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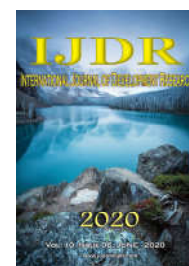
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RESEARCH ARTICLE

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ENGINEERING EXPERTISE IN ENVIRONMENTAL LICENSING PROCESSES

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ABSTRACT

The growing demand for environmental licensing processes in special municipalities, as a result of the process of decentralization of intensified competences in recent years, generates a series of environmental requirements that, in these cases, do not observe some technical or legal aspects of great importance, including all these licenses subject to administrative and / or judicial penalties and nullities. In this context, the present work intends to fill an existing gap, incorporating a detailed look at the municipal, state, and federal laws that guide as legal bases for the environmental licensing process in Brazil. Thus, the objective article performs a literature review about engineering expertise in the sphere of these processes. As a result of the research, a new conceptual model of procedural analysis is proposed, highlighting the importance of an analyst who manages the process. Thus, it is concluded that there is great importance in the study of theoretical knowledge related to a technical technician, which concurrently with an observation of the mandatory methodological references in the expert reports, allows a correct foundation of an environmental licensing process.

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INTRODUCTION

The present work has as fundamental objective the accomplishment of a bibliographic study with respect to the main professional references that must be used in the elaboration of a Technical Opinion, necessary to subsidize the issuance of an Environmental License. Another important objective is to list the most relevant aspects of the legal qualification of some engineering professionals, thus avoiding the application of penalties and the occurrence of administrative and / or judicial nullities. Thus, it is necessary to study several laws at the municipal, state, and federal levels that constitute the legal bases for the environmental licensing

process. The justification for this work is the absence of consolidated references on the issue under investigation, that is, information that deals with the issue of legal technical attributions for professional practice in the specific case of issuing a Technical Opinion that supports decision-making for issuing Environmental Licenses, especially in the field of engineering. In this way, a bibliographic search was carried out applied to the theme, including several norms and legislation pertinent to the content of the work. This article is based on classic works, such as: MAIA (2019), FIKER (2011), SERTÁ JUNIOR (2019), in addition to legislation and standards, namely: Conama Resolution 237/1997, CONFEA Resolution 140/2011, Federal Law No. 9605/1998 and

Complementary Law No. 140/2011. In the course of this work, the administrative process of sequential environmental licensing and in different phases will be described in detail, emphasizing the decentralization of competences, the relevant legal aspects and the methodological references that guide judicial expertise and technical opinions.

Development: In the recent past, environmental licensing basically took place at the federal level in a centralized manner, with the exception of some states that had specialized technical bodies, such as the State Environmental Engineering Foundation (FEEMA), which was an environmental control body of the State Secretariat for the Environment and Urban Development of the State of Rio de Janeiro, through Decree-Law No. 39 of March 24, 1975 (RIO DE JANEIRO, 1975), which is currently called the State Institute for the Environment of Rio de Janeiro (INEA). Many laws have been enacted by all spheres of government. However, environmental licensing was basically established through Resolution of the National Environment Council (CONAMA) No. 237 of 1997 (BRASIL, 1997).

Environmental licensing: Environmental licensing occurs through a federal, state or municipal administrative process, as transcribed below:

“Environmental Licensing: administrative procedure whereby the competent environmental agency licenses the location, installation, expansion and operation of projects and activities that use environmental resources, considered effective or potentially polluting or those that, in any form, may cause environmental degradation, considering the legal and regulatory provisions and technical standards applicable to the case (BRASIL, 1997, p.1).”

Within the scope of the administrative environmental licensing process, administrative requirements are made, also known as general documents, such as copies of business license, social contract, national legal entity registration (CNPJ), property lease, among others. A fundamentally important document according to the federal licensing legislation in force is the Land Use Certificate or Environmental Zoning Certificate, which has the function, according to the Municipal Master Plans, to inform that the activity object of the licensing has permission to work in the desired location.

