MELATED CORRESPONDENCE

### UNITED STATES OF AMERICA NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

APR 28 1986	ź
SERVICE BRANCH SECY-NRC	

In the Matter of:

COMMONWEALTH EDISON COMPANY

(Braidwood Nuclear Station,
Units 1 and 2)

Dockets 50-456 50-457

# TESTIMONY OF DANIEL P. ILGEN

(On Rorem QC Inspector Harassment Contention)

- Ol: Please state your name, address and occupation.
- Al: My name is Daniel F. Ilgen. I am the John A. Hannah

  Professor of Organizational Behavior in the departments of

  Psychology and Management at Michigan State University in

  East Lansing, Michigan, 48824.
- Q2: Describe briefly your field of study and work.
- A2: I teach, consult and publish in the fields of organizational and industrial psychology which deal with the subject of the behavior of individuals in work organizations and particularly with factors which enhance or inhibit work performance.

  I have a special interest in and have published on the subject of why people behave as they do on the job, notably in a book authored with J.C. Naylor and P.D. Pritchard:

  A Theory of Behavior In Organizations (New York: Prentice—Hall, 1980). I have consulted for industrial organizations

such as General Motors on performance appraisal systems and for the U.S. Navy on the use of incentive systems for work motivation.

- Q3: Describe your educational background and employment experience.
- Psychology from the University of Illinois in 1969. Since then I have taught in my field at the University of Illinois, the U.S. Military Academy, the University of Washington, Purdue University, and Michigan State University. I have performed research and published a number of papers in professional journals and co-authored books in this field. In addition, I have served as a consultant to government and industry. A detailed description of my educational and professional experience is contained in my curriculum vita, marked as Ilgen Exhibit 1, attached to this testimony.
- Q4: What is the purpose of your testimony?
- A4: I have been asked by Business and Professional People for
  the Public Interest on behalf of their clients to assist in
  evaluating the work performance of electrical quality control (QC) inspectors employed at the Braidwood Nuclear Power
  Plant in light of certain complaints of management harassment, intimidation and production pressure.

- O5: How does an organizational and industrial psychologist approach the task of evaluating the work performance of these QC inspectors at Braidwood?
- A5: Before I identify and evaluate the specific influences which may either enhance or inhibit effective work by these inspectors, let me provide you with a general analytical model employed by organizational and industrial psychologists to understand the behavior of the individuals in the workplace. Such a model is generally applicable to work settings including, in my opinion, to the work of a nuclear plant QC inspector.
- Q6: What influences workplace behavior?
- A6: Behavior at work is no different from behavior in any other setting. People invest time and effort in activities behaviors are a result of their decisions or choices. While I do not believe that the persons are necessarily aware of all of the decisions that they make, or that such decisions are necessarily rational from an objective perspective, I am convinced that people do think about what they do. At work, people make decisions about where to direct their time and effort. At a very general level, we can think of the choice of activities at work as falling into two categories: behaviors directed at accomplishing job performance and behaviors that are not directly work related. In the latter category fall such behavior as taking personal or sick time to go fishing, or programming the Monday night football pool

into the office computer.

- Q7: What influences the choice of behaviors which are directed at accomplishing tasks important to effective job performance?
- For starters, let us assume that the means for accomplishing the job and the right person for the job are known and agreed upon. While there is often much disagreement on these sometimes difficult questions, let us assume agreement on what should be done and who should do it in order to focus on what then influences effective job performance. If the desired behavior for the employee is known, then effective job performance is a function of three factors: the employee must: (1) possess the skills and abilities that make it possible to display the desired behaviors; (2) be aware of what behaviors are desired of him or her; and (3) be motivated to show those behaviors, rather than some other set of behaviors -- that is, be willing to invest his or her time and energy to accomplish the desired behaviors rather than engaging in some other set of behaviors. For our purposes here, we shall assume that the person has the skills and abilities to display the behavior and that our interest is in the latter two issues -- learning what behaviors are desired and being motivated to carry out those behaviors.

- Q8: How do employees learn what to do on the job?
- A8: There are three general ways that employees learn the behaviors in which they should invest their time and effort on the job: (1) through direction from some authority; (2) through reinforcement of their own behavior the law of effect; and (3) through watching others on the job social learning.
- Q9: How do people learn through direction from authority?
- A9: Let's assume that this authority is the person's immediate supervisor. In this case, the supervisor would tell the employee what is expected on the job. This description varies in its degree of specificity but, all the same, it points the person toward a set of behaviors. For a nuclear quality control inspector, specific instructions might begin with telling the person what weld attributes to check, how to identify defects, how to record inspection results, etc.

  More general instructions would simply tell the person what welds had to be inspected. Pegardless of the degree of specificity, some "expert" is telling the person what to do, and it is assumed that the person has the skills and abilities to do the job once told what to do.

Direct communication may also come from sources that at first seem less direct. For example, the employee ay consult a printed expert in the form of a job description or a work order which also directs him or her toward some set of activities. Here again the process is basically the

same. The employee receives some communication about what it is that he or she is supposed to do.

For QC inspectors in the L.K. Comstock organization at Braidwood, direction might come through instructions from a QC supervisor such as Mr. Saklak, and through written direction from the Comstock Weld Inspection Procedure 4.5.3.

- Q10: How do people learn through reinforcement?
- Although there are many theoretical variants on this A10: general theory, almost all assume that the person displays some set of behaviors and then is reinforced in some fashion for showing the behavior. If the behavior results in either receiving something that the person values or not receiving something that is aversive to the person, and this happens in a way that the person sees some connection between his or her behavior and the receipt of the reinforcement, then the behavior is likely to be learned. In particular, if what is seen as being received from the behavior is positive, the probability of repeating that behavior increases; if either nothing good or nothing bad is seen as resulting from the behavior, or something aversive is seen to result, the behavior is less likely to be repeated. This process is a rather loose description of what is known as the law of effect.

Clearly some behaviors at work re learned in this fashion. The waitress who learns the names of regular customers begins to address them by name when they return,

discovers that the tips are larger after addressing them by name, and begins to pay attention to the names of regular customers and to find a way to use their names when they come into the restaurant. The teller who finds that he or she can finish up to 10 to 15 minutes earlier each evening if checking the day's totals is squeezed in between customers during the last hour before closing (rather then waiting to begin the task until the bank is closed) tends to repeat the behavior. On any job, a number of behaviors are learned through the direct effect of receiving reinforcement for doing the behaviors.

