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Emergency Temporary Standards On Organophosphorous Pesticides

Occupational Safety and Health Administration
Department of Labor

**BY THE COMPTROLLER GENERAL
OF THE UNITED STATES**

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FEB. 24, 1975



COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON, D.C. 20548

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JRS

The Honorable Bill Archer, House of Representatives
The Honorable M. Caldwell Butler, House of Representatives
The Honorable George A. Goodling, House of Representatives
The Honorable James F. Hastings, House of Representatives
The Honorable G. V. Montgomery, House of Representatives
The Honorable Steven D. Symms, House of Representatives
The Honorable Joe D. Waggoner, Jr., House of Representatives
The Honorable Antonio Borja Won Pat, House of Representatives

Gentlemen:

This is our report on the Occupational Safety and Health Administration's (OSHA's) issuance of emergency temporary standards on organophosphorous pesticides. This is our second report in response to your September 24, 1973, request. The first report (B-179768, Jan. 6, 1975) dealt with OSHA's issuance of an emergency temporary standard on carcinogens.

In accordance with your request and later discussions with your offices, the appendix contains (1) a chronological summary of events before and after the issuance of the emergency temporary standards on organophosphorous pesticides and (2) information on the adequacy of the data used by OSHA in support of those standards.

We made our review at the headquarters of OSHA, the Environmental Protection Agency, and the National Institute for Occupational Safety and Health. We interviewed headquarters officials of these agencies and reviewed pertinent laws, legislative history, regulations, and records. We also contacted officials of the Council on Environmental Quality.

As requested, we did not seek formal OSHA comments. However, we did discuss the report's contents with OSHA officials and we considered their views in preparing the report.

B-179768

We do not plan to distribute this report further unless any of you agree or publicly announce its contents.

Sincerely yours,

A handwritten signature in cursive script, reading "James B. Axtell". The signature is written in dark ink and is positioned above the typed name and title.

Comptroller General
of the United States

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ABBREVIATIONS

CEQ	Council on Environmental Quality
EPA	Environmental Protection Agency
NIOSH	National Institute for Occupational Safety and Health
OSHA	Occupational Safety and Health Administration

ISSUANCE OF EMERGENCY TEMPORARY
STANDARDS ON ORGANOPHOSPHOROUS PESTICIDES

Although the Occupational Safety and Health Administration (OSHA) issued two emergency temporary standards for pesticides, neither was ever in effect. The first was withdrawn in June 1973--before its proposed effective date--and was revised because of objections by affected parties. The second, or revised standard, was stayed by the U.S. Court of Appeals for the Fifth Circuit before its effective date and was subsequently vacated (voided) by that court. OSHA took no further action after the court's decision; however, on May 10, 1974, about 1 year after OSHA issued the first emergency temporary standard, the Environmental Protection Agency (EPA) issued regulations establishing a general standard for all agricultural pesticides and specific reentry intervals for 12 pesticides. (Reentry intervals are time periods that employers must keep workers from entering fields or orchards which have been treated with pesticides.)

In June 1974 the Secretary of Labor, in a motion filed with the U.S. District Court for the District of Columbia, stated that (1) EPA possessed clear authority under the Federal Insecticide, Fungicide and Rodenticide Act to prescribe and enforce regulations protecting farmworkers from exposure to pesticides, (2) EPA had exercised that authority, and (3) therefore, he was without power to issue and enforce a permanent pesticide standard.

The court decision to vacate the emergency temporary standard was based on its finding that OSHA did not present sufficient data to show that the standard was needed to protect farmworkers from grave danger--the basic criterion in the law for issuing emergency temporary standards. The absence of such data also was the principal reason for a resolution, which was issued before OSHA's standard, by an OSHA standards advisory committee that an emergency temporary standard should not be issued.

LEGAL AUTHORITY FOR EMERGENCY
TEMPORARY STANDARDS

OSHA's authority to set safety and health standards is contained in section 6 of the Occupational Safety and Health Act of 1970 (29 U.S.C. 655). Section 6 provides that in setting standards dealing with toxic substances OSHA shall set the standard which, to the extent feasible and on the basis of the best available evidence, most adequately insures that no employee will suffer material impairment of health or functional

capacity even if regularly exposed to the substances during his working life.

