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## FEATURES OF NATURE PROTECTION ACTIVITY EXPENSES CLASSIFICATION AND ACCOUNTING

**Abstract.** The article is devoted to theoretical and practical study of nature protection activities accounting at the industrial enterprises, determination of their role in the decision-making process. The results of our personal investigation and questioning of 36 industrial enterprises enabled us to have a relatively objective assessment of the accounting state for nature protection activities in Donetsk and Lugansk regions. Classification of expenses and principles of the nature protection activity expenses accounting is improved on the basis of the received results. The expediency of sub-accounts opening: «The expenses on the nature protection activity» to synthetic accounts «The general production expenses», «The administrative expenses», «The distribution expenses», «The other operating expenses» is proved in the article. This provides control over the implementation of the expenses estimation, the accumulation of data on total amount of expenses for restoration of environment and their reflection in the integrated reporting of the enterprise. The forms of the administrative reporting based at the expenses accounting within the centres of responsibility are offered by the authors for the qualitative administrative decisions timely adoption. This allows providing the internal and external users of the enterprise with amount-quantitative and qualitative information of nature protection appointment. The offers proposed by the authors may result in gaining information and social effects. This will give the possibility to the industrial enterprises to occupy own ecological and economic place at the market in the competitiveness conditions.

**Keywords:** accounting of nature protection activities; industrial enterprises; management decisions; classification of nature protection expenses; integrated reporting; quality information.

**JEL Classification:** M40, M41

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### **ОСОБЛИВОСТІ КЛАСИФІКАЦІЇ ТА ОБЛІКУ ВИТРАТ НА ПРИРОДООХОРОННУ ДІЯЛЬНІСТЬ**

**Анотація.** Статтю присвячено теоретичному і практичному дослідженню ведення бухгалтерського обліку природоохоронної діяльності на промислових підприємствах, визначенню їх ролі у процесі прийняття управлінських рішень. Запропоновано методіку бухгалтерського обліку витрат на охорону навколишнього середовища, форми управлінської та інтегрованої звітності. Це дозволить забезпечити внутрішніх і зовнішніх користувачів підприємства якісною інформацією природоохоронного призначення.

**Ключові слова:** бухгалтерський облік природоохоронної діяльності, промислові підприємства, управлінські рішення, інтегрована звітність, якісна інформація.

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### **ОСОБЕННОСТИ КЛАССИФИКАЦИИ И УЧЕТА РАСХОДОВ НА ПРИРОДООХРАННУЮ ДЕЯТЕЛЬНОСТЬ**

**Аннотация.** Статья посвящена теоретическому и практическому исследованию ведения бухгалтерского учета природоохранной деятельности на промышленных предприятиях, определению их роли в процессе принятия управленческих решений. Предложена методика бухгалтерского учета расходов на охрану окружающей среды, формы управленческой и интегрированной отчетности. Это позволит обеспечить внутренних и внешних пользователей предприятия качественной информацией природоохранного назначения.

**Ключевые слова:** бухгалтерский учет природоохранной деятельности, промышленные предприятия, управленческие решения, интегрированная отчетность, качественная информация.

**Introduction.** The tense economic and ecological situation at the present stage requires improvement of approaches to the ecologization of industrial activities with the purpose of parameters and expenses of protecting the environment optimizing as one of the social economy and policy tasks.

In the practice of industrial enterprises the awareness of ecology importance is revealed in constant need of spending money on protection and restoration of the environment and the need for the organization and accounting of nature protection

activities, the quality of the information which could influence management decisions. These decisions should take into account not only the interests of their companies but also the social and economic objectives of the atmosphere, water and land resources protection, public health, interests of the neighbors, and agricultural producers.

Thus, to ensure timely and quality control, there is a necessity for accounting of the enterprise's expenses on nature protection measures.

**Brief Literature Overview.** Today the issues of accounting for nature protection activities in Ukraine are untreated and insufficiently explored segment of accounting. At the same time, a special importance of accounting for nature protection activity in modern conditions of commercialization is quite obvious and emphasized in the works of some domestic and foreign scientists, namely: L. I. Gnilitkaia (2002) [1], A. A. Sadekov (2004) [2; 3], V. O. Shevchuk (2013) [4], J. B. Barney (1991) [5], A. C. Piquou (1975) [6] and others.

For instance, Sadekov A. A. (2004) considers environmental accounting as a function of the control system without the order of its introduction [2; 3]. The classification of expenses for nature protection offered and prove by Gnilitkaia L. (2002) [1], in our opinion, reveals more of their economic nature, than the purposes of financial and management accounting, which is important for the formation of the cost price of finished goods (works, services), as well as the correctness of their allocation on accounts. Our own solution to this problem was described and grounded in previous articles [3; 7; 8].

