SUMMARY OF DOW'S RESPONSE TO EPA'S RISK ANALYSIS ON THE USE OF 245T HERBICIDE.

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2627	10/25/81	ABSTRACT	1
AUTHOR:				
ADDRESSEE:				
COPYEE:				
DOCUMENT	2628	00/00/69	NEWS	1
AUTHOR:	LENG ML		MCCOLLISTER DD	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2629	00/00/81	NEWS	1
AUTHOR:	REUBER MD			
ADDRESSEE:				
COPYEE:				
DOCUMENT	2630	05/20/81	LETTER	1
AUTHOR:	JOUR OF TOXICOLOGY & ENV		ZWEIG O	
ADDRESSEE:	KOCIBA RJ		DOW	
COPYEE:				
DOCUMENT	2631	04/29/81	MEMO	1
AUTHOR:	LE			
ADDRESSEE:				
COPYEE:				
DOCUMENT	2632	08/26/80	PRESENT	1
AUTHOR:	ACS			
ADDRESSEE:				
COPYEE:				
DOCUMENT	2633	00/00/81	NEWS	1
AUTHOR:	HUMMEL RA		JENSEN DJ	
	DOW		HIGGINS HS	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2634	11/00/79	NEWS	1
AUTHOR:	POIGER H		SCHLATTER C	
ADDRESSEE:				
COPYEE:				

①
4459

4363

TITLE

SEVESO-AN ENVIRONMENTAL ASSESMENT.

TOXICOLOGY OF PICLORAM & EVALUATION OF TORDON HERBICIDES.
DOW

CARCINOGENICITY OF PICLORAM.

CONFLICTING VIEWS ON PICLORAM TOXICITY CTTL.
MCCUTCHEON RS

REPLY OF THE FEDERAL GOVERNMENT RELATING TO 245T HERBICIDES CTTL.

THE RESPONSIBILITY OF THE CHEMIST TO SOCIETY.

RESIDUE STUDY ON BEEF CATTLE CONSUMING 2378 TCDD.
KOCHER CW MAHLE NH

INFLUENCE OF SOLVENTS & ADSORBENTS ON DERMAL & INTESTINAL
ABSORPTION OF TCDD.
UNIV OF ZURICH SWITZ FED-INST OF TECH SWITZ

NUMBER	DATE	TYPE	PAGES	TITLE																																				
DOCUMENT 2635	00/00/72	NEWS	1	RESIDUES IN MILK & MEAT & SAFETY TO LIVESTOCK FROM THE USE OF PHENOXY HERBICIDES PASTURE & RANGELAND. DTE																																				
AUTHOR: LENG ML ADDRESSEE: COPYEE:																																								
DOCUMENT 2636	02/00/82	REPORT	1	REVIEW OF STUDIES WITH 245T IN HUMANS INCLUDING APPLICATORS UNDER FIELD CONDITIONS. DOW RAMSEY JC																																				
AUTHOR: BRAUN WH LAVY TL ADDRESSEE: COPYEE:																																								
DOCUMENT 2637	04/29/81	PRESENT	1	PRODUCT REGISTRATIONS & NOTIFICATIONS-PESTICIDES. DOW																																				
AUTHOR: LENG ML ADDRESSEE: COPYEE:																																								
DOCUMENT 2638	00/00/73	DATA REPORT	10	TERATOGENICITY OF PESTICIDES, THEIR METABOLITES AND CONTAMINANTS.																																				
AUTHOR: ADDRESSEE: COPYEE:																																								
DOCUMENT 2639	05/30/74	REPORT	3	2378-TETRACHLORODIBENZO-P-DIOXIN (TCDD), RESULTS OF A 13 WEEK ORAL TOXICITY STUDY IN RATS. KEELER RJ																																				
AUTHOR: GEHRING PJ ADDRESSEE: COPYEE:																																								
<table border="0"> <tr> <td>BLAIR EH</td> <td>DAVIDSON JH</td> <td>GORDON HL</td> <td>HOLDER BB</td> </tr> <tr> <td>JOHNSON JE</td> <td>KILIAN DJ</td> <td>LENG ML</td> <td>LICHY CT</td> </tr> <tr> <td>LYNN GE</td> <td>MCCOLLISTER DD</td> <td>NORRIS JM</td> <td>OLSON RD</td> </tr> <tr> <td>ROBINSON VB</td> <td>ROWE VK</td> <td>SCHWETZ BA</td> <td>SPENCER HC</td> </tr> <tr> <td>TRAYNOR MJ</td> <td>WESSEL MR; KAYE SCHOLER</td> <td>PRUITT ME</td> <td>MCINTYRE HH</td> </tr> <tr> <td>KIMMEL CE</td> <td>FREVEL LK</td> <td>BURGERT BE</td> <td>HORVATH B</td> </tr> <tr> <td>SHAVER RJ</td> <td>HOUSE RJ</td> <td>LEAVITT FC</td> <td>CARLETON R</td> </tr> <tr> <td>RINZEMA L</td> <td>MOOLENAAR RJ</td> <td>PULLIN T</td> <td>KIN S</td> </tr> <tr> <td>ROSE JQ</td> <td>YATES WM</td> <td>MCCUTCHEON SM</td> <td></td> </tr> </table>					BLAIR EH	DAVIDSON JH	GORDON HL	HOLDER BB	JOHNSON JE	KILIAN DJ	LENG ML	LICHY CT	LYNN GE	MCCOLLISTER DD	NORRIS JM	OLSON RD	ROBINSON VB	ROWE VK	SCHWETZ BA	SPENCER HC	TRAYNOR MJ	WESSEL MR; KAYE SCHOLER	PRUITT ME	MCINTYRE HH	KIMMEL CE	FREVEL LK	BURGERT BE	HORVATH B	SHAVER RJ	HOUSE RJ	LEAVITT FC	CARLETON R	RINZEMA L	MOOLENAAR RJ	PULLIN T	KIN S	ROSE JQ	YATES WM	MCCUTCHEON SM	
BLAIR EH	DAVIDSON JH	GORDON HL	HOLDER BB																																					
JOHNSON JE	KILIAN DJ	LENG ML	LICHY CT																																					
LYNN GE	MCCOLLISTER DD	NORRIS JM	OLSON RD																																					
ROBINSON VB	ROWE VK	SCHWETZ BA	SPENCER HC																																					
TRAYNOR MJ	WESSEL MR; KAYE SCHOLER	PRUITT ME	MCINTYRE HH																																					
KIMMEL CE	FREVEL LK	BURGERT BE	HORVATH B																																					
SHAVER RJ	HOUSE RJ	LEAVITT FC	CARLETON R																																					
RINZEMA L	MOOLENAAR RJ	PULLIN T	KIN S																																					
ROSE JQ	YATES WM	MCCUTCHEON SM																																						
DOCUMENT 2640	05/30/74	CHART	97	2378-TETRACHLORODIBENZO-P-DIOXIN (TCDD), RESULTS OF 13 WEEK ORAL TOXICITY STUDY IN RATS.																																				
AUTHOR: GEHRING PJ ADDRESSEE: COPYEE:																																								
<table border="0"> <tr> <td>REPORT</td> <td>KOCIBA RJ</td> <td>DOW</td> <td>KEELER PA</td> </tr> </table>					REPORT	KOCIBA RJ	DOW	KEELER PA																																
REPORT	KOCIBA RJ	DOW	KEELER PA																																					

D.4460

4364

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2641	00/00/78	REPORT	7

AUTHOR: HARDELL L SANDSTROM A
 ADDRESSEE:
 COPYEE:

DOCUMENT	2642	03/00/82	LABEL	2

AUTHOR: DOW
 ADDRESSEE:
 COPYEE:

DOCUMENT	2643	03/24/82	LETTER	2

AUTHOR: SCHOBBER AE DOW
 ADDRESSEE: EPA ADAMCZYK TE
 COPYEE: LANING ER BUZZELLI DT
 ROSS E

DOCUMENT	2644	00/00/00	REPORT	3

AUTHOR:
 ADDRESSEE:
 COPYEE:

DOCUMENT	2645	00/00/00	REPORT	6

AUTHOR:
 ADDRESSEE:
 COPYEE:

DOCUMENT	2646	12/13/82	LETTER	4

AUTHOR: KILPATRICK R
 ADDRESSEE: WALKER D
 COPYEE:

DOCUMENT	2647	02/07/83	NEWS	2

AUTHOR: MINISTRY OF AG FISHERIES
 ADDRESSEE:
 COPYEE:

194461

4365

TITLE

CASE CONTROL STUDY. MALIGNANT MESENCHYME SOFT TISSUE TUMOUR & EXPOSE TO PHENOXY ACIDS OR CHLOROPHENOLS (LAKARTIDNINGEN 75(40) 1978 (780000)).

ESTERON 245BE HERBICIDE.

ESTERON 245BE EPA REG 464-574 YOUR LETTER OF MARCH 16, 1982 (820316).

GOODMAN C

CONYERS E

PROPOSALS FOR EPIDEMIOLOGICAL INVESTIGATIONS OF MORBIDITY ASSOCIATED WITH HERBICIDES.

SUMMARY OF EPIDEMIOLOGICAL & CLINICAL STUDIES CONTRIBUTING ORIGINAL OBSERVATIONS CONCERNING A POSSIBLE ASSOCIATION BETWEEN CHEMICAL EXPOSURE & SOFT TISSUE SARCOMAS.

EVIDENCE CONCERNING THE SAFETY OF 245T HERBICIDES CTTL.

ADVISORY COMMITTEE ON PESTICIDES, REPORT ON PHENOXYL ACID HERBICIDES.

NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT 2648	06/09/81	REPORT TEST	42	A REPORT ON 24D, 245T & HUMAN HEALTH.
AUTHOR:	HUNTER HCD	RATHUS E	DONOHUE J	OXENHAM B
ADDRESSEE:	KELLY J	LAND ADMIN COMM AUSTRAL		
COPYEE:				
DOCUMENT 2649	08/28/80	LETTER SPEC	2	REMARKS ON 24D & 245T IN RELATION TO CHLORACNE CTTL.
AUTHOR:	WARREN LE	DOW		
ADDRESSEE:	SWEeley JB	MASONITE		
COPYEE:	ALLISON WE	DAVIDSON JH	NORRIS MG	WATSON AJ
	HUNT DD	JONES J	ANDERSON M	PARKER N
DOCUMENT 2650	06/23/72	REPORT TEST	40	DOW EPA HEARING. SUBMISSIONS RE: CANCELLATION - VOLUME 2. 245T.
AUTHOR:				
ADDRESSEE:				
COPYEE:				
DOCUMENT 2651	05/01/80	REPORT	37	24D. EVALUATION OF THE HUMAN HEALTH HAZARDS.
AUTHOR:	DOW	DEPT OF HEALTH SERVICES		
ADDRESSEE:				
COPYEE:	LANING ER			
DOCUMENT 2652	06/24/80	NEWS	1	STATE WARNING ON 24D HERBICIDE EXPOSURE ISSUED.
AUTHOR:				
ADDRESSEE:				
COPYEE:				
DOCUMENT 2653	06/24/80	NEWS	2	24D MAY CAUSE LONG LASTING NERVE DAMAGE CTTL.
AUTHOR:				
ADDRESSEE:				
COPYEE:				
DOCUMENT 2654	10/07/77	LETTER	2	SAFETY OF HANDLING DOW 24D AND MCP PRODUCTS CTTL.
AUTHOR:	LENG ML	DOW		
ADDRESSEE:	ALBERG	MIDLAND COOPERATIVES		
COPYEE:	DAVIDSON JH	DRENCKPOHL JW	HEIN ND	JANTZ OK
	SEWARD WB	SMITH LL	TRAYNOR MJ	WILLIAMS CS
	DAAK D			

D-4462

4306

	NUMBER	DATE	TYPE	PAGES
	RINZEMA L IRON WATKINS		MARTIN JB MILLIGAN DJ	
DOCUMENT	2670	03/07/83	REPORT	25
AUTHOR:	DOW		ALEXANDER HC	
	MOOLENAR RJ			
ADDRESSEE:				
COPYEE:	GANTZ RL		SCHOBER AE	
DOCUMENT	2671	05/21/82	LETTER	2
AUTHOR:	DOW		HAVEL J	
ADDRESSEE:	HOLZSCHU RG		LANING ER	
	SCHULTZ JA		SKURSKI MJ	
COPYEE:	DOW		OSBORNE DW	
DOCUMENT	2672	08/25/81	REPORT	1
AUTHOR:	GANTZ RL		DOW	
	FLANNERY RF			
ADDRESSEE:				
COPYEE:	DOW			
DOCUMENT	2673	01/12/82	MEMO	1
AUTHOR:	BLACK MD		FOOD DEPT CA	
ADDRESSEE:	COLBY RW		DOW	
COPYEE:	EPA		BISHOP F	
DOCUMENT	2674	01/22/82	LETTER	2
AUTHOR:	EPA		MOUNTFORT RF	
ADDRESSEE:	SCHOBER AE		DOW	
COPYEE:				
DOCUMENT	2675	08/22/78	REPORT	1
AUTHOR:	BRAUN WH		DOW	
	SMITH FA			
ADDRESSEE:				
COPYEE:				

①.4463
4367

TITLE

MCDONALD K
TOMKE JA

MERCER C
WILSON JD

THE ACUTE TOXICITY OF 24D TO REPRESENTATIVE AQUATIC ORGANISMS
(ES-584).

MAYES MA

GERSICH FM

DOW

MEETING REGARDING ESTERON 245BE QUALITY AND OPTIONS.

DOW
WOODS J
TICHON JM

EISCHER RL
YTZEN GL

ESTERON 245 BE HERBICIDE (DOW RANGELAND BRUSH KILLER T (XRM-4498)
(245T BUTOXYETHYL ESTER, EMULSIFIABLE CONCENTRATE CONTAINING 4.0
LB. AE/TAL.) (DEVELOPMENTAL PRODUCT TRANSFER TO COMMERCIAL STATUS).
EHRMANTRAUT JW WOOD CR

SPECIAL LOCAL NEED REGISTRATIONS, ESTERON BRUSH KILLER, CA-780065,
ESTERON 245 HERBICIDE, CA-780066.

ESTERON 245 BE, EPA FILE SYMBOL 464-LTU, YOUR SUBMISSION OF
NOVEMBER 9, 1981 (811109).

TCDD TISSUE DISTRIBUTION AND EXCRETION FOLLOWING A SINGLE ORAL DOSE
IN FEMALE GUINEA PIGS (CRI 791735)(R&D REPORT HET K-66681-(37)).
HEFNER JG NOLAN RJ

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2676	00/00/66	REPORT	28

AUTHOR: BJORKLUND NE ERNE K
 ADDRESSEE:
 COPYEE:

DOCUMENT	2677	00/00/73	REPORT	5

AUTHOR: BAGE G CEKANOVA E
 ADDRESSEE:
 COPYEE:

DOCUMENT	2678	10/05/60	DISTRB	16

AUTHOR:	DOW	REPORT	OLSON KJ
ADDRESSEE:			
COPYEE:	DOW		BARRONS KC
	ELSHERE D		FALKENSTEIN WJ
	HAMMER OH		HART A
	KAGY JF		KILIAN DJ
	MCINTYRE HH		PERKINS RP
	TISDALE WL		WRIGHT N

DOCUMENT	2679	02/09/78	REPORT	2

AUTHOR:	CALHOUN LL	DOW
ADDRESSEE:		
COPYEE:	DOW	BLAIR EH
	FISHBECK W	GEHRING PJ
	JOHNS D	KILIAN DJ
	LEAVITT FC	MADRID E
	OLSON KJ	OLSON RD
	RINZEMA L	ROBINSON VB
	VOGEL A	

DOCUMENT	2680	06/18/70	LEGIS	8

AUTHOR: DUBRIDGE LA HART PA
 ADDRESSEE: HART P US SENATE
 COPYEE:

1944-4
 4368

TITLE

 TOXICOLOGICAL STUDIES OF PHENOXYACETIC HERBICIDES IN ANIMALS (ACTA
 VET SCAND, 7, 364-390).
 NATL VETERINARY INST SWE ROYAL VETERINAY COL SWED

TERATOGENIC AND EMBRYOTOXIC EFFECTS OF THE HERBICIDES 24D AND 245T
 (ACTA PHARMACOL ET TOX 32, 408-416).
 KAROLINSKA INSTITUTET SW LARSSON KS

RESULTS OF RANGE FINDING TOXICOLOGICAL DATA ON M-1845 AND M-1847
 AGRICULTURAL CHEMICAL FORMULATIONS OF THE POTASSIUM SALT OF SILVEX
 (T60.14-39291-1 T2.30-190-1).

