(3) No grant may be made under this Act to any private profit-making organization.

* * * * *

31. By adding a new paragraph as (f) to § 45.135 to read as follows:

§ 45.135 Supplemental grant conditions.

* * * * *

(f) Training grants awarded under the Resource Conservation and Recovery Act will be subject to the following condition: Any training program or project for which a Federal grant is awarded to a State, interstate, municipal or local authority, agency or institution shall be the subject of public participation consistent with Part 249 of this chapter.

§ 45.145 [Amended]

32. By revising the reference to "§ 30.701" to read "§ 30.705."

[FR Doc.77-30614 Filed 10-19-77;8:45 am]

federal register

THURSDAY, OCTOBER 20, 1977

PART V

DEPARTMENT OF THE INTERIOR

Office of Surface Mining Reclamation and Enforcement

■

SURFACE MINING CONTROL AND RECLAMATION

Restrictions of Financial Interests of State and Federal Employees

[4310-05]

Title 30—Mineral Resources

CHAPTER VII—OFFICE OF SURFACE MINING RECLAMATION AND ENFORCEMENT, DEPARTMENT OF THE INTERIOR

PART 705—RESTRICTION ON FINANCIAL INTERESTS OF STATE EMPLOYEES

PART 706—RESTRICTION ON FINANCIAL INTERESTS OF FEDERAL EMPLOYEES

Monitoring and Enforcing Restrictions of Financial Interests of State and Federal Employees Performing Functions or Duties Under Surface Mining Control and Reclamation Act of 1977

AGENCY: Office of Surface Mining Reclamation and Enforcement, U.S. Department of the Interior.

ACTION: Final rules.

SUMMARY: The regulations in Part 705 establish provisions for monitoring and enforcing financial interest restrictions applicable to employees of the State Regulatory Authority performing any function or duty under the Surface Mining Control and Reclamation Act of 1977 in order for the State to be eligible for reimbursements or grants under the Act. The proposed regulations in Part 706 establish provisions for monitoring and enforcing financial interest restrictions which apply to Federal employees performing any function or duty under the Act in order to be in compliance with the Act. These regulations provide the methods by which prohibited financial interest situations involving employees performing under the Act can be identified and remedied.

EFFECTIVE DATE: November 21, 1977.

FOR FURTHER INFORMATION CONTACT:

Director, Office of Surface Mining Reclamation and Enforcement, U.S. Department of the Interior, Washington, D.C. 20240, 202-343-4237.

SUPPLEMENTARY INFORMATION:

I. BACKGROUND

On August 23, 1977, Interior issued proposed regulations under Parts 2170 and 2171 to implement Sections 201(f) and 517(g) of the Act (42 FR 42540-42546). As final rules, these Parts are 705 and 706, respectively.

Sections 201(f) and 517(g) of the Act make it a crime for employees performing any function or duty under the Act to knowingly have a direct or indirect financial interest in any coal mining operation. The Act further directs the Secretary to publish regulations which establish methods for monitoring and enforcing the prohibition, including provisions for the filing and review of financial interest statements.

The Secretary promulgates these regulations recognizing the clear Congressional intent that affected employees maintain the highest standards of honesty, integrity and impartiality to avoid even the appearance of conflict of interest.

The direct or indirect financial interests of an employee's spouse, minor child, or other relatives who are full-time members of the employee's home are considered to be the financial interests of the employee. Disclosure of these interests will bring to the reviewer's attention any direct or indirect financial interests in coal mining operations which the employee may be deriving from interests of other family members and relatives. Disclosure will also preclude employees from transferring prohibited financial interests to close family members or relatives in order to avoid the provisions in the Act.

In keeping with the legislative intent and at the suggestion of several States, these regulations place as much responsibility as possible upon the individual States. States are responsible for resolving prohibited financial interest situations, and for initiating action to impose the penalties of the Act within their existing laws, regulations and personnel programs in order to meet the requirements of the Act. Care has been taken to specifically separate the responsibilities of the Federal Government from those of the individual States and to guard against the imposition of excessive Federal requirements upon the States.

The same high standards applicable to covered employees of the State agencies apply to covered employees of the Federal Government under the separate regulations in Part 706. With regard to covered employees of other Federal agencies, it is proposed that each agency have as much latitude as possible in resolving prohibited financial situations and in enforcing the requirements within these regulations. Other Federal agencies' implementation must be consistent with the regulations developed for employees of the Department of the Interior.

II. COMMENTS

The Director, Office of Surface Mining Reclamation and Enforcement, received 15 written comments and 12 oral comments on the proposed rules published in the FEDERAL REGISTER on August 23, 1977. Most of the comments received were addressed to Part 705 implementing Section 517(g) for State employees. Where changes have been made in response to these comments, the same changes have been adopted in Part 706 applicable to Federal employees.

Subsequent paragraphs discuss the major comments received.

1. *Authority to enforce the regulations.* Two commenters took exception to the provisions of § 705.1 that the States must adopt the minimum provisions in proposed Part 705 in order to be eligible for reimbursements under Section 502, grants under Section 705, or primary regulatory authority under Section 503 of the Act. One commenter stated that there is no legislative authority for the Secretary to require adoption of the financial interest provisions as a prerequisite to the implementation of Section 503 or 705. The second commenter stated that there is no statutory authority for withholding reimbursements to the States under Section 502 of the Act on the basis that the States do not have regulations relating to direct and indirect financial interests which meet the minimum Federal requirements.

These views were not accepted. Section 517(g) of the Act directs the Secretary to "establish methods by which the provisions of this subsection will be monitored and enforced". No stipulation is placed on what the methods can or cannot entail. Further statutory support for the methods proposed is found in Section 201(c)(2) which states: "The Secretary, acting through the Office, shall publish and promulgate such rules and regulations as may be necessary to carry out the purposes and provisions of this Act". It has been determined that (i) adoption by the States of the minimum financial interest provisions in Part 705 of these regulations is necessary to carry out the purposes and provisions of Section 517 (g) of the Act, and (ii) the most effective enforcement method available to ensure that the States adopt these financial interest provisions is to tie such adoption to the desirable program provisions of Section 502 reimbursement funds, Section 705 grant funds, and Section 503 State program approval.

Similarly, three commenters objected to the provisions of § 705.6(b) that an employee who fails to file the required financial interest statement would be in violation of a condition of employment and therefore be subject to removal from his or her position. All three commenters stated that the proposed requirement goes beyond the statutory authority of the Act by attempting to expand on the penalties provided in the Act. In addition, one commenter misinterpreted the proposed provisions in § 705.6(b) by suggesting that the provisions mean that the Federal Government would have authority to order removal of a State employee found to have a prohibited interest.

These views were rejected on the basis that (i) Sections 201(f) and 517(g) prohibit certain Federal employees and any State Regulatory Authority employees who perform any functions or duties under the Act from having a direct or indirect financial interest in any underground or surface coal mining operation, and (ii) without a complete financial statement it could not independently be determined if an employee is in compliance with Section 517(g). Therefore, filing of the statement does in fact become a condition of employment both for certain Federal employees and State Regulatory Authority employees who perform functions or duties under the Act.

2. *Effective date of monitoring and enforcement procedures.* Three commenters questioned the requirement of § 705.13(a)(1) to obtain statements of employment and financial interest from State employees within 120 days of the enactment of these regulations. A Federal agency sought a deferral to March 31, to make the filing date compatible with other conflict of interest filing requirements in that agency. One State

agency believed the 120 day timeframe was unrealistic and another contended the first filing should be as late as February 1979, the deadline for State program submission.

Under the Administrative Procedure Act, these regulations go into effect 30 days after publication. Therefore, it is necessary to provide prompt assistance to affected employees in identifying and resolving any prohibited financial interest situations. The 120 day timeframe for filing was selected as a practical limit based on consultations with numerous State officials during the original drafting of these regulations. This initial filing requirement is being retained in §§ 705.13(a)(1) and 706.13(a)(1). To provide more administrative flexibility for subsequent anual filings, the specified February 1 date has been modified to provide for the Director's approval of some other date insofar as such other date still permits the Director to meet reporting requirements to the Congress.

One commenter suggested that while more than 90 days would not ordinarily be required, the time required for remedial action to resolve a prohibited interest for a State employee be increased from 90 days to 180 days in order to provide additional time for remedial action when this would minimize financial loss to the employee. The commenter also suggested that the Head of the State Regulatory Authority be provided an additional 30 days after the 180 day period expired to report noncompliance cases to the Director.

These changes have not been adopted. In most instances, 90 days should be a reasonable and sufficient time period in which to resolve prohibited financial interests, within the intent of Section 517 (g), particularly in consideration of the criminal penalty that may apply in such instances. In addition, § 705.19(b)(3)(i) of the regulations provides that the Director may, after receiving a noncompliance report from the Head of a State Regulatory Authority, grant additional time to the Head of the State Regulatory Authority for the resolution of prohibited interests. The Department, however, prefers to treat such extensions of time as exceptions beyond 90 days rather than the rule. Also, while it is recognized that noncompliance situations may not be reported precisely on the 90th day, prompt reporting is expected. This should be less than 30 days except in rare instances.

3. *Proposals to delete or change procedural requirements.* One commenter suggested deletion of many procedural provisions of these regulations, either because they required undue effort or because there was no authority under the Act for such procedures. Among the more significant changes of this nature sought by the commenter was deletion of requirements that: (i) The Head of the State Regulatory Authority and the Director determine that employees had correctly identified prohibited interests from those listed on their statement of employment and financial interests § 705.4 (a)(2) and (b)(2); (ii) the Head of the State Regulatory Authority and the Director determine that prohibited interests have been resolved (§ 705.4 (a)(4) and (b)(4)); (iii) appeals procedures be established outside of those which already exist for dealing with criminal penalties (§ 705.21), and (iv) employees provide details regarding prohibited interests (§ 705.17(c)(3)). After careful reconsideration of these and other procedures recommended for deletion, it has been concluded that these are in fact necessary and consistent with the Section 517(g) requirement that methods be established by which provisions of this section of the Act will be monitored and enforced, including appropriate provisions for filing and review of statements.

One commenter stated that requirements of § 705.11 (b), (c), and (d) for the Head of the State Regulatory Authority to prepare and submit lists of positions not performing functions or duties under the Act is a tremendous burden and meaningless. A positive list should be required. Based on this comment, new wording was selected to lessen the reporting burden. Heads of multifaceted State Regulatory Authorities now may list the title of entire boards, offices, bureaus, or divisions within the State Regulatory Authority which do not perform functions or duties under the Act. This means that the list of personnel not performing functions or duties under the Act will be limited to only those positions on boards or in offices, bureaus or divisions which are responsible for implementing any provisions of the Act. Subpart 705.11 has been changed accordingly.

The justification for maintaining a negative listing (that is a list of positions not performing under the Act) is that such a listing will assist the Secretary with his responsibility for monitoring and enforcing the provisions of Section 517(g). Specifically, the monitoring responsibility will include audits to determine if the States are complying with the provisions in Section 517(g) of the Act. One important aspect of these provisions will be the justification criteria being used to identify employees not performing any functions or duties under the Act. It is this justification and not a justification for covered employees which is most likely to be requested by members of Congress or others who wish to review the application of Section 517(g) provisions. Consequently, the suggestion for using a positive listing is not adopted.

One commenter suggested deletion of the prohibition against employment in coal mining operations because the word "employment" does not appear in Section 517(g) of the Act. Similarly, the commenter requested deletion of references to "security", "real property" and "creditor" on the basis that there is no authority in Section 517(g) to cover these types of financial interests. These changes have not been adopted. The accepted definitions of "interest" include the right to a benefit, clearly a situation which pertains to employment, ownership and creditor relationships. Further, the existence of employee/employer, ownership and creditor relationships that conflict with official duties is the type of situation that Section 517(g) intended to prevent.

4. *Definitions.* a. *Covered employees.*—Five commenters said that the terms "employee" and "function or duty under the Act" were not adequately defined in § 705.5. They suggested various groups should be excluded from the definition, i.e. State consultants, secretaries, receptionists, clerical personnel, lab personnel, and advisory board or commission members.

Based on the Department's responsibility to develop definitive regulations which implement the Act, and in order to enhance consistency between and among the States and to avoid confusion, the Department has clarified the term employee in § 705.5 to include advisory board or commission members and consultants who perform any function or duty under the Act, if they perform decisionmaking functions for the State Regulatory Authority under the authority of State law or regulations. An exception has been made for members of advisory boards or commissions which are established to represent multi-interests in accordance with requirements of State law or regulations. This exception is necessary to avoid dismembering boards or commissions composed in such a manner as to represent divergent interests.

To provide further guidance as to which members of the State Regulatory Authority are covered employees for the purpose of these regulations, we have added a definition of the term "performing any function or duty under this Act". This term means those functions or duties of an employee which, by their decisions or actions or by their failure to act, affect the programs under the Act. This definition should not be interpreted as excluding all support and clerical personel. Those who may act with considerable independence or are otherwise in a position to affect the agencies' programs are covered employees under this definition. This approach was adopted in lieu of specifying job titles of employees who are covered or not covered since the actual duties that go with such job titles will vary widely. It will be necessary for State officials to apply the definition of "performing any function or duty under this Act" for groups of employees having common job duties and for other situations on a case-by-case basis in order to identify noncovered employees.

b. *Prohibited interests.*—Eight commenters stated that the terms "conflict" and "direct or indirect financial interests" were not precise or explicit, and that clarification of these terms was one of the most important issues. Two commenters suggested deletion of the terms "conflict" and "conflict of interest" because these terms do not appear in Section 517(g) of the Act. These and other commenters suggested various situations which should not be considered as prohibited financial interests, as follows:

(1) Determination of the existence of a direct or indirect financial interest should be linked to a situation where an employee's judgment and decisionmaking role is affected. The most frequently mentioned issue was to permit interests by covered employees in coal mining operations which did not come under their inspection, decisionmaking or jurisdiction. For example, four commenters suggested that a covered employee be allowed to retain financial interests in coal mining operations in States other than the one in which he or she is employed. Similarly, one commenter suggested that the employee should be required to certify only to financial interests which create a conflict, rather than to certify to interests held in coal mining operations.

(2) A de minimis provision should be adopted. Specifically, one commenter suggested that interests of less than 10 percent of the outstanding stock of a business entity should be considered insignificant and therefore not reportable.

(3) Retirement benefits, whether or not guaranteed, should not be considered a financial benefit.

In response to these comments, several changes have been made in these final rules in §§ 705.5 and 706.3. The terms "conflict" and "conflict of interest" have been deleted as both confusing and lacking a statutory base. It is, however, recognized that the statutory history reflects an intent to prohibit conflict of interests and this has been taken into consideration in redefining indirect interests as discussed subsequently.

In lieu of "conflict of interest", the term "prohibited financial interest" has been adopted in light of the statutory restrictions on certain interests. The suggestions for excluding certain financial interest and employment situations from direct interest could not be considered because Section 517(g) of the Act specifically prohibits any covered employee from having a direct interest in a coal mining operation. This statutory requirement also extends to indirect interests, but there is more flexibility to distinguish between conflict and nonconflict situations in defining the term "indirect financial interest".

In these final rules, direct financial interest is defined in terms of what constitutes any financial interest in coal mine operations held by a covered employee. No exceptions are recognized in light of the specific prohibitions of the Act.

In these final rules, indirect financial interest is defined as beneficial ownership (i.e. investments not held in the employee's name but from which he or she reaps the benefits). The definition includes financial interests of the employee's spouse, minor children and other relatives residing in his or her home, except where such financial interests are unrelated to the functions or duties of the employee. It is clear that the potential for conflict increases the closer the relationship of such financial interest to the employee's job duties. Over time, it is expected that through the decisionmaking, appeals and oversight processes, more explicit guidance will be developed by the Director.

One commenter suggested that, to assure impartiality, no covered employees should have been employed or held an elected or appointed office in an organization which has taken a public position on coal surface mining within three years of his employment by a State Regulatory Authority. This suggestion has not been adopted. No statutory authority exists in Section 517(g) of the Act for this, nor does the legislative history suggest that this would be a reasonable inference of the intent of the Act.

c. *Coal mining operations.* Two commenters questioned whether companies that manufacture equipment for production or safety in mining operations or produce pollution control equipment are engaged in coal mining operations for the purpose of these rules. The answer is no. The definition of coal mining operation in §§ 705.5 and 706.3 of these rules addresses those companies which are in the business of developing, producing, preparing or loading various types of coal or of reclaiming the areas upon which such activities occur.

The same two commenters questioned whether diversified companies, engaged in coal operations and many other activities, are considered to be engaged in coal mining operations for the purposes of these rules. The answer is yes. There is no reasonable basis for interpreting Sections 201(f) and 517(g) of the Act as allowing consideration of the relative significance of coal mining operations to the total business of a company.

5. *Employee reporting requirements.* One commenter objected to the reporting requirements of § 705.17 imposed on employees. It was contended that reporting of other than financial interests in coal mining operations was not warranted by the statute and represents an invasion of privacy. However, the concepts that affected employees would only report financial interests in coal mining operations or simply certify that they had no such interests were discarded as legally insufficient to ensure employee compliance with Section 517(g). Instead, covered employees are being required to submit a detailed statement of employment and financial interests to appropriate officials for review. Based on the criteria in these regulations, the reviewing official will determine whether a prohibited financial interest exists and what the proper remedial action should be.

To assist in the Head of the State Regulatory Authority and employees, the proposed rules set forth examples of prohibited financial interests. Three commenters suggested adding examples of financial interests which they believed would not be prohibited. Three other commenters suggested that the examples not be identified as prohibited interests, but rather as exceptions to be reported for a determination of whether or not they represented prohibited interests. One of these commenters also observed that the problem with citing such examples is that they limit the opportunity for the Head of the State Regulatory Authority to make judgments based on the full circumstances of a situation.

While there is little true flexibility in judging direct financial interests, judgment will be required for indirect financial interests because these rules provide an exception where the financial interests of the spouse, minor children and resident relatives are unrelated to the employee's functions or duties. Therefore, we have concluded that the inclusion of examples of prohibited interests in these final rules would create an unwarranted inflexibility. In order to provide assistance in addressing these judgmental areas, and to increase uniformity to the extent feasible, it is contemplated that the Director will issue supplementary guidance, including identification of certain common situations which have been identified as either prohibited or nonprohibited interests.

6. *Requirements for review of employees' statements.* Two commenters suggested deletion of the requirement that the Head of the State Regulatory Authority certify that no prohibited interests exist (§§ 705.4(a)(4) and 706.5(a)(3)). One commenter suggested there was no authority under the Act for this requirement. However, such authority is contained in the provisions of Section 517(g) which states that the Secretary establish methods by which provisions of this subsection of the Act will be monitored and enforced. The other commenter noted that such a certification requirement obligated the Head of the State Regulatory Authority to take responsibility for employee statements which might contain false information. The wording has been changed to make the certifying official responsible only for the information made available for his or her review.

7. *Gifts and gratuities.* One commenter stated that a common problem affecting State surface mining inspectors has been the traditional practice of coal operators offering gifts or gratuities at holiday time. Gifts from a coal mine operator to a State or Federal employee performing functions or duties under the Act may, if accepted, create an indirect financial interest. Based on the comment received, on the clear legislative requirement under Section 201(c)(2) that the Secretary publish and promulgate such rules and regulations as may be necessary to carry out the purposes and provisions of the Act, and on the fact that Federal employees and most State employees already have policies prohibiting acceptance of gifts, §§ 705.18 and 706.18 were adopted.

Sections 705.18 and 706.18 give consideration to existing State and Federal prohibitions about the acceptance of gifts. The regulations in § 705.18 do not prohibit all gifts, are addressed to minimum requirements, and call for administrative remedies to be in accordance with State regulations or policies. The regulations in Section 706.18 for Federal employees are identical and call for administrative remedies to be in accordance with existing Federal regulations.

