implied that the county, and not the State, is to arrange for the construction of the replacement road. The county has adequate power to do so. N.J.S.A. 27:16-1, 2, 42; N.J.S.A. 27:20. Therefore, it is unnecessary to answer the fifth question, whether the Department of Conservation and Economic Development has authority to acquire land outside the reservoir taking line.

As noted above, payment for the reasonable cost of relocation is to be made by the State Treasurer to the county. Since the reasonableness of the amount requested by the county cannot be determined until the route has been selected, and all the facts concerning the proposed new route are available, the Treasurer may withhold payment of any excess over what will clearly be a reasonable amount in any case until he can determine that the full amount requested is reasonable. Since the State Treasurer does not have technical competence to determine the reasonableness of cost of the proposed relocation, he may call on the Department of Conservation and Economic Development for advice. N.J.S.A. 52:27C-7; cf. N.J.S.A. 52:27C-18.

Any payment to the county is held in trust by it for the relocation costs. Cf. *State* v. *Cooper, supra,* at 276.

To the extent that amounts are unexpended, an appropriation is available to cover the cost of relocation of the road involved here. L. 1958, c. 64, sec. 1, account N-12 appropriated the balance of the funds originally appropriated for the acquisition of the Round Valley site, see L. 1956, c. 60, sec. 7; N.J.S.A. 58:20-7, (with the exception of that part of the balance previously appropriated by L. 1957, c. 113 at 475) to carry out the purposes of L. 1957, c. 215, sec. 5, which include *inter alia* the reenacted provision in L. 1956, c. 60, sec. 5 for reimbursement to counties for the cost of relocating roads.

Very truly yours,

DAVID D. FURMAN
Attorney General

By: WILLIAM L. BOYAN
Deputy Attorney General

SEPTEMBER 25, 1958

HONORABLE CARL HOLERMAN
Commissioner of Labor and Industry
20 West Front Street
Trenton, New Jersey

FORMAL OPINION 1958—No. 13

DEAR COMMISSIONER HOLDERMAN:

You have requested our opinion as to whether certain industrial research establishments not physically integrated with production establishments come within the purview of the sections of statutes enforced by the Bureau of Engineering and Safety of the Department of Labor and Industry relating to requirements for plan filing and other conditions affecting safe employment.

Specifically, you question whether those statutes afford jurisdiction over physically segregated industrial research establishments where such establishments:

> "a. employ laboratory scale operations essentially similar in nature to larger scale industrial processes;
>
> b. employ 'pilot plant' operations which duplicate in nature and perhaps in size large scale industrial processes in use or contemplated for use, and which are constructed for the purpose of product or process research;
>
> c. make, synthesize or substantially alter any product, article or substance for use in further research or for experimental test purposes."

Your request concerns the operation of physically segregated industrial research premises only. In accordance with established administrative construction, and on the basis of Formal Opinion 1952, No. 30, December 1, 1952 (holding that eating facilities physically integrated with production establishments are a part thereof for the purpose of the Female Hours Law, R.S. 34:2-24 et seq.), research facilities located in and integrated with other manufacturing facilities come within the ambit of R.S. 34:6-1 and 3.

R.S. 34:6-1 and 3 require that buildings may not be devoted to use as "a factory, workshop, mill or place where the manufacture of goods of any kind is carried on" until the Commissioner of Labor and Industry approves the plans and specifications as to safety and adequacy of various means of egress, ventilation and sanitation. The express provisions of these sections are as follows:

> "No building shall be erected or adapted for any of the purposes enumerated in section 34:6-1 of this title, nor shall any addition more than two stories high be constructed unless the plans and specifications as to stairways, elevator shafts, fire escapes, doors and windows, ventilation and sanitation be first approved by the commissioner of labor on the advice of the commissioner of institutions and agencies." R.S. 34:6-3.
>
> "Every factory, workshop, mill or place where the manufacture of goods of any kind is carried on shall under the supervision and direction of the Commissioner be provided with ample and proper ways and means of egress * * *." R.S. 34:6-1.

