

Monsanto-

JUN 29 1982

FROM
(NAME-LOCATION-PHONE)

S. G. Collins-A3ND-4-3860

DATE : June 28, 1982

cc: G. D. Ingenthron-A3NB

SUBJECT : Agent Orange Q/A

REFERENCE :

TO : R. T. Berendt-E2ND
T. M. Bistline-E2NJ
~~J. R. Condray-G3WG~~

This updated version of Agent Orange Q/A reflects the additional documents submitted to the court.

Said

Sarah Gainer Collins

:cm

Attachment

CONFIDENTIAL
SUBJECT TO PROTECTIVE ORDER.

004579

CONFIDENTIAL

Q/A AGENT ORANGE

1. Q. GOVERNMENT DOCUMENTS SHOW THAT SAMPLES TAKEN FROM THE AGENT ORANGE SUPPLIED BY MONSANTO WAS HIGHLY CONTAMINATED WITH DIOXIN. IS THIS CORRECT?

A. We are aware of three government documents which purport to show numerical ranges for samples of Agent Orange from various producers including Monsanto.

2. Q. WHAT IS MONSANTO'S OPINION OF THE DOCUMENTS?

A. At this time, we don't have sufficient information to draw any conclusions from the documents. For example, we don't know how the Agent Orange allegedly produced by Monsanto was identified as such, how the product had been stored, how the samples were taken or analyzed.

Further, it is impossible to determine from the documents whether the Agent Orange sampled by the Government was representative of all the product supplied to the government by Monsanto or any other producer. Therefore, it would be improper to draw general conclusions based on the documents as to the level of dioxin contained in the Agent Orange supplied by any producer during the Vietnam conflict.

3. Q. DON'T THE DOCUMENTS SHOW THAT THE AGENT ORANGE USED IN VIETNAM WAS HIGHLY TOXIC AND CONTAMINATED WITH DIOXIN?

A. Because we lack crucial information on how the Agent Orange allegedly produced by Monsanto was identified and analyzed, it would be inappropriate to draw any conclusions based on the information contained in the government documents.

As a general matter, keep in mind that there are 75 members of the dioxin family and that their toxicity varies widely. Of those, only one, 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD) is regulated by the government because of its toxicity. Further, the analytical capability to identify 2,3,7,8TCDD from all the other members of the dioxin family simply do not exist prior to 1979. We believe that the analysis reflected on the government document was conducted prior to 1979. Thus, we have significant doubt as to the accuracy, or even the meaning, of the figures reflected there.

4. Q. DID MONSANTO KNOW ITS PRODUCT WAS CONTAMINATED WITH DIOXINS?
- A. This is a matter which is the subject of litigation currently pending before the court. Accordingly, we believe it would be inappropriate for us to comment at this time.
5. Q. DOESN'T THE FACT DIOXINS WERE FOUND MAKE ANY LEVEL FOUND SIGNIFICANT?
- A. This is a matter which is the subject of litigation currently pending before the court. Accordingly, we believe it would be inappropriate for us to comment at this time.
6. Q. HAVEN'T STUDIES SHOWN THAT AGENT ORANGE CONTAMINATED WITH DIOXINS IS THE CAUSE OF SERIOUS HEALTH PROBLEMS SUFFERED BY VIETNAM VETERANS AND THEIR FAMILIES?
- A. The controversy surrounding Agent Orange continues despite the lack of virtually any scientific evidence that it posed a danger to veterans. The substantial amount of scientific and medical evidence available today suggests that there is no link between Agent Orange and the human health problems reported by the veterans.
7. Q. HOW MUCH AGENT ORANGE DID MONSANTO PRODUCE FOR THE GOVERNMENT?
- A. Monsanto supplied approximately 3.8 million gallons for the U.S. government between the years 1963 and 1969.
8. Q. DOES MONSANTO STILL PRODUCE EITHER 2,4,5-T or 2,4-D?
- A. No. We got out of those businesses in 1970 for economic reasons.

Monsanto

027 20 702

FROM
(NAME-LOCATION-PHONE) S. G. Collins - A3ND - 4-3860

DATE : May 27, 1982

cc. G. D. Ingenthron - A3NB

SUBJECT :

REFERENCE :

TO : R. T. Berendt - E2ND
T. M. Bistline - E2NJ
~~J. R. Condray - G3WG~~

Attached are updated versions of our Agent Orange
Position Statements.