The Department believes the regulations added in §§ 705.18 and 706.18 are necessary to satisfy the requirements of Section 201(c)(2) of the Act and to help ensure that State and Federal regulatory officials do not obtain an indirect financial interest in a coal mining operation by receiving a gift from a coal mine operator.

8. *Relations with other Federal agencies*. One comment, received from another Federal agency dealt exclusively with certain provisions of Part 706 which affect the relationships between other Federal agencies and Interior. It was suggested that the provisions of § 706.4 (c) be amended to clearly delegate to the audit capability of other Federal agencies the responsibility for auditing compliance with the Act and regulations within their agency. This was our intent and the wording of the regulation has been modified as suggested.

9. *Adopting additional regulatory provisions*. Two commenters suggested that we add subject matter not addressed in the proposed regulations. Both commenters asked the Department to include provisions delineating what private citizens or citizen groups must do to report conflict of interest situations which they are aware of within State Regulatory Authorities. In addition, one of the two commenters suggested that the proposed regulations should address the related financial interest question of whether a State agency should be allowed to rent office space or a building from a coal company.

These suggested additions have not been adopted. The Department feels that citizens and citizen groups should be encouraged to report violations, but does not consider it appropriate to regulate the channels or procedures for such reporting. Concerning such issues as State agency rentals of building space, the Department believes this is beyond the statutory provisions of Section 517(g) and therefore cannot be addressed in these regulations. The primary authors of this document are Allan L. Reynolds, Gene Fredriksen, and Gabe Paone of the Departmental Counselors staff, in coordination with the Office of Surface Mining Reclamation and Enforcement Task Force and the Solicitor's Office.

NOTE.—The Department of the Interior has determined that this document does not contain major provisions requiring the preparation of an Economic Impact Statement under Executive Order 11821 and OMB Circular A-107.

Dated: October 14, 1977.

LEO M. KRULITZ,
Solicitor.

In consideration of the foregoing and pursuant to the authority of sections 201(c), 201(f) and 517(g) of the Surface Mining Control and Reclamation Act of 1977, Title 30 is amended by adding Chapter VII, Office of Surface Mining Reclamation and Enforcement and by adding Parts 705 and 706 to read as follows:

AUTHORITY: Surface Mining Control and Reclamation Act of 1977, Pub. L. 95-87, Sections 201(c) and 517(g).

§ 705.1 Purpose.

This part sets forth the minimum policies and procedures that States must establish and use to implement Section 517(g) of the Act in order to be eligible for reimbursement of costs of enforcing and administering the initial regulatory program under Section 502, or for grants for developing, administering and enforcing a State regulatory program under Section 705 of the Act, or to assume primary regulatory authority under Section 503 of the Act (Pub. L. 95-87). Compliance with the policies and procedures in this part will satisfy the requirements of Section 517(g) of the Act. Section 517 (g) prohibits certain employees of the State Regulatory Authority from having any direct or indirect financial interest in any underground or surface coal mining operation. The regulations in this part are applicable to employees of the State Regulatory Authority as defined in § 705.5.

§ 705.2 Objectives.

The objectives of this part are: (a) To ensure that the States adopt a standard program for implementing the provisions in Section 517(g) of the Act.

(b) To establish methods which will ensure, as required by Section 517(g) of the Act, that each employee of the State Regulatory Authority who performs any function or duty under the Act does not have a direct or indirect financial interest in any underground or surface coal mining operation.

(c) To establish the methods by which the monitoring, enforcing and reporting responsibilities of the Secretary of the Interior as stated in Section 517(g) will be accomplished.

§ 705.3 Authority.

(a) The Secretary of the Interior is authorized by Pub. L. 95-87 to:

(1) Establish the methods by which he or she and State officials will monitor and enforce the provisions contained in Section 517(g) of the Act;

(2) Establish appropriate provisions for employees of the State Regulatory Authority who perform any function or duty under the Act to file a statement and supplements thereto in order to identify any financial interest which may be affected by Section 517(g), and

(3) Report annually to the Congress the actions taken and not taken during the preceding calendar year under Section 517(g) of the Act.

(b) The Governor of the State, the Head of the State Regulatory Authority, or such other State official designated by State law, is authorized to expand the provisions in this part in order to meet the particular needs within the State.

(c) The Office of Audit and Investigation, U.S. Department of the Interior, is authorized to conduct on behalf of the Secretary periodic audits related to the provisions contained in Section 517(g) of the Act and related to the provisions in this part. These audits will be conducted on a cyclical basis or upon request of the Secretary or the Director.

§ 705.4 Responsibility.

(a) The Head of each State Regulatory Authority shall: (1) Provide advice, assistance, and guidance to all State employees required to file statements pursuant to § 705.11;

(2) Promptly review the statement of employment and financial interests and supplements, if any, filed by each employee, to determine if the employee has correctly identified those listed employment and financial interests which constitute a direct or indirect financial interest in an underground or surface coal mining operation;

(3) Resolve prohibited financial interest situations by ordering or initiating remedial action or by reporting the violations to the Director who is responsible for initiating action to impose the penalties of the Act;

(4) Certify on each statement that review has been made, that prohibited financial interests, if any, have been resolved, and that no other prohibited interests have been identified from the statement;

(5) Submit to the Director such statistics and information as he or she may request to enable preparation of the required annual report to Congress;

(6) Submit to the Director the initial listing and the subsequent annual listings of positions as required by § 705.11 (b), (c) and (d);

(7) Furnish a blank statement 45 days in advance of the filing date established by § 705.13(a) to each State employee required to file a statement; and

(8) Inform annually each State employee required to file a statement with the Head of the State Regulatory Authority, or such other official designated by State law or regulation, of the name, address, and telephone number of the person whom they may contact for advice and counseling.

(b) The Director, Office of Surface Mining Reclamation and Enforcement, shall:

(1) Provide advice, assistance, and counseling to the Heads of all State Regulatory Authorities concerning implementation of these regulations;

(2) Promptly review the statement of employment and financial interests and supplements, if any, filed by each Head of the State Regulatory Authority. The Director will review the statement to determine if the Head of the State Regulatory Authority has correctly identified those listed employment and financial

interests which constitute a direct or indirect financial interest in an underground or surface coal mining operation;

(3) Recommend to the State Attorney General, or such other State official designated by State law or the Governor of the State, the remedial action to be ordered or initiated, recommend to the Secretary that action be taken to impose the penalties of the Act, or recommend to the Secretary that other appropriate action be taken with respect to reimbursements, grants, or State programs;

(4) Certify on each statement filed by the Head of the State Regulatory Authority that the State has completed the review of the statement, that prohibited financial interests have been resolved, and that no other prohibited interests have been identified from the statement;

(5) Monitor the program by using reports requested from Heads of State Regulatory Authorities and by using periodic audits performed by the Office of Audit and Investigation, U.S. Department of the Interior;

(6) Prepare for the Secretary of the Interior a consolidated report to the Congress as part of the annual report submitted under Section 706 of the Act, on the actions taken and not taken during the preceding calendar year under Section 517(g);

(7) Designate if so desired other qualified Office of Surface Mining Reclamation and Enforcement employees as assistant counselors to assist with the operational duties associated with filing and reviewing the statements from the Heads of each State Regulatory Authority;

(8) Furnish a blank statement by December 15 of each year, to the Head of each State Regulatory Authority; and

(9) Inform annually, the Head of each State Regulatory Authority of the requirement to file his or her statement with the Director and supply the name, address, and telephone number of the person whom they may contact for advice and counseling.

(c) State Regulatory Authority employees performing any duties or functions under the Act shall:

(1) Have no direct or indirect financial interest in coal mining operations;

(2) File a fully completed statement of employment and financial interest 120 days after these regulations become effective or upon entrance to duty, and annually thereafter on the specified filing date; and

(3) Comply with directives issued by persons responsible for approving each statement and comply with directives issued by those persons responsible for ordering remedial action.

§ 705.5 Definitions.

Act. Means the Surface Mining Control and Reclamation Act of 1977, Pub. L. 95–87.

Coal Mining Operation. Means the business of developing, producing, preparing or loading bituminous coal, subbituminous coal, anthracite, or lignite, or of reclaiming the areas upon which such activities occur.

Employee. Means (i) any person employed by the State Regulatory Authority who performs any function or duty under the Act, and (ii) advisory board or commission members and consultants who perform any function or duty under the Act, if they perform decisionmaking functions for the State Regulatory Authority under the authority of State law or regulations. However, members of advisory boards or commissions established in accordance with State law or regulations to represent multiple interests are not considered to be employees. State officials may through State law or regulations expand this definition to meet their program needs.

Performing any function or duty under this Act. Means those decisions or actions, which if performed or not performed by an employee, affect the programs under the Act.

Direct Financial Interest. Means ownership or part ownership by an employee of lands, stocks, bonds, debentures, warrants, partnership shares, or other holdings and also means any other arrangement where the employee may benefit from his or her holding in or salary from coal mining operations. Direct financial interests include employment, pensions, creditor, real property and other financial relationships.

Indirect Financial Interest. Means the same financial relationships as for direct ownership, but where the employee reaps the benefits of such interests, including interests held by his or her spouse, minor child and other relatives, including in-laws, residing in the employee's home. The employee will not be deemed to have an indirect financial interest if there is no relationship between the employee's functions or duties and the coal mining operation in which the spouse, minor children or other resident relatives hold a financial interest.

Prohibited Financial Interest. Means any direct or indirect financial interest in any coal mining operation.

Office. Means the Office of Surface Mining Reclamation and Enforcement, U.S. Department of the Interior.

Director. Means the Director or Acting Director of the Office of Surface Mining Reclamation and Enforcement within the U.S. Department of the Interior.

Secretary. Means the Secretary of the Interior.

State Regulatory Authority. Means that office in each State which has primary responsibility at the State level for administering this Act. Until an office is established under the provisions of Section 503 or Section 504 of the Act, this term shall refer to those existing State offices having primary jurisdiction for regulating, enforcing, and inspecting any surface coal mining and reclamation operations within the State during the interim period between the effective date of the Act and the establishment of the State Regulatory Authority under Section 503 or Section 504.

§ 705.6 Penalties.

(a) Criminal penalties are imposed by Section 517(g) of the Surface Mining Control and Reclamation Act of 1977, Pub. L. 95–87. Section 517(g) prohibits each employee of the State Regulatory Authority who performs any function or duty under the Act from having a direct or indirect financial interest in any underground or surface coal mining operation. The Act provides that whoever knowingly violates the provisions of Section 517(g) shall, upon conviction, be punished by a fine of not more than $2,500, or by imprisonment of not more than one year, or by both.

(b) Regulatory penalties are imposed by this part. The provisions in Section 517(g) of the Act make compliance with the financial interest requirements a condition of employment for employees of the State Regulatory Authority who perform any functions or duties under the Act. Accordingly, an employee who fails to file the required statement will be considered in violation of the intended employment provisions of Section 517(g) and will be subject to removal from his or her position.

§ 705.11 Who shall file.

(a) Any employee who performs any function or duty under the Act is required to file a statement of employment and financial interests. An employee who occupies a position which has been determined by the Head of the State Regulatory Authority not to involve performance of any function or duty under the Act or who is no longer employed by the State Regulatory Authority at the time a filing is due, is not required to file a statement.

(b) The Head of each State Regulatory Authority shall prepare a list of those positions within the State Regulatory Authority that do not involve performance of any functions or duties under the Act. State Regulatory Authorities may be organized to include more activities than are covered by the Act. For example, if a State has identified its Department of Natural Resources as the State Regulatory Authority there may be only one or two offices within that Department which have employees who perform any functions or duties under the Act. In those cases, the Head of the State Regulatory Authority shall list the title of boards, offices, bureaus or divisions within the State Regulatory Authority which do not perform any functions or duties under the Act and list the positions not performing functions or duties under the Act for only those boards, offices, bureaus or divisions that do have some employees performing functions or duties under the Act. Only those employees who are employed in a listed organizational unit or who occupy a listed position will be exempted from the filing requirements of Section 517(g) of the Act.

(c) The Head of each State Regulatory Authority shall prepare and submit to the Director, an initial listing of positions that do not involve performance of any functions or duties under the Act within 60 days of the effective date of these regulations.

(d) The Head of each State Regulatory Authority shall annually review and up-date this listing. For monitoring and reporting reasons, the listing must be submitted to the Director and must contain a written justification for inclusion of the positions listed. Proposed revisions or a certification that revision is not required shall be submitted to the Director by no later than September 30 of each year. The Head of each State Regulatory Authority may revise the listing by the addition or deletion of positions at any time he or she determines such revisions are required to carry out the purpose of the law or the regulations of this part. Additions to and deletions from the listing of positions are effective upon notification to the incumbents of the positions added or deleted.

(e) The Secretary or the Director may modify the listing at any time one or both of them determines that the listing submitted by the Head of a State Regulatory Authority indicates that coverage is not sufficient to carry out the purpose of the law or the regulations of this part.

§ 705.13 **When to file.**

(a) Employees performing functions or duties under the Act shall file:

(1) Within 120 days of the effective date of these regulations; and

(2) Annually on February 1 of each year, or at such other date as may be agreed to by the Director, provided that such alternative date will allow sufficient time to obtain information needed by the Director for his or her annual report to the Congress.

(b) New employees hired, appointed, or transferred to perform functions or duties under the Act will be required to file at the time of entrance to duty.

(c) New employees are not required to file an annual statement on the subsequent annual filing date if this date occurs within two months after their initial statement was filed. For example, an employee entering duty on December 1, 1978 would file a statement on that date. Because December 1 is within two months of February 1 the employee would not be required to file his or her next annual statement until February 1, 1980.

§ 705.15 **Where to file.**

(a) The head of the State Regulatory Authority shall file his or her statement with the Director. All other employees, as provided in § 705.11, shall file their statement with the head of the State Regulatory Authority or such other official as may be designated by State law or regulation.

§ 705.17 **What to report.**

(a) Each employee shall report all information required on the statement of employment and financial interests of the employee, his or her spouse, minor children, or other relatives who are full-time residents of the employee's home. The report shall be on OSM Form 705-1 as provided by the Office. The statement consists of three major parts, (1) a listing of all financial interests, including employment, security, real property, creditor and other financial interests held during the course of the preceding year, (2) a certification that none of the listed financial interests represent a direct or indirect financial interest in an underground or surface coal mining operation except as specifically identified and described by the employee as part of the certificate, and (3) a certification by the reviewer that the form was reviewed, that prohibited interests have been resolved, and that no other prohibited interests have been identified from the statement.

(b) Listing of all financial interests. The statement will set forth the following information regarding any financial interest:

(1) *Employment*. Any continuing financial interests in business entities and nonprofit organizations through a pension or retirement plan, shared income, salary or other income arrangement as a result of prior or current employment. The employee, his or her spouse or other resident relative is not required to report a retirement plan from which he or she will receive a guaranteed income. A guaranteed income is one which is unlikely to be changed as a result of actions taken by the State Regulatory Authority.

(2) *Securities*. Any financial interest in business entities and nonprofit organizations through ownership of stock, stock options, bonds, securities or other arrangements including trusts. An employee is not required to report holdings in widely diversified mutual funds, investment clubs or regulated investment companies not specializing in underground and surface coal mining operations.

(3) *Real Property*. Ownership, lease, royalty or other interests or rights in lands or minerals. Employees are not required to report lands developed and occupied for a personal residence.

(4) *Creditors*. Debts owed to business entities and nonprofit organizations. Employees are not required to report debas owed to financial institutions (banks, savings and loan associations, credit unions, and the like) which are chartered to provide commercial or personal credit. Also excluded are charge accounts and similar short term debts for current and ordinary household and living expenses.

(c) Employee certification, and, if applicable, a listing of exceptions.

(1) The statement will provide for a signed certification by the employee that to the best of his or her knowledge, (i) none of the listed financial interests represent an interest in an underground or surface coal mining operation except as specifically identified and described as exceptions by the employee as part of the certificate, and (ii) the information shown on the statement is true, correct, and complete.

(2) An employee is expected to (i) have complete knowledge of his or her personal involvement in business enterprises such as a sole proprietorship and partnership, his or her outside employment and the outside employment of the spouse and other covered relatives, and (ii) be aware of the information contained in the annual financial statement or other corporate or business reports routinely circulated to investors or routinely made available to the public.

(3) The exceptions shown in the employee certification of the form must provide enough information for the Head of the State Regulatory Authority to determine the existence of a direct or indirect financial interest. Accordingly, the exceptions should:

(i) List the financial interests;

(ii) Show the number of shares, estimated value or annual income of the financial interests; and

(iii) Include any other information which the employee believes should be considered in determining whether or not the interest represents a prohibited interest.

(4) Employees are cautioned to give serious consideration to their direct and indirect financial interests before signing the statement of certification. Signing the certification without listing known prohibited financial interests may be cause for imposing the penalties prescribed in § 705.6(a).

§ 705.18 **Gifts and gratuities.**

(a) Except as provided in paragraph (b) of this section, employees shall not solicit or accept, directly or indirectly, any gift, gratuity, favor, entertainment, loan or any other thing of monetary value, from a coal company which:

(1) Conducts or is seeking to conduct, operations or activities that are regulated by the State Regulatory Authority; or

(2) Has interests that may be substantially affected by the performance or non-performance of the employee's official duty.

(b) The prohibitions in paragraph (a) of this section do not apply in the context of obvious family or personal relationships, such as those between the parents, children, or spouse of the employee and the employee, when the circumstances make it clear that it is those relationships rather than the business of the persons concerned which are the motivating factors. An employee may accept:

(1) Food and refreshments of nominal value on infrequent occasions in the ordinary course of a luncheon, dinner, or other meeting where an employee may properly be in attendance; and

(2) Unsolicited advertising or promotional material, such as pens, pencils, note pads, calendars and other items of nominal value.

(c) Employees found guilty of violating the provisions of this section will be subject to administrative remedies in accordance with existing or adopted State regulations or policies.

§ 705.19 **Resolving prohibited interests.**

(a) Actions to be taken by the Head of the State Regulatory Authority:

(1) Remedial action to effect resolution. If an employee has a prohibited financial interest, the Head of the State Regulatory Authority shall promptly advise the employee that remedial action which will resolve the prohibited interest is required within 90 days.

(2) Remedial action may include:

(i) Reassignment of the employee to a position which performs no function or duty under the Act, or

(ii) Divestiture of the prohibited financial interest, or

(iii) Other appropriate action which either eliminates the prohibited interest or eliminates the situation which creates the conflict.

(3) Reports of noncompliance. If 90 days after an employee is notified to take remedial action that employee is not in compliance with the requirements of the Act and these regulations, the Head of the State Regulatory Authority shall report the facts of the situation to the Director who shall determine whether action to impose the penalties prescribed by the Act should be initiated. The report to the Director shall include the original or a certified true copy of the employee's statement and any other information pertinent to the Director's determination, including a statement of actions being taken at the time the report is made.

(b) Actions to be taken by the Director:

(1) Remedial action to effect resolution. Violations of the regulations in this part of the Head of a State Regulatory Authority, will be cause for remedial action by the Governor of the State or other appropriate State official based on recommendations from the Director on behalf of the Secretary. The Governor or other appropriate State official shall promptly advise the Head of the State Regulatory Authority that remedial action which will resolve the prohibited interest is required within 90 days.

(2) Remedial action should be consistent with the procedures prescribed for other State employees by § 705.19 (a)(2).

(3) Reports of noncompliance.

(i) If 90 days after the Head of a State Regulatory Authority is notified to take remedial action the Governor or other appropriate State official notifies the Director that the Head of the State Regulatory Authority is not in compliance with the Act and these regulations, the Director shall report the facts of the situation to the Secretary who shall determine whether the action to impose the penalties prescribed by the Act, or to impose the eligibility restrictions prescribed by § 705.1 should be initiated.

(ii) Within 30 days of receipt of a noncompliance report from the Head of a Regulatory Authority under § 705.19 (a)(3), the Director shall notify the Head of the State Regulatory Authority and the employee involved of additional action to be taken. Actions which the Director may take include but are not limited to the granting of additional time for resolution or the initiation of action to impose the penalties prescribed by the Act.