Authority over safety inspections in buildings likewise devoted to use as "a factory, workshop, mill or place where the manufacture of goods of any kind is carried on" is conferred on the Commissioner by various other provisions of law: R.S. 34:6-14 — Fire alarms — "every factory, workshop, mill, or place where the manufacture of goods is carried on which is more than two stories in height * * *"; R.S. 34:6-20 — Smoking — "Smoking in any factory, workshop, mill, or *other* place where the manufacture of goods is carried on, * * * is forbidden" (italics added); R.S. 34:6-24 and R.S. 34:6-42 — Elevators — "* * * factory, workshop, mill or place where the manufacture of goods (of any kind) is carried on * * *" (portion in parentheses appears only in R.S. 34:6-24); R.S. 34:6-47 — Hoistways, etc. — "* * * factory, workshop, mill or place where the manufacture of goods is carried on * * *"; R.S. 34:6-60 — Air space — "* * * factory, workshop, mill or place where the manufacture of goods is carried on * * *"; R.S. 34:6-61 — Ventilation — "* * * factory, workshop, mill or place where the manufacture of goods is carried on * * *"; R.S. 34:6-62 — Machine guards — "* * * factory, workshop, mill or place where the manufacture of goods is carried on where machinery is used * * *"; R.S. 34:6-63, as

amended, P.L. 1942, c. 31, p. 236, sec. 1 — Meal times — "* * * factory, workshop, mill, mine, or place where goods are manufactured * * *"; R.S. 34:6-66 — Toilet facilities — "* * * every factory, workshop, or mill shall contain * * * water closets and wash rooms * * *".

The words "factory, workshop, mill or place where the manufacture of goods of any kind is carried on" have been the subject of a series of opinions of the Attorney General. Dating from 1915, these opinions suggest that the words "where the manufacture of goods of any kind is carried on" modify "factory, workshop, mill or place." In a survey of the various sections of the present chapter 6, title 34, the Attorney General, in an opinion to Lewis T. Bryant, Commissioner of Labor, dated October 5, 1915, stated:

> "* * * The fourth section of this supplement, (R.S. 34:6-3), which provides for the filing of plans before a new building is constructed, is restricted, in its operation, to buildings used for factory purposes, while the thirteenth section of the act, (R.S. 34:6-22), which provides the penalties for failure to comply with its provisions, empowers the commissioner to close a building which does not comply with the requirements of the act for manufacturing purposes and imposes a penalty upon the use of the building for manufacturing purposes after it has been so closed by the commissioner. It is plain that the two provisions last above mentioned are restricted to places in which manufacturing is done, and do not include within their operation workshops in which no manufacturing is done." (parentheses added).

See also, Formal Opinion 1951—No. 36, November 20, 1951; Formal Opinion 1952—No. 8, May 20, 1952.

The question to be determined, therefore, is whether industrial research establishments which perform the functions you have outlined can be deemed to be places in which "manufacturing" is carried on according to the terms of R.S. 34:6-1 et seq.

The statutes with which we are here dealing are remedial in nature and seek, through the exercise of the police power of the State, to insure that minimum standards of health and safety are met in industrial plants. As such, they must be given a liberal and broad interpretation to accomplish their intended results. *Lane* v. *Holderman,* 23 N.J. 304 (1957); *State* v. *Meinken,* 10 N.J. 348 (1952).

Such a construction was given to the phrase "manufacturing of goods of any kind" as used in R.S. 34:6-1 et seq. in Formal Opinion 1953—No. 52, December 3, 1953, where it was determined that R.S. 34:6-1 gives the Commissioner of Labor and Industry regulatory power over electrical power plants. In so holding, the opinion relied upon *Bates Machine Co.* v. *Trenton R.R.,* 70 N.J.L. 684 (E. & A. 1904).

