
A Case Study of Environmental Impact Post - evaluation of Petrochemical Enterprises

Letian Yang

School of Economics and management, China University of Petroleum (East China),
Qingdao 266580, Shandong, China

36809475@qq.com

Abstract

This paper taking a petrochemical company as an example, from the perspective of petrochemical industry features, mainly describes the structure and content of environmental impact assessment of petrochemical enterprise design and development and the environmental impact assessment report. And put forward relevant suggestions and measures for the archival filing methods, carry out the work of the foundation and clear direction for the influence of petrochemical enterprise environment day after evaluation.

Keywords

Petrochemical Enterprises; Post-evaluation of Environmental Impact; Retrospective Analysis ; Environmental Impact.

1. Introduction

With the continuous development and expansion of the petrochemical industry, petrochemical industry involves more complex equipment, more pollution sources, increasing problems in production and operation, frequent accidents in petrochemical projects, and increasingly serious environmental problems^[1]. So that more and more people are paying attention to petrochemical enterprises. The Post-evaluation of environmental impact of petrochemical enterprises not only makes up for the shortcomings in the pre-project environmental impact assessment, In addition, the stable operation of follow-up projects and the effectiveness of environmental protection measures are analyzed comprehensively and accurately^[2]. In view of the existing problems, scientific, comprehensive and efficient improvement measures and suggestions are put forward. To realize the strategy of enterprise safety, environmental protection and all-round development^[3].

2. Analysis of the Present Situation of Post-evaluation of Environmental Impact and the Basis of Major Laws and Regulations

2.1 Analysis of the present situation analysis of Post-evaluation of environmental impact

In China, post-evaluation of environmental impact has just been carried out and is still in its infancy. At present, the state has not formally promulgated the management methods of post-evaluation of environmental impact at the national level and relevant technical guidelines. The provisions of domestic legislation on post-evaluation of environmental impact are only general and principled. However, there are no specific provisions on how to conduct post-evaluation, the time of post-evaluation and the content of specific procedures, and the specific implementation of post-evaluation is also not well guided and standardized by the relevant legal norm system^[4]. The related work of post-evaluation of environmental impact has not been carried out on a large scale, and the subsequent evaluation work is mainly concentrated in large and medium-sized water conservancy and hydropower, coal mine, highway engineering and other ecological impact industries. In other

fields, it is seldom involved^[5]. Although the working methods, contents, regulations and systems of post-evaluation of environmental impact in China are still not comprehensive. However, the practice shows that the post-evaluation of environmental impact can greatly improve the accuracy of the analysis and evaluation of the predicted results, improve and enhance the ability and level of environmental management to the greatest extent, thus promoting the further development of post-evaluation of environmental impact^[4].

2.2 Main laws and regulations for Post-evaluation of environmental impact

At present, the relevant laws and regulations of post-evaluation of environmental impact in China only implement 《Central Government Investment Project Post-evaluation Management Measures (Trial) 》, 《Water Conservancy Construction Project Post-evaluation Management Measures (Trial) 》, 《Interim Provisions for Environmental Impact Post-evaluation Management of Offshore Oil Development Projects 》, 《Technical Guidelines for Environmental Impact Post-evaluation of Chongqing Construction Projects (Trial) 》. There is no formally promulgated national management method and technical guidelines for post-evaluation of environmental impact^[5]. There is no perfect legal norm system to guide the implementation of Post-environmental impact assessment. At present, in China, post-evaluation of environmental impact is mainly based on the relevant requirements of 《Management Measures for post-evaluation of environmental impact of Construction Projects (Trial) 》 and 《Letter on the post-evaluation of environmental impact of 14 Construction Projects, such as MoHe---DaQing Project of Sino-Russian Crude Oil Pipeline 》. The post-evaluation of environmental impact should first take the existing laws and regulations of the state and the industry norms and standards of the competent departments as the legal basis for carrying out the post-evaluation work, so that each evaluation index system in the established evaluation index system can be found with evidence, law and law^[6]. Among them, the preparation of project report for post-evaluation of environmental impact should be based on national laws and regulations, local laws and regulations, relevant national, local and enterprise planning, departmental regulations, relevant technical guidelines for environmental impact assessment, other normative documents and project documents such as environmental impact assessment report, approval and acceptance^[7].

