

STUDY OF ENVIRONMENTAL MANAGEMENT SYSTEM IMPLEMENTATION AT JONE SLAUGHTERHOUSE (RPH)

Ahmad Hadian Pratama Hamzah¹, Herman², Nurhasanah³, Subekti Nurmawati⁴

^{1,2,3}Magister Studi Lingkungan, Fakultas Sains dan Teknologi Universitas Terbuka

⁴Program Studi Biologi, Fakultas Sains dan Teknologi Universitas Terbuka
Fakultas 2 Jl. Cabe Raya, Pondok Cabe, Pamulang, Tangerang Selatan, 15437

email; hadian@ecampus.ut.ac.id

Abstract

Environmental Management System (EMS) is one of the tools that can be used in environmental management. Slaughterhouses (RPH) are facilities, where animals are slaughtered for consumption as food products. This practice aims to assess and identify the current suitability/conditions at Jone Slaughterhouse (RPH) to the implementation of the Environmental Management System from ISO clause 14001. Practice shows that there are several documented ISO 14001 clauses such as organization (clause 4), Leadership (clauses 5.1, 5.3), planning (clause 6.1.3), support (clause 7.1), and performance evaluation (clause 9.1.2). This practice aims to analyze and identify the current suitability / conditions at Jone Slaughterhouse (RPH) to the implementation of the Environmental Management System from ISO clause 14001 to the operations of RPH Jone. This practice is useful as a study and information material as well as a study for interested parties to take concrete steps or policies in the development of the slaughterhouse business (RPH) based on the ISO 1400 Environmental Management System

Keywords: Environmental Management System (EMS), ISO clause 14001, Slaughterhouses (RPH)

1. INTRODUCTION

Environmental Management System (QMS) is one of the tools that can be used in environmental management. To maintain optimal environmental performance, this QMS can be incorporated into all management procedures in a business. Through cultural shifts that modify employee attitudes and behaviors to show dedication to the environment in order to improve management, environmental management systems can direct companies / organizations in achieving continuous improvements in environmental performance. In addition, the implementation of this system will result in cost savings through improved operational efficiency, including reduced consumption of energy, raw materials, water, and waste, as well as reduction of environmental issues. In addition to the products produced pay attention to environmental factors and produce healthy and nutritious goods, this environmental management system will provide companies / organizations that adopt it with clean production nuances and are able to arouse the desire of employees to be more environmentally conscious. By using QMS in managing the business environment, organizations will be protected from community pressure.

The International Organization for Standardization (ISO) 14001, developed by the International Organization as standardization. Corporations create ISO 14001 standards voluntarily by collecting them from various national standards of other countries to achieve

environmental and economic preservation. This standard seeks to help create environmental balance through prevention of pollution due to business activities. The characteristic of ISO 14001 is its general applicability to all companies of all shapes and sizes and its ability to handle a wide range of geographical, social and cultural contexts. Therefore, this study tries to analyze the implementation of the environmental management system at Jone Slaughterhouse (RPH) through the ISO 14001 environmental management system approach.

Slaughterhouses (RPH) are facilities, where animals are slaughtered for consumption as food products. Stevenson A, (2013) defines RPH as a place where animals are slaughtered for food. The definition of RPH according to the Indonesian National Standard (SNI) 01-6159-1999 concerning slaughterhouses is a community service unit in the provision of foster meat, a place to monitor and survey animal diseases and zoonoses. Law Number 41 of 2014 concerning Livestock and Animal Health mandates that districts/cities must have RPH that has met the technical requirements set by the Minister of Agriculture. The implementation of the law is the issuance of Menpan Regulation Number 13 of 2010 which defines a Slaughterhouse (RPH) as a building or building complex designed with certain conditions and used for slaughterhouses for public consumption.

An important step in providing food sources derived from animals, especially meat labeled safe, healthy, whole, and halal (ASUH) starts from RPH. In the livestock industry, especially in livestock producers.

The existence of RPH meat is very important because all products produced from a broiler must come out through RPH (Nurani et al., 2020). To get safe, healthy, whole, and halal meat, the implementation of meat slaughter must be carried out in RPH (Tawaf et al., 2018). RPH must have minimum standards that are met from various aspects (Dayana et al., 2019). Inadequate facilities and hygiene in RPH can result in contamination of meat and that can endanger the health of humans who consume it. RPH conditions that meet the requirements or standards that have been set will be very supportive in providing foster meat needs for the community (Hetharia, C. 2021). In addition to risks associated with human health, negative impacts on the environment must also be considered (Bonnet, C et al., 2020).