§ 705.21 Appeals procedures.

Employees have the right to appeal an order for remedial action under § 705.19, and shall have 30 days to exercise this right before disciplinary action is initiated.

(a) Employees other than the Head of the State Regulatory Authority, may file their appeal, in writing, through established procedures within their particular State.

(b) The Head of the State Regulatory Authority may file his or her appeal, in writing, with the Director who will refer it to the Conflict of Interest Appeals Board within the U.S. Department of the Interior.

AUTHORITY: Surface Mining Control and Reclamation Act of 1977, Pub. L. 95–87, sec. 201 (c) and (f).

§ 706.1 Purpose.

This part sets forth the minimum policies and procedures to be followed by Federal employees to satisfy the requirements of Section 201(f) of the Act. The requirements of this part are in addition to Executive Order 11222 of May 8, 1965, and other applicable regulations related to conflict of interest. Section 201(f) prohibits certain Federal employees from having any direct or indirect financial interest in underground or surface coal mining operations. The regulations of this part are applicable to Federal employees as defined in § 706.3.

§ 706.2 Objectives.

The objectives of this part are:

(a) To ensure that affected Federal agencies adopt a standard program for implementing the provisions in Section 201(f) of the Act.

(b) To establish methods which will ensure, as required by section 201(f) of the Act, that each Federal employee who performs any function or duty under the Act does not have a direct or indirect financial interest in an underground or surface coal mining operation.

(c) To establish the methods by which the monitoring, enforcing and reporting responsibilities of the Director and the Secretary of the Interior under Section 201(f) will be accomplished.

§ 706.3 Definitions.

Act. Means the Surface Mining Control and Reclamation Act of 1977, Pub. L. 95–87.

Coal mining operation. Means the business of developing, producing, preparing or loading bituminous coal, subbituminous coal, anthracite or lignite or of reclaiming the areas upon which such activities occur.

Employee. Means any person employed by the Office of Surface Mining Reclamation and Enforcement within the U.S. Department of the Interior and any other person employed by the Federal Government who performs functions or duties under the Act without regard to the duration or nature of his or her appointment.

Performing any function or duty under this act. Means those decisions or actions, which if performed or not performed by an employee, affect the programs under the Act.

Direct financial interest. Means ownership or part ownership by an employee of lands, stocks, bonds, debentures, warrants, partnership shares, or other holdings and also means any other arrangement where the employee may benefit from his or her holding in or salary from coal mining operations. Direct financial interests include employment, pensions, creditor, real property and other financial relationships.

Indirect financial interest. Means the same financial relationships as for direct ownership, but where the employee reaps the benefits of such interests, including interests held by his or her spouse, minor child and other relatives, including in-laws, residing in the employee's home. The employee will not be deemed to have an indirect financial interest if there is no relationship between the employee's functions or duties and the coal mining operation in which the spouse, minor children or other resident relatives hold a financial interest.

Prohibited Financial Interest. Means any direct or indirect financial interest in any coal mining operation.

Office. Means the Office of Surface Mining Reclamation and Enforcement, U.S. Department of the Interior.

Director. Means the Director or Acting Director of the Office of Surface Mining Reclamation and Enforcement, U.S. Department of the Interior.

Secretary. Means the Secretary of the Interior.

Other Federal Agency. Means any executive Federal agency or office or part thereof not a part of the U.S. Department of the Interior, and includes but is not limited to, the following agencies: The Department of Agriculture, the Department of Justice, the Corps of Engineers, the Environmental Protection Agency, the Council on Environmental Quality and the Energy Research and Development Administration.

§ 706.4 Authority.

(a) The Director is authorized by Public Law 95–87 to:

(1) Establish the methods by which the provisions in Section 201(f) of the Act will be monitored and enforced;

(2) Establish appropriate provisions for all employees who perform any function or duty under the Act to file a statement and supplements thereto concerning their financial interests which may be affected by Section 201(f); and

(3) Report annually to the Congress on the actions taken and not taken during the preceding calendar year under Section 201(f) of the Act.

(b) Other Federal agencies with employees who perform functions or duties under the Act may adopt financial interest regulations pursuant to the Act which are consistent with the requirements in this part. If any such agency does not adopt regulations pursuant to this part, that agency shall enter into a memorandum of understanding with the Director, to have the employees of that agency who perform functions or duties under the Act file their statements with the Director. The Director will review statements filed with him or her, applying the regulations of the Department of the Interior. Where the Director determines that remedial action is necessary, he or she will refer the case to the employing agency with a recommendation as to the action to be taken.

(c) The Office of Audit and Investigation within the U.S. Department of the Interior, will conduct periodic audits of Interior's compliance with the provisions contained in Section 201(f) of the Act and the provisions of this part. The Office of Audit and Investigation will arrange for such periodic audits of other Federal agencies to be performed by the audit unit of each such agency. The audits will be conducted on a cyclical basis or upon request of the Secretary of the Interior or the Director. Copies of all audit reports and related responses on corrective actions will be provided to the Director.

§ 706.5 Responsibility.

(a) The Director, the Head of each other Federal agency, and the Head of each other bureau or office within the U.S. Department of the Interior, have the following common responsibilities concerning employees within their organizations performing any functions or duties under the Act, and shall:

(1) Provide advice, assistance and counseling to employees concerning financial interest matters related to the Act;

(2) Promptly review the statement of employment and financial interests and supplements, if any, filed by each employee to determine if the employee has correctly identified those listed employment and financial interests which constitute a direct or indirect financial interest in an underground or surface coal mining operation;

(3) Certify on each statement that review has been made, that prohibited financial interests if any, have been resolved, and that no other prohibited interests have been identified from the statement;

(4) Resolve prohibited financial interest situations by promptly notifiying and ordering the employee to take remedial action within 90 days, or by initiating action to impose the penalties of the Act;

(5) Furnish a blank statement by December 15 of each year to each employee required to file a statement within his or her employing organization; and

(6) Inform annually each employee required to file a statement within his or her employing organization of the name, address, and telephone number of the person whom they may contact for advice and counseling.

(b) In addition to the common responsibilities in § 706.5(a) the Director shall:

(1) Monitor the program by using reports requested from the Heads of other Federal agencies, from the Heads of other bureaus and offices within the U.S. Department of the Interior, and by using periodic audits performed by the Office of Audit and Investigation, U.S. Department of the Interior and by other Federal agencies;

(2) Prepare for the Secretary a consolidated report to the Congress as part of the annual report submitted under Section 706 of the Act, on the actions taken and not taken during the preceding calendar year under Section 201(f);

(3) Refer recommendations to officials of other Federal agencies concerning those cases requiring remedial action for employees of the other Federal agency who filed with the Director because that other Federal agency did not choose to adopt its own financial interest regulations pursuant to the Act.

(4) Report to the Solicitor, U.S. Department of the Interior, through the Office of Audit and Investigation, U.S. Department of the Interior, cases of knowing violations of the provisions in Section 201(f). The Solicitor will transfer such reports to the U.S. Department of Justice.

(5) Designate, if so desired, other qualified Office employees as assistant counselors to assist with the operational duties associated with filing and reviewing financial statements;

(6) Furnish an adequate supply of blank statements to the Heads of those other Federal agencies which decide to have their employees file with the Director; and

(7) Submit to the Department of the Interior Ethics Counselor such statistics and information he may request in accordance with 43 CFR 20.735-17 as adopted.

(c) In addition to the common responsibilities in § 706.5(a), the Head of each other Federal agency with employees performing any functions or duties under the Act shall:

(1) Decide whether to adopt independent procedures for the filing and review of financial statements or to enter into a memorandum of understanding with the Director that the U.S. Department of the Interior will provide and review the financial statements and recommend any necessary remedial action to the Head of the employing agency;

(2) Submit to the Director such statistics and information the Director may request to enable preparation of the required annual report to the Congress, and to ensure uniform application of the provision in Section 201(f) of the Act; and

(3) Report to the Director and the U.S. Department of Justice cases of knowing violations of the provisions in section 201(f).

(d) In addition to the common responsibilities in § 706.5(a), the Heads of other bureaus or offices within the U.S. Department of the Interior with employees performing any functions or duties under the Act shall:

(1) Submit to the Director such statistics and information the Director may request to enable preparation of the required annual report to Congress, and to ensure uniform application of provisions in Section 201(f) of the Act;

(2) Submit to the Department of the Interior Ethics Counselor such statistics and information he may request in accordance with 43 CFR 20.735-17 as adopted, and

(3) Report to the Director cases of knowing violations of the provisions in Section 201(f).

(e) Employees shall: (1) Have no direct or indirect financial interests in coal mining operations;

(2) File a fully completed statement of employment and financial interests 120 days after these regulations become effective or upon entrance to duty, and annually thereafter on the specified filing date, and

(3) Comply with directives issued by persons responsible for approving each statement and comply with directives issued by those persons responsible for ordering remedial action.

§ 706.6 Penalties.

(a) Criminal penalties are imposed by Section 201(f) of the Surface Mining Control and Reclamation Act of 1977, Pub. L. 95-87, which prohibits each employee of the Office or any other Federal employee who performs any function or duty under the Act from having a direct or indirect financial interest in underground or surface coal mining operations. The Act provides that whoever knowingly violates the provisions of Section 201(f) shall, upon conviction, be punished by a fine of not more than $2,500, or by imprisonment for not more than one year, or both.

(b) Regulatory penalties are imposed by this part. The provisions in Section 201(f) of the Act make compliance with the financial interest requirements a condition of employment for all Office employees and for other Federal employees who perform any functions or duties under the Act. Accordingly, an employee who fails to file the required financial statement will be considered in violation of the intended employment provisions of Section 201(f) and will be subject to removal from his or her position.

§ 706.11 Who shall file.

(a) Every employee in the Office is required to file a statement of employment and financial interests.

(b) Any other Federal employee who performs any function or duty under the Act is required to file a statement of employment and financial interests. The Head of each other Federal agency and the Heads of other bureaus and offices within the U.S. Department of the Interior shall prepare and submit a report within 60 days of the effective date of these regulations, either listing the Federal positions identified as performing functions or duties under the Act, or listing the organizational unit and showing the total number of employees within the unit who must file a statement. Revision to the listing or certification that revision is not required shall be submitted to the Director by no later than September 30 of each year. The Secretary, the Director, or the Heads of the other affected Federal organizations may revise the list by the addition or deletion of positions at any time such revisions are required to carry out the purpose of the law or regulations of this part. Additions to or deletions from the list of positions are effective upon notification to the incumbents.

§ 706.13 When to file.

(a) Employees performing functions or duties under the Act will be required to file:

(1) Within 120 days of the effective date of these regulations, and

(2) Annually on February 1 of each year or at such other date as may be agreed to by the Director, provided that such alternative date will allow sufficient time to obtain information needed by the Director for his or her annual report to the Congress.

(b) New employees hired, appointed, or transferred to perform functions or duties under the Act will be required to file at the time of entrance to duty.

(c) New employees are not required to file an annual statement on the subsequent annual filing date if this date occurs within two months after their initial statement was filed. For example, an employee entering duty on December 1, 1978 would file a statement on that date. Because December 1 is within two months of February 1 the employee would not be required to file his or her next annual statement until February 1, 1980.

§ 706.15 Where to file.

(a) Each Office employee shall file his or her statement of employment and financial interests with the Director.

(b) Each Department of the Interior employee, who is not an Office employee but does perform any function or duty under the Act, shall file a statement of employment and financial interests with his or her appropriate Ethics Counselor as identified in 43 CFR 20.735–22(c).

(c) Each employee of another Federal agency who performs a function or duty under the Act shall file a statement of employment and financial interests with the official designated by the Head of the other Federal agency.

§ 706.17 What to report.

(a) Each employee shall report all information required on the statement of employment and financial interests of the employee, his or her spouse, minor children, or other relatives who are full-time residents of the employee's home. The report shall be on a form provided by the Office or on a similar form adopted by an other Federal agency. The statement shall consist of three major parts, (1) a listing of all financial interests, including employment, security, real property, creditor and other financial interests held during the course of the preceding year, (2) a certification that none of the listed financial interests represent a direct or indirect financial interest in an underground or surface coal mining operation except as specifically identified and described by the employee as part of the certificate, and (3) a certification by the reviewer that the form was reviewed, that prohibited interests have been resolved, and that no other prohibited interests have been identified from the statement.

(b) Listing of all financial interests. The statement will set forth the following information regarding any financial interest:

(1) *Employment*. Any continuing financial interests in business entities and nonprofit organizations through a pension or retirement plan, shared income, salary or other income arrangement as a result of prior or current employment. The employee, his or her spouse or other resident relative is not required to report a statement plan from which he or she will receive a guaranteed income. A guaranteed income is one which is unlikely to be changed as a result of actions taken by the Federal Government under the Act.

(2) *Securities*. Any financial interest in business entities and nonprofit organizations through ownership of stock, stock options, bonds, securities or other arrangements including trusts. An employee is not required to report holdings in widely diversified mutual funds, investment clubs or regulated investment companies not specializing in underground and surface coal mining operations.

(3) *Real property*. Ownership, lease, royalty or other interests or rights in lands or minerals. Employees are not required to report lands developed and occupied for a personal residence.

(4) *Creditors*. Debts owed to business entities and non-profit organizations. Employees are not required to report debts owed to financial institutions (banks, savings and loan associations, credit unions, and the like) which are chartered to provide commercial or personal credit. Also excluded are charge accounts and similar short term debts for current and ordinary household and living expenses.

(c) Employee certification, and if applicable, a listing of exceptions.

(1) The statement will provide for a signed certification by the employee that to the best of his or her knowledge, (i) none of the listed financial interests represent an interest in an underground or surface coal mining operation except as specifically identified and described as exceptions by the employee as part of the certificate, and (ii) the information shown on the statement is true, correct, and complete.

(2) An employee is expected to (i) have complete knowledge of his or her personal involvement in business enterprises such as a sole proprietorship and partnership, his or her outside employment and the outside employment of the spouse and other covered relatives, and (ii) be aware of the information contained in the annual financial statements or other corporate or business reports routinely circulated to investors or routinely made available to the public.

(3) The exceptions shown in the employee certification of the form must provide enough information for the Director, the Head of an other Federal agency, or the Head of other bureaus or offices within the U.S. Department of the Interior to determine the existence of a direct or indirect financial interest. Accordingly, the exceptions should:

(i) List the financial interests;

(ii) Show the number of shares, estimated value or annual income of the financial interests; and

(iii) Include any other information which the employee believes should be considered in determining whether or not the interest represents a prohibited interest.

(4) Employees are cautioned to give serious consideration to their direct and indirect financial interests before signing the statement of certification. Signing the certification without listing known prohibited financial interests may be cause for imposing the penalties prescribed in § 706.6(a).

§ 706.18 Gifts and gratuities.

(a) Except as provided in paragraph (b) of this section, employees shall not solicit or accept, directly or indirectly, any gift, gratuity, favor, entertainment, loan, or any other thing of monetary value, from a coal company which:

(1) Conducts or is seeking to conduct operations or activities that are regulated by the Federal Government; or

(2) Has interests that may be substantially affected by the performance or non-performance of the employee's official duty.

(b) The prohibitions in paragraph (a) of this section do not apply in the context of obvious family or personal relationships, such as those between the parents, children, or spouse of the employee and the employee, when the circumstances make it clear that it is those relationships rather than the business of the persons concerned which are the motivating factors. An employee may accept:

(1) Food and refreshments of nominal value on infrequent occasions in the ordinary course of a luncheon, dinner, or other meeting where an employee may properly be in attendance, and

(2) Unsolicited advertising or promotional material, such as pens, pencils, note pads, calendars and other items of nominal value.

(c) Employees found guilty of violating the provisions of this section will be subject to administrative remedies in accordance with existing Federal regulations or policies.

§ 706.19 Resolving prohibited interests.

Actions to be taken by the Director, the heads of other Federal agencies, and the heads of other affected bureaus and offices within the U.S. Department of the Interior include:

(a) Remedial action to effect resolution. If an employee has a prohibited financial interest, the head of the organizational entity (Department, bureau, office, etc.) where the employee works shall promptly advise the employee that remedial action which will resolve the prohibited interest is required within 90 days.

(b) Remedial action may include: (1) Reassignment of the employee to a position which performs no function or duty under the Act, or

(2) Divestiture of the prohibited financial interest, or

(3) Other appropriate action which either eliminates the prohibited financial interest or eliminates the situation which creates the conflict.

(c) Reports of noncompliance. If 90 days after an employee is notified to take remedial action that employee is not in compliance with the requirements of the Act and these regulations, the official, other than the Director, who ordered the remedial action shall promptly report the facts of the situation to the Director. The reports to the Director shall include the original or a certified true copy of the employee's statement and any other information pertinent to the Director, including a statement of actions being taken at the time the report is made. Within 30 days of receipt of a noncompliance report, the Director shall notify the head of the employing organization and the employee involved of additional action to be taken. Actions which the Director may take include but are not limited to the granting of additional time for resolution or the initiation of action to impose the penalties prescribed by the Act.

§ 706.21 **Appeals procedures.**

Employees have the right to appeal an order for remedial action under § 706.19 and shall have 30 days to exercise this right before disciplinary action is initiated.

(a) Office employees and other Department of the Interior employees may file their appeal, in writing, in accordance with the provisions in 43 CFR 20.735-25(b).

(b) Employees of other Federal agencies may file their appeal, in writing, in accordance with the established procedures of their employing agency.

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federal register

THURSDAY, OCTOBER 20, 1977

PART VI

ENVIRONMENTAL PROTECTION AGENCY

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PESTICIDE PROGRAMS

Rebuttable Presumption Against Registration and Continued Registration of Pesticide Products Containing Pentachloronitrobenzene (PCNB)

[6560-01]

[FRL 805-4; OPP-30000/17]

ENVIRONMENTAL PROTECTION AGENCY

PESTICIDE PROGRAMS

Rebuttable Presumption Against Registration and Continued Registration of Pesticide Products Containing Pentachloronitrobenzene (PCNB)

AGENCY: Office of Pesticide Programs, Environmental Protection Agency (EPA).

ACTION: Notice of rebuttable presumption.

SUMMARY: Pentachloronitrobenzene (PCNB) has been found to exceed certain risk criteria. This notice requests registrants and other interested persons to submit rebuttals and other information on the presumption and to submit any other data on the risks and benefits of this pesticide chemical. This notice is the first of several which will give public notification of the Agency's progress in reviewing this chemical.

DATES: Rebuttal evidence and other information must be received on or before December 5, 1977. Address material to Federal Register Section, Technical Services Division (WH-569), Office of Pesticide Programs, EPA, Rm. 401, East Tower, 401 M St. SW., Washington, D.C. 20460.

FOR FURTHER INFORMATION CONTACT:

Jeff Kempter, Office of Special Pesticide Reviews, Office of Pesticide Programs (WH-566), Rm. 447, East Tower, EPA 202-755-8053.

SUPPLEMENTARY INFORMATION: The Deputy Assistant Administrator, Office of Pesticide Programs, EPA, has determined that a rebuttable presumption exists against registration and continued registration of all pesticide products containing PCNB.[1]

I. Regulatory Provisions

A. *General.* Title 40, Part 162.11, of the Code of Federal Regulations for the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) as amended (86 Stat. 973, 89 Stat. 751, 7 U.S.C. 136 et seq.), provides that a rebuttable presumption against registration shall arise if the Agency determines that a pesticide meets or exceeds any of the risk criteria relating to acute and chronic toxic effects set forth in § 162.11(a)(3). If it is determined that such a rebuttable presumption has arisen, the regulations require that the registrant be notified by certified mail and afforded an opportunity to submit evidence in rebuttal of the presumption. In addition, the Agency has determined that the public should also be given notice of the bases for the presumption to provide an opportunity for comment and to solicit additional information relevant to the presumption.

