

EXHIBITS TO THE DEPOSITION OF

DONALD M. PURDY

EXHIBIT
Purdy - 1 IP
1/5/84 TL

March 27, 1963

Mr. Frank W. Jarvis - Cleveland

Richard W. McBurney, M.D.

CHLORACNE - CONFIDENTIAL

At the request of Mr. Guidi and C. Richard Brown, I was in Newark, New Jersey yesterday and visited the Diamond's Newark Plant.

Much of which this letter contains will be, of course, repetitious to you, but I feel I should cover the entire problem as I understand it. Please let me say on the onset that Mr. Guidi was most gracious and did his utmost to furnish me with data covering a period of some seven years during which time the management of this plant has been very conversant with the problem at hand.

Essentially this plant produces 2,4 Dichlorophenoxyacetic acid and 2,4,5 Trichlorophenoxyacetic acid. The main building which comprises the laboratory and offices, as well as the workmen's shower rooms, is quite up-to-date, and the sanitary facilities leave nothing to be desired. As you face the river on the left, there is a new building where the initial reactions take place, and after a visitation personally, by me, of this building, I find that I could offer nothing in the way of constructive advice in the improvement of this up-to-date factory. The building on the right, however, is of an ancient vintage, and it is in this building the 2,4,5 T acid process actually takes place, and in this building the workers are easily contaminated by vapors in the air and by other chemical products and by-products of the process; most especially in the regions of the 1500 gallon reactor tank, the 1500 gallon filter holding tank and the rotary string filters as well as the 2400 acidification and the centrifuge feed tank.

As long as this plant has been in operation, there has been a chronic problem in the employees hired of an acne condition which is referred to as chloracne. At one time, some 40 of these 72 workers in the plant were so affected with the chloracne. They have been well cared for under the services of Dr. Jacob Bleiberg, a Dermatologist, who visits the plant weekly and who has been quite concerned with this chronic problem.

Up to this date, Dr. Bleiberg had been under the assumption that most of these workers were suffering from merely an acne-like condition of the skin. However, after years of observation, he began to suspect that other internal organs might be affected by the by-products which originally caused the acne formed condition. It is my impression and the impression of the management that these by-products are those of a chlorinated dher and are a result of the reaction of caustic soda on 1,2,4,5 Tetrachlorobenzene as used in the making of the 2,4,5 T.

Dr. Bleiberg has become much more interested and excited about

COPY

DS00019527

March 27, 1963

- 2 -

Mr. Frank W. Jarvis

this problem since an article appeared in the January issue of the Journal of the American Medical Association concerning a disease known as Porphyria Cutanea Tarda. This article, contrary to most of the medical thinking in the past, shows that instead of this being a disease which is "congenital", it may be acquired by the ingestion of certain chlorobenzene products and this specific article reported 348 cases of this disease which occurred in Turkey when the population were given wheat to plant that had been treated with a fungicide, notably Hexachlorobenzene. Instead of planting the wheat, most families ate it, and thus occurred this outbreak which is estimated to have exceeded 3,000 cases, although only 348 personally observed cases were seen by these authors.

This disease is a disease of the blood forming elements of the body in which the hemoglobin of the red blood cells is broken down and essentially the spleen, liver and kidneys are affected to a greater or lesser extent, depending upon the ingestion of such a chlorinated benzene. Its outward manifestations are those which are prevalent in the plant in Newark and resembled the chloracne which we have known occurred there for a period of time. It is also well known that there is an individual susceptibility to the development of this disease and men are affected about 70% more than women.

One of the significant and easy tests to diagnose this disease other than the skin changes, is the finding of the chemicals called porphyrins in the urine and this is easily accomplished by looking at a fresh specimen of urine under an ultraviolet lamp. This has been carried out by Dr. Bleiberg, and he found that of the four men who have suffered the longest from the chloracne, two of them had a positive porphyrin reaction in their urine. Also, there was evidence of bile in the urine, which is not a normal finding, in all four individuals and two of them had traces of albumin.

It is my impression that two or more of these individuals which Dr. Bleiberg pointed out to us are probably suffering from this disease, Porphyria Cutanea Tarda. It is somewhat doubtful in my mind that all cases of chloracne are in reality this disease, but probably will be merely the usual chloracne that is seen in individuals working with chlorinated benzene products. My statement here is based upon a supposition, but represents fully a 36 hour perusal of the medical literature dealing with these two diseases and what has been known about them in the past.

Management of the plant has in the past appealed to the Department of Health of the State of New Jersey for some aid in handling this problem and it is Mr. Guidi's opinion, as well as mine, that they were of no benefit at all in solving our problem. Dr. Bleiberg has, on several occasions, written to Dr. Donald J. Birmingham of Cincinnati, Ohio, who is Chief of the Dermatologic Section of the Division of Industrial Hygiene of the U. S. Public Health Service and a personal friend of Dr. Bleiberg. Dr. Birmingham expressed both an interest

DS30019520

Mr. Frank W. Jarvis

- 3 -

March 27, 1963

in the condition that exists at the plant and a willingness to make a personal inspection of our plant, and today I have been notified that such an inspection will be carried out by him next week, subject of course, to your approval. I would heartily concur with Dr. Bleiberg and offer the opinion that Diamond Alkali Company can only profit by his visit and would so recommend that he be allowed to make it.

I believe that he probably will wish to undertake more extensive hospital testing of individuals than I personally believe is necessary, and my recommendation in this regard, at the present, would be to hospitalize only the two worst cases and have a thorough medical examination, especially regarding the blood forming elements, the kidneys and the livers of these individuals. I do not feel that I would recommend that more than this be done at the present time.

I have been informed that the company's future plans include a rehabilitation of the older building with raising of the roof, revision of the tanks and modernization of equipment along with adequate ventilation, and I cannot emphasize too strongly to you that until this program is carried out, the problem of the dermatitis and/or porphyria in the plant will continue. I, of course, am not conversant either with the finances available nor the feasibility of carrying forth this program; however, I do believe that this is the only real solution to the problem which exists in the New Jersey plant.

In summary then, Diamond Alkali has a plant in Newark hiring 72 workers, most of whom have been affected with a skin disease and which may prove to be even more dangerous to health than this in some. Present management has been aware of this problem for sometime and the medical treatment has certainly been of high standards and quality. Until a renovation of the old portion of this plant is carried out, I am certain this problem will continue to exist.

Richard W. McBurney, M.D.

RWMcB:rne

cc: Mr. C. Richard Brown
Mr. Raymond A. A. Guidi



DS 00019829

C
O
P
Y

EXHIBIT

Steward-11 Ident
Evid
Nancy Bendish 10-19-83

EXHIBIT
Purdy-2ID
1/5/84 TL

July 22, 1970

Dr. Jacob Bleiberg
40 Union Avenue
Irvington, New Jersey 07111

Dear Dr. Bleiberg:

Enclosed is our check for \$2,510.00 covering statements for the second quarter. I have not included as he is unknown to the Agricultural Chemicals Division. I suggest checking with our Kearny, New Jersey Plant, or Aetna to properly classify the bill.

It is disheartening to note the continued, and in some cases, the increased frequency and severity of symptoms. The majority of the people involved have been removed from contact for almost a year, and the last contact for any patient was over six months ago. has not
been exposed for ten years and last exposure
at Diamond was over five years ago.

Please send me a report on your latest prognosis for the group, and your analysis of our Workmen's Compensation position.

I hope Clair and the family are well and that your vacation runs smoothly.

Very truly yours,

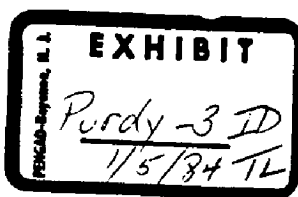
DIAMOND SYNOCCI CHEMICAL COMPANY


F. E. Kennedy
Manager of Manufacturing

FEL:b

Enc.

DE 0001557



June 2, 1964

A. Crumley
Product Liability Claims - Columbia, South America

D. A. Purdy

This subject was discussed on Thursday, May 27, in Stan Rounour's office with Mike Lafferty and G. W. Giles of Alexander & Alexander. Mr. John A. Ekiner of Quinor joined us later in the day.

Some of the more pertinent facts brought out in this meeting are summarized as follows:

A. Shipments of the 2,1-D and 2,1,5-T manufactured at Newark were made in September of 1962 in drums lithographed with a warning label in English. The net trial in question was supposedly from batch #62-025.

B. After arriving at Quinor's facilities in Columbia, their own "Tilers" warning label (which contains slightly stronger language than ours and specifically refers to Glorcene) written in Spanish is affixed to the drums and shipped to customers in various parts of Columbia.

C. The application of the weed killer is made by back packs or packs attached to animals. Although the warning label advises to avoid excessive contact with the weed killer and to wash thoroughly with soap after application, Bingham mentioned that these instructions are rarely followed to the letter.

D. The first case that Diamond became aware of was in April of 1963, but it was felt that this simply was an isolated case and no further action was taken. Subsequent claims received by Quinor and reported to Diamond were felt to be as a result of misapplication of the product since our lab tests indicated that there was nothing unusual about the product. Quinor made minor settlements with three customers (not the employees) and obtained a letter of release from each. A copy of this letter will be forwarded to us.

E. There are a number of claims pending with the total amount estimated to be between \$5,000 and \$10,000, and possibly more if the Public Health report is unfavorable. This report should be available soon.

