

**MINISTRY OF HEALTHCARE AND SOCIAL DEVELOPMENT  
OF THE REPUBLIC OF KAZAKHSTAN**

**FRAMEWORK ENVIRONMENTAL MANAGEMENT PLAN**

**for**

**Social Health Insurance Project:**

**Improving access, quality, efficiency and financial protection**

**August 2015**

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**Abbreviations**

<b>WB</b>	World Bank
<b>WHO</b>	World Health Organization
<b>PIU</b>	Project Implementation Unit
<b>EAIHTDC</b>	European Agreement on international highway transportation of dangerous cargo
<b>SIR</b>	Sources of ionizing radiation
<b>CCRP MNE RK</b>	Committee for consumers right protection of the Ministry of National Economy of the RK
<b>CSD</b>	Carrier of safe disposal
<b>CT</b>	Coordination Team
<b>HF</b>	Health facility
<b>MHSD</b>	Ministry of Healthcare and Social Development of the RK
<b>MSSA</b>	Minimum significant specific activity
<b>UPPOP</b>	Unintentionally produced persistent organic pollutants
<b>AIE</b>	Assessment of impact on environment
<b>UN</b>	United Nations
<b>EP</b>	Environment Protection
<b>PRWD</b>	Points of Radioactive Waste Disposal

<b>PHC</b>	Primary healthcare
<b>UNDP</b>	UN development program
<b>EMP</b>	Environment management plan
<b>RW</b>	Radioactive waste
<b>RT</b>	Radioisotope tool
<b>RMP</b>	Rural Medical Post
<b>RS</b>	Rural settlement
<b>SO</b>	Specialized organizations
<b>HDW</b>	Hard domestic waste
<b>EM</b>	Environment management
<b>MDG</b>	Millennium Development Goals

## **Project Description**

The proposed project would support implementation of the National Mandatory Social Health Insurance System (SHIS) and further adjustments of the Unified National Health System to properly respond to the new population needs and requirements. The SHIS, to be fully operational by 2020, will be introduced under the Concept for Social Development of the Republic of Kazakhstan by 2030, approved by the Government of the Republic of Kazakhstan.

The proposed Project will use an Investment Project Financing instrument. All the activities have been organized in the following three components: (1) support implementation of a national mandatory social health insurance system; (2) introduce reforms to improve access, quality, and efficiency of health service delivery alongside the introduction of a national social health insurance system; and (3) project management and monitoring and evaluation. It is expected that the proposed Project would require 5 years (2016–20) to be completed, with most of the investment to be implemented in years 3, 4 and 5.

Component 1. Supporting implementation of the National Social Health Insurance System (US\$56 million). This component will support the design and implementation of the SHI system. Component activities will be divided into two subcomponents:

Subcomponent 1.1. Establishing and strengthening the organizational and institutional structure of SHI. The SHI Law is expected to be passed by Parliament in early 2016 paving the way for the roll-out of the National SHI system. The proposed SHI Law will create an entirely new set of institutions including a SHI Fund (SHIF) as well as other bodies such as the United Commission on Health Care Quality to support the implementation of SHI.

Subcomponent 1.2. Strengthening purchasing and payment arrangements under SHI. Kazakhstan has already embarked on wide-ranging purchasing reforms, including provider payment reforms which are at different stages of implementation. This sub-component will support the fine-tuning and strengthening of current reforms as well as the introduction of new reforms as needed.

This component will finance technical assistance (including twinning contracts), training, goods, services, and operational costs.

Component 2. Improving access, quality, and efficiency of health service delivery to support implementation of the new the National Social Health Insurance System (US\$132 million). This component will support the strengthening of population services, primary and secondary prevention, and first phase implementation of 16 regional master plans. Component activities will be divided in three subcomponents:

Subcomponent 2.1. Optimization of the network of rendering healthcare services. This subcomponent would support implementation of an integrated network for rendering healthcare services meeting the current and strategic needs of the population, ensuring the strengthening of public health and the continuity of health care delivery. The subcomponent would (a) facilitate the processes of strengthening public health and formation of a healthy lifestyle, and (b) support restructuring of the network of health care organizations on the basis of master plans, taking into account the priority development of primary health care (PHC)

Subcomponent 2.2: Improving the quality of healthcare services. This subcomponent would support the improvement of the quality of healthcare services and the provision of patient safety. The subcomponent is aimed at the formation of the continuity of standards and tools of quality from development to introduction in practical health care with involvement of professional associations and patients. This subcomponent will expand of the existing backlog in the accreditation of health care organizations, development of clinical guidelines/clinical protocols (CG/CP), conduct of Health Technology Assessments (HTAs), and rational use of medicines.

Subcomponent 2.3 - Development of human resources for health care. The purpose of this component is to develop an effective human resources (HR) policy for the sector, which ensures the provision of high-quality health services. This will be achieved by building the key components of the elements of medical education in accordance with the needs of the health system.

This component will finance technical assistance (including twinning contracts), training, goods, works, services, and operational costs.

Component 3. Project Management, Monitoring and Evaluation, and Communications Strategy (US\$12 million). This component aims to support a Project Management Unit (PMU) to provide day-to-day project management, including fiduciary and administrative tasks of the Project, as well as monitoring, evaluation, and reporting.

This component will finance technical assistance, communications services, goods, non-consulting services, training, auditing, and incremental operating costs.

### **Purpose of Framework Environmental Management Plan (FEMP)**

The final list of the refurbishment sites will not be available by appraisal. Therefore, environmental assessment of the project-financed activities cannot be carried out at this time. The purpose of FEMP is to provide set of instructions to Ministry of Health and Social Development engineers, consultants and contractors on how to deal with project environmental issues, and to inform the public and other interested parties about the character and the scope of expected impact of the project on the environment.

The FEMP is also to ensure that environmental concerns are duly incorporated in the project design and implementation. Framework Environmental Management Plan describes i) screening procedure and typical environmental mitigation measures for activities that involve civil works ii) step-by-step procedure for classification and disposal of the medical waste based on the international best practices and RoK regulations, and iii) step-by-step procedure for the disposal of radioactive medical equipment and materials based on the RoK Regulations.

### **The WorldBankenvironmental requirements**

#### **WorldBankSafeguards Policies**

Activitiesimplementedandfundedwithintheprojectshallcorrespondtonational standards and regulations of environment protection as well as WB environmentalsafeguards policies. WBrequiresenvironmental assessment inthecourseofnewbuildingconstructionand environmental management planning during refurbishment and reconstruction. Thoughothersafeguards policiesexcept OP/BP 4.01 «Environmental Assessment» are not

expected within the Project, the Table 1 describes 10 safeguard policies of the WB. The Government is responsible for compliance to requirements of all protective measures if they are enforced.

Table 1: WBSafeguards Policies

Protective policies	Summary information on key requirements
OP/BP 4.01 Environmental Assessment	Protection against possible negative impact, and selection of appropriate tool to assess, minimize and mitigate potentially negative impact. Only this Policy is triggered in this project.
Natural Habitats OP/BP 4.04	Refusal to finance projects where deterioration in conditions or changes in vital conditions of the region take place. Support only those projects that are indirectly affect area of smaller importance if there are no other alternatives, and all measures to mitigate negative impact are used. Not triggered
Forests OP/BP 4.36	Support for integrated approaches to fight against pests. Selection of pesticides to be funded within the Project and preparing appropriate plan for fight against pests to solve potential risk. Not triggered
Pest Management OP 4.09	Identification of local residents in the project area. Policy means the issue if potential impact can be positive or negative. Preparing measures to mitigate the impact which means benefits got by local population from cultural property situated within the project area. Not triggered
Physical Cultural Resources OP/BP 4.11	Study of existing cultural sites which can be potentially damaged. Include measures to mitigate the damage where there is a negative impact on cultural sites. Not triggered
Indigenous Peoples OP/BP 4.10	Assist migrants in improving or obtaining of, at least, the same conditions of life. Avoid resettlement, as far as possible, or reduce its scope. Migrants shall also benefits from Project activities. Not triggered
Involuntary Resettlement OP/BP 4.12	Support for stable forestry with environmental dimensions. Reject in financing projects where significant change or degeneration of important forest areas occurs. Not triggered
Safety of Dams OP/BP 4.37	In case of large dams to conduct technical review and regular safety inspections by independent professionals for dam safety. Not triggered
Projects on International Waterways OP/BP 7.50	Verify that agreement is achieved between neighboring countries and ensure that they are informed and do not object to Project activity. Not triggered
Projects in Disputed	Guarantee that claimants for disputable area do not object to construction works

Areas OP/BP 7.60	under proposed Project. Not triggered
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Note: For detailed explanation of each Safeguard Policy refer to the World Bank website, specifically, [www.worldbank.org/environment/op\\_policies.htm](http://www.worldbank.org/environment/op_policies.htm)

### **Environmental issues within the Project**

The Project plans small scale repair works for such activities as re-arrangement, destruction of internal walls, roof change and etc., which undoubtedly will bring to improving of logistic framework of PHC facilities so that there could be a possibility to provide satisfactory basic care including immunization, family planning services, feeding and monitoring of nutritional state (weight, height), pre - and after baby delivery observation, primary level of care to women, children and other categories of adult population.