With certain exceptions section 6 requires that OSHA, before finally setting a standard, publish a proposed standard in the Federal Register, afford interested parties time to comment on the proposal, and conduct hearings on the proposal.

One exception is that OSHA may provide for an "emergency temporary standard" to take effect immediately upon publication in the Federal Register if OSHA determines that (1) employees are exposed to grave danger and (2) the emergency standard is necessary to protect employees from such danger. OSHA used this authority to issue emergency temporary standards to protect farmworkers from organophosphorous pesticides.

CHRONOLOGICAL SUMMARY OF EVENTS

- December 1971 --The White House asked the Council on Environmental Quality (CEQ) to study the feasibility of regulating worker exposure to organophosphorous pesticides under the Occupational Safety and Health Act of 1970.
- January 1972 --CEQ's Federal Working Group on Pest Management agreed to serve as secretariat to a CEQ ad hoc Task Group on Occupational Exposure to Pesticides.
- February 1972 --The President told the Congress in his environmental message that agricultural worker protection was essential to a sound pesticide policy. Also, the President requested the Secretary of Labor to develop standards to protect workers from exposure to pesticides. CEQ's Federal Working Group appointed eight members to the Task Group--three from the Federal Government, four from universities, and the Task Group Chairman from the California Department of Public Health--to study worker exposure to pesticides.
- June 1972 --The Secretary of Labor appointed the OSHA Standards Advisory Committee on Agriculture, which was to give priority to developing recommendations for pesticide standards.
- September 1972--Farmworkers' representatives petitioned the Secretary of Labor to establish an emergency

temporary standard on pesticides. The Department of Labor asked CEQ's Task Group to recommend reentry intervals to be included in standards.

- October 1972 --The Secretary refused the petition of the farmworkers' representatives because there was, in his opinion, inadequate data available for setting reentry intervals.
- November 1972 --CEQ's Federal Working Group sent OSHA a preliminary report suggesting reentry intervals for 22 pesticides when used on certain crops.
- December 1972 --CEQ's Federal Working Group wrote OSHA and stated that, in view of newly discovered data and approaches, it was withdrawing its preliminary report for amendment by the Task Group. The OSHA Standards Advisory Committee unanimously adopted a resolution which said that no pesticide emergency existed and that there was no justification for an emergency temporary standard.
- February 1973 --The Economic Research Service, Department of Agriculture, sent OSHA a report on its study of the economic impact of the reentry intervals suggested in CEQ's preliminary report. CEQ's Federal Working Group told OSHA that it was permanently withdrawing its preliminary report because data was not available to reach justifiable judgments on uniform national reentry intervals.
- March 1973 --The Secretary of Labor asked the OSHA Standards Advisory Committee's Subcommittee on Pesticides for a recommended standard. The Subcommittee then recommended a standard to the Committee with the understanding that it would not be issued as an emergency temporary standard and that an extended period would be provided for public comments and hearings before a standard was finalized. In March 1973 farmworkers' representatives filed suit against the Secretary of Labor for failure to issue an emergency temporary standard on pesticides. A White House counselor suggested that OSHA issue a "one-time" emergency standard as defense against the suit filed by the farmworkers' representatives. The counselor also suggested that, in the future, EPA be primarily responsible for protecting workers from pesticides.

April and
May 1973

--OSHA sent a proposed emergency temporary standard for pesticides to the National Institute for Occupational Safety and Health (NIOSH) for comment. NIOSH commented that protection of workers exposed to certain pesticides was greatly needed and the reentry intervals in the proposed standard--which were based on recommendations in the CEQ Task Group's preliminary report--were as valid as possible in view of available scientific data. On April 19, 1973, the Assistant Secretary, OSHA, signed an emergency temporary standard for exposure to organophosphorous pesticides. Within 3 weeks the Florida Peach Growers Association and other growers' associations petitioned 10 circuits of the U.S. court of appeals to set aside the standard. Later, on the Government's motion, the petitions were consolidated in the U.S. Court of Appeals for the Fifth Circuit. The emergency temporary standard was published in the Federal Register and was to become effective on June 18, 1973. The farmworkers' representatives dropped the suit they had filed in March 1973. The Florida Peach Growers Association petitioned OSHA to revoke the standard or delay its effective date.