F. Diamond's lab test of the batch in question doesn't indicate that this batch is unusual in any way. Quinor had Eselton Lab analyze a sample (Bingham gave Stan Rounour a copy of this report), but the only conclusion drawn was that our product was more toxic than a similar product made by Dow.

G. Our Product Liability Insurance will indemnify Diamond for sums that we are obligated to pay if we are legally liable for the bodily injury. While there is no definite evidence that this batch of product was faulty, circumstances would seem to indicate that there might have been something wrong with it, i.e. no claims were ever received prior to 1963 and yet we manufactured the product in the same way and application was similar. The fact that all of these accidents occurred at about the same period of time in different sections of Columbia can be traced to one batch of manufactured product.

DP 10010081

COPY


M. A. Crinkley
Page Two
June 2, 1964

H. It would seem prudent to conduct further tests of the product when it is returned from Bogata to determine if it was defective. This determination is important not only from the insurance standpoint, but for our own knowledge and protection in the future.

I. If the insurance won't pay for this, then the \$5,000 to \$10,000 will have to either come from Diamond, Quiaor or both, keeping in mind that we do a fairly good business with Quiaor, who is also in the plastics business, and that we would want to settle the whole matter amicably so as not to reflect in any way on our new plastics venture in Columbia.

J. Our distributors should be advised that all accidents should be reported immediately, and the Insurance Department in Cleveland should be advised. Settlements should not be made in our behalf unless we or our insurance company authorize such payments.

Nothing much can be done now until the report from the Public Health Authorities in Columbia is available and our product is tested further. Mr. Giles should have a report this week from the insurance company's representative in Columbia, after which he will arrange a meeting with them to discuss an insurance recovery.


D. M. Parry

DJP/jas

cc: J. Carr - Cleveland
S. Honour - New York ✓
M. Kennedy - Newark
E. Mack - Cleveland

TS 00018082



EXHIBIT

Employee Patent Agreement

SEP 10 1958

WHEREAS *Donald M. Purdy* hereinafter referred to as the Employee, has been employed by the Diamond Alkali Company, hereinafter referred to as the Company, a Corporation of the State of Delaware, having its principal office in the City of Cleveland and County of Cuyahoga, State of Ohio, in a capacity such that the performance of his duties or information which he acquires from his employment may lead to inventions or suggestions by him relating to improvement of the Company's business:

AND WHEREAS, it is the understanding between the Company and the Employee and the purpose and intent of the Employee that the Company shall have certain rights in such inventions or suggestions.

NOW, THEREFORE, for and in consideration of the salary paid the Employee by the Company during his employment, the Employee agrees as follows:

1. That he shall promptly, fully and completely disclose to the Company all inventions made or conceived by him solely or jointly with another or others during his employment by the Company.

2. That where the subject matter of such inventions relates to machines, apparatus, equipment, methods, processes, products, composition of matter and articles of manufacture utilized or utilizable in any of the plants, branches or departments of said Company, or of a character heretofore or desired to be manufactured, used, sold or dealt in by the Company, the Company shall have all rights to such inventions.

3. That any process or product which the Employee may develop, either solely or jointly with others on his own time and at his own expense during his period of employment, and which does not relate directly to the work of the Employee with the Company or to the business of the Company, shall remain the property of the Employee, but the Company shall be informed on all such inventions and shall have first refusal for a period of one year thereafter to obtain full ownership of such invention or inventions on mutually satisfactory terms. If no agreement can be reached as to mutually satisfactory terms during the said period of one year from date of disclosure to the Company, the Company shall thereafter for a further period of two years, have the right to assume full ownership on terms at least as favorable as may be offered to the inventor by others.

4. That at the request of the Company, either during or after termination of his employment, he shall execute, or shall join in executing, applications for Letters Patent of the United States, and of such foreign countries as the Company may elect, for such of the inventions contemplated by paragraphs 2 and 3 hereof as the Company may direct, which said applications shall be prosecuted at the expense of the Company by solicitors chosen by the Company; and that he shall execute and deliver or join in executing and delivering assignments to the Company of the entire right, title and interest in and to said inventions and the applications and the Letters Patent therefor covered by paragraph 2 hereof and, as the Employee and the Company shall agree, in and to inventions covered by paragraph 3; and that he shall execute, or join in executing all papers essential or desirable to carry out the spirit and intent hereof, and shall give all reasonable assistance in establishing, protecting, and maintaining the rights of the Company in said inventions, applications, and Letters Patent in accordance with the spirit of this agreement.

5. That he shall not, without the written consent of the Company first obtained, publish or disclose to others than the Company or its designated employees, prior to issue of Letters Patent therefor, the subject matter of any of the inventions contemplated by this agreement, or of any invention of another employee of the Company.

6. That the Employee shall treat as confidential, knowledge of all procedures, apparatus, compositions of matter, formulac, specifications, secret processes or other confidential information as he may acquire in the course of his employment, and that the Employee shall not, at any time, either during his term of employment or subsequent thereto disclose to others, publish or cause to be published or otherwise utilize any such subject matter, without the written consent of he Company unless the same shall have been made public by, or with the consent of the Company.

7. That no change, either increase or decrease, in the amount of salary paid the Employee by the Company, no change in the nature of the services and duties required from or assigned to the Employee by the Company, and no change as regards department or plant to which the Employee is assigned, shall in any way affect the obligation of the Employee to the Company under any of the provisions of this agreement, that his employment is terminable at will either by himself or by the Company and termination of his employment shall not release him from his obligations hereunder; and in event of re-employment of the Employee by the Company at any time after any termination of his said employment, this agreement and all the provisions thereof shall without further act on the part of the Company or the Employee continue in full force and effect.

IN WITNESS WHEREOF, said Employee hereunto sets his hand and seal this 10th day of September 19 58.

Donald M Purdy [SEAL]

State of Ohio
County of Cuyahoga } ss.

On this 10th day of September 19 58, before me, the subscriber, a Notary Public for said State, residing at 20610 Clare Avenue, Maple Heights, Ohio personally appeared Donald M. Purdy and in due form of law acknowledged the foregoing agreement to be his act and deed, and desired the same to be recorded as such.

Witness my hand and notarial seal, the day and year aforesaid.

Edward J. March

EXHIBIT
Purdy-5 ID
1/5/84 TL

ALEXANDER & ALEXANDER

INCORPORATED
INSURANCE

AVERAGE ADJUSTERS CONSULTING ACTUARIES
226 BROADWAY NEW YORK, N.Y. 10007

TELEPHONE
TOLL FREE
TELETYPE
212 571-0200
CABLE ADDRESS
ALEXANDER

NEW YORK
ATLANTA
BALTIMORE
CHICAGO
CINCINNATI
COLUMBIA
DENVER
HOUSTON
LOS ANGELES
MEMPHIS
MIAMI
MINNEAPOLIS
NEW ORLEANS
PHILADELPHIA
PITTSBURGH
SAN FRANCISCO
ST. LOUIS
TORONTO
WASH.

June 1, 1964

*United Copy to
John G. G...
American Foreign Ins...
6/1/64*

Mr. S. B. Honour
General Sales Manager
Diamond Alkali Company
99 Park Avenue
New York, New York 10016

Dear Mr. Honour:

PRODUCTS LIABILITY-BOGOTA, COLOMBIA

We wish to acknowledge Mr. Cecil's letter of May 21st, 1964 together with contents mentioned therein. A copy of this report has been forwarded to the American Foreign Insurance Association together with photo copy of Hazleton Laboratories' report.

We are returning to you at this time the original copy of this report which you obtained from Mr. Gingham. We have also had a copy made for our own file.

Mr. Ingegneri of the American Foreign Insurance Association advises he has received a report from his correspondent which indicates that the results of the government report have been received and there is some indication of a fault in your product. It had been American Foreign's intention to hold this report pending receipt of a translation. We, however, requested that they let us have the original Spanish report and we hope to forward this to you tomorrow.

Yours very truly,

ALEXANDER & ALEXANDER, INC.

C. W. Giles

C. W. GILES,
Assistant Vice President

CWG/mf
Enclosure
cc: Mr. D. M. Purdy

DS 00018059

We would like to suggest that you or your representatives gather information directly from some of the reportedly injured persons so that you are familiar with every detail of the reported applications of the product including the equipment used, safety precautions taken, possible admixture with other chemical compounds, samples of the water used, etc. In view of the results of our laboratory analysis there would appear to be cause to wonder if there is some possibility if the product might not have been contaminated at time of application.

In due time please advise us of the results of your contact with the insurance representative.

Yours very truly,

S. B. Honour
General Sales Manager

SEH:I

cc: J.S. Cort
C.W. Giles - Alexander & Alexander
D. Parry

DS00017896

EXHIBIT

Purdy-6 ID

1/5/84 TL

March 17, 1964

Quimor Ltda.
Aptado Aereo 5013
Bogota, Colombia

Attention: Guillermo Leon R.

Gentlemen:

This refers to your letter of March 2nd, your letter No. 41730 under the subject of "Problems R,4-B/2,4,3-T."

The entire file on this situation has been reviewed with Mr. Savage and with the General Manager of our Agricultural Chemical Division. We have also had the benefits of the comments of Mr. Lox Creamer, who has just come to our offices here in New York.

Frankly, the whole situation is something of a mystery. As you know, samples of the product were examined in our laboratories by gas chromatography. This equipment is accurate down to a very few parts per million. The results show a typical product with no evidence of unusual compounds. In other words, our belief is that production lot No. 62,825 is chemically identical with other production lots shipped to Colombian or elsewhere previously or subsequently.