Extension of constructed territory or sufficient increase of capacity is not planned however some definite rehabilitation and construction works will be evidently needed to broaden access to main municipal services including water supply, sewage and current supply. Despite the fact that sufficient increase of scope of medical waste is not planned as well as the changes in waste type and composition an assessment shall be done to identify parameters and applicability of existing objects for waste disposal.

Radioactive waste takes special meaning. Today radiotherapy remains an indispensable treatment for malignancies in humans using such radioactive nuclides as cobalt  $^{60}\text{Co}$ , cesium  $^{137}\text{Cs}$  with a wider range of harmful side effects on healthy tissues surrounding the tumor.

This type of therapy is gradually replaced by the therapy with linear accelerators which have a number of obvious advantages over the use of so-called cobalt guns and other radioisotope devices. Therefore, recycling of used radionuclides such as  $^{60}\text{Co}$  and other sources of ionizing radiation, radioisotope equipment is acquiring practical importance. Project activities may include recycling of cobalt guns and other radioisotope devices as well as radioactive nuclides like  $^{60}\text{Co}$ , cesium  $^{137}\text{Cs}$ . Disposal of radioactive medical materials will be made in accordance with the Regulations on utilization of radioactive materials of medical purpose, sources of ionizing radiation, radioisotope devices provided in Appendix 1)

### **Operations phase**

#### *Medical waste management*

Current Kazakhstan legal system dealing with medical waste disposal was established by the Ministry of Health in the form of sanitary and hygienic requirements in 2004, 2007 and 2012 years. Thanks to these actions discharge of infected waste to municipal dumps was prohibited and greatly contributed to construction of dust burning machines in regions.

Today sanitary requirements bound health facilities to divide waste into 5 categories according to their quality and risk:

Domestic waste (Class A);

Infected waste (Class B);

Highly infected waste (Class C);



Industrial / dangerous waste (Class G);

Radioactive waste (Class D).

Health facilities shall on a quarterly basis report on waste scope to local department for consumers rights protection of Committee for Consumers Rights Protection of the Ministry of National Economy of the Republic of Kazakhstan (CCRP MNE of the RK). There is data on all classes of waste, methods of their processing and treatment with them.

According to data of UN Development Program gathered in one (1) rural hospital in Arshaly, Akmola oblast, (135 beds), and two (2) specialized hospitals in Astana (360 beds) and Ust-Kamenogorsk (670 beds), surgery department of Astana clinic (180 beds) and specialized hospital in Kyzylorda (780 beds) the following was revealed: average rate of waste accumulation in hospitals using scrap sorting system by class of threat is 0,2 kg per 1 bed-day; in hospitals which do not use sorting system and/or where scrap is disinfected and immediately burned the scope of accumulated medical waste is 0,49 kg per a bed-day; in isolated infectious rooms scope of waste achieves 1,17 kg per a bed-day; all studied hospitals do not make actual weighting of domestic waste and their reports are based on rounded value and incorrect formula; estimated rate of HDW accumulation varies from 0,4 to 2,35 kg per a bed-day; chlorine is usually used for disinfection of contaminated waste which is also used to decontamination of waste for burning. Such practice leads to higher emission of UPPOP during burning process.

Basing on above one could propose that total scope of accumulated waste in the country exceeds 10000 tons annually. Thus in health facilities more than 20000 tons of domestic waste is generated.

Incineration is a dominating method for disposal of infected waste in the country. About 1176 operating objects exist there for waste burning and only 91 of them have specialized machines for it. On the other objects incineration of waste is done in ordinary pots, ovens with periodic load and muffle ovens. Incineration of medical waste in furnace room is usually done in rural clinics which have no access to scrap burning plants and/or are not financed for such services. Analytics survey of data available and visits to some specialized scrap burning plants showed that most of these objects can be treated to class of ovens of small capacity – mechanisms without a system of smoke purification. In the best case mechanisms have additional chamber for homogenous burning.

Kazakhstan legislation does not specify the standards of emission during waste incineration or any other technical conditions for such process. However as any other entity dealing with waste disposal such plant is subjected for evaluation of impact upon environment and is bounded to get permission for waste disposal prior to operating launch. Such permission supports requirements to emission of some polluting substances except UPPOP and hard metals with further payment of respective environmental duties. Nevertheless test check of pollutants is not carried out; emission from incineration mechanisms is estimated theoretically to get permission and further on could be controlled and adjusted by the owner himself. Thus, monitoring and control over emission from waste burning is almost absent. Considerable worse of environment occurs during burning of infectious waste which is conventionally disinfected by chlorine and leads to more extensive discharge of dioxin and furan; chlorine compounds are discharged also on scrap yards. Additional environmental issue arises because of official classification of residue upon domestic waste incineration and followed utilization of this residue on scrap yards not adjusted for it.

## Repair and reconstruction works phase

### *Dust, noise and obstacles from motor transport moving*

Many RMP areas situated closely to private areas of local residents, commercial offices and schools. Due to construction works access to public offices, shops, pharmacy can be temporarily limited resulting in reduce of income of their owners. Dust, noise and obstacles will effect neighboring residents and if not prevented or mitigated worsen their health. Sewage waters from soft concrete or waste water with concrete may contain a high pH level, which may have a temporary effect on ecosystem of the area. Reconstruction and construction of rural facilities and rural hospitals may lead to cutting down the trees or temporarily affect vegetation, depending on local conditions.

### *Waste disposal*

In the course of any construction work, including small-scale, accumulation of solid and liquid waste will be observed, including drywall, machine oil, paints and solvents. During construction minor leakage of fuel and other materials may occur. Improper handling of waste at construction sites and incongruous response to leaks can lead to adverse effects on local environment, including groundwater, surface waters, terrestrial ecosystems, local residents and builders. Construction works require the use of heavy equipment, which contains fuel, lubricating oils and hydraulic fluids. Spill of these compounds during construction or subsequent seepage from saturated soil can adversely affect both the terrestrial and aquatic environment.

## Mitigation measures

### *General mitigation measures*

- Reconstruction Design for the buildings should comply with state technical standards in the area of energy efficiency, water supply, sewage and medical waste management.
- Reconstruction parameters should be of such a way so that they could ensure space and instruments enough to provide care basing on planned criteria.
- To reduce energy consumption on transport local material should be used where it is possible.
- Asbestos should not be used.
- It is necessary to avoid the use of lead-based paint of low cost as well as anti-termite chemicals and other pest management measures involving the use of chemical pesticides, and besides, construction materials should be of fire-proof nature.
- Appropriate ventilation and natural light should be planned during building design process pursuant to state construction regulations.
- Design of floor and its coverages shall allow avoiding falls, sliding and retention of infectious materials.
- It is necessary to plan use of advanced methods in repair and reconstruction works including the use of environmentally clean construction materials.
- Emergency entry/exit and convenient path for patients and invalid persons should be planned.
- In case of existing archeological and religious monuments on construction site specific EMP should include all measures of environmental assessment to avoid damaging such monuments or negative impact on them.
- RMP restoration/repair should not cause additional harm to existing habitats or biodiversity of neighboring areas. Tree cutting for repair work should not be carried out without the consent of a respective authority. If a large tree is growing on the place of building then it should be protected and fenced.