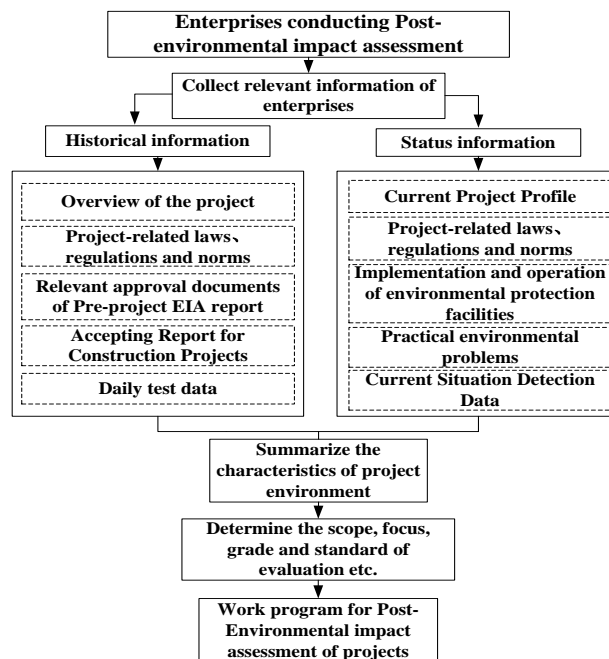


Fig.1 Schematic diagram of the preparation process of the post-evaluation of environmental impact of enterprises

3. Compilation of the work program for Post-environmental impact assessment of petrochemical enterprises

The formulation of the work programme of Post-environmental impact assessment is an important part of the preparation of the Post-environmental impact assessment report, and it is the summary of the preparation of the Post-environmental impact assessment report. After a series of preliminary work, such as the overview of the history and status quo of enterprise projects, legal norms, environmental impact assessment report, completion acceptance report, and analysis of daily monitoring data, it is confirmed. The work programme or outline of Post-environmental impact assessment is determined^[8,9], and the flow chart of the work programme of Post-environmental impact assessment is shown in Fig 1.

3.1 Design and content of Post-evaluation work plan for a petrochemical enterprise

The construction of a petrochemical enterprise mainly includes 15 sets of production facilities, such as atmospheric and vacuum distillation, continuous reforming, and corresponding public utilities and auxiliary facilities. It mainly produces gas, coal and diesel products and various petrochemical products. The Post-environmental impact assessment of the petrochemical enterprise is carried out according to the relevant opinions of the environmental protection authorities in the relevant documents of the "Management Measures for Post-Environmental Impact Assessment of Construction Projects (Trial Implementation)" (Decree No. 37 of the Ministry of Environmental Protection).

Through the collection, analysis and summary of the historical and current data of the petrochemical enterprise in the early stage, the project environmental characteristics, the scope of evaluation, the key points, grades and standards of post-evaluation of the enterprise are determined. The contents of the post-evaluation work programme are mainly as follows: general principles of post-evaluation work, retrospective analysis of project implementation process, investigation and analysis of regional environmental status quo. Assessment, engineering status and pollution source strength analysis, environmental impact validation assessment, effectiveness analysis of pollution prevention and control measures, retrospective analysis of engineering environmental risk control, effectiveness analysis of environmental management and monitoring, remedial schemes and improvement measures of major environmental protection problems, evaluation conclusions and recommendations.

4. Main structure and content of Post-environmental impact assessment report for petrochemical enterprises

The preparation of Post-environmental impact assessment report is further refined on the basis of its well-prepared work programme. It mainly makes a comparative analysis of the historical data and current data in the work programme^[10], analyses the changes before and after the construction of enterprise projects, predicts the accuracy of the results of pre-environmental impact assessment, as well as the general situation of pre-and post-enterprise projects, the laws and regulations involved. Based on the analysis of the current situation, the effectiveness of environmental protection measures is analyzed, and remedial measures and suggestions for improvement are put forward. Finally, various materials are integrated and a Post-environmental impact assessment report is compiled.