However, in view of the number of cases of apparent injury, which were reported in the newspaper article you sent to us, we felt that we should put our insurance agents on notice. Accordingly, we are advised that the Colombian representative in Bogota, of "The American Foreign Insurance Association" will contact you in Bogota for additional information.

In the meantime, we have written to you a separate letter in which we agreed to accept return of your remaining inventory, provided that it is received here in original and saleable condition

DS 00017895

EXHIBIT

Purdy-71B

11/5/84 TL

Diamond Alkali Company

OUTER OFFICE CORRESPONDENCE
4274-64

18 March 1964

TS New York

TO Alex Creaner, Jr.

COLOMBIA

SUBJECT "CLOROXONE" problem to the users of 2,4-D and 2,4,5-T products in Colombia.

During my recent visit to Colombia, Quimor Ltda (DACO agents) put me abreast of the reported serious problems resulting to workers who have used Diamond Alkali products which contain 2,4-D and 2,4,5-T acids.

At the time of my visit which was during the last of Feb., there had already been correspondence between Diamond and Quimor discussing problems which arose in the Bucaramanga area. At that time the last bit of correspondence had come from Diamond on the 27th of November 1963. Since that date Quimor reported that there had been even more people and animals affected who had been in contact with the product, and in other areas also.

BUCARAMANGA—Approximately 20 people have been affected—most have been hospitalized for months with very little signs of curing themselves. In some cases the victims have become increasingly worse. Horses used in application of the products were also badly affected, loss of hair, skin lesions, and in one case death. Cattle have also been affected who grazed the treated areas.

Area

Several claims have come in from the Bucaramanga requesting consideration for the hospital, doctor bills, plus assistance for the loss of work time by the workers.

CALLI—late in 1963 a couple of victims were reported in the Cali area, however very little commotion was made about the fact.

MEDELLIN—Recently cases are reported in the Medellin area of Chloroxone with hospitalizations. At this point the government is stepping in by having the Public Health Society investigate the matter. As reported that the Society will eventually take samples of the product with analysis following.

Quimor's business has been jeopardized by the adverse publicity. Farmers in Colombia are frightened of the product and are turning to the competitors. Quimor feels that the product was in the fault after investigating all facts of case. They feel that the product might have come from a bad batch or two. Quimor still has stock of the same shipment and do not want to sell any more of the material.

by Diamond.

The subject material was shipped to Quimor Ltda in Colombia. Upon receiving the material Quimor painted the Diamond drums and placed their own "ALLEX" label.

Alex Creaner, Jr.

DS 00017893

EXHIBIT

Purdy-8ID
1/5/84 TL

INTERNAL CORRESPONDENCE

Diamond Alkali Company

October 31, 1967

TO S. B. Honour - New York

FROM S. S. Savage - Bogota - 10/26/67

SUBJECT ROBLEDO HERMANO

*L.L.C.
this will be
to lower the
cost of
construction*

*... the above company ...
... 70,000 pesos ...
... APFA (insurance group) ...
... Robledo is demanding ...
... 55-gallon drums ...
... Quimor should ...
... not get stuck ...
... we will work out something ...
... that they do not take ...
... a loss.*

Apparently the only claim still pending under the 2,4-D/2,4,5-T debacle is by the above company and amounts to some 70,000 pesos. I believe APFA (insurance group) is attending the claim. However, Robledo is demanding that Quimor take back two (2) 55-gallon drums which they have been holding to prove the material is at fault. As far as I know Quimor can only dump the material. Quimor should not get stuck. I have told them that if they are forced to take back the material we will work out something so that they do not take a loss.

S. S. Savage
S. S. Savage

SSS:jk

cc: E. R. Sarrey

*... you want me to ...
... APFA ...
... meet ...
... 55-gallon drums ...
... claims ...*

DS 00013206

NEW YORK
ATLANTA
BALTIMORE
CHICAGO
CLARKSBURG
LOS ANGELES
MIAMI
MONTREAL
NEWARK
NEW ORLEANS
PHILADELPHIA
PITTSBURGH
SAN FRANCISCO
ST. LOUIS
TORONTO
TULSA

ALEXANDER & ALEXANDER

INCORPORATED

INSURANCE

AVERAGE ADJUSTERS CONSULTING ACTUARIES

225 BROADWAY, NEW YORK, N. Y. 10007

TELEPHONE
WORTH 4-4800

TELETYPE
212 571-8044

CABLE ADDRESS
"ALEXALEY"

10

Handwritten initials and date

March 23rd, 1964

EXHIBIT
Purdy-9 ID
2/5/84 TL

Mr. Lawrence L. Cecil, Jr.
Sales Manager
Agricultural Chemicals
Diamond Alkali Company
99 Park Avenue
New York, New York 10016

Dear Mr. Cecil:

PRODUCTS LIABILITY INSURANCE
BOGOTA, COLUMBIA

In accordance with our telephone conversation, this will confirm that the American Foreign Insurance Association has cabled their representative in Bogota, Columbia on March 19th as follows:

REASSURED DIAMONDALKALI EXPECT CONTACT FROM THEIR
DISTRIBUTOR QUIMOR LTDA STOP ARRANGE TO OBTAIN SAMPLE
LOT NUMBERN62825 STOP BE CERTAIN TO WITNESS TAKING OF
SAMPLE.

They further supplemented this cable with a letter confirming the cable as well as briefly outlining the present situation with the request that the existence of their policy be kept confidential and the assured's identity (Diamond Alkali Company) should remain unknown for the time being.

We understand that you were to have a telephone conversation with your representative in Bogota, Quimor Ltda. and in this conversation request that they contact the American Foreign's representative.

For the file, American Foreign's representative is as follows:

Mr. George W. Arenas
Home Insurance Company
Edificio City Bank
Avenida Jimenez de Quesada
8-89, Piso 8
Bogota, Columbia

Telephone: 420-670

DS 00017888

Mr. Lawrence L. Cecil, Jr.
Sales Manager
Agricultural Chemicals
Page Two

March 23rd, 1964

We would appreciate your keeping the writer advised of any further developments from your end and we will, of course, advise you as soon as we hear from the American Foreign with respect to any report they receive from their representative.

Incidentally, we have forwarded to the American Foreign the warning label of Quimor Ltda. as well as the various newspaper articles and Quimor's letter of March 16th.

Yours very truly,

ALEXANDER & ALEXANDER, INC.



C. W. GILES
Asst. Vice President

CWG/mf

cc: Mr. D. M. Purdy
Insurance Administrator
Diamond Alkali Company

DS 00017889

MAXUS0945140

EXHIBIT
Purdy - 10 ID
2/5/84 TL

F
July 9, 1962

Mr. R. A. Guidi - Newark Plant

Dr. E. L. Chandler

The question of chloro-acne has not been resolved in the consideration of two sizable customers. Bill Champion of Riverdale Chemical says that he gets better formulations using other suppliers' herbicides, and he insists that he has a chloro-acne problem when he uses Diamond esters.

As you will recall, the Baker City Tree personnel were rather severely affected by this dermatological problem, and we have definitely lost them as a customer.

Jim King would like a reply from you, giving your personal convictions as to the possible recurrence of this problem in the future.

E. L. CHANDLER

ELC:jl
cc: R. S. Weiner

C
O
P
Y

Purdy-11 id
1/5/84 TL

DIAMOND ALKALI COMPANY

INTER OFFICE CORRESPONDENCE

5/4/83

TO: L. L. Cecil

FROM: W. J. Hedges

SUBJECT: QUINOR COMPLAINT
(QUINOR'S ORDER No. 1312)CONFIDENTIAL

Larry, as you can see by Bob Linderman's memo of April 26, 1975) this problem just does not involve quality of product as a factor.

(3) This dermatitis problem is a potential hazard to anyone working with such products as the chloro-phenoxy herbicides. This is especially so of 2,4,5-T. It is not unique with Diamond 2,4,5-T but is an inherent danger with 2,4,5-T products.

This entire problem has been investigated and is continuing to be investigated by all major producers of these chemicals. This also entails the study of penta-chlorophenol and trichlorophenol etc. Theories are abundant, as are facts. But unfortunately no one has a hard and fast answer to the problem.

Last year, in fact, I observed a similar case as Quinor describes near Philadelphia. I'm fairly sure we were not obliged to do much locally; however, we did lose the customer. Some competitors will use an out-crop such as this to their advantage by claiming their products are safer.

This is not so. For example I believe Archen has had 3-4 complaints along these lines the past year in the Northwest. Monsanto has had problems in their east Virginia plant and Dow has had this problem on and off in their plants in past years.

The logical question then is just what can be done in this connection? Here are some facts which may be of some value to you.

- (1) Men under 30 are more prone to chloracne than older men.
- (2) People with oily skin and coarse pores are more prone to this dermatitis problem than people with dry skin and fine pores.
- (3) Cleanliness is essential. All spray applicators should wash thoroughly with soap & water following spraying.
- (4) Protective clothing should be worn while spraying.
- (5) If the applicator has the material blown onto him he might do well to stop, wash, and change clothes.
- (6) Frequent clothing changes are desirable.

DS 00017940

Cont.

MEMO: L. L. Cecil

SUBJECT: CUSTOMER COMPLAINT
(CUSTOMER'S ORDER NO. 1312)

CONFIDENTIAL

May 2, 1963

- 2 -

(7) Some people, with all the above in mind, are so much more sensitive anyway.

