

# *Research on Environmental Accounting Information Disclosure Problems of Shanghai A Shares Pharmaceutical Enterprise*

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**Abstract**—As heavily polluting enterprises prescribed by the Ministry of environmental protection, pharmaceutical enterprises should disclose environmental accounting information timely and accurately. But in practice the frequent environmental accident questioned the quality of the environmental accounting information. The quality of information disclosed by pharmaceutical companies is unsatisfactory. This paper takes the 2014 financial statements of 42 listed Shanghai A shares enterprises as research objects and carries out the classification, counting and summary of the accounting information announced in the financial statements of the 42 pharmaceutical enterprises. It is found out that the listed pharmaceutical enterprises have problems of a lack of quantitative information, scattering and random information disclosure and weak information announcing consciousness in the aspects of environmental accounting information disclosure and this paper puts forward suggestions for improving the accounting information quality in the pharmaceutical industry.

**Keywords**—*pharmaceuticals industry; environmental accounting information; information disclosure quality; social responsibility*

## I. INTRODUCTION

Pharmaceutical industry is one of the 16 highly polluting industries mentioned in the Guideline of Listing Enterprises Environmental Information Disclosure which is published by the Ministry of Environmental Protection in 2010. According to the requirements in the Disclosure Guideline, the highly polluting listed enterprises must carry out the environmental information disclosure regularly and issue environmental reports. The total output value of Chinese pharmaceutical enterprises takes less than 3% of Gross Domestic Product but the total pollution discharge amount takes 6%; in addition, our nation is a big chemical raw medicine production country with the production capacity and yield of fermentation type medicine products stay in the top place in worldwide; large amount of three wastes (waste gas, waste water and industrial residual) generated in the production process of raw material medicine, complicate waste components and serious pollution hazard make the current situation of pharmaceutical enterprises environmental protection severe and there are pharmaceutical enterprises constantly being required for production restriction or stopping production for consolidation because the environmental protection cannot meet related

requirements, so the environmental information disclosure of the pharmaceutical enterprises is really important. The pharmaceutical enterprises need to spread the enterprise environmental accounting information including the discharge of waste water, waste gas and industrial residual and environmental governance; on one hand, it is a implementation of social responsibility and let the public know about the environmental resources use and the pollution control and prevention; on the other hand, the disclosure of environmental information can make the pharmaceutical enterprises to regularly confirm and calculate the environmental cost and environmental benefits in the production and operation process and help enterprises to realize green operation and sustainable development.

This paper carries out the classification, summary and analysis of the environmental accounting information announced in 2014 financial statements of 42 listing pharmaceutical enterprises in Shanghai Stock Market, summarizes the current situation and existing problems of environmental information disclosure and puts forward recommendations for improvement of environmental accounting information disclosure quality.

## II. THE CURRENT SITUATION OF PHARMACEUTICAL ENTERPRISES ENVIRONMENTAL INFORMATION DISCLOSURE

### A. *The Overall Situation of Pharmaceutical Enterprises Environmental Information Disclosure*

#### 1) *The amount of environmental accounting information disclosure*

This paper selects 42 listing pharmaceutical enterprises listed in Shanghai A stock market and the 2014 financial statements of these enterprises come from the official website of Shanghai Stock Exchange market. Among the selected 42 enterprises, except for Zhenbaodao Pharmaceutical and Linco Pharmaceutical, the rest 40 enterprises have announced their environmental accounting information in the director's report, Corporate Social Responsibility Report and financial reports inordinately and the disclosure proportion reaches 95.24%.

2) *The carrier's summary of environmental accounting information disclosure*

The statistics show that among the 40 listing enterprises who have announced environmental accounting information, 11 enterprises announce the environmental accounting information in the director's report, Corporate Social Responsibility Report and financial reports taking 27.5% of total sample amount; 15 enterprises announce the environmental accounting information in the director's report and the Corporate Social Responsibility Report taking 37.5% of sample enterprises amount; 4 enterprises choose to announce the environmental accounting information in two

carriers like the director's report and Corporate Social Responsibility Report or the financial reports and the Corporate Social Responsibility Report; another 6 enterprises choose to announce the environmental accounting information only in the boarder's report. Thus it shows that 90% listing pharmaceutical enterprises choose to announce the environmental accounting information in the boarder's report and 75% enterprises choose to carry out the disclosure in the financial reports; both of them are higher than the percentage of enterprises that choose to carry out the disclosure in the Corporate Social Responsibility Report which is 47.5%.