At Comstock the actual work practices in performing weld inspections, for example, may have been learned through reinforcement. The decision to document large numbers of weld inspections on a single inspection report form, instead of a single inspection, may have been learned behavior. A weld inspection procedure may be open to a wide range of implementing behaviors, the choice of which is influenced by reinforcement.

- Q11: How do people learn through watching others?
- All: The technical name for this is social learning theory. The underlying notion of social learning theory is much the same as the reinforcement position just described. That is, the theory assumes that people will tend to repeat behaviors that are reinforced and not repeat those that are not reinforced.

However, social learning theory recognizes that people do not need to directly experience the reinforcement. Given the human capacity to see, to think and to process information, individuals can observe what happens to others like themselves and learn what is likely to happen to themselves in the same or similar situations. Simply observing the behavior of others and evaluating the kind of reinforcements that these others receive leads to what is called modeling. People model the behaviors of others by repeating behaviors that they see being rewarded in others and avoiding these for which others are either not rewarded or are punished.

- Q12: How do these three sources of learning operate together?
- All: All three of the above mechanisms operate at work. It is safe to say that when you observe the whole set of behaviors representing an employee's work behavior over a given period of time, some of those behaviors were probably learned by each one of the means just described. In addition, some may have been learned by one means and then modified by others.

Even with a relatively simple task like entering the text of the present material into a word processor, one "expert," the manual, tells me that I should format it one way and another "expert," my secretary, tells me a different way to do it. Poth of these systems are probably workable, but they are not the same, and I must choose

between them. When multiple sources exist recommending ways to distribute time and effort, a form of conflict exists in the sense that the person must make a choice, and that choice will usually not be to choose both alternatives.

Conflicting choices of behaviors also exist between the three modes of learning that have been described. For example, a supervisor's instructions may be to do the job one way, while at the same time the employee observes others like himself doing the job the way the supervisor says to do it, and yet not receiving any reward for their behaviors. Or the person may be told to do the job one way, but reinforced for doing it another way.

In any job, conflict within and between the three modes of learning is bound to occur. This conflict is so prevalent that there is an extensive literature on it, typically labeled "role conflict." The interesting questions surrounding role conflict are not so much in demonstrating that it exists (because it is so prevalent), but rather in exploring what employees will do in the face of role conflict. Assuming that the individuals are aware of the different role demands and the existence of some conflicting demands, the question of what behaviors are chosen is one of motivation rather than learning.

Finally, for both within and between the three modes of learning, more than one source may exist for learning the behavior, and these sources may not agree.

- Q13: How does motivation influence work behavior?
- Al3: Knowledge about what behaviors are to be carried out, along with possessing the skills and abilities to carry them out, are only necessary conditions for behavior. The other quality needed is the motivation to engage that behavior. In the framework discussed so far, motivation refers to the conditions that lead the individual to choose to devote his or her time and effort to performing particular behaviors behaviors that the person is capable of performing.

Two conditions are central to the view of wor's motivation taken here and held by most of the positions that dominate current thought on the subject. The first is that there are outcome which people value to some degree. Some examples of outcomes are pay, the friendship of supervisors or co-workers, working conditions, security, safety, promotions, and a sense of achievement. Second, valued outcomes influence decisions about allocations of time and effort to the extent that the employees believe that their behavior is associated with outcomes they value. When outcome is associated with some particular behavior and the outcome is seen as valuable to the employee, the outcome is often labeled an incentive. The opportunity for overtime is an incentive for an inspector to the extent that the inspector values extra pay for extra time, and to the extent that the inspector believes that devoting time and effort to inspecting will increase his or her chances of being

given overtime. If either the person has no desire to work extra hours, or the person has no reason to believe that working hard at inspecting will lead to getting overtime, the opportunity for overtime is not an incentive for that person.

- Q14: How do learning and motivation combine to influence work behavior?
- Al4: Given what has been described so far, a general view of employee behavior emerges. At any given time an employee possesses an array of possible behaviors in which he or she can decide to invest time and effort. The ones that are chosen will depend upon the employee's perception of the utility of the behavior to him or her. This utility is a subjective utility based upon the extent to which the person believes valued outcomes will result from choosing the behavior.

When employees do not choose behaviors that the employers feel they should, there are several explanations for this within the framework suggested here. All of the explanations come down to the fact that the behavior that represents effective work performance does not possess a sufficiently high utility to the employee to be chosen, assuming that employee is aware of the behavior and is capable of performing it. To put it another way, there are competing behaviors which win out over the ones desired by the employers.

Sometimes the behaviors with which the target behavior is competing are other behaviors also prescribed by the employer. In this case, there is conflict between two sets of demands made by the employer. Consider the example of a salesperson selling aircraft to third world governments. Such a salesperson with a U.S. firm is told by his or her employer to "make sales" but is also told that he or she must operate within the ethical limits of Western culture which restrict the giving of bribes to government officials. When the person gets down to trying to do business with his or her customers, it is quickly learned that the two sets of prescribed behaviors cannot be satisified simultaneously even though both sets of behavior are being stressed by the same source -- the employer. According to our model, whether the person selects to devote time and effort to making sales with or without offering payoffs to potential customers depends upon which of the two behaviors is perceived by him or her to possess the higher utility. To gather information to make this decision, the person will probably look to what happened to other salespersons selling to similar customers.

In this example, the conflict between behavioral choices occurred within two sets of behaviors, both desired by the company. The conflict may also be between a set of behaviors prescribed by the employer and behaviors prescribed by some other source. For example, in the case of the rate of inspection, supervisors may be advocating

inspecting more units per time period and NRC regulations may, in effect, require inspecting less. As was the case in the previous example, the employee should choose that behavior which most closely matches what he or she believes will lead to the greater amount of subjective return, taking into account the nature of the outcomes that are likely to accrue from following the wishes of the supervisor and from following the direction of the regulations.

- Q15: How can we apply this general model of industrial and organizational psychology to the evaluation of work performed by quality control inspectors at Braidwood?
- Als: The job of quality control inspector at a nuclear power plant involves two built-in sets of conflicting behavioral requirements defined by the organization: work quality and work quantity. The first behavioral requirement is to inspect with sufficient care to assure the prescribed level of quality. The second behavioral requirement is to inspect with sufficient speed to meet prescribed or understood production rates or work quantity requirements. In such circumstances there is normally a negative correlation between taking time to inspect and keeping production going. In addition, the reporting of quality defects identified through careful inspection may conflict with production requirements.