I hope that this information will be of some value to you. If the people I've copied feel any additional comments or corrections are necessary I'm sure you will be hearing from them.

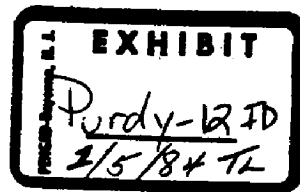
Dick.

R. J. Harrese.

cc: R. A. Guidi
J. O. King
E. L. Chandler

* This problem is more likely to occur when using 2, 4, 5-T than when using 2, 4-D. In fact, some people cannot work with 2, 4, 5-T.

DS00017941



MEMORANDUM

November 6, 1964

CONFIDENTIAL

TO: Messrs. M. E. Everson
A. L. Calloway
L. E. Limpel
S. C. A. McCallan
P. H. Schuldt ✓

SUBJECT: RFP AUC(A)18-064-65-17 - The Development of
More Effective, Rapid-Acting Chemical
Defoliants or Desiccants for the U.S. Army

For your information a Xerox copy of our proposal on the subject RFP is attached. Please note that biographical sketches of the people who would ultimately be involved in work on this contract have been excluded.

D. J. Porter

DJP:dk
Attachment

DS 00022683

COPY

Diamond Alkali Company

GENERAL OFFICES • UNION COMMERCE BUILDING • CLEVELAND, OHIO 44114 • TELEPHONE 621-6100



November 6, 1964

Contracting Officer
U. S. Army
Biological Laboratories
Fort Detrick, Frederick, Maryland 21701

ATTN: Mr. Austin P. Haifleigh

RE: RFP AMC(A)18-064-65-17

Dear Sir:

Transmitted herewith are three copies of our proposal for a one-year study of the effects on biological activity of combining a number of chemical herbicidal compounds and adjuvants, as outlined in your letter of October 9, 1964.

You will note that Diamond Alkali Company proposes to place at your service for this program the talents of the formulation and pesticide development personnel of our Company combined with the skills in greenhouse screening, evaluation of response, and plant research of our project team at Boyce Thompson Institute for Plant Research.

Should you require further elaboration or clarification of any point in your evaluation of this proposal, please do not hesitate to call me.

We look forward to the opportunity of working with you on this most interesting and promising project.

Yours very truly,

DIAMOND ALKALI COMPANY

David J. Porter
Manager, Government Relations

DJP:dk
Encl.

DS 00022684

PROPOSAL

THE DEVELOPMENT OF MORE EFFECTIVE, RAPID-ACTING
CHEMICAL DEFOLIANTS OR DESICCANTS

RFP AMC(A)18-064-65-17

Submitted by

Diamond Alkali Company
300 Union Commerce Building
Cleveland, Ohio 44114

DS 00022685 .

The numbered statements which follow present the information requested in the outline of Enclosure 4:

1. Name: Diamond Alkali Company
2. Incorporated in: Delaware
3. Address: 300 Union Commerce Building
Cleveland, Ohio 44114
4. Location where work will be performed: The work covered by this proposal will be done in our T. R. Evans Research Center located in Concord Township, Lake County, Ohio; at Boyce Thompson Institute for Plant Research, Inc., 1086 North Broadway, Yonkers, New York 10701 (BTI); in test areas and field plots conveniently located with respect to these two laboratory complexes; and at the BTI farm near Stanfordville, New York (Dutchess County).
5. Diamond is a commercial firm; BTI is a non-profit research organization.
- 6a. Contractor's technical representative: Dr. Paul H. Schuldt, Associate Director of Research, T. R. Evans Research Center, P. O. Box 348, Painesville, Ohio 44077, Phone: 216/352-9311.
- 6b. Contractor's contractual and administrative representative: Dr. David J. Porter, Manager, Government Relations, Diamond Alkali Company, 300 Union Commerce Building, Cleveland, Ohio 44114, Phone: 216/MA 1-6100.
7. Term of contract: For maximum efficiency from a biological and climatological point of view, the optimum time to initiate a program of the sort described would be September 15, 1965 (to terminate in September, 1966). This would insure maximum availability of woody plants from nurseries for inclusion in the greenhouse and field testing. Such plant material is very difficult to obtain in mid-winter and is extremely limited as to available species. Since the field trials would in effect essentially terminate the program, it would seem highly desirable to have a maximum amount of prior greenhouse testing; and this timing would provide it.

DS 00022686

Since we understand that the urgency of this program will not permit such a delay, we propose to start, as a next best measure, as soon as possible—i.e., about January 1, 1965. Anytime later than February 1 and sooner than September 1, 1965, would be unsatisfactory.

8. Scope of work to be performed:

- a. We propose to evaluate up to about 400 experimental formulations for their ability to defoliate and/or desiccate woody plants. The evaluations will involve primary and secondary greenhouse testing of the formulations by spraying them onto woody plant species and comparing their activity with that of the standard treatment. The choice of plant species actually to be used will probably be largely dictated by availability; but it is felt that a suitable program would include privet (Ligustrum sp.) and Euonymus sp. using a deciduous variety of one and an evergreen variety of the other.

We propose to obtain biological, chemical and physical data on the herbicides, desiccants, defoliants and adjuvants which will be used alone and in combination with the basic active ingredients of the formulation, a mixture of equal parts, by volume, of the normal butyl esters of 2,4-D and 2,4,5-T. The supplemental active ingredients to be considered will include amino triazole, ammonium thiocyanate, cacodylic acid, Dalapon, 2-(2,4-dichlorophenoxy) propionic acid (2-(2,4-DP), dimethyl sulfoxide (DMSO), 4,6-dinitro-0-sec-butyl phenol (DNBP), Diquat, disodium methylarsonate (DSMA), Endothal, Fenac, Fenuron, Folex, hexachloroacetone (HCA), Paraquat, pentachlorophenol (PCP), Prometone, Silvex, Simazine, S,S,S-tributyl phosphorotrithioate alkanolamine (DCF), Tordon, 2,3,6-trichlorobenzoic acid (2,3,6-TBA), Urox, and other materials and compounds which may have promise. The systems will contain, in addition, various surfactants and other adjuvants.

We propose to establish, for each toxicant, a standard treatment with its basic dosage rate, analogous to an ED₅₀, which will give, with the plant species selected, responses which are neither too lethal to show variations in degree, nor too insignificant to detect. When combinations of toxicants are employed, each will be applied at a rate which is a simple fraction of its basic dosage rate, and, at least for preliminary purposes, these rates will be so selected that the sum of these resulting simple fractions will, for any formulation, be unity. Preparations which out-perform the standard treatment in

DS 00022687

the primary screening will receive secondary greenhouse testing at decreasing gallonages. The criterion of performance will be rapidity of defoliation and/or desiccation. Secondary greenhouse testing will determine which of the preparations merit field trials.

In the field trials, potted woody plants will be placed in the field and sprayed with suitable hand-operated ground equipment. Six species will be used, two of which will be those used in the greenhouse work. Treatments will be replicated four times, and up to four trials can be run, depending on the number of formulations meriting such evaluation. Particularly effective formulations will be evaluated on natural brush. If this program is initiated in January, 1965, the Fall of 1965 will be devoted to follow-up greenhouse testing of the most promising formulations found in the field tests. The purpose of the follow-up testing will be to obtain additional information on the spectrum of activity of the most active preparations, and to continue efforts toward still further improvement of the best formulations.

- b. Assuming the program is authorized in early December, 1964, the first three weeks will be needed to review information available at Fort Detrick, to consult with the Project Officer, and to formulate the Project Plan for accomplishment of the work required and, at BTI, simultaneously to develop and standardize greenhouse screening techniques. This will include procurement, or design and construction, of appropriate application equipment suitable to apply dosages of 3 gallons per acre or less, and development of methods to minimize contamination of greenhouses and surrounding areas by volatilization. Simultaneous with the above will be acquisition, potting, and establishment of the assay plants. Estimated time: 3 to 5 weeks. Greenhouse testing - only primary and secondary screening will be done. As suitable candidate combinations of the basic 2,4-D and 2,4,5-T mixture with other herbicides, desiccants, defoliant and adjuvants are disclosed in the screening tests, laboratory work will be started to develop desired physical characteristics of the combinations. Estimated time: 3 months.

Formulations devised are to be re-tested in greenhouse. If the combination formulations show the desired biological activity, they will be tested on woody plant species in the field.

DS 00022688

Certain species of potted plants for field testing will be started in the greenhouse in late winter or early spring. Field testing will be initiated in late April and will continue through mid-September. Estimated time: 4.5 months. Follow-up greenhouse testing will establish spectrum of activity of the most promising formulations found in the field trials. Estimated time: 3.5 months.

9. It may conceivably be necessary to field test promising compositions on woody growth on some southern Army installation in event the need for such testing arises at a season when no suitable materials are available in the North.
10. Diamond employs more than 500 persons, BTI fewer.
11. Cost Breakdown: In reviewing the information presented in the accompanying Form 633-4, it is important to note a long-standing working relationship between BTI and Diamond. Since 1952 Diamond has maintained a "project" at BTI which has, in effect, amounted to an extension of and an integral part of Diamond's agricultural pesticide research and development team. Charges to Diamond have been, and continue to be, on a cost basis, since BTI is a non-profit research institution. The men on the project at BTI devote all of their time to Diamond's work, have frequent discussions with Diamond personnel for guidance, and are, in effect, managed by the man who will be Diamond's technical representative and project manager on this project.