Economic problems of environmental protection related to externalities first explored English economist Piquou A. (1975) [6]. Famous scientists Barney J. B. (1991) and Shevchuk V. O. (2013) focused on the deep nature of the assets, as an object of environmental accounting [5; 4].

However, the study of the legislative and regulatory base, special literature on ecology, financial and management accounting of expenses for nature protection activity, as well as the study of practice of organization and methodology of these operations at the industrial enterprises of Donetsk and Lugansk regions, allowed concluding that the methodological and methodical aspects of accounting for nature protection activities are not studied enough.

**The purpose** of the article consists in scientific substantiation of industrial enterprises expenses for nature protection activity financial and management accounting expediency, which arises in connection with these activities.

**Results.** The theory of accounting for nature protection activities, especially in its foreign variants, is rarely used by domestic economic entities. At the same time the practice in the sphere of environmental protection in the activities of Ukrainian business has not received sufficient scientific generalization and development for the purposes of the internal structure of the enterprise.

An essential importance for the correct and timely managerial decision-making presents accounting for the company as a whole, including operations related to nature protection activities. The main factors that will determine the tendencies of accounting and control development in Ukraine are the deepening of market processes and their legislative support.

World practice shows that environmental accounting and control are the areas, which are dynamically developing. We note that this system should contain financial and managerial accounting, reporting on environmental indicators and environmental auditing.

Research of the organization practice and methods of environmental accounting at the industrial enterprises of Donetsk and Lugansk regions often confirm these conclusions. So, the results of our personal investigation and questioning of 36 mining enterprises (years 2009-2013) enabled us to have a relatively objective assessment of the accounting state for nature protection activities in Donetsk and Lugansk regions. For example, selecting and reflecting costs for environmental protection under «Costs of nature protection activities» provided for only 24% of economic entities. Actually in practice, this item of expenses in the analytical accounting was noticed only at 8% of enterprises. This, and the fact that 42% of business entities, not allocating these costs in a separate item, refer them to the cost elements, which leads to the facts when the expenses for nature protection activity «dissolve» in cost, their control and management are very difficult. Moreover, 12 per cent of the expenses for nature protection activities refer to the article on labour protection and safety that do not correspond the normative acts on accounting in Ukraine.

As for complications of formation and development of accounting for environmental activity of the enterprise, 14% of economic entities show insufficient development and completeness of legislative and normative acts regulating the accounting and control of nature protection activities [7].

Control over accuracy of measuring the actual volume and the protection of the environment shall be carried out by State management of environmental safety (municipal, regional).

In the course of the conducted questionnaire survey at big industrial enterprises of Donetsk and Lugansk regions, it was determined that the total amount of expenses of the enterprise activity on environmental measures make on average from 0.2 to 1%.

A small proportion of these costs is due to the fact that enterprises pay not enough attention to this kind of activity, and eventually pay the tax at the expense of net profit for excessive emissions, dumping and waste disposal.

Unfortunately, none of the surveyed enterprises shows the calculation «Expenses for maintenance and exploiting of environmental assets» in a separate item, but includes these sums in the item «Administrative expenses». Furthermore, there is no certainty in attributing costs to nature protection activities in those or other items.

In accordance with the Regulation (standard) of accounting No 16 «Expenses», the cost of nature protection measures as a separate item is not highlighted, but included in item 8 «Expenses on labour protection, safety and environmental protection», refer to overhead costs [9]. In addition, most industrial enterprises are trying in any way to show a smaller amount of emissions, dumping and waste disposal, especially excessive.

In our opinion, the expenses of nature protection activities should be referred both to the General production expenses (related to the management and servicing of production), and to the administrative expenses (associated with the management and maintenance of the enterprise as a whole), as well as expenses for sales (related to the implementation of the finished products, goods).

The nomenclature of expenditure items, which will be used by planning and accounting, may differ by industry and environmental practices. The main list of such items should include: materials, low-value and high-wear items; basic wage of production workers (administrative personnel); depreciation; additional wages of production workers (administrative personnel); social activities; fuel and energy for technological needs; other expenses.

Given the relatively high proportion of services cost of outside organizations for nature protection activities in the total cost of nature protection purpose, it is expedient to allocate a separate item.

