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FOOD SAFETY

Building a Scientific,
Risk-Based Meat and Poultry
Inspection System

Statement of John W. Harman,
Director, Food and Agriculture Issues,
Resources, Community, and Economic
Development Division



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Mr. Chairmen and Members of the Subcommittees:

We are pleased to be here to discuss the effectiveness of the federal meat and poultry inspection system and the need for changing to a scientific, risk-based system. Concerns about the adequacy of the U.S. inspection system have been heightened by recent deaths and illnesses in Washington and other western states attributed to undercooked hamburger patties contaminated with pathogenic bacteria. The public interest raised by this tragic incident provides another opportunity for the U.S. Department of Agriculture's (USDA) Food Safety and Inspection Service (FSIS) to make changes in the inspection system that are necessary to better protect public health.

In summary, although experts agree that the intensity and type of inspection coverage should be determined by the risk a particular food presents, the current meat and poultry inspection system is not based on risk and is not able to adequately protect the public from foodborne illness. Labor-intensive inspection procedures that rely on inspectors' sense of sight, smell, and touch, drain resources that could be put to better use in a risk-based system. While inspectors may identify some contamination using the traditional methods, they cannot see, smell, or feel microbial pathogens, which are widely regarded as the principal risk associated with meat and poultry. Furthermore, neither FSIS nor the industry is required to routinely test for such pathogens.

Although FSIS has recognized the need to modernize its inspection system since the late 1970s, it has made little progress. There has been no lack of good ideas on what needs to be done. Rather, FSIS has been hampered by the lack of a well-designed strategic plan, difficulties in achieving a consensus of all affected parties on which specific changes are necessary, and inflexible laws and regulations that lock the agency into the existing system.

Furthermore, we believe that any changes in the meat inspection system should occur within the context of the entire food safety system. In this regard, we reported in June 1992 that this entire food safety inspection system needs to be fundamentally restructured.¹ We found that the federal food safety inspection system is inconsistent, inefficient, and unable to adjust to changing public health risks. We recommended that a uniform, risk-based inspection system be established, preferably under the direction of a single agency.

¹Food Safety and Quality: Uniform, Risk-based Inspection System Needed to Ensure Safe Food Supply (GAO/RCED-92-152, June 26, 1992): See appendix I for a listing of GAO and other reports issued since 1977 on the federal food safety inspection system.

Before providing more detail on our findings, let us briefly give you some background on the current inspection system.

BACKGROUND

At the turn of the century, Upton Sinclair's The Jungle raised a public outcry about contagious animal diseases, unsanitary conditions, deceptive practices, and lax government inspection at meat packing plants. The Congress responded to this outcry by passing the Federal Meat Inspection Act in 1907. This act and a subsequent poultry act require federal inspection of meat and poultry to ensure that they are safe, wholesome, and correctly labeled and packaged.

These acts are aimed at keeping meat and poultry from diseased animals off the market and ensuring that slaughter and processing operations take place in sanitary conditions. To achieve these objectives, the acts require continuous inspection at the time of slaughter. Each individual animal carcass is examined by an on-line USDA inspector.² In this traditional inspection, largely unchanged for 85 years, inspectors make judgments about disease conditions, abnormalities, and contamination in animals and carcasses on the basis of what they see, feel, and smell--a process known as organoleptic inspection.

After slaughter, meat and poultry from government-inspected carcasses can be inspected again during further processing. (Processing operations can include simple cutting and grinding, preparation of ready-to-eat products, or complex canning procedures.) FSIS has interpreted the federal inspection laws as requiring that all meat and poultry processing plants be visited daily by a USDA inspector, who may spend from 15 minutes to several hours performing various inspection duties. These inspections, too, rely primarily on organoleptic methods.

CURRENT INSPECTION PROGRAM HAS SIGNIFICANT LIMITATIONS

The current meat and poultry inspection system, like the overall food safety system, has not adequately responded to changes that have occurred in the kind of risks foods present. With advances in animal and veterinary science, many infectious diseases have been controlled. While the human health hazard posed by animal diseases has decreased, microbial hazards associated with the crowding of animals and other factors have grown. FSIS clearly recognized this change in risk in its 1991 report to the Congress.

²In fiscal year 1991, FSIS inspectors visually checked about 81.3 million swine, 29.6 million cattle, 4.4 million sheep and lambs, 1.9 million other livestock, and 6.6 billion chickens and other birds.

According to that report, microbial hazards present the greatest risks to public health posed by meat and poultry. Because the meat and poultry inspection system is not a scientific, risk-based system, it has not kept pace with these developments. As a result, the system is inadequate to protect consumers from today's most serious food safety risk--pathogenic microorganisms.