There is also a need, what is the main one, for environmental studies, according to BRASIL (1997):

“Environmental Studies: are any and all studies related to the environmental aspects related to the location, installation, operation and expansion of an activity or enterprise, presented as a subsidy for the analysis of the required license, such as: environmental report, environmental control plan and project, preliminary environmental report, environmental diagnosis, management plan, recovery plan for degraded area and preliminary risk analysis (BRASIL, 1997, p.1)”

CONAMA Resolution 237/97 established sequential licensing and in different phases, namely:

I - Preliminary License (LP) - granted in the preliminary planning phase of the enterprise or activity approving its location and design, attesting to the environmental

feasibility and establishing the basic requirements and conditions to be met in the next phases of its implementation;

II - Installation License (LI) - authorizes the installation of the enterprise or activity in accordance with the specifications contained in the approved plans, programs and projects, including environmental control measures and other conditions, of which they are a determining reason;

III - Operation License (LO) - authorizes the operation of the activity or enterprise, after verifying the effective fulfillment of what is contained in the previous licenses, with the environmental control measures and conditions determined for the operation (BRASIL, 1997, p.2).

Thus, there are several phases of environmental licensing, as well as several specific environmental studies that must be prepared by different professionals who, mandatorily, must have academic training with the appropriate legal professional qualifications, under penalty of nullity of the administrative act.

It is noteworthy that Complementary Law No. 140/2011 2011 decentralized the competences for licensing, in this way, many municipalities have issued environmental licenses, through Technical Cooperation Terms. The Environmental Licensing process is required in projects and undertakings in different areas of the industry. A brief review of the literature follows, addressing the subject in some types of industries, such as: oil and natural gas, construction, mining and nuclear. FILHO and SOUZA (2004) analyzed the implementation of measures to mitigate environmental impacts, present in Environmental Impact Studies (EIA) / Environmental Impact Reports (RIMA), established for mining projects located in the Quadrilátero Ferrífero region, in Minas Gerais General. Such projects were licensed by the State Environment Foundation (FEAM) of the State of Minas Gerais. According to the authors, the region in question is rich in iron ore reserves, in addition to gold, limestone, bauxite, manganese, clay, etc. For this reason, mining activities in this region are intense and have high environmental impacts, such as degradation of regional landscapes and transporting solids to river and stream channels, caused mainly by iron ore mining. For the development of the work, the authors, through documentation related to the Environmental Licensing of surrounding miners, obtained from FEAM, and documents from the Mineral Production Department of Minas Gerais (DNPM), selected eight projects to assess whether the mitigation measures for impacts environmental issues were being implemented. It was found by the authors, after visits to the selected mining companies and analysis of the EIAs / RIMAs, that, for the most part, the mitigation measures for environmental impacts present in the documentation of the previous Environmental Licensing process were complied with, resulting in protection and environmental management benefits for the companies. mining activities in the region under consideration.

BARBOSA (2010), in his doctoral thesis, assesses the impact on health as an instrument to be inserted in the Environmental Licensing processes of oil industry enterprises. To this end, it introduces the concept of Environmental Health and presents the Health Impact Assessment (AIS), pointing the latter as a promising instrument in guiding decision-making, in socio-environmental management and in the legal regulation of the environmental licensing process in the oil sector. The author uses an exploratory methodological approach, carrying out a

vast bibliographic survey in the scientific literature and in business and governmental areas associated with obtaining and granting environmental licenses. During the analysis of the literature, the author assesses the existence of evidence and opportunities to insert health-related issues in the respective investment projects in the oil sector, specifically in the areas of oil exploration, production, and refining. At the conclusion of the work, it is evidenced that the environmental management model adopted by the national oil industry is limited to compliance with Standards instituted by government regulators, basically related to the control of atmospheric emissions and of industrial effluents and solid waste. It was also verified that health and social aspects are not effectively incorporated in the studied enterprises, despite the CONAMA Resolution 1/86, in its definition of environmental impact, considering the health effects.