Utilizing people and other resources wisely and effectively to achieve goals is the science and art of management (Hasibuan, 2016). RPH management is a series of governance that controls management procedures to ensure that the products produced are in accordance with established standards and are able to reduce adverse impacts on the environment (Efendi, H., 2012). In terms of location, building design, facilities, and infrastructure, RPH has qualified standards in accordance with Menpan Regulation Number 13/Permentan/Ot.140/1/2010. About Ruminant Slaughterhouse Requirements and Meat Handling. RPH that does not meet the requirements will have a negative impact on environment such as social, economic, environmental, and health impacts (Supriyatin, et al., 2015).

Poorly managed RPH management can have a detrimental impact on the community, especially if the waste produced does not meet the requirements of an effective management system (Susanawati, et al., 2018). Based on pre-research conducted by environmental management system researchers at RPH Tana Paser has not implemented SML which refers to ISO 14001 even though in practice there are several activities that in principle have implemented SML based on ISO 14001. On that basis, researchers plan to conduct field

practice / research related to the analysis of the implementation of SML from ISO 14001 clauses based on activities contained in the Tana Paser RPH.

2. METHOD

The analysis used in this MSL practice is a descriptive research method to determine the picture of RPH environmental management or management system by identifying data and the actual situation in the field then identifying aspects of these operational aspects based on ISO 14001 clauses. The activities carried out were 1) Interviews with the Head of UPTD and employees working at RPH; 2) Observations made to see the picture/facilities and the process of activities that occur in RPH. The stages of activities begin with preliminary research, secondary data collection, primary data collection and data analysis. The stages of research can be seen in the Table

Table 1 of Research Stages

No	Stages Research	Activities
1	Preliminary Research	Conducted a preliminary survey at RPH Jone. In this survey, visual field observations were carried out and interview with the head of UPTD RPH regarding the general condition of RPH
2	Secondary data capture	check the completeness of all documents owned by RPH, especially those managed by the RPH administration department such as documents that are not related to the environment (income documents, livestock expenditure and slaughter, water use documents, electricity usage documents , documents employee performance and RPH activity documents) and documents related to the environment such as (waste monitoring and measurement documents, community complaint documents related to environmental pollution around RPH, environmental policy documents and environmental management program documents) overall completeness check
		The document refers to the ISO 14001 environmental management system clauses that will be used to complement information related to the current state of RPH environmental management
3	Primary data retrieval	Exploring information and data related to the application or application of SML through a checklist based on ISO 14001 clauses

4	Data analysis	The collected data is then analyzed to see the extent of the difference between the existing management in the current RPH and the provisions of the environmental management system based on ISO 14001 clauses
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3. RESULTS AND ANALYSIS

A. Identification of environmental problems in RPH Jone

Based on the results of direct observations or observations of the RPH environment and interviews with RPH managers, the results of identifying environmental problems in RPH Jone were obtained, including:

1. Physical problems

Environmental problems seen from the physical in RPH Jone include: the location of RPH, RPH physical buildings and RPH Operations. Based on the Indonesian National Standard (SNI) RPH, the location of the Jone RPH is actually in accordance with the General Spatial Plan (RUTR), Detailed Spatial Plan (RDTR) and / or City Area Plan (RBWK). The location of RPH was also far from settlements, but the increase in population made the direction of development close to RPH Jone so that it is now close to residential areas. RPH management that is environmentally sound is expected to be appropriate and can solve environmental problems that occur around RPH. Although the RPH Jone building is still relatively new, which was built in 2001, its physical condition has not fully met hygiene and sanitation requirements. The room intended for each activity is still combined in one room such as the slaughter room, separation of offal and other parts so that it has the potential to contaminate meat. The existing sewage treatment unit is still very simple.

The stammering of the existing budget in RPH Jone is also an obstacle in terms of completing or improving existing facilities, facilities and infrastructure. The ownership status of RPH is under the supervision of the Plantation and Livestock Office.

Paser County. RPH is the Technical Implementation Unit of the Service. The commercial power of RPH is relatively low, because solid waste in the form of rumen contents, is only transported by bookers or people in need. Processing existing waste into useful products can be used as an alternative to increase the budget, such as making compost and biogas, animal feed from blood meal, planting plants using compost.

2. RPH Environmental Performance

Environmental concern of employees and service users at RPH Jone is still relatively low. Environmental concern is not yet a written commitment, only limited to each person's thoughts. Another thing that affects this concern is the limited human resources (RPH employees) while the education level of RPH employees includes 6 undergraduate education: 2 high school students, and 1 junior high school.