### *Wastemanagementduring refurbishment works*

Priortodesignofsmallrepairworksitisnecessaryto assess scope and type of discharged hard and liquid waste. Assessmentdeterminestypeofwastecleaningandsanitarylandfill which should be established for each facility. Bankpolicydoesnotrecommendtechnology of burning for small scope of medical waste. Small incinerators do not provide long-term viable solution due to environmental pollution and health issues related to poor-operated waste incineration.

At least for the disposal of sharp things SMU should have ready pit / tanks. Assessment of location and height above ground water should be done. Tank design should prevent the use of other types of waste and must be enclosed. This design should conform to international standards (e.g. WHO). Assessment of requirements, design, and environmental issues should be clearly described in the EMP of each individual facility.

Depending on the volume of waste generated,additional treatment plant for liquid or solid wasteshall be built or installed, if necessary. Brief Review of case studies in similar countries will provide reliable and viable options that can be selected as appropriate to local conditions.

Waste Management Equipment & Supplies (sterilization, autoclaves, microwaves, grinders) must be provided in EMP of each individual facility.

To the extent possible, RMP could identify the area within its premises for collection and recycling of organic and biologically safe and potentially hazardous waste.

### *Mitigation during refurbishment works*

Dust generation is prevalent on construction sites. To reduce dust emissions, it is necessary to conduct periodic watering. In addition, temporary fences should be built along the boundary so that emissions are not exposed to direct neighbors.

Noise interference due to operation of various types of machinery and equipment during construction work can disturb others, including homes, schools, and so on. Construction should be carried out only during the day and in accordance with the time schedule permitted. If there is a school in the neighborhood, appropriate temporary barriers should be installed to reduce associated with construction noise impacts.

Construction workers and agency personnel should be provided with personal protective equipment such as helmets, gloves, safety boots and so on.

Child labor is not permitted for use in construction activity.

Construction camps for temporary construction workers should be established on construction site in accordance with local laws and regulations.

All machinery must be checked for leaks and worn hoses and connections to prevent spills. Proceduresare to be applied in case of leakage of grease, oil and fuel within the construction site.

Temporary fence of the construction siteshall be ensured to control entry\exit of transport with materials, personnel and equipment.

### *Information at construction site*

Details on Project activity, timeframe and contact address of Sub-contractors shall be placed on announcement board in buildings during construction works. Contact phone in case of emergency, feedback and complaints shall be indicated as well.

### *Waste management in healthcare facilities*

Requirements for the separation, collection and disposal of medical waste should be met. Sharp objects, needles and syringes should be disposed in boxes/containers for sharp things immediately after use and/or cuts.

After filling in the boxes, sharp objects will be thrown into the pits for sharp objects. Minor amounts of infectious medical waste (cotton, bandages, etc.) and mercury-containing waste (broken lamps, thermometers, batteries) can be thrown into a pit for sharps and waste pits, located on RMP site. It is recommended not to burn waste from plastic and/or organic waste.

Medical staff should be trained in infectious control and advanced practice in labor protection during work with sharp tools and infected waste. Containers for scrap of relevant sizes should be installed to ensure convenient utilization and preventing of multiple use. Annex 1 gives a detailed information on medical waste management within the project.

## **Environmental Management Planning**

General Objective of Environment Management Plan

(EMP)

is to serve as the tool for decision making and project procedures and duties on environment management which should be applied by MHSD and targeted RMP during Project implementation. The plan is intended to serve as a comprehensive and systematic guideline for environmental sustainability of Project activities and ensure compliance with national environmental legislation and operational policies of the World Bank on Environmental assessment, OP 4.01

EMP details the following:

- mitigation measures that should be taken into consideration during reconstruction and modernization of RMP;
- mitigation measures that should be taken into account in the activities of RMP;
- monitoring and control system

Before the start of construction works on the reconstruction on each individual RMP, MHSD of the Republic of Kazakhstan should provide an alternate location, where rural patients will be able to apply for provision of health services.

In accordance with the hygiene requirements each sub-project should have its own EMP specific to the construction site, which should be approved prior to provision of repair and construction works on the reconstruction. Measures to mitigate the impacts associated with the design and conduct of construction works should be included in the tender offer and contract documents for construction and contracting services. In addition to governmental approvals and inspections, the Project of the World Bank (WB) will also supervise and control the work on some individual sites.

### **Governing principles and capacity building**

Governing principles determining successful methods and recommendations for medical waste management should be elaborated by the MHSD. They will identify the methods which should be used by all levels of medical staff which deals with management and destroy of infected hard and soft waste. Training modules shall be developed basing on these governing principles oriented towards total staff. Trainings shall include standard procedures and procedures of emergency care in case of accidents. MHSD supported by Coordination Team shall bear responsibility for development of capacity building plan and training of all specialists at a regular basis.

For EMP implementation and monitoring training of main MHSD staff is planned. In addition to practical assistance from international experts of the WB technology transfer tools shall be used of other Projects of this area implemented in Kazakhstan.

### **Information disclosure and consultations**

MHSD published FEMP on its webpage and informed its regional departments of Project implementation area. Consultations have been carried out with correspondent ministries and institutions, international and public agencies as well as the medical staff to form feedback and draw up full and exhausting picture of FEMP. Outcomes of public consultations are set in Appendix 4.

Concerning EMP for specific facilities, consultations are carried out with stakeholders to discuss proposed design of the object, planning of schedule for repair and construction works, environment/management of ecosystems and waste disposal. Consultations shall be carried out with patients, residents, medical staff and workers, local business, local nongovernmental organizations, shops and local authorities. Mechanism of feedback should be elaborated for challenges in case of any.

MHSD shall develop plan of consultations for stakeholders regarding consultations on EMP for each individual site. The plan will include meeting with the public, local nongovernmental organizations, information campaigns, feedback mechanisms (telephone, internet), joint development of work plans, creation of Advisory Committee, etc. Such events as open door day or general meeting could also be held.

### **Implementation arrangements**

Implementation of this Project is planned by MHSD, Ministry of Energy of the RK, CCRP of MNE of the RK. Project nature requires establishing of partnership and coordination between governmental and local authorities. Buildings and structures of RMP are estimated on the balance sheet of the MHSD represented by rayon health departments and authorities at local level who are the owners of land sites where RMP are situated.

To control environmental factors during works on repair and reconstruction of buildings Checklist developed and proposed by the WB shall be used (see. Appendix 3)

### **Monitoring and supervision**

Development and approval of EMP, quality control, monitoring and supervision over execution of activities within EMP will be held by responsible units and individuals appointed upon the signing of the Agreement and approval of their functions by MHSD order.

### **Environmental expertise process: roles and duties**

All sub-projects related to reconstruction of buildings, repair works, modernization of equipment and disposal of medical and radioactive wastes will undergo process of environmental expertise.

Stage 1: Construction Engineer prepares environmental management plans or fills checklist as a part of the design documentation (Appendix 3). During informal discussion of the project with the Project Implementation Unit (PIU), the PIU assists in finalizing the plans (if necessary). At this stage the engineer should initiate discussions with government authorities in order to ensure compliance with local and national environmental assessment (e.g. for assessment of environmental impact (AEI) and (or) providing other official approvals and permits). The duties of regional health authorities and local public authorities responsible for construction work include obtaining necessary permits and licenses required by national legislation to speed up the process of registration in the bodies of environmental control. These requirements are considered separate, but parallel to the requirements presented in this document.

Stage 2: PIU analyses presented Plans and permits and informs construction engineer on its conclusions. Its outcomes of analysis are recognized as satisfactory. PIU provides Plan agreement procedures and shifts to consultation for information disclosing (see previous sections).

If work of medical and radioactive waste disposing occurs, PIU notifies the World Bank on quality of report on the results of comprehensive environmental review.

Stage 3: construction engineer takes into consideration recommendations received during analysis, in his plan for work development and execution (including estimated costs related to its implementation).

Stage 4: PIU finalizes package of documentation for the works, including the relevant environmental documentation. Checklist of questions for Plan for Environment Protection for projects for reconstruction of laboratories and other buildings of research centers will be part of the tender documentation of the Contractor and Chief Engineer.

