

**PUBLIC ACCOUNTS COMMITTEE
(1975-76)**

(FIFTH LOK SABHA)

TWO HUNDRED AND FIFTH REPORT

SUB-STANDARD PESTICIDES

DEPARTMENT OF HEALTH

[Action taken by Government on the recommendations of the Public Accounts Committee contained in their 152nd Report (Fifth Lok Sabha) on Paragraph 33 of the Report of the Comptroller and Auditor General of India for the year 1972-73, Union Government (Civil)]



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**LOK SABHA SECRETARIAT
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(1975-76) - PRESENTED TO LOK SABHA ON
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(1975-76)

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Shri N. Sunder Rajan—*Senior Financial Committee Officer.*

*Ceased to be Member of the Committee consequent on retirement from Rajya Sabha w.e.f. 2-4-1976.

INTRODUCTION

I, the Chairman of the Public Accounts Committee as authorised by the Committee, do present on their behalf this Two Hundred and Fifth Report on the action taken by Government on the recommendations of the Public Accounts Committee contained in the Hundred and Fifty-Second Report (5th Lok Sabha) on 'Sub-standard Pesticides. [Paragraph 33 of the Report of the Comptroller and Auditor General of India for the year 1972-73, Union Government (Civil)—Department of Health].

2. On the 3rd June, 1975 an 'Action Taken Sub-Committee', consisting of the following Members, was appointed to scrutinise the replies from Government in pursuance of the recommendations made by the Committee in their earlier Reports:

Shri H. N. Mukerjee—*Chairman*

Shri V. B. Raju—*Convener*

Shri Priya Ranjan Das Munshi

Shri Darbara Singh

Shri N. K. Sanghi

Shri Rabi Ray

Shri Raja Kulkarni

Dr. K. Mathew Kurian

} *Members*

3. The Action Taken Sub-Committee of the Public Accounts Committee (1975-76) considered and adopted the Report at their sitting held on the 23rd March, 1976. The Report was finally adopted by the Public Accounts Committee on the 31st March, 1976.

4. For facility of reference the conclusions/recommendations of the Committee have been printed in thick type in the body of the Report. For the sake of convenience, the conclusions/recommendations of the Committee have also been appended to the Report in a consolidated form.

(vi)

5. The Committee place on record their appreciation of the assistance rendered to them in this matter by the Comptroller and Auditor General of India.

NEW DELHI;
April 7, 1976.
Chaitra 18, 1898 (S).

H. N. MUKERJEE,
Chairman,
Public Accounts Committee.

CHAPTER I

REPORT

1.1. This Report of the Committee deals with the action taken by Government on the Committee's recommendations/observations contained in their 152nd Report (Fifth Lok Sabha) on the Purchase of sub-standard pesticides for the National Malaria Eradication Programme, commented upon in paragraph 33 of the Report of the Comptroller & Auditor General of India for the year 1972-73, Union Government (Civil). The 152nd Report was presented to the Lok Sabha on 11th April, 1975.

1.2. Action Taken Notes have been received from Government in respect of all the 18 recommendations/observations contained in the Report and these have been categorised as follows:

(i) *Recommendations|Observations that have been accepted by Government:*

Sl. Nos. 2, 4, 15, 17 and 18.

(ii) *Recommendations|Observations which the Committee do not desire to pursue in view of the replies of Government:*

Sl. Nos. 1, 8, 11 and 14.

(iii) *Recommendations|Observations replies to which have not been accepted by the Committee and which require re-iteration:*

Sl. Nos. 3, 5, 6, 7, 9, 10 and 12.

(iv) *Recommendations|Observations in respect of which Government have furnished interim replies:*

Sl. Nos. 13 and 16.*

1.3. The Committee wish that in view of the long efflux of time final replies to those recommendations/observations to which only

*Not vetted in Audit.

interim replies have so far been furnished will be furnished to them, duly vetted by Audit, without further delay.

1.4. The Committee will now deal with the action taken by Government on some of their recommendations/observations.

Utilisation of pesticide pending ISI Test Report.

(Paragraph 3.3—Sl. No. 3)

1.5. Dealing with the purchase by the NMEP Directorate of 4,500 tonnes of BHC 50 per cent wdp from Hindustan Insecticides Ltd., of which 1355 tonnes had been found to be not conforming to the stipulated ISI specifications in regard to alkalinity and suspensibility, the Committee, in paragraph 3.3 of the Report, had observed:

“The purchase order was placed on Hindustan Insecticides Ltd., who in turn procured some quantity of technical BHC from various sources and arranged to get it formulated by four different formulators [Pesticides India, Udaipur—1730 tonnes, Devidayal (Sales) Pivated Limited, Bombay—1561 tonnes, Krishichemin Products, Bangalore—970 tonnes and Venkateswara Agrochemicals and Minerals, Madras—240 tonnes] into equivalent quantity of BHC 50 per cent wdp for supply to the National Malaria Eradication Programme. The purchase order initially stipulated that Hindustan Insecticides Ltd. would furnish certificates from the Indian Standards Institution for the entire formulated material and rectify, at its expense, any defect found on testing the material by the Directorate in the field or in the factory. Significantly enough, before the sampling and testing by Indian Standards Institution could begin, Hindustan Insecticides Ltd. had desired that there should be no delay in inspection of the pesticide as the supplies were to be completed within a short period. The NMEP Directorate had, therefore, agreed, in January 1972, to accept supply of the pesticides after field spray test by the Directorate or its representatives at different stations pending receipt of test results (on lot samples) from the Indian Standards Institution. While agreeing to this deviation, the NMEP Directorate apparently assumed that as the pesticide was to be supplied under the ISI marks scheme, the material ordered would conform to the requisite standards. This decision, in the opinion of the Committee, shaped the subsequent

course of events making the original contractual stipulation for the replacement of the sub-standard material ineffective and inoperative."

1.6. In their Action Taken Note dated 31 December, 1975, the Department of Health have stated:

"In accordance with the ISI Mark Scheme as applicable to testing and inspections for certification of BHC 50 per cent wdp the material is required to be tested by the laboratory of the licensee in accordance with the relevant prescribed specifications and the licensees concerned is to maintain the record of tests. Directorate of National Malaria Eradication Programme is basically a field organisation. On matters of standards, it is guided by technical and research organisation, namely ISI. The Directorate of National Malaria Eradication Programme does not conduct specification testing of the insecticides procured. As mentioned above, laboratory tests had been carried out on the BHC supplied by the licensee. As an additional precaution, the Directorate of National Malaria Eradication Programme conducted field spray tests on the BHC. Normally, the Directorate of National Malaria Eradication Programme would have awaited for ISI test results but as already indicated the BHC was required for early spray latest by April 1972. Hence as the results of the field spray tests were found to be satisfactory and the material was required to be used urgently, it was released to units.

The information furnished by the Ministry of Petroleum & Chemicals is reproduced below:

"The recommendation/observation has been brought to the notice of M/s. Hindustan Insecticides Limited for necessary action'."

1.7. The reply furnished in this connection by the Department of Industrial Development on 21 November, 1975 is reproduced below:—

"There is an indirect reference to ISI in the following sentences:

'While agreeing to this deviation, the NMEP Directorate apparently assumed that as the pesticide was to be supplied under the ISI mark scheme, the material ordered would conform to the requisite standards'.

The scheme of quality control agreed upon between NMEP, HIL and ISI clearly envisaged the possibility that some material may be found defective, and thus require rectification. NMEP had full knowledge of it and therefore there was no basis for making any other assumption. The scheme broke down because NMEP permitted the use of the material pending ISI test reports, apparently on account of urgency but without even consulting the ISI to explore whether testing could be expedited."

1.8. The Committee regret that the reply now furnished by the Department of Health appears pointless. It was clear during the Committee's examination of the case, and this has also been accepted by the Department of Health, that the NMEP Directorate, being basically a field organisation, was not equipped to conduct specification tests of pesticides procured. So far as the chemical content of the pesticide was concerned, it had to depend upon the effective supervision and testing of Hindustan Insecticides Ltd., and the Indian Standards Institution. It is also evident from the stipulations in the purchase order relating to the furnishing of a certificate from the Indian Standards Institution for the entire formulated material and for the rectification of defects, if any, that the possibility of some material being found defective had, in fact, been envisaged by the NMEP Directorate. In the circumstances, as pointed out by the Ministry of Industrial Development itself, the assumption made by the Directorate that as the supplies were required under the ISI mark scheme, the material ordered would ipso facto conform to the requisite standard was premature.

1.9. What is also disturbing is the fact now revealed by the Ministry of Industrial Development that the NMEP Directorate had decided to permit the use of the pesticide, pending the ISI test reports, on the basis of the results of the field spray test conducted by it, without even consulting the Indian Standards Institution and exploring the possibility of expediting the tests by the Institution. The Committee cannot, therefore, accept the contention of the Department of Health. They would reiterate their earlier observation that the decision of the NMEP Directorate to accept supplies of the pesticide, pending receipt of the test results from the Indian Standards Institution, after the field spray test by the Directorate, shaped the subsequent course of events making the original contractual stipulation for the replacement of the sub-standard material ineffective and inoperative.

Utilisation of excess-alkaline pesticide
(Paragraphs 3.5 to 3.7—Sl. Nos. 5 to 7).

1.10. With reference to the decision taken to utilise 550 tonnes of the pesticide whose alkalinity content was found to be at variance with the prescribed ISI specification of 1 per cent, the Committee, in paragraph 3.5 to 3.7 to the Report, had observed:

“3.5. In respect of alkalinity of the pesticide, the expert opinions of the Director, Central Forensic Laboratory (Dr. H. L. Bami) and the Plant Protection Adviser to the Government of India (Shri S. N. Banerjee) had been sought on the efficacy of using higher-alkaline pesticide in public health programme, Dr. Bami had opined that slight excess of alkalinity would neither affect the suspensibility nor its ultimate use in the field. He had, however, also stressed the need to conform to the specifications in manufacture and to exercise due care and caution to ensure that the batches which were manufactured did not exceed the upper limit of 1 per cent of alkalinity as specified by Indian Standards Institution as the specifications were essentially drawn to ensure adequate standards of manufacture as well as safety and efficacy in final use. Shri S. N. Banerjee had also suggested that the Pesticides Sub-Committee of the Indian Standards Institution should examine all standards of these pesticides, while expressing his opinion that slightly alkaline BHC wdp should not make any difference as far as its use in the public health field is concerned. The Committee find with surprise that though the experts had expressed views that slight excess of alkalinity would not effect the use of the pesticide in the public health field, they had not specified the limits upto which the excess alkaline-pesticide could be considered efficacious in the field.

“3.6. The Committee find from the Audit paragraph that on the basis of the opinion of these two experts, the Indian Standards Institution informed the Directorate, National Malaria Eradication Programme, that slight increase in alkalinity upto 1.5 per cent would not materially affect adversely the use of the pesticides in the field. It is further seen from the letter dated 14th August, 1972, from the Indian Standards Institution to the Director, NMEP

that this decision had been taken on the basis of the advice tendered by the two experts and considering the fact that till then no adverse report had been received from the field units. It is not at all clear to the Committee how the Indian Standards Institution arrived at the limit of 1.5 per cent particularly when the two experts had not specified any upper limits for alkalinity and adequate scientific data was also lacking. It is also of interest to note that the Pesticides Sub-Committee also had held, in their 42nd meeting, that it was not correct to increase the alkalinity limit in the absence of data, since theoretically it was known that the extra alkaline, medium would be an ideal situation for the quicker deterioration of the active ingredient of the pesticide, *viz.*, gamma isomer. They had also suggested detailed tests. The Committee have been informed that the specification limit for alkalinity has not been revised so far. The decision to utilise 550 tonnes of pesticide with alkalinity of 1.1 per cent to 1.4 per cent was apparently not justified. The Committee would, therefore, like the Ministry to investigate whether the decision to utilise 550 tonnes of the pesticide was justifiable.

“3.7. The Committee are unable to understand how the NMEP Directorate satisfied itself that the gamma isomer content was actually intact in the excess-alkaline pesticide. It is seen from the statement of sampling and testing of BHC wdp, furnished to the Committee by Indian Standards Institution, that the first report of failure in alkalinity had been made available only on 3rd May, 1972, by which time more than 60 per cent of the supplies had been distributed to various consignees for spray in the field. The Committee have also been informed that since marking of batch numbers on the packings were not decipherable, it had not been possible to segregate the sub-standard pesticide. Further, the opinion of the two experts had been furnished only in August, 1972, and the Pesticides Sub-Committee had considered this question only in September, 1972, by which time even the third round of spraying in the field would have been in full swing. Though it has been stated by the Secretary Ministry of Health and Family Planning that the excess of alkalinity in the pesticide did not affect adversely the public health

programme of NMEP he has also admitted during evidence, that the NMEP Directorate was only concerned with the field spray test and so far as the chemical composition and content of the pesticide was concerned, the Directorate depended upon the control and supervision of the Indian Standards Institution and Hindustan Insecticides Ltd. Apparently, therefore, no detailed scientific investigations whatsoever had been carried out by the Directorate to determine whether the spraying of pesticide having excess alkalinity produced the desired results. Under these circumstances, the Committee are inclined to think that the active ingredient was not intact in the pesticide found sub-standard in respect of alkalinity."

1.11. In reply, the Department of Health in their Action Taken Notes dated 31st December, 1975, have stated:

Paragraphs 3.5 and 3.6

"As the observations made in these paragraphs primarily concern the Ministry of Industrial Development and Civil Supplies, they were consulted. Their reply is as follows:

'In the above paragraphs, the specific observation relating to Indian Standards Institution is as below:

It is not at all clear to the Committee how the Indian Standards Institution arrived at the limit of 1.5 per cent particularly when the two experts had not specified any upper limit for alkalinity and adequate scientific data was also lacking.

As noted by PAC, Indian Standards Institution was guided by the opinion of two experts, namely, Dr. H. O. Bami, Director, Central Forensic Science Laboratory and Dr. S. N. Banerjee, Plant Protection Adviser, Ministry of Agriculture, Government of India, who is also the Chairman of the Pest Control Sectional Committee, AFCDC 6 of the ISI. When Indian Standards Institution sought their opinion, they presented the observed values of alkalinity, which ranged from 1.1 per cent to 1.4 per cent. Both gave the opinion that slight increase in alkalinity was not material for the purpose in view. Though they did not state a quantitative figure for an upper acceptable limit, nevertheless they had the values

before them. Therefore, it is natural to presume that the values presented could be considered as slight increase in alkalinity. Since the observed values went up to 1.4 per cent they were merely rounded to 1.5 per cent in the reply to National Malaria Eradication Programme'.

