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**DEVELOPMENT OF OFFSHORE
OIL AND GAS REGULATIONS FOR
THE REPUBLIC OF KAZAKHSTAN**

**NIS Institutional Based Services Under the
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**Central Asian Republics
Regional Energy Sector Initiative**

Final Report

Prepared for

U S Agency for International Development
Bureau for Europe and NIS
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Energy and Infrastructure Division

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EXECUTIVE SUMMARY

The Offshore Oil and Gas Rules and Regulations Work Group (Work Group) was established by Presidential Decree in January, 1997 to draft a set of Rules and Regulations for Offshore Petroleum Operations, Coastal Areas, and other Internal Water Bodies within the boundary of the Republic of Kazakhstan (ROK). Hagler Bailly Services Inc. was selected to draft the regulatory packages and serve as consultant to the Work Group. The ROK had adopted rules in 1996 to regulate all aspects of onshore petroleum operations, however, no uniform rules relating to production of oil and gas, environmental protection, and health and safety had been adopted specifically for offshore situations. The completion of the Caspian Sea Consortium work occurred in 1997, wherein the Exploration Research Study (seismic) has been completed. All participants hope to begin to further explore assigned exploration and production (E&P) blocks in 1998 and 1999. Realistic progress cannot be made on this objective until the ROK rules have been adopted and are in effect.

This report contains a short description of each set of regulations, its evolutionary path through Work Group consideration and the current status of that document in terms of its review by the ministries responsible for administration and implementation. The drafts included as appendices to this report are the final drafts provided by the Work Group and Hagler Bailly consultants to the Government of Kazakhstan (GOK).

PURPOSE

The purpose of this project was to assist the GOK and its state offshore oil company Kazakhstancaspishelf (KCS) in drafting a set of rules and regulations to govern the conduct of petroleum operations in the Caspian and Aral Seas, the adjoining coastal areas, and in and along other internal water bodies of the ROK. Up until the dissolving of the Caspian Sea Consortium in 1997, the agreement for that Consortium and its Exploration Research Study, primarily seismic in scope of work, was used as a substitute for a regulatory program. The GOK did not believe that the Uniform Rules of Onshore Petroleum Operations drafted and adopted in 1996 were applicable offshore. In addition, the onshore rules were adopted prior to the general availability and familiarity with the large number of international standards which are approved through the International Standard Organization (ISO). The standards are objective and performance based in their content and are the cornerstone of the Environmental Management and Health Safety Plans which have been adopted by the international oil companies involved in current and future petroleum operations in Kazakhstan.

The GOK is very anxious to attract foreign investors in the development of its vast oil and gas reserves. Geologic and seismic information to date indicates that the Caspian Sea is to be a prime

area for oil and gas exploration and development. Although KCS gained a wealth of knowledge on the approach to oil exploration through its participation in the Caspian Sea Consortium, foreign capital and technologies are an imperative ingredient to maximizing the recovery of hydrocarbon reserves in Kazakhstan, where the current economic situation is fragile. In addition, the Caspian and Aral Sea regions are environmentally sensitive areas and, in the case of the North Caspian Sea, where large deposits of recoverable oil is possible, the GOK has delineated Ecologically Sensitive Areas and Specially Protected Natural Resource areas by law and edict. Environmental regulations for offshore situations such as the spillage of oil are essential to creating a compatible balance between resource specific environmental protection and the orderly, cost effective production of oil and gas. Offshore oil and gas exploration and development cannot realistically proceed without a viable regulatory framework which provides a level playing field for all operators.

BACKGROUND

In late 1996, Hagler Bailly was contracted to provide assistance to the GOK and KCS in the development of offshore oil and gas regulations. In January 1997, a Work Group was established by Presidential Decree and directed to draft sets of rules and recommendations on five specific offshore activities. This Work Group was represented by three foreign members of the Kazakhstan Petroleum Association (KPA), KCS, KazakhOil, the Ministry of Ecology and Bioresources (later changed to the Ministry of Ecology and Natural Resources), the State Emergency Committee, and the Ministry of Oil and Gas Industry (later changed to the Ministry of Energy, Industry, and Trade). In early 1998, the oil and gas regulatory functions relative to these regulations, with some exceptions, were transferred to the Ministry of Ecology and Natural Resources. The three KPA members appointed to the Work Group were Mobil, Royal Dutch Shell, and Agip. Tulpar-Munai also participated substantially in the health and safety regulatory portion of Work Group considerations.