In view of these considerations, the time, overheads, and other charges originating at BTI are detailed on the attached summary since there is actually no real element of subcontracting involved in the relationship between our two organizations.

Hourly rates are determined from monthly salaries on the basis of 1,928 scheduled hours per year at Diamond, 1,830 scheduled hours per year at BTI. Present salary levels have been adjusted to cover increases which may take effect during calendar 1965.

The 1,606 Diamond and 2,974 BTI working hours, totaling 4,580, are close to the 4,600 suggested in the letter request, and can be used to indicate the relative direct salary costs of our operation, \$4.77 per man hour. The amount, as well as relative distribution of assigned talent, is susceptible to revision to meet your requirements.

Indirect costs at BTI are based on total direct costs, including travel. T. R. Evans Research Center Overhead costs are accumulated on a direct man hour basis.

DS 00022689

COST AND PRICE ANALYSIS - RESEARCH AND DEVELOPMENT CONTRACTS

(This form is to be used in lieu of DD Form 633, as provided under ASPR 1c-206. It will be executed and submitted with proposals in response to "Requests for Proposals," for the procurement of research and development services. If your cost accounting system does not permit analysis of costs as required, contact the purchasing office for further instructions.)

FORM APPROVED
BUDGET BUREAU NO. 22-R204

PURCHASE REQUEST NUMBER
AWC(A)18-064-65-17

NAME AND ADDRESS OF OFFEROR
Diamond Alkali Company
300 Union Commerce Building
Cleveland, Ohio 44114

TITLE OF PROJECT
Development of More Effective, Rapid-Acting Chemical Defoliants or Desiccants

DETAIL DESCRIPTION

1. DIRECT LABOR (Specify)		ESTIMATED HOURS	RATE / HOUR	TOTAL ESTIMATED COST (Dollar)
A. L. Galloway	3 months	482	8.270	3,996
T. L. Curry	2 months	321	5.327	1,710
Technician - Budnar	5 months	803	3.404	2,733
L. E. Limpel	6 months	915	8.133	7,442
Technician	13 1/2 months	2,059	2.896	5,963
TOTAL DIRECT LABOR				21,834
2. BURDEN (Overhead - specify) DEPARTMENT OR COST CENTER		BURDEN RATE	X BASE =	BURDEN (\$)
Indirect Payroll Costs - Diamond		15.2%	8,429	1,281
Overhead - T. P. Evans Research Center		\$4.22/hr	1,606	6,777
Payroll Surcharge - BTI		11.5%	13,368	1,537
Indirect Cost - BTI		37.3%	21,130	9,000
TOTAL BURDEN				18,595
3. DIRECT MATERIAL		EST COST (\$)		
Toxicants		250		
TOTAL MATERIAL				250
4. SPECIAL TESTING (Including field work at Government installations)				
TOTAL SPECIAL TESTING				
5. SPECIAL EQUIPMENT (If direct charge - specify in Exhibit B; reverse)				
6. TRAVEL (If direct charge)				
a. TRANSPORTATION	Diamond			700
b. PER DIEM OR SUBSISTENCE	BTI			900
TOTAL TRAVEL				1,600
7. CONSULTANTS (Identify - purpose - rate)				
TOTAL CONSULTANTS				
8. SUBCONTRACTS (Specify in Exhibit A on reverse)				
9. OTHER DIRECT COSTS (Specify in Exhibit B on reverse - explain royalty costs, if any)				
TOTAL DIRECT COST AND BURDEN				5,775
10. GENERAL AND ADMINISTRATIVE EXPENSE (Rate 4.9 % of item nos. 10)				
TOTAL ESTIMATED COST				53,556
11. FIXED FEE OR PROFIT (State basis for amount in proposal)		7%		
TOTAL ESTIMATED COST AND FIXED FEE OR PROFIT				57,305

DS 00022690

DD FORM 633-4

YES NO PENDING

NAME AND ADDRESS OF GOVERNMENT AGENCY MAKING AUDIT

C. DO YOUR CONTRACTS PROVIDE NEGOTIATED OVERHEAD RATES (ASPR 3-704)? (If yes, show Agency negotiating rates)

(If no Government rates have been established furnish the following information)

DEPARTMENT OR COST CENTER	RATE	BASE	TOTAL INDIRECT EXPENSE POOL	BASE FOR TOTAL
BTI	37.3%	Total Direct \$	\$445,192	\$1,193,843
T. R. Evans Res. Center	\$4.22	Direct Hour	\$1,412,758	334,541 hr

16. EXHIBIT A - SUBCONTRACT INFORMATION (If more space needed, use blank sheets, identifying item number)

NAME AND ADDRESS OF SUBCONTRACTOR(S)	SUBCONTRACTED WORK	SUBCONTRACT	
		TYPE	AMOUNT

17. EXHIBIT B - OTHER DIRECT COSTS (Specify. If more space needed, use blank sheets, identifying item number)

<u>Diamond Direct Charges:</u>		
Photographs and prints	300	
Tel & Tel	150	
Total Diamond Direct		450
<u>BTI Direct Charges:</u>		
Illustration	100	Clerical Service 275
Field Plots	2,500	Tel & Tel 100
Greenhouse	3,650	Expendable Supplies 1,000
Mechanical Shop	700	
Total BTI Direct		8,325
Total		8,775

CERTIFICATE

The labor rates and overhead costs are current and other estimated costs have been determined by generally accepted accounting principles. Bidder represents: (a) that he has, has not, employed or retained any company or person (other than a full-time bona fide employee working solely for the bidder) to solicit or secure his contract, and (b) that he has, has not, paid or agreed to pay to any company or person (other than a full-time bona fide employee working solely for the bidder) any fee, commission, percentage or brokerage fee, contingent upon or resulting from the award of this contract, and agrees to furnish information relating to (a) and (b) above, as requested by Contracting Officer. (For interpretation of the representation, including the term "bona fide employee," see Code of Federal Regulations, Title 44, Part 150.)

Number of contractor employees Over 500 Under 500

State incorporated in Delaware

DATE
Nov 5, 1964

SIGNATURE AND TITLE OF AUTHORIZED REPRESENTATIVE OF CONTRACTOR
H. E. Everton
H. E. Everton, Director of Research

DS 00022691

No charge has been shown for a possible field test in Florida or other southern location. If such a test should prove desirable, at your discretion, appropriate travel cost adjustments will be required.

We have set our Fixed Fee at 7% of Total Estimated Cost in recognition of several factors. We believe this quantity is commensurate, before any other consideration, with the value to the Army of the services which will be rendered, especially since these will draw extensively upon our proprietary background of information and experience closely related to the subject of this project. It further represents reasonable compensation to Diamond for the use of the capital and organizational costs which have provided a working and productive research organization. And finally, it represents token restitution of the loss of future income to the Company resulting from the diversion of technical and managerial people from their normal objectives of developing profitable new products and processes.

12. Payments are desired monthly.
13. The proposed contract does not duplicate in whole or in part any similar research and/or development type contract between Diamond and any other government agency. Boyce Thompson Institute is a sub-contractor to Ethyl Corp. which in turn is a contractor to the United States Army on a project for screening of new compounds as possible jungle defoliant.
14. See accompanying Form 633-4.
15. No financial assistance required.
16. Not applicable.
17. Not applicable.
18. Diamond represents that it has participated in a previous subcontract subject to either the non-discrimination in employment clause herein or the clause originally contained in Section 301 of Executive Order 10925, that it has filed all required compliance reports, and that representations indicating submission of required compliance reports, signed by proposed subcontractors will be obtained prior to subcontract awards. Diamond has participated in a previous contract and has filed required compliance reports; in addition, Diamond is signatory to the "Plan for Progress".

DS 00022692

Supplementary information requested in Mr. Haifleigh's letter of October 9 is presented below following the indicated headings.

Contract Team: The scientific people who will be assigned to the Project Team are as follows:

Dr. Paul H. Schuldt, Associate Director of Research-Agricultural & Biological Chemicals Section, will personally assume the responsibility for the technical management of this project and expects to devote approximately 7% of his time to this assignment. Charges for his services are not detailed in the attached Form 633-4 since he comprises a portion of our Research Department overhead.

Mr. A. L. Galloway, Group Leader-Agricultural & Biological Chemicals Section, will be actively engaged in the formulation aspects of the program and will direct the supporting and complementary formulating work of T. L. Curry, Research Chemist, and a technician. During the year Mr. Galloway expects to spend 25% of his time on this project; T. L. Curry will spend about one-sixth and a technician will spend five months.

At BTI, Dr. L. E. Limpel, Program Director Biological Chemicals, will be actively engaged in the program of primary and secondary screening and field testing, and in the supervision of BTI technicians assigned to the project. He expects to devote half of his time during 1965 to this project. An offer has been made to an experienced Plant Physiologist who may become available to this project at BTI during its early phases. It may prove advantageous to utilize his services to replace to some extent the time presently scheduled to be devoted by Dr. Limpel.

Biographical sketches of the men named above are appended to this proposal.

Facilities: In the T. R. Evans Research Center at Diamond Alkali Company a separate, well-equipped laboratory for herbicide formulation will be utilized. This laboratory, consisting of one standard 12-ft x 24-ft module, is adequately supplied with benches, hoods, and utilities. In addition to the laboratory glassware are instruments, shakers, stirrers, emulsion viewers, flash point, viscosity, specific gravity, surface tension, boiling point, vapor pressure, and particle size instruments are available. Both laboratory and field plot spray equipment are on hand. The laboratory to be employed in this program is located in a building containing fifty other laboratories equipped with a wide range of specialized apparatus and instruments which can be made available as required to this project.

