UNITED STATES OF AMERICA

ATOMIC ENERGY COMMISSION

In the Matter of CONSUMERS POWER COMPANY (Palisades Plant)	)	Docket No. 50-255

BRIEF OF INTERVENORS REGARDING THE ILLEGALITY OF THE STANDARDS FOR PROTECTION AGAINST RADIATION

I

INTRODUCTION AND STATEMENT OF ISSUES PRESENTED

On June 24, 1970, Intervenors addressed a series of motions to the Atomic Safety and Licensing Board ("Board") which were reduced to writing and filed with the Board on June 25, 1970.[1/] It is Intervenors Motion No. 2 which is under discussion in this Brief.

A. Relevant Sections of the Atomic Energy Act of 1954

As shall be demonstrated below, Intervenors in their Motion No. 2 have asserted that the "Standards for Protection Against Radiation" (10 CFR Part 20) ("Standards") are illegal on their face because the Standards do not take into account signif-

1/ All of these motions are reproduced and attached as Appendix A to "Brief of Intervenors Regarding the National Environmental Policy Act and the Water Quality Improvement Act" filed herein on July 7, 1970.

icant factors concerning radiation, the absence of which result in the Standards lacking the specificity and direction required so that the Commission may fully discharge its obligations in connection with the regulation of atomic energy pursuant to the Atomic Energy Act, as amended, ("Act") and thus the protection of the health and safety of the public.

The statutory foundation for Intervenors position is found in Sections 1, 2, 3 and 161(b) of the Act which are codified respectively in 42 U.S.C. §§2011, 2012, 2013 and 2201(b).

As Intervenors have demonstrated elsewhere, the Commission is charged with the responsibility to regulate atomic energy so as to protect the "general welfare" and the "health and safety of the public." This responsibility is set forth in Sections 1, 2 and 3 of the Act.[2/]

The specific jurisdictional basis for the Standards is Section 161(b). It provides that the Commission is required in discharging its obligations under the Act, with respect to radiation dangers, to:

> establish by rule, regulation, or order, such standards and instructions to govern the possession and use of special nuclear material, source material, and by-product material as the Commission may deem necessary or desirable to...[comply with the purposes of the Act]. Act, §161(b).

Thus the "Standards for Protection Against Radiation," as well as any Commission regulation or action, must stand or fall upon the

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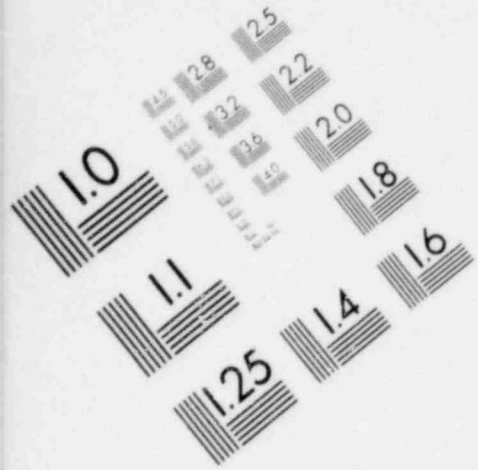
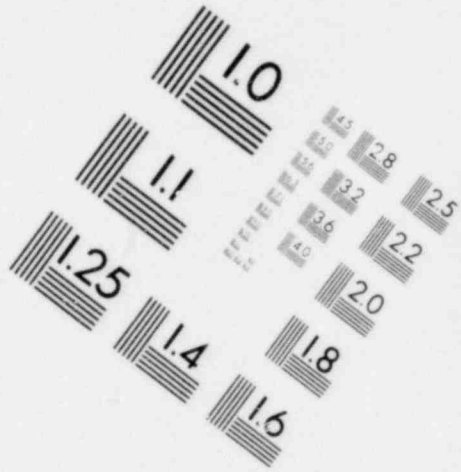
2/ See discussion of this issue in "Brief of Intervenors Regarding the Jurisdiction of the Atomic Energy Commission to Regulate Effects of Thermal Energy Pursuant to the Atomic Energy Act" pages 6-13.