The current system suffers from at least four significant limitations. First, current laws restrict FSIS's flexibility in responding to changes in risk. Regardless of the risk to public health, FSIS is required by law to perform continuous inspection at slaughter plants--examining every carcass--and to visit each processing plant daily. Because of these requirements, the agency is limited in its ability to adjust inspection frequencies to respond to changing health risks. To illustrate the impact on resources of inspecting every carcass, let us describe the resources required to examine the 6.6 billion birds slaughtered in fiscal year 1991. At the fastest line speeds, an inspector has about 2 seconds to visually examine the inside and outside surfaces of each bird and feel the eviscerated internal organs. We calculate that over 1,700 inspectors are needed to carry out these inspections. Some experts have questioned the public health benefits of such an inspection procedure and the effectiveness of an inspector who examines 12,000 or more birds a day. Proposals have been made for slower line speeds to give inspectors more time to check each bird but increasing inspection time from 2 seconds to 4 seconds would require hiring another 1,700 inspectors.

Second, FSIS allocates considerable resources to activities not related to safety. FSIS estimates that it spends half of its resources on inspections related to quality, economic issues, and other non-safety related areas. Such an allocation appears out-of-line with FSIS's stated mission--ensuring safe and wholesome meat and poultry. A 1991 FSIS management study found that emphasis on economic adulteration continued to dominate daily inspection time.

A third limitation is inconsistency. Over the years, requirements and ambiguities in the law and changes in the food industry have resulted in inconsistent decisions on what types of meat and poultry products are subject to FSIS inspection. As a result of these decisions, many food products that pose similar health risks to consumers are subject to significantly different inspection frequencies. For example, under the meat act FSIS is responsible for inspecting cattle, swine, goats, sheep, and horses, and inspectors must be continuously present during slaughter. In contrast, meat products under the Food and Drug Administration's jurisdiction, such as venison, buffalo, and rabbit, are not subject to such requirements. The Food and Drug Administration inspects plants producing these meats about once every 3 years.

Fourth and most important, FSIS does not routinely perform microbial tests of equipment surfaces or raw products. Nor does it

require industry to perform such tests. Instead, FSIS relies on inspection methods that can not identify microbial pathogens, the most serious public health risk associated with meat and poultry. Inspection equipment we observed during visits to meat and poultry plants included knives, flashlights, mirrors, and thermometers, none of which can detect the most serious safety hazards. Some plants recognize the importance of microbial testing and have established their own programs, even though they are not required to do so. For example, one plant we visited started a microbial testing program to check on the effectiveness of its cleaning procedures. Test results indicated that even though cleaned surfaces had passed FSIS inspection, some surfaces still contained high levels of bacteria. Company management therefore revised the cleaning procedures to reduce bacteria levels.

EFFORTS ARE NEEDED TO BUILD A MODERN INSPECTION SYSTEM

Good ideas have not been lacking on what needs to be done to improve the federal meat and poultry inspection system. Over the years many groups, including the National Academy of Sciences, USDA's Inspector General, and GAO have thoroughly studied the current inspection program, described its limitations in detail, and proposed, by our count, more than 200 recommendations for modernization. Philosophical differences exist on some points, such as how much of the inspection function can be turned over to industry. But there is general agreement that FSIS should be headed toward a risk-based inspection system based on modern science and technology.

To achieve the desired goal of a scientific, risk-based inspection system for meat and poultry, FSIS will need to (1) develop and implement a clear and detailed plan for change, (2) obtain a consensus for change by soliciting the involvement of all interested parties, and (3) seek legislative changes to the meat and poultry inspection acts and congressional guidance on the objectives of the federal inspection system.

Developing a Plan for Change

In response to the tragic incident in the western states, where two children died and more than 450 individuals became ill from eating contaminated hamburgers, FSIS announced a two-track plan to update the meat and poultry inspection system. Track one, currently under development, is a near-term plan for maximizing the effectiveness of the existing system. Track two, not yet initiated, is described as a longer-term "revolutionary plan" aimed at overhauling the entire system.

We believe it is imperative that FSIS address the underlying problems of the current inspection system. For example, hiring 160 new inspectors, as FSIS has recently announced, will help alleviate

the load on the existing system and to some extent may rebuild public confidence. But adding inspectors does little to address the underlying limitations of the current inspection system-- inflexible inspection frequencies, questionable resource allocation, inconsistent treatment of products posing similar risks, and a lack of rapid analytical tools to identify microbial contamination. No matter how many thousands of FSIS inspectors are assigned to slaughter lines or processing plants, they cannot visually detect pathogenic bacteria.