While such a quality versus quantity conflict is certainly not unique to the job of QC inspector at a

nuclear plant, the manner in which the nuclear QC inspector chooses between conflicting work behaviors is likely to be a much more critical question than the choices made in another job where quality standards are not as important.

- Q16: Are you aware of any institutional guidance to the nuclear industry on how such job role conflicts are to be resolved?
- A16: Yes. I am familiar with guidance from the U.S. Nuclear Regulatory Commission which attempts to insure that conflicts between production and cost considerations on the one hand and quality assurance on the other will be resolved in favor of quality. I am aware that the NRC's regulations provide that "[t]he persons and organizations performing quality assurance functions shall have sufficient authority and organizational freedom to identify quality problems; to intiate, recommend or provide solutions and to verify implementation of solutions." Such authority must be sufficient to insure "independence from cost and schedule when opposed to safety considerations." These are provisions of Title 10, Code of Federal Regulations, Part 50, Appendix B, Quality Assurance Criteria for Nuclear Power Plants.

In addition, I am aware of NRC Regulations for Employee Protection, 10 Code of Federal Regulations Section 50.7, which prohibit an employer from taking retaliatory action against a nuclear employee, such as a QC inspector, for identifying quality or safety concerns. I am advised by

counsel that these NRC regulations apply to the work activities of the electrical QC inspectors at Braidwood. Such institutional guidance recognizes the existence and significance of potential quality versus quantity role conflicts in the nuclear industry. It also makes clear the institutional preference that quality considerations prevail over other interests. Such institutional guidance, however, is not self-implementing. As is the case with other direction from authority, such guidance provides only one of a number of sometimes conflicting influences on actual work behavior.

- Q17: What influences the choice between quality versus quantity work behavior for QC inspectors?
- Al7: When quality control inspectors face such conflict, the concern of the NRC regulations, as I see them, is to advocate that the net effect of all influences must be such that the QC inspector selects the work behaviors of performing quality assurance work effectively.

  Psychologically speaking, the self-perceived utility associated with effective quality work must be as attractive or more attractive to the QC inspector than devoting time and effort to meeting production schedules. The inspector will look at the work environment to attempt to judge the rewards and punishments associated with devoting time and effort to each domain (i.e., inspection and production). One of the first places the inspector will

look is to the company and the people who represent it, particularly supervisors. The inspector will look not only at what company representatives say, but what they do. Thus, if they were to say that effective and careful inspections are the most important thing, but, on the other hand, most of the praise and other important incentives that QC inspectors receive tend to come from meeting production-related goals, then the inspector is likely to shape his or her behavior toward production.

The person will also look to what is going on with his or her colleagues. Again, if the person observes the balance of the rewards associated with production and, even worse, negative sanctions associated with inspection when the two behaviors come into conflict, he or she is likely to model behavior of production emphasis. Or, alternatively, if the person does not select the behavior that he or she believes will lead to the greater extrinsic reward and decides to stick with a belief that inspection responsibilities are most important in spite of how the company distributes rewards, it is likely that the inspector will experience some degree of stress and role conflict on the job, which itself may adversely affect work performance.

The person may look to what happens to another person in a symbolic fashion, as well as direct observation. In this case, he or she may turn to the folk tales that pass through any work force. Often these are based on stories passed by word of mouth about things that have happened to

other workers in the past. These tales are often based on truth, but may tend to be elaborated on over time. The main point is that they are accepted as fact and guide the behavior of those who hear them and believe them.

Furthermore, they die slowly. It often takes a major reversal of behavior on the part of the parties involved in the tales to reverse the beliefs about what their position is on some issue. It often is not enough to simply make some minor change of course, and certainly not enough to merely proclaim such changes.

In sum, one must carefully review and evaluate the many influences on work behavior - the sources of learning and the factors affecting motivation - in order to understand how conflicts between quality versus quantity are resolved by quality control inspectors.

- Q18: Have you reviewed and evaluated such influences as they affect the work behavior of electrical quality control inspectors at Braidwood?
- Al8: Yes, to a limited extent. I have reviewed a number of sources of factual information describing the work environment of L.K. Comstock QC inspectors at Braidwood and the influences which affect their work performance. I have reviewed a number of documents, including the Quality Control (QC) Inspector Harassment and Intimidation Contention, three Nuclear Pegulatory Commission memoranda reflecting complaints of management harassment, intimida-

tion and production pressure by a large number of Comstock inspectors, Nuclear Regulatory Commission Quality Assurance and Employee Protection regulations, certain Comstock QC inspection procedures and inspection documents, and portions of the deposition testimony of a number of Comstock QC inspectors.

- Q19: Have you formed any opinion on the existence of adverse influences on the work performance of Comstock QC inspectors?
- A19: Yes. In my opinion, there have been a number of cases when conflict between inspection quality and inspection quantity was likely to have arisen. On the basis of the March and April NPC memoranda I can identify a number of influences on learning and motivation which strongly suggest the need for a detailed evaluation of the adequacy of the inspectors' quality assurance work performance. By this I mean that it is highly likely that QC inspectors felt a good deal of pressure or conflict between their need to do high quality inspections and the desire of their supervisors for speeding up the inspection process to a point of perhaps interfering with the quality of the inspections. On the positive side, I would assume that the inspectors wanted or desired to do quality inspections and that the official Comstock position supported quality. However, the actual message received from Comstock supervisors appears quite different.

Some specific examples of the message being sent by

Comstock came out in the March and April NRC memoranda. In

one case, an inspector describing a confrontation between

himself and his supervisor regarding the inspector's

unwillingness to close out some inspections said: "Rick

[the supervisor] says, 'No wonder we have such a back log

of documents you won't evaluate them or close them out.' I

said, 'I have to follow my procedure - It's not my decision

to close out ICRs or NRCs.' Rick said, 'I can put you in

the vault or whatever and make you do it all.' Rick came

back to my desk and said, 'At times you make me so pissed

off that if beating was legal you would be dead."

Another inspector said that this incident was not the first. In fact, he said he knew of at least five other occasions of this type of treatment. That inspector went on to describe other kinds of negative sanctions associated with not speeding up inspections. These are as severe as being "railroaded out," that is, losing one's job. In addition, it seems clear that the QC inspectors did not believe that the pressure and negative sanctions were limited to one bad supervisor. The Company supported this negative view in the opinion of QC inspectors by putting supervisors in positions where they were not qualified to judge the quality of the QC inspectors' work, and by placing new people in positions as "leads" because, in the opinion of the QC inspectors, the new people would "do what they are told to do - sign what needs to be signed and get

the NRCs or ICRs cleared away."