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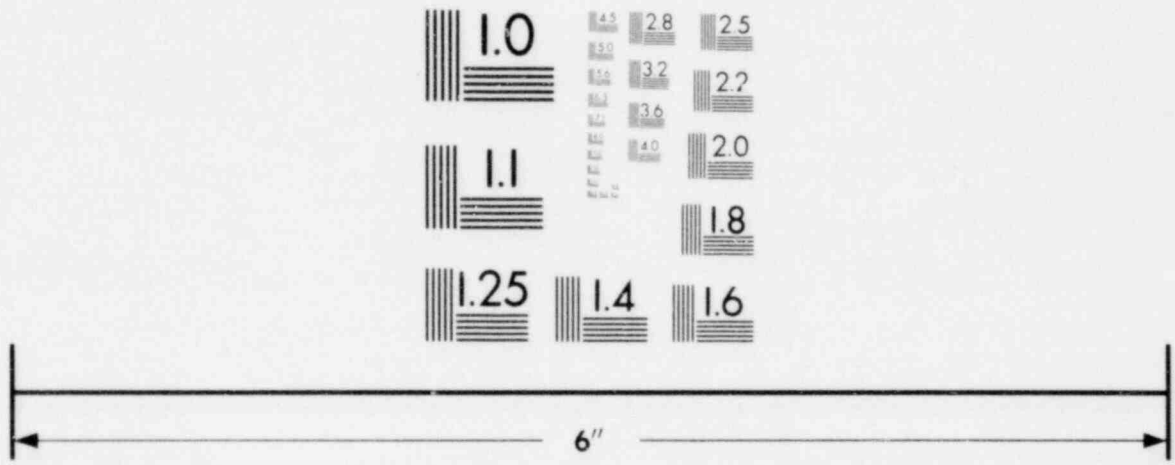