In addition, it may be mentioned that the Indian Standards Institution were consulted in the matter by the Directorate, National Malaria Eradication Programme. In their letter dated 23rd August, 1972, the Indian Standards Institution had clearly expressed the view that as far as the use of BHC in Public Health Projects was concerned, slight increase in alkalinity upto a limit of 1.5 per cent would not materially affect the suspensibility or, gamma content or the efficacy of BHC wdp. They accordingly recommended that all batches which were reported to have failed in alkalinity could be considered as having satisfied the requirement of the specifications so far as the requirements of National Malaria Eradication Programme were concerned."

Paragraph 3.7

"The Directorate of NMEP is basically a field organisation. On matter of standards, it is guided by technical and research organisations like ISI. In their letter No. CMD/38 : 1 (NMEP) dated 27th November, 1973, the ISI have clearly opined that the gamma isomer content of BHC wdp was more than the minimum prescribed under the relevant ISI specifications. It was, therefore, not necessary for the Directorate of NMEP to conduct any further scientific investigations."

1.12. The Committee are surprised that the Indian Standards Institution should have proceeded on what appears to be a hypothetical presumption that since the observed values of alkalinity presented to the two experts went upto 1.4 per cent, the 'slight increase in alkalinity' and 'slightly alkaline BHC wdp' referred to by the two experts, could be taken to represent alkalinity upto 1.4 per cent and had accordingly informed the NMEP Directorate, in August, 1972, that a slight increase in alkalinity upto 1.5 per cent would not materially affect adversely the use of the pesticides in the field'. The Committee are of the view that the Indian Standards Institution

should have sought a more specific clarification in this regard from the two experts, particularly when adequate scientific data was lacking. The Committee fear that the entire question had been handled desultorily and would urge the Indian Standards Institution to exercise greater care in such matters.

1.13. In paragraph 3.6 of the 152nd Report, the Committee had, inter alia, desired that the Department of Health should investigate whether the decision to utilise 550 tonnes of the pesticide found to be excess in alkalinity was justifiable. The reply furnished by the Department is just silent on this issue. From the chronological sequence of events set out in paragraph 3.7 of the 152nd Report, it will be seen that by the time the first report of failure in alkalinity had been made available by the Indian Standards Institution, more than 60 per cent of the supplies had been distributed to various consignees for spray in the field and that by the time the opinions of the two experts were available, the third round of spraying of the pesticide in the field would have also commenced. To make matters worse, the sub-standard material could also not be segregated since the marking of batch numbers on the packings was not decipherable. Besides, it was only in November, 1973, that the Indian Standards Institution had opined that the Gamma Isomer content of the pesticide was more than the minimum prescribed under the relevant ISI specification. In these circumstances and in the absence of any contrary statement from the Department of Health, other than what had already been stated earlier during evidence before the Committee, to justify the decision to utilise the pesticide excess in alkalinity, the Committee can only reiterate their earlier conclusion that this decision was apparently not justified. It would also appear that having decided, in January, 1972, to accept supplies on the basis of field spray tests, there was little that the NMEP Directorate could do to extricate itself from an embarrassing situation which had become irretrievable by the time the first report of failure of the pesticide in tests (on lot samples) was received from the Indian Standards Institution.

Levy of penalty for sub-standard supplies and fixation of responsibility for various lapses (Paragraphs 3.9 to 3.12—Sl. Nos. 9 to 12).

1.14. Dealing with the manner in which the question of levying a penalty for the sub-standard supplies had been handled by the NMEP Directorate and the Ministry of Health, the Committee, in paragraphs 3.9 and 3.10 of the Report, had observed:

“3.9. Yet another unsatisfactory feature of this case is the way in which the question of penalty for the sub-standard

pesticide was handled by the Ministry and the NMEP Directorate. The Committee find that a penalty of Rs. 9,300 has been imposed on Hindustan Insecticides Ltd. only in respect of 275 tonnes of the pesticide with susceptibility below 45 per cent and partly deficient in alkalinity as well, on the basis of the recommendation made by the Indian Standards Institution. In respect of the remaining 1080 tonnes which were also sub-standard, according to the original specifications, the Indian Standards Institution had advised that no penalty need be levied on this quantity as the material was usable and most of it had actually been used. The Committee are unable to appreciate the logic of this argument. The fact remains that this quantity was also below the specifications stipulated in the purchase order."

"3.10. Since the material accepted was not according to the original specifications, the Committee are surprised that the NMEP Directorate, as the purchaser of the pesticide, took no action to explore the possibility of a reduction or re-fixation of price for the quantity found sub-standard with the suppliers but merely remained content with accepting the advice of the Indian Standards Institution, thereby abdicating their rights and responsibility as buyers. The Committee desire that responsibility should be fixed for this costly lapse on the part of the Directorate. The possibility of obtaining a price reduction for this quantity of 1080 tonnes or recovering an adequate penalty should also be explored."

1.15. In paragraphs 3.11 and 3.12 of the Report, the Committee had further observed:

"3.11. The part played by the Indian Standards Institution in this case is unsatisfactory. The Committee feel that the proper role of Indian Standards Institution is to enforce strict quality control. It should not have expressed a definite view in regard to the acceptability of a sub-standard supply, without adequate laboratory and field trials and tests. It is true that in this case the Indian Standards Institution proceeded on the basis of opinions expressed by two experts, one of whom specifically advised reference to its relevant Sub-Committee. Such an approach, in the Committee's opinion, is hardly becoming an organisation entrusted with certifying the quality and

efficacy of products. The Institution has also functioned beyond its jurisdiction by advising that no penalty was leviable in respect of bulk of the material found sub-standard."

"3.12. To sum up, the Committee are of the opinion that (a) the decision to utilise 550 tonnes of pesticide, with alkalinity, 1.1 per cent to 1.4 per cent was not justified; (b) the introduction of a 'keeping quality' clause in the specification on an *ad hoc* basis retrospectively by the Indian Standards Institution to apply to the supply of 530 tonnes of pesticide found sub-standard in suspensibility is unconvincing; (c) there has been a costly lapse on the part of the NMEP Directorate in remaining merely content with accepting the advice of the Indian Standards Institution on the question of penalty, thereby abdicating their responsibilities as the purchasers of the pesticide; (d) the Indian Standards Institution has clearly functioned beyond its jurisdiction in advising that no penalty was leviable in respect of bulk of the material found sub-standard; and (e) there has been an avoidable delay of nearly four months in issuing necessary sanction for the purchase in this case which in turn led to deviations in the procedure for inspection and testing. These errors of omission and commission, besides resulting in monetary loss to the Government, have also caused a set-back to the Malaria Eradication Programme in the States in which the sub-standard pesticide has been used. The lapses summarised above are serious and call for fixation of individual responsibility in each case. The Committee desire that this should be done immediately and appropriate action taken against the officials concerned under advice to the Committee."

1.16. The Action Taken Notes dated 31 December, 1975 furnished by the Department of Health with reference to the Committee's recommendations contained in paragraphs 3.9, 3.10 and 3.12 are reproduced below:

Paragraph 3.9

"As mentioned in reply to para 3.7, the Directorate of NMEP are guided in the technical matters of specifications of BHC by the advice of the ISI. In their letter No. CMD/38:1 (NMEP) dated 19th October, 1972, the ISI have very clearly advised that all batches of BHC wdp found to

have suspensibility of 45 per cent and above may be considered to have met the requirement of IS-562 as amended with retrospective effect. Since according to that advice, the material was within the prescribed standards, there was no question of imposing any penalty. It may be added that the ISI advised penalty of Rs. 9,300 in respect of 275 tonnes of insecticides with suspensibility below 45 per cent. That advice was accepted and the amount recovered."

Paragraph 3.10

"The purchase order for the BHC wdp indicated that the material should conform to IS-562 with amendments then in force.

As mentioned under para 3.9, the technical advice of ISI was that 1080 tons of BHC wdp conformed to the relevant specifications as retrospectively amended by them. As such the question of reduction or refixation of price for 1080 tons of BHC did not arise. In the circumstances no responsibility can be fixed."

Paragraph 3.12

"In this connection attention is invited to replies given against paragraphs 3.1 and 3.10. In view of the position explained, the question of fixation of individual responsibility does not arise."

1.17. With reference to the reply furnished by the Department of Health to the Committee's observations contained in paragraph 3.9, the Department of Industrial Development, however, stated as follows in their letter dated 21 November, 1975:

"The Ministry of Health and Family Planning (Department of Health) in their Action Taken Note under para 3.9, forwarded to the Lok Sabha Secretariat vide their O.M. No. 25015/4/75&C&CD dated 28-8-1975, and copy endorsed to this Ministry, had not brought out the factual position of the issue relating to the penalty imposed in so far it relates to the ISI. Our views on the Action Taken Note under para 3.9 of the Ministry of Health were conveyed to them vide our O.M. No. 3(40)SD&P/75, dated 15-10-1975, asking them to amend their reply accordingly

and a copy thereof was also endorsed to the AGCR, New Delhi for necessary action. The office of the AGCR, New Delhi, however, could not make any comments as they had vetted our Action Taken Note, before the receipt of our O.M. dated 15-10-1975."

The Office Memorandum No. 3(40)SD&P/75 dated 15 October, 1975 from the Department of Industrial Development to the Department of Health, a copy of which was also furnished to the Committee by the former, is reproduced below:

"The undersigned is directed to refer to the Ministry of Health and Family Planning (Department of Health) O.M. No. G-25015[4/75-C&CD dated the 28th August, 1975 on the subject mentioned above and to say that in reply to paragraph 3.9 of the Report of the Public Accounts Committee that Ministry has stated, *inter alia*, that 'the ISI has advised penalty of Rs. 9,300 in respect of 275 tonnes of insecticides with suspensibility below 45 per cent. That advice was accepted and the amount recovered'. This para of the reply of the Ministry of Health gives an erroneous impression and needs modification, because the factual position has not been brought out in its correct chronological order. In the letter dated the 19th October, 1972 of the ISI it has been clearly stated that the question of recommending a suitable penalty in the form of deduction from payment does not arise. The Institution is concerned with the assessment of the quality under certification marking scheme and the commercial aspects of supply like imposing a penalty are outside the purview of the Institution. It was only at a meeting held in March 1973, under the Chairmanship of Shri A. B. Malik, the then Joint Secretary in the Ministry of Health and Family Planning that it was decided that 275 tonnes of material which was found to have a suspensibility below 45 per cent should be subjected to penalty. This committee also unanimously agreed that the question of quantum of penalty be referred to DG, ISI and that his recommendation should be final. It was only in pursuance of this decision of the Committee that the ISI advised in the matter. It will thus be seen that the decision for levying a penalty rested with the Ministry of Health and only on the decision of the Ministry of Health, ISI was asked to advise in the matter.

In view of what has been stated above, it is requested that the reply of the Ministry of Health to paragraph 3.9 of the PAC Report may please be amended and the position of ISI clarified."

1.18. The Department of Industrial Development also furnished to the Committee an Action Taken Note, on 29 September, 1975, on the observations contained in paragraphs 3.9, 3.11 and 3.12, which is reproduced below:

"The cause of PAC's observations is related to two quantities which formed the 'bulk of the material found sub-standard' namely, 550 tonnes with excess alkalinity and 530 tonnes with suspensibility ranging from 45 per cent to below 50 per cent. PAC noted, without any comments, the penalty of Rs. 9,300 on 275 tonnes of the material with suspensibility below 45 per cent. (para 3.9).

In regard to the first two quantities, the position is explained in the preceding comments against para Nos. 3.4-3.6 and 3.8 respectively.

ISI letter No. CMD/38:1 (NMEP) dated 20 October, 1972 on the question of penalty for material with excess alkalinity (which has not been included in the PAC Report) is reproduced below. It clearly states that commercial aspects are outside the purview of ISI. This statement brings out the perspective against which the latter part of the ISI letter should be interpreted.

Letter No. CMD/38:1 (NMEP) dated 20 October, 1972 from Shri M. V. Patankar, DDG, ISI, New Delhi to Dr. V. Somasundara Rao, Director, NMEP Delhi.

Kindly refer to your letter No. 9-17/NMEP(II) dated 12 October, 1972 regarding the supplies of BHC wdp made by M/s Hindustan Insecticides Ltd.

We appreciate your desire that the ISI should make a recommendation for levy of penalty for the supplies which were found initially to exceed the limit of alkalinity. I am afraid that the ISI being an Institution concerned with laying down of specifications for materials and assessment of quality under the Certification Marking Scheme, the commercial aspects of the supply are out-

side its purview. We are, therefore, not in a position to recommend any penalty in terms of reduction in payment which you would like to impose on M/s HIL.

However, in this connection, I would draw your kind attention to our letter of even number dated 23 August, 1972 in which we had indicated that in our opinion BHC wdp with alkalinity upto 1.5 per cent should be considered to satisfy the requirements of the relevant Indian Standards so far as your requirements are concerned. Looking at the problem from this technical point of view, we are of the opinion that the question of levying of penalty for those batches of BHC wdp having alkalinity of 1.5 per cent maximum may not arise'.

The concluding paragraphs of the above letter and letter No. CMD/38:1(NMEP) of 19 October have been interpreted by all including ISI as advice from ISI that no penalty was leviable on the two quantities under question. Nevertheless a closer analysis of the letter reveals certain extenuating features which have largely gone unnoticed. Considering that the dealing officer in the ISI is dead and his clarifications of the letters are unavailable the ISI has drawn attention to these features even at this late stage.

- (i) The ISI letter dated 19 October, 1972 says the question of recommending a penalty does not arise. It does not say that the question of penalty does not arise. There is a substantial difference between these two positions. Also the next sentence is extremely important, wherein it is stated 'commercial aspects of supply like imposing penalty are outside our purview'. The two sentences together can only mean that recommending a penalty does not arise as commercial aspects are outside ISI purview.
- (ii) In ISI's letter dated 20 October, 1972, the principal question of basic importance adequately stressed is again the same, that is, 'Commercial aspects of the supply are outside our purview'. Further, in the concluding sentence the word *may* indicates an option open to NMEP. Significantly this option is open looking at the problem from this technical point of view and not from any commercial point of view."