Description of Activities

- ▶ The Work Group met ten times during 1997 to consider regulatory drafts prepared by Hagler Bailly consultants. August and October were the only months where meetings did not take place. No meetings were held in 1998, because the main documents for Health and Safety, Rules of Technical Construction, and Instructions for Environmental Protection were completed by the end of December 1997. The September and November meetings encompassed an entire week, since the number of issues to be discussed were numerous.
- ▶ Concurrent with the drafting of regulations, Hagler Bailly consultants spent

considerable time researching applicable laws and regulations which were in effect and would affect the content of the rules being drafted. The GOK had inherited over 200 sets of GOST standards, regulations, and manuals which had the force of regulation from the former Soviet Union. Selected regulations were translated from Russian to English so that a match between existing requirements and ones being drafted could be made. In addition, the GOK had adopted a number of rules for natural resource protection and health and safety since 1993 which had some effect on the offshore regime.

- ▶ A setback occurred after completion of the first draft of the Environmental Protection Instructions in July 1997. In August 1997, the GOK passed the Law "On the Protection of the Environment" and the Law "On Specially Protected Areas" which required substantial revision of this document. These laws also delineated responsibility splits between state and oblast governments which made our previous drafts statutorily inaccurate. Work Group members either were not aware of the imminent passage of these laws or did not perceive the effect they would have on Work Group deliberations.
- ▶ The activities of the Work Group between January and May 1997 focused primarily on developing an outline for each of the five documents which was essentially a Table of Contents. The usual style in Western cultures is to develop the Table of Contents after, rather than before, regulations are written, but the Kazakhstani preference is the reverse. The KPA members also expressed a desire for "no surprise subjects to be included" which they did not know about at the outset. This process, however, did serve one purpose and that was to establish lines of communication among Work Group members who were accustomed to different regulatory persuasions. This may have facilitated discussion later in the year because by July, a lot of the major issues had been discussed.
- ▶ Activities during 1998 through the preparation of this report included finalizing the document on Damage Assessments for Environmental Violations and Payments for Physical Environmental Impacts (seismic, acoustical, etc). KCS rewrote the first three documents into ROK standard regulatory formats which is substantially different in form, but not in context, than the drafts prepared by Hagler Bailly consultants. These drafts have been commented upon by both the Kazakhstani Ministries and the KPA members. During the past several months, the consultants have prepared several revisions based on comments and accompanied each set of responses with explanatory papers as to why or why not the comments resulted in document revisions.

- ▶ As a result of work group discussions Hagler Bailly was requested to develop several small issue papers or statements where Work Group members could not reach closure on an important issue. These included a discussion of operator responsibility versus liability, the definition of a coastline versus coastal area, and the difference between a contractor and an operator.

DISCUSSION OF DRAFT REGULATIONS FOR OFFSHORE KAZAKHSTAN

This Section outlines, in brief, the current status of each regulatory package considered by the Work Group along with a summary of the contents of the document.

- 1) Instructions for the Observance of Standards of Environmental Protection During the Design and Implementation of Petroleum Operations in Offshore, Coastline and Internal Water Bodies of the Republic of Kazakhstan

This document represents the core set of regulations and norms for the protection of the offshore environment during all petroleum operations and is included in Appendix 1. It provides a limiting definition to establish delineation between offshore and onshore and contains a specific definition of a coastal zone. It established the procedures for monitoring environmental media from both ambient and nature use permit aspects, requires the operator to have an approved waste management program and a spill contingency plan for offshore operations. It sets forth the procedures for the required Environmental Impact Assessment (EIA) which must be approved prior to the beginning of petroleum operations. Support facilities, such as tank farms, supply depots, and vessel loading stations are also covered because these activities are linkages between onshore and offshore. A process is provided for both the operator and the ministry responsible for the regulatory activity or enforcement action to hold hearings and informal conferences. Ten state ministries and committees and two regional entities are involved in the implementation of these rules, however the majority of responsibility is assigned to three state entities and the two regional groups. In summary, this set of regulations represents a comprehensive environmental protection program.