Stage 5: Construction engineer provides monitoring of implementation of Plan for Environment Protection (if required) and informs PIU. PIU reports on Plan implementation through regular Project progress reports and by the demand of the Bank.

Preliminary analysis and analysis upon completion - World Bank / Project Implementation Unit. Procedures for environmental assessment and examination will be analyzed as required by supervision missions of PIU and the World Bank. The World Bank will check preliminary analysis and design of all sub-projects requiring preparation of the Plan of Environmental protection, as well as sub-projects related to disposal of medical and radioactive waste. In this regard, total documentation on environment issues, subject to prior analysis, will be prepared in English and local language. Analysis of the results of evaluation will enforce the work in satisfactory manner, participation of the public (when necessary), making necessary recommendations, appropriate archiving and records of all documentation, and coordination of conditions imposed by environment supervising bodies. During preparation and implementation of the Project PIU together with Bank representatives will monitor the whole process of pre-assessment and implementation of environmental recommendations for sub-projects. PIU and WB team will also carry out analysis (as appropriate) of environmental documentation. Accordingly, health departments and facilities shall keep such documentation and, if necessary, to direct it to PIU.

**Contracts**

Contracts and invoices will include provisions for appropriate disposal of unacceptable construction materials and construction waste. Procurement documents will indicate that the use of environmentally unacceptable materials is not allowed. Tender documentation will include restoration of adequate sanitary facilities, including disposal of waste water and sewage. Checklist and Plan of EP should be given to contractors performing construction work within the Project, and should be an integral part of construction contracts.

Report on the results of monitoring, prepared by the Object Inspector, will be the basis for payment of full amount of remuneration set by the contract, as well as the results of analysis for compliance with criteria for technical quality or quantity. To ensure sufficient level of performance of contractor's environmental commitments, contracts for performance of work will include relevant provisions laying down penalties in case of failure to perform environmental requirements of the contract, for example as retention of a certain part of payment, the amount of which will depend on the severity of violation.

**Budget**

The Government of Kazakhstan will provide a part of the Republican and local budgets for the management of small-scale repairs and implementation of components of project management, for implementation of this plan FEMP will contribute to institutional mechanisms of control and supervision that will include hiring of local consultants for construction /engineering and rational management of natural resources. Project evaluation by independent third party will be held until the completion of the project. For provision of this assessment, Project funds will also be allocated within the Project.

## Annex 1 Medical waste management

According to Code of the Republic of Kazakhstan as of September 18, 2009 «on population health and health care system» sanitary rules have been developed «Sanitary and epidemiological requirements to health facilities» (Sanitary rules) which set sanitary and epidemiological requirements to health facilities (Decree of the GoK as of January 17, 2012, № 87 on approved sanitary rules «Sanitary and epidemiological requirements to health facilities», order of acting Minister of National Economy of the RK as of February 24, 2015, № 127 «on approval of sanitary rules "Sanitary and epidemiological requirements to health facilities"».

Current Sanitary rules contain sanitary and epidemiological requirements to health facilities during:

- 1) selection of land site for construction;
- 2) design, construction, reconstruction;
- 3) maintenance of rooms and equipment;
- 4) collection, disinfection, transportation, storage and burial of medical waste;
- 5) organization of patient meals and labor conditions for medical staff;
- 6) provision of sterilization and disinfection of medical devices;
- 7) arranging and performance of sanitary and epidemiological requirements activities.

Sanitary rules have been developed and approved by Decree of the GoK as of March 6, 2012 № 291 "On Approval of Sanitary Rules" Sanitary epidemiological for collection, use, application, processing, transportation, storage and disposal of production and consumption waste". These Sanitary Rules establish sanitary and epidemiological requirements for collection, use, application, processing, transportation, storage and disposal of production and consumption waste at production facilities, hard domestic waste and waste from health care facilities.

In industrial facilities collection and temporary storage (location) of production waste is carried out in special industrial areas, corresponding to the level of hazard of waste. Waste as far as it is accumulated collected into container designed for each group of waste in accordance with the class of danger.

By degree of risk production waste is divided into four classes of hazard:

I class of hazard – extremely hazardous waste;

II class of hazard – highly hazardous waste;

III class of hazard – waste of moderate hazard;

IV class of hazard – low-hazard waste.



Construction wastes relate to hazard class IV: Construction soil, waste from concrete, mortar, brick fight, waste of ceramic products, adobe, clay, etc. Production waste of hazard class IV can be kept open at the industrial site in the form of a cone-shaped pile, where from they were transferred to a truck and delivered by vehicles to the place of recycling or disposal. These wastes may be combined with household waste at disposal sites or use as insulating material or leveling of the area. For disinfection of production waste(III-IV class of hazard)it may be co-processed with household waste at respective plants and storing at the landfill of HDW and used as an insulating material.

According to WHO, proportion of laboratory studies is 75-90% of total number of all types of research conducted in hospitals to sick person. At the same time, according to WHO data in the total amount of waste generated as a result of medical activity, approximately 80% are normal trash. The rest 20% are considered as hazardous medical materials which could be infected, toxic or radioactive.

Waste generated in healthcare facilities are of diverse composition. They contain agents of infections or substances with hazardous properties. They are used bandages, disposable syringes, infusion sets, gloves, gowns, x-ray films, infectious waste from kitchens, infected blood, skin grafts, excision of organs. Medical waste could be also overdue, counterfeit and confiscated drugs; infectious waste is wastecontaminated by blood and blood products, cultures and stocks of infectious agents, waste of patients in isolated wards, removable diagnostic samples containing blood, urine and other body fluids and contaminated materials (swabs and bandages) and equipment (such as disposable medical devices); pathological waste is identifiable parts of the body; sharps waste is syringes, needles, disposable scalpels and blades, etc.; radioactive waste: such as glassware contaminated with radioactive diagnostic material or radiotherapeutic materials; waste from heavy metals such as mercury of broken thermometers.

By the degree of hazard medical waste is divided into five classes of hazard:

Class A– nonhazardous medical waste like HDW;

Class B –dangerous (risky) medical waste;

Class C –extremely dangerous medical waste;

Class G –medical waste by composition close to industrial ones;

Class D – radioactive medical waste.

Collection, reception and transportation of medical waste is carried out in disposable bags, containers, carriers for safe disposal (CSD).For each class of medical waste containers, bags and packages for waste collection should have different color (marking). Container construction should be watertight to avoid possible contact with the contents.

It is not allowed to ram down medical waste by hands and collect and examine medical waste without individual protective gear (IPG).

Medical waste of class B is disinfected in special machines.

Used sharp things (needles, pens, razors, ampoules) are accepted in CSD which are subject for utilization without examination.

Organic waste from operation departments (organs, tissues) of non-infectious patients are subjected for burying in designated areas of cemeteries.

Used fluorescent lamps, mercury-containing devices and equipment are transported and stored in airtight containers to prevent breaks during storage and transportation.

Products of medical waste incineration or ash are removed as waste of class A.

Disposal of medical waste of class G is carried out at landfills for toxic waste.

Transportation of medical waste is allowed on a vehicle equipped with a waterproof closed body which is easily disinfected in case of transport sanitary-epidemiological conclusion of State authority in the field of sanitary and epidemiological welfare of the population of the Republic of Kazakhstan.

After unloading of medical waste vehicle should be washed and disinfected, cleaned.

Burning of medical waste is not permitted on the territory of objects and settlements outside the specialized units.

Neutralization by thermal way (burning) of medical waste - is carried out by thermal impact on medical waste at a temperature not lower than 800-1000°C.

Medical waste are accepted for disposal if it is accompanied by certificate indicating the class and the amount of waste, signed by the head (person in charge) of health facility.

Receiving medical waste is carried in packaged form with recording of qualitative and quantitative records in a special register.

Special plants for disposal of medical waste must be placed and operated according to the manufacturer's technical documentation.

Room for sorting and temporary storage of medical waste must have the area of not less than 12 m<sup>2</sup> and equipped with ventilation system, refrigeration equipment for storage of biological waste, racks, containers to collect packages of medical waste, weights, sink with hot and cold water, germicidal lamp. In each room conditions are created for cleaning, disinfection and storage of tanks. Separate working closes for staff is provided.