4.1 Structure and content of Post-Environmental impact assessment report for a petrochemical enterprise

Taking a petrochemical enterprise as an example, the main result of its environmental impact post-assessment is the report on environmental impact post-assessment of a petrochemical enterprise. The structure and content of the report are listed in table^[11].

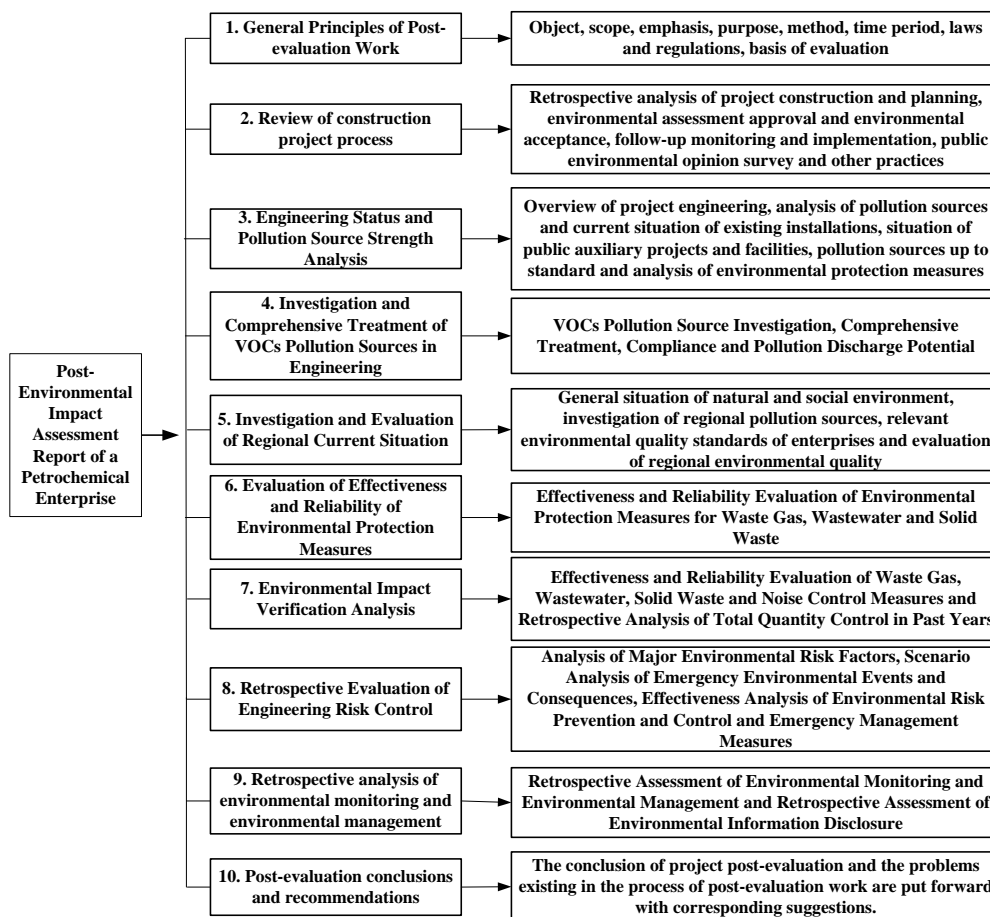


Fig.2 Structure and Content Framework of Environmental Impact Post-evaluation

5. Procedures, methods and recommendations for the post-evaluation of environmental impact of petrochemical enterprises

The environmental impact post-evaluation report is that the construction unit (or production and operation unit) further understands the actual impact of the enterprise on the environment after the project is run. The proposed environmental protection improvement measures are the embodiment of the social responsibility of the construction unit or the production and operation unit, and also a commitment of the construction unit to society. Therefore, it is obliged to accept supervision and inspection by the social and environmental protection departments. However, in the current "Guidelines" and "Specifications", there are no specific requirements for the filing methods and recommendations for post-evaluation of environmental impact. This paper takes the petrochemical enterprise environmental impact report as an example, and refers to the structure content of the environmental impact post-evaluation report, according to the content of Article 27 of the Environmental Impact Assessment Law of the People's Republic of China, and the function of the "notice and statistics of the EIA filing". The recommendations for the environmental impact post-evaluation report filing[11] are as follows:

Filing procedure

According to the relevant requirements, the construction unit or production operation unit that needs to prepare the post-evaluation document for environmental impact shall entrust the technical advisory service organization to prepare the post-evaluation document for environmental impact of the construction project within the prescribed time limit.