Finally, there is evidence that the OC inspectors may have paid more attention to these behaviors than the official company line on how to do inspections, and that they felt that it was more important to rely on what management did rather than simply what management said. This evidence is captured, for example, in the following quote: "The quality first or whatever you call it sucks - It's CECo working for CECo and all this bullshit reporting hasn't done a damn bit of good. I have not seen one improvement since it started."

The material I have just described convinces me that the QC inspectors were aware of a discrepancy between their beliefs about inspections and the company's actions. They also heard the company stating one position in its official quality assurance policy but saw a very different set of standards being enforced by the behavior of company representatives. I cannot say for certain, in this case, whether the inspectors behaved consistently with their internal (personal) standards for quality and the company's official position, or if they sacrificed quality for quantity. I can say however, based on what has been observed in many other jobs, that when powerful reinforcers are used, such as: (1) fear of losing a job, (2) thinly veiled threats, (3) the loss of valued overtime, or (4) the appointment to critical positions of people who are not likely to stand up to pressure, actual behavior tends to

shift in the direction of the reinforcers. Therefore, I'd be very surprised if the inspection behavior of at least some of the inspectors was not affected by the pressure. Furthermore, when it did occur, some of the inspectors may not even have been aware of yielding to this pressure.

- Q20: Have you reviewed testimony by a number of these same inspectors given in depositions a year after the late March and early April meetings, in which testimony the inspectors denied personal performance of inadequate inspection work due to management pressure?
- Yes. I have reviewed portions of deposition testimony to A20: that effect cited by Commonwealth Edison Company in April 1986 brief. However, I question these statements to some degree. I can say this without implying that the inspectors deliberately altered their opinion. When a person holds strongly to some value, it is difficult to admit, even to himself or herself that he or she has behaved inconsistent with that value. Let me give you a personal example. As a professor, I believe in high academic standards and my role in maintaining these standards for the University. I do not believe in compromising these standards due to some personal circumstances of a student. I will help the student as much as possible to enable him or her to do good work, but at some point the person's work must be evaluated against my standard.

Now let us assume that I have a student that I like and

respect, whom I also know has had severe personal problems during the semester. His father has had a heart attack, and the student has had to return home every weekend to help run the family business. With this background, I must grade his term paper, which is guite long, with a large number of opportunities for me to make subjective judgments. In such a situation, my psychological background convinces me that I will probably err in the direction of giving this student the benefit of the doubt and grade him higher than I probably should. However, if you interview me a year later and ask me directly if I gave this student a higher grade, I will probably say no. I'll say no because to say yes is so counter to my values that I have repressed or never even realized that I was more lenient than I would like to think I am. I see a lot of similarity between my example and the testimony of QC inspectors who are being asked in a deposition regarding their own behavior of doing less than high quality inspections.

There is also the possibility that the inspectors would be more willing to express feelings of supervisory pressure in the protection of a large group in which many are expressing negative events, rather than making public statements without the security of the group. In a sense, it is possible that the group condition lowered the threshold of willingness to make statements that might be seen as personally threatening. When alone and on the record, the threshold was raised. This situation is not unlike

what we find with performance evaluations and feedback.

When supervisors have to rate subordinate performance and discuss these ratings with subordinates, the data show that these ratings often are more positive than if the same raters are asked to provide these ratings in confidence to researchers who will not share these data with anyone else. Under the privacy condition, the supervisors feel free to express less positive behaviors than they would do if they had to face the person directly. It is generally accepted that the private ratings are closer to the rater's true feelings than are the public ones. In a sense, the group condition may have acted somewhat like the privacy condition in performance appraisals.

The issue of lowered threshold and the fact that the QC inspectors may not have admitted to themselves that they were affected by supervisor pressure lead me to conclude that we should not discount the March and April, 1985, statements simply because of the reports from the 1986 depositions.

- Q21: Do you have any recommendations for the Licensing Board with respect to how they might verify conditions of harassment, intimidation and production pressure that occurred at Braidwood at the time under consideration here?
- A21: Yes. Two methods lend themselves to verifying past behavior, which behavior scientists call "retrospective reconstructions" and "behavior traces." Some combination of

both methods may provide additional data on which to draw a conclusion about harassment, intimidation and production pressure at Braidwood.

Retrospective reconstructions could be assembled through the use of a questionnaire or survey of QC inspectors, supervisors and other relevant persons who worked at Braidwood during the time under investigation. I understand that a professional colleague of mine, Dr. Richard Arvey, will address this subject in his testimony in this proceeding.

Behavior traces are objective indicia of behavior that are recorded in some fashion that can be assessed at a later time. From behavior traces we may be able to infer whether or not some behavior occurred at an earlier time. Absenteeism data is a good example of a behavior trace which may evidence some adverse influence in the work environment. The quality of actual workmanship is another obvious behavior trace which may evidence work behavior.

On the basis of the evidence I have reviewed regarding Braidwood, I would strongly recommend that a detailed evaluation be performed which may employ some combination of retrospective reconstructions and behavior traces. The data from such an evaluation should provide evidence about whether there was an adverse effect on QA work performance at Braidwood during the time in question.

December, 1985

Daniel R. Ilgen Curriculum Vita

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## Degrees

B.S.	(1965)	Iowa State University Major: Psychology; Minors: Mathematics & Statistics
M.S.	(1968)	University of Illinois Major: Psychology
Ph.D.	(1969)	University of Illinois Major: Industrial/Organizational Psychology;
		Minors: Mathematics & Social Psychology

#### Professional Experience

1983-Present	John A. Hannah Professor of Organizational Behavior, Department of Psychology and Department of Management, Michigan State University, East Lansing, MI 48824.
1972-1983	Assistant Professor to Professor, Department of Psychological Sciences (Area Head of Industrial/Organizational Psychology, 1977 to 1983), Purdue University, West Lafayette, IN 47907.
1978-1979	Visiting Associate Professor, Department of Management and Organization, University of Washington, Seattle, WA 98195.
1970-1972	Captain, U.S. Army Position: Instructor, Office of Military Psychology & Leadership, U.S. Military Academy, West Point, New York 10996.

1969-1970 Assistant Professor, Department of Psychology, University of Illinois, Urbana, IL 61801.