As FSIS develops its long-term plan to overhaul the entire system, it needs to research alternative inspection approaches, such as (1) thoroughly examining a statistical sample of carcasses to provide the desired degree of confidence instead of inspecting each carcass; (2) performing unannounced inspections of processing plants, basing the frequency of such inspections on risk, rather than inspecting each processor daily; and (3) using scientific methods to identify and control pathogenic bacteria instead of relying primarily on organoleptic inspection methods. FSIS's plan should set out specific goals, identify the barriers to meeting these goals, develop countermeasures to identified barriers, set milestones, and require periodic progress reports.

Obtaining Consensus

Even with a comprehensive plan, FSIS can not achieve success on its own. FSIS must also enlist the aid of all interested parties. Our discussions with representatives of the inspectors' union, consumer groups, industry, and FSIS indicated a lack of mutual trust and a reluctance to work together to ensure a safe and wholesome product to consumers. However, these representatives also stated that they were optimistic about the FSIS Administrator's efforts to develop a cooperative atmosphere by improving communication and considering outside views in agency decisionmaking.

Recent failed attempts to improve the inspection system illustrate the need for consensus on major changes. Studies found that a streamlined inspection system for cattle--which attempted to shift certain quality-related inspection tasks to plant employees--when properly implemented was as effective as traditional inspection. However, criticism by the inspectors' union and consumer groups contributed to the system's termination. Similarly, the failure of discretionary inspection (a risk-based system that does not require daily inspection of processing plants) can be attributed in part to a lack of trust in FSIS management by industry, consumer groups, and the inspectors' union. Union representatives and consumer groups, in particular, said that FSIS did not make adequate efforts to elicit their support or clearly demonstrate that the proposed changes would benefit public health. In their view, FSIS made these changes to aid industry by reducing the level of inspection and increasing line speeds.

Even though the FSIS Administrator has emphasized that all constituent groups should participate in initiatives to change the inspection system, the agency is developing its current track-one plan without a formal mechanism to obtain outside views. At recent Senate hearings on the Washington state outbreak, a spokesperson for consumer groups expressed concern that in developing its response to the incident, FSIS consulted with industry and not consumer groups. FSIS also decided not to release its plan until it was approved by the Secretary of Agriculture.

Seeking Legislative Change

We must not underestimate the magnitude of the effort to implement the organizational and scientific changes necessary to improve the inspection system. Modernizing a system that has survived largely unchanged for almost a century and forming a partnership among previously acrimonious parties will require strong leadership. Here, we believe the Congress can play an important role by providing the stimulus for change, strong support for agency management, and the vehicle for change through new legislation.

The basic criterion behind new food safety laws should be a scientific, risk-based system. That is, agency focus and resources should be directed towards reducing the most serious risks to public health. Since food safety risks change over time, FSIS needs the flexibility to adjust its inspection and research resources to target the most serious food safety risks.

FSIS could assist the Congress in its efforts by identifying and seeking the legislative changes that would provide the flexibility needed under a risk-based inspection system. For example, FSIS could assess the public health benefits of and continued need for organoleptic examination of every carcass, as currently required by law. While careful organoleptic examination of some animals, such as old dairy cows, may still be needed, the benefit of such inspections for young, market animals that account for the vast majority of slaughtered animals is less certain.

FSIS could also seek a broadening of the meat and poultry acts' definition of adulteration. FSIS's Administrator has stated that under current law the presence of naturally occurring bacteria in raw meat and poultry does not constitute adulteration. Since microbial pathogens are the greatest health risk associated with meat and poultry, the Administrator could propose that the statutory definition of "adulterated" be amended to include pathogenic bacteria.

Our past work has shown that the inefficiencies and ineffectiveness of FSIS's meat and poultry inspection also apply to other food products and other federal inspection agencies. In our 1992 report, we discussed the results of our comprehensive review

of federal food safety inspections and noted problems of inefficient resource use, inconsistent inspection of foods posing similar risks, and lack of coordination. We also expressed concerns about the overall ability of federal inspection agencies to ensure food safety. We believe that ensuring the safety of all foods would best be accomplished by a single, consolidated food safety agency. We asked that the Congress consider forming a blue-ribbon panel to study the feasibility of this and other approaches to strengthening food inspection. Such a panel could provide the means to build consensus on the design of a new food safety system.