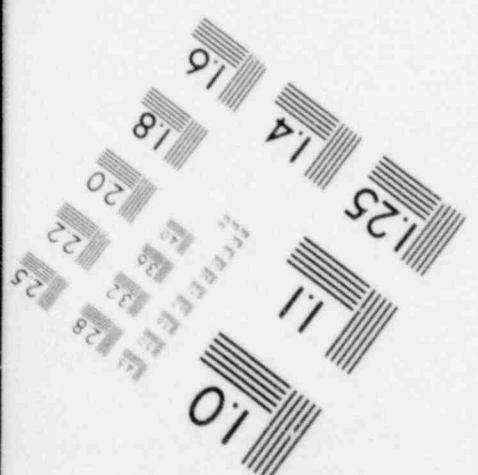

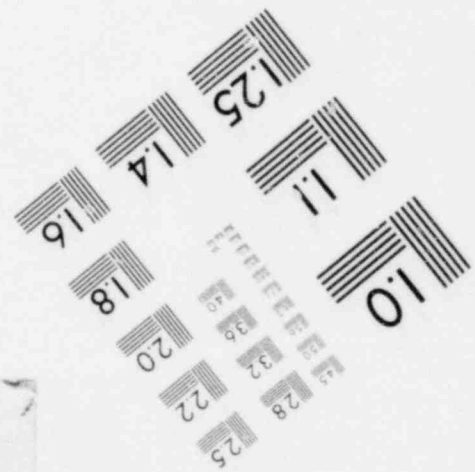

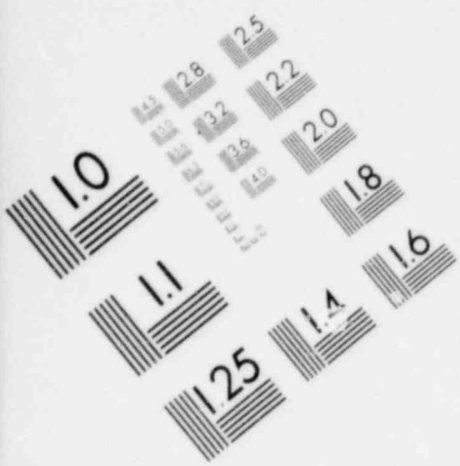

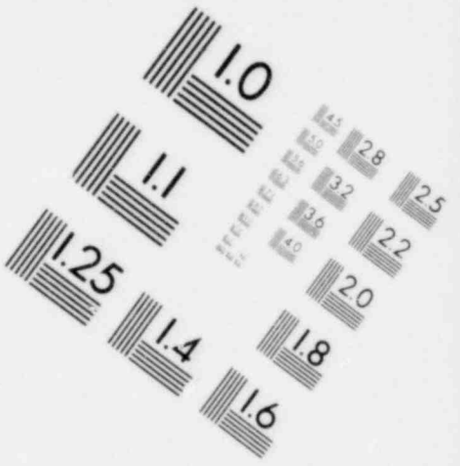

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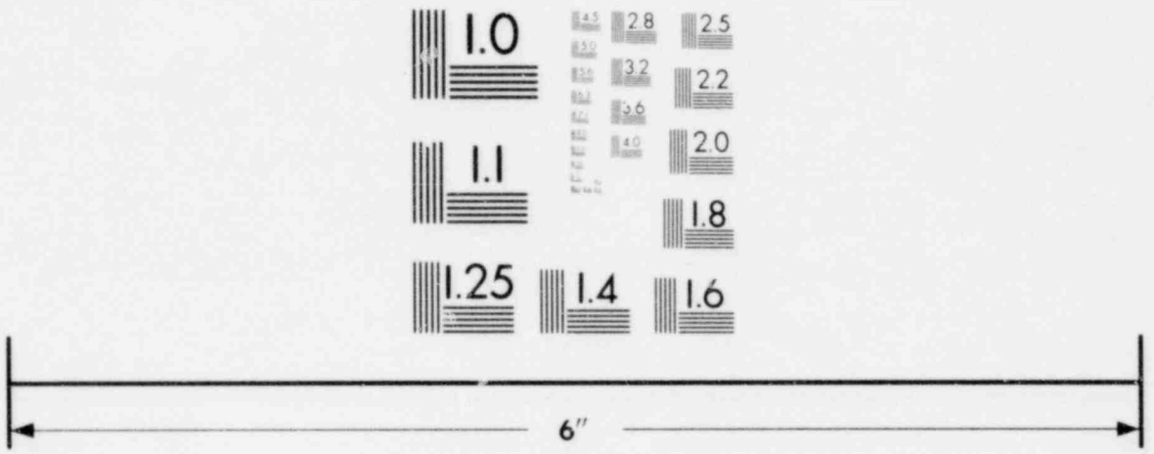

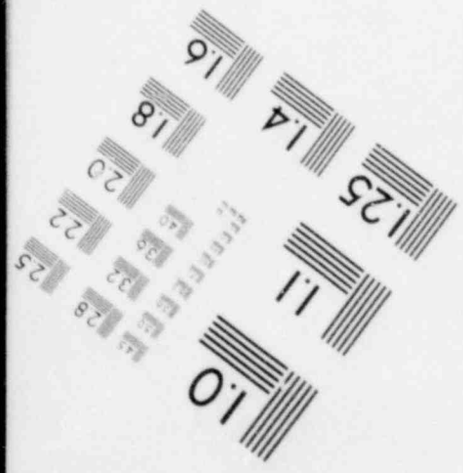

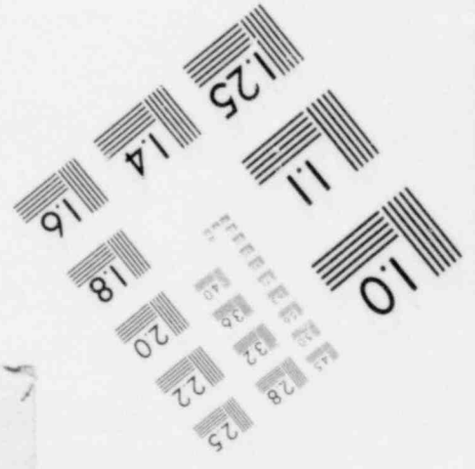

basis of whether they do indeed comply with the purposes of the Act. It follows, therefore, that the Commission's Standards are illegal, if it can be demonstrated that the Standards fail to comply with the purposes of the Act.

It is Intervenors' position that the "Standards for Protection Against Radiation" do not adequately discharge the Commission's responsibility to protect the "general welfare" and the "health and safety of the public" from radiation dangers resulting from the use of atomic energy by the licensees of the Commission.