OYEN F

BOUNDY HH
 GAY HH
 HYMAS TA
 LUCE EN
 SCOLES G

COLBY RW
 GREENE LM
 JONES GD
 LYNN GE
 STENGER VA

ACUTE TOXICITY AND CHLORACNE POTENTIAL OF TARS FROM THE 24D(HET
 K-2372-(18)).
 KEELER PA

LOCKWOOD DD

CAPUTO R
 HOLDER BB
 LANGNER RR
 MCCOLLISTER DD
 PINKERTON M
 SCHWETZ BA

DEGESERO RA
 HUMBERT DK
 LANHAM JM
 MOOLENAAR RJ
 PRUITT ME
 TALCOTT TA

STATEMENT OF DR. LEE A. DUBRIDGE SCIENCE ADVISOR TO THE PRESIDENT
 AND DIRECTOR, OFFICE OF SCIENCE AND TECHNOLOGY ACCOMPANIED BY DR.
 EDWARD J. BURGER JR, TECHNICAL ASSISTANT (EFFECTS OF 245T AND
 RELATED HERBICIDES ON MAN AND THE ENVIRONMENT).
 BICKWIT BURGER

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2681	02/07/70	REPORT	17
AUTHOR:	NEW YORKER		WHITESIDE T	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2682	00/00/81	REPORT	14
AUTHOR:	VAINIO H		NICKELS J	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2683	00/00/82	NEWS	7
			REPORT	
AUTHOR:	SHIVERICK KT		MUTHER TF	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2684	11/00/73	REPORT	14
AUTHOR:	DOW ROSE JQ		GEHRING PJ	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2685	03/04/82	LETTER	1
AUTHOR:	DOW		WOODS CD	
ADDRESSEE:	DOW		ROSS EM	
COPYEE:	GANTZ RL		DOW	
DOCUMENT	2686	00/00/00	LABEL	1
AUTHOR:	IMPERIAL			
ADDRESSEE:				
COPYEE:				
DOCUMENT	2687	12/00/66	REPORT	13
AUTHOR:	BYRD BC PA ELECTIC		DOW	
ADDRESSEE:				
COPYEE:				

4369
 1.4465

TITLE

A REPORTER AT LARGE, DEFOLIATION(NEW YORKER)(EFFECTS OF 245T ON MAN AND THE ENVIRONMENT).

PHENOXY ACID HERBICIDES CAUSE PEROXISOME PROLIFERATION IN CHINESE HAMSTERS (SCANDINAVIAN JOUR OF WORK & ENTIRON HEALTH).
LINNAINMAA K INST OF OCCUPATIONAL HEA

EFFECTS OF TCDD ON SERUM CONCENTRATIONS AND THE UTEROTROPHIC ACTION OF EXOGENOUS ESTRONE IN RATS (TOX & APPLIED PHARMACOLOGY 65, 170-176).

UNIV OF FL

THE FATE OF 245T FOLLOWING ORAL ADMINISTRATION TO RATS AND DOGS (JOUR OF TOX AND APPLIED PHARMACOLOGY 26(3), 339-351).
LENG ML PIPER WN

ESTERON 245BE HERBICIDE.

YTZEN GL

2 PLUS 2 BRUSH KILLER (EPA REG 464-204-407).

HELICOPTER APPLICATIONS OF EXPERIMENTAL FORMULATIONS CONTAINING TORDON FOR COMPARISON WITH TORDON 101 MIXTURE BRUSH KILLER (PA2.11) CTTL.

LITTLE S NORTHEASTERN FOREST EXP

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2688	09/01/71	REPORT	7
AUTHOR:	DOW		JOHNSON JE	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2689	03/00/77	NEWS	9
			REPORT	
AUTHOR:	KIMBROUGH RD		CARTER CD	
	HEW		PHILLIPS PE	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2690	10/00/54	REPORT	8
AUTHOR:	ROWE VK			
ADDRESSEE:				
COPYEE:	HYMAS TA			
DOCUMENT	2691	09/00/73	NEWS	5
			REPORT	
AUTHOR:	ENVIRON HEALTH PERSPECTI		GUPTA BN	
	NIH		VOS JG	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2692	09/00/73	REPORT	8
AUTHOR:	GUPTA BN		MOORE JA	
	ZINKL JG			
ADDRESSEE:				
COPYEE:				
DOCUMENT	2693	09/00/73	REPORT	13
AUTHOR:	DOW		EMERSON JL	
	NORRIS JM		ROWE VK	
ADDRESSEE:				
COPYEE:				

D.4466

4370

TITLE

THE PUBLIC HEALTH IMPLICATIONS OF WIDESPREAD USE TO THE PHENOXY
HERBICIDES AND PICLORAM (BIOSCIENCE 21(17), 899-905).

EPIDEMIOLOGY AND PATHOLOGY OF A TCDD POISONING EPISODE (ARCHIVES OF
ENVIRON HEALTH, 77-85).

LIDDLE JA
DIV OF HEALTH MO

CLINE RE

SUMMARY OF TOXICOLOGICAL INFORMATION ON 24D ABD 245T TYPE
HERBICIDES AND AN EVALUATION OF THE HAZARDS TO LIVESTOCK ASSOCIATED
WITH THEIR USE AMERICAN JNL VET RSCH XV(57):622-629, 1954.

POSTNATAL EFFECTS OF MATERNAL EXPOSURE TO TCDD (ENVIRON HEALTH
PERSPECTIVES 81-85).

MOORE JA
ZINKL JG

NIEHS

HEMATOLOGIC AND CLINICAL CHEMISTRY EFFECTS OF TCDD IN LABORATORY
ANIMALS (ENVIRON HEALTH PERSPECTIVES 5, 111-118)(730400 CONFERENCE
ON DIBENZODIOXINS AND DIBENZOFURANS SPONSORED BY NIEHS, RESEARCH
TRIANGLE PARK NC).

NIEHS

VOS JG

TOXICOLOGY OF CHLORINATED DIBENZO-P-DIOXINS (ENVIRONMENTAL HEALTH
PERSPECTIVES 87-99)(730900).

GEHRING PJ
SCHWETZ BA

GERBIG CG
SPARSCHU GL

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2694	09/00/73	REPORT	5

AUTHOR: BRADY TP BRIGGS PR
 ADDRESSEE:
 COPYEE: DOW LANGER HG

DOCUMENT	2695	08/00/72	REPORT	7

AUTHOR: EPA KIMBROUGH RD
 ADDRESSEE:
 COPYEE:

DOCUMENT	2696	11/00/72	REPORT	3

AUTHOR: ELLINGTON CP JR KEARNEY PC
 ADDRESSEE:
 COPYEE:

DOCUMENT	2697	00/00/69	REPORT	13

AUTHOR: ISENSEE AR KEARNEY PC
 WOOLSON EA
 ADDRESSEE:
 COPYEE:

DOCUMENT	2698	04/15/70	MEMO	2

AUTHOR: DOW
 ADDRESSEE:
 COPYEE:

DOCUMENT	2699	06/22/65	TEST	6

AUTHOR: DOW
 ADDRESSEE:
 COPYEE:

DOCUMENT	2700	01/00/41	REPORT	4

AUTHOR: ADAMS EM DOW
 SPENCER HC
 ADDRESSEE:
 COPYEE:

4371

D.4467

TITLE

FORMATION OF DIBENZODIOXINS AND OTHER CONDENSATION PRODUCTS FROM CHLORINATED PHENOLS AND DERIVATIVES (ENVIRON HEALTH PERSPECTIVE, 3-7).

TOXICITY OF CHLORINATED HYDROCARBONS AND RELATED COMPOUNDS(A REVIEW INCLUDING CHLORINATED DIBENZODIOXINS AND CHLORINATED DIBENZOFURANS)(ARCH ENVIRON HEALTH 25, 126-131).

PERSISTENCE AND METABOLISM OF CHLORODIOXINS IN SOILS (ENVIRONMENTAL SCIENCE & TECH, 6(12), 1017-1019).
 USDA WOOLSON EA

DECONTAMINATION OF PESTICIDES IN SOILS (RESIDUE REVIEWS 29)(EFFECTS OF 245T ON MAN AND THE ENVIRONMENT, 384-396).
 PLIMMER JR USDA

LIST OF REFERENCES ON DEGRADATION OF PHENOXY HERBICIDES, INCLUDING 245T (EFFECTS OF 245T ON MAN AND THE ENVIRONMENT, 382-383).

THE DETERMINATION OF TCDD IN 245T BY GAS LIQUID CHROMATOGRAPHY (EFFECTS OF 245T IN MAN AND THE ENVIRONMENT, 367-372).

THE RESPONSE OF RABBIT SKIN TO COMPOUNDS REPORTED TO HAVE CAUSED ACNEFORM DERMATITIS (EFFECTS OF 245T ON MAN AND THE ENVIRONMENT, 362-365).
 IRISH DD ROWE VK

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2701	04/15/70	LEGIS	45

AUTHOR: BICKWIT L BLAIR EH
HART PA JOHNSON JE
US SENATE

ADDRESSEE:
COPYEE:

DOCUMENT	2702	00/00/72	NEWS REPORT	7

AUTHOR: DOW WILLIAMS CS
ADDRESSEE:
COPYEE:

DOCUMENT	2703	06/23/71	REPORT	18

AUTHOR: DOW GEHRING PJ
ADDRESSEE:
COPYEE:

DOCUMENT	2704	01/00/80	NEWS	1

AUTHOR: KNAKE EL WEEDS TODAY
ADDRESSEE:
COPYEE:

DOCUMENT	2705	00/00/81	NEWS	8

AUTHOR: ERIKSSON M HARDELL L
AXELSON O UNIV HOSPITAL
UNIV HOSPITAL LUND
LINKOPING SWEDEN

ADDRESSEE:
COPYEE:

DOCUMENT	2706	00/00/00	PRESENT	1

AUTHOR: DOW
ADDRESSEE:
COPYEE:

4372
D.4468

TITLE

STATEMENT OF DR JULIUS E JOHNSON, VICE PRESIDENT AND DIRECTOR OF RESEARCH, DOW ACCOMPANIED BY ETCHYL BLAIR, DIRECTOR OF DOW AG CHEM RES VK ROWE DIRECTOR OF THE DOW TOX LAB AND GEORGE LYNN, DIRECTOR OF GOVERNMENT REGULATORY RELATIONS OF DOW (EFFECTS OF 245T ON MAN AND THE ENVIRONMENT, 360-404).

COMM ON COMMERCE
LYNN GE

DOW
ROWE VK

THE CURRENT STATUS OF PHENOXY HERBICIDES(IVM 4(1), 6-11).

THE EFFECT OF 24D (24D) AND ESTERS OF 24D ON RAT EMBRYONAL, FOETAL AND NEONATAL GROWTH AND DEVELOPMENT (FD COSMET TOX 9, 801-817).

SCHWETZ BA

SPARSCHU GL

THE BURIAL OF THE TWO MILLION DOLLAR TEASPOON, EDITORIAL (WEEDS TODAY).

SOFT-TISSUE SARCOMAS AND EXPOSURE TO CHEMICAL SUBSTANCES, A CASE-REFERENT STUDY (BRITISH JOUR OF IND MEDICINE (38, 00-00).

BERG NO
UMEA
SWEDEN

MOLLER T
SWEDEN
UNIV HOSPITAL

PRODUCT TORDON RTU, TORDON 101R FORESTRY HERBICIDE, TORDON 225E, KURON, TORDON 10K PELLETS, GARLON, TORDON 2E.

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2707	09/29/67	LETTER	1

AUTHOR: BEUTEL AP DOW
 ADDRESSEE: RENEGOTIATION BOARD USA SEMPLE PT
 COPYEE:

DOCUMENT	2708	00/00/80	NEWS	4

AUTHOR: FANELLI R REPORT CASTELLI MG
 ISTITUTO DI RICERCHE FA MARTELLI A
 ADDRESSEE:
 COPYEE:

DOCUMENT	2709	09/00/73	NEWS	15

AUTHOR: MOORE JA REPORT NIEHS
 ADDRESSEE:
 COPYEE:

DOCUMENT	2710	00/00/78	REPORT	22

AUTHOR: HARDELL L SANDSTROM A
 ADDRESSEE:
 COPYEE:

DOCUMENT	2711	03/03/78	REPORT	12

AUTHOR: BAUGHMAN R HARVARD
 ADDRESSEE:
 COPYEE:

DOCUMENT	2712	02/22/57	LETTER	1

AUTHOR: DOW SMITH FB
 ADDRESSEE: CH BOEHRINGER SOHN WEY B
 COPYEE: DOW GRISWOLD AM
 KNAPP KRAHN O
 ROWE VK VANDERWEELE JC

14469

4373

TITLE

APPLICATION FOR COMMERCIAL EXEMPTION FOR THE YEAR 660000 OF THE PHENOXY BASE WEED AND BRUSH KILLERS IN ACCORDANCE WITH THE PROVISIONS OF SECTION 106 OF THE RENEGOTIATION ACT OF 510000 (REFERENCE LPI 10581 12) CTTL.

PRESENCE OF TCDD IN WILDLIFE LIVING NEAR SEVESO, ITALY A PRELIMINARY STUDY (BULLETIN OF ENVIRON CONTAMINATION & TOX 24, (460-463)).

NOSEDA A

GARATTINI S

EFFECT OF TCDD ON THE IMMUNE SYSTEM OF LABORATORY ANIMALS (ENVIRON HEALTH PERSPECTIVES)(PRESENTED AT NIEHS CONFERENCE ON CHLORODIBENZO DIOXINS, RESEARCH, 730402 TO 730403).

VOS JG

ZINKL J

CASE CONTROL STUDY SOFT TISSUE SARCOMAS AND EXPOSURE TO PHENOXYACETIC ACIDS OR CHLOROPHENOLS.
UNIV HOSPITAL SWEDEN

THE EVALUATION OF POSSIBLE HEALTH HAZARDS FROM TCDD IN THE ENVIRONMENT (PRESENTATION FOR SYMPOSIUM ON THE USE OF HERBICIDES IN FORESTRY ARLINGTON, VA 780221 TO 780222).

MESELSON M

OKEEFE P

PREPARATION OF TRICHLOROPHENOL TO AVOID CHLORACNE.