This set of regulations was approved by the Work Group in November 1997, revised into GOK format in February 1998, and has since been sent to Work Group members for final revision. The final revised regulations were sent to various ministries and oblast administrations for final comment in July 1998. Hagler Bailly consultants are currently reviewing the latest set of comments from the ministries. KPA has indicated in writing that the latest draft sent to the ministries is acceptable to industry and should be approved.

2) Uniform Technical Rules for the Construction of Facilities While Conducting Petroleum Operations on Offshore and Internal Water Bodies in the Republic of Kazakhstan

This set of rules guides the conduct of the operator in drilling constructing operating and abandoning any offshore oil, gas, or injection well during petroleum operations This document is included in Appendix 2 of this report It describes the duties of the operator and the ministry relative to project and design approval and is a counterpart to the Uniform Rules for Onshore established under Presidential Edict The regulations are objective-based and, unlike previous Soviet-style regulations, do not set out a step-by-step approach to technical well completions and depends upon the operator to submit a project plan for approval This set of regulations was approved by the Work Group in December 1997 and revised into Kazakhstani format in February 1998 It has since followed the same review process as described for the Environmental Protection Rules and has received written notice from KPA that the document is acceptable in the present draft form

3) Safety Regulations for Conducting Oil Operations in Offshore and Internal Water Bodies in the Republic of Kazakhstan

This set of rules includes comprehensive requirements for conducting all operations on offshore facilities in a manner which protects the health and safety of workers at all times The draft rules in Kazakhstani format are included as Appendix 3 It requires the operator to have a Health and Safety Management Plan approved by the Competent Body prior to beginning petroleum operations The regulations cover such matters as protection against hydrogen sulfide gas release, explosion and fire protection, and establishes procedures for evacuation of personnel from an offshore platform This regulatory package was first approved by the Work Group in December 1997 and has followed the same route through the review process as the Environmental Protection and Technical Construction Rules The Kazakhstani citizens are very safety conscious and the Ministry of Labor has a lot of regulations which apply to onshore operations The intent of this regulatory package is to supercede existing regulations where they are in conflict The KPA has expressed written notice that these rules are acceptable and should be adopted in the current draft form

4) Methodical Recommendations to Define the Level of Damage Caused to Marine and Internal Reservoirs Resulting from Physical Environmental Impact and Violation of Nature Use Normatives

The original charge to the Work Group was to prepare two documents one for a compilation of documents used for calculation of damage assessments from violations such as oil spills air emissions, or unauthorized discharges the other for payments to the ROK for loss of fish life and supporting biota from permitted activities such as seismic explosion and vessels transporting material to platforms Hagler Bailly prepared a damage document in October 1997, which went to the Work Group and comments were received In January 1998 the payment portion was submitted as a separate set of recommendations In February, the Work Group decided to merge the two documents into one because of the redundancy that was necessary to support the two documents Hagler Bailly redrafted the documents into one, changed the title and submitted it in July 1998 No further action has been taken by the Work Group on this document and none is anticipated before October 1998 This draft is included in Appendix 4 of this report in the form sent by Hagler Bailly to the Work Group The other three sets of rules are essential to have approved before offshore petroleum operations begin This package attempts to modify the way monetary penalties and damage reimbursements are calculated

LESSONS LEARNED

- ▶ The translation of very common regulatory language in English does not have the same meaning when translated into Russian It is an easier task to offer a new regulatory concept than to cross-translate such common words as “ independent” “control” or “ delegation of authority” In future regulatory efforts, it may be a valuable tool to regulation drafting if a small table of words is developed showing the image the word projects in terms of implementation The Hagler Bailly consultant must, very quickly, grasp a knowledge of those words which connote a different activity when translated Generally, it was found that if the GOK members of the Work Group had difficulty understanding the draft, and occasionally substantially disagreed with the expression of the regulation it was due to not bad translation, but different interpretation
- ▶ The Russians and Kazakhstani regulators often discuss regulatory issues in roundabout terms (to us not them), use lots of examples, and often appear to be totally against something when, in fact, they may basically agree American Advisors, who are accustomed to “cutting to the chase” may easily become impatient that discussion is not more succinct It appeared that the discussions became less verbose, as the Work Group continued to meet
- ▶ The US and the former Soviet Union both had environmental protection and waste disposal regulations which were prescriptive rather than objective-based

The task of the Kazakhstani Work Group was to develop objective-based regulations with reliance on international standards whereas neither the Hagler Bailly advisors nor the Kazakhstani ministries were totally familiar with the concepts when Work Group activities began. The first two or three Work Group meetings centered around conceptual discussions of regulatory philosophy - the new versus the old. Some industry members were frustrated over the lack of draft material being developed, however patience was a virtue and after the third meeting all sides were better willing to share their regulatory viewpoints so that a gamut of acceptable objectivity began to emerge. Another difficulty in bringing closure, as to the issue of objective (performance based) versus prescriptive is that what is objective to some is prescriptive to others.