B. The Standards for Protection Against Radiation are illegal on their face.

In their Motion No. 2, Intervenors call attention to four important considerations with which the Standards do not concern themselves. The absence of an inclusion of these considerations in the Standards, therefore, results in their being illegal under the Act. This conclusion is further buttressed by the fact that the Act, the Joint Committee and the Commission itself have recognized that Commission regulations in general and the Standards in particular are "living documents." Thus, as scientific knowledge expands, the Commission has the obligation to revise its Standards to comply with the most recent knowledge.

Since the factors raised by Intervenors are not included within the scope of the Standards, but are an accepted part of

the atomic energy scientific community, their not having been included in any revision of the Standards results in an additional ground of illegality.

(i) The Standards are illegal in that they do not take into account radiation doses which the public may receive from sources other than a particular licensee of the Commission.

The only Section of the Standards which has relevance to this particular attack on the Standards is Section 20.1(b). It provides:

> The use of radioactive material or other sources of radiation not licensed by the Commission is not subject to the regulations in this part. However, it is the purpose of the regulations in this part to control the possession, use, and transfer of licensed material by any licensee in such a manner that exposure to such material and to radiation from such material, when added to exposures to unlicensed radioactive material and to other unlicensed sources of radiation in the possession of the licensee, and to radiation therefrom, does not exceed the standards of radiation protection prescribed in the regulations in this part.

Examination of this Standard reveals clearly that it is deficient because it does not by its terms require the Commission to consider the following which are necessary in order adequately to protect the public from radiation danger:

(1) Consideration of licensed radioactive material not in the possession of the licensee;

(2) Consideration of licensed sources of radiation not in the possession of the licensee; and

(3) Consideration of unlicensed sources of radiation not in the possession of the licensee.3/

3/ We further point out that this Standard could be interpreted as being deficient, and hence illegal, for the additional reason that it does not consider unlicensed material not in the possession of the licensee.

The absence of these considerations in this Standard result in the Standards not taking into account, for example, radiation from nuclear power plants other than the particular plant under consideration; from color television sets; from medical and dental diagnostic procedures; and from microwave ovens.

(ii) The Standards are illegal in that they do not take into account accumulations of emissions of radioactivity which may be present as a result of continued emissions of radiation by a licensee.

The only section in the Standards which is relevant to this particular attack on the Standards is Section 20.106(a). It provides:

> A licensee shall not possess, use, or transfer licensed material so as to release to an unrestricted area radioactive material in concentrations which exceed the limits specified in Appendix 'B', Table II of this part, except as authorized pursuant to §20.302 or paragraph (b) of this section. For purposes of this section concentrations may be averaged over a period not greater than one year.4/

It is obvious from reading this subsection of the Standards that the following important considerations, necessary to protect the health and safety of the public from radiation dangers, are excluded from consideration.

1. This subsection does take into consideration certain kinds of radioactivity which may be present, as a result of earlier

4/ We also note in passing the insufficiency, and hence the illegality of Section 20.106(b) which permits a licensee to exceed, even on an average basis, the permissible limitations of radioactive concentrations upon a showing that he had tried hard to keep within the levels.

discharges of a licensee recycled into such licensee's plant. Thus, over a period of years radioactive water once released into Lake Michigan might be taken back into Applicant's Proposed Plant and since such re-used water may contain soluble radionuclides, the regulations, therefore, require a licensee to consider them in connection with future discharges.

However it is well-known in the scientific community that many radioactive particles are insoluble. Such radioactive particles precipitate and in a body of water would tend to settle down to the bottom. Hence, to analyze or take into consideration only the recycling of water into Applicant's Proposed Plant could in no event take into account precipitated radioactive particles. Since the Standards only take into account concentrations of radioactivity in circulating water, the net result is that the bottom of the affected body of water is subjected to accumulations of radioactivity which are not considered in any analysis of radiation danger.

It is obvious, therefore, that bottom organisms and human beings exposed to such a build up of precipitated radioactive particles are subjected to radioactivity in excess of that permitted by the Standards.

2. It is also well-known in the scientific community that radioactive particles precipitate not only from water but from air. Thus, directly surrounding licensee's plant, but also,

depending upon meteorological conditions, areas distant from licensee's plant, there will be on the ground accumulations of radioactive precipitated material. These on the ground accumulations are not considered in the permissible concentrations (in air) of radioactivity released by a licensee from its plant at any given time. Accordingly, absence of this consideration is a further ground for the Standards' illegality.