The environmental performance of RPH is still relatively not optimal. Wastewater Management Plant (WWTP) has not been optimally used for liquid waste treatment. Solid waste only placed in shelters has not been managed properly. The collection or transportation of solid waste is only waiting for the ordered or person in need. This will occur hoarding and unpleasant odors from the solid waste which can make the surrounding environment polluted. RPH does not monitor solid waste and liquid waste regularly, only the Environmental Office annually tests waste samples in WWTP. The problem of RPH environmental performance that has not been optimal is a major environmental problem that must be addressed immediately, to get results that are in accordance with regulations legislation and avoid environmental pollution. Identification of aspects of the RPH operational environment is presented in Table 1.

Table 2
Results of Identification of RPH Operational Environmental Aspects

No	Kegiatan di RPH	Aspek Lingkungan	Dampak Lingkungan
1	Perkantoran	Limbah padat (sampah, kertas)	Pencemaran tanah
2	Pemeriksaan surat keterangan hewan dan antemortem	Kesehatan dan kesejahteraan ternak	Kualitas daging, Penyakit ternak,
3	Penampungan ternak sementara	Limbah cair (urine), padat (feces, sisa pakan), dan bau	Pencemaran tanah, air dan udara
4.	Pembersihan kandang penampungan dari sisa pakan, kotoran ternak	pengelolaan limbah padat dan campuran	Pengurangan pencemaran tanah dan udara
5.	Pemotongan hewan	Ceceran darah, limbah cair	Pencemaran air, kesehatan dan keselamatan kerja
6.	Pengeluaran isi rumen	Ceceran isi rumen, limbah cair, bau, media pertumbuhan bakteri patogen	Pencemaran air, gangguan kesehatan manusia
7.	Pencucian jeroan, usus, isi rumen,	Limbah cair	Pencemaran air
8	Pencucian peralatan dan lantai	Limbah cair	Pencemaran air
9	Pemeriksaan postmortem	Kesehatan ternak	Kualitas daging
10	Pengangkutan	Asap mobil (bau)	Pencemaran udara

Sumber : Hasil telaah Peneliti

3. Management Issues

RPH Jone does not yet have procedures for identifying environmental aspects and impacts as well as a waste management plan. This has resulted in the absence of clear identification of environmental aspects and impacts of all activities in RPH including the absence of monitoring and measuring the quality and quantity of liquid and solid waste. Environmental aspects that have been considered from RPH activities are animal health, in accordance with the types of RPH activities, namely:

1. Inspection and supervision of slaughter and meat animal health in RPH
2. Examination and supervision of meat health outside RPH

3. Control of slaughter of large animals of productive horned females
4. Supervision of animal traffic from RPH.

Other management problems in RPH are the absence of a written environmental policy as a commitment of RPH leaders in environmental management, limited laws and regulations referred to by RPH in regulating environmental aspects and environmental concern issues of employees and service users.

4. Jone RPH Management Strategy

Based on the current condition of RPH, an RPH environmental management strategy is needed, especially in RPH waste management. Although initially RPH was established far from residential areas, with the development of development and population growth, RPH Jone is currently located close to residential areas, so better technology or waste treatment strategies are needed in order to reduce the impact of environmental pollution.

B. Identification of the clauses of the ISO 14001 environmental management system

Based on the results of the identification of the clauses of the ISO 14001 environmental management system in RPH, priority clauses were obtained which became the subject of study, including:

1. Organization (clause 4)

a. Understand the organisation and its context (clause 4.1)

The RPH organization has been clearly established and documented through the Regulation of the Minister of Home Affairs No. 12 of 2017 concerning guidelines for the establishment and classification of Regional Service Branches and Technical Implementation Units, Paser Regency Regional Regulation No. 21 of 2013 concerning the second amendment to Regional Regulation No. 21 of 2008 related to the Organization and Work Procedures of Regional Offices, Paser Regent Regulation concerning the Establishment and Organizational Structure of Regional Technical Implementation Units at the Plantation Office and District Livestock

b.Environmental management system (clause 4.4)

RPH Jone has not implemented an ISO 14001 environmental management system, but the implementation of all its activities has been reflected through compliance with applicable regulations, activities, products and services produced have been pursued through improving environmental performance. Currently the guidelines used only refer to UKL-UPL documents. The application of SML ISO 14001 has not been documented.