DS 00022693

A well-staffed analytical laboratory specializing in various pesticide determinations and equipment with the latest instrumentation is available for any analytical work required. These facilities are further augmented by an extensive research library containing book, magazine, patent, photostatic, and translation collections, and serviced by a full-time professional staff of three.

At BTI adequate greenhouse facilities and personnel are available. Stock plants for testing will be grown in one greenhouse while treated plants will be isolated in another greenhouse. This will be excellent because of high volatility and activity of the basic ingredient of these formulations. In addition to possible similar problems with some of the proposed additives, it is anticipated that special equipment may have to be developed and constructed to apply the small quantities to be sprayed. Experienced personnel are available for this type of work. The BTI farm in Dutchess County, New York, is large enough (460 acres) to avoid hazards of damage from drift and volatility to neighbors or nearby tests of a different nature and represents an attractive site for field evaluation studies. The Diamond Research Center is located on a tract of over 600 acres much of which is brush covered and which may afford an opportunity for some field tests on typical established material. A test farm of twenty acres now under development on this site may afford a location for additional checks and field tests.

BTI has a long history of working with herbicides, and has on its staff highly qualified scientists, who have specialized in this general area, thus affording an opportunity to the people working on this project to consult with recognized authorities in the herbicide field. It is entirely possible that new techniques of screening and evaluation may be evolved to meet the special requirements of this program.

Formulation experience: Mr. Galloway has been directly engaged in formulation work since 1926. With the Black Leaf organization his duties included the development of new, improved, and revised formulations of a wide range of pesticides for commercial and home-owner use, and the supervision of the organization doing this work. Herbicidal materials for which he developed a variety of formulations included maleic hydrazide, 2,4-D and 2,4,5-T amine salts and esters, chloro IPC, MCP and TCP.

Since becoming a member of Diamond's organization, he has developed a commercial wettable powder formulation for DACTHAL[®] herbicide, and several formulations for granulars using such diverse carriers as fertilizers, corncobs and vermiculite.

DS 00022694

Two entirely new concepts of granular formulation and production have been developed, in which the toxicant is incorporated in the granule at the time of its formation. Since impregnation is not involved, toxicant solubility and solvent recovery are of no concern. Two entirely different base systems have been developed, giving control of toxicant release rate (minutes to days). These developments are covered by an issued and a pending patent.

Mr. Galloway has continued for the past ten years in a general program of laboratory formulation of experimental herbicides and other pesticides as well as the evaluation of the performance of defoliant, desiccant, and herbicides in greenhouse and field, and working with co-operators who have evaluated them.

Mr. Curry brings to this project fourteen years of pesticidal and fertilizer formulation and experience.

Drs. Schuldt and Limpel have each been active in the area of pesticide screening and development, with a considerable background of experience in the laboratory formulation of herbicides, their testing, and the evaluation of field tests of the formulations in plots all over the United States.

Reporting Costs: Included in our estimate of the cost of this program are costs for preparing the following reports:

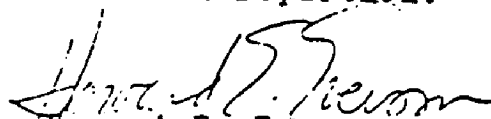
- 1 Project plan
- 12 Monthly expenditure reports
- 6 Bimonthly informal letter reports
- 1 Semiannual progress report
- 1 Final technical report

We anticipate that these reports will require the equivalent of one man month in preparation plus BTI secretarial charges of \$250, and miscellaneous costs, including prints and postage, of perhaps as much as \$500.

Insurance: Diamond's present insurance program meets the specified requirements.

Respectfully submitted,

DIAMOND ALKALI COMPANY
Research Department


Howard E. Everson
Director of Research

November 5, 1964

DS 00022695

EXHIBIT
 Purdy-13 ID
 1/5/84 TL

OFFICE CORRESPONDENCE

DATE October 4, 1968

TO: H. Hochberg

FROM

Mr. K. F. Wilcoxon

TASK FORCE MEETING
 RE: WELDON SPRINGS

I attended a meeting today at Monsanto's headquarters in St. Louis with other representatives of the 2,4-D and 2,4,5-T industry. The purpose and agenda are as outlined on the attached. Present were:

- John Connor - Council for NACA but in "free lance" attendance
- Bill Rogers - Legal Staff - Monsanto
- Robert Pomer - General Manager - Ag. Div. - Monsanto
- Doug Huff - Monsanto
- Stu E. Daniels - Monsanto
- "Red" Zorch - Monsanto
- Ken Jivens - Hercules
- H. H. Howard - Thompson-Hayward
- Dan Miller - Hooker
- Stan ? - Hooker

Invited but not present - Dore Chem and Chipman, both of whom however submitted production capacities through Thompson-Hayward's Mr. H. H. Howard.

Uninvited and not present - Thompson Chemical and Hoffman-Taff.

Based upon present industry capacity to produce both D and T, as opposed to present purchase patterns of the Military, it was concluded we have a case to present to the Defense and Commerce Departments. Thompson-Hayward's Mr. Howard agreed to chair this endeavor, with John Connor being appointed as the group's Council. Expenses are anticipated to be minimal for the foreseeable future and will undoubtedly be shared by the participating 6 member companies.

At best we hope to prevent completion of the Weldon Springs plant or at least confine its production to only that amount of T or D needed by the Government, but unavailable from industry. Details will be submitted to you as they are available.

Of general interest are the following annual production capacities as secretly submitted to Mr. Connor today. He totaled them and our discussion then centered about the totals only:

	<u>2,4-D</u>	<u>2,4,5-T</u>
Total capacity (lbs.) of 6 participating members	95.2MM	32.2MM
The Group's estimate for non-participating companies' capacities were:		
	DS 00017180	
Thompson Chemical		1.3
Hoffman-Taff		2.0
Woodbury Chemical (under construction)	5.	
TOTALS	<u>100.2MM</u>	<u>35.5MM</u>

M. Hochberg
October 4, 1968
Page 2

A bit of upside-down reading gave the following breakdown of the participating members' capacities. These were coded but are exact. I have attached Company names which may or may not be, with the exception of Diamond, associated correctly with the capacity number.

<u>2,4-D</u>	<u>2,4,5-T</u>
5.0 MM - Hercules	5.5MM - Hercules
12.0 MM - Diamond	3.0MM - Diamond
40.0 MM - Dow	12.0MM - Dow
24.0 MM - Monsanto	7.2MM - Monsanto
14.0 MM - Chipman	4.5MM - T-Hayward
TOTALS 95.0 MM	32.2 MM

T-Hayward acknowledged they produced no 2,4-D as did Chipman for 2,4,5-T.

This group's best estimates for total annual domestic requirements of D and T were:

2,4-D - 55 MM lbs.
2,4,5-T - 18 MM lbs.

Hooker acknowledged they now have TCB capacity to supply all producers, on the basis of these estimates, except for Dow (who produce their own) and T-Hayward (who are presently being supplied TCP by Dow.)

M. F. WILKERSON

MPW/la

cc: J. A. Wilson
R. A. Guidi
C. L. Troph
J. O. King

P.J.

The following position statement has been drawn up by Mr. Connor and is being submitted October 7 to Miss Jane Lewis of the Commerce Department:

SUMMARY OF POSITION

The group of phenoxy herbicide producers at their meeting on October 4, 1968 after estimating the capacity of the domestic industry to produce 2,4-D and 2,4,5-T; after estimating as accurately as possible the domestic civilian consumption of these products and the military requirement based upon the stated needs and current delivery schedules, concluded that there is sufficient domestic production of 2,4-D to fully meet both the civilian and military requirements, and that the production of 2,4,5-T would meet a substantial part of both the civilian and military need. It was concluded that the questions which prompted the Government

DS 00017181

M. Hochberg
October 4, 1968
Page 3

Officials to make the decision to construct and place in operation a plant at Walden Springs to produce both 2,4-D and 2,4,5-T have changed, and that the industry should request an opportunity to explore these data with the Government.

It was further concluded that even if it is assumed that the military will require the full amount of its needs as heretofore estimated, that there would be a very substantial over-production of both 2,4-D and 2,4,5-T if the Walden Springs plant is operated at full capacity. This raised questions of serious import to the domestic industry which thoroughly explored with the Government.

///
M. F. WILKERSON

DS 00017182

St Louis, Mo.

AGENDA

Friday, October 4, 1968, 9:00 a.m.

A-303

- I. Introduction.
- II. Discussion.
 - A. Purpose - To discuss possible legislative means to prevent unauthorized activity of Department of Defense.
 - B. Review activity of DOD in area of 2,4,5-T.
 - C. Discuss whether proposed new plant is in public interest.
 1. Received information on past:
 - a. Capacity.
 - b. Products.
 - c. Sales.
 - d. Consumption.
- III. Discuss possible courses of action.
- IV. Divide needed preparation.
- V. Establish time and place for next meeting.