HOYLE H
MELCHING WAKLEINE
MYERS JR

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2713	07/28/75	LETTER REPORT	2
AUTHOR:	DOW		FRASER JM	
ADDRESSEE:	DOW		DAVIDSON JH	
COPYEE:	DOW		HOFF RC	
DOCUMENT	2714	05/00/78	LABEL	1
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:				
DOCUMENT	2715	05/20/61	REPORT	23
AUTHOR:	BAUER H		SCHULTZ KH	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2716	12/26/74	REPORT	41
AUTHOR:	DISHBURGER HJ		DOW	
ADDRESSEE:				
COPYEE:	DISHBURGER HJ		DOW	
	BJORK CK		COULTER LL	
	HEFNER RE		HYMAS TA	
	LENG ML		LINCE M	
	MOSS RD		NAEGELE RE	
	SEYMOUR KG		SHAVER RJ	
	WILLIAMS CS			
DOCUMENT	2717	07/19/78	REPORT	20
AUTHOR:	DOW		HUMMEL RA	
	MAHLE NH			
ADDRESSEE:				
COPYEE:	DOW		BROOKENS RG	
	DONALDS JE		FERGUSON RH	
	HANSON RG		HEBBOURN RG	
	JANTZ OK		KENAGA EE	
	MITCHELL MK		MOSS RD	
	PRUITT ME		SAUNDERS ES	
	SPEER LH		THEIS JM	
	WILLIAMS CS			
DOCUMENT	2718	08/04/76	LEGIS	5
AUTHOR:	DOW		SHADOFF LA	
ADDRESSEE:				
COPYEE:				

4374
D-4476

TITLE

KURON BRUSH AND WEED KILLER, LOT MM 501048.

KURON.

OCCUPATIONAL INTOXICATION OCCURRING IN THE PRODUCTION OF
CHLOROPHENOL COMPOUNDS.
SPIEGELBERG U

RESIDUE STUDY; DISSIPATION OF SILVEX AND 245-TRICHLOROPHENOL IN
TISSUES OF CATTLE FED SILVEX (R&D REPORT GH-C 774)(75 0052).
JENSEN DJ MILLER PW

BARRONS KC
GETZENDANER ME
KARWAL JH
LYNN GE
OSBORNE DW
SHELDON HW

BAURIEDEL WR
HANSON RG
KENAGA EE
MCCOLLISTER DD
PRUITT ME
WATSON AJ

A RESIDUE STUDY ON BEEF CATTLE CONSUMING TCDD.
JENSEN DJ KOCHER CW

COULTER LL
GORING CA
HUNTER RC
LENG ML
MULLISON WR
SEYMOUR KG
VRANISH SR

DISHBURGER HJ
HAAGSMA TA
HYMAS TA
MCCOLLISTER DD
OSBORNE DW
SMITH LL
WESELOH JW

STATEMENT OF LEWIS A SHADOFF ON TCDD IN THE ENVIRON.
SHADOFF LA

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2719	07/00/75	ABSTRACT	42
AUTHOR:	THALKEN CE		REPORT	
ADDRESSEE:			USAF	
COPYEE:				
DOCUMENT	2720	00/00/57	NEWS	7
AUTHOR:	KIMMIG VJ		REPORT	
ADDRESSEE:			SCHULZ KH	
COPYEE:				
DOCUMENT	2721	00/00/77	REPORT	9
AUTHOR:	BLAU GE		BRAUN WH	
ADDRESSEE:	SAUERHOFF MW			
COPYEE:				
DOCUMENT	2722	00/00/80	REPORT	17
AUTHOR:	DOW		SHADOFF LA	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2723	00/00/00	LEGAL	6
AUTHOR:	DOW		TALCOTT AT	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2724	00/00/79	REPORT	43
AUTHOR:	CRUMMETT WB		DOW	
ADDRESSEE:	STEHL RH			
COPYEE:				
DOCUMENT	2725	00/00/74	NEWS	8
AUTHOR:	AXELSON O		REPORT	
ADDRESSEE:			SUNDELL L	
COPYEE:				

114471

4375

TITLE

ABSENCE OF TCDD TOXICITY TO A RODENT POPULATION FOLLOWING MASSIVE
FIELD APPLICATIONS OF 245T HERBICIDE(J AM VET MED ASSOC 167, 861).

HARD WE

YOUNG AL

BERUFLICHE AKNE (SOG CHLORAKNE) DURCH CHLORIERTE AROMATISCHE
ZYKLISCHE ATHER (DERMATOLOGICA 115, 540).

UNIV HAUTKLINIK HAMBURG

THE FATE OF 24D FOLLOWING ORAL ADMINISTRATION TO MAN (TOXICOLOGY).
DOW GEHRING PJ

THE DETERMINATION OF TCDD IN HUMAN MILK.

TESTIMONY OF AT TALCOTT SHOECRAFT ET AL VS DOW.

A SEARCH FOR CHLORINATED DIOXINS IN THE ENVIRONMENT.
HUMMEL RA SHADOFF LA

HERBICIDE EXPOSURE MORTALITY AND TUMOR INCIDENCE AN EPIDEMIOLOGICAL
INVESTIGATION ON SWEDISH RAILROAD WORKERS (WORK ENVIRONMENT AND
HEALTH 11,21-28).

YRKESMEDICINSKA KLINIKEN

DOCUMENT	2726	00/00/00	REPORT	19	MORTALITY OF PERSONS EXPOSED TO DIOXIN DURING AN ACCIDENT WHICH OCCURRED IN THE BASF AG ON 531117.
AUTHOR:					
ADDRESSEE:					
COPYEE:					
DOCUMENT	2727	00/00/78	REPORT	7	IMMUNE SUPPRESSION BY TCDD (DIOXIN, TOXICOLOGICAL AND CHEMICAL ASPECTS, 163-175).
AUTHOR:	KATER L		KREEFTENBERG JO		NATL INST OF PUBLIC HEALTH UNIVERSITY HOSPITAL NETH
VOS JO					
ADDRESSEE:					
COPYEE:					
DOCUMENT	2728	00/00/77	NEWS	2	MALIGNANT MESENCHYMAL TUMORS AND EXPOSITION FOR FENOXISYROR, EN KLINIK OBSERVATION (LAKARTIDNINGEN 74(33), 2753-2754).
REPORT					
AUTHOR:	HARDELL L		REGIONAL HOSPITAL SWEDEN		
ADDRESSEE:					
COPYEE:					
DOCUMENT	2729	00/00/78	NEWS	8	THE DETERMINATION OF TCDD IN BIOLOGICAL EXTRACTS BY GAS CHROMATOGRAPHY MASS SPECTROMETRY (BIOMEDICAL MASS SPECTROMETRY 5(1), 7-13).
REPORT					
AUTHOR:	DOW		HUMMEL RA		SHADOFF LA
ADDRESSEE:					
COPYEE:					
DOCUMENT	2730	01/06/79	NEWS	2	MALIGNANT LYMPHOMA OF HISTIOCYTIC TYPE AND EXPOSURE TO PHENOXYACETIC ACIDS OR CHLOROPHENOLS (THE LANCET, 55-56).
REPORT					
AUTHOR:	HARDELL L		UNIV HOSPITAL SWEDEN		
ADDRESSEE:					
COPYEE:					
DOCUMENT	2731	00/00/80	REPORT	19	MALIGNANT LYMPHOMA AND EXPOSURE TO CHEMICAL SUBSTANCES, ESPECIALLY ORGANIC SOLVENTS, CHLOROPHENOLS AND PHENOXY ACIDS (LAKARTIDNINGEN 77(4), 208-210).
AUTHOR:	AXELSON		ERIKSSON M		HARDELL L LENNER P
ADDRESSEE:					
COPYEE:					
DOCUMENT	2732	12/00/75	REPORT	6	INCREASED SUSCEPTIBILITY TO BACTERIAL INFECTION AS A SEQUELA OF EXPOSURE TO TCDD (INFECTION AND IMMUNITY 12(6), 1319-1324).
AUTHOR:	FAITH RE		MCCONNELL EE		MOORE JA NIEHS
THIGPEN JE					
ADDRESSEE:					
COPYEE:					

1447a

4376

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2733	04/17/70	REPORT	21
AUTHOR: CROW KD PRINCESS MARGARET ADDRESSEE: COPYEE:				
DOCUMENT	2734	00/00/79	REPORT	33
AUTHOR: BISANTI L BONETTI F FARA GM FAVARETTI C MONTESARCHIO E PUCCINELLI V VOLPATO C ZAMBRELLI E ADDRESSEE: COPYEE:				
DOCUMENT	2735	00/00/77	CALCS	18
AUTHOR: DOW ADDRESSEE: COPYEE:				
			REPORT	
			OTT MG	
DOCUMENT	2736	05/06/80	REPORT	13
AUTHOR: DOW KNOLL FJ SHADOFF LA ADDRESSEE: COPYEE: DOW COOK RR GEHRING PJ SCHWETZ BA VRANISH SR				
DOCUMENT	2737	00/00/79	REPORT	7
AUTHOR: HARDELL L SANDSTROM A ADDRESSEE: COPYEE:				
DOCUMENT	2738	00/00/79	NEWS	7
AUTHOR: HARDELL L ADDRESSEE: COPYEE:				
			REPORT	
			SANDSTROM A	

14473

4377

TITLE

CHLORACNE, A CRITICAL REVIEW INCLUDING A COMPARISON OF TWO SERIES OF CASES OF ACNE FROM CHLORNAPHTHALENE AND PITCH FUMES (DOWLING ORATION DELIVERED AT ST THOMAS' HOSPITAL).

HOSPIT

EXPERIENCE OF THE ACCIDENT OF SEVESO (PROCEEDINGS OF THE 6TH ETS CONF 790904 TO 790907 HUNGARY).

CARAMASCHI F	DELCORNO G
GIAMBELLUCA S	MARNI E
REGIONE LOMBARDIA ITALY	REMOTTI G

ANALYSIS OF SELECTED LABORATORY TESTS AMONG EMPLOYEES PRESUMABLY EXPOSED TO TCDD (EXAM PERIOD 640900 TO 650300).

DETERMINATION OF DIOXINS HUMAN MILK SAMPLES FROM RESIDENTS OF WASHINGTON (ML AL 80-50246).

LANGHORST ML	LOOMIS T

CRUMMETT WB
SCRIVEN JG

DAVIDSON JH
VENABLE J

CASE CONTROL STUDY SOFT TISSUE SARCOMAS AND EXPOSURE TO PHENOXYACETIC ACIDS OR CHLOROPHENOLS (BR JOUR CANCER 790000 39, 711).

UNIV HOSPITAL UMEA SWEDE

CASE CONTROL STUDY SOFT TISSUE SARCOMAS AND EXPOSURE TO PHENOXYACETIC ACIDS OR CHLOROPHENOLS (BR J CANCER 39, 711-717).

UNIV HOSPITAL SWEDEN

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2739	00/00/80	NEWS	7

AUTHOR: ANDERSSON K
 KLING H
 ADDRESSEE:
 COPYEE:

REPORT
 AXELSON O
 SUNDELL L

DOCUMENT	2740	00/00/79	REPORT	19

AUTHOR: MONSANTO
 ADDRESSEE:
 COPYEE:

SUSKIND RR

DOCUMENT	2741	00/00/73	NEWS REPORT	30

AUTHOR: FISHER P
 ADDRESSEE:
 COPYEE:

TUNG TT

DOCUMENT	2742	01/11/78	REPORT	17

AUTHOR: ASP S
 RIIHIMAKI V
 ADDRESSEE:
 COPYEE:

GEPPAIINEN AM

DOCUMENT	2743	00/00/79	NEWS	20

AUTHOR: AXELSON A
 LITERATURE RESEARCH
 ADDRESSEE:
 COPYEE:

REPORT
 BERG NO
 MOLLER T

DOCUMENT	2744	01/11/78	REPORT	14

AUTHOR: AXELSON O
 ADDRESSEE:
 COPYEE:

REGIONAL HOSPITAL

124474

4378

HERBICIDE EXPOSURE AND TUMOR MORTALITY (AN UPDATED EPIDEMIOLOGIC INVESTIGATION ON SWEDISH RAILROAD WORKERS)(SCAND J WORK ENVIRON HEALTH 6(1980) 73-79).

EDLING C

HOGSTEDT C

THE MORTALITY EXPERIENCE OF WORKERS EXPOSED TO
TETRACHLORODIBENZODIOXIN IN A TRICHLOROPHENOL PROCESS ACCIDENT.
UNIV OF CINCINNATI MEDIC ZACK JA

PRIMARY CANCER OF THE LIVER IN VIETNAM (CHIRURGIE 99(7), 427-436).

COORDINATION OF EPIDEMIOLOGICAL STUDIES ON THE LONG TERM HAZARDS OF
CHLORINATED DIBENZODIOXINES AND CHLORINATED DIBENZOFURANS
(SYMPTOMATOLOGY MORBIDITY AND MORTALITY EXPERIENCE OF CHLORINATED
PHENOXYACID HERBICIDE 24D 245T SPRAYERS IN FINLAND)(A CLINICAL AND
EPIDEMIOLOGICAL STUDY).

HERNBERG S

INST OF OCCUPATIONAL HEA

CASE CONTROL STUDY ON MALIGNANT MESENCHYMAL TUMORS OF THE SOFT
PARTS AND EXPOSURE TO CHEMICAL SUBSTANCES (LAKARTIDNINGEN 76,
3872-3875).

ERIKSSON M
SWEDEN

HARDELL L

A REVIEW ON SWEDISH EPIDEMIOLOGICAL STUDIES WITH RELATIONS TO
CHLORINATED DIBENZODIOXINES(WORKING PAPER TO THE IARC MEETING
780110 TO 780111 ON COORDINATION OF EPIDEMIOLOGIC STUDIES ON THE
LONG TERM HAZARDS OF CHLORINATED DIBENZODIOXINES AND CHLORINATED
DIBENZOFURANES).

SWEDEN

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2745	00/00/79	REPORT	3

AUTHOR: HOGSTEDT C WESTERLUND B
 HOGSTADT C
 ADDRESSEE:
 COPYEE:

DOCUMENT	2746	09/00/76	REPORT	5

AUTHOR: GOLDMANN P THEISS AM
 ADDRESSEE:
 COPYEE:

DOCUMENT	2747	00/00/73	REPORT	9

AUTHOR: GOLDMAN PJ LITERATURE RES
 ADDRESSEE:
 COPYEE:

DOCUMENT	2748	09/00/77	REPORT	11

AUTHOR: NATL BD OF HEALTH AND WE
 ADDRESSEE:
 COPYEE:

DOCUMENT	2749	00/00/00	MEDREC	1

AUTHOR:
 ADDRESSEE:
 COPYEE:

DOCUMENT	2750	11/14/78	REPORT	4

AUTHOR: COOK RR DOW
 ADDRESSEE:
 COPYEE:

DOCUMENT	2751	00/00/00	REPORT	13

AUTHOR: BASF FRENTZELBEYME R
 ADDRESSEE:
 COPYEE:

14475
 4379

TITLE

COHORT STUDY OF DEATH CAUSES AMONG TIMBER WORKERS WITH AND WITHOUT EXPOSURE TO PHENOXY ACID PREPARATIONS(EPA TRANSLATION) (SELECTED PAPERS ON 245T AND TCDD).

WESTERLUND B

LITERATURE RES

FOLLOW UP REPORT ON THE TRICHLOROPHENOL-DIOXIN ACCIDENT AT BASF AG ON 531113(EPA TRANSLATION)(SELECTED PAPERS ON 245T AND TCDD).

LITERATURE RES

SEVERE ACUTE CHLORACNE, A MASS INTOXICATION BY 2367-TETRACHLORODIBENZODIOXIN(SELECTED PAPERS ON 245T AND TCDD).

CONGENITAL MALFORMATIONS AND PERINATAL DEATH IN A SWEDISH COUNTY, A STUDY OF THE RELATION TO EXPOSURE TO 245T (REPORT FROM THE SWEDISH NATIONAL BOARD OF HEALTH AND WELFARE).