Comments?

Sarah Gainer Collins

Sarah Gainer Collins

:cm

Attachments

CO4579-A

AGENT ORANGE ... MONSANTO COMPANY POSITION

We genuinely sympathize with the plight of our Vietnam Veterans. But we believe that the substantial amount of scientific and medical evidence available today suggests that there is no link between Agent Orange and human health problems of the magnitude claimed by the veterans.

Monsanto was one of the companies asked to produce this herbicide mixture for the U.S. Government during the Vietnam War. Now, much to our regret, we find that we are both an object of the veterans' frustrations and a target of a class action suit filed by thousands of veterans against the producers. The suit seeks \$40 billion trust fund to compensate Vietnam veterans for cancer, miscarriages, and birth defects allegedly caused by the use of Agent Orange.

Agent Orange, used in Vietnam between 1962 and 1970, was supplied at the government's request, formulated to government specifications, applied by military personnel under the orders of the government, and used in war situations ... utterly beyond the control of the manufacturers.

The controversy surrounding Agent Orange has continued to grow despite the lack of virtually any scientific evidence that this herbicide posed a danger to the veterans. To the contrary, there is a substantial amount of scientific/medical evidence on the record (attached that says there is no link between Agent Orange and human health problems of the magnitude claimed by the veterans.

Obviously, this conflict is not of our making. However, having been drawn into it, we have no alternative but to defend ourselves. We are confident that good science will ultimately prevail over the emotions of the moment and exonerate the producers of Agent Orange. At the same time, we sincerely hope that good science will also provide many of the answers the veterans now seek regarding possible service-related health problems.

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① Monsanto and American ...
② ...

June, 1982
For additional information, contact:
Sarah Gainer Collins
Environmental Communications
Monsanto Company
800 N. Lindbergh Blvd.
St. Louis, MO 63167
314-694-3860

AGENT ORANGE -- MONSANTO COMPANY BACKGROUND

Monsanto began producing the components of Agent Orange ...2,4,5-T and 2,4-D in the late 1940s. We continued the manufacture of these herbicides until 1970 when we decided to get out of the business for economic reasons.

During the Vietnam War, Monsanto was one of the companies asked by the U.S. government to produce a special formulation of these herbicides for use in Vietnam. Consequently, today, we are a target of a class action suit filed by thousands of veterans against the producers. The suit seeks \$40 billion trust fund to compensate Vietnam veterans for cancer, miscarriages, and birth defects allegedly caused by the use of Agent Orange.

We genuinely sympathize with the plight of our Vietnam Veterans. The unpopular war they fought has left inevitable scars and Agent Orange has become an outlet for accumulated frustrations.

Also, in the past few years, a great deal of information has been gathered from health studies on human populations exposed to dioxin...a trace contaminant found in 2,4,5-T. One such study offers us a good insight into long-term or chronic health effects of dioxin exposure. In 1949, there was an accident at one of Monsanto's plants during which 121 employees were exposed to relatively high concentrations of dioxin.

A standardized mortality analysis...or a study of the cause of death...was recently conducted on these 121 employees of which 32 were exposed in 1949 and have since died from any and all causes. That study...conducted by Monsanto and the Institute of Environmental Health at the University of Cincinnati found no apparent excess in death from cancer or cardiovascular disease based on statistics taken from the total U.S. population.

Monsanto is confident that good science will ultimately prevail over the emotions of the moment and exonerate the producers of Agent Orange. At the same time, we sincerely hope that good science will provide answers to Vietnam veterans regarding their health problems.

-000-

June 1982

Q/A AGENT ORANGE

1. Q. A GOVERNMENT DOCUMENT SAYS THAT A SAMPLE TAKEN FROM THE AGENT ORANGE SUPPLIED BY MONSANTO WAS HIGHLY CONTAMINATED WITH DIOXIN. IS THIS CORRECT?

A. We are aware of one government document that purports to show numerical ranges for samples of Agent Orange from various producers including Monsanto.