A notice of rebuttable presumption against registration is issued when the evidence related to risk meets the criteria set forth in § 162.11(a)(3). It is emphasized that a notice of rebuttable presumption against registration and continued registration of a pesticide is not a notice of intent to cancel the registration of a pesticide, and may or may not lead to cancellation. The notice of intent to cancel is issued only after the risks and benefits of a pesticide are carefully considered and it is determined that the pesticide may generally cause unreasonable adverse effects to the environment.

Accordingly, all registrants and applicants for registration are invited pursuant to 40 CFR 162.11(a)(4) to submit evidence in rebuttal of the presumptions listed in Part II of this notice and, in the case of oncogenicity, to submit information which relates to the assessment of oncogenic risks as set forth in the Agency's Interim Procedures and Guidelines for Health Risk and Economic Impact Assessment of Suspected Carcinogens (May 25, 1976; 41 FR 21402). Registrants and other interested parties may submit for consideration data on benefits which they believe would justify registration or continued registration. In addition, any registrant may petition the Agency to voluntarily cancel a current registration pursuant to Section 6(a)(1) of FIFRA.

This notice of rebuttable presumption against PCNB also describes scientific studies which suggest that hexachlorobenbene (HCB), a contaminant of PCNB, may adversely induce oncogenic and/or reproductive effects. The Agency is soliciting information and comment on these questions, but is not now presuming against HCB on the basis of these studies.

B. *Rebuttal Criteria.* Section 162.11(a)(4) provides that a registrant may rebut the presumption by sustaining the burden of proving:

(1) In the case of a pesticide presumed against pursuant to the acute toxicity or lack of emergency treatment criteria, "that when considered with the formulation, packaging, method of use, and proposed restrictions on the directions for use and widespread and commonly recognized practices of use, the anticipated exposure to an applicator or user and to local, regional, or national populations of nontarget organisms is not likely to result in any significant acute adverse effects" (40 CFR 162.11(a)(4)(i));

(2) In the case of a pesticide presumed against pursuant to the chronic toxicity criteria, "that when considered with proposed restrictions on use and widespread and commonly recognized practices of use, the pesticide will not concentrate, persist or accrue to levels in man or the environment likely to result in any significant chronic adverse effects" (40 CFR 162.11(a)(4)(ii): or

(3) In either case, that "the determination by the Agency that the pesticide meets or exceeds any of the criteria for risk was in error" (40 CFR 162.11 (a)(4)(iii)).

C. *Benefits Information.* In addition to submitting evidence to rebut the presumption of risk, section 162.11(a)(5)(iii) provides that a registrant "may submit evidence as to whether the economic, social and environmental benefits of the use of the pesticide subject to the presumption outweigh the risk of use." If the risk presumptions are not rebutted, the benefit evidence submitted by the registrant,[2] applicants, and other interested persons will be considered by the Administrator in determining the appropriate regulatory action. Specifically § 162.11(a)(5)(iii) provides that if the benefits appear to outweigh the risks, the Administrator may in his discretion, issue a notice of intent to hold a hearing pursuant to section 6(b)(2) of FIFRA to determine whether the registration should be cancelled or application denied. Alternatively, if the "benefits do not appear to outweigh the risks, the Administrator shall issue a notice pursuant to section 3(c)(6) or section 6(b)(1) of the Act, as appropriate." Moreover, if at any time the Administrator determines that a pesticide poses an "imminent hazard" to humans or the environment, a notice of suspension may be issued pursuant to section 6(c) of the Act.

Stated below are the § 162.11(a)(3) risk criteria which the Agency has found to have been met or exceeded by registrations and applications for registration of pesticide products containing PCNB. The Agency's basis for concluding that these risk criteria have been met or exceeded is set out in "Pentachloronitrobenzene (PCNB): Position Document 1," which follows. Copies of attachments to the Position Document, which are not published with this notice, are available for public inspection in the Office of Special Pesticide Reviews. Information protected from disclosure pursuant to

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[1] A position document, containing an appendix of references, background information, and other material pertinent to the issuance of this notice, has been prepared by the Agency Working Group on PCNB and is also published with this notice.

[2] Registrants or other interested persons who desire to submit benefit information should consider submitting information on the following subjects, along with any other relevant information they desire to submit:

1. Identification of the major uses of the pesticide, including estimated quantities used by crop or other application.
2. Identification of the minor uses of the pesticide, including estimated quantities used by category such as lawn and garden uses and household uses.
3. Identification of registered alternative products for the uses set forth in (1) and (2) above, including an estimate of their availability.
4. Determination of the change in costs to the user of providing equivalent pesticide treatment with any available substitute products.
5. Assessment of regulation impact upon user productivity (e.g., yield per acre and/or total output) from using available substitute pesticides or from using no other pesticides.
6. If the impacts upon either user costs or productivity are significant, a qualitative assessment of the regulation's impact on production of major agricultural commodities and retail food prices of such commodities.

FIFRA section 10 cannot be provided. Specific inquiries concerning the Position Document, as well as requests for access to these files, should be directed to Project Manager Jeff Kempter, Office of Special Pesticide Reviews (WH-566), EPA, Rm. 447, East Tower, 401 M St. SW., Washington, D.C. 20460, 202-755-8053.

II. Presumptions

A. *Oncongenicity.* 40 CFR 162.11(a)(3)(ii)(A) provides that a rebuttable presumption shall arise if a pesticide "(i)nduces oncogenic effects in experimental mammalian species or in man as a result of oral, inhalation or dermal exposure . . . ." As a further clarification of the provision, the preamble to the Agency's Interim Procedures and Guidelines for Health Risk and Economic Impact Assessment of Suspected Carcinogens (May 25, 1976; 41 FR 21402) states that "a substance will be considered a presumptive cancer risk when it causes a statistically significant excess incidence of benign or malignant tumors in humans or animals."

On the basis of scientific studies and information summarized in the Position Document, the Agency has concluded that this risk index has been exceeded by all registrations and applications for registration of pesticide products containing PCNB, and that a rebuttable presumption against new or continued registration of such products has therefore arisen.

III. Grounds for Pesticide Review in Addition to Rebuttable Presumption Criteria

A. *General.* In addition to the risk criteria set forth in 40 CFR 162.11(a)(3) which require the issuance of a notice of rebuttable presumption against registration or continued registration and a determination by the Administrator to register or cancel a pesticide, 40 CFR 162.11(a)(6) provides that the Administrator may determine that a pesticide should be canceled or that a hearing should be held if the pesticide poses a substantial question of safety to man or the environment "based on toxicological data, epidemiological studies, use history, accident data, monitoring data, or such other evidence as is available to the Administrator."

A determination to cancel or deny registration of a pesticide or to hold a hearing based upon such data and a finding that a pesticide poses a substantial question of safety need not be preceded by public notice and opportunity for rebuttal prior to the administrative adjudicatory hearing procedure of section 6(b) of the Act. However, where the Agency is using a notice of rebuttable presumption against registration or continued registration based on the risk criteria of 40 CFR 162.11(a)(3), it is in the public interest to include all evidence which may indicate additional grounds for determining that a pesticide causes unreasonable adverse effects on the environment. Accordingly, evidence derived from studies which suggest that HCB may produce oncogenic and/or reproductive effects has been included in the positions document accompanying this notice.

IV. Registrations and Products Subject to the Notice

All registrants and applicants for registration listed below are being notified by certified mail of the rebuttable presumption existing against registration and continued registration of their products.

The registrants and applicants for registration shall have 45 days from the date this notice is sent or until December 5, 1977 to submit evidence in rebuttal of the presumption. However, the Administrator may, for good cause shown, grant an additional 60 days during which such evidence may be submitted. Notice of such an extension, if granted, will appear in the Federal Register.

V. Duty To Submit Information on Adverse Effects

Registrants are required by law to submit to EPA any additional information regarding any adverse effects on man or the environment which comes to a registrant's attention at any time, pursuant to section 6(a)(2) of FIFRA and 40 CFR 162.8(d). If any registrant of PCNB products has any published or unpublished information, studies, reports, analyses, or reanalyses regarding any adverse effects in animal species or humans, residues, and claimed or verified accidents to humans, domestic animals, or wildlife, which have not been previously submitted to EPA, the material must be submitted immediately. When responding to this notice, each registrant shall submit a written certification to the Agency that all information regarding any adverse effects known to the registrant has been submitted. In addition, the registrants should notify EPA of any studies currently in progress, including the purpose of the study, the protocol, the approximate completion date, and a summary of all results observed to date.

VI. Public Comments

During the time allowed for submission of rebuttal evidence, specific comments on the presumptions set forth in this notice and on the material contained in the Position Document are solicited from the public. In particular, any documented episodes of adverse effects to humans, domestic animals, or wildlife, and information as to any laboratory studies in progress or completed, are requested to be submitted to EPA as soon as possible. Specifically, information on the fate and effects of PCNB, its impurities (especially HCB), metabolites, and degradation products on flora and fauna, particularly ainmals with metabolism similar to man, is solicited. Similarly, any studies or comments on the benefits from the use of PCNB are requested to be submitted. All comments and information received, as well as any other relevant information and analysis thereof, which come to the attention of the Agency may serve as a basis for final determination pursuant to § 162.11(a)(5).

All comments and information should be sent to the office of the Federal Register Section at the address given above, if possible in triplicate to facilitate the work of the agency and others interested in inspecting them. The comments and information should bear the identifying notation "OPP-30000/17." Comments and information received within the specified time limit shall be considered before it is determined whether a notice shall be issued in accordance with 40 CFR 162.11(a)(5)(ii).

Comments received after the specified time period will be considered only to the extent feasible, consistent with the time limits imposed by 40 CFR 162.11(a)(5)(ii). All written comments and information filed pursuant to this notice will be available for public inspection in the office of the Federal Register Section from 8:30 a.m. to 4 p.m. during normal working days.

Interested persons are encouraged to take advantage of the opportunity to inspect Agency files during normal working hours since (1) all of the information received may serve as a basis for final determination pursuant to § 162.11(a)(5) and (2) the Agency will not generally publish a summary of information received in the Federal Register at the close of the rebuttal period.

Your cooperation is solicited in identifying any errors or omissions which may have been made in the following computer listings. Corrections to the listings may not necessarily be published in the Federal Register, but rather handled by mail with affected parties. Omissions will be corrected by notice in the Federal Register.

Dated: October 13, 1977.

Edwin L. Johnson,
Deputy Assistant Administrator for Pesticide Programs.

PCNB special local needs registrations approved by EPA under Sec. 24(c) of FIFRA

Registrant	Name and address	Permit No.	Product name
001258	Olin Corp., Agricultural Products Department, P.O. Box 991, Little Rock, Ark. 72203.	FL-770011	Terrachlor+ Dasanit 10-3 Granular.
001258	do	CA-760137	Terra-coat L-21.
004628	Mobil Chemical Co., P.O. Box 26683, Richmond, Va. 23261	FL-770009	MOCAP-PCNB 3-10 Granular.
004628	do	SC-770003	Do.
004628	do	NC-770004	Do.
004628	do	VA-770004	Do.

PENTACHLORONITROBENZENE (PCNB): POSITION DOCUMENT 1

EPA WORKING GROUP ON PCNB, JEFF KEMPTER, PROJECT MANAGER, OFFICE OF SPECIAL PESTICIDE REVIEWS, ENVIRONMENTAL PROTECTION AGENCY

PENTACHLORONITROBENZENE (PCNB): POSITION DOCUMENT 1

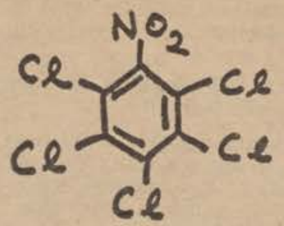
I. BACKGROUND

A. *Characteristics of PCNB*

(1) *Nomenclature*. PCNB is the common name for pentachloronitrobenzene. Other common names are quintozene and terrachlor. Some trade names for PCNB are Avicol, Botrilex, Brassicol, Folosan, Terraclor and Terrachlor. In many products PCNB is combined with other active pesticidal ingredients, such as captan, terrazole, phorate, maneb, thiram, zineb, disulfoton and others.

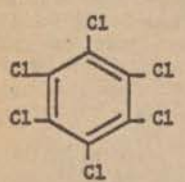
(2) *Chemistry*. Technical grade PCNB consists of about 98% PCNB and 2% related compounds, such as hexachlorobenzene, tetrachloronitrobenzene, and pentachlorobenzene. These and other metabolites are shown in figure 1. The molecular weight is 295.4. The molecular formula is C Cl NO. The structural formula for PCNB is:

6 5 2

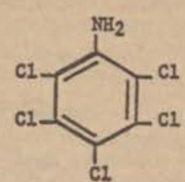


PCNB is a crystalline solid, pale yellow to white, depending on purity, with a musty odor. Its density is 1.718 at 25°C, its boiling point is 328°C at 760 mm Hg and its melting point is 142°–145°C. Some vapor pressures are:

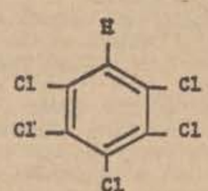
1.61×10^{-5} mm Hg at 10°C
5.0×10^{-5} mm Hg at 20°C
11.3×10^{-5} mm Hg at 25°C



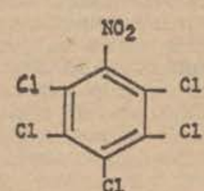
hexachlorobenzene (HCB)



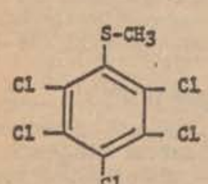
2,3,4,5,6-pentachloroaniline (PCA)



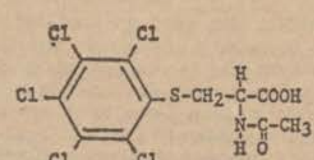
2,3,4,5,6-pentachlorobenzene (PCB)



2,3,4,5-tetrachloronitrobenzene (2,3,4,5-TCNB)



S-methyl pentachlorophenyl sulfide (MPCPS)



N-acetyl-S-pentachlorophenyl-L-cysteine

Figure 1. Chemical structures of PCNB impurities and various PCNB metabolites

PCNB is freely soluble in carbon disulfide, benzene, chloroform, ketones, and aromatic and chlorinated hydrocarbons, and is slightly soluble in alkanols. It is nearly insoluble in water (0.44 mg/l at 20[C.) and in ethanol (2 mg/l at 25[C).

(3) *Degradation, Transport and Soil Residues.*—Chacko et al. (1966) found that eight soil fungi species and nine actinomycete species, grown in nutrient media *in vitro*, degraded PCNB to pentachloroaniline (PCA). In one species of fungus, Nakanishi and Oku (1969) found that PCNB was metabolized to PCA and pentachlorothioanisole (PCTA). Several authors have stated that microbial degration of PCNB occurs only when the microorganisms are actively growing (Casely 1968, Ware and Roan 1970, Chako et al. 1966).

Casely (1968) traced the disappearance of PCNB from Yolo fine sandy loam through biological and non-biological pathways. He analyzed only for PCNB and not for its metabolites. Sterilized and unsterilized soil samples were measured for PCNB loss under moisture conditions of 3%, 20%, and 50% (equivalent to air dry, field capacity and saturated soil, respectively). It was found that only 10% of the PCNB escaped from the air-dry soil; 20% and 50% escaped from the moisture field-capacity and saturated soil samples, respectively. From these results the author observed that an increase in soil moisture increases the mobility of PCNB in the soil and thus increases losses through volatilization.

In the unsterilized field-capacity samples, 80% of PCNB was lost after 10 months. Three-fourths of this loss was to the water-saturated air passed over the sample and one-fourth to microbial degradation. Undegraded PCNB was the major component of the removed air stream. The author concluded that "considerable quantities" of PCNB could be lost to the air in intensively cropped areas where irrigation is used.

Ko and Farley (1969) attempted to confirm the conversion of PCNB to PCA in soil. Residues of PCNB were measured in moist soil, sterilized-moist soil, submerged soil and sterilized-submerged soil. Only in the submerged soil did PCNB disappear (56% after 3 weeks); more than half of this amount was transformed into PCA. The authors concluded that this conversion resulted from soil micro-organisms. They suggested that the remaining PCNB was lost through a non-biological process, since the same amount disappeared from the sterilized-submerged soil.

Wang and Broadbent (1972) measured the rate of loss of PCNB from three California soils—Colombia fine sandy loam, Sacramento clay and Staten peaty muck. PCNB was found to have a halflife of 4.7, 7.6 and 9.7 months, respectively, in these soils. Kaufman (1970) confirmed that the conversion of PCNB to PCA is enhanced by submergence of treated soil in water.

The EPA National Soils Monitoring Program reports that in 1972 there were no detections of PCNB in any of 1,487 soil samples from 37 states (Memo, 1976). Of the 1,487 soil samples collected in 1973, only 3, or 0.3%, had detectable levels of PCNB. Residues ranged from 0.22 to 2.61 ppm. Pesticide applications had been made at seven of these sites in 1973 (0.5% of 1402 responses) with an average total application of 0.2 lb/A (0.02 kg/ha).

(4) *Bioaccumulation and Metabolism.*—(a) *Plants.* Casanova and Dubroca (1973) studied the residues of PCNB found in lettuce after treatment of the soil with PCNB. In the first set of experiments, PCNB was applied to the soil before planting at rates of 15 and 30 kg AI/ha. Residues were determined by gas chromatography after 12 weeks of growth. Table 1 gives the results of the residue tests.

TABLE 1.—*Residues of PCNB in lettuce leaves (parts per million) from plants grown in treated soils*

Study location (in France)	Soil treatment rates, kilograms AI/ha		
	0	15	30
Nantes	0.51	0.63	1.10
Rennes	.17	.52	1.05
Nantes	.05	.47	1.15
Rennes	.07	.61	1.10
Rennes	.10	.16	.43
Average	.18	.48	.96

The residues after the application of 15 kg AI/ha were approximately 0.5 ppm, while the residues after an application of 30 kg approached 1.0 ppm, the established tolerance for PCNB in France. The authors suggest that this was due to PCNB applications prior to the study.

In the second set of experiments, the same application and test methods were used, except that analyses for HCB, an inherent contaminant of PCNB, were included and residues were determined not only in lettuce but also in soil before treatment and at the end of the growing season. The results are given in Table 2. The results of the first test were confirmed in the second test, which showed the presence of PCNB residues in lettuce at about 1.0 ppm after an application of 30 kg AI/ha. Residues of HCB from the same application were considerably lower than these values; they ranged from 0.02 in lettuce from untreated soils to 0.04 ppm in lettuce from treated soils.

TABLE 2.—*Residues of PCNB and HCB in lettuce from treated soil (parts per million)*

Location and procedure	Soil treatment rates, kilograms AI/ha: None HCB	None PCNB	15 HCB	15 PCNB	30 HCB	30 PCNB
Nantes:						
Lettuce	0.016	0.29	0.034	0.83	0.041	1.04
Soil (preplant)	.160	1.50	.160	1.50	.160	1.50
Soil (at harvest)	.170	1.57	.620	20.90	2.07	82.41
Rennes:						
Lettuce	.025	.34	.43	.66		
Soil (preplant)	.080	.64	.090	.90		
Soil (at harvest)	.087	.67	.660	10.27		

Residues in soil before treatment varied considerably with the study location. HCB residues also varied, but they were consistently lower than the PCNB residues.

Casanova and Dubroca (1973) attempted to show that residues found in lettuce resulted from absorption from soil through roots rather than from surface contamination. In a laboratory, soil was treated with the equivalent of 15 and 45 kg AI/ha PCNB. Residue measurements were taken 8 weeks later. Table 3 shows the resulting residues.

TABLE 3.—*Residues of PCNB and HCB in soil and lettuce (parts per million)*

Nature of test	Soil treatment rates, kilograms AI/ha: None HCB	None PCNB	15 HCB	15 PCNB	45 HCB	45 PCNB
Treated soil	*N.D.	0.14	0.50	20.40	1.86	69.10
Lettuce	*N.D.	.03	.01	.73	.02	1.56

*N.D.=undetected.