3. Finally, this subsection of the Standards is illegal because it permits a licensee to release excessive and dangerous quantities of radioactivity (above the limitations set by the Standards) so long as at the end of a given period, not greater than one year, the average level of concentration is within the Commission's Standards. We need only allude to those persons subjected to those excessive and dangerous levels of radiation during the period of the year in which the average is exceeded, to demonstrate the illegality of this Standard.

(iii) The Standards are illegal in that they do not take into account differences in toleration of radiation in different human beings in given different locations.

Intervenors can find no section of the Standards which even attempts to consider the different tolerances of different segments of the population. It is obvious that the absence of a consideration of relative tolerance to radiation in different human beings in the same and differing communities, in and of itself, demonstrates that the Standards are illegal.

It is common knowledge in the scientific community that the amount of radiation a strong healthy adult can absorb without harm is significantly higher than the amount of radiation which can be harmlessly absorbed by unhealthy adults, children, pregnant women and fetuses. As a matter of fact, we are sure this Board is aware that a fetus, and hence a pregnant woman, has a radiation tolerance lower than that which the scientific community deems acceptable for the average adult. Standards which do not consider the pregnant woman and fetus as the limiting case for the establishment of Standards cannot be considered as adequate to protect the health and safety of the public.

(iv) The Standards are illegal in that they do not adequately provide for a tracing of emissions of radioactivity through all pathways by which such radioactivity may be transmitted to the population in a given area.

The only Section of the Standards which could be considered relevant to this part of Intervenors' Motion is directed to the illegality of the Standards is Section 20.106(e). It provides:

> In addition to limiting concentrations in effluent streams, the Commission may limit quantities of radioactive materials released in air or water during a specified period of time if it appears that the daily intake of radioactive material from air, water, or food by a suitable sample of an exposed population group, averaged over a period not exceeding one year, would otherwise exceed the daily intake resulting from continuous exposure to air or water containing one-third the concentration of radioactive materials specified in Appendix 'B', Table II of this part.

While Intervenors do not admit that this subsection takes into account all pathways by which radiation may be transmitted from its point of emission to man, thus making any daily samples of intakes of radioactive material, averaged over a period of a year, insufficient and hence illegal, Intervenors are content to point out the insufficiency of the Standards regarding pathways by reference to an entire area which all the Standards fail to consider.

Some radioactivity transmitted through biological pathways may never reach man. But radioactivity, by virtue of reconcentration through these pathways, may destroy fish life, animal life and plant life, and hence dislocate the ecosystem. To suggest that man is adequately protected from dangers of radiation by a process which prevents him from being directly subjected to radiation through biological pathways but which requires him to live in an environment which is progressively distorted ecologically until it is uninhabitable is again to suggest the kind of narrow interpretation of the Commission's obligation which we have elsewhere pointed out is a clear violation of the Atomic Energy Act.

Intervenors have demonstrated but some of the significant omissions in the Standards, any one of which would be sufficient in its omission to result in the illegality of the Standards. The absence of all of these considerations in the Standards leaves no doubt that the Commission is powerless to grant any license or permit to Applicant until it has revised the Standards so as

to discharge its responsibilities to protect man and his environment against the dangers of radiation, thus complying with the purposes of the Act to protect the health and safety of the public.

II

APPLICANT'S BRIEF REGARDING THE STANDARDS FOR PROTECTION AGAINST RADIATION IS INSUFFICIENT TO SUPPORT A DENIAL OF INTERVENORS' MOTION NO. 2

Pages 1-11 of Applicant's Brief represent an attempt to answer Intervenors Motion by the citation of sections of the Standards which Applicant asserts, without argument, are despositive of the issues. We refer the Board to our earlier discussion of these sections of the Standards to demonstrate the insufficiency of this portion of Applicant's Brief.

Apparently failing to find any reasonable support for its citation of specific sections of the Standards, and presumably in anticipation of the first section of this Brief, Applicant attempts to support sections of the Standards, illegal on their face, by an abundant reference to portions of reports and recommendations from the International Commission on Radiological Protection (ICRP) and the Federal Radiation Council (FRC).