After the construction unit or the production and operation unit examines and confirms the content of the environmental impact post-evaluation document, it shall be publicized according to the relevant requirements of the enterprise environmental information disclosure.

The post-evaluation document for environmental impact shall be filed with the competent department of environmental protection of the original environmental impact assessment report. The filing documents are: the environmental impact post-evaluation filing report and its annexes, and the annex is the environmental impact post-evaluation report of the construction project and its information disclosure [12].

After receiving the environmental impact assessment report, the competent department of environmental protection shall conduct a formal review of the legality of the filing unit and the integrity of the filing documents, handle the filing receipt, and disclose the filing status to the public.

Filing method

The filing report, the text of the post-evaluation report on the environmental impact of the construction project and the information disclosure of the project shall be bound into a book in the prescribed format, in one copy, and simultaneously submitted to the electronic version of the post-evaluation report on the environmental impact of the construction project.

6. Conclusion

In summary, the related national departments should further clarify the positioning of the environmental impact post-assessment system, as well as its connection with the environmental management systems, including environmental impact assessment system and pollution discharge permit system, and clear-cut the relationship between the environmental impact post-assessment of construction projects and the planning environmental impact tracking evaluation. Which facilitate the smooth and standard conduct of environmental impact post-evaluation in the future. Therefore, related management departments should issue technical guidelines or technical specifications and other related management requirements for environmental impact post-assessment, strengthen the training of the staff who engaged in the environmental impact post-assessment report. The corresponding "guidelines" or "norms" should further clarify the definition, purpose, connotation and scope of EIA, For further clarifying the information disclosure, public opinion collection and investigation, and record management of EIPPA to promote the further standardization of the national environmental impact post-assessment work.

References

- [1] Yi guangming. A brief analysis of the development trend and countermeasures of China's petrochemical industry [J]. Chinese & foreign energy, 2017.(04):56-61.
- [2] Lu lei, Chai hongyun, Duan weichao, Zhao dongfeng. Post environmental impact assessment of petroleum processing [J]. Environmental protection of chemical industry, 2017.(02):248-252.
- [3] Shen yi, Wu lina, Wang hongrui, Yan xiaolin. Progress and main problems of environmental impact post assessment [J]. Journal of chang 'an university, 2005 (01) :56-59.
- [4] Liang peng, Chen kaiqi, Su yi, Du yunhui. Status quo and development strategies of environmental impact post assessment in China [J]. Environmental protection journal, 2013 (01):35-37.
- [6] Cai Wenxiang, Zhu jianqiu, Zhou shuxun. Recent progress and Suggestions on environmental impact post assessment [J]. Environmental pollution and prevention and control, 2007.7 (7) : 549-551.
- [7] Zhao Dongfeng, Yan Laihong. Retrospective environmental impact assessment and content study [J]. Xinjiang environmental protection, 1997, 19 (3) : 38-43.
- [8] Guo ping, Wang jianmei. Methods and working procedures for environmental impact post-evaluation of construction projects [J]. Non-ferrous metal processing, 2009, 38 (06) : 52-54.
- [9] Xiao zhan. Discussion on the working procedures and contents of environmental impact post evaluation of construction projects [J]. Chemical engineering and equipment, 2010 (06) : 182-183.54 on conversion.
- [10] Deng qingwen. Environmental impact post evaluation methods and case study of petrochemical projects [J]. Environmental science guide, 2015:5-6.

- [11] Hou kebin. Theoretical discussion on the record system of environmental impact assessment [J]. Journal of China environmental management cadre institute.2016(04) : 15-18.
- [12] Li nan, hou kebin, Qiu daqing. Preliminary study on China's environmental impact assessment filing system [J]. China's environmental protection industry.2016(06) : 42-44.