In estimating the costs for nature protection activities there should be noted that they have a complex character, that is, among the environmental costs there are variables, the value of which varies in proportion to the volume of production (for example, materials used for the neutralization of harmful substances), semi-fixed, the value of which changes little to change the volume of production (for example, the content of dustproof and slag collecting points) and permanent, the size of which does not change as to the volumes of production (for example, stations for water neutralization).

With regard to the general production expenses for nature protection activity, they should be delimited on the distributed and undistributed according to the allocation bases specified in the accounting policy of the company. The most precise distribution is possible only if the object records of nature protection activities are detailed enough, otherwise, there will be a significantly distorted value of the cost of the manufactured products. The fact is that the production of some commodities may be associated with the need to implement measures for protection of soil from pollution by waste, others protect air pool, and the third ones carry out several nature protection practices at the same time.

For the compilation of information on emerging expenses associated with nature protection, it is advisable to use existing accounts in the Plan of accounts of assets, capital, liabilities

and operations of enterprises and organizations, approved by the Ministry of Finance of Ukraine (MFU) dated November 30, 1999, No 291 (in the edition from 27.06.2013, No 627):

a) to account overhead costs – account 91 «General production expenses». It is used at all enterprises related to production activities, and therefore the above mentioned expenditures are desirable to be reflected in it;

b) to account expenditures related to nature protection activities at the whole enterprise, irrespective of the activity – account 92 «Administrative expenses»;

c) to account expenditures on these activities arising at the sale of finished products, goods, works, services (for example, costs associated with air pollution by motor transport of the enterprise) – item 93 «Expenses on sales» [10].

Thus, it is expedient to allocate on specified accounts specific sub-accounts «Expenses for nature protection activity». It is necessary to control the use of cost estimates, accumulation of information about the total amount of environmental costs to reflect them in the accounts and a more accurate allocation between the types of manufactured products than it is possible with the existing system of accounting expenses for nature protection activity.

Analytical accounting can be carried out by the structural units of the nature protection complex as centers of responsibility (specialized shops and departments), in specific areas of nature protection expenses and according to the item of expenditures.

Control functions need information. It comes from a variety of sources, including economists, analysts, marketing personnel, accountants, specialists in management accounting and ecologists.

So, on the one hand, management environmental accounting is a part of the enterprise information system, on the other hand, activities, the goals of which are the provision of information to guide decision-making and planning activities, assistance in the operational management and control, stimulation of workers of the enterprise in the implementation of planned programs, assessment of structural divisions' activity.

Matiukha M. M. (2013) emphasizes the peculiarity of the formation of management reporting on expenditures in the context of effective information support for managers [11]. For management accounting, the information sources, except for the accounting system of the enterprise, are the data about the normative costs, material resources, technological wastes, research of market situations, reports on research works, the use of their results in the current conditions of production, the size of penalties to the failure of the parties of the items of business contracts and exceeding the limits of pollution of the environment and others.

The above mentioned information and managerial decisions made by the management based on it, will allow the company to take its ecological and economic niche at the market in the conditions of competition, which should be optimal.

Unfortunately, the method guidelines on the application of accounting records, approved by MFU from 29.12.2000, No 356 do not offer a form where you could prepare such information. In our view, to ensure the visibility of the economic activities related to nature protection activities, it is appropriate to have the following statements of the analytical accounting of the costs (Table 1).

When commenting on this statement, you should pay attention to the following moments: to make the right financial statements for the year you should prepare to draw it up from the first month of the reporting year.

Tab. 1: Analytical account of the costs associated with nature protection activity

Document		Structural unit (centre of responsibility)	Name of economic operations	Item of expenditures	Correspondence of accounts		Sum, UAH	
No	Date				Debit	Credit	For the reporting month	Cumulative from the year beginning
1	2	3	4	5	6	7	8	9

Source: The Author's own development [7]

Therefore, analytical cost accounting should be since January; costs accrue in the debit of accounts to close their final turnovers at the end of the year.

At big industrial enterprises there can occur long-term nature protection costs (for example, construction of treatment facilities, capital repair of the main funds of nature protection and others). In this case, the accounting for such costs should be reflected in the account 39 «Deferred expenses» under the costs estimation, and then evenly written off to expenses of the current reporting periods (Table 2).

Statements should be made on the basis of cost accounting and liabilities. It should be pointed out that according to the order of the MFU from 07.02.2013, No 73 «On approval of the National provisions (standards) of accounting 1 «General requirements to the financial statements» (hereinafter – NP(S)A there was cancelled the order of MFU from 31.03.1999, No 87 «On approval of regulations (standards) of accounting», which means a loss of force for five Provisions (standards) of accounting (P(S)A 1 - 5) and correspondingly approved by them financial reporting forms, which were used for financial statements for 12 years. New NP(S)A 1 from the first quarter of 2013, has introduced new forms of financial statements, the deadline for submission of which is not changed. Reporting forms are filled in accordance with orders from 28.03.2013, No 433 «On approval of Method guidelines for filling in the forms of financial statements»; from 11.04.2013, No 476 «On approval of method guidelines for the verification of comparability of financial statements».