2. Leadership (clause 5)

a. Environmental policy (clause 5.2)

RPH Jone does not have a written environmental policy as a manifestation of the commitment of RPH leaders to protect and protect the environment around RPH and in every RPH activity. However, the commitment to create neat clean

conditions around RPH has been carried out through liquid waste treatment activities, waste disposal and cage cleaning.

RPH environmental policies must be established in writing and documented, so that they are easily applied in every RPH activity and can increase environmental awareness of RPH employees and service users. Environmental policy shows the commitment of the head of RPH and is determined by the head of RPH. Environmental policy of RPH must contain the commitment of the leader to prevent environmental pollution, comply with applicable regulations in RPH and make continuous improvement of every activity in RPH. Such environmental policies are used for the implementation and maintenance of environmental management systems and form the basis for the establishment of environmental goals and targets. The environmental policy is according to the ISO 14001 standard.

b. Roles, responsibilities and authorities (clause 5.3)

The roles, responsibilities and authorities of RPH have also been clearly defined and documented and communicated to all RPH employees. The roles, responsibilities and authorities of RPH are in accordance with Paser Regent Regulation Number 22 of 2020 concerning the Position, Organizational Structure, Duties and Functions, and Work Procedures of the Paser Regency Plantation and Livestock Office. The top management of RPH is the Head.

UPTD RPH which has responsibility for all activities that take place in RPH, employees under the head of RPH are the head of the sub-division of administration, general administration, data management, security officers, cleaning attendants, drivers, veterinary medicine and RPH managers. All RPH employees carry out their duties according to instructions from the head of UPTD RPH and positions or positions in RPH and based on appointment letters for civil servants or employment contracts for non-permanent employees. UPTD RPH Jone is responsible to the Paser Regency Plantation and Livestock Office regarding all RPH activities and the daily slaughter service levy.

ISO 14001 environmental management system states that structures, roles and responsibilities must be established, documented and communicated in order to carry out environmental management effectively.

3. Planning (clause 6)

a. Environmental aspects (cf. 6.1.2)

RPH Jone does not establish procedures to identify environmental aspects that have an important impact on the environment. RPH Jone's meat trade flow document in Tana Paser City only identifies the environmental aspects of livestock health. However, environmental aspects have been identified based on the thoughts of RPH heads and RPH employees with visual indicators or observations that commonly occur in RPH activities, such as liquid waste (water used for washing tools and floors and blood splatter), solid waste (rumen contents, animal waste and feed splatter) and odor, are environmental aspects of animal slaughter activities, livestock health is an environmental aspect of animal inspection activities.

Procedures for identifying environmental aspects that have an important impact on the environment should be developed and implemented. RPH must also identify environmental aspects and impacts based on the activities that occur in RPH. According to the ISO 14001 standard, RPH must ensure that important environmental aspects form the basis of setting goals and objectives and keep information about environmental aspects up-to-date.

b. Structuring policy (clause 6.1.3)

RPH Jone already has a UKL-UPL document as a guideline to manage and monitor environmental impacts that occur. However, the implementation is still not optimal. Regarding the laws and regulations owned by RPH Jone is still limited to RPH operational matters, while other provisions in the form of Indonesian National Standards (SNI) regarding RPH are still regarding working conditions and RPH buildings.

Environmental laws and regulations have not been widely adopted by RPH. The prevailing laws and regulations in RPH have not been fully complied with by employees and service users. Procedures for identifying and obtaining laws and regulations and other provisions related to environmental aspects need to be developed and implemented. The prevailing laws and regulations in RPH must be obeyed by employees and service users.

The regulations that need to be adopted by RPH are regulations related to the environment because the applicable laws and regulations in RPH do not contain regulations on the environment, especially those related to the environmental performance of RPH. The prevailing laws and regulations in RPH must be obeyed by employees and service users by documenting these regulations, then socializing and implementing them in every activity carried out by RPH employees and service users

c. Environmental targets (clause 6.2.1)

Environmental goals and objectives have not been set by RPH. These environmental goals and objectives are still within the limits of the thinking of the head of RPH, one of the environmental objectives presented by the head of RPH is to process solid and liquid waste in the form of rumen contents, blood and water used for washing. Environmental goals and targets must be created and maintained by documenting them. When creating and reviewing objectives, RPH must consider environmental regulatory requirements, important environmental aspects, technology chosen, business, financial and operational considerations, views of relevant parties and consistency with environmental policies. Goals and objectives should be consistent with environmental policies, including a commitment to pollution prevention.