Kuchar et al. (1969) studied the metabolism of PCNB in immature cotton plants. Cotton plants grown in soil containing 300 ppm of PCNB were monitored for PCNB, its impurities and its metabolites. Results after two weeks growth (roots included) were:

Component	Residues (parts per million)
PCNB	155.0
PCB	3.96
TCNB	.018
HCB	4.61
PCA	1.11
MPCPS	2.95

PCA had been found in young corn and soybean plants grown in PCNB-treated soil (Kuchar et al. 1969). Gorbach and Wagner (1967) have also cited PCA as a metabolite in potatoes, along with two unidentified metabolites. Kuchar et al. (1969) later described these unidentified substances as having gas chromatograph retention times identical to HCB and MPCPS.

HCB applied to wheat seed is translocated to the developing grain (Johns 1969, Smith 1969).

(b) *Animals. Rabbits.*—In a study conducted by Beets et al. (1955) 12 rabbits received either 1, 2, or 3 g of PCNB via stomach tube. Urine and feces were collected for 72 hours. An average of 62% of the administered dose was found in the feces from the 2 g dose and was considered unabsorbed. Another 11% of the dose could be accounted for as PCA in the urine. N-acetyl-S-(pentachlorophenyl)-L-cysteine was also isolated from the urine at a level 14% of the initial dose. Pentachlorophenol was formed only in trace amounts.

To determine the metabolic pathways of 2,3,4,5,-TCNB, 0.7 g was administered to rabbits as an aqueous suspension via stomach tube. The 2,3,4,5-TCNB was poorly absorbed; 33% was found in the feces after 48 hours. Further, 11% of the dose was excreted in the urine as 2,3,4,5-tetrachloroaniline (2,3,4,5-

TCA). The excretion of the glucuronide (41%) and the ethereal sulfate (6%) of 6-amino-2,3,4,5-tetrachlorophenol indicated that ring hydroxylation had occurred (Bray et al. 1953).

Dogs.—Purebred beagles, approximately 4.5 months old (4 per sex per dose), were fed 0, 5, 30, 180, or 1,080 ppm PCNB in their diets for two years (Borzelleca 1971). Olin technical grade PCNB (97.8%), containing 1.8% HCB, 0.4% 2,3,4,5-TCNB and 0.1% PCB, was used. Kidney, brain, skeletal muscle, liver, spleen, fat, bile, blood, urine, and feces samples were collected for analysis after two years. Electron-capture gas chromatography was used to detect the presence of PCNB, PCB, HCB, PCA, and MPCPS. Results for liver, kidney, fat, and feces at dose levels of 0, 5, 30, and 180 ppm dietary exposures are summarized in Table 4.

MPCPS appeared to have an equal propensity to be stored in the fat or skeletal muscle of the male rat. At the method's sensitivity level (unstated), a 60 day withdrawal period from the treated diet resulted in undetectable residues of PCA, MPCPS, and PCB in adipose tissue at all exposure levels. Substantial residues of HCB remained from all levels of dietary exposure.

TABLE 4.—*Dog tissues and excreta concentrations of PCNB, its metabolities (PCA, MPCPS), and related impurities (a) after 2 years on diet*

Tissue and diet	Concentrations found (parts per million)				
	PCNB	PCA	MPCPS	PCB	HCB
Liver:					
0	ND	<0.06	<0.05	<0.02	ND
5	ND	<.06	<.05	<.02	0.039
30	ND	<.06	<.10	<.02	.125
180	ND	<.06	<.05	0.54±0.61	.74
Fat:					
0	ND	<.08	<.03	.005	.005
5	ND	<.08	<.03	.093	.452
30	ND	<.08	<.03	.163	1.11
180	ND	<.08	(b) ND	.767	6.12
Kidney:					
0	ND	ND	ND	<.03	ND
5	ND	ND	ND	<.03	<.04
30	ND	ND	ND	<.03	<.10
180	ND	(c) .018	.021	<.10	<.60
Feces:					
0	0.004	(c) .005	(d) .014	ND	(c) .004
5	.059	.188	.134	.007	.009
30	.343	.450	.675	.03	.022
180	1.56	1.96	.192	.03	.072

(a) PCNB, 97.8 pct; HCB, 1.8 pct; PCB, 0.1 pct; 2, 3, 4, 5-TCNB, 0.4 pct.
(b) 2 of 3 samples.
(c) 1 dog, ND in 2.
(d) Average 2 dogs, ND in 1.

Rats.—Finnegan et al. (1958) conducted an initial study to determine the amount of PCNB stored in the fat of male and female albino rats. The diets contained 0, 63.5, 1,250, or 2,500 ppm of PCNB as a 25% dust. The animals were fed for 3 months and then sacrificed. The results showed a dose-related increase in content of PCNB in adipose tissue. Subcutaneous and perirenal fat samples were taken to be analyzed by neutron activation of chlorine. For the respective dietary levels, the average chlorine concentration in ether extracts of fat was 42.4, 392, 571, and 1,151 ug/g in males, and 43.7, 470, 875, and 1,316 ug/g in females.

As stated by Kuchar et al. (1969), the neutron activation process was later found to be inadequate for determining residues of PCNB or its metabolites in animals.

A subsequent study by Borzelleca et al. (1971) stated that the residue in the fat originally identified as PCNB consisted mostly of the impurities PCB and HCB.

As part of a reproduction study (Borzelleca et al. 1971), a portion of F-2b generation rats were fed diets containing 0, 5, 50, or 500 ppm PCNB for approximately 3 weeks following weaning. The animals were sacrificed after producing two litters. Analyses were made of composites of tissue and excreta from three rats of the same sex and dietary level. Those animals that were not sacrificed at this time were returned to control diets for two months. Residues of PCNB, HCB, PCB, PCA, and MPCPS were found in skeletal muscle, liver, kidney, fat, and feces at the end of the 33 week feeding period and two months after withdrawal from treated diets (see Table 5).

The major tissue of storage appeared to be adipose tissue (fat) where both PCB and HCB displayed dose-related storage levels. This storage trend continued to the 1,080 ppm exposure level, where respective storage levels of PCB and HCB increased to 5.15 and 194 ppm, respectively. No significant amounts of any product, including PCNB, were found in the urine. Decreased elimination of HCB from animal tissues over an extended time period was indicated by dose-related levels of HCB in fecal matter at the end of the 60 day withdrawal period.

TABLE 5.—*Rat tissue and excreta concentrations of PCNB, its metabolites (PCA, MPCPS), and related impurities (PCB, HCB)*

Specimen and diet (parts per million)	Days on control, diet (a)	Sex	Concentrations found (parts per million)				
			PCNB	PCA	MPCPS	PCB	HCB
Sk. muscle: 500	0	M	(b) ND	0.117	8.13	0.042	29.7
Liver: 500	0	M	ND	.069	.306	.010	1.93
Kidney: 500	0	M	ND	.084	.269	.131	6.43
Fat:							
5	0	M	ND	ND	.060	<.001	.587
5	0	F	ND	ND	.055	<.001	.824
50	0	M	ND	.019	.46	.019	10.8
50	0	F	ND	.095	.345	.011	4.73
500	0	M	ND	1.11	4.74	.304	117
500	0	F	ND	.238	3.82	.176	49
5	60	M	ND	ND	ND	ND	1.07
50	60	M	ND	ND	ND	ND	3.67
500	60	M	ND	ND	ND	ND	22.3
Feces:							
5	60	M	ND	ND	ND	ND	.023
50	60	M	ND	ND	ND	ND	.137
500	60	M	ND	.027	.101	ND	1.95

(a) After 33 weeks on test diets.
(b) ND=None detected.

Cows.—PCNB (Olin technical grade) was dissolved in corn oil and administered orally in gelatin capsules to cows (Borzelleca et al. 1971). Doses for each cow were dependent upon the animal's consumption of feed the previous week. Three cows per dose level received 0, 0.1, 1.0, or 10 ppm PCNB for 12 to 16 weeks. Fat biopsies for analyses during the course of the study were collected from the brisket area; additional tissues were obtained at autopsy. The cows were milked twice daily. An aliquot was removed and analyzed by a gas chromatograph equipped with electron capture. Levels of detectability for control and treated samples differed from week to week; consequently, the results are difficult to assess accurately. Tissue samples included skeletal muscle, liver, kidney, and abdominal and subcutaneous fat.

Considerable variation in residue levels was noted when individual samples were analyzed. Levels of HCB in milk from cows fed a diet of 1 ppm PCNB ranged from 0.001 to 0.003 ppm between the twenty-first and fifty-sixth days of continuous exposure. The average value was 0.002 ppm. At a dietary level of 10 ppm PCNB, the HCB residue ranged from non-detectable to 0.015 ppm, with an average value of 0.01 ppm. Levels of PCNB, PCA, MPCPS, and PCB showed sporadic variation, but were generally 0.005 ppm or less. There was little indication of dose-related level changes.

Samples of subcutaneous fat biopsied at 0, 1, 2, 4, 7, and 8 weeks after exposure to 10 ppm in the diet suggested a 0.5 ppm plateau of HCB residue beginning in the fourth week and continuing through the eighth week. PCA appeared to stabilize at a level of about 0.1 ppm between weeks 1 and 8 at the 10 ppm dietary exposure level. The remaining residues (PCA, PCNB, and MPCPS) were negligible or non-detectable.

Guorsaud et al. (1972) studied the relationship of HCB residues in endive roots to residue levels of HCB in the milk of cows eating the roots. First they determined that of all the pesticides used only PCNB was chemically related to HCB. Using gas chromatography, they found that the roots of the endives were contaminated with both HCB and PCNB and that the milk of cows eating these endives was contaminated with HCB. The most contaminated milk (26 ppm HCB) was from cows receiving 25 to 30 kg of endive roots per day. The roots were contaminated with 0.11 ppm of HCB. Another sample of milk containing 0.13 ppm of HCB came from a cow receiving endive roots contaminated with 0.006 ppm HCB.

In a subsequent study (Goursaud et al. 1972), a cows received a feed mixture containing 12 kg of endive roots contaminated with 0.16 ppm HCB and 2.16 ppm PCNB. The residues found in the milk are shown in Table 6. The authors concluded that the HCB contamination in the milk was linked to the application of PCNB to endives. They speculated that the source of HCB was from original formulation rather than from PCNB degradation.

TABLE 6.—*Residues of HCB and PCNB (parts per million) in milk of cows fed treated endive roots*

	HCB	PCNB
Milk sampling day:		
0*	0.21	Negligible for all samples.
1	.57	
2	1.23	
3	1.34	
4	1.68	
5	1.83	
6	2.00	
7	2.02	

*Day 0 means the day before the root-feed mixture was fed to the cows.

Feeding studies have shown that HCB is assimilated in the fat and other tissues of sheep (Craig and Dwyer 1961, Avrahami and Steel 1972a), chickens (Craig 1959, Watts 1968a, 1968b, Avrahami and Steel 1972b, 1972c), pigs (Gardiner and Armstrong 1960, Hansen et al. 1977), Japanese quail (Vos et al. 1968, 1971), kestrels (Vos et al. 1972), lambs (EPA 1976), rats (Medline et al. 1972, Villenueve 1975, Kuiper-Goodman et al. 1977), and aquatic organisms (Laseter et al. 1976, Isensee 1976).

Field studies have reported the occurrence of HCB residues in fish (Zitko 1971, Koeman et al. 1969, Holden 1973, Johnson et al. 1974), poultry products (Stanhope 1969, Tuinstra and Roos 1970, Goursaud et al. 1972, Smyth 1972), birds (Gilbertson and Reynolds 1972, Zitko and Choi 1972, Cromartie et al. 1975, Nickerson and Barbehenn 1972, White 1976, White and Heath 1976), edible animal tissues (Booth and McDowell 1975), and human milk and tissues (Bick 1967, Acker and Schulte 1970, Abbott et al. 1972, Siyali 1972, Brady and Siyali 1972, Curley et al. 1973, Neuhaus et al. 1973, Graca et al. 1974, Stacey and Thomas 1975, EPA 1977).

(5) *Tolerances and Food Residues.* Before any pesticide or any inert ingredient of a pesticide formulation may be used on a food or feed crop, a tolerance or exemption from a tolerance must be established. A tolerance is defined as the maximum residue level allowed for a particular pesticide on a raw agricultural commodity or a processed food or feed. It is based on the maximum residue expected from the proposed use and on the toxicological data submitted by the registrant. PCNB tolerances are summarized in Table 7.

TABLE 7.—*U.S. tolerances* for PCNB on raw agricultural commodities (40 CFR 180.291)*

Crop	Parts per million	Crop	Parts per million
Bananas	0.1	Cottonseed	0.1
Beans	.1	Garlic	.1
Broccoli	.1	Peanuts	1.0
Brussels sprouts	.1	Peppers	.1
Cabbage	.1	Potatoes	.1
Cauliflower	.1	Tomatoes	.1

*All tolerances are interim except for cottonseed.

FDA Market Basket surveys from 1964 to 1969 detected very small residues of PCNB in only 0.7% of leaf and stem type vegetables sampled. Residues ranged from 0.005 ppm to 0.42 ppm, with an average of 0.01 ppm (Duggan et al. 1971). In the Market Basket Survey between June 1971 and June 1972, trace residues were found in only one sample (oil, fat, or shortening). HCB residues ranged from 0.002 to 0.011 ppm in 4 composite samples, while PCA residues were found from 0.005 to 0.023 ppm in 3 composite samples (Manske and Johnson 1975).

In another FDA survey for 1973–1974, individual items in the dairy and meat composites in four market baskets were analyzed. PCNB residues occurred from 0.002 to 0.005 ppm in 7 composites. HCB ranged from 0.0003 to 0.0070 ppm in 17 composites. PCA was found from 0.004 to 0.050 ppm in 10 composites. TCNB occurred at 0.001 to 0.284 ppm in 8 composites (Manske and Johnson 1977).

Samples from FDA compliance and surveillance programs during 1972–1976 showed small residues in animal feed, vegetables and cottonseed meal (U.S.F.D.A. 1976).

HCB has been shown to survive the milling process of wheat and remain in the final product (Old 1969). It has also been detected at 0.010 ppb in raw and 0.006 ppb in finished U.S. drinking water (Murphy 1975).

(6) *Toxicity.* (a) *Acute. Rats.*—The oral LD-50 for technical grade PCNB (Olin product) as a 10% solution in corn oil was found to be 1.71 ± 0.17 g/kg for females (Finnegan et al. 1958). The oral LD-50 of a 75% wettable powder commercial formulation (Olin product) administered as a 40% aqueous suspension to male rats was greater than 12 g/kg.

Dogs.—Groups of 10 mongrel dogs were administered PCNB (Olin product) via gavage as a 10% solution in warm corn oil. Doses up to 2.5 g/kg did not produce any deaths, although half of the dogs on this dosage level vomited (Finnegan et al. 1958).

Rabbits.—Percutaneous toxicity was tested in male albino New Zealand rabbits weighing an average of 1.96 kg (Borzelleca et al. 1971). Animals with intact and abraded skin were used. The hair was removed from the trunk with an electric clipper and abrasions were made with a metal grid. The rabbits were restrained in stocks for 24 hours. PCNB (Olin product) was dissolved in dimethyl phthalate as a 30% solution and applied over the trunk under the restraining device. Doses of 10.0 ml/kg and 13.3 ml/kg were applied to 10 rabbits with intact skin and 13.3 ml/kg was administered to 10 rabbits with abraded skin. During the 14 days following dosing these were no indications of toxicity or skin irritation.

(b) *Subacute. Rats.*—Five groups of 7 male and 7 female albino rats of weanling age were divided into separate groups for a 3 month study. Each was fed a diet containing 1 of 5 levels of PCNB (Olin Product) at 0, 63.5, 635.0, 1,250, 2,500, or 5,000 ppm. The animals were weighed at weekly intervals and a hematologic study was done upon termination of the study. Body weights for males were significantly depressed at the 2,500 ppm level. The males and females on the 5,000 ppm level were killed at the end of 2 weeks. At the 1,250 and 2,500 ppm levels, the kidney-to-body weight ratios showed a significant increase for male rats. Significant increases in the liver-to-body weight ratios were found at all levels except in the females fed 63.5 ppm (Finnegan et al. 1958).

Rtas (10 per sex per dose) were fed technical PCNB (purity and source unknown) in their diets at rates of 0, 1,000, 5,000, or 10,000 ppm for 90 days. The growth rate of rats fed 5,000 ppm PCNB was slightly less than that of controls. Rats on the 10,000 ppm diet had an even lower growth rate (FAO/WHO 1970).

Dogs.—Groups of 3 mongrel dogs were placed on diets containing either 25, 200 or 1,000 ppm PCNB for 1 year. The PCNB (Olin product) was added as a dust formulation consisting of 20% PCNB, 77% Pyrax ABB and 3% Armour "Sticker." The dogs were weighed at weekly intervals and hematologic studies were made at the start, mid-point and termination of the study. The PCNB did not inhibit growth or result in any significant hematological or histopathological changes (Finnegan et al. 1958).

(c) *Chronic. Rats*.—Finnegan et al. (1958) conducted a 2 year study in which rats in groups of 10 males and 10 females were fed a diet containing 0, 25, 100, 300, 1,000 or 2,500 ppm PCNB. The PCNB (Olin product) was the same formulation as for the dog experiment discussed above. Rats were housed individually and weighed weekly. They were given hematologic examination during the eleventh and twenty-fourth months of the experiment. Deaths did not correlate with the dose of PCNB. Female rats showed a slight growth suppression at 100 ppm and above. The growth of male rats accelerated, especially at 25 ppm. Hematological values were within normal ranges. Lung abscesses and fatty changes in the liver did not correlate with PCNB dose.

Dogs.—In a study conducted by Farbwerke Hoechst AG (cited in FAO/WHO 1970), groups of 6 dogs, 3 males and 3 females, were fed diets containing 0, 500, 1,000 or 5,000 ppm PCNB (purity not specified) for 2 years. Liver changes occurred in all groups and the degree was dose related. The 5,000 ppm level produced fibrosis, narrowing of hepatic cells, thick leucocyte infiltration and increased size of the periportal areas. At the 500 and 1,000 ppm levels, the changes were similar but to a lesser degree. The highest dose level also produced atrophy of bone marrow and reduced hematopoiesis.

In another study (Borzelleca et al. 1971), purebred beagles, approximately 4.5 months old, were fed a diet containing PCNB (Olin product) at 0, 5, 30, 180, or 1,080 PRM for 2 years. Hematocrit values showed a significant decrease at 18 months for males receiving dosages of 30 and 180 ppm. There was no change for males at 1,080 ppm There were no dose related effects on urine analysis, blood chemistry, mortality, body weight, food consumption or the estrus cycle. A ratio of organ-to-body weight data showed a significantly greater value for livers of the dogs at 1,080 ppm PCNB. No treatment-related lesions were observed in dogs sacrificed at 1 year. In dogs sacrificed after two years, cholestatic hepatosis with secondary bile nephrosis was found in those dosed at 180 ppm and 1,080 ppm. Although these correlated with dosing, the authors considered the lesions reversible.

B. *Registered Uses and Supplies*

(1) *Products*. PCNB, a versatile fungicide, is an active ingredient in 233 Federally-registered products and 98 State-registered products. It is not used as inert ingredient in any registered products. PCNB is formulated as wettable powders, dusts, emulsifiable concentrates, granules, and in combination with other active ingredients previously listed.

(2) *Use Patterns*. 295,000 pounds of PCNB were used as a soil fumigant in 1971; 7,000 pounds were used for seed treatment (EPA 1976). Of the soil fungicide applied, 77% was used on cotton, 19% on peanuts, and 4% on nursery and fruit crops, and vegetables. It is unlikely that PCNB is used on more than 12% of the total U.S. cotton acreage and 2%–3% of the U.S. peanut acreage (EPA, 1976).