KAUKO SATAMA LABORATORY TEST RESULTS (SHOEMAKER VS DOW).

REVIEW OF THE TRANSLATED ARTICLE HARDELL L AND SANDSTROM A CASE-CONTROL STUDY MALIGNANT MESENCHYME SOFT TISSUE TUMOUR AND EXPOSE TO PHENOXY ACIDS OR CHLOROPHENOLS (LAKARTIDNINGEN 75N40) 780000).

MORTALITY STUDY OF PERSONS EXPOSED TO DIOXIN AFTER AN ACCIDENT WHICH OCCURED IN THE BASF ON 531113.

THIESS AM

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2752	01/00/72	REPORT	7
AUTHOR: AUS DER ARZTLICHEN ABTEI GOLDMAN PJ				
ADDRESSEE:				
COPYEE:				
DOCUMENT	2753	01/30/79	REPORT	65
AUTHOR:	CHETOCK JJ		GREAVES RD	
	U. S. FOREST SERVICE			
ADDRESSEE:				
COPYEE:				
DOCUMENT	2754	00/00/79	ABSTRACT	17
			REPORT	
AUTHOR:	ANDERSON K		AXELSON O	
	KLING H		SUNDELL L	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2755	02/00/70	REPORT	31
AUTHOR:	BINNS W		CUETO C	
	HEGGESTAD HE		HEPTING GH	
	SAND PF		STEPHENS RF	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2756	00/00/71	REPORT	12
AUTHOR:	ARCH ENVIRON HEALTH		METTER G	
	SMITH D			
ADDRESSEE:				
COPYEE:				
DOCUMENT	2757	11/10/76	LETTER REPORT	2
AUTHOR:	DAVIDSON JH		DOW	
ADDRESSEE:	DOW		CRUMMETT WB	
	MINTZ MJ		MUELDER WW	
	SCHWETZ BA		SEWARD WB	
COPYEE:				

74496

4380

TITLE

SCHWERSTE AKUTE CHLORAKNE DURCH TRICHLORPHENOLZERSETZUNGSPRODUKTE
(ARBEITSMEDIZIN SOZIALMEDIZIN ARBEITSHYGIENE 7(1), 12-18).

FORESTRY RELATED IMPACTS OF 245T IN OR.
KNAPP WH OR ST DEPT OF FORESTRY

HERBICIDE EXPOSURE AND TUMOR MORTALITY AN UPDATED EPIDEMIOLOGICAL
INVESTIGATION ON SWEDISH RAILROAD WORKERS.

EDLING C HOGSTEDT C
UNIV HOSPITAL SWEDEN

INVESTIGATION OF SPRAY PROJECT NEAR GLOBE, AZ.
ELIASON BC FREEMAN B
MI ST UNIV PIMENTEL D
TSCHIRLEY FH

A HEALTH SURVEY OF WORKERS IN 24D AND 245T PLANT WITH SPECIAL
ATTENTION TO CHLORACNE, PORPHYRIA CUTANEA TARDA, AND PSYCHOLOGIC
PARAMETERS (ARCH ENVIRON HEALTH 22, 316-327).
POLAND AP POSSICK P

CHLORINATED DIOXIN ISSUE MANAGEMENT TEAM MEETING 761117.

HOLDER BB JOHNSON RL
OLSON RD PARSEY ES

NUMBER	DATE	TYPE	PAGES	TITLE
DOCUMENT 2758	11/19/80	LEGIS	34	DIRECT TESTIMONY OF DR RALPH T ROSS(IN RE DOW ET AL)(REFERENCE 15)(WERNER H BRAUN EXHIBITS AND REFERENCES).
AUTHOR: ROSS RT		USDA		
ADDRESSEE:				
COPYEE:				
USDA		AM CNCL ON SCIENCE & HEA		AM FARM BUR FEDN
ARNOLD & PORTER		BREINHOLT MM		BUTLER WA
EPA		GILLHAM M		JACKSON TG
LAUTERBACH AA		MAYFIELD CD		NFPA
PATTON D		PRICE WR JR		RADEMACHER JJ
VERTAC		WARREN JM		WENKER JA
WHELAN E		ZACKRISON JA		
				ANDERSON S
				ENVIRON DEFENSE FUND
				KIRK RS JR
				NW COALTN ALT PEST
				STEVENS JE JR
				WERTHEIMER RJ
DOCUMENT 2759	07/28/75	LETTER	1	KURON BRUSH AND WEED KILLER, LOT NO MM 501048.
AUTHOR: DOW		FRASER JM		
ADDRESSEE: DOW		DAVIDSON JH		
COPYEE: DOW		HOFF RC		
DOCUMENT 2760	07/00/74	LETTER REPORT	82	DIOXIN IMPLEMENTATION PLAN.
AUTHOR: AGEE JL		EPA		
ADDRESSEE: COLLEAGUE				
COPYEE:				
DOCUMENT 2761	03/11/65	REPORT	17	EARLY DOW HISTORY OF THE CHLORACNE PROBLEM(BIOCHEM'S CONTRIBUTION) CTTL.
AUTHOR: DOW		SILVERSTEIN L		
ADDRESSEE:				
COPYEE:				
DOCUMENT 2762	02/05/68	ABSTRACT	2	CORPS OF ENGINEERS NEW AQUATIC PLANT CONTROL PROGRAM (ABSTRACTS 680000 MEETING OF WSSA NEW ORLEANS LA 680205 TO 680208).
AUTHOR: SCOTT RA JR		US CORP OF ENGINEERS		
ADDRESSEE:				
COPYEE:				
DOCUMENT 2763	00/00/00	MEMO	1	ACTIVE SERVICE LIST FOR RISKS.
AUTHOR:				
ADDRESSEE:				
COPYEE:				
DOCUMENT 2764	10/24/78	REPORT	1	PESTICIDE USE COORDINATING COMMITTEE ADVISORY MEMORANDUM 206.
AUTHOR: THORNTON PL		USDA FS		
ADDRESSEE: AREA DIRECTORS		DUBBELS W		
COPYEE:				
				REGIONAL FORESTERS
				STATION DIRECTORS

44477

4381

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2765	12/03/80	REPORT	18

AUTHOR: HOPES CONSULTING
 ADDRESSEE: MCILNAY CQ
 COPYEE:

DOCUMENT	2766	10/27/80	LEGIS	53
AUTHOR:	HARDY TS		REGGIANI G	
ADDRESSEE:	EPA		AM CNCL SCI & HEALTH	
COPYEE:	EPA		BREINHOLT MM	
	ARNOLD & PORTER		JACKSON TG	
	GILLHAM M		MAYFIELD CD	
	LAUTERBACH AA		PRICE WR JR	
	PATTON D		VERTAC	
	USDA		WHELAN EM	
	WERTHEIMER RJ			

DOCUMENT	2767	05/13/63	LETTER	1
AUTHOR:	DOW		MCINTYRE HH	
ADDRESSEE:	DOWNARD GM		USDA	
COPYEE:				

DOCUMENT	2768	06/26/63	LETTER	1
AUTHOR:	DOWNARD GM		USDA	
ADDRESSEE:	DOW		MCINTYRE HH	
COPYEE:				

DOCUMENT	2769	01/12/78	REPORT	6
AUTHOR:	DOW		SHADOFF LA	
ADDRESSEE:				
COPYEE:				

DOCUMENT	2770	11/10/64	LETTER	1
AUTHOR:	DOW		SACHS SB	
ADDRESSEE:	DOWNARD GM		USDA	
COPYEE:	DOW		HAMMER OH	

4382
 14478

TITLE

AN INVESTIGATION OF THE POSSIBLE EFFECTS OF PESTICIDE EXPOSURES ON
REPRODUCTIVE MORTALITY AND MORBIDITY, PART 1 PRELIMINARY REPORT
COMPARISONS BETWEEN POPULATIONS OF AGRICULTURAL PILOTS AND THEIR
SIBLINGS WHO ARE NOT OCCUPATIONALLY EXPOSED TO PESTICIDES (REPORT
SUBMITTED TO NATL AG AVIATION ASSN, FOR RELEASE ON 801203).
ROAN CC

DIRECT TESTIMONY OF DR G REGGIANI(EXHIBIT 861)(DOW, ET AL.).

AM FARM BUR FEDERATION	ANDERSON S
BUTLER WA	ENVIRON DEFENSE FUND
KIRK RS JR	LATHROP KOONTZ RIGHTER C
NFPA	NW COALTN ALT PEST
RADEMACHER JJ	STEVENS JE JR
WARREN JM	WENKER JA

QUELLETTE FE

REVISED LABEL FOR KURON BRUSH KILLER REGISTRATION 464-162 WITH
LETTER OF 630515.

STATEMENT OF LEWIS A SHADOFF FOR THE COMMITTEE OF ENVIRONMENTAL
PROTECTION ASSEMBLY BILL 1093.

ESTERON 76BE REG 464-279. DOWFUME W-85 REG 464-121. DOW GENERAL
WEE KILLER REG 464-098. KURON REG 464-162. VERTIFUME REG 464-188.

SUNDERLAND WW

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2771	00/00/79	REPORT	41
AUTHOR:	GIVAUDAN RES CENTER		HOFFMANN LAROCHE	
ADDRESSEE:	SAMBETH J		WIPF HK	
COPYEE:				
DOCUMENT	2772	00/00/00	LABEL	3
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:				
DOCUMENT	2773	03/06/72	REPORT	7
AUTHOR:	AZ COMUNITY PEST STUDIES MORGAN DP			
ADDRESSEE:				
COPYEE:				
DOCUMENT	2774	12/23/64	LETTER	1
AUTHOR:	DOWNARD GM		USDA	
ADDRESSEE:	DOW		SACHS SB	
COPYEE:				
DOCUMENT	2775	10/00/69	LABEL	2
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:				
DOCUMENT	2776	07/00/72	REPORT	9
AUTHOR:	DOW		LENG ML	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2777	11/04/70	LETTER	1
AUTHOR:	REA JM		USDA	
ADDRESSEE:	DOW			
COPYEE:				
DOCUMENT	2778	06/25/78	REPORT	22
AUTHOR:	DAVIDSON JH		DOW	
ADDRESSEE:				
COPYEE:	DOW		AM FARM BUR ASSN	
	DESAI P		DISHBURGER HJ	
	GEHRING PJ		GREFRATH B	
	HOLDER BB		JOHNS D	
	LAFOLLETTE		LAWRENCE B	

14479

4383

TITLE

THE SEVESO ACCIDENT; ITS NATURE, EXTENT AND CONSEQUENCES (AN OCCUP
HYG VOL22 3273-70).
HOMBERGER E REGGIANI G

KURON BRUSH KILLER.

ALLEGED EFFECTS ON HUMAN HEALTH OF THE USE OF HERBICIDES IN THE
AREA AROUND GLOBE AZ.
ROAN CC

KURON BRUSH KILLER REGISTRATION 464-162 WITH LETTER OF 641110.

KURON LOW VOLATILE WEED AND BRUSH KILLER.

RESIDUES IN MILK AND MEAT AND SAFETY TO LIVESTOCK FROM THE USE OF
PHENOXY HERBICIDE IN PASTURE AND RANGELAND (DTE 28(1), 12-20).

KURON BRUSH KILLER USDA REG 464-162 YOUR APPLICATION OF 700717.

THE ESTIMATION OF THE TCDD TOXIC POTENTIAL IN THE LIGHT OF THE
SEVESO ACCIDENT (PRESENTED 20TH CONGRESS OF THE EUROPEAN SOCIETY OF
TOXICOLOGY BERLIN 780625 TO 780628).
F HOFFMANN LA ROCHE & CO REGGIANI G

BLAIR EH
DOST F
HEALY M
JOHNSON SR
LENG ML

DAY B
DOWNS T
HEBBOURN R
KOCIBA RJ
MAIN RE

NUMBER	DATE	TYPE	PAGES
MCCOLLISTER DD MOSS RD OR ST UNIV SCHROETER RH TRAYNOR MJ WALSTAD J YOUNG AL		MELVIN W NEWTON M ROSS WURM ASSOC SCHWETZ BA TSCHIRLEY FH WITT J	

DOCUMENT 2779 AUTHOR: DOW ADDRESSEE: COPYEE:	04/11/60	REPORT	1

DOCUMENT 2780 AUTHOR: DOW ADDRESSEE: COPYEE:	02/19/60	REPORT	8

DOCUMENT 2781 AUTHOR: BLAU GE ADDRESSEE: COPYEE:	00/00/00	REPORT	154
		DOW	

DOCUMENT 2782 AUTHOR: LA ST UNIV ADDRESSEE: DOW COPYEE:	05/31/60	LETTER STAMPER ER SOUTHWICK L	1

DOCUMENT 2783 AUTHOR: GOLDMAN PJ ADDRESSEE: COPYEE:	00/00/72	REPORT	27
		RALPH MCELROY CO	

DOCUMENT 2784 AUTHOR: DOW ADDRESSEE: USDA COPYEE: DOW	06/15/60	LETTER MCINTYRE HH WHITE RO LYNN GE	1

174480

4384

TITLE

MI ST UNIV
NORRIS LA
ROWE VK
SMITH LL
USAF
WULF M

MILLER G
NORRIS MG
SCHARNWEBER C
THOMPSON T
VRANISH SR
WURM R

KURON USE RECOMMENDATION IN SUGAR CANE.

A RESIDUE STUDY OF KURON IN SUGAR CANE.

PHARMACOKINETIC STUDIES IN EVALUATION OF THE TOXICOLOGICAL AND
ENVIRONMENTAL HAZARD OF CHEMICALS.
GEHRING PJ WATANABE PG

CRITICALLY ACUTE CHLORACNE CAUSED BY TRICHLOROPHENOL DECOMPOSITION
PRODUCTS (ARBEITSMEDIZIN SOZIALMEDIZIN ARBEITSHYGIENE 7(1), 12-18
720000).

RECOMMENDATIONS FOR USE OF KURON CTTL.
OUELLETTE FE

SOUTHWICK L

WIFFEN EE

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2785	03/29/65	REPORT	6
AUTHOR:	DOW		SILVERSTEIN LG	
ADDRESSEE:	ROWE VK			
COPYEE:	AMSTUTZ FC		BARRONS KC	
	FALSEY WP		FEINAUER HW	
	GRANT LB		HANSEN KY	
	HOLDER BB		HOYLE HR	
	LYNN GE		MCCOY WJ	
	PLETCHER DE		RILEY FH	
	STAEHLING EC		TUCKER JC	
DOCUMENT	2786	00/00/00	LABEL	4
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:				
DOCUMENT	2787	02/10/64	MEMO	1
AUTHOR:	BAKER G		DAVIS H	
	I OHH		LYNN GE	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2788	02/27/64	LETTER	1
AUTHOR:	DOW		SACHS SB	
ADDRESSEE:	DOWNARD GM		USDA	
COPYEE:	DOW		HAMMER OH	
DOCUMENT	2789	00/00/69	MEMO	3
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:				
DOCUMENT	2790	11/00/00	LABEL	2
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:				
DOCUMENT	2791	03/02/65	MINUTES	2
AUTHOR:	DOW		LYNN GE	
ADDRESSEE:				
COPYEE:	BARRONS KC		CORBIN WL	

184481

4385

TITLE

 REPORT ON THE CHLORACNE PROBLEM MEETING ON 650324.

CORBIN WL
 GILL HH
 HARRIS JW
 HUTCHENREUTHER CO
 OTIS CE
 SADEK SE
 WILTSE MG

DOEDENS JD
 GILL WM
 HOFF RC
 IRISH DD
 PETERSON JE
 SMILEY RN

KURON BRUSH KILLER.

