March 1, 1933

Mr. A. E. Mittnacht
Ethyl Gasoline Corporation
Chrysler Building
New York City
New York

Dear Mr. Mittnacht:

I am returni[redacted]ith your Mr. Boudreau's letter concerning Mr. [redacted] together with a letter which I have written [redacted] I enclose also the letter from the Travelers Insurance Company concerning the same case together with my reply to Mr. F. H. Race. I will send on any further information which comes to me in regard to this case.

Very truly yours,

RAK:IS

March 15, 1933

Dr. D. W. Johnson
52 Greenridge Avenue
White Plains, N.Y.

Dear Doctor Johnson:

Allow me to thank you for your letter of March 9th and for the interesting history of your case which you sent. I am returning this history to you herewith.

Your case has certain characteristics similar to a case which we have had under observation here. The urticarial condition suggests to me that your patient has a very definite sensitivity to something in the gasoline. I should be inclined to believe that it is some material in the gasoline base rather than in the ingredients of Ethyl Fluid, not only for the reasons which I outlined in my former letter but also because no cases of dermatitis have been seen among several hundred men who have been handling the materials that enter into the make-up of Ethyl Fluid.

By "cracked" gasoline I mean those gasolines which are produced by "cracking" processes in the refinery. "Cracked" gasoline is produced by subjecting petroleum to fairly high pressures or high temperatures, or to both under suitable conditions. When this is done, the petroleum yields materials within the boiling point range of gasoline and these are used to increase the anti-knock properties of the gasoline base itself. Some of these materials are very unstable and on standing they polymerize to form gum like substances. Some of these products we believe are the materials which are responsible for sensitizing reactions seen in a limited number of people.

I do not believe you are correct in concluding that there have been many more such cases. We have seen a number of cases of this sort and we have received such complaints as have come to the attention of gasoline handlers from all parts of the country. Up to the present, I do not believe there have been more than fifty such cases of skin manifestations of all types, and only a few of them have been of the type you describe. Most of them have been associated with infectious processes or parasitic infestations of the tinea type.

Again allow me to thank you for your courtesy, and may I say further that I believe you are somewhat fortunate in having had such a quick response to your treatment. I am taking the liberty of making a copy of your report in order to complete our records on such cases as have come either directly or indirectly to our attention. I trust that this will meet with your approval.

Very truly yours,

RAK:IS

C O P Y

DERMATITIS FROM ETHYL GASOLINE

The patient was a man aged 30, married, with no children. The past history was essentially negative excepting that which concerned his present illness. Three days before I say him he developed an urticarial eruption involving the entire body with edema of the lips, eyelids, hands and feet. There were pains in the joints, headache, chills and nausea with a slight rise in temperature. The patient was in contact with ethyl gasoline which he was testing, about six hours before the eruption developed. He complained of considerable itching in the erupted areas. The first examination revealed a generalized eruption, urticarial in nature. Some of the wheals were about the size of a half dollar, others varied in size from two to three cms. in diameter. They were more pronounced on the arms, forearms and back. Interspersed between these wheals was an erythematous eruption circinate in type. A detailed history revealed the following: He worked in 1924 at Deep Water N.J. as a tester and research worker in lead tetra-ethyl. After one year of this work he began to have slight joint pains, loss of appetite, constipation and loss of weight. He was examined at this time but the results of the examination were not made known to him. No eruption had as yet developed but because of his health he gave up his position. He was transferred to the millwright department where he was employed for six months and again discontinued working because of similar symptoms. For a time he was employed as a real estate operator. He felt much better in this occupation but for financial reasons obtained a position as automobile mechanic.

This was in 1925-26. He then had about ten recurrences of the eruption. He noticed that handling carburetors and gasoline caused his skin to itch. He discontinued this work and obtained employment repairing metal and wood on cars. During this time there were no further outbreaks on his skin. In 1929 he purchased a gasoline service station. There was no eruption of the skin while so engaged. No ethyl gasoline was sold by him and no

repair work was done. The patient then went south and after a few months returned north. At this time a repair job was done on his friends car who used ethyl gasoline and he had another acute outbreak of his skin condition. Employment was then obtained with an asbestos corporation doing insulation work and was free from symptoms. Employment was then obtained with another gasoline service station and since then has had several attacks of the eruption from which he now complains.

In treating his present skin eruption elimination was forced and for local use he was given Calamine lotion with Phenol 1% and Menthol 0.5%. His eruption disappeared in two days. When his skin was entirely clear sensitization tests were carried out for various substances with which the patient was in contact. All these were negative except as follows:

Control Tests
Adhesive - No reaction
Kerosene - No reaction
Plain gasoline-No reaction

Blood Count-Normal

Ethyl Gasoline
1:500 Slight reaction
1:100 Slight reaction
1:50 Mild reaction
1:25 Mild reaction
1:10 Marked reaction
1:5 Marked reaction

Undiluted ethyl gasoline produced a marked reaction with the development of a generalized urticarial eruption. This also happened with dilutions 1:10 and 1:5, but to a lesser extent. These tests were patch tests carried out in the usual manner.

Conclusions:

I believe this to be a case of dermatitis from ethyl gasoline and that there must be many more such cases in existence which have not been reported.

Signed: David W. Johnson, M.D.
52 Greenridge Ave.
White Plains, N.Y.