#### Professional Societies

Academy of Management
American Psychological Association-Fellow
American Psychological Association-Council of Representatives--elected 1985-1988
Michigan Association of Industrial-Organizational Psychology
Midwest Psychological Association
Sigma Xi
Society of Organizational Behavior--Elected Member of Board 1982 to present,

appointed coordinator for Board 1983 to 1985.

## Bibliographic Listings

Who's Who
Who's Who in the Midwest

## Committee Appointments

## A. National/State Level Committees

Scientific Affairs Committee of Division 14 of APA, 1974-1975, Reappointed, 1975-1976.

Society for Industrial-Organizational Psychology, Division 14, Executive Committee 1984 to present.

Education and Training Committee of Division 14 of APA 1978-1979, 1979-1980, 1981-1982, 1982-1983, 1983-1984 (appointed committee chairperson).

American Assembly of Collegiate Schools of Business, hnical Review Panel for Developmenting Criteria for Schools of Management, Appointed Member, August, 1977 to April, 1978.

American Assembly of Collegiate Schools of Business, Steering Committee for Accreditation of Business Schools Study, Appointed Member, April, 1978 to December, 1979.

Midwest Academy of Management, Program Committee, 1981-1982.

Academy of Management, Organizational Behavior Division Executive Committee, 1982-1983, 1983-1984.

Academy of Management, Organizational Behavior Division, Program Chairman Elect, 1982-1983.

Academy of Management, Organizational Behavior Division, Program Chairperson, 1983-1984.

#### B. Recent University Committee Appointments

\*/O Psychology Faculty Search Committee (Psychology) 1985-1986 Craduate Programs Committee (School of Business) 1985-1986 Honorary Degree Committee (University) 1985-1986

#### Editorial Activity

A. Associate Editor: Organizational Behavior and Human Decision Processes,
January, 1984 to present.
Acting Editor: Organizational Behavior and Human Performance,

January 1, 1983 - January 6, 1983.

#### B. Editorial Boards:

Academy of Management Review, 1982-1984.

Journal of Applied Psychology, 1983-present.

Organizational Behavior and Human Performance, 1977-1983.

#### C. Reviewing Activities:

Occasional to frequent reviewer for the following journals or publishers:

Administrative Science Quarterly Academy of Management Journal Cross-Cultural Behavior

Human Relations

Journal of Applied Behavioral Sciences

Journal of Management Studies

Journal of Occupational Psychology

Journal of Personality and Social Psychology

Journal Supplement Abstract Service, APA

Perceptual and Motor Skills

Professional Psychology

Psychological Bulletin

National Science Foundation

School of Labor and Industrial Relations,

Cornell University

## Publications

# A. Articles in Refereed Journals:

- Humphreys, L. G., Ilgen, D. R., McGrath, D., & Montanelli, R. (1969).

  Capitalization on chance. Educational and Psychological Measurement,
  29, 259-271.
- Humphreys, L. G., & Ilgen, D. R. (1969). Note on a criterion for the number of common factors. Educational and Psychological Measurement, 29, 571-578.
- Fiedler, F. E., O'Brie:, G. E., & Ilgen, D. R. (1969). The effects of leadership style upon performance and adjustment in volunteer teams operating in a stressful foreign environment. Human Relations, 22, 503-514.
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- Ilgen, D. R., & Hamstra, B. W. (1972). The effect of the expected performance-reported performance difference on satisfaction as a function f the level of reported performance. Organizational Behavior and Human Performance, 7, 359-370.
- Ilgen, D. R., & Seely, W. (1974). Realistic expectations as an aid to coping with a stressful environment. Journal of Applied Psychology, 59(4), 452-456. (Reprinted in D. Osborne & M. Gruneberg (Eds.), Psychology and Industrial Productivity. MacMillan Press, 1980.)
- Ilgen, D. R., & O'Brien, G. E. (1974). Leader-Member relations in small groups. Organizational Behavior and Human Performance, 12, 335-350.
- Terborg, J. R., & Ilgen, D. R. (1975). A theoretical approach to sex discrimination in traditionally masculine occupations. Organizational Behavior and Human Performance, 13, 352-376.

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- Dugoni, B. L., & Ilgen, D. R. (1981). Realistic job previews and the adjustment of new employees. Academy of Management Journal, 24, 579-591.
- Ilgen, D. R., Hobson, C. J., & Dugoni, B. L. (1981, August). Performance feedback in organizations: The development of a measure. <u>Journal</u> Supplement Abstract Service.
- Ilgen, D. R., Nebeker, D. M., & Pritchard, R. D. (1981). Expectancy theory measures: An empirical comparison in an experimental simulation. Organizational Behavior and Human Performance, 28, 189-223.

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  Organizational Behavior and Human Performance, 28, 311-330.
- Weiss, H. M., Ilgen, D. R., & Sharbaugh, M. E. (1982). Effects of life and job stress on information search behaviors in organizations. Journal of Applied Psychology, 67, 60-66.
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- Ilgen, D. R., & Favero, J. L. (1985). Methodological limitations of social psychological literatures for the understanding of performance appraisal processes. Academy of Management Review, 10, 311-321.
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#### B. Books:

- Naylor, J. C., Pritchard, R. D., & Ilgen, D. R. (1980). A theory of behavior in organizations. New York: Academic Press.
- McCormick, E. J., & Ilgen, D. R. (1980). Industrial psychology (7th ed.). Englewood Cliffs, NJ: Prentice-Hall.
- McCormick, E. J., & Ilgen, D. R. (1985). Industrial and organizational psychology (8th ed.). Englewood Cliffs, NJ: Prentice-Hall.
- Ilgen, D. R., & Barnes-Farrell, J. B. (1984). Performance planning and evaluation. Booklet in Modules in management edited by F. Kast and J. Rosensweig. Chicago: Science Research Associates.

### C. Book Chapters:

- Ilgen, D. R., & Feldman, J. M. (1983). Performance appraisal: A process approach. In B. M. Staw & L. L. Cummings (Eds.), Research in organizational behavior (Vol. 5). Greenwich, CT: JAI Press.
- Ilgen, D. R. (1983). Gender issues in performance appraisal: A discussion of O'Leary & Hansen. In F. J. Landy, S. Zedeck, & J. Cleveland (Eds.), Performance appraisal. Hillsdale, NJ: Lawrence Erlbaum.