LABEL COPY FOR KURON BRUSH KILLER.
 DOW HOLDAMAN GE
 SACHS SB WOLF MA

KURON REGISTRATION 464-162.

SUNDERLAND WW

CHRONOLOGY OF CHLORACNE TESTING IN BRL.

KURON BRUSH KILLER.

MINUTES OF "EXCITER" PROBLEM MEETING, 650204, DISPOSITION OF THE
 MONSANTO 245T CTTL.

HOYLE HR

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2792	04/09/64	LETTER	1
AUTHOR:	DOWNARD GM		USDA	
ADDRESSEE:	DOW		MCINTYRE HH	
COPYEE:				
DOCUMENT	2793	12/30/64	LABEL	3
AUTHOR:	DOW		SOUTHWICK L	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2794	07/30/64	LETTER REPORT	3
AUTHOR:	DOW		HOLMES R	
ADDRESSEE:	DOW		HOYLE HR	
COPYEE:				
DOCUMENT	2795	12/10/64	LETTER	2
AUTHOR:	DOW		SOUTHWICK L	
ADDRESSEE:	DOW		HAMMER OH	
COPYEE:	DOW		LICHY CT	
DOCUMENT	2796	03/02/65	LETTER	1
AUTHOR:	DEPT OF HEALTH MI		SCOVILL RG	
ADDRESSEE:	DOW		SILVERSTEIN LG	
COPYEE:				
DOCUMENT	2797	12/15/64	MEMO	1
AUTHOR:	DOW		HAMMER OH	
	SACHS SB			
ADDRESSEE:				
COPYEE:				
DOCUMENT	2798	06/24/65	LETTER	2
AUTHOR:	DOW		ROWE VK	
ADDRESSEE:	DOW		MULHOLLAND R	
COPYEE:	DOW		ROWE VK	
	GOERGEN G		HOLDEMAN G	
	SILVERSTEIN L			
DOCUMENT	2799	12/23/64	LETTER	1
AUTHOR:	AG EXP STATION FL		ORSENIGO JR	
ADDRESSEE:				
COPYEE:				

①4482

4386

TITLE

AMENDED LABEL FOR KURON BRUSH KILLER REGISTRATION 464-162 RECEIVED
ON 640302.

KURON BRUSH KILLER.

MANUFACTURE OF TRICHLOROPHENOL AT 199 BLDG.

KURON FOR FL SUGARCANE.

LYNN GE

WILTSE MG

PRECAUTIONS INSTITUTED TO MINIMIZE TRICHLOROPHENOL "CONTAMINANT"
EXPOSURE CTTL.

LABEL COPY FOR KURON BRUSH KILLER.
HOLDEMAN GE LYNN GE

245-TRICHLOROPHENOL, THE T ACIDS, AND ASSOCIATED ACNEGENS.

AMSTUTZ FC
HOYLE H

FALSEY W
OTIS C

UNIV OF FL

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2800	05/04/65	LETTER	2
AUTHOR:	DOW		WHITE LC JR	
ADDRESSEE:				
COPYEE:	DOW		DOSSER RC	
DOCUMENT	2801	05/04/65	LETTER	2
AUTHOR:	DOW		HOFF RC	
ADDRESSEE:	DOW		AMSTUTZ FC	
	SCULATI JJ		SILVERSTEIN LG	
COPYEE:				
DOCUMENT	2802	05/04/65	LABEL	4
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:				
DOCUMENT	2803	04/28/65	LETTER	1
AUTHOR:	DEPT OF HEALTH MI		SCOVILL RG	
ADDRESSEE:	DOW		SILVERSTEIN L	
COPYEE:				
DOCUMENT	2804	07/14/65	LETTER	4
AUTHOR:	DOW		DOWNARD GW	
ADDRESSEE:	SACHS SB			
COPYEE:				
DOCUMENT	2805	03/01/65	REPORT	2
AUTHOR:	DOEDENS JD		DOW	
ADDRESSEE:				
COPYEE:	DOW		ROWE VK	
DOCUMENT	2806	11/24/65	LABEL	2
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:				
DOCUMENT	2807	02/16/65	LETTER	2
AUTHOR:	DOEDENS JD		DOW	
ADDRESSEE:	DOW		RILEY FH	
COPYEE:	DOW		FEINAUER HW	
	HUTCHENREUTHER C		OTIS CE	

14483

4387

TITLE

245T ACID PRODUCT SPECIFICATION.

SMITH HA

245-TRICHLOROPHENOL AND 245T ANALYSIS FOR TCDD.

BAILEY CZ
STAEHLING EC

GILL HH
WHITE LC

KURON BRUSH KILLER.

SUGGESTION OF UV LIGHT TO DETERMINE PRESENCE OF CONTAMINANT IN
TRICHLOROPHENOL PRODUCTION AREA CTTL.

KURON BRUSH KILLER REGISTRATION 464-162 WITH LETTER OF 650601.
USDA

TRICHLOROPHENOL SUMMARY.

KURON BRUSH KILLER.

245-TRICHLOROPHENOL.

SMILEY RN
GRANT LB
SILVERSTEIN L

TUCKER JC
HARRIS JW
STAEHLING EC

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2808	12/02/65	LETTER	1
AUTHOR:	DOWNARD GM		USDA	
ADDRESSEE:	DOW		SACHS SB	
COPYEE:				
DOCUMENT	2809	07/11/66	LABEL MEMO	2
AUTHOR:	DOW WATSON AJ		I OHH	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2810	11/23/65	CHART LETTER TEST	6
AUTHOR:	DOW		GETZENDANER ME	
ADDRESSEE:	DOW		GOWELL GE	
COPYEE:	DOW		LYNN GE	
DOCUMENT	2811	07/08/66	LETTER	2
AUTHOR:	AM SUGAR CANE LEAGUE		LAUDEN LL	
ADDRESSEE:	DOW		HAMMER OH	
COPYEE:	AG EX SERVICE LA STAMPER ER		LA ST UNIV USDA	
DOCUMENT	2812	11/00/65	LABEL	2
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:				
DOCUMENT	2813	10/05/66	LETTER	1
AUTHOR:	DOWNARD GM		USDA	
ADDRESSEE:	SUNDERLAND WW			
COPYEE:				
DOCUMENT	2814	10/17/73	LABEL	6
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:				
DOCUMENT	2815	10/17/73	LEGAL	2
AUTHOR:	USDA			
ADDRESSEE:	DOW		HOERGER FJ	
COPYEE:				

14484

4388

TITLE

DOW KURON BRUSH KILLER REG 464-162 WITH LETTER OF 651102.

LABEL COPY FOR KURON SUGAR CANE USERS.

LYNN GE

SACHS SB

SUGAR CANE JUICE FROM KURON TREATMENTS.

SOUTHWICK L

LOUPE D

MILLHOLLON R

KURON BRUSH KILLER.

**USE OF SUGARCANE DOW KURON BRUSH KILLER REGISTRATION 464-162 WITH
LETTER OF 660808.**

**WEED CONTROL IN SUGARCANE IN LA. TANK MIX RECOMMENDATIONS.
PROPOSED LABELING.**

KURON. APPLICATION FOR AMENDED REGISTRATION OF ECONOMIC POISONS.

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2816	08/00/66	LABEL	3
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:				
DOCUMENT	2817	06/00/67	LABEL	3
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:				
DOCUMENT	2818	07/20/66	AUTH	1
AUTHOR:				
ADDRESSEE:	DOW		ROWE VK	
COPYEE:				
DOCUMENT	2819	08/00/67	LABEL	3
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:				
DOCUMENT	2820	10/00/68	LABEL	3
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:	MCINTYRE HH			
DOCUMENT	2821	09/01/71	REPORT	7
AUTHOR:	DOW			
ADDRESSEE:			JOHNSON JE	
COPYEE:				
DOCUMENT	2822	09/00/69	LABEL	3
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:	MCINTYRE HH			
DOCUMENT	2823	12/00/70	LABEL	1
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:	AJJ			

①4485

4389

TITLE

KURON WEED AND BRUSH KILLER (12107-010-1).

KURON WEED AND BRUSH KILLER (12107-010-2).

CONTINUING RESEARCH ON CHLORACNE USING HUMAN SUBJECTS.

KURON WEED AND BRUSH KILLER (1207-010-2).

KURON WEED AND BRUSH KILLER (1207-010-3).

THE PUBLIC HEALTH IMPLICATIONS OF WIDESPREAD USE OF THE PHENOXY HERBICIDES AND PICLORAM(BIOSCIENCE 21(17), 899-905) (PRESENTED AT THE SYMPOSIUM ON POSSIBLE PUBLIC HEALTH IMPLICATIONS OF WIDESPREAD USE OF HERBICIDES, AM INST OF BIOLOGICAL SCIENCES, BLOOMINGTON, IN 700826).

KURON LOW - VOLATILE WEED AND BRUSH KILLER (1207-010-4).

KURON LOW - VOLATILE WEED AND BRUSH KILLER.

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2824	00/00/78	REPORT	7
AUTHOR:	BETSO JE		DOW	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2825	09/00/71	LABEL	1
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:	MCINTRYRE HH			
DOCUMENT	2826	00/00/79	REPORT	10
AUTHOR:	KITCHIN KT		NIEHS	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2827	09/00/73	LABEL	2
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:				
DOCUMENT	2828	00/00/77	NEWS	14
AUTHOR:	FAITH RE		REPORT	
ADDRESSEE:			MOORE JA	
COPYEE:				
DOCUMENT	2829	05/00/74	LABEL	2
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:				
DOCUMENT	2830	00/00/79	NEWS	22
AUTHOR:	HINS DILL RD		REPORT	
ADDRESSEE:			THOMAS PT	
COPYEE:				

14486

4390

TITLE

PHENOXY ACIDS. EFFECTS AND FATE IN MAMMALS (CHLORINATED PHENOXY ACIDS AND THEIR DIOXINS ECOL BULL (STOCKHOLM)27, 122-133).
GEHRING PJ

KURON LOW - VOLATILE WEED AND BRUSH KILLER (1207-010-6).

TCDD EFFECTS ON HEPATIC MICROSOMAL CYTOCHROME P-448-MEDIATED ENZYME ACTIVITIES (TOX AND APPLIED PHARMACOLOGY 47, 537-546).
WOODS JS

KURON LOW - VOLATILE BRUSH AND WEED HERBICIDE (SPECIFICATION 101586-021-6).

IMPAIRMENT OF THYMUS DEPENDENT IMMUNE FUNCTIONS BY EXPOSURE OF THE DEVELOPING IMMUNE SYSTEM TO TCDD (JOUR OF TOX AND ENVIRON HEALTH 3, 451-464).

NIEHS

KURON LOW - VOLATILE BRUSH AND WEED HERBICIDE (SPECIFICATION 12107-010-8).

THE EFFECT OF PERINATAL EXPOSURE TO TETRACHLORODIBENZO-P-DIOXIN ON THE IMMUNE RESPONSE OF YOUNG MICE (DRUG AND CHEM TOX 2(1&2), 77-98).

UNIV OF WI

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2831	00/00/00	REPORT	16
AUTHOR: FAITH RE ADDRESSEE: COPYEE: LUSTER MI				
DOCUMENT	2832	05/00/77	NEWS	4
AUTHOR: NIEHS ADDRESSEE: COPYEE: REPORT VOS JO				
DOCUMENT	2833	03/24/59	REPORT	24
AUTHOR: LA AG EXP STA ADDRESSEE: COPYEE: STAMPER ER				
DOCUMENT	2834	00/00/74	NEWS	22
AUTHOR: MOORE JA ADDRESSEE: COPYEE: REPORT NATL INST OF ENVIRON				
DOCUMENT	2835	00/00/78	NEWS	28
AUTHOR: HOFFMAN LAROCHE ADDRESSEE: COPYEE: REPORT REGGIANI G				
DOCUMENT	2836	00/00/79	NEWS	5
AUTHOR: BEYER JE ADDRESSEE: KEYES DG COPYEE: REPORT CARREON RM KOCIBA RJ				

14487

4391

TITLE

INVESTIGATIONS ON THE EFFECTS OF TCDD ON PARAMETERS OF VARIOUS
IMMUNE FUNCTIONS.
NIEHS ORAL ROBERTS UNIV

IMMUNE SUPPRESSION AS RELATED TO TOXICOLOGY (CRITICAL REVIEW IN
ROX 5, 67-101).

CHEMICAL WEED CONTROL REPORT OF THE DEPT OF PLANT PATHOLOGY LA AG
EXP STATION, BATON ROUGE, LA, TO THE CONTACT COMMITTEE OF THE AM
SUGARCANE LEAGUE FOR THE YEAR 1958.

SUPPRESSION OF CELLULAR IMMUNITY IN RATS AND MICE BY MATERNAL
TREATMENT WITH TCDD (INT ARCH ALLERGY 47, 777-794).

HEA NIH VOS JG

MEDICAL PROBLEMS RAISED BY THE TCDD CONTAMINATION IN SEVESO, ITALY
(REVIEW ARTICLE)(ARCH. TOX. 40, 161-188)(PRESENTED AT THE 5TH
INTERNATIONAL CONFERENCE ON OCCUPATIONAL HEALTH IN THE CHEMICAL
INDUSTRY (MEDICHEM) SAN FRANCISCO, CA, 770905 TO 770910).

LONG TERM TOXICOLOGIC STUDIES OF TCDD IN LABORATORY ANIMALS (ANNALS
NEW YORK ACADEMY OF SCIENCES PART 5 CARCINOGENICITY 397-404).

DOW GEHRING PJ

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2837	03/12/57	REPORT	12

AUTHOR: CHILTON SJ LA AG EXP STA
 ADDRESSEE:
 COPYEE: STAMPER ER

DOCUMENT	2838	02/15/59	REPORT	1

AUTHOR: LA AG EXP STA STAMPER ER
 ADDRESSEE:
 COPYEE: CHILTON SJ

DOCUMENT	2839	00/00/80	REPORT	17

AUTHOR: ERIKSSON M HARDELL L
 ADDRESSEE:
 COPYEE:

DOCUMENT	2840	00/00/77	REPORT	15

AUTHOR: BRAUN WH DOW
 ADDRESSEE:
 COPYEE:

DOCUMENT	2841	12/00/55	REPORT	8

AUTHOR: EXPERMNT STAT HSPA EXPRMT STA HSPA
 ADDRESSEE:
 COPYEE: BRYANT CA COULTER LL
 HANSON NS KAGY JF
 PENDERGAST DT SMITH HL

DOCUMENT	2842	01/00/60	REPORT	56

AUTHOR: DOW
 ADDRESSEE:
 COPYEE:

DOCUMENT	2843	09/26/76	REPORT	30

AUTHOR: CENTER FOR BIO NATURAL S COMMONER B
 ADDRESSEE:
 COPYEE:

88488

26392

TITLE

WEED CONTROL REPORT OF THE DEPT OF PLANT PATHOLOGY LA AG EPS
STATION, BATON ROUGE, LA, TO THE CONTACT COMMITTEE OF THE AM
SUGARCANE LEAGUE FOR THE YEAR 1956.

RECOMMENDATIONS FOR JOHNSON GRASS SEEDLING AND JOHNSON GRASS
CONTROL IN SUGARCANE.