C. *Supply*

The sole manufacturer of PCNB is the Olin Chemical Corp. of Stamford, Conn. In 1971 annual production was 3 million pounds active ingredient (National Academy of Sciences 1975). According to the Olin Corporation, about a quarter of its production is exported. The U.S. Department of Agriculture has not recorded any imports.

II. REGULATORY HISTORY

A. *Past Actions*

On January 14, 1959, a registration for Technical Grade PCNB (EPA Reg. No. 1258–517) was issued to Olin Mathieson Chemical Corporation. This later became the Olin Chemical Corporation, the current holder of the PCNB technical registration. After the technical material was registered, numerous end use products were registered for various uses, including food crop uses. Tolerances for PCNB were set at zero.

In June 1965, the National Academy of Sciences National Research Council issued a report recommending that "no residue" and "zero tolerance" concepts be abandoned. The report stated that zero tolerances were not desirable, since, as experience bore out, residues might be present at levels below the current sensitivity of detection methods.

On April 13, 1966 a joint USDA-HEW statement for implementation of the recommendation was published in the FEDERAL REGISTER. The plan included discontinuation by December 31, 1967 of registrations involving residues on food or feed for which a tolerance or exemption were lacking. However, extensions were granted until December 31, 1970, if progress was being made toward showing that the registration could be continued without undue hazard to the public health.

In late 1967, PR Notice 67–10 informed registrants of the extension of certain no residue and zero tolerance registrations beyond December 31, 1967. A FEDERAL REGISTER notice of April 15, 1967 stated that registrations involving food or feed on a no residue or zero tolerance basis would be cancelled unless (1) FDA established finite tolerance or (2) a progress report were submitted to show studies were underway to support such tolerance. All registered uses of PCNB listed in the USDA Summary of Agricultural Pesticides (Compendium) were extended until January 1, 1969.

On September 4, 1968, a petition to establish tolerances on several crops was received by the Federal Food and Drug Administration (FDA). This petition was filed (i.e. accepted) on September 11, but on October 20 was found to be inadequate. PCNB was certified for usefulness on alfalfa, celery, clover, beans, bananas, broccoli, brussel sprouts, cabbage, cauliflower, cottonseed, flaxseed, garlic, lettuce, mushrooms, peanuts, peppers, potatoes, and tomatoes on December 27, 1968.

PR Notice 69–2, issued on January 10, 1969, again extended affected registrations, beyond December 31, 1968 to January 1, 1970, based on the petition to FDA for uses in the USDA Summary. These include alfalfa, bananas, beans (all), beans (pole), beans (bush), broccoli, brussel sprouts, cabbage, cauliflower, clover, cotton, cotton (seed), garlic, lettuce (head), peanuts, peppers, potatoes, and tomatoes, (staked, unstaked, and green house).

On February 19, 1969, these petition data were found sufficient to support issuance of requested negligible residue tolerances (0.1 ppm) and 1 ppm on celery. On March 21 that year PCNB residue data and analytical methods were evaluated, and on August 1, the petition was amended by Olin Corporation. This amendment was evaluated on February 19, 1970.

PR Notice 70–1, issued on January 19, 1970 yet again extended registrations, this time beyond December 31, 1969. Some PCNB uses were extended to January 1, 1971; these uses are listed in the EPA Compendium of Registered Pesticides, which superceded the USDA Summary. PR 70–8, issued on March 10, 1970, informed registrants of further needs for toxicological information; specifically, carcinogenicity and teratogenicity studies were requested to be submitted or to be initiated for PCNB.

In March 1970, FDA recommended establishment of the proposed tolerances in spite of findings by the U.S. Department of Health, Education and Welfare of possible tumorigenic and teratogenic effects (DHEW 1969). A dissenting opinion from FDA, on the other hand, recommended further data requests because of these findings. Finally, on May 1, 1970, the amended petition was withdrawn because of an EPA requirement that the petitioner resolve the issues raised by DHEW. Later, on May 25, a petition for cottenseed was resubmitted, and on February 17, 1971, a permanent tolerance was issued at 0.1 ppm.

In the meantime, on December 14, 1970 a new petition, was received by EPA. It proposed tolerances on peanuts at 1.0 ppm and bananas, beans, broccoli, brussel sprouts, cabbage, cauliflower, garlic, peppers, potatoes, and tomatoes at 0.1 ppm. Additional data were not submitted and thus EPA refused to file the new petition. In addition, since evidence did not support or was not submitted in support of PCNB uses on alfalfa, clover, and lettuce (head), these uses were cancelled while remaining uses were extended until further notice.

Olin requested on October 11, 1971, a reconsideration of the petition, since the World Health Organization (WHO) had established a temporary acceptable daily intake which was based on crop residue data in agreement with the proposed tolerances. As a consequence, on November 10, EPA filed the amended petition and on November 23 issued a Certification of Usefulness for 0.1 ppm on bananas, beans, broccoli, peppers, potatoes, and tomatoes and 1 ppm in or on peanuts. However, on February 23, 1972, EPA recommended against establishment of proposed tolerances and requested further requirements to be met by the petitioner.

On May 9, the petition was evaluated. When eight deficiencies were found, EPA requested further data. In a letter to Olin Corporation dated May 25, EPA outlined these deficiencies and stated that the toxicology review could not progress without the results of the carcinogenic and teratogenic tests in progress. On December 2, 1972, interim tolerances were established identical to the proposed tolerances. Olin proposed amendments to the petition on January 30, 1973, which were accepted on March 2, 1973.

On March 14, 1973, EPA stated that a teratology study submitted by the registrant had satisfied one of the toxicological requirements for making the proposed tolerances permanent. However, it was noted that the carcinogenicity study still had to be submitted before permanent tolerances could be recommended.

EPA informed the registrant on June 5, 1973 that only two of the deficiencies had been corrected, while six were still unresolved. It was recommended that permanent tolerances not be established. It was stated that a tolerance of 0.2 ppm for total residues of HCB, PCB and PCA would be required for meat, fat and meat by-products of cattle, goats, horses and sheep, and 0.2 ppm in milk fat. It was stressed that these suggested tolerances for HCB were based only on HCB arising from PCNB uses; the tolerance pending for HCB under another petition might require addition of a paragraph under 40 CFR 180.3 specifying that residues of HCB shall not exceed the higher of the two tolerances.

EPA received a progress report on the National Cancer Institute cancer bioassay on rats and mice on February 21, 1974.

On July 9, 1974, the petitioner was notified of the acceptability of protocols for chicken feeding study, and this study was received by EPA on November 17, 1975.

In summary, while there exists a permanent tolerance for cottonseed, tolerances for residues of PCNB on other crops listed in Table 7 are interim. Finalization of these into permanent tolerances is pending the outcome of this RPAR investigation and further review by the EPA Registration Division.

B. *Referral to OSPR*

Action was started by OSPR on the basis of the findings in Section III below, that PCNB induced a statistically significant increase in the incidence of tumors in mice. PCNB was accepted as a candidate for RPAR review in July 1976, by the Director, Office of Special Pesticide Reviews.

III. SUMMARY OF SCIENTIFIC EVIDENCE TO SUPPORT REBUTTABLE PRESUMPTION—ONCOGENICITY

40 CFR 162.11(a)(3)(ii)(A) provides that a "rebuttable presumption shall arise if a pesticide's ingredient(s) * * * [i]nduces oncogenic effects in experimental mammalian species or in man as a result of oral, inhalation, or dermal exposure * * *." Section 162.3(bb) defines the term oncogenic as "the property of a substance or a mixture of substances to produce or induce benign or malignant tumor formation in living animals."

Several studies have been examined by the Agency which present evidence that PCNB meets the above criterion. Briefly, these findings are that PCNB induced:

1. A significant increase in hepatic carcinomas in male mice exposed to 1,000 to 3,000 ppm PCNB in the diet ($p<0.021$).
2. A significant increase in fibrosarcomas of the skin in female mice at 1,200 ppm in the diet ($p<0.001$).
3. A significant increase in hepatomas in male mice fed 1,206 ppm in the diet ($p<0.011$).
4. A significant increase in skin papillomas in mice receiving PCNB as an initiating agent followed by croton oil applications (males, $p<0.0225$; males and females and females combined, $<p0.011$).
5. A higher occurrence of malignant lymphoreticular tumors in male rats exposed to 1,200 ppm in the diet ($p<0.0548$).

Following are descriptions of the tests which resulted in these conclusions.

A. *Hazleton Carcinogenesis Bioassay of PCNB*

A carcinogenesis bioassay of PCNB was started in 1972 at Hazleton Laboratories, Inc., on behalf of the National Cancer Institute. The experiments used Osborne-Mendel rats (Supplier: BmI) and B6C3F1 mice (Supplier: Charles River Laboratories).

These animals were fed a mixture of corn oil and PCNB *ad libitum* at two dose levels, with 50 males and 50 females of each species in each group. Control groups for each species consisted of 20 animals of each sex.

The composition of the PCNB has been reported by the supplier as (Olin Corporation letter, 1976):

	Weight (percentage)
Pentachloronitrobenzene	98.1–98.2
Pentachlorobenzene	.11–0.16
Chloranil	.13–0.15
2,3,4,5-Tetrachloronitrobenzene	.22–0.29
Hexachlorobenzene	1.0
High Boiler (unknown)	.30–0.22

Male rats in the low dose group received 7,500 to 5,000 ppm, and 15,000 to 10,000 ppm PCNB in the high dose group. These doses were decreased to the second dosage rate after 14 weeks and continued until feeding was completed at 78 weeks. Low dose females were fed 11,000 ppm for 14 weeks; this was decreased to 7,250 ppm PCNB for the remainder of the experiment. High dose females received 22,000 ppm for 14 weeks and 14,500 ppm for the remaining feeding period. All animals were sacrificed after 111–113 weeks.

Mice were fed PCNB for 78 weeks. Low dose males were fed increasing doses of 1,075 ppm to 3,000 ppm, and high dose males received 2,150 to 6,000 ppm. Low dose females were fed 2,320 to 4,500 ppm and the high dose groups received 4,640 to 9,000 ppm. Surviving animals were sacrificed 91 to 93 weeks after the start of feeding.

The results obtained from rats showed a higher incidence of carcinomas in low dose PCNB-treated males and females. Female rats fed the low dose also had increases in malignant tumors. However, these observations are not statistically significant ($p<0.05$).

Carcinomas of the liver increased in low dose male mice, with eight of eighteen mice (44%) in that group, compared to two of twenty control male mice, developing carcinomas. This is significant at $p<0.021$ (Albert, 1977).

B. *Central Institute for Nutrition and Food Research—Mouse Study*

At the request of Farbwerke Hoechst AG (Frankfurt, W. Germany), the Central Institute for Nutrition and Food Research conducted a mouse carcinogenesis bioassay of PCNB (Van der Heijden and Til 1974). According to the report, the technical grade sample contained:

	Weight percentage
Pentachloronitrobenzene	98.2–98.3
Hexachlorobenzene	2.7
2,3,4,5-tetrachloronitrobenzene	1.1
2,3,5,6 - tetrachlornitrobenzene and 2,3,4,6-tetrachlornitrobenzene	0.64
Chloranil	<0.5

Diet pellets were administered *ad libitum* to SPF (Swiss random bred) males and females in 0, 100, 400 and 1,200 ppm dose groups for 80 weeks.

Gross necropsies were conducted. Tissues and tissues with gross abnormalities, three sections of the liver and each lung lobe were histologically prepared and examined. The gross examination showed skin abscesses and subcutaneous masses in females that had ingested 1,200 ppm PCNB. From tissue specimens, they were identified as fibromas and fibrosarcomas. 12 of 91 females at this dose level, compared to none of the 90 control females, had these tumors at $p<0.001$ (Albert 1977).

C. *Central Institute for Nutrition and Food Research—Rat Study*

In September 1971 the Institute began a carcinogenesis test for PCNB on rats at the behest of Farbwerke Hoechst A.G. (Anonymous undated). The technical material was the same as that used in the mouse study. Males and females, 50 per dose group, were fed a diet of 0, 100, 400 and 1,200 ppm for 104 weeks.

Complete gross necropsies were conducted to provide tissues for histological fixing and scrutiny. Tissue examinations were detailed for 20 males and females from the control and 1,200 ppm groups, but were limited to the liver for all other animals and to grossly visible tumors or lesions suspected of being tumors.

26 of 47 (55%) males ingesting 100 ppm had significantly more lymphoreticular tumors of the lung ($P<0.0548$). Most of these tumors were reticulum cell sarcomas; 20 of 47 tumors were found in treated males and 8 of 44 tumors were seen in untreated males (Albert 1977).

D. *Innes Mouse Study*

A tumorigenicity screening study on PCNB was conducted by Bionetics Research Laboratories, Inc. from 1966–1967 for the National Cancer Institute (Innes et al., 1969). While the purity of the sample was not reported, it is suspected that it contained about 88% PCNB and 11% hexachlorobenzene (U.S.E.P.A. 1976b).

Strain X and Strain Y mice, (C57BL–6 x C3H/Anf)F1 and (C57B1/6 x AKR)F1, respectively, were administered 464 mg/kg PCNB (maximum tolerated dose) by stomach tube at seven to 28 days of age and orally in the diet *ad libitum* at 1,206 ppm up to necropsy at 78 weeks. There were 18 males and 18 females of each species in the control and treated groups.

Mice were grossly examined post mortem externally and in the thoracic and abdominal cavities. Tissues of major organs and of grossly visible lesions were reviewed microscopically. The cranium and thyroid glands were not dissected.

A significantly elevated incidence of liver tumors was found in the Strain Y males ingesting PCNB. 10 of 17 (59%) treated males compared to 1 of 17 (6%) of control males had hepatomas at $p<0.00246$ (Albert 1977).

E. *Tumor Initiating Study in Mice*

The University of Birmingham Cancer Research Laboratories in Birmingham, England, has conducted a study on the tumor initiatory activity of technical PCNB (Searle, 1966). The purity of the compound was not reported.

Treated and untreated groups of albino mice (background unspecified), 6–8 weeks old, were assigned 10 males and 10 females each. The backs of mice to be treated were shaven and 0.3% PCNB dissolved in 0.2 ml acetone was applied twice weekly for 12 weeks. These mice then received applications of 0.25% croton oil on the same skin area for another 20 weeks. Mice were killed 20 weeks after the last croton oil treatment.

Total number of tumors and the numbers of mice bearing visible skin tumors were recorded weekly during croton oil treatment, and biweekly thereafter. Papillomas less than 1 mm in diameter or persisting less than three weeks were not counted.

Mice from treated and untreated groups began to develop papillomas after 5–8 weeks of croton oil treatment. Papillomas increased in number until 5–10 weeks after cessation of applications, when some papillomas regressed. Seven treated males had tumors as compared to only one in the control group, significant at $p<0.0225$ (Albert 1977).

Also, 14 of 20 treated males and females (combined), compared to 5 to 20 untreated males and females (combined) had papillomas, which is significant at $p<0.0225$.

IV. OTHER ADVERSE EFFECTS ON WHICH THE AGENCY SEEKS ADDITIONAL INFORMATION

The Agency is concerned about preliminary information which indicates that HCB, an inherent contaminant of PCNB may induce oncogenic and other chronic effects in test animals. Since the reports providing most of the information are not yet in final form, the Agency cannot determine at this time that any RPAR criteria have been met by PCNB on the basis of these HCB reports. However, when final and verified reports are obtained, they will be fully evaluated along with other published studies which alone are not grounds for an RPAR (Courtney 1976, Khera and Villenueve 1975, Villenueve and Khera 1975). If an RPAR is declared for the potential effects of HCB in PCNB, a supplemental RPAR notice may be issued in the FEDERAL REGISTER for PCNB. If the Agency declares an RPAR for all products other than PCNB which contain HCB, a separate FEDERAL REGISTER notice will be issued, and all PCNB registrants may respond accordingly. A summary of the information awaiting consideration follows:

A. *Oncogenicity*

Dr. J. R. Cabral, while previously with the Eppley Institute for Research on Cancer, University of Nebraska, preliminarily reported that HCB induces oncogenic effects in hamsters (Cabral 1977a and 1977b).

Male and female Syrian golden hamsters were fed HCB in the diet at doses of 0, 50, 100, and 200 ppm, with 40, 30, 30, and 60 animals of each sex in each dosage group, respectively. After 80 weeks of feeding, significant increases in hepatomas were observed in HCB treated animals (low dose females, 37.5 percent, and males 27.2 percent; middle dose females, 42 percent, and males, 75 percent; high dose females, 81 percent, and males, 87 percent) compared to no hepatomas in untreated hamsters. Hemangioendotheliomas occurred significantly higher in hamsters receiving 200 ppm HCB (females, 9 percent, and males, 34 percent) than controls. Thyroid tumors were present only in treated animals and in proportion to the dose.

B. *Reproductive and Other Adverse Effects*

Linder et. al. (1977) are nearing the completion of a multi-generation reproductive study and some auxiliary experiments in rats. While the final results of the test are not yet available, the preliminary findings and the test design are of interest.

Technical grade hexachlorobenzene (HCB) was fed to rats at dietary concentrations of 0, 5, 20, or 100 ppm, and manifestations of toxicity observed through weaning of the third filial generation. Suckling pups of rats fed 100 ppm developed tremor and most of them died 4–14 days after birth. At weaning, liver weights of pups were increased in each filial generation of the group fed 20 ppm HCB, and, to a lesser degree, in some weanlings of the group fed 5 ppm. Significant HCB residues were found in whole fetuses and stomach contents of sucklings whose parents were fed 100 ppm HCB. Pathologic changes in the liver, consisting of hepatocellular enlargement in both sexes and slightly increased hemosiderin in females, were limited to adult rats fed 100 ppm HCB. In the lungs, an increase in size, number and distribution of intraalvelor (lipid-containing) macrophages was observed in HCB-treated rats. Porphyrinuria and excess storage of hepatic porphyrins occurred primarily in female rats fed 100 or 20 ppm HCB.

The Agency requests that any party having new or additional information on these or other potential adverse effects of PCNB or HCB submit such information for consideration in the RPAR process.

PCNB BIBLIOGRAPHY

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*Not cited in text, but included in Working Group review.