- Naylor, J. C., Pritchard, R. D., & Ilgen, D. R. (1980). A sequential view of behavior and motivation. In K. D. Duncan, M. M. Gruneberg, & D. Wallis (Eds.), Changes in working life. Sussex, England: John Wiley & Sons Limited.
- Naylor, J. C., & Ilgen, D. R. (1984). Goal setting: A theoretical analysis of a motivational technology. In L. L. Cummings & B. M. Staw (Eds.), Research in Organizational Behavior (Vol. 6). Greenwich, CT: JAI Press.
- Taylor, M. S., Fisher, C. D., & Ilgen, D. R. (1984). Individuals' reactions to performance feedback in organizations: A control theory perspective. In K. Rowland & J. Ferr's (Eds.), Research in Personnel and Human Resource Management (Vol. 2). Greenwich, CT: JAI Press.
- Ilgen, D. R. (1985). Laboratory research: A question of when, not if.
  In E. A. Locke (Ed.), The generalizability of laboratory experiments:
  An inductive survey. Lexington, MA: D. C. Heath and Company.
- Ilgen, D. R., & Youtz, M. (1986). Factors affecting the evaluation and development of minorities in organizations. In K. M. Rowland & G. R. Ferris (Eds.), Research in Personnel and Human Resource Management Volume 4. Greenwich, CT: JAI Press.
- Ilgen, D. R. (in press). Small groups in an individualistic world.

  Interfaces in Psychology, Volume V. Lubock, TX: Texas Tech
  University Press.
- Ilgen, D. R. (in press). Small groups and teams in work organizations:

  Barriers to successful use. In R. S. Schuler & S. A. Youngblood

  (Eds.), Readings in Personnel and Human Resource Management (3rd ed.).

#### D. Encyclopedia Chapters:

- a. Industrial Psychology. Encyclopedia of Psychology, New York: Wiley, 1984.
- Performance Evaluation. Encyclopedia of Psychology, New York: Wiley, 1984.

#### E. Book Reviews:

- Ilgen, D. R. (1979). Job-related stress. [Review of Stress at work]. Contemporary Psychology, 24, 804-805.
- Ilgen, D. R. (1977). Theory with caution: A Primer of Industrial-Organizational Psychology. [Review of Essentials of Industrial and Organizational Psychology]. Contemporary Psychology, 22, 317-318.
- Ilgen, D. R. (1974). [Review of Recruitment and selection of typists and secretaries]. Personnel Psychology, 27, 265-268.
- Ilgen, D. R. (1974). [Review of Psychology applied to work and life (5th ed.)]. Personnel Psychology, 27(3), 380-383.

Ilgen, D. R. (1986). [Review of Absenteeism by P. S. Goodman & R. S. Adkin (Eds.)]. In Journal of Occupational Behavior.

#### Presentations

# A. Invited Colloquia/Presentations to University Audiences:

Loyola University, Chicago, April, 1975 University of Illinois, Champaign-Urbana, November, 1976 University of Maryland, November, 1977 University of Texas at Dallas, October, 1978 University of Washington, January, 1979 University of Oregon, May, 1979 University of South Carolina, October, 1979 Ohio State University, January, 1981 University of Cincinnati, June, 1981 University of Illinois, Urbana-Champaign, February, 1983 Purdue University, March, 1983 Carnegie-Mellon University, April, 1984 Pennsylvania State University, May, 1984 Loyola University, Chicago, October, 1984 Concordia University, Montreal, January, 1985 Rice University, Houston, March, 1985. Michigan State University, May, 1985 (Department of Psychology) Michigan State University, November, 1985 (Department of Management) University of Michigan, November, 1985 University of Illinois, February, 1986

# B. Special Presentations:

Rotary, Lafayette, IN, February, 1976

Center for Creative Leadership Conference on Feedback, Washington, DC,

November, 1977

Selection Proceedings Conference, Old Dominion University, April 1980

Scientist-Practitioner Conference, Old Dominion University, April, 1980
Office of Naval Research Conference on Minorities in high tech industries,
Pensacola, FL, February, 1984

Michigan Association of Industrial-Organizational Psychology, Southfield, MI, May 1984

Human Resource Management Group, Personnel Testing Council of Southern California, Newport Beach, CA, November, 1984

Commencement address; Michigan State University, March, 1985

Health Care Promotion, Keynote Speaker, Michigan State University, May, 1985

Human Resource/Personnel Management Graduate Student Consortium, Academy of Management, San Diego, CA, August, 1985

American Society for Training and Development, Michigan Chapter, October, 1985

Interfaces in Psychology Symposium sponsored by the Department of Psychology, Texas Tech University, Lubbock, TX, October, 1985

# C. Convention Papers and/or Symposia Presentations:

Ilgen, D. R., & O'Brien, G. E. (1968). Task organization effects on interpersonal atmosphere in small groups. Paper presented at the meeting of the Midwest Psychological Association, Chicago, IL.

- O'Brien, G. E., & Ilgen, D. R. (1968). Effects of organizational structure upon small group creativity. Proceedings of the 76th Annual Convention of the American Psychological Association, 2, 553-554.
- Ilgen, D. R., & Hamstra, B. W. (1971, April). Expected performance and satisfaction with performance. Psychology in the Air Force.

  Symposium conducted at the Air Force Academy, Colorado Springs, CO.
- Terborg, J. R., & Ilgen, D. R. (1974, August). Access and treatment discrimination against women in masculine occupations. Paper presented at the 83rd annual convention of the American Psychological Association, New Orleans, LA.
- Ilgen, D. R. (1975, April). The influence of expectation and beliefs on the motivation and adjustment of new members of military organizations. Paper presented at a conference for the study of the "Social Psychology of Military Service," University of Chicago.
- Campbell, D. J., & Ilgen, D. R. (1976, May). Role perception accuracy as moderators of the relationship between motivation and performance.

  Paper presented at the Midwest Psychological Association meeting, Chicago, IL.
- Fisher, C. D., Pritchard, R. D., & Ilgen, D. R. (1977). Extrinsic reward, personal causality, feelings of competence, and intrinsic motivation. Paper presented at the 86th annual convention of the American Psychological Association, San Francisco, CA.
- Ilgen, D. R., & Dugoni, B. L. (1977, August). Psychological implications of realistic job previews on the adjustment of new organizational members. Symposium conducted at the annual meeting of the Academy of Management, Orlando, FL.
- Individual differences in perceptions of exercise requirements:

  Implications for Assessment Center data used for career development.

  Paper presented at the Fifth International Congress on Assessment Center Method, Washington, DC.
- Ilgen, D. R. (1978, May). New developments in goal setting research.