MALIGNANT LYMPHOMA AND EXPOSURE TO CHEMICAL SUBSTANCES ESPECIALLY
TO ORGANIC SOLVENTS, CHLOROPHENOLS AND PHENOXY ACIDS (A CASE
CONTROL STUDY) (LAKARTIONINGEN 77(4) 208-210)
UMEA

DOSE DEPENDENT PHARMACOKINETIC PROFILE OF SILVEX FOLLOWING
INTRAVENOUS ADMINISTRATION IN RATS(JOURNAL OF TOXICOLOGY AND
ENVIRONMENTAL HEALTH 2, 605-618).
LEBEAU JE SAUERHOFF MW

COMPARISON OF SILVEX AND DCMU WITH OTHER COMMONLY-USED HERBICIDES
FOR PRE-EMERGENCE WEED CONTROL (SPECIAL RELEASE 134).

FITZGERALD CD
LYNN GE
SOUTHWICK L

FLETCHER FW
OTIS CE

KURON IN SUGAR CANE - PERFORMANCE DATA AND USE RECOMMENDATIONS.

ACCIDENTAL CONTAMINATION OF SOIL WITH DIOXIN IN MISSOURI EFFECTS
AND COUNTERMEASURES.
SCOTT RE

	NUMBER	DATE	TYPE	PAGES
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	2844 DOW	06/00/67	LABEL	1
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	2845 DOW	02/00/69	LABEL	1
DOCUMENT	2846	00/00/79	REPORT	7
AUTHOR: ADDRESSEE: COPYEE:	F HOFFMANN LAROCHE SWITZ REGGIANI G			
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	2847 DOW	05/00/69	LABEL	2
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	2848 DOW	07/00/67	LABEL	1
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	2849 BEAN J HORTON J	06/00/70	REPORT	1
DOCUMENT	2850	02/00/70	REPORT	32
AUTHOR: ADDRESSEE: COPYEE:	BINNS W HEGGESTAD HE STEPHENS RF		CUETO C HEPTING GH	
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	2851 AZ HAND EL	08/04/71	REPORT SWART RW TX	6

14489

4393

TITLE

ESTERON 99 CONCENTRATE.

ESTERON 99 CONCENTRATE.

ESTIMATION OF THE TCDD TOXIC POTENTIAL IN THE LIGHT OF THE SEVESO ACCIDENT (MECHANISM OF TOXIC ACTION ON SOME TARGET ORGANS, ARCH TOXICOL, SUPPL 2, 291-302).

KURON WEED AND BRUSH KILLER.

VEON 245.

KURON.

INVESTIGATION OF SPRAY PROJECT NEAR GLOBE, AZ (INVESTIGATION CONDUCTED 700200).

ELIASON BC
PIMENTEL D

FREEMAN B
SAND PF

EXHIBIT E KURON COMPLAINTS.

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2532	03/00/58	REPORT	9
AUTHOR:	EXPRMT STA HSPA		HANSON NS	
ADDRESSEE:				
COPYEE:	ANDERSON F		BIRON RA	
DOCUMENT	2533	00/00/00	ABSTRACT	1
AUTHOR:	ALLEN JR		BARSOTTI DA	
	VANMILLER JP			
ADDRESSEE:				
COPYEE:				
DOCUMENT	2534	00/00/00	ABSTRACT	1
AUTHOR:	BERRY DL		DIGIOVANNI J	
	SLAGA TJ		UNIV WA	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2535	00/00/00	ABSTRACT	1
AUTHOR:	HOLMES PA		IIT RES INST AND	
	SHEFNER AM			
ADDRESSEE:				
COPYEE:				
DOCUMENT	2536	00/00/00	ABSTRACT	1
AUTHOR:	BEYER JE		CARREON RM	
	KEYES DG		KOCIBA RJ	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2537	00/00/72	ABSTRACT	1
AUTHOR:	HUNTER JH		USAF	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2538	00/00/76	ABSTRACT	1
AUTHOR:	ARNOLDS EL		USAF	
ADDRESSEE:				
COPYEE:				

04490

4394

TITLE

COMPARISON OF SIMAZIN AND OTHER NEWER HERBICIDES FOR PRE-EMERGENCE
WEED CONTROL (SPECIAL RELEASE 165).

SMITH HL

SOUTHWICK L

REPRODUCTIVE EFFECTS OF HALOGENATED AROMATIC HYDROCARBONS ON
NONHUMAN PRIMATES.

LAMBRECHT LK

UNIV WI

STUDIES WITH CHLORINATED DIBENZO-P-DIOXINS, POLYBROMINATED
BIPHENYLS AND POLYCHLORINATED BIPHENYLS IN A TWO STATE SYSTEM OF
MOUSE SKIN TUMORIGENESIS POTENT ANTI CARCINOGENIC EFFECTS.

JUCHAU MR

OAK RIDGE NATL LAB

LONG TERM EFFECTS OF TCDD AND HCDD IN MICE AND RATS.

UNIV CH RICHTER WR

RUST JH

LONG TERM TOXICOLOGIC STUDIES OF TCDD IN LABORATORY ANIMALS.

DOW

GEHRING PJ

CHEMICAL ANALYSIS FOR DIOXIN AND DEFOLIANT RESIDUES IN SOIL FROM
TEST AREA C-52A EGLIN AFB, FL.

WOOLSON EA

YOUNG AL

FIELD STUDIES OF THE SOIL PERSISTENCE AND MOVEMENT OF 24D, 245T AND
TCDD(PRESENTATION TO WSSA ABSTRACT NO 206).

WACHINSKI AM

YOUNG AL

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2539	00/00/74	ABSTRACT	1
AUTHOR:	USAF		YOUNG AL	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2540	09/00/73	ABSTRACT	1
AUTHOR:	BENEZET HT		MATSUMURA F	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2541	00/00/72	ABSTRACT	1
AUTHOR:	ELLINGTON CP JR		KEARNEY PC	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2542	00/00/76	ABSTRACT	1
AUTHOR:	UNIV OF WI		WARD CT	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2543	00/00/76	ABSTRACT	1
AUTHOR:	GARCIA JD		GONTANEK B	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2544	10/25/79	REPORT	119
AUTHOR:	AGRESTI A OR ST UNIV USDA		HIGGINS JE ORTIZ M JR WAGNER SL	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2545	05/04/73	NEWS	14
AUTHOR:	ALLEN JR		REPORT	
ADDRESSEE:			CARSTENS LA	
COPYEE:				

①
4491

4395

TITLE

 ECOLOGICAL STUDIES ON A HERBICIDE EQUIPMENT TEST AREA (NATL TECH
 INFORM. SERV, 140)(ABSTRACT 76-0357).

STUDIES ON THE BIOACCUMULATION AND MICROBIAL DEGRADATION OF TCDD
 (ENVIRON HEALTH PERSPECTIVES S, 253-258).

PERSISTENCE AND METABOLISM OF CHLORODIOXINS IN SOILS (ENVIRON SCI
 TECH 6(12), 1017-1019).
 WOOLSON EA

STUDIES ON THE DEGRADATION OF TCDD IN LAKE WATER AND SEDIMENTS.

TX TECH UNIV NOXIOUS BRUSH AND WEED CONTROL RESEARCH HIGHLIGHTS VOL
 7.
 HARRIS B RHODES MJ

A SCIENTIFIC CRITIQUE OF THE EPA ALSEA II STUDY AND REPORT WITH THE
 791116 SUPPLEMENT.
 NM ST UNIV NORRIS LA
 UNIV OF FL UNIV OF SC
 WITT JM

LIGHT AND ELECTRON MICROSCOPIC OBSERVATIONS IN MACACA MULATTA
 MONKEYS FED TOXIC FAT (AM JOUR VET RES 28(126, 1513-1526).

UNIV OF WI

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2546	00/00/61	PRESENT	6
AUTHOR:	DOW		WILTSE MG	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2547	00/00/60	PRESENT	6
AUTHOR:	DOW		WILTSE MG	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2548	00/00/73	REPORT	8
AUTHOR:	DOW		SOUTHWICK LS	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2549	00/00/00	REPORT	4
AUTHOR:	DOW		LICHY CT	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2550	04/00/59	REPORT	2
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:				
DOCUMENT	2551	00/00/72	NEWS	2
AUTHOR:	BUUHOI NP		REPORT	
ADDRESSEE:	SAINTRUF G		CHANH PH	
COPYEE:			CENTRE NATIONAL DE	
DOCUMENT	2552	02/07/83	REPORT	47
AUTHOR:	WHO			
ADDRESSEE:				
COPYEE:				

D.4492

4396

TITLE

AQUATIC VEGETATION CONTROL IN RECREATIONAL AREAS (ACD FILE HA-26)(PRESENTED AT THE 1961 MI FORESTRY AND PARK ASSN ANNUAL CONF).

AQUATIC VEGETATION CONTROL WITH KURON (ACD FILE HA-23)(PRESENTED AT 1960 MEETING OF THE WEED SOCIETY OF AM).

KURON SILVEX HERBICIDE CONTINUES TO GAIN ACCEPTANCE (DOWN TO EARTH 28(4):26-32, 1973).

PROGRAM YOUR AQUATIC WEED CONTROL NEEDS.

END TO WATER WEEDS KURON OFFERS A CONTROL FOR UNWANTED VEGETATION IN LAKES AND PONDS (DOW DIAMOND, APRIL 1959).

ORGANS AS TARGETS OF "DIOXIN" (TCDD) INTOXICATION (JG HEFT 4, 174-175).

SESQUE G

AZUMGELADE MC MRS

LA RE

ENVIRONMENTAL HEALTH CRITERIA 24D.

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2553	02/15/80	MEMO	1
AUTHOR:	LENG ML		DOW	
ADDRESSEE:	DAVIDSON JH		FISCHER AC	
	NORRIS MO		THEIS JM	
	CASTILLO L		TUCKER MD	
COPYEE:				
DOCUMENT	2554	08/05/81	REPORT	1
AUTHOR:	WEED JM			
ADDRESSEE:	HEITZIG W			
COPYEE:	CALDWELL B		LEE B	
	DOWNES L			
DOCUMENT	2555	05/18/82	LETTER	1
AUTHOR:	EPA		MOUNTFORT RF	
ADDRESSEE:	SCHOBER AE		DOW	
COPYEE:				
DOCUMENT	2556	05/19/82	MEMO	1
AUTHOR:	SCHOBER AE		DOW	
ADDRESSEE:	DOW		BUZZELLI D	
COPYEE:	GLEDHILL GR		LANING ER	
	CONYERS ES			
DOCUMENT	2557	09/00/81	NEWS	7
			REPORT	
AUTHOR:	EPA		HRYHORCZUK DO	
	POLLUTION CONTROL	BD IL	HESSE CS	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2558	02/06/81	NEWS	3
AUTHOR:	SANDERSON CA		ROGERS LJ	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2559	02/12/81	NEWS	1
AUTHOR:				
ADDRESSEE:				
COPYEE:				

D.4493

4397

TITLE

 LABELS FOR ESTERON 245, ESTERON BRUSH KILLER AND KURON APPROVED
 CTTL.

FREDERICK DM
 WATSON AJ
 WOODS CD

MULLISON WR
 WESELOH JW
 WINE LM

ESTERON 245 ROBINSON, ILLINOIS.

ZWEIGLE R

SHAFFER G

TCDD ANALYSES ESTERON 245BE EPA REGISTRATION 464-574 FOLLOWUP TO
 OUR REGISTRATION NOTICE OF MARCH 29, 1982 (820329).

ESTERON 245BE, TCDD ANALYSIS.

GOODMAN CH

WOODWARD RE

A WIRE RECLAMATION INCINERATOR AS A SOURCE OF ENVIRONMENTAL
 CONTAMINATION WITH TCDD & TETRACHLORODIBENZOFURANS (ARCHIVES OF
 ENVIRON HEALTH 36(5), 228-234).

UNIV OF IL
 BEASLEY VR

WITHROW WA

245T CAUSES BEHAVIORAL EFFECTS IN CHICKENS AT ENVIRONMENTALLY
 RELEVANT DOSES.

HERBICIDE IS REAL-RISK TO BIRDS & PEOPLE.

	NUMBER	DATE	TYPE	PAGES
DOCUMENT	2560	03/12/82	NEWS	2
AUTHOR:	LENG ML		DOW	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2561	03/00/83	REPORT	21
AUTHOR:	VET ADMIN		HOBSON LB	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2562	06/25/83	MEMO TELECON	1
AUTHOR:	SCHMIDT B			
ADDRESSEE:				
COPYEE:				
DOCUMENT	2563	03/11/82	LABEL	4
AUTHOR:	DOW			
ADDRESSEE:				
COPYEE:				
DOCUMENT	2564	00/00/00	CHART	11
AUTHOR:	HUMMEL RA		TEST	
	DOW		JENSEN DJ	
ADDRESSEE:				
COPYEE:				
DOCUMENT	2565	00/00/00	REPORT	10
AUTHOR:				
ADDRESSEE:				
COPYEE:				
DOCUMENT	2566	09/30/83	MEMO	2
AUTHOR:				
ADDRESSEE:	F DICK			
COPYEE:				
DOCUMENT	2567	10/26/83	LETTER	1
AUTHOR:	COOK RR		DOW	
ADDRESSEE:	WHEATER RH		AM MEDICAL ASSN	
COPYEE:	MAY VT		VOSTAL	

4494

4398

TITLE

JUMPING CHICKENS; RELEVANCE TO HAZARD IN HUMANS.
ROGERS LJ SANDERSON CA

EPIDEMIOLOGY OF SOFT-TISSUE SARCOMA & RELATED HUMAN RESEARCH AS
RELATED TO HERBICIDE EXPOSURE.

ALLEGED COMPLAINT ON SPRAYING ESTERON 245 CTTL.

ESTERON 245BE.

THE GAS CHROMATOGRAPHIC-MASS SPECTOMETRIC DETERMINATION OF TCDD IN
FAT FROM CATTLE FED RONNEL INSECTICIDE.

MAHLE NH

SHADOFF LA

TOXICOLOGICAL EVIDENCE OF A HEALTH HAZARD.

DOW OFFICAL CORRESPONDENCE CONCERNING AM MEDICAL ASSN ADVISORY
PANEL CTTL.

DOW CORRESPONDENCE WITH AN MEDICAL ASSN OFFICIAL CONCERNING DIOXIN
SYMPOSIUM IN AUSTRIA CTTL.

GENERAL MOTORS RES LAB

	NUMBER	DATE	TYPE	PAGES
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	2568	11/02/83	ABSTRACT	2
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	2569	02/03/82	LETTER	1
			DOW MOUNTFORT R GOODMAN C ROSS E	
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	2570	03/02/82	LETTER	1
			DOW AKERMAN EPA ROSS ER	
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	2571	02/03/82	LETTER	1
			MOUNTFORT RF DOW	
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	2572	03/03/82	LETTER	1
			ADAMCZYK TE DOW	
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	2573	03/19/82	MEMO	1
			BUZZELI D DOW	
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	2574	03/18/82	LEGIS	1
			DOW	
DOCUMENT AUTHOR: ADDRESSEE: COPYEE:	2575	03/29/82	LETTER	1
			MOUNTFORT RF DOW	

4495

4399

TITLE

COMMENTS ON ANIMAL TOXICITY SEGMENT OF AMA DOCUMENT.

ESTERON 245BE. EPA FILE SYMBOL 464-LTU. YOUR LETTER OF JANUARY 13, 1982 (820113).

YTZEN GL

ARNOLD S

ESTERON 245BE. EPA FILE SYMBOL 464-LTU.

GRAY EC
YTZEN GL

CONYERS ES

ESTERON 245 BE. EPA FILE SYMBOL 464-LTU. RESUBMISSION FEBRUARY 3, 1982 (820203).

ESTERON 245 BE. EPA FILE SYMBOL 464-LTU. RESUBMISSION, MARCH 3, 1982 (820303).

ESTERON 245 BE-TCDD ANALYSIS.