The floor, walls, ceiling of space for temporary storage of medical waste is made of materials resistant to detergents and disinfectants.

Beside main rooms space is given for staff of at least 6 m<sup>2</sup>, pantry for cleaning tools, cleaning and disinfection substances of at least 4 m<sup>2</sup>, washing of containers.

Room for washing is equipped with connected hot and cold water or with floor descent. To comply with the rules of personal hygiene sink with running cold and hot water is set equipped with facilities for washing and drying hands.

Top-management of health facility provides preliminary (at employment stage) and periodic medical examinations. Personal medical records of employees are kept in the workplace.

The burial place of medical waste complies with the following conditions of personal hygiene:

- 1) The work is carried out in protective masks, screens, disposable rubber, latex gloves;
- 2) Not permitted smoking and food intake in the workplace;
- 3) The work is carried out in special clothing;
- 4) Storage of personal and special clothes is made in cabinets.

By the Order of the Minister National Economy of the RK “on approval of sanitary rules “Sanitary and epidemiological requirements for collection, use, application, processing, transportation, storage and disposal of production and consumption waste” as of 28.02.2015 №176 sanitary rules are approved governing the sanitary-epidemiological requirements for collection, use, application, storage, handling, transportation, storage and disposal of production and consumption waste at production facilities, solid and medical waste.

By the order of acting Minister of National Economy of the RK «on approval of sanitary rules "Sanitary and epidemiological requirements to radioactive security” as of 24.03.2015, № 261sanitary rules "Sanitary and epidemiological requirements to radioactive security” are approved.

As the institutions established within the Project are the PHC facilities the project will provide support for small-scale construction works such as the repair of medical and administrative buildings (redevelopment, demolition of internal walls, roof replacement, and so on.)

The project will also support the Ministry of Healthcare and Social Development of the Republic of Kazakhstan to initiate political dialogue with the other ministries to develop solid policy framework in healthcare, waste management and occupational safety.

## **Annex 2 Instructions for disposal of radioactive materials for medical purposes, sources of ionizing radiation, radioisotope devices.**

In accordance with the Order of the Acting Minister of National Economy of the Republic of Kazakhstan "On approval of the Sanitary Rules "Sanitary epidemiological requirements for radiation safety" of 27.03.2015 № 261 sanitary rules "Sanitary epidemiological requirements for radiation safety" have been approved establishing sanitary-epidemiological requirements to ensure radiation safety during selection of the land, during the design, commissioning and maintenance of radiation facilities, decommissioning of radiation facilities, handling of the sources of ionizing radiation (closed and open radioactive sources, radioactive substances, radioisotope devices, devices that generate ionizing radiation), radioactive waste management, use of materials and products contaminated with or containing radionuclides, production radiation monitoring at the facilities, including oil and gas complex and metal waste, the use of personal protective equipment and personal hygiene, during medical exposure, during exposure of natural sources of radiation and radiation accidents.

According to the degree of hazard the waste products are divided into four classes of hazard:

class I - extremely hazardous wastes;

class II - highly hazardous waste;

class III - moderately hazardous waste;

class IV - low hazardous waste.

Medical waste are divided into five classes of hazard:

Class A - non-hazardous medical waste, such as hard domestic waste;

Class B - hazardous medical waste;

Class C - extremely hazardous medical waste;

Class G - medical waste, the composition is close to the industry;

Class D - radioactive medical waste.

Radioactive medical waste includes all types of waste containing radioactive components. The collection, storage, class D waste disposal is carried out in accordance with the rules of working with radioactive substances and other sources of ionizing radiation, radiation safety standards, and other applicable regulations, which regulate the handling of radioactive materials.

Places of generation:

Diagnostic laboratories (departments);

Radioisotope laboratory and X-ray rooms.

-cancer facilities (radiotherapy department, etc)

The collection, temporary storage, transportation and disposal of radioactive waste on the territory of the Republic of Kazakhstan has been carried out in accordance with the above Article 10 of the sanitary rules:

10. Sanitary Epidemiological Requirements for the collection, temporary storage, transportation and disposal of radioactive waste

199. Radioactive waste have resulted from commissioning and decommissioning of nuclear fuel cycle facilities, nuclear power plants, ships with nuclear power plants and other radiation sources; the use of radioactive substances in the production, research organizations, and medicine; in the rehabilitation of territories contaminated by radioactive substances and in the radiation accidents.

200. Based on aggregate state theradioactive waste are divided into liquid, solid and gaseous.

201. The liquid waste isreferred to any radioactive liquids, solutions of organic and inorganic substances,pulp, sludge which is not subject to further use. The liquid waste is consideredas radioactive if radionuclide specific activity is 10 times greater the value of the intervention levels (Bq/kg), given in hygienic standards.

202. Solid waste includes radionuclide sources which spent their resource and also materials, products, equipment and biological objects, contaminated objects of the environment, cured liquid waste not intended for further use and in which specific activity of radionuclides exceeds the value of the minimum significant specific activity(Bq/kgandBq) given in hygienic standards.

203. With the known radionuclide content in the waste they are considered as radioactive, if the sum of a ratio of specific activity of radionuclides Bq/kg to their minimumsignificant activity and the sum of the ratios of their activity Bqto the minimum significant specific activity is greater than 1.

204. When an unknown radionuclide composition solid waste is considered radioactive if their specific activity is more than:

- 1) 100 kBq / kg - for beta-emitting radionuclides;
- 2) 10 kBq / kg - for sources of alpha-emitting radionuclides;
- 3) 1 kBq / kg - for transuranic radionuclides.

205. Gamma emitting waste of unknown composition are considered radioactive if the equivalent dose rate at their surface (0.1 m) is higher than 0.001 mSv / h above the background provided measurement conditions are in accordance with approved procedures.

206. Liquid and solid radioactive waste areclassified according to the specific activity into three categories in accordance with Table 4 of Annex 4 to the Sanitary Rules.

207. If based on the characteristics of the radionuclides listed in Table 4 Annex 4 to the present sanitary regulations the waste may be referred to different categories, the highest value of the waste category is affixed to them.

208. For the pre-sorting of solid waste it is recommended to use criteria in terms of radioactive contamination in accordance with Table 5 of Annex 4 to the Sanitary Rules and dose rate of gamma radiation at a distance of 0.1 m from the surface provided the measurement conditions are in accordance with the approved methods:

- 1) low level - 0.001 m Sv / h to 0.3 m Sv / h;
- 2) intermediate level - 0.3 m Sv / h to 10 m Sv / h;
- 3) high-level - more than 10 m Sv / h.

209. Collection of radioactive waste in the organization is made in places of their accumulation separately from ordinary waste, taking into account:

- 1) the waste category;
- 2) the state of aggregation (solid, liquid);
- 3) The physical and chemical characteristics;
- 4) the nature (organic, inorganic);
- 5) period of half-life of radionuclides which are present in the waste (with a half-life period of hours, days, months, years, decades or longer period);
- 6) explosion and flammability;
- 7) accepted methods of recycling.

Radionuclide waste in the organization shall be transformed into physical, chemical- and bio-inert state.

It is not allowed to mix radioactive and non-radioactive waste and radioactive waste of different categories in order to reduce their specific activity.

210. In order to collect waste in the organization special collecting containers are provided. For primary collection of solid radionuclide waste plastic or paper bags can be used, which are then loaded into the collecting container. The bags made of polymer films may be mechanically strong, resistant to a maximum low temperature and have a cord for tightening the top of the bag after its filling. When placing the waste into the bags in all cases measures shall be taken to prevent the possibility of mechanical damage by sharp, piercing and cutting items. Filling the radionuclide waste collecting container shall be carried out according to radiation control in the conditions precluding the possibility of scattering and spillage.

211. Liquid radionuclide waste is collected in special containers. In the organization, which generate liquid radioactive waste, it is recommended to translate them into the solid state. For small quantities of liquid radioactive waste (less than 200 liters / day), they are sent to storage or processing to the specialized organizations (SPO). In organizations where it is possible to have the formation of a significant amount of liquid radioactive waste (over 200 l / day), the project provides special sewage system. The special sewage is not provided for dumping of non-radioactive effluents.