June 1973

--The Florida Peach Growers Association petitioned the U.S. Court of Appeals for the Fifth Circuit to stay the standard's effective date pending a decision on the association's prior petition to have the standard set aside. The Secretary suspended the initial standard and announced that it would be revised to consider the objections of the growers' associations. The court dismissed the petitions of the growers' associations as moot. A revised standard was published in the Federal Register and was to become effective on July 13, 1973. Revisions included (1) deletion of 9 of the 21 pesticides originally covered and (2) shortened reentry intervals. OSHA also published a notice which, in effect, was a proposed permanent standard covering the 21 pesticides covered by the original emergency temporary standard and invited public comments and oral testimony at scheduled hearings. The growers' associations petitioned the court to delay the effective date of the revised standard.

- July 1973 --Farmworkers' representatives petitioned the U.S. Court of Appeals for the District of Columbia Circuit to review the revised emergency temporary standard and to reinstate the first standard--the petition was later transferred to the U.S. Court of Appeals for the Fifth Circuit on the Government's motion. The farmworkers' representatives contended that the Department of Labor could not amend an emergency standard because the Occupational Safety and Health Act provided that any emergency standard was to be effective until superseded by a permanent standard (section 6(c)(2)). The Florida Peach Growers Association and other growers' associations filed petitions to vacate the revised standard. Before the July 13, 1973, effective date of the revised standard, the U.S. Court of Appeals for the Fifth Circuit issued a stay of the standard pending a final decision. Representatives of EPA, the Department of Labor, the Office of Management and Budget, the Department of Agriculture, and the President's Domestic Council met and decided that (1) EPA and OSHA would jointly conduct the scheduled hearings on OSHA's proposed permanent standard for the 21 pesticides and (2) EPA would hold additional hearings concerning worker protection from other pesticides. The first joint hearings on OSHA's proposed permanent standard were started in Boise, Idaho.
- August 1973 --The joint hearings in Boise were completed. Additional joint hearings were held in Phoenix, Atlanta, and Washington, D.C. OSHA announced in the Federal Register that its final decision on its proposed permanent standard would take into consideration the information to be obtained during the additional EPA hearings.
- January and February 1974 --The U.S. Court of Appeals for the Fifth Circuit denied the July 1973 petition of the farmworkers' representatives, ruling that OSHA could amend an emergency temporary standard in the same manner in which it could issue one. In the same decision, however, the court granted the petitions of the growers' associations to vacate the revised emergency temporary standard. Farmworkers' representatives petitioned the U.S. District Court for the District of Columbia to

order the Secretary of Labor to issue a permanent standard for the 21 pesticides listed in the first emergency temporary standard. The farmworkers' representatives filed to amend their petition by adding an action to prevent EPA from assuming exclusive authority to regulate worker exposure to pesticides.

- May 1974 --EPA published a permanent standard to protect workers from pesticides. The standard included reentry intervals for 12 pesticides, 9 of which had been included in OSHA's first emergency standard.
- June 1974 --The Secretary of Labor filed a motion with the U.S. District Court for the District of Columbia to dismiss the petition of the farmworkers' representatives on the grounds that the complaint failed to state a claim upon which relief could be granted and that the court lacked jurisdiction over the allegations. The memorandum of points and authorities supporting the Secretary's motion states in part that (1) EPA possesses clear authority under the Federal Insecticide, Fungicide and Rodenticide Act to prescribe and enforce regulations protecting farmworkers from exposure to pesticides, (2) EPA has exercised that authority, and (3) therefore, the Secretary of Labor is without power to issue and enforce a permanent pesticide standard.^{1/}
- October and November 1974 --The U.S. District Court for the District of Columbia denied the January 1974 petition, as amended, of the farmworkers' representatives and dismissed the case. The farmworkers' representatives appealed this decision to the U.S. Court of Appeals for the District of Columbia Circuit.