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**** PRODUCT SEARCH LISTING ****                    PAGE     1

09/21/77          FEDERALLY REGISTERED PRODUCTS CONTAINING PCNB

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*REGISTRANT*       *NAME AND ADDRESS*

*  000148          THOMPSON-HAYWARD CHEMICAL COMPANY
                   BOX 2383
                   KANSAS CITY KS 66110

   **************** PRODUCT NAME ****************

 **00764*  DE-PESTER TERRACHLOR 10% GRANULES

 **00780*  DE-PESTER TERRACHLOR-CAPTAN NO 10-10

 **01040*  T-H 20% TERRACLOR DUST

 **01062*  T-H TERRACLOR 2 LB. EMULSIFIABLE CONCENTRATE

 **01077*  T-H 10% TERRACLOR DUST

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*REGISTRANT*       *NAME AND ADDRESS*

*  000239          CHEVRON CHEMICAL COMPANY
                   ORTHO DIVISION 940 HENSLEY WAY
                   RICHMOND CA 94801

   **************** PRODUCT NAME ****************

 **01522*  ORTHO LAWN DISEASE CONTROL

 **02073*  ORTHOCIDE SOIL TREATER X-W

 **02162*  ORTHO PCNB 80 DUST CONCENTRATE

 **02213*  ORTHO SOIL TREATER 3 "X"

 **02382*  ORTHO ORTHOCIDE SOIL TREATER "X"
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**** PRODUCT SEARCH LISTING ****                    PAGE     2

09/21/77          FEDERALLY REGISTERED PRODUCTS CONTAINING PCNB

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*REGISTRANT*       *NAME AND ADDRESS*

*  000241          AMERICAN CYANAMID COMPANY
                   BOX 400
                   PRINCETON NJ 08540

   **************** PRODUCT NAME ****************

 **00146*  THIMET 10% SYS. INSECT./TERRACLOR SUPER X SOIL FUNGL GR

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*REGISTRANT*       *NAME AND ADDRESS*

*  000279          FMC CORP.
                   AGRICULTURAL CHEM DIV.
                   2000 MARKET STREET
                   PHILADELPHIA, PA. 19103

   **************** PRODUCT NAME ****************

 **01250*  NIAGARA PCNB 40 DUST CODE: 30260

 **02222*  NIAGARA PCNB10 ZINEB 10 SOIL TREATER

 **02354*  NIAGARA LANSTAN 10 PCNB-5 GRANULAR SOIL FUNGICIDE

 **02591*  TERRACLOR 6.5 SUPER X 1.6 THIMET 6.5 GRANULAR CODE: 31964

 **02938*  TERRACLOR 6.5 THIMET 6.5 GRANULAR

 **02967*  TERRACLOR 5 ZINEB 2/5 THIMET 5 COATED GRANULES

 **02975*  CAPTAN TERRACHLOR 10-10
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**** PRODUCT SEARCH LISTING **** PAGE 3

09/21/77 FEDERALLY REGISTERED PRODUCTS CONTAINING PCNB

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REGISTRANT *NAME AND ADDRESS*

* 000476 STAUFFER CHEMICAL COMPANY LABELING & REGISTRATION
DEPT 1200 SOUTH 47TH ST
RICHMOND, CA 94804

**************** PRODUCT NAME ****************

**01315* STAUFFER CAPTAN TERRACLOR 10-10 SEED PROTECTANT

**01437* TERRACLOR 10 DUST

**01500* CAPTAN-PCNB 10-10 DUST

**01739* TERRACLOR 10 G GRANULES

**01881* CAPTAN-PCNB 10-10 GRANULAR

**01928* CAPTAN TERRACLOR 30-30 WP SEED PROTECTANT

**01977* CAPTAN-TERRACLOR* 30-30 SEED PROTECTANT

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REGISTRANT *NAME AND ADDRESS*

* 000524 MONSANTO COMPANY
AGRICULTURAL PRODUCTS
800 N. LINDBERGH BLVD.
ST. LOUIS, MO 63166

**************** PRODUCT NAME ****************

**00121* PCNB 80% DUST CONCENTRATE

**00122* PCNB TECHNICAL GRADE

**** PRODUCT SEARCH LISTING **** PAGE 4

09/21/77 FEDERALLY REGISTERED PRODUCTS CONTAINING PCNB

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REGISTRANT *NAME AND ADDRESS*

* 000538 SCOTT O M & SONS COMPANY
MARYSVILLE OH 43040

**************** PRODUCT NAME ****************

**00040* PROTURF FF 11

**00050* FUNGICIDE WITH FERTILIZER FOR BLUEGRASS LAWNS

**00055* SCOTTS FUNGICIDE WITH FERTILIZER FOR ST. AUGUSTINE GRASS LAWNS

**00078* LAWN DISEASE CONTROL

**00096* NEW LAWN DISEASE CONTROL

**00108* PROTURF NEW FF II

**00116* SCOTTS TURF BUILDER PLUS LAWN DISEASE PREVENTER

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REGISTRANT *NAME AND ADDRESS*

* 000550 VAN WATERS & ROGERS DIV OF UNIVAR
2256 JUNCTION AVENUE
SAN JOSE, CA 95131

**************** PRODUCT NAME ****************

**00091* GUARDSMAN SEED GUARD

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**** PRODUCT SEARCH LISTING ****                    PAGE       5

09/21/77          FEDERALLY REGISTERED PRODUCTS CONTAINING PCNB

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*REGISTRANT*      *NAME AND ADDRESS*

*  000554         AGSCO INC
                  BOX 458
                  GRAND FORKS ND 58201

     **************** PRODUCT NAME ****************

 **00110*  AGSCO PCNB-E.C.

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*REGISTRANT*      *NAME AND ADDRESS*

*  000557         SWIFT AGRICULTURAL CHEMICAL
                  CORP.
                  111 WEST JACKSON BOULEVARD
                  CHICAGO, IL 60604

     **************** PRODUCT NAME ****************

 **01856*  VIGORO BROWN PATCH CONTROL PLUS FERTILIZER

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*REGISTRANT*      *NAME AND ADDRESS*

*  000728         SOUTHLAND PEARSON & COMPANY
                  PO BOX 7151
                  MOBILE AL 36601

     **************** PRODUCT NAME ****************

 **00081*  PEARSONS GREEN LAWN FUNGICIDE
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**** PRODUCT SEARCH LISTING ****                    PAGE       6

09/21/77          FEDERALLY REGISTERED PRODUCTS CONTAINING PCNB

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*REGISTRANT*      *NAME AND ADDRESS*

*  000802         LILLY CHAS H COMPANY MILLER RD DIV
                  7737 N.E. KILLINGSWORTH
                  PORTLAND, OR 97218

     **************** PRODUCT NAME ****************

 **00454*  MILLER S TERRACHLOR 20D FUNGICIDE

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*REGISTRANT*      *NAME AND ADDRESS*

*  000869         GREEN LIGHT COMPANY
                  P.O. BOX 17985
                  SAN ANTONIO, TX 78217

     **************** PRODUCT NAME ****************

 **00037*  GREEN LIGHT BULB STARTER & FOOD

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*REGISTRANT*      *NAME AND ADDRESS*

*  001023         TUCO PRODUCTS COMPANY
                  DIV UPJOHN CO 7171 PORTAGE RD
                  KALAMAZOO MI 49001

     **************** PRODUCT NAME ****************

 **00010*  ACTI DIONE - RZ
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**** PRODUCT SEARCH LISTING **** PAGE 7

09/21/77 FEDERALLY REGISTERED PRODUCTS CONTAINING PCNB

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REGISTRANT *NAME AND ADDRESS*

* 001202 PUREGRO COMPANY
1052 W 6TH ST
LOS ANGELES CA 90017

**************** PRODUCT NAME ****************

**00105* GAVICIDE THIMET PCNB 6.5-6.5

**00192* PUREGRO TERRACHLOR 20 DUST

**00193* PUREGRO TERRACHLOR 10 GRANULES

**00203* PUREGRO DI SYSTON PCNB 6.5-6.5

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REGISTRANT *NAME AND ADDRESS*

* 001258 OLIN CHEMICALS
OLIN CORPORATION
120 LONG RIDGE ROAD
STAMFORD, CT 06904

**************** PRODUCT NAME ****************

**00158* MATHIESON TERRACLOR 20% DUST

**00185* OLIN TERRACLOR 75% WETTABLE POWDER

**00279* TERRACLOR 2 LB EMULSIFIABLE SOIL FUNGICIDE

**00286* TERRACLOR 40% DUST SOIL FUNGICIDE

**00287* TERRACLOR 10% DUST-SOIL FUNGICIDE

**00407* MATHIESON BRAND TERRACLOR LANDPLASTER MIXTURE

**00466* MATHIESON TERRACAP 10-10-DUST

**00516* MATHIESON TERRACLOR 80% DUST CONCENTRATE

**00517* OLIN TERRACLOR TECHNICAL GRADE PCNB 99% SOIL FUNGICIDE

**** PRODUCT SEARCH LISTING **** PAGE 8

09/21/77 FEDERALLY REGISTERED PRODUCTS CONTAINING PCNB

**CONTINUE REGISTRANT 001258

**00555* MATHIESON TERRACLOR 10% GRANULAR

**00584* MATHIESON GREENJACK LAWN FUNGICIDE

**00588* OLIN TURFCIDE EMULSIFIABLE TERRACLOR FUNGICIDE

**00740* OLIN TERRACLOR SUPER-X EMULSIFIABLE SOIL FUNGICIDE

**00758* TERRACLOR SUPER X GRANULAR 10-2.5 SOIL FUNGICIDE

**00759* OLIN TERRACLOR SUPER X DUST-SOIL FUNGICIDE

**00760* OLIN TERRACLOR SUPER X PRE MIX DUST SOIL FUNG TERACLOR PLUS TERRAZOLE

**00765* TURFCIDE 10% GRANULAR SOIL FUNGICIDE

**00776* TERRACLOR SUP X SOIL FUNG WITH DI SYSTON SYSTEMIC INSECT GRANULAR

**00786* OLIN TERRA-COAT COTTON SEED TREATMENT

**00789* OLIN TERRACLOR SUPER-X SOIL FUNG W/THIMET SYST. INSECT. GRAN

**00801* OLIN TERRACLOR LIQUID SEED TREATMENT FUNGICIDE

**00806* TERRACLOR

**00809* OLIN TERRACLOR 6.5% PLUS DI-SYSTON 6.5% GRANULAR

**00810* OLIN TERRACLOR SUPER-X-MOLY SEED TREATMENT FUNGICIDE

**00811* OLIN TERACLOR 6.5% SOIL FUNGICIDE WITH THIMET SYSTEMIC·INSECTICIDE 6.5

**00813* OLIN TERRACLOR SUPER-X-SEED DUST 20-5

**00814* OLIN TERRA-COAT L-41 SEED TREATMENT FUNGICIDE

**00818* OLIN TERRA-COAT L-205

**00819* OLIN TERRA-COAT WP 6015

**00821* OLIN TERRACLOR 90% DUST CONCENTRATE

**00823* OLIN TERRACLOR SOIL FUNGICIDE 30% GRANULAR

**00824* OLIN TERRA COAT WP-4010 WITH MOLY SEED TREATMENT FUNGICIDE

**00830* OLIN-TERR COAT L-105 SEED TREATMENT FUNGICIDE

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       **** PRODUCT SEARCH LISTING ****                 PAGE     9

09/21/77          FEDERALLY REGISTERED PRODUCTS CONTAINING PCNB

**CONTINUE REGISTRANT 001258

   **00882*  OLIN-TERRA COAT LT 2 SEED TREATMENT FUNGICIDE

   **00884*  OLIN-TERRA-COAT SD-205 SEED DUST FUNGICIDE

   **00888*  OLIN TERRACLOR SUPER-X WITH GRAPHITE SEED TREATMENT FUNGICIDE

   **00914*  OLIN TERRA-COAT 2-LF SEED TREATMENT FUNGICIDE

   **00943*  OLIN TERRACLOR SUPER-X 20-5 WITH GRAPHITE

   **00944*  OLIN TERRA-COAT 205-LF SEED TREATMENT FUNGICIDE

   **00964*  OLIN-TERRACLOR 20% GRANULAR SOIL FUNGICIDE

   **00982*  OLIN TERRA-COAT ZN-2055

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  *REGISTRANT*        *NAME AND ADDRESS*

  *  001339          COTTON STATES CHEM CO INC
                     P O DRAWER 157
                     W MONROE LA 71291

     **************** PRODUCT NAME ****************

   **00187*  FURROW-TEC TERRACHLOR EMULSIFIABLE CONCENTRATE

******************************************************************************

  *REGISTRANT*        *NAME AND ADDRESS*

  *  001526          A G CHEM-CHEM DIST
                     ARIZONA AGROCHEMICAL CO.
                     P.O. BOX 21537
                     PHOENIX AZ 85036

     **************** PRODUCT NAME ****************

   **00411*  PHOENIX BRAND GRANULAR INSECTICIDE

   **00439*  PHOENIX BRAND PCNB 10% GRANULAR
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       **** PRODUCT SEARCH LISTING ****                 PAGE    10

09/21/77          FEDERALLY REGISTERED PRODUCTS CONTAINING PCNB

**CONTINUE REGISTRANT 001526

   **00492*  PHOENIX BRAND GRANULES CONTAINING THIMET 6.5 PLUS PCNB 6.5

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  *REGISTRANT*        *NAME AND ADDRESS*

  *  002169          PATTERSON CHEMICAL COMPANY INC
                     1400 UNION AVE
                     KANSAS CITY, MO 64101

     **************** PRODUCT NAME ****************

   **00173*  PATTERSON'S ROOT AND CROWN ROT CONTROL

******************************************************************************

  *REGISTRANT*        *NAME AND ADDRESS*

  *  002342          KERR-MCGEE CHEMICAL CORP
                     MGR PKG & LABELING
                     KERR-MCGEE CENTER
                     OKLAHOMA CITY OK 73102

     **************** PRODUCT NAME ****************

   **00759*  GRO-TONE LAWN FUNGICIDE SPRAY

   **00788*  10% THIRAM 10% PCNB

   **00836*  20% TERRACHLOR DUST

******************************************************************************

  *REGISTRANT*        *NAME AND ADDRESS*

  *  002749          ACETO CHEMICAL COMPANY INC
                     126-02 NORTHERN BLVD
                     FLUSHING NY 11368

     **************** PRODUCT NAME ****************
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**** PRODUCT SEARCH LISTING **** PAGE 11

09/21/77 FEDERALLY REGISTERED PRODUCTS CONTAINING PCNB

**CONTINUE REGISTRANT 002749

**00009* PCNB 100

**00289* CAPTAN PCNB 30-30 FUNGICIDE SEED PROTECTANT

****

REGISTRANT *NAME AND ADDRESS*

* 002935 WILBUR ELLIS CO.
P. O. BOX 1286
FRESNO, CA 93715

**************** PRODUCT NAME ****************

**00208* RED-TOP TERRACLOR 2 SPRAY

**00357* RED TOP PCNB 10 GRANULAR

**00361* RED TOP THIMET 6.5% SYST. INSECT W/PCNB 6.5% SOIL FUNG GRAN

**00362* RED TOP DI-SYSTON 6.5% SYST. INSECT. W/PCNB 6.5% SOIL FUNG GRAN

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REGISTRANT *NAME AND ADDRESS*

* 003125 CHEMAGRO DIV OF BAYCHEM CORP
BOX 4913
KANSAS CITY MO 64120

**************** PRODUCT NAME ****************

**00070* DEXON - TERRACLOR 35-35 WETTABLE POWDER

**00109* DEXON-TERRACLOR 5-5 GRANULAR SOIL FUNGICIDE

**00145* DEXON TERRACLOR 2.5%-10% DUST

**** PRODUCT SEARCH LISTING **** PAGE 12

09/21/77 FEDERALLY REGISTERED PRODUCTS CONTAINING PCNB

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REGISTRANT *NAME AND ADDRESS*

* 003743 SOUTHERN AGRICULTURAL CHEMICALS INC
PO BOX 527
KINGSTREE SC 29556

**************** PRODUCT NAME ****************

**00251* 101 BRAND P C N B 75 WETTABLE

**00300* 30-30 PLANTER BOX TREATER

**00303* 10-10 PLANTER BOX TREATER

****

REGISTRANT *NAME AND ADDRESS*

* 004185 SMITH-DOUGLASS DIV.
BORDEN CHEMICAL, BORDEN INC.
5100 VIRGINIA BEACH BLVD.
NORFOLK, VA 23501

**************** PRODUCT NAME ****************

**00229* CHAMPION LANDPLASTER WITH TERRACHLOR FOR PEANUTS

****

REGISTRANT *NAME AND ADDRESS*

* 004581 PENNWALT CORP AGCHEM DIV.
PENNWALT TECHNOLOGICAL CENTER
P.O. BOX C
KING OF PRUSSIA, PA 19406

**************** PRODUCT NAME ****************

**00260* PCNB TECHNICAL

**00264* PCNB FUNGICIDE

**** PRODUCT SEARCH LISTING **** PAGE 13

09/21/77 FEDERALLY REGISTERED PRODUCTS CONTAINING PCNB

REGISTRANT *NAME AND ADDRESS*

* 005522 FRYLINK ADRIAN ASSOCIATION
BOX 339
BABYLON NY 11702

**************** PRODUCT NAME ****************

**00001* AAFUMA

REGISTRANT *NAME AND ADDRESS*

* 005905 HELENA CHEMICAL CO
CLARK TOWER, 5100 POPLAR AVE, SUITE 2904
MEMPHIS TN 38137

**************** PRODUCT NAME ****************

**00310* HELENA 10% TERRACLOR DUST

REGISTRANT *NAME AND ADDRESS*

* 005967 MOYER CHEMICAL COMPANY
BOX 945
SAN JOSE CA 95108

**************** PRODUCT NAME ****************

**00055* DEXACLOR 35-35

**** PRODUCT SEARCH LISTING **** PAGE 14

09/21/77 FEDERALLY REGISTERED PRODUCTS CONTAINING PCNB

REGISTRANT *NAME AND ADDRESS*

* 006720 SOUTHERN MILL CREEK PRODUCTS COMPANY INC
BOX 1096
TAMPA FL 33601

**************** PRODUCT NAME ****************

**00075* SMCP TTC TURF FUNGICIDE

REGISTRANT *NAME AND ADDRESS*

* 007001 OCCIDENTAL CHEMICAL CO
P O BOX 198
LATHROP, CA 95330

**************** PRODUCT NAME ****************

**00068* BEST TERRACLOR 40 DUST

**00175* TERRACLOR 2 EC

REGISTRANT *NAME AND ADDRESS*

* 007401 VOLUNTARY PURCHASING GROUP INC
PO BOX 460
BONHAM TX 75418

**************** PRODUCT NAME ****************

**00042* FERTI-LOME LAWN & GARDEN FUNGICIDE

**00084* FERTI-LOME LIQUID FUNGICIDE FOR BROWN PATCH CONTROL

**00163* FERTI-LOME AZALEA-CAMELLIS-GARDENIA PROBLEMS SOLVER

**00197* FERTI-LOME CONTAINING FUNGICIDE

**** PRODUCT SEARCH LISTING **** PAGE 15

09/21/77 FEDERALLY REGISTERED PRODUCTS CONTAINING PCNB

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REGISTRANT *NAME AND ADDRESS*

* 008222 LING FUANG INDUSTRIES, INC.
LING FUANG, IND.
P.O. BOX 1207
GARDNERVILLE, NV. 89410

**************** PRODUCT NAME ****************

**00021* T & C MULTI-PURPOSE INSECTICIDE-FUNGICIDE

**00023* TOWN & COUNTRY MULTI-PURPOSE SOIL & BULB DUST

****

REGISTRANT *NAME AND ADDRESS*

* 008340 AMERICAN HOECHST CORPORATION
270 SHEFFIELD STREET
MOUNTAINSIDE, NJ 07092

**************** PRODUCT NAME ****************

**00001* BRASSICOL 20

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REGISTRANT *NAME AND ADDRESS*

* 008434 DOTSON & SONS INC
BOX 173
BRAWLEY CA 92227

**************** PRODUCT NAME ****************

**00033* DOT-SON BRAND STAND -AID

**** PRODUCT SEARCH LISTING **** PAGE 16

09/21/77 FEDERALLY REGISTERED PRODUCTS CONTAINING PCNB

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REGISTRANT *NAME AND ADDRESS*

* 009779 RIVERSIDE CHEM COMPANY
P.O. BOX 171199 855 RIDGE LAKE BLVD
MEMPHIS TN 38117

**************** PRODUCT NAME ****************

**00099* RIVERSIDE T-MAN COTTON SEEDLING FUNGICIDE

****

REGISTRANT *NAME AND ADDRESS*

* 010226 ROCKWOOD CHEM COMPANY
BOX 34
BRAWLEY CA 92217

**************** PRODUCT NAME ****************

**00005* ROCKWOOD BR SYST T THIMET 6.5% INSECT W/PCNB SOIL FUNG GRAN FOR CO

**00014* ROCKWOOD BRAND LITTLE PEBBLES CONTAINS DI SYSTON 6.5% PCNB 6.5%

**00032* ROCKWOOD BRAND TERRACLOR 2 LB. E.C.

****

REGISTRANT *NAME AND ADDRESS*

* 010290 PROFESSIONAL CHEMICAL COMPANY INC
P.O. BOX 94071 4517 YALE ST
HOUSTON TX 77018

**************** PRODUCT NAME ****************

**00021* TERRACLOR 2E

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**** PRODUCT SEARCH LISTING ****                    PAGE    17

09/21/77         FEDERALLY REGISTERED PRODUCTS CONTAINING PCNB

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 *REGISTRANT*      *NAME AND ADDRESS*