212. It is not allowed to discharge of liquid radionuclide waste into surface and ground water facilities, in the catchment area, and in the depths of the soil.

213. Short-lived waste, the decay time of radionuclides is less than one year to get a value below the minimum significant specific activity, may be temporarily stored in the organization without referral for burial with follow-up treatment as non-radioactive waste.

214. Temporary storage of radioactive waste of different categories in the organization is carried out in separate rooms, or on a dedicated section equipped in accordance with the requirements for premises for work of not less than class II. It is not allowed to store in the organizations over the period provided for the project, unconditioned radioactive waste and spent sources of ionizing radiation.

215. Temporary storage of containers with radioactive waste containing radioactive substances emanating (radium, thorium and others.) shall be carried out in a fume hood or shelters equipped with exhaust ventilation system with the speed of air flow in the working hoods openings of at least 1.5 m / s.

216. For transporting radionuclide waste from their temporary storage sites to specialized organizations special transport containers are used. The design for low active waste containers allows manual loading and unloading of radionuclide waste packages. Loading and unloading of medium and high radionuclide waste shall be mechanized.

217. Radioactive waste containing radionuclides with half-life period of less than 15 days, shall be collected separately from other waste and are kept in temporary storage sites to reduce the activity to levels not exceeding 10 intervention level  $i$  for liquid and minimum significant specific activity for solid radioactive waste. Following such storage, the solid waste is disposed as ordinary industrial waste, and liquid waste can be used by the organization in the system of economic and technical water supply or discharge into the public sewage system. Discharge of liquid waste into waterways is allowed (with the exception of fish and ponds for household purposes), provided they do not exceed the radionuclide specific activity values.

218. Period of storing radioactive waste containing large amounts of organic matter (the bodies of experimental animals, etc.) should not exceed 5 days if the storage conditions (exposure) in refrigeration systems, or in respective solutions are not provided.

219. Responsible for organizing the collection, storage and delivery of radioactive waste is appointed by the order of the organization executive officers.

The person in charge shall maintain systematic monitoring and accounting for the collection, temporary storage and preparation for disposal of radioactive waste generated during operation. This information shall be entered in the register of radioactive waste in the form of standard document.

220. At least once a year the Commission, appointed by the administration of the organization, shall check the correctness of the accounting the amount of waste, released to a specialized organization for disposal, as well as amount of waste being kept in the organization.

221. Requirements for transportation, conditioning, processing and disposal of radioactive waste are regulated by separate sanitary rules

Accounting of sources of ionizing radiation (hereinafter - SIR) shall be conducted by territorial divisions of the state body in the sphere of sanitary and epidemiological welfare of the population.

The decision to extend the life of the SIR or the decommissioning shall be adopted upon a comprehensive survey of the commission of radiation and technical condition of the equipment and technological systems, structures and adjoining territory. According to the Chapter 5 "Sanitary epidemiological requirements for decommissioning of radiation facilities" para. 82.SanRules:

82. The decision to extend the life period of commissioning or decommissioning of radiation facility (radiation source), as well as selection of its option shall be taken upon a comprehensive survey of radiation and technical condition of the equipment and technological systems, structures and adjoining territory.

The commission includes representatives of the administration of the organization, who use SIR, the controlling bodies of state supervision over radiation safety, specialized organization with a license for the provision of technical inspection of ionizing radiation sources in the field of nuclear energy use, and if necessary, representatives of organization- manufacturer of SIR.

Finally, the Commission has determined:

- 1) the conditions and timetable for the use of radiation sources (life extension), or
- 2) temporary or long-term disposal.

Radionuclide radiation sources and radioisotope devices which shall not be used may be stored at the plant for not more than 6 months. During this period, the operating organization carries out activities on further disposal in areas of radioactive waste disposal, in the prescribed manner, in accordance with paragraph. 88 SanRules:

88. Radionuclide radiation sources with the expired life period, as well as radioactive sources of radiation, which are no longer needed to be used or which in the future cannot be exploited, are treated as radioactive waste and be transferred to specialized organizations for long-term storage (disposal) in the prescribed manner.

An issue of a possible extension of life period of radiation sources shall be solved by the commission composed of the representatives of the organization, that uses a radiation source, and of the state supervising bodies on radiation safety, and if necessary, of the representatives of the manufacturer.

In the Commission's conclusion the following shall be determined: possibility, terms and period for further use of the radiation source. Technical examination of the source has been carried out by a specialized organization licensed to provide services in the field of nuclear energy.

Radioactive sources of radiation and radioisotope devices which were not used can be stored at the plant for not more than 6 months.

Upon termination of work with sources of radiation the administration of the organization shall inform the agency of the state body in the sphere of sanitary and epidemiological well-being of the population and the competent authority in the field of nuclear energy.

Sources of radiation can be removed from the register in the organization only after the actual transfer to another organization or transfer for disposal or dismantling and write-off under the act (for facilities generating ionizing



radiation). A corresponding entry shall be done in the credit and debit journal. Credit and debit journals are stored in the organization for 10 years.

In the case of liquidation of the organization, all radiation sources, kept in the account shall be transferred to another organization or radioactive sources are transferred for disposal and the facility generating ionizing radiation, shall be dismantled and written off by the act, before the start of the liquidation procedure.

Information about that shall be sent to the territorial subdivisions of the department of the state body in the field of sanitary and epidemiological well-being of the population and the competent authority in the field of nuclear energy.

The act is made by the organization based on the resolution of the commission to transfer to another organization, to transfer for disposal, to dismantle, to write off SIR and may be removed from the register of the organization according to para. 69 SanRules:

69. Use of radionuclides used in the open view, shall be regulated by internal regulations composed by work executives with participation of individuals responsible for registration and storage of radiation sources and production radiation control. Acts on usage and write-off of radionuclide radiation sources shall be approved by the Administration of the organization in compliance with Appendix 9 to these sanitary rules.

Terms of temporary storage and transportation of radionuclides, SIR shall be conducted in accordance with paragraphs 70-80 SanRules:

70. Each year, during the period from 1 to December 30, the commission appointed by the head of the organization, makes an inventory of radioactive substances, radioisotope devices, machines, installations.

The composition of the inventory commission includes individuals responsible for the accounting, storage, as well as representatives of the administration and accounting department.

With a large amount of work for simultaneous inventory of the various divisions of the organization, having sources of radiation, at the discretion of the Administration, working inventory commissions have been established.

Inventory commission shall:

- 1) Check the availability of supporting documents on radiation sources (passports, certificates);
- 2) Carry out verification of records about the characteristics of the radiation sources in the receipts and payments journals with the data indicated in the supporting documents (passports, certificates);
- 3) Check the actual availability of radiation sources in the places of use (installation) and / or storage and compliance of the data received with the entries in the receipts and payments journals and accounting data;
- 4) Carry out validation of accounting and records in the receipts and payments journals upon receipt, use, transfer, and moving sources of radiation during work performance;
- 5) Carry out verification of map schemes according to the actual location of radionuclide sources placed in the storage (safe), of the hospital for installed radioisotope devices. In the event of discrepancies the map scheme shall be amended accordingly.

6) As a result of the inventory of radiation sources, the Commission draws up an inventory Act, signed by all members of the inventory commission and sealed by the head of the organization.

7) In case of found non-compliance of the recorded data with the actual number of radiation sources or their use for purposes other than authorized activities of the organization, the administration has carried out an internal investigation.

8) Within 10 days upon preparing the materials of the official investigation shall be sent to the territorial division of the department of the state body in the sphere of sanitary and epidemiological well-being of the population.

9) The extraordinary inventory shall be carried out in cases of changing the legal form of organization, its liquidation or reorganization, a complete cessation of work with sources of radiation, in property leasing, buy out, sale, establishing the fact of theft, unsanctioned exposure on point (places) of location or storage of radiation sources, upon liquidation of consequences of emergency situations.

71. Storage and transportation of radiation sources shall be carried out based on the principle of uniformity of substances and materials subject to the requirements of existing standards.

72. Sources of radiation that are not in operation are stored in designated areas or in equipped storage facilities to ensure their safety and preventing any access of unauthorized persons to them. The activity of radionuclides being in storage must not exceed the values given in the conclusion.