VASQUES (2016) carried out a study about public hearings, highlighting its importance in the Environmental Licensing process for nuclear installations, as it is the main mechanism for the direct participation of the population in the protection of environmental quality. According to the author, the public audience has the purpose of presenting to the public the characteristics of the project and the content of the Environmental Impact Studies / Environmental Impact Reports (EIA / RIMA). The author uses the qualitative method of comparing procedures and results obtained in Environmental Licensing in other countries, such as Colombia, France, Uruguay, Paraguay and the United States, and makes a comparison with the practices in some of these countries with the way in which the process is performed in Brazil, especially with regard to public hearings. One of the conclusions reached by the author is that there is a generation of conflicts regarding public acceptance of a nuclear undertaking, due to the risks that these facilities offer. About the population surrounding the project, these conflicts are resolved through benefits offered by the entrepreneur. Another conclusion obtained is that clarity and objectivity in communication are extremely relevant and, when well-founded, lead to greater acceptance by the public involved. ANDRADE (2017) carried out a complete study on the environmental licensing process in hydroelectric plants, addressing from the environmental impacts associated with the undertakings, necessary competence of the licensing agency (IBAMA or state environmental agency), the environmental licensing process itself and mechanisms for social participation (public hearings). The study states that ventures and activities must be licensed under a single level of competence and the Environmental License establishes conditions, restrictions and environmental control measures that must have a direct relationship with the environmental impacts of the enterprise and be obeyed by the entrepreneur. According to the author, there are a series of strict rules and criteria that guide the installation of a hydroelectric plant, making the process of environmental licensing of a project of this size extremely complex.

Legal aspects: Federal Law No. 5,194, of December 24, 1966, which regulates the exercise of the professions of Engineer, Architect and Engineer-Agronomist, and provides other measures expressed in its article 13 the following:

Art. 13 - Studies, plans, projects, reports and any other Engineering, Architecture and Agronomy work, whether public or private, can only be submitted to the judgment of the competent authorities and will only have legal value

when its authors are professionals qualified in accordance with this Law.

Within the scope of engineering professionals, in analysis of CONFEA Resolution No. 218/1973, which delimits the activities of the different professional modalities of Engineering, it was found, by way of example and not exhaustive, to carry out Expertise, Technical Assistance or Environmental Licensing, the engineers Mechanics, Electricians, Civilians and Sanitarians.

In article 1 of the resolution, the following activities are designated:

(...) Activity 06 - Inspection, expertise, evaluation, arbitration, report, and technical opinion.

In Article 7, the civil engineer is responsible for:

I - the performance of activities 01 to 18 of article 1 of this Resolution, referring to buildings, roads, runways and airports; transport, water supply and sanitation system; ports, rivers, channels, dams and dikes; drainage and irrigation; bridges and large structures; its related and related services.

It is the responsibility of the electrical engineer, according to article 9:

I - the performance of activities 01 to 18 of article 1 of this Resolution, referring to electrical and electronic materials; electronic equipment in general; communication and telecommunications systems; electrical and electronic measurement and control systems; its related and related services.

In Article 12, the mechanical engineer is responsible for:

I - performance of activities 01 to 18 of article 1 of this resolution, referring to mechanical processes, machines in general; industrial and mechanical installations; mechanical and electromechanical equipment; auto-vehicles; systems of production of transmission and use of heat; refrigeration and air conditioning systems; its related and related services.

In Article 18, the sanitary engineer is responsible for:

I - the performance of activities 01 to 18 of article 1 of this resolution, regarding the sanitary control of the environment; water collection and distribution; water, sewage and waste treatment; pollution control; drainage; hygiene and comfort of the environment; its related and related services.

It is not allowed to define definitions expressed in Resolution No. 345/1990, which offers how much professional exercise at a higher level in the activities of Engineering Assessments and Engineering Expertise are listed in the following topics:

Art. 1º - For the purposes of this resolution, define:

a) INSPECTION is a fact finding, using a detailed examination and a detailed description of the elements it produced, without indicating the causes that motivated it.