 * 010659          OCCIDENTAL CHEMICAL COMPANY
                   BOX 1185
                   HOUSTON TX 77001

     **************** PRODUCT NAME ****************

  **00034*  ZIPP LAWNFOOD 6-12-12 FUNGUS CONTROL

*****************************************************************************

 *REGISTRANT*      *NAME AND ADDRESS*

 * 010820          QUIMICA ORGANICA DE MEXICO S A
                   C/O RENEE ROMERO & CO, INC
                   103 ROCKWOOD AVE
                   CALEXICO CA 92231

     **************** PRODUCT NAME ****************

  **00001*  PCNB TECHNICAL MATERIAL FOR MANUFACTURING PURPOSES ONLY

*****************************************************************************

 *REGISTRANT*      *NAME AND ADDRESS*

 * 010912          HAYNES CHEMICAL COMPANY
                   P.O. BOX 30
                   EAST GRAND FORKS, MN 56721

     **************** PRODUCT NAME ****************

  **00001*  HAYNES SEED TREAT NO.1
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**** PRODUCT SEARCH LISTING ****                    PAGE    18

09/21/77         FEDERALLY REGISTERED PRODUCTS CONTAINING PCNB

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 *REGISTRANT*      *NAME AND ADDRESS*

 * 011489          GREEN-UP PLANT FOOD COMPANY
                   PO BOX 9
                   NACOGDCHES TX 75961

     **************** PRODUCT NAME ****************

  **00001*  GREEN-UP LAWN-GARD PLANT FOOD

*****************************************************************************

 *REGISTRANT*      *NAME AND ADDRESS*

 * 011656          WESTERN FARM SERVICE INC SHELL CHEM COMPANY
                   1025 CONNECTICUT AVE-STE 200
                   WASH DC 20036

     **************** PRODUCT NAME ****************

  **00029*  TERRACLOR* THIMET(R) 6.5 - 6.5

*****************************************************************************

 *REGISTRANT*      *NAME AND ADDRESS*

 * 018773          TURNER SALES & SUPPLY INC
                   PO BOX 847
                   TIFTON GA 31794

     **************** PRODUCT NAME ****************

  **00002*  T-S-P 4 WAY FOR SEED DISEASE CONTROL
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**** PRODUCT SEARCH LISTING ****                PAGE      19

09/21/77            FEDERALLY REGISTERED PRODUCTS CONTAINING PCNB

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  *REGISTRANT*        *NAME AND ADDRESS*

  *  033955          ACME DIVISION
                     PBI GORDON CORP
                     300 SOUTH THIRD ST
                     KANSAS CITY, KS 66118

     **************** PRODUCT NAME ****************

   **00518*  ACME BULB SAVER
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**** PRODUCT SEARCH LISTING ****                    PAGE      1
09/21/77      APPLICANTS FOR REGISTRATION OF PRODUCTS CONTAINING PCNB

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*REGISTRANT*        *NAME AND ADDRESS*
*  000239          CHEVRON CHEMICAL COMPANY
                   ORTHO DIVISION 940 HENSLEY WAY
                   RICHMOND CA 94801

   **************** PRODUCT NAME ****************
 **05845*  ORTHOCIDE SOIL TREATER "X"
 **08631*  ORTHOCIDE PCNB 10-20 DUST

*****************************************************************************
*REGISTRANT*        *NAME AND ADDRESS*
*  000279          FMC CORP.
                   AGRICULTURAL CHEM DIV.
                   2000 MARKET STREET
                   PHILADELPHIA, PA. 19103

   **************** PRODUCT NAME ****************
 **04970*  PCNB 20 DUST
 **04971*  PCNB 10 ZINEB 10 SOIL TREATER
 **09451*  PCNB 5% IN FERTILIZER

*****************************************************************************
*REGISTRANT*        *NAME AND ADDRESS*
*  000557          SWIFT AGRICULTURAL CHEMICAL
                   CORP.
                   111 WEST JACKSON BOULEVARD
                   CHICAGO, IL 60604

   **************** PRODUCT NAME ****************
 **09673*  PAR EX PLUS PCNB
 **09674*  PAR EX PLUS PCNB
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**** PRODUCT SEARCH LISTING ****                    PAGE      2
09/21/77      APPLICANTS FOR REGISTRATION OF PRODUCTS CONTAINING PCNB

**CONTINUE REGISTRANT 000557
   **09675*  PAR EX PLUS PCNB
   **09676*  PAR EX PLUS PCNB
   **09731*  PAR EX PLUS PCNB
   **09732*  PAR EX PLUS PCNB
   **09733*  PAR EX PLUS PCNB
   **09734*  PAR EX PLUS PCNB
   **09735*  PAR EX PLUS PCNB
   **09736*  PAR EX PLUS PCNB
   **09737*  PAR EX PLUS PCNB
   **09738*  PAR EX PLUS PCNB
   **09739*  PAR EX PLUS PCNB
   **09740*  PAR EX PLUS PCNB
   **09741*  PAR EX PLUS PCNB
   **09742*  PAR EX PLUS PCNB
   **09743*  PAR EX PLUS PCNB
   **09744*  PAR EX PLUS PCNB
   **09745*  PAR EX PLUS PCNB
   **09746*  PAR EX PLUS PCNB
   **09747*  PAR EX PLUS PCNB
   **09748*  PAR EX PLUS PCNB
   **09749*  PAR EX PLUS PCNB
   **09750*  PAR EX PLUS PCNB
   **09751*  PAR EX PLUS PCNB
   **09752*  PAR EX PLUS PCNB
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**** PRODUCT SEARCH LISTING **** PAGE 3

09/21/77 APPLICANTS FOR REGISTRATION OF PRODUCTS CONTAINING PCNB

**CONTINUE REGISTRANT 000557

**09753* PAR EX PLUS PCNB

**09754* PAR EX PLUS PCNB

**09755* PAR EX PLUS PCNB

**09756* PAR EX PLUS PCNB

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REGISTRANT *NAME AND ADDRESS*

* 000829 SOUTHERN AGRI INSECT INC
PO BOX 218
PALMETTO FL 33561

**************** PRODUCT NAME ****************

**09449* SA-50 BRAND TURF - TREATER FUNGICIDE

**09450* SA-50 BRAND TERRACHLOR SUPER -X

****

REGISTRANT *NAME AND ADDRESS*

* 000909 COOKE LABORATORY PRODUCTS
4759 S DURFEE AVE
PICO RIVERA CA 90660

**************** PRODUCT NAME ****************

**08642* COOKE FUNGICIDE

**08644* ROSEDALE'S FUNGI-TAC

**** PRODUCT SEARCH LISTING **** PAGE 4

09/21/77 APPLICANTS FOR REGISTRATION OF PRODUCTS CONTAINING PCNB

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REGISTRANT *NAME AND ADDRESS*

* 001202 PUREGRO COMPANY
1052 W 6TH ST
LOS ANGELES CA 90017

**************** PRODUCT NAME ****************

**05009* PUREGRO TERRACLOR 2 E

**05033* PUREGRO TERRACHLOR SUPER X DISYSTON 6.5-1.63.5

**05034* PUREGRO TERRACHLOR SUPER X THIMET 6.5-1.63.5

**05035* PUREGRO THIMET PCNB 6.5-6.5 GRAN

**05061* PUREGRO DI-SYSTON PCNB 6.5-6.5

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REGISTRANT *NAME AND ADDRESS*

* 001258 OLIN CHEMICALS
OLIN CORPORATION
120 LONG RIDGE ROAD
STAMFORD, CT 06904

**************** PRODUCT NAME ****************

**08634* TERRACLOR R 2-16 EMULSIFIABLE

**08635* TERRACLOR R 10% GRANULAR

**08636* TERRACLOR R 2-16 EMULSIFIABLE

**08638* TERRACLOR R + DASANIT R 10-30 GRANULAR

**08639* TERRACLOR R + DASANIT R 10-30 GRANULAR

**08640* TERRACLOR R + DASANIT 10-3 GRANULAR

**** PRODUCT SEARCH LISTING **** PAGE 5

09/21/77 APPLICANTS FOR REGISTRATION OF PRODUCTS CONTAINING PCNB

REGISTRANT *NAME AND ADDRESS*

* 001526 A G CHEM-CHEM DIST
ARIZONA AGROCHEMICAL CO.
P.O. BOX 21537
PHOENIX AZ 85036

**************** PRODUCT NAME ****************

**03787* AGRC-CHEM BRAND TERRACLOR 10 GRANULAR

**03788* AGRC-CHEM BRAND TERRACLOR 2E

REGISTRANT *NAME AND ADDRESS*

* 001871 FARMCRAFT, INC
8900 S W COMMERCIAL
TIGARD OR 97223

**************** PRODUCT NAME ****************

**08921* FARMCRAFT TERRACHLOR 20 DUST

REGISTRANT *NAME AND ADDRESS*

* 002224 MOBIL CHEMICAL COMPANY INDUSTRIAL CHEMICALS DIV
P O BOX 29
KINGSTREE, SC 29556

**************** PRODUCT NAME ****************

**08632* MOCAP(NEMATICIDE-INSECTICIDE)-PCNB 3-10 GRANULAR

**08633* MOCAP (NEMATICIDE-INSECTICIDE)-PCNB 3-10 GRANULAR

**** PRODUCT SEARCH LISTING **** PAGE 6

09/21/77 APPLICANTS FOR REGISTRATION OF PRODUCTS CONTAINING PCNB

REGISTRANT *NAME AND ADDRESS*

* 002342 KERR-MCGEE CHEMICAL CORP
MGR PKG & LABELING
KERR-MCGEE CENTER
OKLAHOMA CITY OK 73102

**************** PRODUCT NAME ****************

**06962* GRO-TONE GRANULAR LAWN FUNGICIDE

REGISTRANT *NAME AND ADDRESS*

* 002935 WILBUR ELLIS CO.
P. O. BOX 1286
FRESNO, CA 93715

**************** PRODUCT NAME ****************

**06625* RED-TOP PCNB SEED-COAT

06634* RED-TOP SACTON-SUPER X * 6.5-6.5-1.63 GRANULAR

06635* RED-TOP THIMET-SUPER X * 6.5-6.5-1.63 GRANULAR

**06654* RED-TOP PCNB 10 DUST

REGISTRANT *NAME AND ADDRESS*

* 003122 SUPERIOR FERTILIZER & CHEM COMPANY ATTEN R BASS
BOX 1021
TAMPA FL 33600

**************** PRODUCT NAME ****************

**07192* SUPERIOR'S EXTRA VALUE TERRACLOR 2-EC

**07565* SUPERIOR'S SOIL FUNGICIDE

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           **** PRODUCT SEARCH LISTING ****              PAGE      7

09/21/77      APPLICANTS FOR REGISTRATION OF PRODUCTS CONTAINING PCNB

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 *REGISTRANT*        *NAME AND ADDRESS*

 *  003238           AGRICO CHEMICAL CO.
                     CROP PROTECTION CHEMICAL DIV.
                     BOX 3451
                     TULSA, OK 74101

   **************** PRODUCT NAME ****************

  **10165*  STANDARD BRAND LAWN & TURF FUNGICIDE

  **10166*  STANDARD FORMAD LAWN & TURF FUNGICIDE

**********************************************************************************

 *REGISTRANT*        *NAME AND ADDRESS*

 *  005967           MOYER CHEMICAL COMPANY
                     BOX 945
                     SAN JOSE CA 95108

   **************** PRODUCT NAME ****************

  **08641*  TERRACLOR DUST NO. 20

**********************************************************************************

 *REGISTRANT*        *NAME AND ADDRESS*

 *  006720           SOUTHERN MILL CREEK PRODUCTS COMPANY INC
                     BOX 1096
                     TAMPA FL 33601

   **************** PRODUCT NAME ****************

  **03357*  SMCP TERRACLOR 2-E
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           **** PRODUCT SEARCH LISTING ****              PAGE      8

09/21/77      APPLICANTS FOR REGISTRATION OF PRODUCTS CONTAINING PCNB

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 *REGISTRANT*        *NAME AND ADDRESS*

 *  006973           SOILSERV INC
                     PO BOX 1817
                     SALINAS CA 93901

   **************** PRODUCT NAME ****************

  **04969*  SOILSERV TERRACLOR EC 25

**********************************************************************************

 *REGISTRANT*        *NAME AND ADDRESS*

 *  007159           DOWNEY FERTILIZER COMPANY
                     BOX 370 9447 E IMPERIAL HIGHWAY
                     DOWNEY CA 90242

   **************** PRODUCT NAME ****************

  **08219*  RED STAR VELVET TERRACAP

**********************************************************************************

 *REGISTRANT*        *NAME AND ADDRESS*

 *  007413           PENNINGTON GRAIN & SEED INC
                     PO BOX 290
                     MADISON GA 30650

   **************** PRODUCT NAME ****************

  **10284*  PENNINGTON GREEN COAT FOR GRASS TREATMENT
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**** PRODUCT SEARCH LISTING ****                    PAGE    9

09/21/77      APPLICANTS FOR REGISTRATION OF PRODUCTS CONTAINING PCNB

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*REGISTRANT*        *NAME AND ADDRESS*

*  007478         CHEM PAK COMPANY
                  P.O. BOX 430757
                  SOUTH MAIMI FL 33157

     **************** PRODUCT NAME ****************

  **08028*  CURE-A-LAWN

*********************************************************************************

*REGISTRANT*        *NAME AND ADDRESS*

*  008278         METRO BIOLOGICAL LAB
                  8241 GAY ST
                  CYPRESS CA 90639

     **************** PRODUCT NAME ****************

  **10167*  METRO DITHANE M-45

*********************************************************************************

*REGISTRANT*        *NAME AND ADDRESS*

*  008434         DOTSON & SONS INC
                  BOX 173
                  BRAWLEY CA 92227

     **************** PRODUCT NAME ****************

  **07052*  DOT-SOT BRAND STAND-AID

  **07053*  DOT-SON BRAND THIMET STAND-AID

  **07054*  DOT-SON BRAND TERRACLOR SOIL FUNGICIDE 10% GRANULAR

  **08976*  DOT-SON BRAND TERRACLOR 20%
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**** PRODUCT SEARCH LISTING ****                    PAGE    10

09/21/77      APPLICANTS FOR REGISTRATION OF PRODUCTS CONTAINING PCNB

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*REGISTRANT*        *NAME AND ADDRESS*

*  009404         CHASE & COMPANY
                  BOX 1697
                  SANFORD FL 32771

     **************** PRODUCT NAME ****************

  **03483*  SUNNILAND THREE WAY FUNGICIDE FILE SYMBOL: 9404-EI

*********************************************************************************

*REGISTRANT*        *NAME AND ADDRESS*

*  009782         WOODBURY CHEMICAL COMPANY
                  PO BOX 4319
                  PRINCETON FL 33030

     **************** PRODUCT NAME ****************

  **03664*  TERRACLOR 2-E

  **03665*  TERRACLOR 75-W

  **03670*  TRI-MIX FUNGICIDE

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*REGISTRANT*        *NAME AND ADDRESS*

*  010226         ROCKWOOD CHEM COMPANY
                  BOX 34
                  BRAWLEY CA 92217

     **************** PRODUCT NAME ****************

  **03784*  ROCKWOOD BRAND SYSTEMIC T
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**** PRODUCT SEARCH LISTING ****                    PAGE      11

09/21/77        APPLICANTS FOR REGISTRATION OF PRODUCTS CONTAINING PCNB

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  *REGISTRANT*        *NAME AND ADDRESS*

  *  010258          SPRAY DISTRIBUTORS, INC.
                     11625 MC BEAN DR.
                     EL MONTE, CA 91732

     **************** PRODUCT NAME ****************

   **08637*  TERRACLOR R 2-16 EMULSIFIABLE

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  *REGISTRANT*        *NAME AND ADDRESS*

  *  010965          CALIFORNIA DEPT OF AGRICULTURE
                     WEED & VERTEBRATE PEST CONTROL 1220 N ST
                     SACRAMENTO CA 95814

     **************** PRODUCT NAME ****************

   **09904*  ANY APPROPRIATE PRODUCT

*****************************************************************************

  *REGISTRANT*        *NAME AND ADDRESS*

  *  010972          CASTLE A L INC
                     PO BOX 877
                     MORGAN HILL CA 95037

     **************** PRODUCT NAME ****************

   **06550*  CASTLE BRAND DUST FUNGI CLOR 20

   **10158*  CASTLE BRAND DUST FUNGI CLOR 40

   **10159*  CASTLEW BRAND FUNGI CLOR 75W
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**** PRODUCT SEARCH LISTING ****                    PAGE      12

09/21/77        APPLICANTS FOR REGISTRATION OF PRODUCTS CONTAINING PCNB

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  *REGISTRANT*        *NAME AND ADDRESS*

  *  011017          FOSTER-GARDNER INC
                     1577-1ST ST
                     COACHELLA CA 92236

     **************** PRODUCT NAME ****************

   **08196*  TERRACLOR 2 E

*****************************************************************************

  *REGISTRANT*        *NAME AND ADDRESS*

  *  011079          LESCO SEED & CHEMICAL INC
                     PO BOX 148
                     WATSONVILLE CA 95076

     **************** PRODUCT NAME ****************

   **07055*  LESCO TERRACLOR 80% DUST

*****************************************************************************

  *REGISTRANT*        *NAME AND ADDRESS*

  *  011093          MASTER NURSERYMEN'S ASSN C/O LEO DUPUICH
                     3620 1/2 MT DIABLO BLVD
                     LAFAYETTE CA 94549

     **************** PRODUCT NAME ****************

   **07371*  49'ER BRAND FUNGICID
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**** PRODUCT SEARCH LISTING **** PAGE 13

09/21/77 APPLICANTS FOR REGISTRATION OF PRODUCTS CONTAINING PCNB

REGISTRANT *NAME AND ADDRESS*

* 011656 WESTERN FARM SERVICE INC SHELL CHEM COMPANY
1025 CONNECTICUT AVE-STE 200
WASH DC 20036

PRODUCT NAME

**05918* TERRACHLOR SUPER X THIMET 5-1.25-5 GRANULAR

REGISTRANT *NAME AND ADDRESS*

* 014775 ASGROW FLORIDA COMPANY
PO DRAWER D
PLANT CITY FL 33566

PRODUCT NAME

**08724* PROTECTURF WETTABLE

REGISTRANT *NAME AND ADDRESS*

* 021275 SPAULDING INC
1921 5TH AVE S
ST PETERSBURG FL 33733

PRODUCT NAME

**05364* X-CEL TERRACLOR 2E

**05547* X-CEL TTC

**** PRODUCT SEARCH LISTING **** PAGE 14

09/21/77 APPLICANTS FOR REGISTRATION OF PRODUCTS CONTAINING PCNB

REGISTRANT *NAME AND ADDRESS*

* 023420 INDEPENDENCE ANIMAL HOSPITAL
INDEPENDENCE KS

PRODUCT NAME

**06946* FASCO TERRACLOR 2 E.C.

REGISTRANT *NAME AND ADDRESS*

* 035222 SOUTHERN CHEMICALS, INC.
204 N. ELM AVE, BOX 1480
SANFORD, FL 32771

PRODUCT NAME

**07175* TURF FUNGICIDE

REGISTRANT *NAME AND ADDRESS*

* 035994 BOB BOYDSTUN PEST CONTROL
1419 N. BIG SPRING STREET
MIDLAND, TX 79701

PRODUCT NAME

**06087* BOYDSTUN'S CONC.SHRUB AND FLOWER SPRAY

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          **** PRODUCT SEARCH LISTING ****               PAGE     15

09/21/77        APPLICANTS FOR REGISTRATION OF PRODUCTS CONTAINING PCNB

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  *REGISTRANT*        *NAME AND ADDRESS*

  * 037854        AGRICULTURAL SUPPLIES OF        BATESVILLE, INC.
                  BOX 6
                  BATESVILLE, TX 78829

     **************** PRODUCT NAME ****************

   **08298*  FALL OUT 10% TERRACLOR DUST
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[FR Doc.77-30279 Filed 10-19-77;8:45 am]