  Symposium conducted at the Thirty-Eighth annual meeting of the Academy of Management, New York City, NY.
- Taylor, M. S., & Ilgen, D. R. (1979, August). Employees' reactions to male and female managers: Is there a difference? Paper presented at the 39th annual meeting of the Academy of Management, Atlanta, GA.
- Ilgen, D. R. (1980, June). A process model for the effects of feedback of the feedback recipient. Paper presented at the annual meeting of the Institute for Management Sciences, Honolulu, HI.

- Taylor, M. S., & Ilgen, D. R. (1980, August). An investigation of initial placement decisions made aboutwomen in traditionally male occupations. Paper presented at the 40th annual Academy of Management meeting, Detroit, MI.
- Martin, B. A., Ileen, D. R., Peterson, R., & Boeschen, D. (1981, May).

  Reactions of supervisors and their subordinates to performance
  appraisal sessions. Paper presented at the annual meeting of the
  Midwest Psychological Association, Detroit, MI.
- Ilgen, D. R. (1981, April). Matching rating scales for performance feedback to recipient characteristics. Feedback implications for rating scale design. Symposium conducted at the annual meeting of the Midwest Academy of Management, Chicago, IL.
- Ilgen, D. R. (1981, August). The individual's contribution to the productivity problem: A realistic view. <u>Productivity</u>. Symposium conducted at the 41st Academy of Management meeting, San Diego, CA.
- Ilgen, D. R. (1981, October). Habit in behaviors in organizations.

  Pape presented at the annual meeting of the Society for

  Organizational Behavior, Chicago, IL.
- Ilgen, D. R. (1981, November). Sex and sex-role effects on performance appraisal. Presented as discussant at conference on Performance Appraisal, Dallas, TX.
- Ilgen, D. R. (1982, March). The macro-micro interface in organizational behavior. Symp sium conducted at the Midwest Academy of Management meeting, Columbus. OH.
- Landy, F. J., & Ilgen, D. R. (1982, August). Performance appraisal and feedback. Workshop presented at the annual meeting of the American Psychological Association, Washington, DC.
- Ilgen, D. R. (1982, July). Triggering information search in organizational members. Workshop presented at the 20th International Congress of Applied Psychology, Edinburgh, Scotland.
- Ilgen, D. R. (1982, August). A person perception view of performance appraisal: Some methodological issues. Symposium conducted at the annual meeting of the American Psychological Association, Washington, DC.
- Moore, C. F., & Ilgen, D. R. (1983, May). Goal setting and feedback effects on proof ready performance. Paper presented at the annual meeting of the Midwest Psychological Association, Chicago, IL.
- Ilgen, D. R. (1983, August). A control theory integration of performance goal and performance feedback research. Symposium conducted at the annual meeting of the Academy of Management, Dallas, TX.
- Ilgen, D. R. (1984, April). Current issues in performance appraisal.

  Symposium conducted at the annual meeting of the Midwest Academy of Management, South Bend, IN.

- Ilgen, D. R. (1984, October). Good theory and good practice: Have we misinterpreted Lewin? Society of Organizational Behavior annual meetings. Berkeley, CA:
- Ilgen, D. R., & Wiggins, A. (1985, July). The passage of time: A neglected factor in the goal setting-to-performance-to-feedback sequence. Presented as part of a symposium on goal setting at the XX Interamerican Congress of Psychology, Caracus, Venesuela.

## Other Reports (Not Refereed)

## A. Technical Reports:

- Ilgen, D. R. (1966). Fall 1965 norms of the American College Test Battery for University of Illinois freshmen at Urbana (Tech. Rep. No. 66-2).

  Urbana: University of Illinois, Office of Admissions and Records.
- Ilgen, D. R. (1966). High school indices used as predictors of college success. Urbana: University of Illinois, Office of Admissions and records.
- Fiedler, F. E., O'Brien, G. E., Ilgen, D. R. (1967). The effect of leadership style upon performance and adjustment in terms operating in a stressful foreign environment (Rep. No. 24). Urbana: University of Illinois, Group Effectiveness Laboratory.
- Ilgen, D. R., & O'Brien, G. E. (1968). The effects of task organization and member compatibility on leader-member relations in small groups (Tech. Rep. No. 58). Urbana: University of Illinois, Group Effectiveness lesearch Laboratory.
- Ilgen, D. R., Seeley, W., & Eggert, R. (1971). Expectations and NCB resignations (Tech. Rep. No. 71-2). Office of Military Psychology and Leadership, USCC, West Point, NY.
- Ilgen, D. R., & Schmitt, N. (1971). Evaluation of the third class' sponsor program (Tech. Rep. No. 71-4). Office of Military and Leadership, USCC, West Point, NY.
- Ilgen, D. R., Peters, L. H., Fisher, C. D., & Campbell, D. J. (1976, April). The development and change of work-relaced perceptions relevant to motivation (Tech. kep. No. 2). West Larayette, IN: Purdue University, Department of Psychological Sciences.
- Ilgen, D. R., Peters, L. H., & Campbell, D. J. (1976, April). A systematic study of the sources and effects of work expectations: Final report (Tech. Rep. No. 4). West Lafayette, IN: Purdue University, Department of Psychological Sciences.
- Ilgen, D. R., & Peters, L. H. (1975). Boundary conditions and operationalizations of expectancy theory variables (Tech. Rep. No. 3). West Lafayette, IN: Purdue University, Department of Psychological Sciences.

- Ilgen, D. R., Campbell, D. J., Peters, L. H., & Fisher, C. D. (1975, December). Work role perceptions: Their affective and behavioral consequences (Tech. Rep. No. 5). West Lafayette, IN: Purdue University, Department of Psychological Sciences,
- Ilgen, D. R., Campbell, D. J., Peters, L. H., & Fisher, C. D. (1976, March). Sources and effects of work perceptions (Tech. Rep. No. 1). West Lafayette, IN: Purdue University, Department of Psychological Sciences.
- Ilgen, D. R., Campbell, D. J., & Peters, L. H. (1976, April). Individual and situational contributions to work role perceptions (Tech. Rep. No. 3). West Lafayette, IN: Purdue University, Department of Psychological Sciences.
- Ilgen, D. F. (1975, August). The psychological impact of realistic job reviews (Tech. Rep. No. 2). West Lafayette, IN: Purdue University, Department of Psychological Sciences.
- Ilgen, D. R. (1976). Scientific Affairs Committee's criterion development study. The Industrial/Organizational Psychologist, 13(3), 27.
- Performance feedback: A review of its psychological and behavioral effects (Tech. Rep. No. 1). West Lafayette, IN: Purdue University, Department of Psychological Sciences.
- Dugoni, B. L., & Ilgen, D. R. (1978, July). Realistic job previews and the adjustment of new employees (Tech. Rep. No. 5). West Lafayette, IN: Purdue University, Department of Psychological Sciences.
- Ilgen, D. R., Matte, W. E., Fisher, C. D., Dugoni, B. L., & Taylor, M. S. (1978, September). The antecedents and consequences of performance feedback in organizations. West Lafayette, IN: Purdue University. Department of Psychological Sciences.
- Ilgen, D. R., Dugoni, B. L., & Matte, W. E. (1978, September). Effects of performance feedback in organizational settings (Tech. Rep. No. 3).