2. Q. WHAT IS MONSANTO'S OPINION OF THE DOCUMENT?

A. At this time, we don't have sufficient information to draw any conclusions from the document. For example, we don't know how the Agent Orange allegedly produced by Monsanto was identified as such, how the product had been stored, how the samples were taken or analyzed.

Further, it is impossible to determine from this one document whether the Agent Orange sampled by the Government in this one test was representative of all the product supplied to the government by Monsanto or any other producer. Therefore, it would be improper to draw general conclusions based on this single document as to the level of dioxin contained in the Agent Orange supplied by any producer during the Vietnam conflict.

3. Q. DOESN'T THE DOCUMENT SHOW THAT THE AGENT ORANGE USED IN VIETNAM WAS HIGHLY TOXIC AND CONTAMINATED WITH DIOXIN?

A. Because we lack crucial information on how the Agent Orange allegedly produced by Monsanto was identified and analyzed, it would be inappropriate to draw any conclusions based on the information contained in the government document.

As a general matter, keep in mind that there are 75 members of the dioxin family and that their toxicity varies widely. Of those, only one, 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD) is regulated by the government because of its toxicity. Further, the analytical capability to identify 2,3,7,8-TCDD from all the other members of the dioxin family simply did not exist prior to 1979. We believe that the analysis reflected on the government document was conducted prior to 1979. Thus, we have significant doubt as to the accuracy, or even the meaning, of the figures reflected there.

CD4579-B

4. Q. DID MONSANTO KNOW ITS PRODUCT WAS CONTAMINATED WITH DIOXINS?
- A. This is a matter which is the subject of litigation currently pending before the court. Accordingly, we believe it would be inappropriate for us to comment at this time.
5. Q. DOESN'T THE FACT DIOXINS WERE FOUND MAKE ANY LEVEL FOUND SIGNIFICANT?
- A. This is a matter which is the subject of litigation currently pending before the court. Accordingly, we believe it would be inappropriate for us to comment at this time.
6. Q. HAVEN'T STUDIES SHOWN THAT AGENT ORANGE CONTAMINATED WITH DIOXINS IS THE CAUSE OF SERIOUS HEALTH PROBLEMS SUFFERED BY VIETNAM VETERANS AND THEIR FAMILIES?
- A. The controversy surrounding Agent Orange continues despite the lack of virtually any scientific evidence that it posed a danger to veterans. The substantial amount of scientific and medical evidence available today suggests that there is no link between Agent Orange and the human health problems reported by the veterans.
7. Q. HOW MUCH AGENT ORANGE DID MONSANTO PRODUCE FOR THE GOVERNMENT?
- A. Monsanto supplied approximately 3.8 million gallons for the U.S. government between the years 1963 and 1969.
8. Q. DOES MONSANTO STILL PRODUCE EITHER 2,4,5-T or 2,4-D?
- A. No. We got out of those businesses in 1970 for economic reasons.

1982
stockholder meeting

Q: DID MONSANTO MANUFACTURE AND SUPPLY AGENT ORANGE TO THE U.S. GOVERNMENT FOR USE IN VIETNAM?

A: Yes. Monsanto was one of several companies asked to supply this compound during the Vietnam War.

Background: Monsanto manufactured the principal ingredients of Agent Orange -- 2,4,5-T at the Nitro Plant from 1948-1969 and 2,4-D at the Krummrich Plant from 1946-1970. At various times from 1963 to 1969 Monsanto provided quantities of a mixture of 2,4,5-T and 2,4-D to the U.S. government. In 1969 and 1970, respectively, Monsanto decided for economic reasons to stop production of 2,4,5-T and 2,4-D.

The dioxin 2,3,7,8-TCDD can be formed in ultra-trace quantities during the manufacture of tri-chloro-phenol, which is used to make 2,4,5-T. The Agent Orange controversy involves this dioxin, which is extremely toxic to some laboratory animals, less toxic to others and of unknown toxicity to humans.

Q: WHAT IS THE STATUS OF THE AGENT ORANGE LAW SUITS AND MONSANTO'S POTENTIAL LIABILITY?

A: These lawsuits have been consolidated for pretrial purposes in the U.S. District Court for the Eastern District of New York. Discovery and other pretrial matters are continuing. Since this is a matter in litigation, it would be inappropriate to speculate on the potential liability to Monsanto, but I will say that, in our judgment, the available scientific and medical evidence does not support the claims of adverse health effects alleged in these lawsuits.

