

# REGULATIONS OF WASTES GENERATION KALININGRAD REGION MEAT-PROCESSING AND FURNITURE ENTERPRISES

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## ABSTRACT

In 1999-2005 meat-processing and furniture industry was actively developed. Simultaneously with growth of these industrial sectors it is necessary to solve problems of pernicious influence on the environment. These problems can be separated into legislative and technical. In terms of law, the problem of waste products in these enterprises is a standardization of generation and allocation of waste products. Recently, majority of enterprises were not informed about the necessity of compliance with the demand and they were breaking the law deliberately. Currently, the problems of regulation within the sphere of waste products are waste generation accounting, licensing and settlement of accounts.

Technical problem of studied aspect is the necessity of modern recycling equipment and methods usage. This makes difficulties for enterprises to perform an efficient activity in wastes disposal and involves them into flow process as well. The process of collecting and removing wastes from wood chipboards and reutilization of those when producing veneer is non-value-adding due to long distance from the furniture enterprises of Kaliningrad Region to enterprises, which produce wood chipboards.

Meat processing industry in Kaliningrad Region has some problems with removal of wastes from the main production, which can be fewer than 10% from the crudes, entering into the enterprise. During the period of 2000 - 2003, animal wastes were carried out by gratuitous assignment of these wastes into animal food in fur farming and pig farms. However, currently, the amount of meat processing enterprises has increased, that has been brought about by considerable growth of wastes. At the same time, the number of animal farms was cut down.

To sum up, currently, the issue of wastes placement from meat processing industries is not an actual problem because of ban import of meat-on-bone into Russian Federation. Whereas, the issue of removing waste products can become sharp due to the great demand on the crudes and the agriculture government support.

## KEYWORDS

Meat processing waste; Furniture processing waste: Standardization generation and allocation of waste.

## 1 INTRODUCTION

In 1999-2005, meat-processing and furniture industry was actively developed in the Kaliningrad region. Simultaneously with development of these industries, it is essential to observe the current legislation in the field of preservation of the environment. Regulation of pernicious influence on the environment and its compensation (chargeability) can be singled out as principles of nature management for current enterprises.

Reasoning from these attitudes, activity of environmental service of each industrial object comes to working out norms of pernicious influence and permissions on the influence, its registration, accounts and payment calculation for actual impact on the environment. Simultaneously, with development of industrial production, both managerial responsibility for non-observance of nature-conservative legislation and attention from the direction of state supervisory organizations and the public are toughened.

For the past 2 years the sum of punitive measures imposed for violation of environmental legislation has 2 times increased; a new article has been implemented in the Code of administrative infractions - for timely non-payment for pernicious influence on the environment. Having analyzed practice of arbitration and administrative procedure in the region of environmental legislation observance, one can conclude that 95% of enterprises have no pernicious impact on the environment in accordance with established lawful procedure and correspondingly, no permissions on this impact. Beginning from the second half of 2006, the main appearing violation of nature-conservative legislation acts has become non-payment for pernicious influence on the environment.

## 2 ENVIRONMENT PAYMENTS AND COST OF DOCUMENTATION

Observance of environmental legislation by enterprises is stimulated, firstly, by heavy managerial responsibility, secondly, a necessity of payment for pernicious influence on the environment.

The existent calculation procedure of payment for environmental pollution has a differentiated character, i.e. each contaminant (or a danger class of wastes) corresponds with its basic payment rate for 1 ton. Besides, basic payment rates applied in the presence of pernicious influence norms, there are rates within limits (in cases of temporarily established norms) and over-normative rates (in cases of norm exceeding or absence of them). The difference between normative and over-normative wastes disposal is 5 times. *Table 1* graphically illustrates the difference between payment for normative and over-normative impact.

In conformity with the federal law "Environment protection", enterprises are to regulate their pernicious influence with a view to decrease it. Regulation and payment for pernicious influence are mechanisms of economic stimulating for enterprises to reduce their impact.

Worked out and coordinated projects of pernicious influence norms (in particular, PNOLRO) are to act during 5 years on the condition of technological process invariability, otherwise require correction and reconsideration.