In the *Bates Machine Co.* case, the court was faced with the question whether machinery furnished for the production and control of electric power and its adaptation for use upon a trolley system was machinery for "manufacturing purposes" under P.L. 1898, p. 538, section 8 (Mechanics Lien Act). After holding that the entire clause, "fixed machinery, or gearing or other fixtures for manufacturing purposes", was qualified by the last three words, the court at pp. 686, 7 and 8 went on to state:

> "The question, however, is not one of scientific terminology but rather of the sense in which an ordinary term was used by the Legislature in framing an enactment whose sole purpose was to secure to laborers and others payment for furnishing and erecting machinery for manufacturing purposes, a

descriptive term that should be given its broadest signification in order to effect what was clearly the legislative will. That the word 'manufacture' is no longer limited to something that is made by hand is not more obvious than that, by the very necessities of the case, it must continue to travel farther and farther from its first meaning in keeping with the growth and progress of the thing for which it continues to stand; so that to make by machinery, or by chemical reaction, or by any other device known to art, has already entirely superseded the original notion of hand fabrication. While its original meaning lasted, however, it necessarily involved the idea of tangibility, but with the elimination of the manual element from the essential meaning of the word, there was no longer the slightest justification for the retention of this notion of tangibility as a restriction upon its broadening usefulness, and, as a fact, it has been entirely dropped from current use when applied to such processes as the manufacture of oxygen, or of carbonic acid, or of nitrous oxide, or of illuminating gas, or of a host of other products totally lacking in tangibility. The essential meaning retained by the word 'manufacture,' or perhaps that has been acquired by it, is that of effecting by art some change in materials or elements as they exist in a state of nature by which they are rendered more subject to man's control or more serviceable to his use. A mere appropriation of natural objects without imparting to them this added quality, as in the case of agriculture or of the gathering of natural ice, is not manufacture in this current sense, nor is the mere liberation or collection of natural products, such as petroleum or natural gas. But the production of illuminating gas is a manufacture. *Nassau Gaslight Co.* v. *City of Brooklyn,* 89 N.Y. 409. So is the making of ice by artificial means. *People* v. *Knickerbocker Ice Co.*, 99 Id. 181.

"Neither the fact, therefore, that the material elements to be acted upon already exist in a state of nature, nor the fact of their intangibility before or after the desired change has been impressed upon them, militates against the application of the word 'Manufacture' to the process by which such change is wrought. In the recent case of *People* v. *Wemple,* 129 N.Y. 543, decided in the New York Court of Appeals, the precise question we are now considering was before the court as a basis for exemption from taxation, to which, for obvious reasons, a much more stringent rule is applied than to remedial legislation, such as our Mechanics Lien Law. In the opinion in that case, Judge O'Brien said: 'The true inquiry would seem to be whether the corporation would not be considered, in common language, as engaged in some manufacturing process. Though granting all that is said by experts and others about electricity as a natural element or force, to say that electricity exists in a state of nature; and that the relator collects or gathers it, does not fully or accurately express the process. According to the common understanding, the electricity or thing that produces the results is generated or produced by the application of power to machinery; that is, by a process purely artificial. Passing by the refinements of scientific discussion, it would seem to be common sense to hold that a corporation that does this is, in every just sense of the term, a manufacturing corporation. The materials from which all manufactured things originate exist in a state of nature, but the manufacturer, by application to these materials of labor and skill gives to them a new and useful property. The electricity which is generated and transmitted by the

operation of the relator is a very different thing from that mysterious element which is said to pervade nature.' "

You point out that the last 15 years have seen the growth and establishment of separate industrial research centers at a rate which has made or is soon likely to make New Jersey first in the nation among host States for the industrial research enterprise. You further point out that your experience with industrial research facilities which are an integral physical part of production establishments has indicated that the danger to life and limb in such work places is probably greater than that encountered in manufacturing operations in general.

Industrial research as it is known today was nonexistent at the time of the enactment of the statutes under discussion. The industrial research process represents an amalgamation of scientific creative techniques with economic motivations. The application of available research resources to a given project or program in industrial research can begin with the exploratory stage where the problems are not clearly defined and the object is the investigation of feasibility and probability, and continue through the intensive to the trial stage, in which pilot or plant-scale trials preparatory to commercial use of the results are conducted. *Hertz, The Theory and Practice of Industrial Research,* 1950, page 138.