1.19. The Committee are unable to accept the rather tenuous logic of the Department of Health for not levying any penalty or obtaining a price reduction in respect of 1080 tonnes of the pesticide found sub-standard according to the original specifications stipulated in the purchase order. Though the supply had been regularised subsequently by a retrospective amendment of the specifications by the Indian Standards Institution, the fact remains that, from the normal commercial point of view, the supplies actually made had not conformed to the specifications originally prescribed and there had thus been a variation between the pesticide ordered by the NMEP Directorate and that supplied. The Committee are of the view that the NMEP Directorate, as the purchaser of the pesticide, should have taken steps to safeguard the financial interests of Government instead of merely giving in to an unsatisfactory situation. It is significant that though the Indian Standards Institution had recommended a penalty of Rs. 9,300 in respect of only 275 tonnes of the pesticide, which did not conform either to the original or amended specifications, it was apparently from a purely technical consideration of the question, and an option seems to have been open to the Directorate to take all necessary action in so far as the commercial aspects of the transaction were concerned. The Directorate appear, in the Committee's view to have pounced upon the finding of the Indian Standards Institution as a way out of a bad job, instead of asserting their rights and responsibilities as the purchaser of the pesticide with public funds.

1.20. The Committee would, therefore, reiterate their earlier observations in this regard and desire that responsibility for this costly lapse on the part of the Directorate should be fixed. Government should also, as asked for earlier, explore the possibility of obtaining a price reduction for the quantity of 1080 tonnes of the sub-standard pesticide or recovering an adequate penalty.

1.21. The Committee find that the advice given in this regard by the Indian Standards Institution had influenced, to a great extent, the subsequent course of events. Having taken the stand that "commercial aspects of supply like imposing penalty" were outside their purview, the Indian Standards Institution ought to have dissociated themselves from offering any advice on the question. It would, however, appear that in recommending a penalty in respect of 275 tonnes of the pesticide, the Institution had functioned beyond its jurisdiction. The Committee note from the reply furnished by the Department of Industrial Development to another recommendation of theirs, contained in paragraph 3.16 of the 152nd Report, that

the Indian Standards Institution have now issued certain precautionary instructions to avoid involvement in commercial questions. The Committee trust that these as well as any fresh instructions which may be issued in this regard after the proposed further review of the matter would be scrupulously adhered to.

1.22. The Committee had drawn pointed attention, in paragraph 3.12, to the avoidable delay of nearly four months in issuing necessary sanction for the purchase in this case, which in turn led to deviations in the procedure for inspection and testing. The Committee had also desired fixation of responsibility for the delay. The reply furnished by the Department of Health is silent on this issue. The Committee would like to know what action, if any, has been taken in pursuance of this recommendation.

*Action to be taken against the private formulators of the pesticide.
(Paragraph 3.13—Sl. No. 13).*

1.23. In paragraph 3.13 of the Report, the Committee had recommended:

“The Committee are of the view that appropriate action should also be taken against the four private formulators [Pesticides India, Udaipur, Devidayal (Sales) Private Ltd., Bombay, Krishimhem Products, Bangalore and Venkateshwara Agro Chemicals and Minerals, Madras] after proper investigation”

1.24 In their Action Taken Note dated 31 December, 1975 furnished to the Committee in this regard, the Department of Health stated:

“The order was placed on the Hindustan Insecticides Limited and there was no direct dealing between the NMEP and the four formulators. The Hindustan Insecticides Limited were directly responsible for the execution of the contract to the NMEP. Hence, the NMEP Directorate has no jurisdiction to initiate investigation and action as recommended by the Committee. The matter concerns Ministry of Petroleum and Chemicals.”

1.25. The Action Taken Note dated 29 September, 1975 received in this connection from the Ministry of Petroleum & Chemicals is reproduced below:

“The recommendation has been brought to the notice of Hindustan Insecticides Limited to consider what further

action could be taken against the parties concerned, in addition to the penalties already imposed on them."

1.26. The Committee note that the question of what further action could be taken against the four private formulators of the pesticide, in addition to the penalties already imposed on them, is to be considered by Hindustan Insecticides Ltd. Some six months have gone since then and the Committee would like to know what has happened.

CHAPTER II

RECOMMENDATIONS/OBSERVATIONS THAT HAVE BEEN ACCEPTED BY GOVERNMENT

Recommendation

The Committee are distressed to find that 13.55 tonnes of BHC 50 per cent wdp pesticide, worth Rs. 24.55 lakhs, which represents about 30 per cent of the total quantity of 4500 tonnes of the pesticide procured by the N.M.E.P. Directorate were found to be of substantially sub-standard quality as it did not conform to the stipulated specifications relating to either its alkalinity content or suspensibility or both. The pesticide was meant for spraying during the 1972-73 spray season in those areas of Madhya Pradesh, Maharashtra, Gujarat, Orissa, Uttar Pradesh, Rajasthan and Punjab where mosquitoes had developed resistance to DDT. The penalty imposed for the sub-standard supply was only Rs. 9,300. After an examination of the information made available to them, the Committee find a number of unsatisfactory aspects in the handling of the case which are discussed in the succeeding Paragraphs.

[Serial No. 2 (Para 3.2) of Appendix VII to 152nd Report
(Fifth Lok Sabha)]

Action Taken

Replies to each observation of the Committee are given in the subsequent notes.

The note has been seen and vetted by Audit.

[Department of Health O.M. No. G 25015/4/75-C&CD dated
31-12-1975]

Recommendation

According to specification No. IS: 562 of the Indian Standards Institution, which was in operation when orders for the pesticide were placed in December, 1971, the alkaline content of BHC 50 per cent wdp should not exceed 1 per cent and its minimum suspensibility should be 50 per cent. The test reports of Indian Standards Institution, however, revealed that the alkalinity content of 550 tonnes of the pesticide varied between 1.1 per cent to 1.4 per cent, while 530 tonnes had suspensibility below 50 per cent but above 45 per cent and 275 tonnes had a suspensibility below 45 per cent and were also deficient in alkalinity as well.

[Serial No. 4 (Para 3.4) of Appendix VII to 152nd Report
(Fifth Lok Sabha)]

Department of Health

As the observations made in these paragraphs primarily concern the Ministry of Industrial Development and Civil Supplies, they were consulted. Their reply is as follows:—

“In the above paragraphs, the specific observation relating to Indian Standards Institution is as below:—

“It is not at all clear to the Committee how the Indian Standards Institution arrived at the limit of 1.5 per cent. particularly when the two experts had not specified any upper limit for alkalinity and adequate scientific data was also lacking”.

As noted by PAC, Indian Standards Institution was guided by the opinion of two experts, namely, Dr. H. O. Bami, Director, Central Forensic Science Laboratory and Dr. S. N. Banerjee, Plant protection Adviser, Ministry of Agriculture, Government of India, who is also the Chairman of the pest control Sectional Committee, AFCD 6 of ISI. When Indian Standards Institution sought their opinion, they presented the observed values of alkalinity, which ranged from 1.1 per cent to 1.4 per cent.

Both gave the opinion that slight increase in alkalinity was not material for the purpose in view. Though they did not state a quantitative figure for an upper acceptable limit, nevertheless they had the values before them. Therefore, it is natural to presume that the values presented could be considered as “slight increase in alkalinity”. Since the observed values went up to 1.4 per cent they were merely rounded to 1.5 per cent in the reply to National Malaria Eradication Programme.

In addition, it may be mentioned that the Indian Standards Institution were consulted in the matter by the Directorate National Malaria Eradication Programme. In their letter dated 23rd August, 1972 the Indian Standards Institution had clearly expressed the view that as far as the use of BHC in Public Health projects was concerned, slight increase in alkalinity up to a limit of 1.5 per cent would, not materially affect the suspensibility or, gamma content or the efficacy of BHC wdp. They accordingly, recommended that all batches which were reported to have failed in alkalinity could be considered as having satisfied the requirement of the specifications so far as the requirements of National Malaria Eradication programme were concerned.

The Note has been seen and vetted by Audit.

[Department of Health O.M. No. G 25015/4/75—C&CD dated 31-12-1975.]

Department of Industrial Development

In the above paragraphs, the specific observation relating to ISI is as follows:

"It is not at all clear to the Committee how the Indian Institution arrived at the limit of 1.5 per cent particularly when the two experts had not specified any upper limits for alkalinity and adequate scientific data was also lacking".

As noted by P.A.C., ISI was guided by the opinion of two experts, namely, Dr. H. L. Bami, Director, Central Forensic Science Laboratory and Dr. S. N. Banerjee, Plant Protection Adviser, Ministry of Agriculture, Government of India, who is also the Chairman of the Pest Control Sectional Committee, AFCDC 6 of ISI. When ISI sought their opinion, they presented the observed values of alkalinity, which ranged from 1.1 per cent to 1.4 per cent.

Both gave the opinion that slight increase in alkalinity was not material for the purpose in view. Though they did not state a quantitative figure for an upper acceptable limit, nevertheless they had the values before them. Therefore, it is natural to presume that the values presented could be considered as "slight increase in alkalinity." Since the observed values went upto 1.4 per cent, they were merely rounded to 1.5 per cent in the reply to NMEP.

[Department of Industrial Development D.O. No. 3(40) SD&P/
75 dated 21-11-75]

Recommendation

The Committee are also concerned to find that a public sector undertaking preferring to trade in sub-standard pesticide rather than to gearing up its own production to meet the requirements of the Government Health and Agricultural programmes.

[Sl. No. 15 (Para 3.15) of Appendix VII to 152nd Report (Fifth Lok Sabha).]

Action Taken

The purchase of B.H.C. from outside sources was in vogue only for one year and this practice was discontinued thereafter, every precaution is being taken by Hindustan Insecticides Ltd., to see that the pesticides of the requisite quality are produced and marketed. They are also embarking on a large-scale programme of diversification to meet the requirements of Health and Plant protection.

[Ministry of Petroleum and Chemicals D.O. No. L-51012/1/75-
A&I dated 29-9-1975].

Recommendation

The Committee feel that the sorry state of affairs reflected in this transaction was not entirely unavoidable. This could have been prevented had adequate advance action for the procurement of the pesticides been taken. The delays in procuring pesticides for the Malaria Eradication Programme have also been examined by the Committee in the past and they had then been informed by the Ministry of Health and Family Planning that a programme for the advance procurement of insecticides, one year in advance, had been drawn up and the delay factor had once and for all been eliminated. The Committee note that despite this assurance having been given to them earlier, the proposals for the procurement of BHC wdp for use during the 1972-73 spray season (first round of spraying to commence in March, 1972) had been sent to the Director General of Health Services only by the end of July, 1971 and necessary sanction was received by the middle of November, 1971. The Secretary of the Ministry admitted during evidence that it had not been possible so far to reach the ideal pattern of finalising all the details one year in advance. The Ministry have subsequently informed the Committee that because of various formalities involved, viz., screening of the proposals by the DGHS, the Ministry and its Associate Finance and clearance by the Department of Economic Affairs and the DGTD in the case of imports, the issue of formal sanction for advance procurement of insecticides is liable to delay. Since the Department of Economic Affairs and the DGTD are concerned only with imports from abroad, the delay of nearly four months for issuing sanction in this case of indigenous procurement needs to be explained. The Committee are also of the opinion that the various difficulties expressed by the Ministry are not insurmountable.

[Serial No. 17 (Para 3.17) of Appendix VII to 152nd Report
(Fifth Lok Sabha)]

The picture that emerges from the statement furnished to the Committee by the Ministry, containing the details of proposals for procurement of different insecticides, issue of sanctions and delivery schedule is depressing. For instance, in respect of procurement of Malathion for the 1974-75 spray season, the Committee find that while the proposal had been sent on the 30th April, 1973, the sanction had been received only on the 19th March, 1974 and even though the supplies were to be completed by the 31st May, 1974 (by which time

the first round of spraying should have been completed) the orders had been placed only in July and August, 1974. Similarly, sanctions in respect of DDT 75 per cent, proposals for which had been sent on 30th April, 1973, had been issued as late as March and May, 1974. The Committee can only deplore such glaring instances of delays and desire that the existing procedures for the issue of sanctions and procurement should be thoroughly reviewed and streamline so as to obviate emergency and distress purchases. The Committee would like to be kept informed of the changes effected in this regard.

[Serial No. 18 (Para 3.18) of Appendix VII to 152nd Report
(Fifth Lok Sabha)].

Action Taken

The Ministry is conscious of the delay in the processing of financial sanctions for advance procurement of materials leading to difficulties in timely procurement. A drill for advance procurement of insecticides etc., is being worked out in consultation with the Ministry of Finance, keeping in view the chemical characteristics including keeping quality of the materials and the position of financial resources.

The note has been seen and vetted by Audit.

[Department of Health O.M. No. G. 25015/4/75-C&CD dated
31-12-1975].

CHAPTER III
RECOMMENDATIONS/OBSERVATIONS WHICH THE COMMITTEE DO NOT DESIRE TO PURSUE IN VIEW OF THE REPLIES OF GOVERNMENT

Recommendation

Apart from the financial aspect of this transaction what causes great concern to the Committee is the fact that sub-standard pesticide has been used in the field. The Committee find from the information furnished in the Annual Reports of the Ministry of Health and Family Planning for the years 1972-73 and 1973-74, that the incidence of malaria in the country during 1971, 1972 and 1973 was respectively 13,23,104 cases, 13,62,806 cases and 14,98,961 cases. While the number of cases of malaria reported during the period from January to October, 1972 was only 8,86,937; the incidence reported during the remaining two months, i.e. after the completion of the spraying operations, was as high as 4,75,869 cases. The Committee are also concerned to note that in the four States of Orissa, Uttar Pradesh, Rajasthan and Punjab, where the BHC procured in this case had been sprayed, there has been an alarming increase in the incidence of malaria during 1972 and 1973. The Committee, therefore, consider it essential to investigate immediately whether the spraying of the sub-standard pesticide in these States has contributed to the increase in the incidence of malaria.