TABLE I. THE STATISTICAL TABLE OF ENVIRONMENTAL ACCOUNTING INFORMATION DISCLOSURE CARRIERS

Disclosure carrier	Director's report	Director's report	Director's report	Director's report	Director's report	Sum
	Social responsibility report	Social responsibility report	Financial report	Social responsibility report	Financial report	
Enterprises quantity	11	4	15	4	6	40
Percentage	27.50%	10%	37.50%	10%	15%	100%

B. *The analysis of the environmental accounting information disclosure in the director's report*

The director's report is the most selected carrier for listing enterprises to carry out environmental accounting information disclosure, so what kind of information has

been announced in the director's report? The author carries out classification and summary of 36 enterprises who announced environmental accounting information in the director's report as shown in the following Tab.2:

TABLE II. SUMMARY OF ENVIRONMENTAL ACCOUNTING INFORMATION DISCLOSURE ITEMS IN THE DIRECTOR'S REPORT

Disclosure item	Disclosure content
Environmental protection policies, objectives and items	EHS (environmental protection, security and health) policy, environment policy, EHS objective, environmental protection policy objective, environment objective, environmental protection item, environmental protection institution, environmental protection investment
Pollutant discharge	Three wastes treatment and discharge, the classification of pollutant discharge
Energy saving and emission reduction effect	Energy saving and emission reduction effect, environmental technology development and rewards, the situation of cleaner production within the report period
Significant environmental problems	Significant environmental problems and rectification situation, there is significant environmental problems and rectification or not within the report period
Environmental protection facilities construction and environmental prevention situation	The construction and operation of environmental protection facilities, emergency plan for environmental pollution issues
Other items	Possible risks, voluntary disclosure of environmental protection information, resource use or consumption information within the report period, system construction

We can see from the Tab.2 that the enterprises only announced non-monetary information like environmental protection policies, pollutant discharge and the effect of energy saving and emission reduction in the director's report, most enterprises only announced the positive information, and only two enterprises announced their existing environmental accounting problems: first, Huahai Pharmaceutical announced the environmental

pollution issues which caused in the remediation implementation process; second, Shandong Lukang Pharmaceutical announced the issues of waster water discharge in the director's report. In the director's reports, most enterprises mainly announce the implementation situation of the environmental protection policies and a few enterprises announce the data-type environmental accounting information like environmental protection

investment and environment income and expenses.

In addition, in the director's reports, many enterprises in detail announced the implementation situation of environmental protection in the column of enterprises actively performing corporate social responsibilities. For example, the Shanghai Pharmaceutical announced that they can carry out the follow-up research of environmental risk each month by the establishment of enterprise environmental risk resources summary table and effectively control the environmental risks to ensure the pollution can reach standards for discharge. Fangsheng Pharmaceutical announced that they have been focusing on the environmental protection work, specially established the Environmental Protection Management System and they have the Pollutant Discharge Permit. But the environmental accounting information disclosure content, form and other aspects are different without prescribed forms; the disclosure is scattered and no orders to follow.

### C. The analysis of the environmental accounting information disclosure in financial report

By checking the financial statements and footnotes information of 40 enterprises, we found out that except for 10 enterprises including Kangmei Pharmaceutical, Humanwell Health-care, Taloph Pharmaceutical, Lingrui Pharmaceutical, Guangyuyuan Herbal, Zhongxin Pharmaceutical, Heng Rui Medicine, Shyndec Pharmaceutical, Lianhuan Pharmaceutical and Shanghai Pharma, other 30 sample enterprises announced the environmental accounting information in the financial statements and the announced information are mainly distributed in the items of deferred income, other receivables and construction in progress in the balance sheet and in the items of administration expenses and non-operating income in the profit statement. The detailed enterprises quantity is as following:

TABLEIII. ITEMS RELATED TO ENVIRONMENTAL ACCOUNTING INFORMATION DISCLOSURE IN THE FINANCIAL STATEMENTS

Statement items	Other receivables	Construction in progress	Deferred income	Administration expenses	Non-operating income
Disclosure enterprises quantity	3	5	16	6	18
Percentage	10%	16.7%	53.30%	20%	6%

The announced content in all the reports are mainly including:

TABLEIV. SUMMARY OF ENVIRONMENTAL ACCOUNTING INFORMATION DISCLOSURE CONTENT IN FINANCIAL STATEMENTS

Statement items	Disclosure content
Construction in progress	Energy saving and emission reduction projects under construction
Other receivables	Reward funds which haven't been received yet
Deferred income	Special fund and allowance of environmental protection
Administration expenses	Pollution discharge fees and afforestation fees
Non-operating income	Special fund for energy saving projects, rewards for environmental protection and rewards for cleaner production

In addition, other content related to environmental accounting information scattered in other items are as following:

TABLEV. SUMMARY OF ENVIRONMENTAL ACCOUNTING INFORMATION DISCLOSURE IN OTHER ITEMS

Disclosure places	Disclosure enterprises and content
Other cash payments related to operation activities	Huawai Pharmaceutical: pollution discharge fees
Other cash paid for operation related activities	Tianyao Pharmaceutical: pollution discharge fees
Other non-current assets	National Pharmaceutical: prepayment of city withdraw and park entering project
Long-term deferred and prepaid expenses	Tianmu Pharmaceutical: landscape planting
Fixed assets which haven't got the certificates of title	Yabao Pharmaceutical: sewage plant in Fenglingdu factory, sewage plant in branch company in Ruicheng
Special payable	North China Pharmaceutical: environmental protection funds
Footnotes of financial statements	Fosun Pharma: non-recurring profit and loss statement: financial aid for innovation ability, supporting projects and environmental protection Guangzhou Baiyunshan Pharmaceutical: operating income includes special construction fund for environmental protection and special funds for energy saving modification projects.

Since the enterprises locate in different fields, a few enterprises announced the environmental accounting items in payable taxes or business tariff and annex, such as city compensation and river management.

### 2.4 The analysis of the environmental accounting information disclosure in pharmaceutical enterprises corporate social responsibility reports

The study shows that 19 enterprises among 40

sample enterprises announced environmental accounting information in the corporate social responsibility reports and the author selects 6 enterprises with the most detailed

disclosure and makes a summary of the announced information as following:

TABLEVI. SUMMARY OF THE ENVIRONMENTAL ACCOUNTING INFORMATION DISCLOSURE IN THE SOCIAL RESPONSIBILITY REPORT

Enterprise name	Disclosure content
Fosun Pharmaceutical	There are detailed introductions of EHS system construction, environmental protection and occupational health and security in Environmental Health and Security. Detailed content include: resource use and consumption within the report period, classification of enterprise energy consumption, purchasing, using and reusing of materials, measures for energy saving and consumption reduction, the use of water resource, three wastes treatments and discharge and the discharge of solid waste and sulfur oxide smoke. Promoting green travel, green working and green suppliers.
Hisun Pharmaceutical	Environment management: the environment management system, environment influence evaluation of projects and the conservation of biological diversity Saving energy and resource Environment friendly and energy saving: energy control center: waste water treatment equipment built in east new area. Two sets of newly built systems for the reuse of recycled water, the daily water saving quantity can reach 150 tons. Green working: management of power consumption of lighting and computer. Management of water, paper, classification and treatment of waste gas and solid waste and the control of tail gas discharge. The input of Hisun for pollution decreases and discharge reduction and environmental protection have been increased gradually each year. The total input in 2014 is 1940 million RMB for environmental protection.
Pien Tze Huang	Strengthening enterprise management, completely carrying out energy saving measures and increasing the utilization ratio of resource. Strengthening the scientific management of environmental protection measures (1)Waste gas treatment (2)The waste water treatment should avoid any negative influence to the Jiangxi streams of Kowloon and protect the mother river of Zhangzhou. (3)Formulating management of dangerous waste and decrease the environmental pollution risks. (4)Strengthening supervision 3. Three simultaneity environmental protection work
Tasly Pharmaceutical	Low-carbon operation, energy saving and environment friendly and making a green and ecological enterprise. Establishing environment and energy management system and regulating the objective of environment and energy management system and the establishment, examination, implementation, evaluation and update process of the implementation plans in the Quality, Environment, Health and Security Management Manual. The enterprise carries out the examination of ISO140001 environment management system. The detection of exhaust gas, smoke, waste water and the noise of the factory borders have all reached qualification standards. Environmental protection: influence objects of exhaust gas, smoke, waste water, noise of the factory borders and waste gas, environmental standards, measurement index of enterprises and control measures. The utilization of environmental resources: influence objects, measurement index of enterprises and control measures.
Yabao Pharmaceutical	During the report period, the enterprise further completes the management of the environmental protection planning, energy consumption, three wastes discharge and the construction of surrounding environment, establishes the direct-management system from the president to environmental protection member and takes the environmental protection work into the range of enterprise economic responsibility evaluation. The company sets up and completes all environmental protection systems and makes complete environmental protection measures. In this year, the company takes a comprehensive maintenance for the waste water treatment facility and exhaust gas and dust discharge facility and further improves the energy saving and emission reduction capacity and ability. During the report period, all the waste water reaches standards for discharge after being treated in the waste water stations; the condensate water can be recycled after treatment saving more than 300000 tons water annually. In 2014, the company further strengthens the construction of afforestation, beautification and purification; currently the afforestation coverage ratio has reached 37% in all the production areas and the whole production process completely follows the principle of cleaning and civilization.
Zhongxin Pharmaceutical	1.In the aspect of environmental protection, the company inputs 4.5 million yuan for waste water modification and boiler combustion modification and the discharge standards all meet the national discharge standards avoiding environmental pollution. 2.In the aspect of energy saving and emission reduction: in 2014, all units have increased the utilization percentage of energy after equipment upgrading , technology update and the utilization of waste materials and decreased the energy consumption; in 2014, the energy consumption for ten thousand yuan output value is0.0352 ton standard coal equivalent; in 2013, the energy consumption for ten thousand yuan output value is0.037 ton standard coal equivalent falling 4.86% year-on-year; in conclusion, saving a lot of capital in energy consumption aspect.

We can see from the aboveTab.6 that in the social responsibility reports, the enterprises mainly announce the environmental protection measures they have adapted such as energy saving and emission reduction, the construction of environmental protection measures and

sustainable development; most of these are textural narration, only a few enterprises announced the energy consumption data and discharge data but few enterprises announced any environmental accounting information to the disadvantage of themselves.

### III. THE EXISTING PROBLEMS OF THE ENVIRONMENTAL ACCOUNTING INFORMATION DISCLOSURE OF LISTING PHARMACEUTICAL ENTERPRISES

#### A. *The environmental accounting information disclosure of enterprises is random*

The enterprises disclosure is mainly be stated by narrative words lacking quantitative information disclosure, systematically financial data related to environment cost and environment income and certainly comparability. Additionally, the enterprises environmental accounting information disclosure is not specific and random in content and not standardized in form and type.

#### B. *Much advantageous environmental accounting information disclosure and little disadvantageous information disclosure.*

Most enterprises emphasize all the works they have carried out, positive influence and the positive attitude towards environmental protection in the information disclosure. Only Huahai Pharmaceutical and Lukang Pharmaceutical announced the environmental pollution events in the director's reports. Enterprises barely mentioned the energy consumption, influence that the discharged pollutant may have for the surrounding environment and the potential damage risks in the production and operation process.

#### C. *Most enterprises haven't issued independent environmental accounting report*

Independent environmental accounting report can make the enterprise environmental accounting information disclosure more detailed; under the current situation that the environmental accounting evaluating information cannot be put into the current financial statements, carrying out the environmental accounting evaluation independently and making an independent environmental accounting report can offer more detailed environmental accounting information for the information users making them better understand the enterprises' environmental cost and benefits. Based on the current disclosure situation, the environmental accounting information in the financial statements are scattered in different items, so it is difficult to make summary and calculation.