  West Lafayette, IN: Purdue University, Department of Psychological Sciences.
- Ilgen, D. R., & Knowlton, W. A. (1979, June). Performance attributional effects on feedback from subordinates (Tech. Rep. No. 79-1). West Lafayette, IN: Purdue University, Department of Psychological Sciences.
- Ilgen, D. R., Mitchell, T. R., & Frederickson, J. W. (1980, March).

  Poor performers: Supervisors' and subordinates' responses (Tech. Rep. No. 1). West Lafayette, IN: Purdue University, Department of Psychological Sciences.
- Ilgen, D. R., Hobson, C. J., & Dugoni, B. L. (1980, September).

  Performance feedback in organizations: The development of a measure
  (Tech. Rep. No. 2). West Lafayette, IN: Purdue University, Department of Psychological Sciences.

- Weiss, H. M., Ilgen, D. R., & Sharbaugh, M. E. (1981, January). Effects of life and job stress on information search behaviors of organizational members (Tech. Rep. No. 7). West Lafayette, IN: Purdue University, Department of Psychological Sciences.
- Favero, J. L., & Ilgen, D. R. (1983). The effects of ratee characteristics on rater performance appraisal behavior (Tech. Rep. No. 83-5). East Lansing: Michigan State University, Departments of Psychology & Management.
- Ilgen, D. R., & Moore, C. F. (1983). Performance feedback effect under varying conditions of goals, feedback type, and choice (Tech. Rep. No. 83-6). East Lansing: Michigan State University, Departments of Psychology & Management.
- Ilgen, D. R., & Youtz, M. (1984). Factors affecting the evaluation and development of minorities in organizations (Tech. Rep. No. 84-3).

  East Lansing: Michigan State University, Departments of Psychology & Management.
- Ilgen, D. R. (1985). Laboratory research: A question of when, not if (Tech. Rep. No. 85-1). East Lansing: Michigan State University, Departments of Psychology & Management.
- Ilgen, D. R., & Wiggins, A. (1985). The passage of time: A neglected factor in the goal setting-to-performance-to-feedback sequence (Tech. Rep. No. 85-3). East Lansing: Michigan State University, Departments of Psychology & Management.
- Ostroff, C., & Ilgen, D. R. (1985). The relationship between cognitive categories of raters and rating-accuracy (Tech. Rep. No. 85-4). East Lansing: Michigan State University, Departments of Psychology & Management.
- Ostroff, C., & Ilgeu, D. R. (1985). The effects of training on raters' accuracy and cognitive categories (Tech. Rep. No. 85-5). East Lansing: Michigan State University, Departments of Psychology & Management.
- B. Reports Prepared for Organizational Use Only:
  - Ilgen, D. R., & Hollenback, H. J. (1975. August). Absentecism and turnover as affected by job satisfaction and pressure for attendance in a sample of Purdue University clerical workers. Report prepared for the Department of Personnel Administration, Purdue University, West Lafayette, IN.
  - Baxter Laboratories. (1976). Factors related to job satisfaction, performance, and commitment to the organization among engineers at Baxter/Traveral. Deerfield, IL: Ilgen, D. R., Campbell, D. J., Fisher, C. D., Peters, L. H., & Schneider, W. J.
  - Delco-Remy. (1978, September). Reports about and reactions to performance feedback at Delco-Remy. Anderson, IN: Ilgen, D. R., Matte, W. E., & Dugoni, B. L.

Simpson Timber Company. (1980, September). Evaluation of the performance planning and appraisal system at Simpson Timber Company. Seattle, WA: Ilgen, D. R., Peterson, R. D., Martin, B., & Boeshen, D.

Favero, J. L., Pavur, E., & Ilgen, D. R. (1983). The development and test of a performance appraisal instrument for custodians at Purdue University. Report prepared for Purdue University, West Lafayette, IN.

## Recent Consultation

Michigan Bell Telephone Company General Motors Corporation

## Grants Received

\*Office of Naval Research, September, 1983 - August, 1986 Office of Naval Research, June, 1982 - August, 1983

\*Army Research Institute, September 1, 1978 - August 31, 1982

\*Purdue Research Foundation, David Ross XR, August, 1981 - July, 1982

\*Army Research Institute, July 1, 1976 - June 30, 1978

\*Purdue Research Foundation, David Ross XR, June 1, 1976 - May 31, 1977

\*Army Research Institute, December 1, 1975 - May 31, 17,6
\*Army Research Institute, January 1, 1974 - December 31, 1975

\*Purdue Pesearch Foundation, David Ross XR, June ., 1973 - May 31, 1975

\*Purdue Research Foundation, David Ross XR, Summer, 1973

\*University of Illinois Research Board, September, 1969 - June, 1970

<sup>\*</sup>Indicates that he was the sole Principal Investigator.

#### UNITED STATES OF AMERICA NUCLEAR REGULATORY COMMISSION

# BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of:		
COMMONWEALTH EDISON COMPANY	Docket Nos.	50-456 50-457
(Braidwood Nuclear Station, ) Units 1 and 2)		30 437

# CERTIFICATE OF SERVICE

I hereby certify that I have served copies of the Testimony of Daniel R. Ilgen (On Rorem QC Inspector Harassment Contention) on each party listed on the attached Service List by having said copies placed in envelopes, properly addressed and postaged (first class), and deposited in the U.S. m il at 109 North Dearborn, Chicago, Illinois 60602, on this 25th day of April, 1986; except that counsel for Edison Mr. Miller was served by personal delivery, and Judge Herbert Grossman and counsel for the NRC Staff Mr. Treby were all served via Federal Express.

Gy March