CONCLUSIONS AND RECOMMENDATIONS

The present meat and poultry inspection system relies primarily on organoleptic inspections that are not capable of detecting microbial pathogens, which constitute the greatest public health risk. To better protect the public from foodborne illnesses, FSIS must move to a modern, scientific, risk-based inspection system.

To achieve this goal, we recommend that the Secretary of Agriculture direct the FSIS Administrator to (1) develop a detailed strategic and operational plan showing how it intends to achieve a more effective inspection system, (2) work with all interested parties to build a consensus on the design of a new inspection system, and (3) seek needed legislative changes and obtain congressional guidance on the objectives of the meat and poultry inspection system.

Mr. Chairmen, this completes our prepared statement. We would be happy to respond to any questions.

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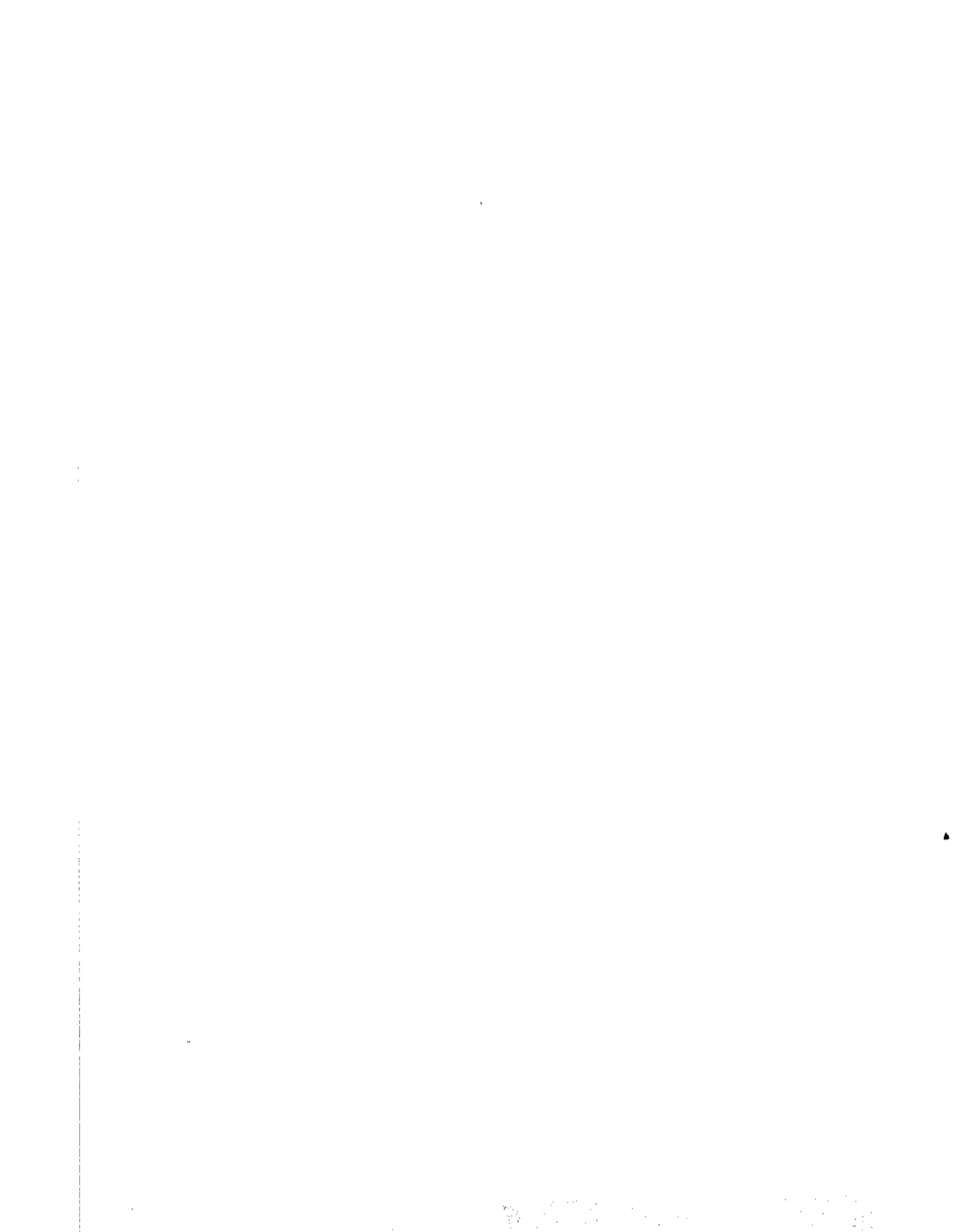
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