#### D. *Standards for environmental accounting information disclosure are not specific*

As the increase of people's environmental protection consciousness, some enterprises have realized the importance of environmental protection and have the intention to announce environmental accounting information to public. Since the national environmental accounting system and information disclosure system are not complete, the environmental information accounting methods have not been well applied among enterprises. There is no guide for enterprises, so the disclosure is random without standard forms. The environmental accounting information of 42 enterprises has no essential communality and no uniform disclosure form which is

partially caused by the incomplete environmental accounting information disclosure standards.

### IV. SUGGESTIONS FOR COMPLETING THE ENVIRONMENTAL ACCOUNTING INFORMATION DISCLOSURE IN PHARMACEUTICAL INDUSTRY

#### A. *Increasing the environmental protection consciousness of enterprises administrators and the professional ability of accountants*

The enterprises administrators' environmental protection consciousness level has fatal influence on the enterprises environmental accounting information disclosure, so making the enterprises administrators fully understand that the economical benefit, social benefit and environmental benefit are inseparable and increasing the social responsibility consciousness contribute to the improvement of enterprise environmental accounting information disclosure level. In addition, a high quality environmental accounting information disclosure requires the accounting staff not only have professional accounting knowledge but also have knowledge of environmental economics, resource economics and environmental protection laws and regulations; the accounting staff in pharmaceutical industry should be familiar with medicine production process, the toxicity of raw material and components of discharge; it is a good method to set professional accounting staff in pharmaceutical industry and strengthen the professional training for these staff for the purpose of better environmental accounting confirmation, evaluation, record and report.

#### B. *Formulating the environmental accounting information disclosure in the pharmaceutical industry*

In order to increase the standardization and comparability of environmental accounting information disclosure in pharmaceutical industry, firstly, confirming the basic content of pharmaceutical industrial enterprises accounting information disclosure, setting the general structure of disclosure content and requiring enterprises to carry out the information disclosure according to the structure; secondly, applying disclosure method combining quantitative information and qualitative information, such as taking a scientific measurement and calculation for environmental assets, liabilities, cost and benefit and presenting them in the reports; thirdly, ensuring a comprehensive disclosure; announcing both the efforts that he enterprises have made for environmental protection and the existing environmental pollution events and making the public understand the production and operation activities of enterprises; fourthly, making a certain predictive environmental information such as enterprise environmental protection plan and the objectives of energy saving and emission reduction which can contribute to establish good social image of for enterprises.

#### C. *Strengthening the auditing supervision of environmental accounting information*

In order to improve the environmental accounting information disclosure, it is necessary to strengthen the auditing supervision of environmental accounting information. Firstly, carrying out interior supervision of enterprise environmental information accounting and disclosure, finding out and dealing with irregular and misrepresentative disclosure information; secondly, the external certified public accountant auditing should take environmental accounting information auditing into the auditing range; in addition, as the increase of social public environmental protection consciousness, more and more people are concerning about the enterprises environmental information, social media should play the propaganda and guidance function, carry out positive propaganda for environmental protection enterprises, make disclosure for polluting enterprises and take the social supervision function.

#### *D. Increasing penalties for polluting enterprises*

The related environmental protection department and financial ministry should carry out evaluation and confirmation for the environmental information announced by enterprises and carry out severe penalty for enterprises with concealed declaration and false information disclosure. Currently, the penalty for polluting enterprises is light, for example, the pollution event of main plant of Harbin Pharmaceutical, the large amount discharge of antibiotic waste water of Lukang Pharmaceutical and Yunan Pharmaceutical and Hisun Pharmaceutical have been supervised for modification by the environmental protection ministry. But later other enterprises have similar problems and it is because that the environmental protection ministry takes light penalty for the polluting enterprises. The penalty for the pollution event of main plant of Harbin Pharmaceutical is 1.23 million yuan which will not have enough deterrent for the enterprises with this low cost of law violation. By comparison, we can see that the penalty abroad in this aspect is much severe, for example, the global pharmaceutical company, American Lilly company has problems of soil and water pollution during the operation process in the pharmaceutical factory established in Brazil causing physical and mental damage to more than 60 workers in the factory, so the Brazil Judicial Department issued a sky-high price penalty bill with a total amount of one billion Brazilian Real (about 2.7 billion RMB). Increasing penalties for enterprises with pollution, concealed disclosure and false information disclosure can better guarantee the seriousness of laws and regulations and contributes to the improvement of environmental accounting information disclosure quality.

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