73. A conclusion of compliance with working with the sources of radiation (physical factors of human exposure) with the requirements of hygiene standards shall be issued for temporary storage facilities of radiation sources located outside the territory of organization, including for gamma flaw detection apparatus used in the field work. The dose rate on the external surface of such facility or a fence, preventing access by unauthorized persons, shall not exceed 1.0 mc Sv / h.

Temporary storage of packages containing radioactive material in open areas and public transport organizations warehouses is allowed if conclusion is available.

74. Specially equipped storage facilities are located at the lower elevations of the building (uncovered basement, first floor).

75. Finishing and equipment of the storage space for storing open radiation sources shall correspond to the requirements for premises for the relevant class of work, but not lower than class II.

76. Arrangements for the storage of radionuclide radiation sources (niches, wells, safes) are constructed so that when placing or removing individual sources of radiation the personnel shall not be exposed to radiation from other radiation sources. Doors of section and packages with radioactive substances (containers) are easy to open and have a clear marking of the name of the radionuclide and its activity. Glass containers containing radioactive liquid shall be placed in a metal or plastic packages.

77. Radionuclides in storage of which radioactive gases, vapors or aerosols can be released, are stored in closed vessels made of fireproof materials, with a tap of gases formed in fume cupboards, boxes, cameras with treatment filters on ventilation systems. The storage is equipped with a round the clock running exhaust ventilation.

When storing radioactive substances with high activity a cooling system is provided. When storing fissile materials nuclear safety measures shall be provided. When storing flammable or explosive materials, measures to ensure their explosion and fire safety shall be provided.

78. Transportation of radionuclide radiation sources inside the premises as well as on the territory of the organization shall be carried out in containers and packages on special vehicles, taking into account the physical condition of the radiation sources, their activity, radiation type, size and weight of the package, meeting safety conditions.

79. Vehicles specially designed for the transport of radioactive substances and nuclear materials outside the organization boundaries, a conclusion authorizing transportation of radioactive substances and nuclear materials, equipment and facilities with radiation sources and radioactive waste shall be issued, which is filled out according to the instructions given in Annex 10 to these Sanitary rules.

80. The basis for the issuance of the conclusion is the act of acceptance into service of a vehicle or an act of sanitary survey of operated vehicle.

Vehicles used for transportation of radiation sources, are equipped with signs of cargo radiation danger, as well as signal colors, in accordance with requirements of existing standards.

In the event of termination of activity with SIR or liquidation of the organization, the administration shall inform the agency of the state body in the sphere of sanitary and epidemiological well-being of the population and the competent authority in the field of nuclear energy. In this case all sources of ionizing radiation recorded, shall be transferred to another organization or sent for disposal or recycling.

### **Annex 3. Checklist environmental management Plan for small reconstruction and rehabilitation**

Checklist environmental management plan (EMP)

Checklist is applied for minor reconstruction and small scale building construction especially in education, healthcare and public utilities sectors. The checklist is provided for pragmatic good practice and it is designed to be user friendly and compatible with WB safeguard requirements. The checklist-type format attempts to cover typical mitigation approaches to common civil works contracts with localized impacts.

The checklist has one introduction section and three main parts:

- Introduction or foreword part in which the project is introduced, environmental category defined, and checklist EMP concept explained.
- Part 1 constitutes a descriptive part (“site passport”) that describes the project specifics in terms of physical location, the institutional and legislative aspects, the project description, inclusive of the need for a capacity building program and description of the public consultation process.
- Part 2 includes the environmental and social screening in a simple Yes/No format followed by mitigation measures for any given activity.
- Part 3 is a monitoring plan for activities during project construction and implementation. It retains the same format required for standard World Bank EMPs in Appendix 1. It is the intention of this checklist that Part 2 and Part 3 be included as bidding documents for contractors.

Table of contents :

General project and construction site information

Information on ensuring safety measures

Information on mitigation measures

Monitoring plan

## Part A: General project and construction site information

Constriction site description	
Site name	
Location description	Appendix 1: Site map <input type="checkbox"/> Y <input type="checkbox"/> N
Who own the land?	
Description of geographic, physical, biological, geological, hydrographical and social economic condition of the site	
Location and distance from material procurement point, particularly, water stone etc. collection places?	
Legislation	
Describe state/local laws/permits which shall be applied toward the activity related to project implementation	
Public consultations	
Identify when / where the public consultation process took place	
Institutional capacity building	
Will there be any capacity building?	<input type="checkbox"/> N or <input type="checkbox"/> Y if Yes, Attachment 2 includes the capacity building program

PART B: Information on ensuring safety measures

Environmental/social screening			
	Activity	Status	Initiated activities
Will the site activity include/involve any of the following?	Buildingrehabilitation	<input type="checkbox"/> Yes <input type="checkbox"/> No	See Section«A» below
	Newconstruction	<input type="checkbox"/> Yes <input type="checkbox"/> No	See Section«A» below
	Individualwastewatertreatmentsystem	<input type="checkbox"/> Yes <input type="checkbox"/> No	See Section«B» below
	Historic building(s) and districts	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Possible	See Section«C» below
	Acquisitionofland <sup>1</sup>	<input type="checkbox"/> Yes <input type="checkbox"/> No	See Section«D» below
	Hazardousortoxicmaterials <sup>2</sup>	<input type="checkbox"/> Yes <input type="checkbox"/> No	See Section«F» below
	Impacts on forests and/or protected areas	<input type="checkbox"/> Yes <input type="checkbox"/> No	See Section«F» below
	Handling / management of medical waste	<input type="checkbox"/> Yes <input type="checkbox"/> No	See Section«G» below
	TrafficandPedestrianSafety	<input type="checkbox"/> Yes <input type="checkbox"/> No	See Section«H» below

<sup>1</sup> Land acquisitions includes displacement of people, change of livelihood encroachment on private property this is to land that is purchased/transferred and affects people who are living and/or squatters and/or operate a business (kiosks) on land that is being acquired.

<sup>2</sup> Toxic / hazardous material includes and is not limited to asbestos, toxic paints, removal of lead paint, etc.

PartC: Information on mitigation measures

ACTIVITY	PARAMETER	MITIGATION MEASURES CHECKLIST
0. GeneralConditions	NotificationandWorkerSafety	<p>The local construction and environment inspectorates and communities have been notified of upcoming activities</p> <p>The public has been notified of the works through appropriate notification in the media and/or at publicly accessible sites (including the site of the works)</p> <p>All legally required permits have been acquired for construction and/or rehabilitation</p> <p>All work will be carried out in a safe and disciplined manner designed to minimize impacts on neighboring residents and environment.</p> <p>Workers' PPE will comply with international good practice (always hardhats, as needed masks and safety glasses, harnesses and safety boots)</p> <p>Appropriate signposting of the sites will inform workers of key rules and regulations to follow.</p>
General Rehabilitation and /or Construction Activities	AirQuality	<p>During interior demolition use debris-chutes above the first floor</p> <p>Keep demolition debris in controlled area and spray with water mist to reduce debris dust</p> <p>Suppress dust during pneumatic drilling/wall destruction by ongoing water spraying and/or installing dust screen enclosures at site</p> <p>Keep surrounding environment (sidewalks, roads) free of debris to minimize dust</p> <p>There will be no open burning of construction / waste material at the site</p> <p>There will be no excessive idling of construction vehicles at sites.</p>
	Noise	<p>Construction noise will be limited to restricted times agreed to in the permit</p> <p>During operations the engine covers of generators, air compressors and other powered mechanical equipment</p>