CO4579-C

Q: WHAT IS MONSANTO'S POSITION ON AGENT ORANGE? WHY ARE YOU FIGHTING THE VETERANS ON THIS ISSUE?

A: We sympathize with the plight of our Vietnam veterans. The unpopular war they fought has left inevitable scars, and Agent Orange has become an outlet for accumulated frustrations.

As a result, this controversy has continued to grow despite the lack of virtually any scientific evidence that this herbicide posed a danger to the veterans. To the contrary, there is a substantial amount of scientific and medical evidence on the record that says there is no link between Agent Orange and the serious human health problems claimed by the veterans.

That evidence includes the following:

1. The 1974 Report by the National Academy of Sciences on the effects of herbicides in South Vietnam.
2. A series of independent scientific workshops sponsored by the American Farm Bureau in 1979.
3. World Health Organization studies done to date on the human population exposed to high levels of TCDD during an industrial accident in Seveso, Italy in 1976.
4. Two recently completed mortality (cause of death) studies on groups of former Monsanto employees who had worked with 2,4,5-T since 1948. One group experienced high peak exposure more than 30 years ago.
5. An animal study, released in August, 1980, by HEW which cleared Agent Orange of causing birth defects in offsprings of males exposed earlier to TCDD.
6. A report on the chronic health effects of British World War II veterans of the Far East which found many of the same symptoms being reported by Vietnam veterans. This report was published in the July 19, 1980 issue of the prestigious British medical journal, Lancet.
7. A report by the American Medical Association dated Oct. 1, 1980 which found a lack of conclusive evidence that Agent Orange can produce the health effects being reported by veterans.

Monsanto

FROM (NAME-LOCATION-PHONE)

LAW DEPARTMENT

T. M. Bistline - E2ND - (4-2989)

JUN 9 1982

DATE: June 8, 1982

cc: R. T. Berendt - E2ND

SUBJECT: Agent Orange Position Papers

J. R. Condray - ~~GAWG~~

G. D. Ingenthron - A3NB

REFERENCE:

TO Sarah G. Collins - A3ND

Bob Berendt and I have the following suggestions to make on the position papers which you forwarded to us. With regard to paragraph 2 of the paper entitled "Agent Orange ... Monsanto Company Position", we would suggest eliminating the final sentence. While the Plaintiffs do seek to impose a trust fund on the companies involved, the request for \$40 billion does not appear in the Prayer for Relief in the Amended Complaint. Therefore, it is technically inaccurate to say that the Plaintiffs seek a \$40 billion trust fund. Rather than get into disputes about how much they seek, we suggest simply dropping that entire sentence.

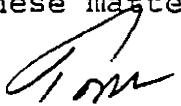
The dates mentioned in the first sentence of paragraph 3 ("between 1962 and 1970") can be seen as misleading. Monsanto sold herbicides which fall under the broad definition of "Agent Orange" as used in this litigation from 1961 to 1969. The government used such herbicides in Vietnam from 1961 to 1971. We suggest simply eliminating the dates and saying that Agent Orange was used during the Vietnam War.

The first sentence of paragraph 4 states that "the controversy surrounding Agent Orange has continued to grow...". From our point of view, the public clamor surrounding this case has peaked and decreased and we feel that it might be more appropriate simply to say that the controversy continues.

On the document entitled "Agent Orange -- Monsanto Company Background", paragraph 2 contains the sentence regarding the \$40 billion trust fund. As with the position paper, we recommend deletion of this sentence in the background paper as well.

I have taken the liberty of revising paragraph 5 of the background paper and merging it with paragraph 4. The manner in which the prior draft was written seemed to me unclear and I suggest this version as emphasizing the point which we wish to make.

I would be happy to discuss any of these matters with you.


Thomas M. Bistline

TMB:mmmp
Enclosure

CO4579-1

AGENT ORANGE -- MONSANTO COMPANY BACKGROUND

Monsanto began producing the components of Agent Orange-- 2,4,5-T and 2,4-D--in the late 1940's. We continued the manufacture of these herbicides until 1970 when we decided to get out of the business for economic reasons.