CONFIDENTIAL STATEMENT OF FORMULA. ESTERON 245 BE HERBICIDE.
EPA MOUNTFORT RF

TCDD ANALYSES, ESTERON 245 BE. EPA REGISTRATION 464-574. FOLLOW UP TO OUR REGISTRATION NOTICE OF MARCH 29, 1982 (820329).

19

4400

19

D.4496

pp 4401 - pp 4603

See part 2

SOUTH OKANAGAN ENVIRONMENTAL COALITION

We believe that only through the preservation of a vital and diverse environment can human beings hope to survive on this planet. By understanding our role in the complex ecosystems which we inhabit, we can learn to live in harmony with all other species over the millennia. Our purpose is to educate people as to the need for careful examination of our activities, to see that they will not damage our environment and to take action where necessary to ensure the integrity of our ecosystems.

* * * * *

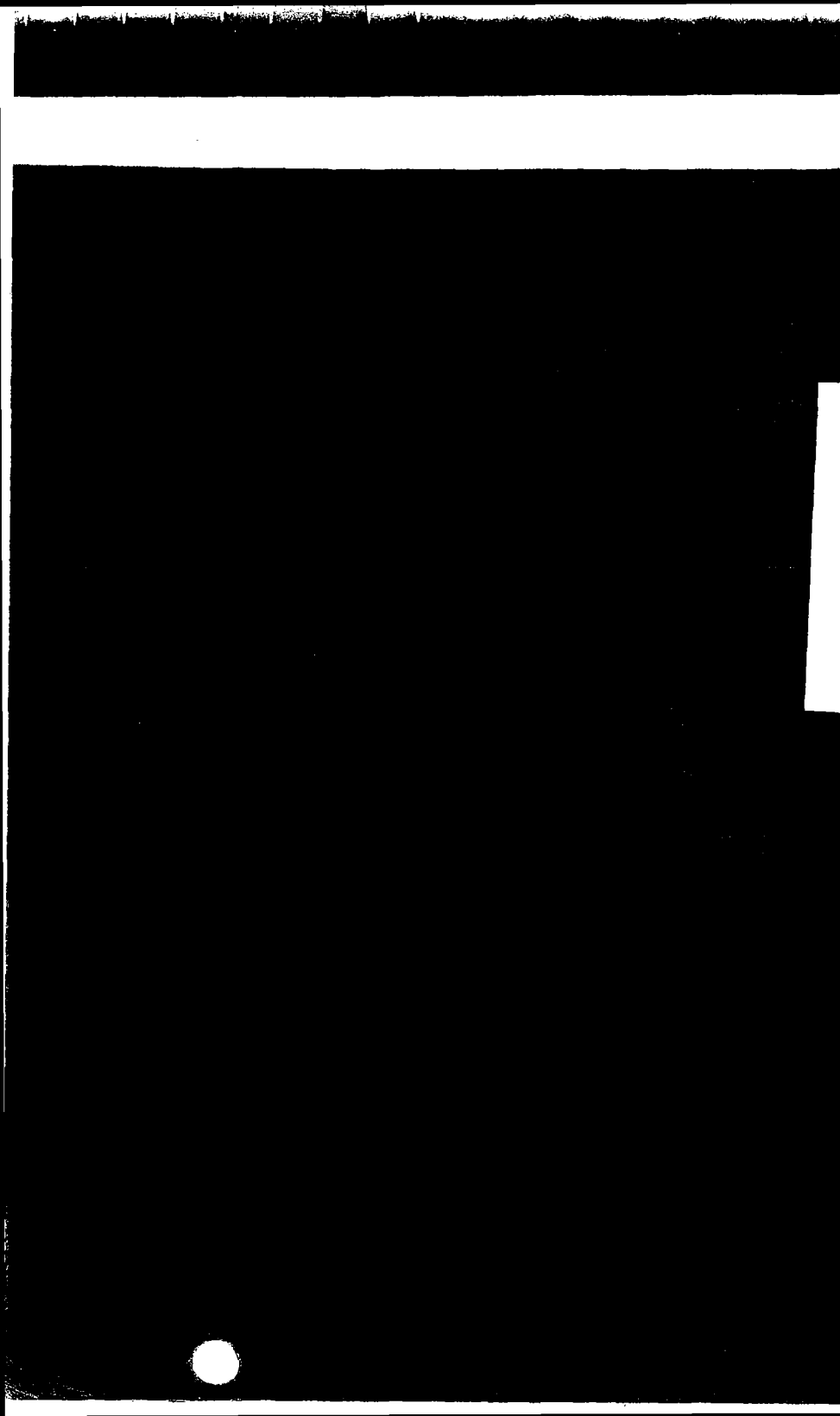
For additional copies of "The Other Face of 2,4-D;
A Citizens' Report," send \$7.00 to:

South Okanagan Environmental Coalition
P.O. Box 188,
Penticton, B. C.
V2A 6K3

The South Okanagan Environmental Coalition is a non-profit, voluntary organization. The price of this report only covers costs already incurred, plus mailing. We would greatly appreciate contributions to further our efforts to protect the environment of the Okanagan Basin lake system.

D-4701

4605



4606

D-4702

DAVIS v. DOW

Exhibits 251 - 277

3

5/13

GH

251

4607

D-4703

251



DOW CHEMICAL LATIN AMERICA

82347

P.O. BOX 340400
CORAL GABLES, FLORIDA 33134 U.S.A.

ANALYTICAL METHOD

LA-AMC-82-001
QA Number 1961

August 3, 1982

ESTERON* 245 C Herbicide

This is a file copy. For
Outside Distribution Obtain
Copies With Liability Clause
and Without Dow Reference.

1. Scope

This method is applicable to the analysis of ESTERON* 245 C Herbicide. A procedure is given for the determination of the active ingredient as the acid equivalent. The concentrations of the butyl ester of 2,4,5-tri-chlorophenoxyacetic acid (2,4,5-T) is calculated from the acid equivalent concentrations. Calculations are given for the pounds of 2,4,5-T per gallon and grams of 2,4,5-T per liter. The inert ingredients are calculated by difference.

2. Safety Precautions

2.1 ESTERON 245 C must be handled with care. It is capable of causing skin and eye irritation or possibly a mild burn. Avoid skin and eye contact. Wear safety glasses and gloves. If contact occurs, wash affected area with plenty of water. For eye contact, see a physician.

2.2 Acetonitrile is a flammable and toxic solvent. Do not breathe its vapors. Work only in a well-ventilated area away from any source of ignition. Avoid skin and eye contact.

2.3 2-Propanol is a flammable solvent. Work only in a well-ventilated area away from any source of ignition.

2.4 Phosphoric acid is a corrosive acid. Wear chemical workers' goggles and impervious gloves to prevent skin and eye contact.

2.5 Sodium hydroxide is a corrosive base. Wear chemical workers' goggles and impervious gloves to prevent skin and eye contact.

2.6 Good laboratory practices dictate that each analyst should be thoroughly acquainted with potential hazards of the reagents, products, and solvents before commencing laboratory work. For information on the product being analyzed, consult the current Dow Material Safety Data Sheet supplied to Dow customers. Safety information on reagents may be obtained from the supplier. Disposal of reagents, reactants, and solvents must be in compliance with local, state, and federal laws and regulations.

*Trademark of The Dow Chemical Company

NOT FOR OUTSIDE
DISTRIBUTION

4608008210

D-4704

MIDLAND TX CRI

29.1982

CRI

RECEIVED

BON 2111261

82347

3. Acid Equivalent

3.1 Principle

The sample is saponified and the sample components together with an internal standard are analyzed by liquid chromatography with an ultra-violet absorption detector. Peak height measurement is used and the 2,4,5-T acid is quantitated by comparison to a standard of known purity.

3.2 Apparatus

- a) UV Detector: LDC Model 1203 with 280 nm conversion kit, available from Laboratory Data Control Company, 5000 Park Street, St. Petersburg, FL 33733, or equivalent.
- b) Pump: Milton Roy Instrument, Mini-Pump Model 2396, available from Milton Roy Company, 5000 Park Street, St. Petersburg, FL 33733.
- c) Pressure Gauge: 0-5000 psig, Cat. No. 9220 of Alltech Associates, available from the Anspec Company Inc., P.O. Box 7044, Ann Arbor, MI 48107.
- d) Sample Injection Valve: Rheodyne Model 70-10 with 10 ul sample loop, available from Alltech Associates Inc., 202 Campus Drive, Arlington Heights, IL 60004.
- e) Syringes: 100 ul, available from Hamilton Company, P.O. Box 10030, Reno, NV 89510, or equivalent.
- f) Recorder: Linear Model 155, available from Alltech Associates Inc., or equivalent.
- g) Pre-Column: 4.6 mm I.D. x 50 mm stainless steel packed with Whatman Co: Pell ODS, available from Whatman Inc., 9 Bridewell Place, Clifton, NJ, or equivalent.
- h) Column: 4.6 mm I.D. x 250 mm Partisil 10-25 ODS, available from Whatman Inc.
- i) Flow-through Bourdon tube: 1/4 inch O.D. x 8 feet 316 stainless steel tubing, partially flattened and coiled. Available from Alltech Associates Inc., or equivalent.
- j) Reducing unions: 1/4 inch to 1/16 inch, available from Whatman Inc., or equivalent.
- k) Integrator: Hewlett-Packard 3380A, available from Hewlett-Packard, Route 41, Avondale, PA 19311, or equivalent.

3.3 Reagent

- a) Acetonitrile (non-spectro): distilled-in-glass grade, Burdick and Jackson Laboratories, Inc., Muskegon, MI 49442, or equivalent.

NOT FOR OUTSIDE
DISTRIBUTION

DOM 2111262

4609

0008211

D-4705

b) Water, 0.4 μ m filtered, deionized.

c) Phosphoric acid: 86%, ACS reagent grade, available from J. T. Baker Chemical Company, Phillipsburg, NJ 08865, or equivalent.

d) Sodium hydroxide solution: 50%, ACS reagent grade, available from J. T. Baker Chemical Company, or equivalent.

e) Eluent: To a 1-liter volumetric flask, add 200 ml acetonitrile, 600 ml of filtered deionized water, 34.2 g of 86% phosphoric acid, 18 g of 50% sodium hydroxide, and shake to dissolve. Add more water to the 1-liter mark and shake. Adjust pH to 2.95 ± 0.05 using 50% sodium hydroxide or 86% phosphoric acid. Degas eluent prior to use.

CAUTION: Do NOT add concentrated phosphoric acid and 50% sodium hydroxide together. Add each to the acetonitrile/water mixture separately.

f) 2,4,5-Trichlorophenoxyacetic Acid Analytical Standard: available from the Sample Coordinator, Agricultural Products Dept., P.O. Box 1706, Midland, MI 48640, U.S.A. Store in a desiccator over drying reagent.

g) p-Bromophenol: available from Eastman Kodak Company, Rochester, NY 14650.

h) 2-Propanol: ACS reagent grade, available from J.T. Baker Chemical Company, or equivalent.

i) Internal Standard Solution. Dissolve 13 g of potassium hydroxide and 4 g of p-bromophenol in one liter of 2:1 v/v (2-propanol:water).

3.4 Chromatographic Conditions

3.41 Pre-Column: 4.6 mm ID x 50 mm, packed with Whatman Co: Pell ODS. (Note 3.94).

Analytical Column: 4.6 mm ID x 250 mm Whatman Partisil 10-25 ODS (Note 3.94).

Eluent: 200 ml acetonitrile per liter of aqueous 0.3 M sodium dihydrogen phosphate-phosphoric acid buffer at pH 2.95. (Note 3.93).

Flow rate: 2.67 ml/min. (Milton-Roy pump).

Detection: LDC Model 1203 at 280 nm.
0.512 absorbance units full scale.

Injection Volume: 10 μ l (Rheodyne valve).

3.42 Typical Integration Parameters for the Hewlett-Packard 3380A

start delay:	1 minute
stop timer:	60 minutes
area reject:	100
slope sensitivity:	1.00 mV/minute
attenuation:	16

DOM 2111263

NOT FOR OUTSIDE
DISTRIBUTION

4610

0008212
D-4706

3.5 Calibration

3.51 Weigh about 70 mg of 2,4,5-T acid analytical standard to the nearest 0.1 mg into a 10 dram vial. Pipet 25 ml of internal standard solution (Note 3.91). Shake to dissolve.

3.52 Analyze a 10- μ l aliquot of the calibration standard prepared in 3.51 under the conditions listed in section 3.4 (Note 3.92).

3.53 Calculate the response factors (R.F.) for 2,4,5-T as follows (Note 3.95):

$$a) \text{ R.F.} = \frac{A \times D \times P}{B \times C \times 100}$$

Where A = peak area for internal standard.
B = grams p-bromophenol/25 ml internal standard solution in calibration standard.
C = peak area of the analytical standard.
D = grams of analytical standard in the calibration standard.
P = percent purity of the analytical standard.

3.6 Procedure

3.61 Weigh about 0.29 g of ESTERON 245 C Herbicide into a 10-dram vial. Pipet 25 ml of internal standard solution (Note 3.91). Shake to dissolve.

3.62 Analyze a 10- μ l aliquot of the sample solution under the conditions listed in Section 3.4.

3.7 Calculations

3.71 Calculate the percent 2,4,5-T for the sample as follows:

$$\frac{E \times \text{R.F.} \times H \times 100}{F \times G} = \% \text{ 2,4,5-T acid equivalent}$$

Where E = peak area of the 2,4,5-T peak for the sample solution.
F = grams of sample.
G = peak area of internal standard.
H = grams p-bromophenol/25 ml internal standard solution.
R.F. = response factor.

3.8 Precision

The data obtained by this procedure indicate a relative standard deviation of 1.02% for a sample containing 44.7% 2,4,5-T. The values obtained may be expected to vary from the average by not more than $\pm 2.03\%$ relative (2 sigma relative) at the 95% confidence level.

DON 2111264

NOT FOR OUTSIDE

DISTRIBUTION

4611

0008213

D-4707

3.9 Notes

3.91 The use of a bulk internal standard is convenient. However, valid results are insured only when all standards and samples are prepared at the same time using the same internal standard solution and the same pipet.

3.92 The calibration standard solution should be replaced with a freshly made solution after one month.

3.93 The eluent can be recirculated for 100 injections. The eluent reservoir must be stirred continuously while it is recycled.

3.94 Repack the inlet of a fresh pre-column and/or analytical column with Whatman Co: Pell ODS after four days' use and thereafter if the chromatographic peaks tail. Replace the pre-column inlet filter when the pressure gauge reads 3,500 psig or greater.

3.95 Best precision will be obtained if the column temperature is held constant. R.F. changes by about 1% per 1°C.

4. Percent 2,4,5-Trichlorophenoxyacetic Acid Butyl Ester

$$\% \text{ 2,4,5-T butyl ester} = (\% \text{ 2,4,5-T acid}) \times \frac{312}{256}$$

where 256 = molecular weight of 2,4,5-trichlorophenoxyacetic acid
312 = molecular weight of 2,4,5-trichlorophenoxyacetic acid butyl ester

5. Pounds of 2,4,5-Trichlorophenoxyacetic Acid Equivalent per U.S. Gallon

5.1 Principle

The pounds of 2,4,5-T acid equivalent per gallon of ESTERON 245 C Herbicide are calculated from the percent acid equivalent, the specific gravity of the sample and the weight per gallon of water at 25°C. A procedure is given for the determination of the specific gravity.

5.2 Procedure

The specific gravity in air is determined by weighing a known volume of the sample in a pycnometer at 25°C. The procedure used is Method C of ASTM Designation D 891-59 except for one modification. The water bath is set at 25°C.