- b) ARBITRATION is an activity that involves decision making or positioning between technically controversial alternatives or that result from subjective aspects.
- c) EVALUATION is an activity that involves a technical determination of the qualitative or monetary value of a good, a right or an enterprise.
- d) EXPERTISE is an activity that involves investigating the causes that motivated a certain event or assertion of rights.
- e) REPORT through this, in which the expert, a qualified professional, reports what he observed and gives his conclusions or evaluates the value of things or rights, reasonably.

Art. 4 - The technical works indicated in the previous article, for maximum validity, must be subject to the Technical Responsibility Note (ART) required by Law No. 6,496, of DEC 7, 1977.

In general, technical works must, mandatorily, be prepared under the responsibility of engineers, within their exclusive attributions, with permission to return Technical Responsibility Note (ART) registered with the Regional Engineering System CREA / CONFEA, since it was regulated by Federal Law No. 6,496 / 1977 (BRASIL, 1977).

Methodology in Judicial Expertise and Technical Opinions: The methodology is a mandatory item in expert reports, as it was established by Federal Law No. 13,105 / 2015. In many reports, unfortunately, this item is not verified, so the null report must be immediately read, since the current legislation does not curve. In terms of methodological frameworks, the guiding principles for conducting an investigation follow, as MAIA (2019), SERTÁ JUNIOR (2019) and FIKER (2011), which can be found in detail in the mentioned literature: Observation Principle; Principle of Analysis; Principle of Interpretation; Principle of Description and Principle of Documentation. In the preparation of technical opinions for obtaining an environmental license, there is no legislation that explicitly obliges the methodology used. However, the basic and frequent items are: fauna and flora; waste; atmospheric emissions; assessment of contaminated areas; risk analysis; sanitary and industrial effluents, electric and magnetic fields, urban zoning; noise; among other studies presented in accordance with the legal provision of Conama Resolution No. 237/1997. It turns out that, in the practice of the licensing agencies, especially in the municipal ones, the process is evaluated by only one analyst. Thus, hypothetically, an activity that has sewage treatment can be analyzed by an electrical engineer; or a contaminated area possibly assessed by a mechanical engineer; or a civil engineer being able to check the noise produced by an industry. All of these examples are common and make the technical opinion riddled with vices, and the environmental license that subsidized by such opinion may be null, since in these cases the professionals act outside their professional duties. In the state of Rio de Janeiro, in order for the municipality to promote environmental licensing, it must meet several requirements required by the State Environmental Institute (INEA). Among them is the presentation of a specialized technical team. Accordingly, according to the team presented by the city, INEA will grant more or less licensing profiles for the municipal portfolio. Another important factor to be noted is that many city halls in other states do not have a properly trained technical staff, including the turnover of professionals

hired in government changes, which directly interferes with the quality of the evaluation of licensing processes. No less important than the previous assessment for the issuance of environmental licenses, is the fulfillment of validity conditions and the subsequent closure of these licenses. In this sense, it is also necessary to define, clearly, which professionals will have technical skills for the preparation of opinions that will support decision-making on the actual compliance with environmental conditions, since the diversity of conditions will require reports and opinions from several professionals. A proposal for the conceptual model of analysis is that there is an analyst who manages the process, asking other specialists, who have related attributions to the items evaluated in the processes, for a simplified opinion. In this way, the process manager would make a consolidated technical opinion, based on the other specialized opinions. It should be noted that there are penalties provided for in the environmental crimes law - Law 9,605 / 1998 (BRASIL, 1998).

Conclusion

In view of the above, the analysis developed throughout the work allows us to conclude that the administrative process of environmental licensing must be preceded by: (1) verification of professional legal qualification with the class council; (2) review of the literature and standards; (3) evaluation of the methodological procedure to be applied; (4) analysis of the legislation applied to the licensing case. The authors also suggest the adoption of a conceptual model of procedural analysis in which the figure of a process management analyst and responsible for issuing a consolidated opinion is introduced, acting with the support of other specialists limited to their specific professional legal attributions. Thus, this article fully fulfills its objective of consolidating the main references used in the preparation of a Technical Opinion that supports the Environmental License, relating them to the aspects of legal qualification of the professional involved, in addition to highlighting the possibility of penalties and administrative nullities. and / or judicial if such legal conditions are not met.

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