The mere fact, however, of its youth, or highly technical processes, affords no basis for excluding it from the necessarily broad application to be given to the term "manufacture" as it appears in these remedial statutes. The test for this purpose, against which all activity should be measured, is that laid down in the *Bates* case, *supra.* Does the activity effect "by art some change in materials or elements as they exist in a state of nature by which they are rendered more subject to man's control or more serviceable to his use?"

We are of the view that the three specific illustrations cited at the outset constitute "manufacturing" within this definition and that, therefore, such activities come within the purview of the statutes discussed above. In all three cases materials or elements are rendered more serviceable to man or more subject to his control. Each activity must be judged independently, upon its own processes. A determination as to jurisdiction must be made in each case.

In holding that jurisdiction exists in these instances, we are not unmindful of Formal Opinion 1949—No. 111, December 5, 1949. In that Opinion the Attorney General held that the Commissioner of Labor and Industry had no jurisdiction under any portion of Title 34 of the Revised Statutes over certain operations involving the use of radio-active substances and radio isotopes. The U.S. government had contracted with a New Jersey laboratory to assay and analyze certain material for the Atomic Energy Commission. The laboratory was "primarily a way station and no processing of any kind is carried out." The material was crushed and ground to a fine state, analyzed and tested, and then shipped to other locations "probably outside the State for further use." Holding that a "workshop" is "a place where the manufacture of goods of any kind is carried on," the opinion concluded that "It cannot be said that the highly technical processes involved in the operations under consideration were within the contemplation of the Legislature."

Insofar as that opinion held that manufacturing was not involved despite the fact that something was done to a natural element which made it more useful or more controllable in a later process, it is contrary to the opinion herein expressed and is overruled. We feel, in accordance with the opinion expressed in *Scrymser* v. *Seabright Electric Light Co.,* 74 N.J. Eq. 587 (Ch. 1908), that new, highly technical processes,

unknown to science when reference to manufacturing was originally made, are not to be excluded from such a categorization merely on the basis of their newness or the degree of technical skill involved.

Our further opinion is that if any research activity, not involving some change in materials or elements as they exist in nature so as to render them more subject to man's control or more serviceable to his use, is carried on in conjunction with, or accompanied by, research which does work such change, then the entire research program and any activity incidental thereto falls within the legislative classification termed "manufacturing." Formal Opinion 1952—No. 30, December 1, 1952.

Very truly yours,

DAVID D. FURMAN
Attorney General

By: MARTIN L. GREENBERG
Deputy Attorney General

SEPTEMBER 29, 1958

COLONEL JOSEPH D. RUTTER
Superintendent
Division of State Police
Trenton, New Jersey

FORMAL OPINION 1958—No. 14

DEAR COLONEL RUTTER:

You have requested our opinion as to the legal validity of a system of warning citations which carry no penalty, to be issued by State Police and Motor Vehicle Inspectors in the enforcement of the motor vehicle laws (R.S. 39:1-1 *et seq.*). In your request, you have summarized several advantages of such a system from the standpoint of effective traffic law enforcement.

1. The authority of a law enforcement officer to issue warnings, in addition to summonses, increases his potential for both education and enforcement. The effect of a warning on a driver can be both corrective and deterrent. There are many bad driving practices which can and often do cause serious accidents. A law enforcement officer with only the authority to issue a summons often hesitates to take such action when he observes a bad driving practice, because he has not secured sufficient evidence to convict the motorist of any violation beyond a reasonable doubt, as the law requires, or because he determines that the violation is minor and not an immediate threat to safety on the highway or street. By issuing a warning citation, the officer would stress to the driver the specific bad driving practice and its possible dangerous consequences.

   As an example, a driver approaches a stop sign and fails to come to a complete halt. He has made reasonable observation to his right and left, and no other vehicles are approaching the intersection. While the law has been technically violated, the issuance of a warning here, with an explanation by the issuing officer that the practice can result in a careless habit leading to accidents, may appear to the officer to have the best possi-