^{1/}Section 4(b)(1) of the Occupational Safety and Health Act of 1970 states that "Nothing in this Act shall apply to working conditions of employees with respect to which other Federal agencies * * * exercise statutory authority to prescribe or enforce standards or regulations affecting occupational safety or health."

As of January 10, 1975, the appeal of the farmworkers' representatives to the U.S. Court of Appeals for the District of Columbia Circuit was pending.

DATA USED BY OSHA TO SUPPORT
EMERGENCY TEMPORARY STANDARDS

OSHA's first emergency temporary standard, issued on May 1, 1973, covered 21 pesticides and provided for the protection of farmworkers mainly by establishing reentry intervals. The justification section of the published standard stated that:

- The pesticides were highly toxic.
- Premature exposure to the pesticides would pose a grave danger.
- The farmworkers had been, were being, and were expected to be in the near future exposed to these pesticides.
- The standard was necessary to regulate exposure to protect the workers.

The revised emergency temporary standard, issued on June 29, 1973, covered 12 of the 21 pesticides specified in the first standard and shortened most of the earlier proposed reentry intervals. The preamble to the standard stated that careful review had been given to the first emergency temporary standard on pesticides and it had been determined that (1) certain pesticides listed in the first standard were not necessarily highly toxic, (2) the first standard was broader than necessary as it applied to pesticides which were not considered highly toxic, and (3) the number of pesticides and the corresponding reentry intervals had been changed to reflect the recommendations made by the OSHA Standards Advisory Committee.

As previously mentioned, the Florida Peach Growers Association petitioned the U.S. Court of Appeals for the Fifth Circuit to set aside the emergency temporary standards. In response OSHA submitted a list of 220 documents and a list of 18 documents to the court and certified that the documents listed constituted the entire basis for the issuance of the first emergency temporary standard and the revised emergency standard.

The preamble to the first emergency temporary standard cited several major sources of information used to support the issuance of the standard. These sources were (1) CEQ's Task Group, (2) the OSHA Standards Advisory Committee and its Subcommittee on Pesticides, (3) NIOSH, and (4) Senate Report 1282 (91st Cong., 2d Sess. (1970)).

Recommendations of CEQ's Task Group

In response to a Department of Labor request, CEQ's Federal Working Group submitted a preliminary special report on November 10, 1972, to the Assistant Secretary for Occupational Safety and Health suggesting reentry intervals for 22 federally registered organophosphorous pesticides. (The pesticide "Gardona" was included in the report but was not included in the emergency temporary standards.) The CEQ Task Group prepared the report and it covered the use of pesticides on oranges, lemons, grapefruit, apples, tobacco, peaches, and grapes. In a letter transmitting the report, the Chairman of the Federal Working Group stated:

"The Special Report provides starting figures and limited supportive data on a very complex problem. * * * It is important to emphasize that the reentry intervals suggested are based on current knowledge. As more scientific data are developed, it may be necessary to revise either upward or downward."

On December 5, 1972, the Federal Working Group again wrote to the Assistant Secretary stating that:

" * * * new and previously unavailable data and new approaches have been found that now make it imperative that this Special Report be amended by the Task Group. We are therefore withdrawing this Special Report for amendment by the Task Group."

On February 23, 1973, the Chairman of the Task Group wrote to the Chairman of the Federal Working Group and stated that the Task Group had decided to reject its own preliminary report for the following reasons:

(1) There was not sufficient data to make more than a professional estimate of reentry intervals--the Task Group felt that the establishment of reentry intervals must be based on objective scientific data.

(2) Uniform reentry intervals were, in the view of the Task Group, impossible to establish since regional cropping practices and climatic and other conditions were too variable.

(3) The Task Group saw no evidence that a national emergency existed with the problem of reentry, although special problems which indicated that some local action might be necessary had been identified on a regional basis.

(4) The Task Group was still working on the standardization of research guidelines for establishing reentry intervals.