[Serial No. 1 (Para 3.1) of Appendix VII to 152nd Report
(Fifth Lok Sabha)].

Action Taken

A statement showing the incidence of malaria in the units where B.H.C. 50 per cent w.d.p. was sprayed during the years 1971, 1972 and 1973 is attached (Annexure). It will be seen that in the States of Gujarat, Rajasthan and Madhya Pradesh, there was reduction in the incidence in 1972 as compared to 1971. In Punjab to which the so-called sub-standard B.H.C. was not supplied the incidence rose from 2,201 cases to 27,652 cases in 1972 and to 31,363 cases in 1973. Moreover, the incidence went up considerably in 1973 in all States, although standard quality B.H.C. was sprayed in 1972 and 1973 spraying season.

The increase of malaria during 1971, 1972 and 1973 is due to various factors like, vector resistance to insecticides, parasite resis-

tance to drugs and increase of cases in maintenance phase areas where only focal spray was required to be done. The incidence of malaria is always higher in the months following the monsoon. Only 1355 tons of B.H.C. out of 4500 tons ordered from the Hindustan Insecticides Limited was found to be sub-standard. The increase in the incidence cannot, therefore, wholly be attributed to the spray of this B.H.C.

It is submitted, therefore, that the rise in the incidence of malaria in 1972 and 1973 cannot be attributed only to the spraying of the so-called sub-standard B.H.C. procured in 1971 and 1972 but it has to be related to other factors as well.

The note has been seen and vetted by audit.

[Department of Health O.M. No. G. 25015/4/75-C&CD dated
31-12-1975].

ANNEXURE
INCIDENCE OF MALARIA IN BHC SPRAY AREAS

| Sl. No. | State | Sl. No. | Name of the Unit | Incidence for | | |
|---------|-----------------------|---------|-------------------------|-----------------|--------|--------|
| | | | | 1971 | 1972 | 1973 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1. | <i>Gujarat</i> | 1. | Baroda | 28450 | 27549 | 19653 |
| | | 2. | Rajpipla | 15219 | 19609 | 38601 |
| | | 3. | Nadiad | 6845 | 6001 | 9917 |
| | | 4. | Panchmahal | 45380 | 31593 | 69777 |
| | | 5. | Rajkot | 18199 | 13147 | 20681 |
| | | 6. | Surat | 23305 | 29656 | 56004 |
| | | 7. | Bulsar | 6690 | 8164 | 41846 |
| | | 8. | Anand | 13533 | 14591 | 12061 |
| | | 9. | Chota Udaipur | 7333 | 7911 | 14935 |
| | | | | Total | 164954 | 158221 |
| 2. | <i>Rajas</i> | 1. | Kota | 5538 | 2756 | 5341 |
| | | 2. | Chittorgarh | 2366 | 931 | 6826 |
| | | 3. | Jodhpur | 17676 | 7706 | 22218 |
| | | 4. | Udaipur | 1096 | 4101 | 11706 |
| | | 5. | Ratangarh | 5547 | 1346 | 1026 |
| | | 6. | Karoli | 121 | 103 | 2491 |
| | | | | Total | 32344 | 16943 |
| 3. | <i>Madhya Pradesh</i> | 1. | Ratlam | 36654 | 11062 | 28114 |
| | | 2. | Indore | 13633 | 13456 | 13749 |

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|----|----------------------|---------------------------------|---|--------|-------|-------|
| | | 3. Kalkar | | 2143 | 1263 | 6605 |
| | | 4. Burwari | | 17316 | 20117 | 14992 |
| | | 5. Dhar | | 14727 | 13549 | 10012 |
| | | 6. Mardaur | | 10466 | 6445 | 11338 |
| | | 7. Jagdolpur | | 8358 | 7098 | 2018 |
| | | Total | | 103802 | 92990 | 86828 |
| 4. | <i>Uttar Pradesh</i> | | | | | |
| | | 1. Jharsi | | 4677 | 5346 | 8955 |
| | | 2. Rudrapur | | 478 | 210 | 371 |
| | | Total | | 5155 | 5556 | 9326 |
| 5. | <i>Malara atra</i> | | | | | |
| | | 1. Nagpur | | 111 | 531 | 3340 |
| | | 2. Bukdara | | 314 | 286 | 235 |
| | | 3. Bhardara | | 101 | 59 | 689 |
| | | 4. Pooa | | 1305 | 6168 | 5426 |
| | | 5. Satara | | 62 | 358 | 200 |
| | | 6. Charada—I | | 1904 | 2705 | 6172 |
| | | 7. Charada—II | | 2161 | 1664 | 5061 |
| | | 8. Yeotmal | | 86 | 173 | 1477 |
| | | 9. Warora (Charada—III) | | 125 | 416 | 1505 |
| | | 10. Ahmednagar | | 3613 | 7105 | 4863 |
| | | 11. Sargamner | | 1796 | 8040 | 6756 |
| | | 12. Pardharpur | | 208 | 2405 | 863 |
| | | 13. Jalgaon | | 11285 | 8921 | 8982 |
| | | Total | | 23071 | 38831 | 45569 |

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|------------------|----|-------------------------|---|------|-------|-------|
| 6. Punjab | | | | | | |
| | 1. | Sangrur | | 1225 | 13334 | 45569 |
| | 2. | Ferozepur | | 976 | 14318 | 7556 |
| | | Total | | 2201 | 27652 | 31363 |
| 7. Orissa | | | | | | |
| | 1. | Bhawanipatana | | 600 | 691 | 6684 |
| | 2. | Berhampur | | 855 | 945 | 6274 |
| | 3. | Reygada | | 4510 | 3813 | 10013 |
| | 4. | Phulbari | | 461 | 1725 | 8541 |
| | 5. | Bhanjagar | | 82 | 414 | 5137 |
| | 6. | Balasore | | 826 | 587 | 610 |
| | | Total | | 7343 | 8175 | 36259 |

Recommendation

As regards the specification for suspensibility, the Committee are surprised that the Indian Standards Institution had introduced the 'Keeping quality' clause for suspensibility in the specification on an *ad-hoc* basis and also made it applicable retrospectively to the consignments of BHC wdp found substandard according to the original specification, even while necessary data in this regard were being collected. The Committee note that this clause and consequent amendment to specification IS:562 had also been approved initially for six months effective only from 1st November, 1972, on the analogy of a similar specification for DDT introduced on the basis of a study, previously made. The issue of a regular amendment incorporating the 'Keeping quality' clause had been finally approved by the Pesti-

cides Sub-committee, AFCDC 6 only at their 33rd meeting held on 19th and 20th August, 1974. In this context, the Committee find it difficult to accept the argument put forth by the Indian Standards Institution, in their letter dated 19th October, 1972, that since the issue of the amendment was brought about at the instance of Hindustan Insecticides Ltd., the amendment was also to take care of the problem faced by them which, to say the least, is unconvincing.

[S. No. 8 (Para 3.8) of Appendix VII to 152nd Report (Fifth Lok Sabha)].

Action Taken

In the above paragraph, the specific observation about ISI is as below:

“In this context, the Committee find it difficult to accept the argument put forth by the Indian Standards Institution, in their letter dated 19th October 1972, that since the issue of the amendment was brought about at the instance of Hindustan Insecticides Ltd., the amendment was also to take care of problem faced by them which, to say the least, is unconvincing”.

The proposal for amending an established Indian Standard arises frequently when the producer or the consumer is faced with a problem in implementing the standard. A consequent amendment, therefore, has a direct relation with the particular problem.

ISI letter No. CMD/38:1(NMEP) dated 20th October 1972 to NMEP, [Appendix VI (6) of the Report], was written after the concerned ISI Sub-committee had accepted a tentative amendment to introduce a Keeping Quality clause in the Standard for BHC wdp. As explained in the letter, a view was taken that by the above amendment “the Committee has given effect formally to a principle which had been agreed to earlier”. Following from this view, the I.S.I. drew the conclusion.

“Taking into consideration the normal time lapsed between drawal of the samples by our inspecting officers and the testing, and also the fact that the suspensibility test results conveyed to you were after accelerated storage of the samples, all the batches of BHC wdp found to have suspensibility of 45 per cent and above may considered to have met the requirements of IS: 562 read with the present amendment”.

It is necessary to explain the technical ground for the above view point. The original standard merely stipulated that suspensibility shall not be below 50 per cent. It has earlier been observed for a comparable specification (for DDT wdp formulations) that suspensibility decreases with time. Thus the question arises at what point of time the limit of 50 per cent applies? To resolve this difficulty, a 'Keeping quality' clause had been introduced for DDT wdp formulations specifying an allowable drop in six months. The same clause was made applicable to BHC wdp formulations subsequently. This amendment removed a defect in the original specification, without which it is not possible to interpret the stipulated requirement. The constitutes the technical ground for suggesting that the original specification should be read with the amendment.

[Department of Industrial Development D.O. No. 3(40) S.D.&P./
75 dated 21-11-1975].

Recommendation

Yet another unsatisfactory feature of this case is the way in which the question of penalty for the sub-standard pesticide was handled by the Ministry and the NMEP Directorate. The Committee find that a penalty of Rs. 9,300 has been imposed on Hindustan Insecticides Ltd. only in respect of 275 tonnes of the pesticide with suspensibility below 45 per cent and partly deficient in alkalinity as well, on the basis of the recommendation made by the Indian Standards Institution. In respect of the remaining 1080 tonnes which were also substandard, according to the original specifications, the Indian Standards Institution had advised that no penalty need be levied on this quantity as the material was usable and most of it had actually been used. The committee are unable to appreciate the logic of this argument. The fact remains that this quantity was also below the specifications stipulated in the purchase order.

[Para 3.9-152nd PAC Report (5th Lok Sabha)].

The part played by the ISI in this case is unsatisfactory. The Committee feel that the proper role of ISI is to enforce strict quality control. It should not have expressed a definite view in regard to the acceptability of a substandard supply, without adequate laboratory and field trials and tests. It is true that in this case the ISI proceeded on the basis of opinions expressed by two experts, one of whom specifically advised references to its relevant sub-

committee. Such an approach, in the Committee's opinion is hardly becoming an organisation entrusted with certifying the quality and efficacy of products. The Institution has also functioned beyond its jurisdiction by advising that no penalty was leviable in respect of bulk of the material found substandard.

[S. No. 11 (Para 3.11) of Appendix VII to 152nd Report
(5th Lok Sabha)].

Action Taken

The cause of PAC's observations is related to two quantities which form the "bulk of the material found substandard" namely, 550 tonnes with excess alkalinity and 550 tonnes with suspensibility ranging from 45 per cent to below 50 per cent. PAC noted, without any comments, the penalty of Rs. 9300 on 275 tonnes of the material with suspensibility below 45 percent (para 3.9).

In regard to the first two quantities, the position is explained in the preceding comments against para Nos. 3.4—3.6 and 3.8 respectively.

ISI letter No. CMD/38:1 (NMEP) dated 20 October, 1972 on the question of penalty for material with excess alkalinity (which has not been included in the PAC Report) is reproduced below. It clearly states that commercial aspects are outside the purview of ISI. This statement brings out the perspective against which the latter part of the ISI letter should be interpreted.

"Letter No. CMD/38:1(NMEP) dated 20 October, 1972 from Shri M. . Patankar, DDG ISI New Delhi to Dr. V. Somasundara Rao, Director, NMEP Delhi.

Kindly refer to your letter No. 9-17/NMEP(II) dated 12 Oct., 1972 regarding the supplies of BHC wdp made by M/s-Hindustan Insecticides Ltd.

We appreciate your desire that the ISI should make a recommendation for levy of penalty for the supplies which were found initially to exceed the limit of alkalinity. I am afraid that the ISI being an Institution concerned with laying down of specifications for materials and assessment of quality under the Certification Marking Scheme, the commercial aspects of the supply are outside its purview. We are, therefore, not in a position to recommend any penalty in terms of reduction in payment which you would like to impose on M/s. HIL.

However, in this connection, I would draw your kind attention to our letter of even number dated 23 August, 1972 in which we had indicated that in our opinion BHC wdp with alkalinity upto 1.5 per cent should be considered to satisfy the requirements of the relevant Indian Standards so far as your requirements are concerned. Looking at the problem from this technical point of view, we are of the opinion that the question of levying of penalty for those batches of BHC wdp having alkalinity of 1.5 per cent maximum may not arise."

The concluding paragraphs of the above letter and letter No. CMD/38:1(NMEP) of 19 October [Appendix VI (6) of the PAC Report] have been interpreted by all including ISI as advice from ISI that no penalty was leviable on the two quantities under question. Nevertheless a closer analysis of the letter reveals certain extenuating features which have largely gone unnoticed. Considering that the dealing officer in the ISI is dead and his clarifications of the letter are unavailable, the ISI has drawn attention to these features even at this late stage:

- (i) The ISI letter dated 19 October, 1972 says the question of **recommending** a penalty does not arise. It does not say that the question of penalty does not arise. There is a substantial difference between these two positions. Also the next sentence is extremely important, wherein it is stated "commercial aspects of supply like imposing penalty are outside our purview". The two sentences together can only mean that recommending a penalty does not arise as commercial aspects are outside ISI purview.
- (ii) In ISI's letter dated 20 October, 1972, the principal question of basic importance adequately stressed is again the same, that is "Commercial aspects of the supply are outside our purview". Further, in the concluding sentence the word may indicates an option open to NMEP. Significantly this option is open "**looking at the problem from this technical point of view**" and not from any commercial point of view.

[Department of Industrial Development D. O. No. 3(40) SD/P/75 dated 21-11-75].

Recommendation

The Committee have also been informed that the order for the supply of the pesticide had been placed on Hindustan Insecticides

Ltd. on a special approach made by the undertaking to the Health Ministry that if the Ministry had any need for BHC, they should preferably buy it from the undertaking. The background for this request was that in the year Hindustan Insecticides Ltd. commenced production of BHC from their plant, there was a terrific glut' in the BHC market and it was extremely difficult to sell the BHC in the prevailing competition.' The Committee, however, find that in actual practice, Hindustan Insecticides Ltd. had procured 450 metric tonnes of Technical BHC from M/s. Tata Chemicals and 963 metric tonnes from M/s Kanoria Chemicals. The Committee are unable to understand how the procurement of Technical BHC by Hindustan Insecticides Ltd. from other private producers was agreed to by the Ministry of Health when the Hindustan Insecticides were claiming a glut in production and difficulty in disposing of their stock. The Committee, therefore, desire that the circumstances leading to the procurement of Technical BHC from private producers by Hindustan Insecticides Ltd. should be thoroughly investigated and responsibility therefor fixed and the Committee informed.