During the Vietnam War, Monsanto was one of the companies asked by the U.S. government to produce a special formulation of these herbicides for use in Vietnam. Consequently, today we are a target of a class action suit filed by thousands of veterans against the producers.

We genuinely sympathize with the plight of our Vietnam Veterans. The unpopular war they fought has left inevitable scars and Agent Orange has become an outlet for accumulated frustrations.

Also, in the past few years, a great deal of information has been gathered from health studies on human populations exposed to dioxin--a trace contaminant found in 2,4,5-T. One such study offers us a good insight into long-term or chronic health effects of dioxin exposure. In 1949, there was an accident at one of Monsanto's plants during which 121 employees were exposed to relatively high concentrations of dioxin. A standardized mortality analysis--a study of the cause of death--was recently conducted by Monsanto and the Institute of Environmental Health at the University of Cincinnati on those employees who were exposed in 1949. The study found no apparent excess in death from cancer or cardiovascular disease among the study group as compared to the total U. S. population.

Monsanto is confident that good science will ultimately prevail over the emotions of the moment and exonerate the producers of Agent Orange. At the same time, we sincerely hope that good science will provide answers to Vietnam veterans regarding their health problems.

oOo

June 1982

AGENT ORANGE ... MONSANTO COMPANY POSITION

We genuinely sympathize with the plight of our Vietnam Veterans. But we believe that the substantial amount of scientific and medical evidence available today suggests that there is no link between Agent Orange and human health problems of the magnitude claimed by the veterans.

Monsanto was one of the companies asked to produce this herbicide mixture for the U.S. Government during the Vietnam War. Now, much to our regret, we find that we are both an object of the veterans' frustrations and a target of a class action suit filed by thousands of veterans against the producers.

Agent Orange, used during the Vietnam War, was supplied at the government's request, formulated to government specifications, applied by military personnel under the orders of the government, and used in war situations ... utterly beyond the control of the manufacturers.

The controversy surrounding Agent Orange continues despite the lack of virtually any scientific evidence that this herbicide posed a danger to the veterans. To the contrary, there is a substantial amount of scientific/medical evidence on the record (attached) indicating that there is no link between Agent Orange and human health problems of the magnitude claimed by the veterans.

Obviously, this conflict is not of our making. However, having been drawn into it, we have no alternative but to defend ourselves. We are confident that good science will ultimately prevail over the emotions of the moment and exonerate the producers of Agent Orange. At the same time, we sincerely hope that good science will also provide many of the answers the veterans now seek regarding possible service-related health problems.

oOo

June 1982

For additional information, contact:

Sarah Gainer Collins

Environmental Communications

Monsanto Company

800 N. Lindbergh Blvd.

St. Louis, MO 63167

314-694-3860

Monsanto

FROM
(NAME-LOCATION-PHONE) S. G. Collins - A3ND - 4-3860

DATE : June 3, 1982

cc. J. R. Condray
G. D. Ingenthron

SUBJECT :

REFERENCE :

TO : R. T. Berendt - E2ND
T. M. Bistline - E2NJ

Attached is a Q/A on Agent Orange. May I have your comments please.

Sarah

Sarah Gainer Collins

:cm

Attachment

Tam,

I'm sending over the article I found in Monsanto Magazine, Oct. '62.

CONFIDENTIAL
6-3-82

Q/A AGENT ORANGE

1. Q. A GOVERNMENT DOCUMENT SAYS THAT A SAMPLE TAKEN FROM THE AGENT ORANGE SUPPLIED BY MONSANTO WAS HIGHLY CONTAMINATED WITH DIOXIN. IS THIS CORRECT?