SDD:jh
9/30/68

DS 00017183

EXHIBIT
Purdy-14 ID
1/5/84 TL

March 8, 1965

Quinor, Ltda.
Apartado Aereo 5013
Bogota, Colombia

Attention: Mr. Guillermo Leon, R., Manager

Subject: Weedkiller Claim

Gentlemen:

We confirm our cable of today's date, as follows:

"REPLY 24749 AIRMAILING CHECK TODAY US\$1612 STOP PLEASE
SEND FULL QUITE CLAIM IN TRIPPLICATE STOP AFIA APPROVES
SETTLEMENT LONDONO PESOS 41052 SUBJECT TO RELEASE HOLDING
QUINOR HARMLESS FOR ANY FUTURE CLAIMS LONDONO EMPLOYEES
STOP WRITING DIAMALKALI"

Our check in the amount of \$1,611.90 is enclosed in full settlement of your claim, as per statement attached to your letter of February 12th. As stated in our cable above, we need a release from you in triplicate, which releases us from all further responsibility or claim for those specific items which you listed in your statement. We need this release from you in order that we may obtain compensation from AFIA for the amount of the enclosed check.

We also are pleased to advise that AFIA agrees to the settlement with Dr. Londono. Their approval of the amount of the claim is subject to your obtaining from Dr. Londono a written release, which not only names the employees covered by the sum of \$1,052 pesos, but also agrees to hold you harmless from any future claims brought by Dr. Londono's employees.

We shall need triplicate copies of this release and upon receipt of same we will reimburse you with the dollar equivalent of the Colombian pesos and will obtain ourselves compensation from AFIA.

DS 00018145

-2-

A Xerox copy of letter of March 5th from our insurance agents is attached for your further interest.

Very truly yours,

S. B. Honour
General Sales Manager

SBH:I

attachs.

cc: Mr. Warren Giles - AAA
D.M. Purdy

DS 00018146

EXHIBIT
Purdy-15 ID
1/5/84 TV

QUIZOR LTD., Products for Agriculture and Cattle Breeding

Bogota, November 19, 1965
Air Mail P.O. Box 5013

No. 47323

Messrs.
AFIA COLOMBIANA, LIMITED.
CITY

Att.: Dr. Alberto Copete, Manager

Gentlemen:

Re: Claim of Quizer Limitada

In accordance with what was stated verbally by the undersigned to Mr. S. B. Diamond, an official of Diamond, during his visit in New York during the month of September, and to Dr. Copete, Manager of AFIA Colombiana, Quizer Limitada is obliged to file a claim for losses sustained, both material and consequential, in connection with distribution and sale to our clients of 2,4,5-T butyl ester weed killer, manufactured by Diamond and distributed in Colombia under the name of "Elix 2-3", registered trade mark of Quizer; this product caused among the workers of our clients who applied it serious illness called cholera and some of them still suffer from this sickness two years later, not having completely recovered.

For better orientation on your part in the presentation of claim, we are giving you below the chronological description of what happened together with the reasons for Quizer in filing of this claim.

- 1) On April 1, 1963, we received first information from our office in Bucaramanga concerning the illness of one of the workers of a client of that office resulting from application of Elix 2-3. We informed Diamond of this by cable and on April 9, 1963 we confirmed the information by letter; we asked Diamond to give us instructions as to how to handle this case and others that may come up in the future.
- 2) In the course of the year 1963 we informed Diamond, in accordance with correspondence which is in our files, of each of the nine cases which developed. Furthermore, Messrs. J. Martin Bernal and John R. Bingham reported these facts personally to Diamond in the course of visits which they made at the offices of Diamond in New York.
- 3) To our written and verbal information, Diamond replied always that this was a case of improper use of product because the analysis by Diamond of samples which we sent in due time, did not show any difference with the product which Diamond had been manufacturing before.
- 4) In view of the fact that the cases of illness of workers of our clients continued to occur, in spite of precise instructions on the use of product given to the clients as received from Diamond, we suspended sales and arranged for a toxicological analysis by Hazleton Laboratories of Falls Church, Virginia, United States;

(continued)

DS 00018235

the result of analysis demonstrated that the product was toxic and caused chloracne among the workers who applied it; likewise, it was affecting animals which were occasionally used in fumigating operations.

- 5) The cases of chloracne became generalised in the areas served by our offices in Bucaramanga, Medellin and Cartagena and as a consequence of this condition, the health authorities of the Department of Antioquia ordered an investigation of this matter and started a publicity spread in the press, both local and national. At the request of these authorities, the Ministry of Public Health started an investigation of its own and the officials of this Ministry visited us on many occasions. In plain justice, we believe that we managed this investigation well and with good luck in the manner in which the Ministry was informed, because the Government did not ultimately hold liable for the situation neither the manufacturers nor Quimor in its capacity of distributors.
- 6) The consequence of the above was that the market for Kilex 2-3 was practically paralyzed in the entire country and for this reason we requested Diamond to give us the authorization to return the stock of this product to the United States; this was accepted by Diamond, together with the expenses arising from the return. The return was completed during the month of June 1964.
- 7) By that time, the following cases of workers affected by chloracne resulting from Kilex 2-3 were reported:

Bucaramanga Office:

25 workers ill, with the following clients: Alfonso Silva Silva, Pedro Gomez A., Alberto Porraz, Daniel Coarazon, Robledo Brothers, Rafael Parra, Alfonso Mantilla and Jorge Jaramillo U.

Medellin Office:

48 workers ill, the principal claimant being Dr Gilberto Londono.

Cartagena Office:

5 workers ill, the principal claimant being Mr Cesar Frieri.

- 8) Because of effort made by the officials of Quimor, particularly by General Manager and Managers of Offices in Bucaramanga, Medellin and Cartagena, with collaboration given in earnest by Attorney José Yelaz Peraz, who made several trips to various areas and, later, because of efforts on the part of Dr Alberto Copete, Manager of APIA Colombiana, it was possible to achieve satisfactory settlements with various claimants, with the exception of Robledo Brothers, Rafael Parra and Cesar Frieri, who up to this date have not complied with the requirements imposed by APIA for consideration of their claims, such as - among others - proof of expenses incurred by them.
- 9) The greatest success in our handling, assisted by the Manager of APIA, was obtained by Medellin Office in settling the case of Dr Londono, who tackled the task of discouraging possible claimants, brought around to such attitude by our Manager in Medellin.

(continued)

- 10) It was also the Medellin manager who by means of innumerable interviews with health authorities of Antioquia, especially with the Antioquia Public Health Society, managed that this entity and others abandoned their intention of imposing liability on Quinor or on manufacturers of the product and forgot the subject.
- 11) During the year 1964 our sales of Kilex 2-3 were zero and the sales of other weed killers called Kilex were reduced by approximately one half in comparison with 1962, when sales were 24,186 gallons.
- 12) Our sales of Kilex 2-3 in 1962 were 17,500 gallons for an amount of \$962,500.00.
- 13) Our forecast for sales in 1963, taking into account the normal increase of the market, was 21,000 gallons, for a total of \$1,155,000.00. The problem of Kilex 2-3 started in April and it practically closed the market; at that time, our sales were only 7,516 gallons for a total of \$413,380; this means that because of this problem, we failed to sell 13,484 gallons for a total of \$741,620.00.
- 14) For the year 1964, natural market for the product should have increased to 29,000 gallons for a total of \$1,375,000.00. As it mentioned already, sales of the product were zero.
- 15) Starting with January of this year, we decided to change the name Kilex 2-3 to "Weed Killer for Cattle Ranch", supplied locally by Dow Colombiana; its introduction was difficult and slow.
- 16) Taking sales in 1963 as basis, we lost the market of 20,000 gallons annually, without taking into account the logical increase of the market. We are calculating that about 5 years will be required to regain the market.
- | | |
|---|----------------------|
| - If we take into account that in 1963 | 13,484 gallons |
| we failed to sell | 20,000 |
| In 1964 | 15,000 |
| In 1965 | 10,000 |
| In 1966 | 5,000 |
| In 1967 | 0-0 |
| and in 1968 | 53,484 gallons which |
| we have a total of | |
| we failed to sell until recovery of the market with the new name. | |
- Without taking into consideration the increase of price which the product incurred necessarily and will sustain in the future and taking into account the rate of exchange of 110 for one dollar which was applicable when the problem started, we have lost profits at the rate of \$3.00 per gallon, or \$191,452, the equivalent in dollars being \$19,045.20.
- 17) If we add to the above the loss resulting from reduction of sales which by reflex applied to Kilex products, which was \$45,000 or US\$4,500, the figure indicated in the preceding item becomes US\$23,545.20.
- 18) Quinor Limitada, the company constituted in 1947, developed intense

(continued)

effort on the national market of products for agriculture and because of its serious attitude, organization, service and quality of products, it established a magnificent reputation among farmers and until April 1965 there has never been any claim in connection with the quality of its products or with the attitude of the firm. Suddenly, in connection with toxicity of Kilex 2-3, supplied by Diamond, the quality of its products and the reputation of firm was placed in questionable light on the national market because the firm could not in its own name face the claims or the liability which the health authorities wanted to impose upon it.

Quite naturally, this mistrust reflected on all the products of our Company but, naturally, the most affected were various weed killers with the name Kilex; there was resulting reduction of our sales, which we are able to determine only with reference to weed killers.