[Serial No. 14 (Para 3.14) of Appendix VII to 152nd Report
(Fifth Lok Sabha)]

Action Taken

The proposal for the purchase of 4500 tonnes of BHC 50 per cent w.d.p. was considered in a meeting held in the room of Joint Secretary in the Department of Health. It was known that the Hindustan Insecticides Limited would not be able to supply all the 4500 tonnes of the formulated material from out of their own production in 1972-73 due to operational reasons. They would, however, meet their commitment and for this some quantities may have to be purchased by them from the market. This was noted but it was felt that it would be more convenient to place the entire order on Hindustan Insecticides Limited when they have planned to expand their capacity etc. Accordingly, the Hindustan Insecticides Limited purchased some quantities of Technical BHC from private producers to complete the present contract.

The Ministry of Petroleum and Chemicals have stated as follows:

“It has been ascertained from Hindustan Insecticides Limited that sealed tenders were invited by General Manager, Hindustan Insecticides Limited, (Alwaha) for the required quantities of BHC from all the manufacturers and that a Three-man Committee consisting of the Financial Adviser

and Chief Accounts Officer, the General Manager, Always and the Chief Technical Superintendent, was set up to evaluate the tenders and decide on the purchase. It has also been explained by the Hindustan Insecticides Limited that the decision to purchase BHC Technical from Hindustan Organic Chemicals, Tata Chemicals and Kanoria Chemicals was taken on the recommendation of the Committee taking *inter-alia* into account the cost of formulated 50 per cent BHC to Hindustan Insecticides Limited, capacity of the various formulators, etc. Hindustan Insecticides Limited has also explained that there was no procedural or other mistake in making the assessments in regard to the selection of the parties involved.

In the circumstances, an investigation, as suggested in this paragraph, with a view to fixing the responsibility is not considered necessary."

The note has been seen and vetted by Audit.

[Department of Health O.M. No. G.25015/4/75-C&CD dated
31-12-1975]

CHAPTER IV

RECOMMENDATIONS/OBSERVATIONS REPLIES TO WHICH HAVE NOT BEEN ACCEPTED BY THE COMMITTEE AND WHICH REQUIRE REITERATION

Recommendation

The purchase order was placed on Hindustan Insecticides Ltd., who in turn procured some quantity of technical BHC from various sources and arranged to get it formulated by four different formulators (pesticides India, Udaipur—1730 tonnes, Devidayal (Sales) Private Limited, Bombay—1561 tonnes, Krishichemin Products, Bangalore—970 tonnes and Venkateswara Agrochemicals and Minerals, Madras 240 tonnes) into equivalent quantity of BHC 50 per cent wdp for supply to the National Malaria Eradication Programme. The purchase order initially stipulated that Hindustan Insecticides Ltd. would furnish certificates from the Indian Standards Institution for the entire formulated material and rectify, at its expense, any defect found on testing the material by the Directorate in the field or in the factory. Significantly enough, before the sampling and testing by Indian Standards Institution could begin, Hindustan Insecticides Ltd. had desired that there should be no delay in inspection of the pesticide as the supplies were to be completed within a short period. The NMEP Directorate had, therefore, agreed, in January 1972, to accept supply of the pesticide after field spray test by the Directorate or its representatives at different stations pending receipt of test results (on lot samples) from the Indian Standards Institution. While agreeing to this deviation, the NMEP Directorate apparently assumed that as the pesticide was to be supplied under the ISI mark scheme, the material ordered would conform to the requisite standards. This decision, in the opinion of the Committee, shaped the subsequent course of events making the original contractual stipulation for the replacement of the sub-standard material ineffective and inoperative.

[Serial No. 3 (Para 3.3) of Appendix VII 152nd Report
(Fifth Lok Sabha)]

Action Taken

Department of Health

In accordance with the I.S.I. Mark Scheme as applicable to testing and inspections for certification of B.H.C. 50 per cent w.d.p. the material is required to be tested by the laboratory of the licensee in accordance with the relevant prescribed specifications and the licensee concerned is to maintain the record of tests. Directorate of National Malaria Eradication Programme is basically a field organisation. On matters of standards, it is guided by technical and research organisation, namely ISI. The Directorate of National Malaria Eradication Programme does not conduct specification testing of the insecticides procured. As mentioned above, laboratory tests had been carried out on the BHC supplied by the licensee. As an additional precaution, the Directorate of National Malaria Eradication programme conducted field spray tests on the BHC. Normally, the Directorate of National Malaria Eradication Programme would have awaited for ISI test results but as already indicated the BHC was required for early spray latest by April, 1972. Hence as the results of the field spray tests were found to be satisfactory and the material was required to be used urgently, it was released to units.

The information furnished by the Ministry of Petroleum and Chemicals is reproduced below:—

“The recommendation/observation has been brought to the notice of M/s Hindustan Insecticides Limited for necessary action.”

The note has been seen and vetted by Audit.

[Department of Health O.M. No. G.25015/4/75-C&CD
dated 31-12-1975]

Department of Industrial Development

There is an indirect reference to ISI in the following sentences:

“While agreeing to this deviation, the NMEP Directorate apparently assumed that as the pesticide was to be supplied under the ISI mark scheme, the material ordered would conform to the requisite standards”.

The scheme of quality control agreed upon between NMEP, HIL and ISI clearly envisaged the possibility that some material may be found defective, and thus require rectification. NMEP had full

knowledge of it and therefore there was no basis for making any other assumption. The scheme broke down because NMEP permitted the use of the material pending ISI test reports, apparently on account of urgency but without even consulting the ISI to explore whether testing could be expedited.

[Department of Industrial Development D.O. No. 3 (40) SD&P/
75 dated 21-11-1975]

Recommendation

In respect of alkalinity of the pesticide, the expert opinions of the Director, Central Forensic Laboratory (Dr. H. L. Bami) and the Plant Protection Adviser to the Government of India (Shri S. N. Banerjee) had been sought on the efficacy of using higher-alkaline pesticide in public health programme. Dr. Bami had opined that slight excess of alkalinity would neither affect the suspensibility nor its ultimate use in the field. He had, however, also stressed the need to conform to the specification in manufacture and to exercise due care and caution to ensure that the batches which were manufactured did not exceed the upper limit of 1 per cent of alkalinity as specified by Indian Standards Institution as the specifications were essentially drawn to ensure adequate standards of manufacture as well as safety and efficacy in final use. Shri S. N. Banerjee had also suggested that the Pesticides Sub-Committee of the Indian Standards Institution should examine all standards of these pesticides, while expressing his opinion that slightly alkaline BHC wdp should not make any difference as far as its use in the public health field is concerned. The Committee find with surprise that though the experts had expressed views that slight excess of alkalinity would not affect the use of the pesticide in the public health field, they had not specified the limits upto which the excess alkaline-pesticide could be considered efficacious in the field.

[Serial No. 5 (Para 3.5) of Appendix VII to 152nd Report
(Fifth Lok Sabha)].

Recommendation

The Committee find from the Audit paragraph that on the basis of the opinion of these two experts, the Indian Standards Institution informed the Directorate, National Malaria Eradication Programme, that slight increase in alkalinity upto 1.5 per cent would not materially affect adversely the use of the pesticides in the field. It is further seen from the letter dated 14th August, 1972, from the Indian Standards Institution to the Director, National Malaria Eradication Programme that this decision had been taken on the basis of the advice tendered by the two experts and considering the

fact that till then no adverse report had been received from the field units. It is not at all clear to the Committee how the Indian Standards Institution arrive at the limit of 1.5 per cent particularly when the two experts had not specified any upper limits for alkalinity and adequate scientific data was also lacking. It is also of interest to note that the Pesticides Sub-Committee also had held, in their 42nd meeting, that it was not correct to increase the alkalinity limit in the absence of data, since theoretically it was known that the extra alkaline medium would be an ideal situation for the quicker deterioration of the active ingredient of the pesticide, viz., gamma-isomer. They had also suggested detailed tests. The Committee have been informed that the specification limit for alkalinity has not been revised so far. The decision to utilise 550 tonnes of pesticide with alkalinity of 1.1 per cent to 1.4 per cent was apparently not justified. The Committee would, therefore, like the Ministry to investigate whether the decision to utilise 550 tonnes of the pesticide was justifiable.

[Serial No. 6 (Para 3.6) of Appendix VII to 152nd Report
Fifth Lok Sabha].

Action Taken

Department of Health

As the observations made in these paragraphs primarily concern the Ministry of Industrial Development and Civil Supplies, they were consulted. Their reply is as follows:—

“In the above paragraphs, the specific observation relating to Indian Standards Institution is as below:—

‘It is not at all clear to the Committee how the Indian Standards Institution arrived at the limit of 1.5 per cent particularly when the two experts had not specified any upper limit for alkalinity and adequate scientific data was also lacking’.

As noted by PAC, Indian Standards Institution was guided by the opinion of two experts, namely, Dr. H. L. Bami, Director, Central Forensic Science Laboratory and Dr. S. N. Banerjee, Plant Protection Adviser, Ministry of Agriculture, Government of India, who is also the Chairman of the Pest Control Sectional Committee, AFCD 6 of ISI. When Indian Standards Institution sought their opinion, they presented the observed values of alkalinity, which ranged from 1.1 per cent to 1.4 per cent.

Both gave the opinion that slight increase in alkalinity was not material for the purpose in view. Though they did not state a quantitative figure for an upper acceptable limit, nevertheless they had the values before them. Therefore, it is natural to presume that the values presented could be considered as "slight increase in alkalinity". Since the observed values went up to 1.4 per cent they were merely rounded to 1.5 per cent in the reply to National Malaria Eradication Programme.

In addition, it may be mentioned that the Indian Standards Institution were consulted in the matter by the Directorate National Malaria Eradication Programme. In their letter dated 23rd August, 1972 (Annexure) the Indian Standards Institution had clearly expressed the view that as far as the use of BHC in Public Health Projects was concerned, slight increase in alkalinity up to a limit of 1.5 per cent would not materially affect the suspensibility or, gamma content or the efficacy of BHC w.d.p. They accordingly, recommended that all batches which were reported to have failed in alkalinity could be considered as having satisfied the requirement of the specifications so far as the requirements of National Malaria Eradication Programme were concerned.

The note has been seen and vetted by Audit.

[Department of Health O.M. No. G.25015/4/75-C & CD,
dated 31-12-1975].

Department of Industrial Development

In the above paragraphs, the specific observation relating to I.S.I. is as below:

"It is not at all clear to the Committee how the Indian Institution arrived at the limit of 1.5 per cent particularly when the two experts had not specified any upper limits for alkalinity and adequate scientific data was also lacking".

As noted by P.A.C., I.S.I. was guided by the opinion of two experts, namely, Dr. H. L. Bami, Director, Central Forensic Science Laboratory and Dr. S. N. Banerjee, Plant Protection Adviser, Ministry of Agriculture, Government of India, who is also the Chairman of the Pest Control Sectional Committee, AFCDC 6 of ISI. When ISI sought their opinion, they presented the observed values of alkalinity, which ranged from 1.1 per cent to 1.4 per cent.

Both gave the opinion that slight increase in alkalinity was not material for the purpose in view. Though they did not state a quantitative figure for an upper acceptable limit, nevertheless they had the values before them. Therefore, it is natural to presume that the values presented could be considered as "slight increase in alkalinity". Since the observed values went upto 1.4 per cent, they were merely rounded to 1.5 per cent in the reply to NMEP.

[Department of Industrial Development D.O. No. 3(40)SD&P/75,
dated 21-11-1975].

ANNEXURE

INDIAN STANDARDS INSTITUTION

M. V. PATANKAR
DY. DIRECTOR GENERAL

MANAK BHAVAN
9, BAHADUR SHAH ZAFAR MARG,
NEW DELHI-1.
23rd August, 1972

CMD/38:1 (Pest) NMEP

Dear Dr. Rao,

With reference to my D.O. Letter No. CMD/38:1 (pest) (NMEP) dated 14th August, 1972 and the telephonic discussion which I had with you on date, I write to clarify the position as under:—

We took the opportunity of discussing the effect of increased alkalinity with a few experts in the field and their con-

sidered view is, as far as the use in public health projects is concerned, that the slight increase in alkalinity, upto a limit of 1.5, will not materially effect the suspensibility or gamma content or the efficacy of BHC w.d.p.

Taking this fact into consideration, we feel that all the batches, which were reported to have failed in alkalinity, can now be considered as having satisfied the requirements of the specification so far as your requirements are concerned.

With regards,

Yours sincerely,
(Sd.) M. V. PATANKAR.

Dr. V. Somasundara Rao,
Director, NMEP, Delhi-6.

Recommendation

The Committee are unable to understand how the NMEP Directorate satisfied itself that the gammaisomer content was actually intact in the excess-alkaline pesticide. It is seen from the statement of sampling and testing of BHC w.d.p., furnished to the Committee by Indian Standards Institution, that the first report of failure in alkalinity had been made available only on 3rd May, 1972, by which time more than 60 per cent of the supplies had been distributed to various consignees for spray in the field. The Committee have also been informed that since marking of batch numbers on the packing were not decipherable, it had not been possible to segregate the sub-standard pesticide. Further, the opinion of the two experts had been furnished only in August, 1972, and the pesticide sub-Committee had considered this question only in September, 1972, by which time even the third round of spraying in the field would have been in full swing. Though it has been stated by the Secretary, Ministry of Health and Family Planning that the excess of alkalinity in the pesticide did not affect adversely the public health programme of NMEP, he has also admitted during evidence, that the NMEP Directorate was only concerned with the field spray test and so far as the chemical composition and content of the pesticide was concerned, the Directorate depended upon the control and supervision of the Indian Standards Institution and Hindustan Insecticides Ltd. Apparently, therefore, no detailed scientific investigations whatsoever had been carried out by the Directorate to determine whether the spraying of pesticide having excess alkalinity

produced the desired results. Under these circumstances, the Committee are inclined to think that the active ingredient was not intact in the pesticide found sub-standard in respect of alkalinity.