The Chairman of the Task Group stated that the preliminary report which the Task Group had rejected illustrated the inability of expert committees to arrive at valid reentry intervals. The Task Group, he said, had concluded that there was inadequate scientific information for any agency to establish uniform reentry intervals for any pesticide at that time.

Recommendations of the OSHA
Standards Advisory Committee
and Subcommittee on Pesticides

In December 1972 the Subcommittee on Pesticides unanimously adopted a resolution which stated that no pesticide emergency existed and that there was no justification for an emergency standard. The resolution was adopted unanimously by the entire Standards Advisory Committee.

On March 15, 1973, the Subcommittee recommended to the Committee a proposed permanent standard with reentry intervals for 12 pesticides. The reentry intervals were generally shorter than those suggested in November 1972 by the CEQ Task Group. The Subcommittee proposed the reentry intervals as initial national standards and recommended that States develop intervals more appropriate to their conditions through the State OSHA programs.

The intervals proposed by the Subcommittee were developed by research entomologists at Auburn University, Auburn, Alabama, where the Chairman of the Subcommittee was head of the entomology department. The Chairman, in presenting the intervals to the Subcommittee, stated that good data was not available for setting reentry intervals and that the entomologists had limited knowledge of the use of pesticides in arid areas.

Nevertheless, on May 1, 1973, OSHA promulgated an emergency temporary standard, which included reentry intervals that were generally longer than those recommended in the Subcommittee's proposed permanent standard for pesticides.

On May 9, 1973, the Chairman of the Subcommittee resigned and stated that many of the recommendations of the Standards Advisory Committee had been totally ignored in the standard issued. In his letter of resignation he stated:

"I was shocked to learn of the Emergency Temporary Standard for Exposure to Organophosphorous Pesticides, published in the Federal Register May 1, 1973. The Advisory Subcommittee on Pesticides worked many hours and conferred with leading scientists throughout the United States

during the past 9 months assisting OSHA in developing a realistic reentry standard to protect employees from hazards from certain organophosphorous insecticides. We considered many controversial aspects of the problems associated with exposure to pesticides and encountered some that were so controversial that agreement was difficult to reach. However, there was no disagreement in the Subcommittee regarding the absence of any need for an emergency standard. Its enactment has created unnecessary problems.

"In the preamble to the emergency standard, an official of the Department of Health, Education, and Welfare was quoted as estimating 800 persons are killed and another 800,000 [sic] injured each year with pesticides. We would like to see the proof of this 'estimate'. A diligent search by the Subcommittee revealed that relatively few deaths in the United States could be attributed to pesticides and those that did occur resulted primarily from persons drinking the chemical through accident or suicide. The number of pesticide-related deaths was much smaller than for household chemicals and non-prescription drugs. The emergency standard deals with employees re-entering treated orchards or fields. The Subcommittee was unable to find a single authentic record of a fatality resulting from a person entering or working a field treated with a pesticide.

"* * * A survey of pesticide safety specialists at all the Land-Grant universities revealed that no problems had arisen from workmen entering pesticide treated fields in a majority of the states and only minor problems in others.

* * * * *

"The Subcommittee on Pesticides was unanimous in its recommendation that no emergency existed and that there was no justification for emergency standards. This recommendation was made verbally at several Subcommittee meetings and adopted unanimously as a written resolution at the Iowa City meetings on December 19 and 20, 1972. The resolution was also adopted unanimously by the entire Advisory Committee on Occupational Safety and Health in Agriculture at the same meeting."

NIOSH's review of the proposed emergency standard

NIOSH reviewed OSHA's proposed emergency temporary standard and in April 1973 wrote to OSHA. NIOSH stated that

- it was aware of the inherent toxicity of organophosphorous pesticides and the hazard which they might present to fieldworkers under certain situations,
- protection for workers exposed to these agricultural chemicals was greatly needed,
- the concept of reentry intervals provided an effective means to furnish such protection, and
- the proposed reentry intervals were as valid as the present state of scientific knowledge permitted.