In most cases enterprises receive pernicious influence norms after negotiation of projects with corresponding authorities.

*Table 1. Payment for wastes disposal produced by meat and sausage production (2nd quarter of 2007), average expenditures sum to receive limits for disposal.*

Type of waste	Danger class	Formed and disposed, ton	Normative rate for 1 ton, roub.	Over-normative rate for 1 ton, roub.	Payment (normative), roub.*	Payment (over-normative), roub.*
Garbage from domestic premises organizations ungraded (excluding large dimension)	4	3.1	248.4	1242	1491.89	7459,452
Polyethylene wastes in the form of film	5	0.2	15	75	5.46	27.3
Food wastes from kitchens and public catering organizations ungraded	5	1.3	15	75	35.49	177.45
Fat separator wastes containing adipose products	4	1.4	248.4	1242	632,9232	3164,616
Polyethylene wastes in the form of film (sale)	5	2.2	8	40	32,032	160.16
Waste (litter) from territory and premises cleaning Wholesale and retail trade of foodstuffs (sale)	5	18.5	8	40	269.36	1346.8
TOTAL:					2467,1552	12335,78
Average expenses sum to receive limits for wastes disposal taking into account co-ordination, roub.					50000,00	

\* - payment calculated taking into account supplementary coefficients in compliance with the Government regulation of RF № 344 from 12.06.2003

In practice after receiving norms, no reduction of pernicious influence takes place; the exerted influence stays put or even frequently increases quantitatively as a result of production volume growth. Norms receiving is becoming a formality for enterprises, in particular, meat and sausage and furniture industries.

Disadvantages of the existing regulation system are:

- 1) Lack of real decreasing of pernicious influence;
- 2) Considerable man-hours and cost of documents preparation and co-ordination;
- 3) Lack of methods of norm calculation of wastes production from contemporary domestic and foreign equipment;
- 4) Dynamics of production volume growth, change of range and source of raw materials do not allow to correspondingly modify the limits received by an enterprise.

The given procedure can be positively marked for its giving an opportunity to substantiate quantitative and qualitative pernicious influence produced by an industrial enterprise. Thus,

the existing regulation system of pernicious influence can not be considered an efficient tool of economic stimulating of enterprises to regulation and reduction of environment pollution. The present system is also behind contemporary paces of economic and technological development of enterprises in given industries.

In the present situation, it is advisable to consider a procedure of the state expertise of project documents which is carried out for new enterprises intending to be engaged in production activity without fail.

*Table 2. Normative wastes generation (to be disposed) of existing enterprises and their characteristics influencing wastes generation.*

	Enterprise 1	Enterprise 2
Off-cuts, flinders waste of resin-bonded chipboards and/or wood fiberboards containing binding resin in the amount of 0,2 % to 2,5 % inclusive, ton/year	58,450	71,600
Sawdust of resin-bonded chipboards and/or wood fiberboards containing binding resin in the amount of 0,2 % to 2,5 % inclusive, ton/year	22,211	27,210
Garbage from domestic premises and organizations; ungraded (excluding large dimension)	11,260	3,850
Amount of resin-bonded chipboards gone into production, ton/year	584,50	716,00
Average amount of employees	43	55
The area of cleaned asphalted territory, square meter	1650	-

Reasoning from the data cited in *Table 2*, it is necessary to analyze influence of major industrial factors (enterprise's territory, productiveness, power consumption, staff, heat consumption, sort and quality of used fuel) on quantitative and qualitative indicators of pollution of the environment. After that, it is essential to find a dependence of contaminant quantities going into the environment from certain characteristics of an enterprise.

## 6 CONCLUSIONS

Since mathematical dependence between quantities of pernicious influence on the environment and industrial parameters is defined, it is possible to:

- 1) Prepare a method of regulation of pernicious influence on the environment differentially according to industries;
- 2) Substantiate the necessity of implementing differentiated payment rates for each kind of economic activity;
- 3) Propose a reductive payment calculation procedure for pernicious influence depending on the kind of economic activity adhering to nature management principles and civil rights;
- 4) Facilitate the state control procedure of assessment of data reliability provided by nature managers at payment accounting for pernicious influence.