[Serial No. 7 (Para 3.7) of Appendix VII to 152nd Report
(Fifth Lok Sabha)]

Action Taken

The Directorate of NMEP is basically a field organisation. On matters of standards, it is guided by technical and research organisations like ISI. In their letter No. CMD|38:1 (NMEP) dated 27th November, 1973, (Annexure) the ISI have clearly opined that the Gamma Isomer content of BHC w.d.p. was more than the minimum prescribed under the relevant ISI specifications. It was, therefore, not necessary for the Directorate of NMEP to conduct any further scientific investigations.

The note has been seen and vetted by Audit.

[Department of Health O.M. No. G. 25015/4/75 C & CD,
dated 31st December, 1975.]

ANNEXURE

Copy of letter No. CMD/38.1 (NMEP), dated 27th November, 1973 from the Indian Standards Institution addressed to the Director, N.M.E.P., Delhi-6.

Further to my letter of even number dated 8 October, 1973, it is stated for your information that the pest Control Section Committee, AFCDC 6 of this Institution which met on 30th and 31st October, 1973, has considered the problem of effect of high alkalinity in BHC WDP in the light of the data available and decided to review this problem after collection of more data. The general opinion of the Committee, was that a slight increase in alkalinity as Na_2 to Co_3 would not materially affect the efficacy of BHC WDP in public health programme so long *gamma isomer* of BHC was found within specified limits. In this connection it may be added that when AFCDC 6 had prepared Indian Standard IS: 562 specification for BHC WDP, the Committee had in its view only agricultural use and limit of alkalinity was accordingly fixed, to prevent adverse effect on plants where such limit are critical. Recent use of BHC WDP conforming to the provisions of IS: 562 for public health programme has been found satisfactory, and it is BHC content which is considered critical.

It may be further added that literature survey had shown that dehydrochlorination of BHC in presence of alkali like Na_2Co_3 take place under high temperature and humid conditions not found in normal storage condition. Hence, even on assumption that dehydrochlorination did take place in the supplies under reference, the slight increase in alkalinity (average value 0.17 per cent above maximum limit of 1.0 per cent as Na_2Co_3 will dehalogenate 0.4 per cent *gamma*-isomer only. Since the average *gamma* BHC content of the concerned material was found 7 per cent the calculated content of 6.96 per cent is found to be higher than the required content of 6.5 per cent. After giving full consideration to all these points and obtaining opinion from other experts in the field the ISI had advised NMEP vide the letter of even number dated 14th and 23rd August, 1972, to consider the supply under reference as having met the requirements of the standard as the material was used for public health programme.

It is hoped that the above information will be useful and the matter may be considered as closed.

Yours faithfully,

Sd./- S. K. KARMAKER,

Deputy Director (Central Marks).

Recommendation

Yet another unsatisfactory feature of this case is the way in which the question of penalty for the sub-standard pesticide was handled by the Ministry and the NMEP Directorate. The Committee find that a penalty of Rs. 9,300 has been imposed on Hindustan Insecticides Ltd. only in respect of 275 tonnes of the pesticides with suspensibility below 45 per cent and partly deficient in alkalinity as well, on the basis of the recommendation made by the Indian Standards Institution. In respect of the remaining 1080 tonnes which were also sub-standard, according to the original specifications, the Indian Standards Institution had advised that no penalty need be levied on this quantity as the material was usable and most of it has actually been used. The Committee are unable to appreciate the logic of this argument. The fact remains that this quantity was also below the specifications stipulated in the purchase order.

[Serial No. 9 (Para 3.9) of Appendix VII to 152nd Report (Fifth Lok Sabha)].

Action Taken

Department of Health

As mentioned in reply to para 3.7, the Dte. of NMEP are guided in the technical matters of specifications of BHC by the advice of the ISI. In their letter No. CMD/38:1(NMEP) dated 19th October, 1972 (copy at Annexure) the ISI have very clearly advised that all batches of BHC w.d.p. found to have suspensibility of 45 per cent and above, may be considered to have met the requirement of IS-562 as amended with retrospective effect. Since according to that advice, the material was within the prescribed standards, there was no question of imposing any penalty. It may be added that the ISI advised penalty of Rs. 9,300/- in respect of 275 tonnes of insecticides with suspensibility below 45 per cent. That advice was accepted and the amount recovered.

The note has been seen and vetted by Audit.

[Department of Health O.M. No. G. 25015/4/75-C & CD dated 31-12-1975].

Department of Industrial Development

The cause of PAC's observations is related to two quantities which form the "bulk of the material found substandard" namely, 550 tonnes with excess alkalinity and 530 tonnes with suspensibility ranging from 45 per cent to below 50 per cent. PAC noted, without any comments, the penalty of Rs. 93800 on 275 tonnes of the material with suspensibility below 45 per cent (para 3.9).

In regard to the first two quantities, the position is explained in the preceding comments against para Nos. 3.4—3.6 and 3.8 respectively.

ISI letter No. CMD/38:1 (NMEP) dated 20 October, 1972 on the question of penalty for material with excess alkalinity (which has not been included in the PAC Report) is reproduced below. It clearly states that commercial aspects are outside the purview of ISI. This statement brings out the perspective against which the latter part of the ISI letter should be interpreted.

"Letter No. CMD/38:1 (NMEP)" dated 20 October, 1972 from Shri M. V. Patankar, DDG ISI New Delhi to Dr. V. Somasundara Rao, Director, NMEP Delhi.

Kindly refer to your letter No. 9-17/NMEP(II) dated 12 October, 1972 regarding the supplies of BHC wdp made by M/s. Hindustan Insecticides Ltd.

We appreciate your desire that the ISI should make a recommendation for levy of penalty for the supplies which were found initially to exceed the limit of alkalinity. I am afraid that the ISI being an Institution concerned with laying down of specifications for materials and assessment of quality under the Certification Marking Scheme, the commercial aspects of the supply are outside its purview. We are, therefore, not in a position to recommend any penalty in terms of reduction in payment which you would like to impose on M/s. HIL.

However, in this connection, I would draw your kind attention to our letter of even number dated 23 August, 1972 in which we had indicated that in our opinion BHC wdp with alkalinity upto 1.5 per cent should be considered to satisfy the requirements of the relevant Indian Standards so far as your requirements are concerned. Looking at the

problem from this technical point of view, we are of the opinion that the question of levying of penalty for those batches of BHC wdp having alkalinity of 1.5 per cent maximum may not arise."

The concluding paragraphs of the above letter and letter No. CMD/38:1 (NMEP) of 19 October, [Appendix VI(6) of the PAC Report] have been interpreted by all including ISI as advice from ISI that no penalty was leviable on the two quantities under question. Nevertheless a closer analysis of the letter reveals certain extenuating features which have largely gone unnoticed. Considering that the dealing officer in the ISI is dead and his clarifications of the letters are unavailable, the ISI has drawn attention to these features even at this late stage:

- (i) The ISI letter dated 19 October, 1972 says the question of *recommending* a penalty does not arise, it does not say that the question of penalty does not arise. There is a substantial difference between these two positions. Also the next sentence is extremely important, wherein it is stated "commercial aspects of supply like imposing penalty are outside our purview". The Two sentences together can only mean that recommending penalty does not arise as commercial aspects are outside ISI purview.
- (ii) In ISI's letter dated 20 October, 1972, the principal question of basic importance adequately stressed is again the same, that is "Commercial aspects of the supply are outside our purview". Further, in the concluding sentence the word *may* indicates an option open to NMEP. Significantly this option is open "*looking at the problem from this technical point of view*" and not from any commercial point of view.

[Department of Industrial Development D. O. No. 3(40) SD & P/75 dated 21-11-1975].

S. No. 9—Extract from the Department of Industrial Development O.M. No. 3(40) SD&P/75 dated the 15th October, 1975 addressed to the Department of Health:

The undersigned is directed to refer to the Ministry of Health and Family Planning (Department of Health)'s O.M. No. G-25015/4/75-C&CD, dated the 28th August, 1975 on the subject mentioned above, and to say that in reply to paragraph 3.9 of the Report of the Public Accounts Committee, that Ministry has stated *inter-alia*

that "the ISI has advised penalty of Rs. 9,300 in respect of 275 tonnes of insecticides with suspensibility below 45 per cent. That advice was accepted and the amount recovered." This para of the reply of the Ministry of Health gives an erroneous impression and needs modification, because the factual position has not been brought out in its correct chronological order. In the letter dated the 19th October, 1972 of the ISI it has been clearly stated that the question of recommending a suitable penalty in the form of deduction from payment does not arise. The Institution is concerned with the assessment of the quality under certification marking scheme and the commercial aspects of supply like imposing a penalty are outside the purview of the Institution. It was only at a meeting held in March, 1973, under the Chairmanship of Shri A. B. Malik, the then Joint Secretary in the Ministry of Health and Family Planning, that it was decided that 275 tonnes of material which was found to have a suspensibility below 45 per cent should be subjected to penalty. This Committee also unanimously agreed that the question of quantum of penalty be referred to DG, ISI and that his recommendation should be final. It was only in pursuance of this decision of the Committee that the ISI advised in the matter. It will, thus, be seen that the decision for levying a penalty rested with the Ministry of Health and only on the decision of the Ministry of Health. ISI was asked to advise in the matter.

In view of what has been stated above, it is requested that the reply of the Ministry of Health to paragraph 3.9 of the PAC Report may please be amended and the position of ISI clarified.

*S. No. 9—Extract from the Department of Industrial Development
D.O. No. 3(40) SDP/75 dated the 21st November, 1975.*

The Ministry of Health & Family Planning (Department of Health) in their Action Taken Note under para 3.9, forwarded to the Lok Sabha Sectt. *Vide* their O.M. No. 25015/4/75 C&CD, dated 28-8-1975, and copy endorsed to this Ministry, had not brought out the factual position of the issue relating to the penalty imposed in so far it relates to the ISI. Our views on the Action Taken Note under para 3.9 of the Ministry of Health were conveyed to them *vide* our O.M. No. 3(40) SD&P/75, dated 15-10-1975, asking them to amend their reply accordingly and a copy thereof was also endorsed to the AGCR, New Delhi for necessary action. The Office of the AGCR, New Delhi however, could not make any comments as they had vetted our Action Taken Note, before the receipt of our O.M. dated 15-10-1975.

ANNEXURE

Copy of letter No. CMD/38:1(NMEP) dated 19th October, 1972 from Shri M. V. Patankar, ISI, New Delhi, addressed to Dr. V. Somasundara Rao, Director, NMEP, Delhi-6.

Dear Dr. Somasundara Rao,

Kindly refer to your letter No. 9-17/71-NMEP (II) dated 12-10-72 in respect of the supplies of BHC wdp made by M/s. HIL, which were found to fail in suspensibility requirements as specified in IS:562. About the "Keeping Quality" of BHC wdp and the amendment now made on the recommendation of the Pesticides Sub-Committee AFCDC 6:1 to IS:562 under the powers vested in the Director General of this Institution, it may be recalled that this amendment is practically the same as that made for DDT wdp quite sometime ago. You may be aware that keeping quality clause was introduced in case of DDT wdp in 1964 (see IS:565) because of the storage problem faced by NMEP in respect of the supplies of DDT wdp made to it by HIL. At that time, BHC wdp not being used for public health purposes like Malaria Eradication and hence corresponding amendment to IS: 562 was not made I would venture to state that our Pest Control Sectional Committee, AFCDC:6 overlooked this point at that time. Now that the use of BHC wdp in Malaria Eradication Programme has come to stay, the Committee has given effect formally to a principle which had been agreed to earlier. **Since the issue of the amendment (communicated to you vide our letter of even number dated 14-9-72) was brought about at the instance of HIL with reference to the supplies of BHC wdp made by them during the last few months, I feel that the amendment was to take care of the present problem. Taking into consideration the normal time lapsed between drawal of the samples by our inspecting officers and the testing, and also the fact that the suspensibility test results conveyed to you were after accelerated storage of samples, all the batches of BHC WDP FOUND to have suspensibility of 45 per cent and above may be considered to have met the requirements of IS:562 read WITH the present amendment.**

In view of the clarification given in the foregoing para, I feel that the question of recommending a suitable penalty in the form of deduction from payment does not arise. I must hasten to add that this Institution is concerned only with the assessment of the quality under certification marking scheme and the commercial aspects of supply like imposing a penalty are outside our purview.

Recommendation

Since the material accepted was not according to the original specifications, the Committee are surprised that the NMEP Directorate, as the purchaser of the pesticide, took no action to explore the possibility of a reduction or refixation of price for the quantity found sub-standard with the suppliers but merely remained content with accepting the advice of the Indian Standards Institution, thereby abdicating their rights and responsibilities as buyers. The Committee desire that responsibility should be fixed for this costly lapse on the part of the Directorate. The possibility of obtaining a price reduction for this quantity of 1080 tonnes or recovering an adequate penalty should also be explored.

[Serial No. 10 (Para 3.10) of Appendix VII to 152nd Report
(Fifth Lok Sabha)].

Action Taken

The purchase order for the BHC wdp indicated that material should conform to IS-562 with amendments then in force.

As mentioned under para 3.9, the technical advice of ISI was that 1080 tonnes of BHC wdp conformed to the relevant specifications as retrospectively amended by them. As such the question of reduction or refixation of price for 1030 tons of BHC did not arise. In the circumstances no responsibility can be fixed.

The note has been seen and vetted by Audit.

[Department of Health O. M. No. G. 25015/4/75-C&CD dated
31-12-1975].

Recommendation

To sum up, the Committee are of the opinion that (a) the decision to utilise 550 tonnes of pesticide, with alkalinity, 1.1 per cent to 1.4 per cent was not justified; (b) the introduction of a keeping quality clause in the specification on an *ad hoc* basis retrospectively by the Indian Standard Institution to apply to the supply of 530 tonnes of pesticide found sub-standard in suspensibility is unconvincing; (c) there has been a costly lapse on the part of the NMEP Directorate in remaining merely content with accepting the advice of the Indian Standards Institution on the question of penalty, thereby abdicating their responsibilities as the purchasers of the pesticide; (d) the Indian Standards Institution has clearly functioned beyond its jurisdiction in advising that no penalty was leviable in respect of bulk of the material found sub-standard; and (e) there has been

an avoidable delay of nearly four months in issuing necessary sanction for the purchase in this case which in turn led to deviation in the procedure for inspection and testing. These errors of omission and commission, besides resulting in monetary loss to the Government, have also caused a set-back to the Malaria Eradication Programme in the States in which the sub-standard pesticide has been used. The lapses summarised above are serious and call for fixation of individual responsibility in each case. The Committee desire that this should be done immediately and appropriate action taken against the officials concerned under advice to the Committee.