Senate report containing an estimate of the number of deaths and injuries resulting from the use of pesticides

The preamble to the first emergency temporary standard quoted Senate Report 1282 (91st Cong., 2d Sess.) as follows:

"While the full extent of the effect that such chemicals have had upon those working in agriculture is totally unknown, an official of the Department of Health, Education, and Welfare stated, during hearings of the Migratory Labor Subcommittee, that an estimated 800 persons are killed each year as a result of improper use of such pesticides, and another 80,000 injured."

This testimony was given on August 1, 1969, before the Subcommittee on Migratory Labor, Senate Committee on Labor and Public Welfare. The Director, Division of Community Studies, Office of Product Safety, Food and Drug Administration, estimated that between 150 and 200 pesticide-related deaths were reported each year. The Chairman of the Subcommittee stated that he read or heard that actual deaths attributable to pesticides were about four times greater than reported deaths. The Director said he would not reject that estimate and estimated the ratio of illnesses to deaths at about 100 to 1-- although he said this figure was indefensible. The Chairman then projected the number of deaths relating to pesticides to be 800 a year and the number of illnesses to be 80,000 a year.

Subsequently, the Department of Health, Education, and Welfare submitted to the Subcommittee a statement which said that data showing the number of occupational deaths and illnesses relating to pesticides was not available.

Decision by the U.S. Court of Appeals
for the Fifth Circuit

OSHA's basis for the first emergency temporary standard on pesticides--issued May 1, 1973, and withdrawn June 15, 1973--and the additional data cited in issuing the revised standard on June 29, 1973, were submitted to the U.S. Court of Appeals for the Fifth Circuit.

On January 9, 1974, the court vacated the revised emergency standard for pesticides. The court found that the reasons published by the Secretary of Labor were not themselves evidence of a factual need for an emergency standard. The court stated that the Secretary's heavy reliance on the toxicity per se of the pesticides to support the allegedly grave danger was unjustified. The court stated also:

"In the published standards the Secretary seems to rely on the Senate report 'that an estimated 800 persons are killed each year as a result of improper use of pesticides, and another 80,000 injured.' This report refers to improper use, and encompasses all pesticides."

The court found that the Secretary of Labor had not shown substantial evidence that agricultural workers were exposed to a grave danger and must necessarily be protected by an emergency temporary standard. The court stated,

"We, of course, do not intimate any opinion as to the feasibility of the published standard to furnish adequate protection, were an emergency shown, nor does our determination in any way reflect consideration of the propriety of a permanent standard * * *."

On the other hand, growers' associations referred the court to documents detailing the generally mild nature and relatively few cases of illness reported by crop workers exposed solely to pesticide residues. The court stated that (1) the Subcommittee on Pesticides had reported that it was unable to find a single authentic record of a fatality resulting from a person entering or working in a field treated with a pesticide and (2) the Secretary of Labor had pointed to no evidence to the contrary. The court further stated:

"We reject any suggestion that deaths must occur before health and safety standards may be adopted. Nevertheless, the danger of incurable, permanent, or fatal consequences to workers, as opposed to easily curable and fleeting effects on their health, becomes important in the consideration of the necessity for emergency measures to meet a grave danger."

APPENDIX

In October 1974 an official in the Department of Labor's Office of the Solicitor told us that, in line with the court's expressed concerns, the criteria for "grave danger" had been "further articulated" since the pesticides litigation. According to the official, present criteria define a "grave danger" as consisting of either

- a new condition, not contemplated by existing standards, which is producing serious illness, injury, or death of employees in numbers sufficient to suggest a cause-effect relation between the disability and the danger or
- a long-standing condition about which data has been newly developed or recognized showing exposure of a substantial number of employees to health or safety dangers which are irreversible, permanent, fatal, or serious in either the short or the long term.

In November 1974 OSHA officials told us that OSHA did not have a written definition of grave danger when the emergency temporary standards were issued. The comments by the CEQ Task Group and the Subcommittee on Pesticides and the decision by the court indicate that the data OSHA used in issuing the emergency temporary standards on pesticides would not have met the grave danger criteria as defined above.