DOM 2111265

NOT FOR OUTSIDE
DISTRIBUTION

4612

0008214
D-4708

5.3 Calculation

$A \times B \times C$ = pounds of 2,4,5-T acid equivalent per U.S. gallon

where A = % 2,4,5-T acid equivalent from 3.7

B = weight per gallon of water at 25°C, which is
8.32 pounds per gallon

C = specific gravity of the sample as determined in 5.2

6. Grams of 2,4,5-T Acid Equivalent Per Liter

$E \times 119.83$ = grams of 2,4,5-T acid equivalent per liter

where E = pounds of 2,4,5-T acid equivalent per U.S. gallon
calculated in Section 5.3

119.83 = conversion factor from pound/gallon (U.S.) to
grams/liter

7. Percent Inert Ingredients

% inerts = 100% - (% 2,4,5-T butyl ester from Section 4)

8. Literature References

American Society for Testing and Materials, 1916 Race Street,
Philadelphia, PA 19103, ASTM Designation D 891-59, "Specific Gravity of
Industrial Aromatic Hydrocarbons and Related Materials."

9. Dow References

9.1 Stevens, T. S., and Wiederrich, D. J., "Direct Injection Assay of
TORDON 101 - A Fully Automated Analyzer," ML-AL 78-00452.

9.2 Kracht, W. R., ed, "TORDON 101 Mixture Weed and Brush Killer,"
Analytical Method No. 87120E.

9.3 Mujica, M. L., "TORDON 101 M Herbicide - Validation of Assay,"
LA-ALM-80-001.

9.4 Roldan, J., "ESTERON 245-C Herbicide - Validation of Assay,"
LA-ALC-82-001, March 17, 1982.

AUTHOR

M. L. MUJICA
Mexico City

NOT FOR CIRCULATION
DISTRIBUTION

4613

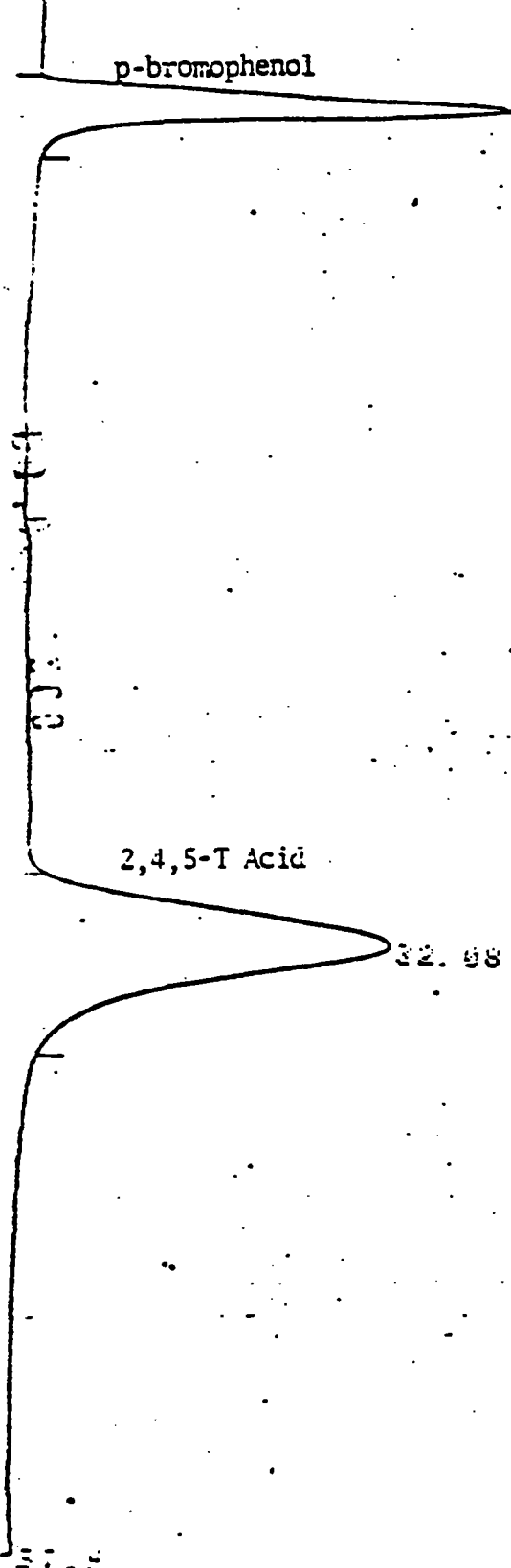
0008215

D-4709

DOM 2111268

FIGURE 1

Calibration Standard Chromatogram



pre-column: 4.6mm ID X 50mm s.s. w/ Co: Pell ODS
column: 4.6mm ID X 250mm stainless steel
packing: Partisil 10-25 ODS (Whatman)
eluent: 200mL acetonitrile/ liter aqueous
0.3M potassium dihydrogen phosphate/
phosphoric acid buffer pH=2.95

flowrate: 2.67 mL/min
detection: uv at 280nm
0.512 AUFS
LDC-1203

injection
volume: 10 uL

retention
times: p-bromophenol 10.0 minutes
2,4,5-T acid 32.0 minutes

DOM 2111267

NOT FOR OUTSIDE
DISTRIBUTION

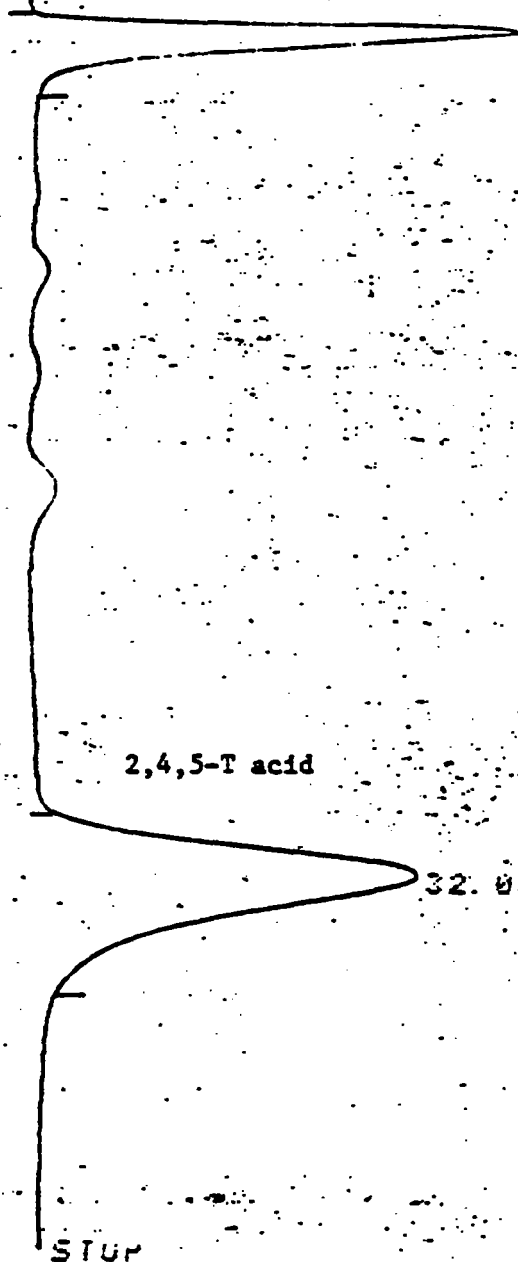
0008216

D-4710

FIGURE 2

Sample Solution Chromatogram

p-bromophenol



pre-column: 4.6mm ID X 50mm s.s w/ Co: Pell ODS
 column: 4.6mm ID X 250mm stainless steel
 packing: Partisil 10-25 ODS (Whatman)
 eluent: 200mL acetonitrile/liter aqueous
 0.3M potassium dihydrogen phosphate/
 phosphoric acid buffer pH=2.95
 flowrate: 2.67mL/min
 detection: uv at 280nm 0.512 AUFS
 LDC-1203
 injection volume: 10 uL
 retention times:
 p-bromophenol 10.0 minutes
 2,4,5-T acid 32.0 minutes

DOM 2111288

NOT FOR OUTSIDE
DISTRIBUTION

RT	TYPE	AREA	IDE	AMT
1.76		11737		
10.01		265922	1	
32.03		589791	2	44.00
		TOTAL		44.00

KF 440.3 ISID AMT 11

-- 0.000

RT: 1.76 STOP 00

1.76

RT: 1.76

RT: 1.76

0008217
4615-4711

252

4616 D-4712

252



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

RECEIVED

SEP 22 1982

REGISTRATION

SEP 20 1982

DOM 2115822

MN071991

Arthur E. Schober
Dow Chemical Company
P.O. Box 1706
Midland, MI 48640

Dear Mr. Schober:

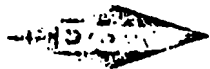
Subject: Description of the Analytical Method
for TCDD
ESTERON 245 BE
EPA Registration No. 464-574
Your Submission of July 14, 1982

We have concluded that the analytical method for 2,3,7,8-TCDD in the butoxyethyl ester of 2,4,5-T is valid. The two analyzed samples of the technical contained 2 ppb and 9 ppb TCDD (0.002, 0.009 ppm).

Sincerely yours,

Richard F. Mountfort
Richard F. Mountfort
Product Manager (23)
Fungicide-Herbicide Branch
Registration Division (TS-767)

4617 0008339
D-4713



DOW CHEMICAL U.S.A.

July 14, 1982

MIDLAND, MICHIGAN 48640

Mr. Richard Mountfort
Product Manager (23)
Registration Division (TS-767C)
U.S. Environmental Protection Agency
401 M Street, S.W., Rm. 237
Washington, D.C. 20460

Subject: ESTERON 245 BE
EPA Reg. No. 464-574
Your Letter of May 13, 1982

MN071991

DOW 2115823

Dear Mr. Mountfort:

Attached is a description of the method and recovery data (chromatograms) of 2,3,7,8 TCDD spiked samples as you requested. Please note these data are stamped Trade Secret.

We have decided not to offer the 16,500 lb. of material in 55-gallon drums for sale or use in the U.S. at this time.

Thank you for your continued assistance.

Sincerely,

Arthur E. Schober
Product Registration Manager
Agricultural Products Department

nbe

Attach:

bcc: Eva Ross (attachment)
D. Buzzelli - 834 Bldg.
E. Conyers - 9001 (attachment)

0008340

D-4714



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

RECEIVE

MAY 17 1982

REGISTRATION

MAY 13 1982

Mr. Arthur E. Schober
Dow Chemical Company
P.O. Box 1706
Midland, MI 48640

Dear Mr. Schober:

Subject: TCDD Analyses
Esteron 245 EE
EPA Registration Number 464-574
Followup to our Registration Notice of March 29, 1982

We have completed review of your additional data on this subject submitted March 24, 1982. You are reporting TCDD concentrations within the maximum (0.008 ppm) stipulated in your formula statement of March 18. Since you have described this method as unvalidated, however, submit a method description and recovery data (including chromatograms) of TCDD-spiked samples. We note that you also plan to submit further analyses of the 16,500 lb of material packaged in 55-gallon drums as they become available. We appreciate your cooperation in this matter.

Sincerely Yours,

Richard F. Mountfort

Richard F. Mountfort
Product Manager (23)
Fungicide-Herbicide Branch
Registration Division (TS-767)

MN071991

DOM 2115831

0008341

4619 D-4715



U.S. ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF PESTICIDE PROGRAMS (TS-767)
WASHINGTON, D.C. 20460

CONFIDENTIAL STATEMENT OF FORMULA

☐ BASIC FORMULATION
☐ ALTERNATE FORMULATION

See instructions on back
of last page.

1. NAME AND ADDRESS OF APPLICANT/REGISTRANT (Include ZIP Code)		2. PAGE 1 OF 1		3. REGISTRATION NUMBER/FILE SYMBOL 464-574		4. PRODUCT MANAGER R. F. Mountfort	
Dow Chemical U.S.A. P. O. Box 1706 Midland, MI 48640 Attn: Arthur E. Schober		5. PRODUCT NAME ESTERON 245 BE Herbicide					
6. NAME AND ADDRESS OF PRODUCER (Include ZIP Code)		7. WEIGHT/GALLON DENSITY 9.42 lb/gal.		8. pH 2.8 diluted 10.1 with water		9. FLASH POINT/FLAME EXTENSION 175°F (TCC)	
The Dow Chemical Company Michigan Division Midland, Michigan 48640		10. COUNTRY WHERE FORMULATED USA					
COMMERCIAL COMPONENT (List each as actually introduced into this formulation. Give Trade Name (if any). Name of Supplier, and EPA Registration Number (if applicable).)		12. SUPPLIER		13. EPA REG. NO.		14. WEIGHT OF EACH COMPONENT*	
2,4,5-T, butoxyethyl ester associated impurities max. 0.8% (2,3,6-T butoxy ethyl ester max. 0.4% 2,4-D butoxyethyl ester, max. 0.4% 2, methoxy-4,5-dichlorophenoxyacetic acid butoxy ethyl ester, max. 0.2%; 4-methoxy-2,5-dichlorophenoxyacetic acid, butoxyethyl ester, max. 0.2; 5-methoxy-2,4-dichlorophenoxyacetic acid, butoxyethyl ester max. 0.2%; 2,3,7,8-TCDD less than 0.008 ppm) GAFAC RE 610 GAFAC PE 510 Aromatic/aliphatic petroleum solvent		Dow Chemical GAF Inc. " " Many sources		464-491		60,900 2,300 3,500 33,300	
						59.1 1.8 2.3 3.5 33.3	
						AI impurities emulsifier solvent	
*If liquid measure, give specific gravity or pounds per gallon.		17. TOTAL WEIGHT OF BATCH		100,000 lbs.		100.00%	
18. TYPED NAME OF APPROVING OFFICIAL Arthur E. Schober		19. TITLE Product Registration Mgr.		20. TELEPHONE NO. (Include area code) (517)-636-6277		21. DATE March 18, 1982	

DOW 2115837

166120NN

000834

2000 D-4716



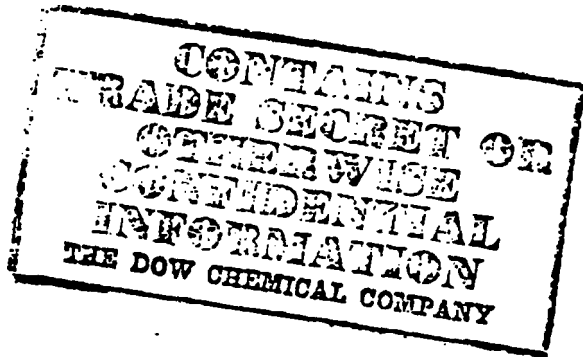
DOW CHEMICAL U.S.A.

MICHIGAN DIVISION
March 19, 1982

MIDLAND, MICHIGAN 48640

A. E. Schober
H&E Sciences
1803 Building

cc: C. H. Goodman, 2030



DOW 2115838 MN071991

ESTERON 2,4,5 BE-TCDD ANALYSIS

Currently our inventory of BEE 2,4,5-T technical ester is made up of one bulk tank which contains about 635,000 pounds of product and 16,500 pounds of product packaged in 55 gallon drums. The bulk tank was sampled on March 2, 1982, and was analyzed and found to contain 2 ppb of 2,3,7,8 TCDD. The analytical research method used is an unvalidated research method with a detection limit of 1 ppb. I have attached the raw analytical data which includes the chromatograms.

All of the product in 55 gallon drums is from one production lot and will be sampled and analyzed next week. I will communicate the results as soon as they are available.

Dave

D. T. Buzzelli
Ag Chemicals Production
Environmental Services

r

Attachment



1521 0008343 D-4717

253

4622

253

D-4718