However, the absence of information disclosure requirements about the nature protection activity in national standards leads to the fact that in the annual reports of the industrial enterprises there is little information on the accounting for these activities. So, in integrated reporting Statement on financial results (Income statement) there are no researched expenses (Table 3).

Proceeding from the importance of the issues, it is expedient to allocate the costs of nature protection activities on definite lines in the financial statements.

Tab. 2: Accounting records for accounting expenses and liabilities related to nature protection activities

Contents of operations	Debit	Credit
The amount of expenses related to nature protection activities:		
a) material	91, 92, 93	20
b) wages to employees related to nature protection activity	91, 92, 93	661
c) compulsory and deductions from wages	91, 92, 93	65
d) depreciation on treatment facilities, settings	91, 92, 93	13
e) for the amount of services on nature protection activity provided by third-party organizations	91, 92, 93	686
f) for the amount of fees for emissions set by norms	91, 92, 93	642
g) for the amount of fees for emissions in excess of the established norms	91, 92	642
The amount of the long-term costs for nature protection:		
a) in accordance with costs estimation	39	55
b) their equal write-off to current expenses	91, 92, 93	39
Write-off of expenses:		
a) distributed overhead (in proportion to wages of production workers)	23	91
b) non-distributed	90	91
c) administrative	79	92
d) costs of sales	79	93

Source: The Author's own development [7; 10]

Tab. 3: Income statement (statement of total income)

INCOME STATEMENT (STATEMENT OF TOTAL INCOME) for 2013 (fragment)			
I. Financial results			
Item	Line code	For reporting period*	For the previous period*
Administrative expenses	2130	(23 612)	(18 541)
including expenses for nature protection activity	2131	(472)	(380)
Distribution expenses	2150	(34 702)	(17 611)
including expenses for nature protection activity	2151	(694)	(352)
Other operating expenses	2180	(158 388)	(166 099)
including expenses for nature protection activity	2181	(7919)	(8305)
...	...		
Financial expenses	2250	(32)	(202)
including expenses for nature protection activity	2251	( )	( )
...	...		
II. Operating expenses elements			
Item	Line code	For reporting period*	For the previous period*
Material costs	2500	404712	387059
including expenses for nature protection measures	2501	60707	50318
Labour costs	2505	316 741	243 788
including expenses for nature protection measures	2506	47512	36568
Deductions for social events	2510	129 099	99 431
including expenses for nature protection measures	2511	19365	14915
Depreciation	2515	157 718	123 274
including expenses for nature protection measures	2516	3154	3698
Other operating expenses	2520	64 414	47 961
including expenses for nature protection measures	2521	7730	5755
<b>Total:</b>	2550	<b>1 072 684</b>	<b>901 513</b>
including expenses for nature protection measures	2551	<b>138 468</b>	<b>111 254</b>
Head	Chief accountant		
(Name, surname, signature)	(Name, surname, signature)		

\* Conditional information, thousand UAH  
Source: The Author's own development

Proposals on perfecting the technique of the account of nature protection costs were implemented at industrial enterprises of Donetsk and Lugansk regions. Author's developments was used at the seven coal industry enterprises during 2009-2013.

The above mentioned information and managerial decisions made by the management based on it, will allow the industrial enterprise to take its ecological and economic niche in the market under competitive conditions.

**Conclusions.** The defaults in organization and methodical accounting have been identified according to the complicated reserch and the questionnaire survey's results at the Donetsk and Lugansk regions enterprises. Analytical account of the costs associated with nature protection activity have been offered with the aim to necessary information receiving. Methodical approach to the nature protection activities expenditures accounting has been formed for the discovered defaults removing. This is done for the further accounting quality degree rising.

Summing up, it should be determined that in modern conditions the accounting of nature protection activities is an integral part of the financial and managerial accounting and financial reporting at enterprises of Ukraine. The timeliness and the accuracy of records of nature protection activities will enable us to make informed management decisions, which is important in the conditions of market relations and fierce competition.

Simultaneously, internal costs control for nature protection activity is also important, as these costs affect the formation of the cost price of finished goods (works, services). The solution of these issues will be presented in further research.

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