[Serial No. 12 (Para 3.12) of Appendix VII to 152nd Report
(Fifth Lok Sabha)]

Action Taken

Department of Health

In this connection attention is invited to replies given against Paragraphs 3.1 and 3.10. In view of the position explained, the question of fixation of individual responsibility does not arise.

The note has been seen and vetted by Audit.

[Department of Health O.M. No. G. 25015/4/75—C & D
dated 31st December, 1975]

Department of Industrial Development

The cause of PAC's observations is related to two quantities which form the "bulk of the material found substandard" namely, 550 tonnes with excess alkalinity and 530 tonnes with suspensibility ranging from 45 per cent to below 50 per cent. PAC noted, without any comments, the penalty of Rs. 9,300 on 275 tonnes of the material with suspensibility below 45 per cent (para 3.9).

In regard to the first two quantities, the position is explained in the preceding comments against para Nos. 3.4—3.6 and 3.8 respectively.

ISI letter No. CMD/38 1 (NMEP) dated 20 October, 1972 on the question of penalty for material with excess alkalinity (which has not been included in the PAC Report) is reproduced below. It clearly states that commercial aspects are outside the purview of ISI. This statement bring out the perspective against which the latter part of the ISI letter should be interpreted.

Letter No. CMD/38:1 (NMEP) dated 20 October, 1972, from Shri M. V. Patankar, DDG ISI New Delhi to Dr. V. Somasundara Rao, Director, NMEP Delhi.

Kindly refer to your letter No. 9-17/NMEP(II) dated 12th October, 1972, regarding the supplies of BHC wdp made by M/s. Hindustan Insecticides Ltd.

We appreciate your desire that the ISI should make a recommendation for levy of penalty for the supplies which were found initially to exceed the limit of alkalinity. I am afraid that the ISI being an Institution concerned with laying down of specifications for materials and assessment of quality under the Certification Marking Scheme, the commercial aspects of the supply are outside its purview. We are, therefore, not in a position to recommend any penalty in terms of reduction in payment which you would like to impose on M/s. HIL.

However, in this connection, I would draw your kind attention to our letter of even number dated 23 August, 1972, in which we had indicated that in our opinion BHC wdp. with alkalinity upto 1.5 per cent should be considered to satisfy the requirements of the relevant Indian Standards so far as your requirements are concerned. Looking at the problem from this technical point of view, we are of the opinion that the question of levying of penalty for those batches of BHC wdp having alkalinity of 1.5 per cent maximum may not arise.

The concluding paragraphs of the above letter and letter No. CMD/38:1 (NMEP) of 19 October, (Appendix VI(6) of the PAC Report) have been interpreted by all including ISI as advice from ISI that no penalty was leviable on the two quantities under question. Nevertheless a closer analysis of the letter reveals certain extenuating features which have largely gone unnoticed. Considering that the dealing officer in the ISI is dead and his clarifications of the letters are unavailable, the ISI has drawn attention to these features even at this late stage:

- (1) The ISI letter dated 19th October, 1972, says the question of recommending a penalty does not arise. It does not say that the question of penalty does not arise. There is a substantial difference between these two positions. Also the next sentence is extremely important, wherein it is stated "commercial aspects of supply like imposing

penalty are outside our purview". The two sentences together can only mean that recommending a penalty does not arise as commercial aspects are outside ISI purview.

- (ii) In ISI's letter dated 20th October, 1972, the principal question of basic importance adequately stressed is again the same, that is "Commercial aspects of the supply are outside our purview". Further, in the concluding sentence the word *may* indicates an option open to NMEP. Significantly this option is open "*looking at the problem from this technical point of view*" and not from any commercial point of view.

[Department of Industrial Development D.O. No. 3 (40) SD & P/75 dated 21st November, 1975.]

CHAPTER V

RECOMMENDATIONS/OBSERVATIONS IN RESPECT OF WHICH GOVERNMENT HAVE FURNISHED INTERIM REPLIES

Recommendation

The Committee are of the view that appropriate action should also be taken against the four private formulators [Pesticides India, Udaipur, Devidayal (Sales) Private Ltd., Bombay, Krishichemin Products, Bangalore and Venkateshwara Agro Chemicals, and Minerals, Madras], after proper investigation.

[Serial No. 13 (Para 3.13) of Appendix VII to 152nd Report
(Fifth Lok Sabha)]

Action Taken

Department of Health

The order was placed on the Hindustan Insecticides Limited and there was no direct dealing between the N.M.E.P. and the four formulators. The Hindustan Insecticides Limited were directly responsible for the execution of the contract to the N.M.E.P. Hence, the N.M.E.P. Directorate has no jurisdiction to initiate investigation and action as recommended by the Committee. The matter concerns Ministry of Petroleum and Chemicals.

The note has been seen and vetted by Audit.

[Department of Health O.M. No. G. 25015/4/75—C&CD
dated 31st December, 1975.]

Ministry of Petroleum and Chemicals

The recommendation has been brought to the notice of Hindustan Insecticides Limited to consider what further action could be taken against the parties concerned, in addition to the penalties already imposed on them.

[Ministry of Petroleum and Chemicals D.O. No. C—51012/
1/75-A & I. dated 29th September, 1975.]

Recommendation

The committee would also like to be informed of the final decision taken by the Indian Standards Institution about the safe alkalinity limit for BHC wdp. Since the existing limit of 1 per cent is already high compared to the WHO limit of 0.2 per cent, the Committee see no justification for deviating from that limit.

[S. No. 16 (Para 3.16) of Appendix VII to 152nd Report
(5th Lok Sabha)].

Action Taken

The question of alkalinity (prescribed in IS: 562 BHC Water Dispersible Power Concentrates) in the context of indigenous conditions was under the consideration of the Pest Control Sectional Committee, AFCDC 6 of the Indian Standards Institution. A study made by the Committee indicated the possibility of a theoretical assessment of the effect of slightly high alkalinity or gamma isomer of BHC. The Committee in its meeting held on 28th and 30th June, 1975, discussed the question of alkalinity prescribed in IS: 562-1971 BHC WDFC in the context of its use in public health programmes, like malaria eradication. The relevant extracts from the Agenda and the Minutes of that Meeting are enclosed (See Annexure). It will be observed from the Minutes that the Committee noted that the available evidence and experience indicated that alkalinity upto 2 per cent (as Na₂CO₃) as against 1 per cent now prescribed, could not produce any deterioration in respect of active ingredient (gamma isomer). However, the Committee decided that before finally taking a decision for amending the Standard further, laboratory studies, one for chemical effect and the other for bio-efficiency, should be completed. The studies are in progress and will be considered further. In due course a report on Sectional Committee's discussions and decision will be conveyed to PAC.

This case has focussed attention on the role of Indian Standards Institution in commercial matters. Queries are received in ISI for clarification and interpretation on Standards some of which have commercial and other implications. To avoid any such controversies in future, the ISI have issued the following precautionary instructions to its staff to avoid involvement in commercial questions:

- (i) No advise should be given knowingly on commercial aspects like rates, penalties etc. for supplies not conforming to specifications;

- (ii) To the extent possible technical opinion should be based on the Sectional Committee's recommendation or on opinion expressed by the Chairman or other knowledgeable members;
- (iii) On doubtful cases, the matter should be brought to the notice of the concerned DDG, if necessary even DG;
- (iv) The query should be assessed to discover the purpose behind it and at the end of the letter, the following may be added:

“Commercial or financial issues are outside the purview of ISI. The ISI's views/advice are purely on technical consideration of the specification or functional utilization of the material. Any commercial implications should be examined by your own organization according to applicable rules and procedures”.

The matter is being further reviewed at the highest level to consider whether any fresh instructions are called for in this regard.

[Department of Industrial Development D.O. No. 3 (40)
S.D. & P/75 dated 21st November, 1975.]

ANNEXURE

Extract from the Agenda of 35th Meeting of Pest Control Sectional Committee AFCDC 6 held on 28 and 30 June, 1975

8.2. IS:562—1972—At the thirty-third meeting of AFCDC 6 the requirement of the characteristic of alkalinity in BHC, water dispersible concentrate formulations was reviewed, when the National Institute of Communicable Diseases (NICD) was requested to conduct certain field trials using formulation with varying alkalinity levels. In pursuance of the recommendation made by AFCDC 6, NICD when approached could not undertake the field investigations. The Institute, instead agreed to carrying out laboratory investigations, if samples for test were made available to them.

At 32nd meeting AFCDC 6 when discussing the subject had been informed that it was not possible for the ISI Laboratory to study storage stability of BHC, WDP formulation with alkalinity (as Na_2CO_3) varying between 0.5 and 2.0. However, facilities have now been created in the ISI Laboratory and in view of the inability of NICD to undertake proposed field trials as recommended by AFCDC 6, certain experiments have been undertaken in the ISI Laboratory. Results of these experiments will be tabled at the meeting. In addition details of a theoretical study on the effect of alkalinity on active ingredient content (gamma isomer) will also be brought to the notice of the committee.

Extract from the minute of the 35th meeting of Pest Control Sectional Committee AFCDC 6 held on 28 and 30 June 1975

8.2. IS:562—1972—AFCDC 6 and AFCDC 6:1 considered item 8.2 of agenda. The Secretary informed the committee that the theoretical study on the effect of alkalinity on the active ingredient content (gamma isomer) carried out in the ISI Directorate General and the results of the experimental investigations for studying the effect of different levels of alkalinity (as Na_2CO_3) on the gamma isomer content at three different temperatures had been tabled before the members. The Committee may therefore consider.

Shri Chatterjee wished to know the background which led to the issue. The Committee was then informed that as Indian Standards were used as the basis for supply of materials, problems concerning

the provisions specified in the standard arose from time to time which were brought to the notice of the concerned technical committee for a technical view on the questions raised and guiding the ISI Directorate to deal with the same. Sometimes amendments come up from such references. In this particular case, in the course of procurement of BHC WDP according to IS:562—1972, the question came as to whether the material having a slightly excess alkalinity as Na_2CO_3 over the specified limit, could be accepted for public health use. Expert opinions sought by the ISI Directorate General indicated that slightly excess alkalinity was not likely to affect the use of BHC WDP for public health purposes. Similar opinions had also been expressed at the preceding meetings but without any definite conclusion. It was therefore, proposed that a more definitive view should be reached on the two specific issues, namely:

- (a) Whether the use of BHC WDP formulation for public health purposes would be materially affected if it contained more than 1 per cent alkalinity as Na_2CO_3 ; and
- (b) Whether from the technological point of view the limit for the requirement of alkalinity (as Na_2CO_3) is required to be modified.

There was considerable discussion on the question of efficacy of using slightly excess alkaline material in public health. It was opined by members present that in their experience they did not envisage any adverse effect due to excess alkalinity, upto 2.0 per cent. On the contrary, manufacturers' experience showed that slight excess of alkalinity would help in maintaining suspensibility during storage through more than 2 per cent could affect physico-chemical properties. In any case, no deterioration of the active ingredient (gamma isomer) content was expected. This was evident from the data (tabled at the meeting) which indicated that alkalinity (as Na_2CO_3) even upto 2 per cent did not alter the gamma isomer significantly at temperatures ranging from ambient to 60°C. The Committee was further informed of the experimental investigations which had been conducted in the laboratory of M/s. Hindustan Insecticides Limited where material containing varying levels of alkalinity of upto 2 per cent, had been stored for periods ranging between 3 and 6 months. The results of this investigation showed that the physico-chemical characteristics of the material was unaffected. No deterioration in the active ingredient content had been observed. Another view which emerged was that the material was required to be diluted considerably for application as spray under field conditions. As such, alkalinity at the time of application would be at extremely low concentrations resulting in no adverse effects on the active ingredient content of the material.

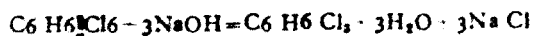
Dr. Wattal stressed the need to conduct laboratory trials to study the effect of varying levels of alkalinity *vis-a-vis* the bio-efficacy of the material. He agreed to have the bio-efficacy trials conducted in his laboratory.

The Committee finally concluded that though available evidence and experience suggested that alkalinity (as Na_2CO_3) upto 2 per cent would not produce any deterioration in active ingredient (gamma isomer) but still to clinch the issue the two laboratory studies (i) for chemical effect, and (ii) bio-efficacy effect for public health uses, should be completed. It was recommended that chemical tests should be conducted in ISI Laboratory as well as in the Indian Agricultural Research Institute and the bio-efficacy test in the National Institute of Communicable Diseases. Representatives of M/s Hindustan Insecticides Limited, M/s Rallis India Limited and M/s Bharat Pulverising Mills agreed to provide necessary samples for test.