- 19) In addition to profits missed by reason of absence or reduction of sales of Kilex, it is necessary to take into account the following factors, which must be evaluated in connection with claim against Diamond:
 - a) Time of General Manager spent on each of the claims submitted by the clients and in giving attention to the investigation conducted by health authorities.
 - b) Time of Managers of our offices of Bucaramanga, Medellin and Cartagena in giving attention to claims filed by their clients and to attempts at improving the reputation which developed in respective areas in connection with this problem.
 - c) Time of our legal consultants in the study and settlement of claims.
 - d) Time of our agronomists and salesmen in attempts to divert the effects produced in the minds of farmers and to achieve recovery of the market lost for Kilex 2-3 and reduced for other Kilex products.
 - e) Injury to good will for Quimor arising from the failure of commercial mark, reduction of industrial prestige and, generally, from collapse of good reputation which Quimor has always enjoyed. In fact, these matters, as well as other immaterial, intangible factors and, generally, all other elements constituting good will earned over a long period of time, have been without any doubt and seriously injured by the problem of Kilex; apart from the fact that clients of Quimor in agriculture have been reduced by reason of lack of confidence, the Agricultural and Health Authorities of the country have established a ban on the products distributed by Quimor, if it can be called so, doubling their vigilance over such products. Quite apart from the advantage taken by the competitors of the fall of prestige of Quimor, the loss was increased by their notorious spread of news on this problem. This commercial discredit precisely, is the largest item on which Quimor must insist as its greatest prejudice in this case. We consider reasonably that prejudice sustained by reason of circumstances mentioned in this section, might be compensated by means of payment to us of the sum of US\$25,000.00.

DS 00018238

Consequently, claim is established as follows:

Reduction of sales of Kilex 2-3	US\$19,045.20
Reduction of sales of other weed killers	4,500.00
Injury to good will	25,000.00
Total	<u>US\$48,545.20</u>

In the injury to good will we are including the value of time spent by the officials of Quisor in settlement and adjustment of various problems which were presented by the affected clients, clients in general and the Health and Agricultural Authorities.

In order that you may confirm the affirmations made above, we are placing at your disposal our accounting books and all statistics pertaining to the matter. You may also interview various officials of the Company who intervened and continue to intervene in the matter, in order to verify every one of the affirmations made herein, if you consider it to be necessary.

Thanking you for the attention which will be given to our request and awaiting your prompt decision, we remain,

Yours truly,

(s) Guillermo Leon R.
Manager

cc: Diamond Alkali Inter-American Corp.
Doctor Humberto Perez Restrepo
Files

SES.

DS 00018239

EXHIBIT
Purdy-16 ID
1/5/84 TL

April 6, 1966

Mr. J. O. King

Mr. J. C. Kelly

Dow Chemical Co.

50

COPY

On March 21, we directed a sample of our Technical 2,4,5-T Acid to subject account. In talking with Ken Hanson on April 4, he advised that they would not be in a market for our material. Apparently, they feel that our material could conceivably re-create a chlor-acne problem at Midland and, as such, would not entertain the purchase of our present production.

J. C. KELLY

JCK/la

cc. Mr. F. B. Kennedy - Newark
Mr. R. A. Guidi

[Handwritten notes and signatures]
Our Tech. Dept. will be
about 100,000 lbs. current
a ...
...
S/G

DS 00012690

EXHIBIT
Purdy-17B
1/5/84 TL

COPY

October 21, 1964

Chemical Bank New York Trust Company
International Division
80 Pine Street
New York, New York

Re: Your CC 304449 - Our Draft A-8449-573
for \$10,614.10 Draw on Quimor Ltda. Quimor, Colombia

Gentlemen:

Further to our letter of September 23, 1964, we are pleased to give you new
our instructions concerning captioned collection. We instruct you herewith
as follows:

The draft now calls for \$10,614.10. Due to returned material, the draft
is to be reduced by \$6,043.60 which will leave a balance of \$4,570.50. This
balance of the \$4,570.50 is due immediately, and should be paid as soon as
possible. Kindly convey this instruction to your correspondent bank.

Your cooperation is very much appreciated

Very truly yours,

E. Kriemke
Agricultural Chemicals

RM:msf

cc: Leon Chang
Morris Abe

Please issue a credit memorandum to Quimor Ltda. covering 1,000 gallons of
MI BUTYL ESTER of 2, 4-D/R, 4, 5-T Acids at \$4.29 per gallon and 480 gallons
of the same product at \$4.15 per gallon. The total of the credit memo will
amount to \$6,043.60. Additionally against credit memorandum No. 75-735 for
\$1,647.65, you are to issue a debit memorandum covering over price of 25
cents on 1,000 gallons and 30 cents per gallon on 480 gallons which will
total \$759.60.

77. ak

DS 00018205

EXHIBIT
Purdy-18 ID
2/5/84 JL

JACOB BLUMBERG, M. D.
80 HALL STREET
LIVINGSTON 11, NEW JERSEY

EX-100

May 20, 1963.

Acids-1 Id
10-34-83
HSD

Att. Mr. Guidi,
Diamond Alkali Co.,
18 Lister Avenue,
Newark, N.J.

Dear Mr. Guidi:

This is a report of some of our more important findings to date on two separate phases of investigation both of the chloracne and of the concomitant involvement of some of the functions of the liver. Originally, as you may recall, shortly after our suspicions that liver damage might be present, four men were picked for urine analysis between January 7th and January 9th, 1963. [redacted] was selected to serve as a control, since his contact with the chemicals that are possibly responsible for the change has always been minimal. All of these men showed a well concentrating urine of normal color, except that the color was somewhat dark in [redacted] and [redacted]. A trace of albumin was found in [redacted] and a very marked trace in [redacted]. Traces of albumin are not too abnormal and actually I paid very little attention to these findings. Interestingly enough, all the men showed traces of bile pigments in the urine, including biliverdin and bilirubin. The presence of indican in three out of the four was surprising indeed since indican usually appears in the urine only in cases of severe constipation and/or intestinal obstruction. In the absence of constipation or intestinal obstruction one must seek some abnormality of amino acid metabolism in the liver as a cause for the appearance of this chemical in the urine.

Among that first group, [redacted] showed a 2+ uroporphyrin and a 1+ uroporphyrin. Each one of the urines showed at least a trace of trichloroacetic acid. This was attributed to contaminated glassware. However, it must be borne in mind that certain chlorinated hydrocarbons do tend to be metabolized in the liver and the product of metabolism is often trichloroacetic acid. A second set was checked on the same men, with glassware from the laboratory. On that date, 2/7/63, [redacted] was not available. The picture was essentially the same. A 2+ indican was found in [redacted] and in [redacted]. There was no trichloroacetic acid found in any of the cases.

On 4/17/63 [redacted], who in the meantime had come up with an overt porphyria cutanea tarda of the acquired type and [redacted], who was obviously the most

DS00019506

pigmented and the worst of the chloracne, were admitted to Newark Beth Israel Hospital for medical work-up including liver biopsy. It was understood at that time that as soon as [redacted] had been worked up, his hospitalization would be changed to Blue Cross, so that he might have his bothersome hemorrhoids removed. Liver biopsy was performed on both, and there was a 4+ fluorescence of the liver fragment in [redacted] and a 1+ fluorescence in [redacted]. Both men had complete urinalysis done by the Brady Laboratories on 4/18/63 and again on 4/24/63. At this time, it was found that [redacted] urine was the red color characteristic of porphyria and that [redacted] did show a red urine on the first occasion but not on the second. Again traces of bile were found in the four urine specimens. Indican was found to be normal in [redacted] and above 3+ in [redacted]. On the second of [redacted] urine tests dated 4/24/63, the indican was 2+. This, of course, may be a simple laboratory difference or it may indicate that he was improving out of the plant environment.

In the meantime, according to the advice of Dr. Donald Birmingham of the U.S. Public Health Service, we began to run a urine profile on all the men. In the first set, which included the 25 or 26 names, apparently the laboratory was confused about [redacted] so that 26 names appear, although I feel that [redacted] is one individual and not two as indicated by Brady. Of this number, [redacted] showed the presence of indican in the urine. There was a marked trace of bile in the urine of [redacted], a slight trace in [redacted] and [redacted], a trace in [redacted], a marked trace in [redacted], a trace in [redacted], a faint trace in [redacted], and [redacted], a trace in [redacted], a marked trace in [redacted], a trace in [redacted], and [redacted]. Indican appeared in the urines of [redacted] and [redacted], who I understand is a very recent employee. Porphyrin appeared in addition to the ones listed above in the urines of [redacted] and [redacted].

Certainly there is enough evidence here to indicate that there is some liver abnormality present in a considerable group of people. Those showing porphyrins alone, at one time or another, include [redacted], the two men who were hospitalized, and the others listed above. Certainly the presence of uroporphyrins in the urine is never found normally and this indicates that we do have a rather serious problem on our hands. Certainly before we can go about correcting it, it is my feeling, in which Dr. Birmingham concurs, that the entire population at risk, have the urine profile. He also feels, as I do, that some of the worst cases, particularly [redacted] and [redacted], be hospitalized as quickly as possible for the same procedures that were done on [redacted] and [redacted].

I might add that after two consultations of several hours each with Dr. Birmingham, it is his feeling that the old building is probably the source of most of our troubles and that the situation should improve greatly once that situation is corrected.

DS00019507

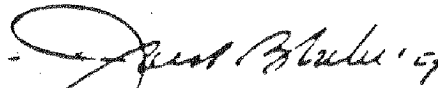
Diamond

5/20/63

I must tell you that for the good of the plant, for the good of the men, this investigation must be carried out to a sensible conclusion. If necessary I am willing to meet with Dr. McBurney and discuss this problem with him in more detail.

If there is any further information which I can give you, please feel free to call on me. I looked for you on Thursday of last week; I understand that you were tied up, but I shall be in next Thursday and hope for an opportunity to talk to you then.

Very truly yours,


JACOB ELIEBERG, M.D.

JB:kxc
enc 2

DS00019500