

Reports on Samples from Petroleum
Company Employees sent in by
Du Pont Medical Supervisors
Also Du Pont Personnel

RE 0010090

ASSOCIATED ETHYL COMPANY LIMITED NORTHWICH CHESHIRE

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OUR REF. K.2.

YOUR REF.

DATE 1st June, 1949.

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Dr. R.A. Kehoe,
Kettering Laboratory of Applied Physiology,
University of Cincinnati,
College of Medicine,
Eden Avenue,
Cincinnati,
OHIO,
U.S.A.

Dear Dr. Kehoe,

As you know, there is to be an Operations Department Conference in London in June and July, at which all members of the Department will be present and for part of which I also will be present. One of the items which will give rise to most dispute is the frequency permissible of the use of a blending plant in one month. As you are aware, many of the Companies carrying out blending did not do so in full conformance to this Company's regulations during the war period; in fact, some became very lax mainly due to lack of supervision and to meet war needs. Some are now most reluctant to observe the regulations on blending to the letter, particularly in regard to the number of blends carried out per month. It was manifestly impossible to acquire and install the extra storage equipment necessary to permit no more than six blends per month being carried out. In a few instances permission was given to carry out more than six blends per month provided that no blender was used for more than six blends in one month, and with the understanding that at the earliest possible date the extra storage equipment would be installed. This is working very well. Some Companies have already installed the additional equipment and others are acquiring it as speedily as possible. From our knowledge no significant lead exposure has resulted from this practice. However, from one's short experience, a considerable number of malpractices have been encountered. In one case we know of a man being used daily for blends requiring less than one drum of "Ethyl" fluid. He showed no clinical symptoms and his lead excretion figures were within normal range. We know also of an instance where inner bungs of the cast metal type which could not be loosened, being hammered into drums, and of drums being punctured both in the shell and on the end to permit the fluid to be educted. We have recently heard of another instance of the outer bung being removed and the inner bung being loosened about the difference of the drum circumference from the blending point, so that when the drum was rolled through one complete circle, the inner bung, already loosened, was uppermost and more or less ready for the drop-arm to be inserted. This happened at Abadan and, as you have observed from the lead excretion rates,

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no danger to the workmen there seems to have arisen from this practice. However, there is undoubtedly a considerable hazard from this malpractice, not only from the platform in the blending plant but also from the fairly gross contamination of the drums themselves. It was heavy contamination of our drum storing area from returned empties which first led us to investigate the cause.

The foregoing will give you some indication of the line of thought of the customers and the Operations Department in this respect. One does not know whether or not you have changed your views in regard to the regulations concerning blending of "Ethyl" fluid with gasoline. From my experience I consider them to be approximately right and would personally be most reluctant to accept any lowering of the standards already laid down. I would be grateful if you could confirm that your directions have not changed in this respect.

Things are proceeding fairly satisfactorily at Northwich. All hazards of contamination and danger have not yet been cleared up but with increased supervision there is now no significant lead absorption on this plant, nor has there been for the past six months.

As regards our equipment, we have now got practically all the "tools of the trade" but the accommodation allotted, we cannot get any more, is beginning to look somewhat congested.

As regards production, this plant is turning out as much as the raw materials, reflux condensers and refrigeration will permit it to do. Overflowing of our sludge pit is becoming too frequent of late, especially when a four-hour cycle is in operation. There is also inadequate drainage for the effluent.

Our new medical laboratory should be open in September. E.R. Smith, our Chemist, who was trained by you, is leaving at the end of July and, so far, we have not obtained another. However, we shall manage.

We are all looking forward to seeing you in August 1950.

We are forwarding, by surface mail, the following items from literature which has come into our hands and in some of which you may be interested:-

"Lead and the Red Cells" from "The Lancet" dated 23rd April, 1949.

"Unusual Symptoms in Petrol-Tank Cleaners" by Inder Singh.

"Lead Tetraethyl" by Dr. Franz Koelsch.

"Cerebral Symptoms due to Tetraethyl Lead" by Dr. C. Feuillet and Dr. M. Hamel.

"Lead Poisoning in the North East of Scotland" by Davidson, Fullerton, Rae and Henderson.

We are also forwarding a copy of the French Decree and the first set of lead analysis figures carried out in the French plant. The latter indicates, to

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me at least, that some improvement has taken place and that some care is being taken there. At the present time there is a complete shift off work owing to significant lead absorption. A full-time Medical Officer has been appointed and is coming over here to spend a month with us in September.

With kindest personal regards to Mrs. Kehoe and
yourself,

Sincerely yours,,



E. Davison.

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