		should be closed, and equipment placed as far away from residential areas as possible
	WaterQuality	The site will establish appropriate erosion and sediment control measures such as e.g. hay bales and / or silt fences to prevent sediment from moving off site and causing excessive turbidity in nearby streams and rivers.
	Wastemanagement	<p>Waste collection and disposal pathways and sites will be identified for all major waste types expected from demolition and construction activities.</p> <p>Mineral construction and demolition wastes will be separated from general refuse, organic, liquid and chemical wastes by on-site sorting and stored in appropriate containers.</p> <p>Construction waste will be collected and disposed properly by licensed collectors</p> <p>The records of waste disposal will be maintained as proof for proper management as designed.</p> <p>Whenever feasible the contractor will reuse and recycle appropriate and viable materials (except asbestos)</p>
Individual wastewater treatment system	WaterQuality	<p>The approach to handling sanitary wastes and wastewater from building sites (installation or reconstruction) must be approved by the local authorities</p> <p>Before being discharged into receiving waters, effluents from individual wastewater systems must be treated in order to meet the minimal quality criteria set out by national guidelines on effluent quality and wastewater treatment</p> <p>Monitoring of new wastewater systems (before/after) will be carried out</p>
Historicbuilding(s)	CulturalHeritage	<p>If the building is a designated historic structure, very close to such a structure, or located in a designated historic district, notify and obtain approval/permits from local authorities and address all construction activities in line with local and national legislation</p> <p>Ensure that provisions are put in place so that artifacts or other possible “chance finds” encountered in</p>

		excavation or construction are noted, officials contacted, and works activities delayed or modified to account for such finds.
Acquisition of land	Land Acquisition plan/Framework	<p>If expropriation of land was not expected and is required, or if loss of access to income of legal or illegal users of land was not expected but may occur, that the bank task Team Leader is consulted.</p> <p>The approved Land Acquisition Plan/Framework (if required by the project) will be implemented</p>
Toxic Materials	Asbestos management	<p>If asbestos is located on the project site, mark clearly as hazardous material</p> <p>When possible the asbestos will be appropriately contained and sealed to minimize exposure</p> <p>The asbestos prior to removal (if removal is necessary) will be treated with a wetting agent to minimize asbestos dust</p> <p>Asbestos will be handled and disposed by skilled &amp; experienced professionals</p> <p>If asbestos material is to be stored temporarily, the wastes should be securely enclosed inside closed containments and marked appropriately</p> <p>The removed asbestos will not be reused</p>
	Toxic / hazardous waste management	<p>Temporarily storage on site of all hazardous or toxic substances will be in safe containers labeled with details of composition, properties and handling information</p> <p>The containers of hazardous substances should be placed in an leak-proof container to prevent spillage and leaching</p> <p>The wastes are transported by specially licensed carriers and disposed in a licensed facility.</p> <p>Paints with toxic ingredients or solvents or lead-based paints will not be used</p>
Affects forests and/or protected areas	Protection	All recognized natural habitats and protected areas in the immediate vicinity of the activity will not be damaged or exploited, all staff will be strictly prohibited from hunting, foraging, logging or other damaging activities.

		<p>For large trees in the vicinity of the activity, mark and cordon off with a fence large trees and protect root system and avoid any damage to the trees</p> <p>Adjacent wetlands and streams will be protected, from construction site run-off, with appropriate erosion and sediment control feature to include by not limited to hay bales, silt fences</p> <p>There will be no unlicensed borrow pits, quarries or waste dumps in adjacent areas, especially not in protected areas.</p>
Disposal of medical waste (not applicable)	Infrastructure for medical waste management	<p>In compliance with national regulations the contractor will insure that newly constructed and/or rehabilitated health care facilities include sufficient infrastructure for medical waste handling and disposal; this includes and not limited to:</p> <p>Special facilities for segregated healthcare waste (including soiled instruments “sharps”, and human tissue or fluids) from other waste disposal; and</p> <p>Appropriate storage facilities for medical waste are in place; and</p> <p>If the activity includes facility-based treatment, appropriate disposal options are in place and operational</p>
Traffic and Pedestrian Safety	Direct or indirect harm to public transportation and pedestrians, resulted from construction activity	<p>In accordance with state regulations, the contractor must provide reliable protection of the site of the construction works, as well as traffic control for vehicles involved in construction. The complex of measures includes, but is not limited to the following:</p> <p>Placing signs, warning signs, barriers and detour route signs: location of the facility must be clearly visible, and people should be informed about the possible danger due to construction activities.</p> <p>The traffic management system device and training of personnel, particularly at the entrance to the facility and at the site of intense traffic near the facility. At the intersections with vehicles traveling in the direction of the construction site pedestrian crossings and safe passages shall be fitted.</p> <p>Mode of operation at the facility should be designed in such a way as not to interfere with the pattern of local transport movement, i.e. avoid heavy traffic during</p>

		<p>"rush hours" or time when livestock crosses the way.</p> <p>The traffic should be actively regulated by specially trained personnel and immediately noticeable at the site if the need arises to ensure safe and easy movement of people.</p> <p>Ensuring safe and continuous access to office facilities, shops and accommodation premises during the repair work, if buildings stay opened for public use.</p>
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PartD: MONITORING PLAN

activity	What (Will the parameter be monitored?)	Where (Is the parameter to be monitored?)	How (Is the parameter to be monitored?)	When (Define the frequency / or continuity?)	Who (Is responsible for monitoring?)(responsibility)
1. type of activity					
2. type of activity					
3. type of activity					

**Annex 4. Minutes of public hearing to discuss Framework Plan of Environmental Management**

**Minutes  
of public hearing to discuss Framework Plan of Environmental Management  
Social Health Insurance Project: improving access, quality and efficiency of  
healthcare and financial protection of population**

**Astana city**

**October 26, 2015  
at 18:00**

**The Chairman:** Tsoy A.V. – Vice-Minister of Healthcare and Social Development of the Republic of Kazakhstan.

**Attendees:** the staff of MHSD, RCHD, PIST of ongoing Project co-funded by the World Bank (the list is attached).

**Speakers:** representatives of MHSD, RCHD and PIST.

**Agenda:**

Discussion of Framework Plan of Environmental Management (FPEM) within the Social Health Insurance Project: improving access, quality and efficiency of healthcare and financial protection of population.

According to WB policy the FPEM was placed on MHSD web-site on September 22, 2015 and distributed among regional health departments, health departments of Astana and Almaty and NGOs operating in the area of ecology and environment protection:

1. Echo NGO
2. MOO «Institute of human health»
3. Climate change Coordination Center
4. ARGO DRC
5. Center “Globus”
6. Environment Society “Green Salvation”
7. Green Salvation Ecological Society
8. Foundation for Integration of Ecological Culture (FIEC)
9. National Analytical Information Resource NGO
10. Ecocenter
11. Analytical ecological agency “Greenwomen”
12. Ecological NGO «Kaspiy Tabigaty»

Representative of MOO «Institute of human health» Mr. D. Tereshkevich informed on the lack of any comments. In general FPEM was positively assessed;

Following proposals and comments of NGOs have been considered during the hearing:

1. Representative of National Analytical Information Resource NGO Mr. B. Isayev commented on the need to involve NGO more thoroughly into FPEM to implement public monitoring at all stages since the project designing.

Decision: FPEM assumes «regarding PEM of specific objects, consultations will be done with relevant stakeholders in the field to discuss proposed design of the object, planning schedule of construction works, habitat/ecosystem management and waste management. Consultations will be held with patients, residents, medical staff and workers, local entrepreneurs, local shops and local authorities. MHSD shall develop plan for stakeholder consultation for each individual section of PEM.

Feedback mechanism should be worked out in case of problematic issues. The plan will include meeting with the public, information campaigns, feedback mechanisms (telephone, internet), joint development of work plans, creation of Advisory Committee, etc. During SNP such events as open door day or general meeting could also be hold».

It is decided to supplement this section by consultations with local NGOs.

According to WB procedures NGOs are permitted to participate in the bidding thus public informing shall be done on biddings to be carried out within the Project and information of announcements is to be forwarded to NGOs.

2. Representative of Ecological NGO «Kaspiy Tabigaty» (Atyrau city) Mr. Khakimov proposed to require from subcontractors to follow principles of «green office», rational use of resources (water / energy), carry out continuous monitoring of its impact on environment and ecological construction programs, reduction of harmful emissions, integrated approach to environmental protection, allowing not only to reduce the negative impact on the environment, but also to reduce general administrative expenses.

It was also emphasized on the need to introduce compulsory insurance of liability for environmental pollution, implementation of priority programs in the field of energy saving, ecology and environmental protection.

Decision: Take information into consideration. Account proposals during Project implementation to the extent possible.