(Tabled at the meeting)

A NOTE ON THE EFFECT OF ALKALI ON BHC WDP FORMULATIONS (THEORETICAL)

BHC is susceptible to dehydrochlorination by alkali at room temperature, except the beta-isomer (Pesticides Manual. British Crop Protection Council). In the presence of alcoholic alkali, the alpha, gamma, delta and epsilon isomers readily dehydrochlorinate, liberating 3 moles of HCl per mole to form 65 to 86 per cent 1,2,4,—trichlorobenzene, with 5 to 15 per cent of 1, 2, 3,—and 6 to 15 per cent 1, 3, 5—trichlorobenzenes. The beta-isomer, although reacting very slowly under these conditions at room temperature, dehydrochlorinate at reflux temperature to produce almost exclusively 1, 2, 4—trichlorobenzene (Organic Insecticides by Metcalf). The chemical reaction is as follows:



Therefore

$$120\text{g of NaOH} = 29\text{g of BHC}$$

$$0.01\text{g of NaOH} = 0.097\text{g of BHC}$$

$$\text{or } 0.053\text{g of Na}_2\text{CO}_3 = 0.097\text{g of BHC}$$

Calculating from the equation above :

$$0.1\text{g Na}_2\text{CO}_3 = 0.183\text{g of BHC} = 0.0238\text{g of gamma BHC assuming 13\% gamma BHC in BHC technical}$$

| | |
|---|--|
| 0.2g Na ₂ CO ₃ = 0.366g of BHC = 0.0476g of BHC | assuming 13% gamma BHC in BHC technical |
| 0.3g Na ₂ CO ₃ = 0.549g of BHC = 0.0714g of BHC | Do |
| 0.4g Na ₂ CO ₃ = 0.732g of BHC = 0.0952g of BHC | Do |
| 0.5g Na ₂ CO ₃ = 0.915g of BHC = 0.1190g of BHC | Do |
| 1.0g Na ₂ CO ₃ = 1.83g of BHC = 0.238g of BHC | Do |

Since HC technical contains between 12 to 16 per cent gamma BHC (see IS: 560 Specification for BHC, Technical), as BHC WDPC 50 per cent formulations should contain 6 to 8 per cent gamma BHC. Therefore a formulations with nominal gamma BHC 6.5 per cent+ 10 per cent made out of BHC, technical conforming to IS: 560 could under extreme conditions tolerate upto 1.5 per cent Sodium Carbonate and still have a gamma isomer above 6 per cent (with 1 per cent alkali as Na₂ CO₃) as evident from the statement above.

**RESULT OF A STUDY IN ISI LABORATORY ON THE EFFECT OF
ALKALINITY ON GAMMA ISOMER OF BHC AT DIFFERENT TEMPERATURES**

(Tabled at the meeting)

Per cent Alkalinity

| Na ₂ CO ₃ % Room Temp | 24 Hours | | | 48 Hours | | | 72 Hours | | | 96 Hours | | | 120 Hours | | | 144 Hours | | | 168 Hours | | |
|--|----------|-------|-----------|----------|------|-----------|----------|-------|-----------|----------|-------|-----------|-----------|-------|-----------|-----------|-------|-----------|-----------|-------|-----------|
| | 40°C | 60°C | Room Temp | 40°C | 60°C | Room Temp | 40°C | 60°C | Room Temp | 40°C | 60°C | Room Temp | 40°C | 60°C | Room Temp | 40°C | 60°C | Room Temp | 40°C | 60°C | Room Temp |
| 0.0 | 0.105 | 0.106 | 0.106 | 0.1 | 0.1 | 0.1 | 0.106 | 0.106 | 0.1 | 0.106 | 0.106 | 0.106 | 0.105 | 0.106 | 0.105 | 0.104 | 0.106 | 0.105 | 0.106 | 0.105 | 0.105 |
| 0.5 | 0.30 | 0.31 | 0.29 | 0.31 | 0.32 | 0.35 | 0.31 | 0.32 | 0.33 | 0.32 | 0.31 | 0.31 | 0.31 | 0.31 | 0.31 | 0.31 | 0.22 | 0.31 | 0.30 | 0.32 | 0.31 |
| 1.0 | 0.60 | 0.58 | 0.60 | 0.61 | 0.59 | 0.60 | 0.60 | 0.60 | 0.60 | 0.60 | 0.60 | 0.60 | 0.59 | 0.61 | 0.60 | 0.61 | 0.62 | 0.61 | 0.59 | 0.60 | 0.60 |
| 1.5 | 0.80 | 0.80 | 0.80 | 0.79 | 0.81 | 0.80 | 0.81 | 0.80 | 0.80 | 0.80 | 0.81 | 0.80 | 0.79 | 0.78 | 0.80 | 0.81 | 0.80 | 0.80 | 0.78 | 0.81 | 0.82 |
| 2.0 | 1.30 | 1.25 | 1.30 | 1.27 | 1.24 | 1.25 | 1.30 | 1.25 | 1.30 | 1.30 | 1.30 | 1.30 | 1.29 | 1.30 | 1.31 | 1.30 | 1.30 | 1.29 | 1.31 | 1.29 | 1.28 |

Per cent Gamma Isomer

| | | | | | | | | | | | | | | | | | | | | | |
|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 0.0 | 6.30 | 6.30 | 6.25 | 6.22 | 6.3 | 6.3 | 6.32 | 6.27 | 6.30 | 6.28 | 6.26 | 6.26 | 6.28 | 6.26 | 6.27 | 6.21 | 6.25 | 6.25 | 6.25 | 6.24 | 6.26 |
| 0.5 | 6.12 | 6.28 | 5.96 | 6.20 | 6.26 | 6.03 | 6.30 | 6.19 | 6.26 | 6.24 | 6.21 | 6.20 | 6.24 | 6.23 | 6.21 | 6.18 | 6.20 | 6.21 | 6.21 | 6.18 | 6.18 |
| 1.0 | 6.10 | 6.06 | 5.96 | 6.20 | 6.21 | 5.9 | 6.16 | 6.19 | 6.25 | 6.21 | 6.25 | 6.18 | 6.21 | 6.20 | 6.20 | 6.18 | 6.16 | 6.20 | 6.19 | 6.14 | 6.15 |
| 1.5 | 6.12 | 6.09 | 6.03 | 6.18 | 6.20 | 5.9 | 6.12 | 6.17 | 6.21 | 6.21 | 6.26 | 6.08 | 6.16 | 6.14 | 6.15 | 6.16 | 6.12 | 6.12 | 6.17 | 6.13 | 6.02 |
| 2.0 | 6.08 | 6.04 | 6.04 | 6.12 | 6.14 | 5.9 | 6.10 | 6.18 | 6.17 | 6.18 | 6.15 | 6.06 | 6.13 | 6.10 | 6.11 | 6.15 | 6.0 | 6.07 | 6.14 | 6.12 | 6.04 |

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NEW DELHI;
April 7, 1976.
Chaitra 18, 1898 (S).

H. N. MUKERJEE,
Chairman,
Public Accounts Committee.

APPENDIX

Consolidated Statement of Conclusions/Recommendation

| Sl.No. | Para No. of the Report | Ministry concerned | Conclusions/Recommendations |
|--------|------------------------|---|---|
| 1 | 2 | 3 | 4 |
| 1 | 1·3 | Ministry of Petroleum and Chemicals <hr/> Department of Industrial Development | The Committee wish that in view of the long efflux of time final replies to those recommendations/observations to which only interim replies have so far been furnished will be furnished to them, duly vetted by Audit, without further delay. |
| 2 | 1·8 | Department of Health <hr/> Department of Industrial Development | The Committee regret that the reply now furnished by the Department of Health appears pointless. It was clear during the Committee's examination of the case, and this has also been accepted by the Department of Health, that the NMEP Directorate, being basically a field organisation, was not equipped to conduct specification tests of pesticides procured. So far as the chemical content of the pesticide was concerned, it had to depend upon the effective supervision and testing of Hindustan Insecticides Ltd. and the Indian Standards Institution. It is also evident from the stipulations in the purchase order relating to the furnishing of a certificate from the Indian Standards Institution for the entire formulated material |

and for the rectification of defects, if any, that the possibility of some material being found defective had, in fact, been envisaged by the NMEP Directorate. In the circumstances, as pointed out by the Ministry of Industrial Development itself, the assumption made by the Directorate that as the supplies were required under the ISI mark scheme, the material ordered would *ipso facto* conform to the requisite standard was premature.

3

1-9

Department of
Health

Department of
Industrial Develop-
ment

What is also disturbing is the fact now revealed by the Ministry of Industrial Development that the NMEP Directorate had decided to permit the use of the pesticide, pending the ISI test reports, on the basis of the results of the field spray test conducted by it, without even consulting the Indian Standards Institution and exploring the possibility of expediting the tests by the Institution. The Committee cannot, therefore, accept the contention of the Department of Health. They would reiterate their earlier observation that the decision of the NMEP Directorate to accept supplies of the pesticide, pending receipt of the test results from the Indian Standards Institution after the field spray test by the Directorate, shaped the subsequent course of events making the original contractual stipulation for the replacement of the sub-standard material ineffective and inoperative.

62

4

1-12

Do.

The Committee are surprised that the Indian Standards Institution should have proceeded on what appears to be a hypothetical

presumption that since the observed values of alkalinity presented to the two experts went upto 1.4 per cent, the 'slight increase in alkalinity' and 'slightly alkaline BHC wdp' referred to by the two experts, could be taken to represent alkalinity upto 1.4 per cent and had accordingly informed the NMEP Directorate in August 1972, that a slight increase in alkalinity upto 1.5 per cent would not materially affect adversely the use of the pesticide in the field. The Committee are of the view that the Indian Standards Institution should have sought a more specific clarification in this regard from the two experts, particularly when adequate scientific data was lacking. The Committee fear that the entire question had been handled desultorily and would urge the Indian Standards Institution to exercise greater care in such matters.

5

I-13

Do.

In paragraph 3.6 of the 152nd Report, the Committee had, *inter alia*, desired that the Department of Health should investigate whether the decision to utilise 550 tonnes of the pesticide found to be excess in alkalinity was justifiable. The reply furnished by the Department is just silent on this issue. From the chronological sequence of events set out in paragraph 3.7 of the 152nd Report, it will be seen that by the time the first report of failure in alkalinity had been made available by the Indian Standards Institution, more than 60 per cent of the supplies had been distributed to various consignees for spray in the field and that by the time the opinions of the two experts were available, the third round of spraying of the pesticide in the field would have also commenced. To make mat-

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ters worse, the sub-standard material could also not be segregated since the marking of batch numbers on the packings was not decipherable. Besides, it was only in November 1973, that the Indian Standards Institution had opined that the Gamma Isomer content of the pesticide was more than the minimum prescribed under the relevant ISI specification. In these circumstances and in the absence of any contrary statement from the Department of Health, other than what had already been stated earlier during evidence before the Committee, to justify the decision to utilise the pesticide excess in alkalinity, the Committee can only reiterate their earlier conclusion that this decision was apparently not justified. It would also appear that having decided, in January 1972, to accept supplies on the basis of field spray tests, there was little that the NMEP Directorate could do to extricate itself from an embarrassing situation which had become irretrievable by the time the first report of failure of the pesticide in tests (on lot samples) was received from the Indian Standards Institution.

2

Department of
Health

Department of
Industrial Develop-
ment

The Committee are unable to accept the rather tenuous logic of the Department of Health for not levying any penalty or obtaining a price reduction in respect of 1080 tonnes of the pesticide found sub-standard according to the original specifications stipulated in the purchase order. Though the supply had been regularised subse-

quently by a retrospective amendment of the specifications by the Indian Standards Institution, the fact remains that, from the normal commercial point of view, the supplies actually made had not conformed to the specifications originally prescribed and there had thus been a variation between the pesticide ordered by the NMEP Directorate and that supplied. The Committee are of the view that the NMEP Directorate, as the purchaser of the pesticide, should have taken steps to safeguard the financial interests of Government instead of merely giving in to an unsatisfactory situation. It is significant that though the Indian Standards Institution had recommended a penalty of Rs. 9,300 in respect of only 275 tonnes of the pesticide, which did not conform either to the original or amended specifications, it was apparently from a purely technical consideration of the question, and an option seems to have been open to the Directorate to take all necessary action in so far as the commercial aspects of the transaction were concerned. The Directorate appear, in the Committee's view to have pounced upon the finding of the Indian Standards Institution as a way out of a bad job, instead of asserting their rights and responsibilities as the purchaser of the pesticide with public funds. 5

Do. The Committee would, therefore, reiterate their earlier observations in this regard and desire that responsibility for this costly lapse on the part of the Directorate should be fixed. Government should also, as asked for earlier, explore the possibility of obtain-

furnished by the Department of Health is silent on this issue. The Committee would like to know what action, if any, has been taken in pursuance of this recommendation.

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1-26

Department of
Health

Ministry of
Petroleum and
Chemicals

The Committee note that the question of what further action could be taken against the four private formulators of the pesticide, in addition to the penalties already imposed on them, is to be considered by Hindustan Insecticides Ltd. Some six months have gone since then and the Committee would like to know what has happened.

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| Sl. No. | Name of Agent | Sl. No. | Name of Agent |
|--------------------|---|----------------|---|
| WEST BENGAL | | 32. | Lakshmi Book Store, 42, Municipal Market, Janpath, New Delhi. |
| 21. | Grantholoka, 5/1, Ambica Mookherjee Road, Belgharia, 24-Parganas. | 33. | Bahree Brothers, 188, Lajpat Rai Market, Delhi-6. |
| 22. | W. New Man & Company, Ltd., 3, Old Court House Street, Calcutta. | 34. | Jayna Book Depot, Chhapparwala Kuan, Karol Bagh, New Delhi. |
| 23. | Firma K. L. Mukhopadhyay, 6/1-A, Banchharam Akur Lane, Calcutta-12. | 35. | Oxford Book & Stationery Co., Scindia House, Connaught Place, New Delhi. |
| 24. | Mrs. Manimala, Buys & Sells, 128, Bow Bazar Street, Calcutta-12. | 36. | People's Publishing House, Rani Jhansi Road, New Delhi. |
| 25. | M/s. Mukerji Book House, Book Seller, 8B, Duff Lane, Calcutta. | 37. | The United Book Agency, 48, Amrit Kaur Market, Pahar Ganj, New Delhi. |
| DELHI | | 38. | Hind Book House, 82, Janpath, New Delhi. |
| 26. | Jain Book Agency, Connaught Place, New Delhi. | 39. | Book Well, 4, Sant Nirankari Colony, Kingsway Camp, Delhi-9. |
| 27. | Sat Narain & Sons, 3141, Mohd. Ali Bazar, Mori Gate, Delhi. | 40. | M/s. Saini Law Publishing Co., 1899, Chandni Chowk, Delhi. |
| 28. | Atma Ram & Sons, Kashmere Gate, Delhi-6. | MANIPUR | |
| 29. | J. M. Jaina & Brothers, Mori Gate, Delhi. | 41. | Shri N. Chaob Singh, News Agent, Ram Lal Paul High School Annexe, Imphal.—MANIPUR. |
| 30. | The Central News Agency, 23/90, Connaught Place, New Delhi. | | |
| 31. | The English Book Store, 7-L, Connaught Circus, New Delhi. | | |

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