A. We are aware of one government document that ^{purports to show} ~~shows numerical~~ ranges for individual samples ~~from various~~ Agent Orange ^{from} various producers, including a Monsanto product. (8)

2. Q. WHAT IS MONSANTO'S OPINION OF THE DOCUMENT?

see attachment
A. ~~We don't know what the samples or numbers represent. We don't know how the samples were taken, how they were analyzed, the protocol followed or whether an individual sample was representative of the product made. Therefore, it is difficult to draw an overall conclusion.~~

3. Q. DOESN'T THE DOCUMENT SHOW THAT THE AGENT ORANGE USED IN VIETNAM WAS HIGHLY TOXIC AND CONTAMINATED WITH DIOXIN?

see attachment
A. ~~We don't know what the dioxins numbers represent because we don't know what dioxins were found. There are over 75 isomers or members of the dioxin family and only one, 2,3,7,8-Tetra-chlorodibenzo-p-dioxin or TCDD is the isomer regulated by the government because of its toxicity. The analytical techniques to isolate TCDD were not developed until 1979. The government document is dated around 1977 and does not break down the dioxin numbers into specific isomers.~~

4. Q. DID MONSANTO KNOW ITS PRODUCT WAS CONTAMINATED WITH DIOXINS?

A. ~~Monsanto produced the components of Agent Orange, 2,4,5-T and 2,4-D according to government specifications. The products supplied to the government were of high quality and met or surpassed the specifications. At the time of production, we analyzed the 2,4,5-T component using state-of-the-art technology and did find very low levels of dioxins, that were considered to be inconsequential.~~

→ This is a matter which is ~~currently~~ the subject of litigation currently pending before the court. Accordingly we feel that it would be inappropriate for us to comment

5. Q. DOESN'T THE FACT DIOXINS WERE FOUND MAKE ANY LEVEL FOUND SIGNIFICANT?

A. ~~No. Even today, there is no conclusive scientific evidence that Agent Orange or the dioxins sometimes found in it are the cause of purported health problems. At the time Monsanto produced the components of Agent Orange for the government, there was no scientific evidence a problem existed nor were we aware of any complaints from our other customers of 2,4,5-T.~~

6. Q. HOW MUCH AGENT ORANGE DID MONSANTO PRODUCE FOR THE GOVERNMENT?

A. Monsanto supplied approximately 3.8 million gallons for the U.S. government between the years 1963 and 1969.

7. Q. DOES MONSANTO STILL PRODUCE EITHER 2,4,5-T or 2,4-D?

A. No. We got out of those businesses in 1970 for economic reasons.

As reflected in documents which we recently filed with the Court,

5. *Same answer as to 4. General comment on the health effects of exposure to Agent Orange should track our general statement.*

DATE: June 3, 1982

SUBJECT: Agent Orange Q/A

cc: R. T. Berendt
✓ J. R. Condray
G. D. Ingenthron

REFERENCE:

TO S. G. Collins

Attached are my comments on the Agent Orange Q/A which you sent over this morning. Bob Berendt has reviewed and signed off on this. Please note that I have taken the liberty of substantially revising the answers to Questions 2 and 3. In addition, Bob and I both feel that we should not answer questions of the nature of Nos. 4 and 5. These matters go directly to the heart of the litigation and we feel that it would be most unwise to depart from our long-standing position of declining comment on these matters. I have supplied the number of gallons of Agent Orange which we sold as obtained from Court documents we filed last month.

Please feel free to contact Bob Berendt if you wish to discuss further any of the enclosed answers.



Thomas M. Bistline

TMB:ke
Attachments

2. We do not at this time have sufficient information to draw any conclusions with respect to the information contained in this document. For example, we do not know at this time how the Agent Orange allegedly produced by Monsanto was identified as such, how the product so identified had been stored, how the samples were taken or how the samples were analyzed. Further, it is impossible to determine from this one document whether the Agent Orange sampled by the Government in this one test was representative of all the product supplied to the Government by Monsanto--or by any other producer. Accordingly, it would be improper to draw general conclusions on the basis of this single document as to the level of dioxin contained in the Agent Orange supplied by any producer during the Vietnam conflict.

3. Because we lack crucial information as to the manner in which the Agent Orange allegedly produced by Monsanto was identified and analyzed, it would be inappropriate to draw any conclusions based on the information contained in the government document. As a general matter, it should be borne in mind that there are some 75 members of the dioxin family and that their toxicity varies widely. Of those, only one, 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD) is regulated by the Government because of its toxicity. Further, the analytical capability to identify 2,3,7,8-TCDD unambiguously from all the other members of the dioxin family simply did not exist prior to 1979. We believe that the analysis reflected on the government document was conducted prior to 1979. Thus, we have significant doubt as to the accuracy--or even the meaning--of the figures reflected there.