Intervenors suggest that Applicant may not rely upon reports, recommendations and policy statements to prop up and support otherwise invalid Standards. The Commission is charged by the Atomic Energy Act with the promulgation of regulations that

will insure that the health and safety of the public is properly taken into account in licensing facilities which utilize nuclear energy. The public must rely on whatever regulations are promulgated by the Commission. Applicant's position with regard to the Commission's Standards for Protection Against Radiation would, if carried to the extreme, mean that the Commission in defending its Standards could look to any policy statements, reports or recommendations and cite these in support of a particular interpretation of its standards. The Commission's obligation cannot be so easily discharged. As a matter of administrative law, it would be extremely unusual and a peculiar circumstance if a regulatory agency could in defending its standards and regulations read into those standards and regulations any reports, policy statements or recommendations of any groups which serve its purpose.

The Commission's Standards for Protection Against Radiation must be self-sufficient and self-contained. They either comply with the Act or they do not. Since the recommendations of the various groups relied upon by Applicant do not have, pursuant to the Atomic Energy Act, the force and effect of law, as do validly promulgated regulations, it is indeed an imposition for Applicant to suggest that this Board proceed to an analysis of such reports, recommendations and policy statements in order to determine the legality of the Standards.

III

REQUEST FOR RELIEF

Intervenors have demonstrated that the Standards do not take into account significant and important factors necessary in any regulatory scheme which propose to protect against radiation danger. The absence of these considerations in the Standards results in their illegality.

Accordingly, the Commission may not proceed to a hearing upon Applicant's request for a provisional operating license unless and until valid Standards have been promulgated. This is because the Commission is powerless to issue a license which does not comply with the purposes of the Act, and any hearing which results in the issuance of a license based upon illegal Standards must result in the issuance of an illegal license.

Intervenors are aware of the possibility that Standards illegal on their face may be the subject of a legal implementation in the course of a license hearing if appropriate safeguards are provided so that inherent illegalities in the Standards are corrected by a proper consideration of all necessary factors. Intervenors do not suggest that this possibility is foreclosed to this hearing.

The Commission in its "Notice of Hearing" has implicitly recognized that in the course of a hearing a license may not be issued solely because the Applicant has complied with the rules and regulations of the Commission. Thus, paragraph 3(i) of the

issues to be considered at this hearing recognize that there must be a finding, in advance of the granting of any license, that:

> ...there is reasonable assurance (i) that the activities authorized by the provisional operating license can be conducted without endangering the health and safety of the public...

In view of the showing made by Intervenors as to the illegality of the Standards, Applicant and Staff must be required, as a part of their affirmative case in support of the Application, to demonstrate that notwithstanding the illegality of the Standards proper safeguards have been taken with respect to Applicant's Proposed Plant to eliminate the dangers from radiation which Intervenors have demonstrated the Standards do not take into accoun

Finally all interested parties, including Intervenors, should have an opportunity to submit evidence, directly and by way of cross-examination, as to the illegality of the Standards.

To support their request for relief, Intervenors submit as representative of controlling legal authority, the Commission's Memorandum Decision in Baltimore Gas and Electric Company (Calvert Cliffs case); and Manhattan General Equipment Co. v. Commissioner, 297 U.S. 129 (1935).

As the Supreme Court said in Manhattan:

> The power of an administrative officer or board to administer a federal statute and to prescribe rules and regulations to that end is in the power to make law--for no such power can be delegated by Congress--but the power to adopt regulations to carry into effect

the will of Congress as expressed by the statute. A regulation which does not do this, but operates to create a rule out of harmony with the statute, is a mere nullity. Lynch v. Tilden Produce Co., 265 U.S. 315, 320-322; Miller v. United States, 294 U.S. 435, 439-440, and cases cited. And not only must a regulation, in order to be valid, be consistent with the statute, but it must be reasonable. 297 U.S. at p. 134.

IV

CONCLUSION

For the reasons submitted above, Intervenors request the Board to enter orders consistent with Intervenors' request for relief as set forth in III above, and the Request for Relief as to Motion No. 2 and Motion Nos. 1 through 5 reproduced at pages 2, 5 and 6 of Appendix B attached to "Brief of Intervenors Regarding the National Environmental Policy Act and the Water Quality Improvement Act" filed with the Commission July 7, 1970.

Respectfully submitted,

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