Environmental goals and objectives that are still in the mind of the head of RPH must be immediately established by documenting. Procedure for setting and preparing goals and objectives in the form of Standard Operating Procedures (SOPs) and work instructions (IC) must be immediately prepared by RPH by sorting out

environmental aspects and environmental commitments (prevent pollution, obey regulations, continuous improvement) in environmental policies.

4. Support (clause 7)

a. Resources (clause 7.1)

RPH distributes roles, responsibilities and authorities to existing human resources through Paser Regent Regulation Number 22 of 2020 concerning the Position, Organizational Structure, Duties and Functions, and Work Procedures of the Paser Regency Plantation and Livestock Office. Resources are needed in order to effectively function and improve the environmental management system and improve environmental performance. The resources contained in RPH are still insufficient, especially those related to RPH environmental management, both in terms of quantity and quality of human resources, infrastructure (equipment, buildings, and drainage systems), technology, and financial resources. The measurement of the quality of liquid waste has been carried out by the environmental agency due to budget constraints.

b. Competency (clause 7.2)

RPH has identified related competencies of personnel whose work affects environmental performance, such as jobs that have the potential to cause environmental impacts or who are assigned to be responsible for environmental management systems, but are not documented,

c. Care (clause 7.3) and communication (clause 7.4)

RPH has not established procedures related to concern and communication on environmental policies, and is not decollated, in the implementation of slaughter activities only limited to commitments that have been communicated by the head of RPH including important information, structuring obligations, environmental performance and suggestions for continuous improvement.

5. Operational (clause 8)

a. Operational planning and control (clause 8.1)

RPH has a flow chart of activities in the form of meat trade flow in Tana Paser City but does not include environmental aspects and impacts; RPH identifies operations in RPH, but has not been linked to environmental aspects. RPH does not have procedures for inspection, maintenance and calibration of equipment related to environmental control, but calibration of slaughter equipment is always carried out based on established standards. RPH has special oral procedures and instructions for all activity processes related to environmentally critical matters. According to the author's observer, the operational control that has been carried out at RPH Jone is to maintain the cleanliness of the work environment from garbage and waste. Employees are required to dispose of paper waste or other garbage in the trash. Employees maintain the cleanliness of bathrooms and toilets around RPH, especially those in the office.

The cleanliness of the cage is also observed at all times. Feed and animal wastes in cages are cleaned by breeder workers, after out of the cage is cleaned by RPH janitors. Solid waste produced by RPH in the form of rumen/intestinal contents is placed in an open place and dried, then transported to be used as

compost. Removal of the contents of the rumen and intestines is generally carried out dryly in a separate place from the slaughterhouse. Removal of rumen and intestinal contents in RPH Jone is carried out at slaughterhouses.

RPH liquid wastewater channels are always cleaned at all times. Liquid waste before entering the river is treated first in the WWTP. Livestock health checks begin when new livestock arrive at RPH by checking the completeness of letters from the area of origin. Before the animal is slaughtered, a visual ante mortem examination is carried out by the veterinarian and after the animal is slaughtered, the meat is examined postmortem to pass distribution. Animals affected by harmless diseases are carried out only treatment, after recovery can be cut in RPH. The cleanliness of floors, walls and cutting equipment at RPH Jone is always considered.

6. Evaluation of structuring (clause 9)

a. Evaluation of structuring (clause 9.1.2)

The evaluation of the arrangement carried out by RPH is only limited to activity reports and physical and financial realization reports, as well as evaluation of policies and laws that form the basis for the implementation of activities in RPH; Related to the evaluation of undocumented environmental policies is only discussed in the annual evaluation.

7. Remedies (clause 10)

a. Continuous improvement (clause 10.3)

In general, RPH Jone always strives to support all continuous improvements by improving and implementing organizational improvements through improving slaughter services, related to all activities that have risks to environmental sustainability are also a concern, it's just not yet documented.

4. CONCLUSION

Conclusion

Based on the results of practices that have been carried out on the study of the implementation of the environmental management system at the Jone Slaughterhouse (RPH), it is known that the Jone RPH does not yet have an ISO 14001 environmental management system document, but the RPH management has committed to meet all aspects needed to obtain ISO 14001, this has been realized from the operational implementation of RPH activities which have led to several of the ISO 14001 clauses that have been documented such as organization (clause 4), Leadership (clauses 5.1, 5.3), planning (clause 6.1.3), support (clause 7.1), and performance evaluation (clause 9.1.2)

Advice

1. RPH needs to document all activities related to the environment because several things from RPH activities have led to the implementation of ISO 14001 environmental management systems,

2. RPH can coordinate with relevant agencies regarding the aspects needed to qualify for ISO 14001 environmental management system certificates.

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