NEXT STEPS

If the Kazakhstani ministries approve regulations for offshore petroleum operations as they are likely to do in the next few months, since the country badly needs the income from Caspian Sea oil to grow economically, the next role for Hagler Bailly will be to assist in the efficient implementation of those regulations. This objective cannot be achieved without on-the-ground training of inspectors as to the field activity and observation associated with each section of the regulations. In the U.S., state and federal Oil and Gas Regulatory Commissions found it very difficult to retrain inspectors who had background and experience in down-hole activities such as well completions and plugging to effectively observe operator compliance with waste treatment ponds and injection well permit limitations. Kazakhstan and Turkmenistan, once the regulations are in effect, will have the same dearth of unqualified inspectors as the US did, unless the inspectors are subjected to practical training. In addition, the completion of the Work Group deliberations on the damage document will have to occur in the next few weeks.

Hagler Bailly

APPENDIX A

**INSTRUCTION FOR COMPLIANCE WITH THE
ENVIRONMENTAL PROTECTION NORMS DURING PLANNING
AND CONDUCTING OF PETROLEUM OPERATIONS OFFSHORE
IN THE COASTAL AREA AND INTERNAL WATER BODIES OF
THE REPUBLIC OF KAZAKHSTAN**

**MINISTRY OF ENERGY, INDUSTRY AND TRADE
OF THE REPUBLIC OF KAZAKHSTAN**

STATE REGULATION

INSTRUCTION

**FOR COMPLIANCE WITH THE ENVIRONMENTAL PROTECTION NORMS
DURING PLANNING AND CONDUCTING OF PETROLEUM OPERATIONS
OFFSHORE IN THE COASTAL AREA AND INTERNAL WATER BODIES
OF THE REPUBLIC OF KAZAKHSTAN**

DRAFT

RND 98

AKMOLA, 1998

DRAFT

**MINISTRY OF ENERGY, INDUSTRY AND TRADE
OF THE REPUBLIC OF KAZAKHSTAN**

Approved by
the Minister of Energy Industry and
Trade of the Republic of Kazakhstan
_____ M K Ablyasov
“ ” _____ 1998

**INSTRUCTION
FOR COMPLIANCE WITH THE ENVIRONMENTAL PROTECTION NORMS
DURING PLANNING AND CONDUCTING OF PETROLEUM OPERATIONS
OFFSHORE IN THE COASTAL AREA AND INTERNAL WATER BODIES
OF THE REPUBLIC OF KAZAKHSTAN**

RND 98

AKMOLA - 1998

Developed by The Working Group, created on the order of the Ministry of Energy, Industry and Trade of the Republic of Kazakhstan No 39 of March 11 1998 with participation of JSS "KazakhstanCaspianShelf" Hagler Bailly Consulting Inc Kazakhstan Petroleum Association (KPA) and facilitated by the United States Agency for International Development (USAID)

Agreed with

- Atyrau Oblast Akim
- Mangystau Oblast Akim
- Ministry of Justice of the Republic of Kazakhstan
- Ministry of Education, Culture and Health Care of the Republic of Kazakhstan
- Ministry of Agriculture of the Republic of Kazakhstan
- Ministry of Transport and Communications of the Republic of Kazakhstan
- Ministry of Ecology and Natural Resources of the Republic of Kazakhstan
- State Committee for Investments of the Republic of Kazakhstan
- Committee for Emergencies of the Republic of Kazakhstan
- (see Appendix)

Approved by

- Positive Conclusion of the Department for Environmental Expertise of the Ministry of Ecology and Natural Resources of the Republic of Kazakhstan (dtd ____ 1998 No ____)

- Positive Conclusion of the Sanitary-Epidemiological Expertise of the Kazakh Republican Sanitary-Epidemiological Station (dtd ____ 1998, No ____)

Decision of the Scientific- technical Council of the Ministry
of Energy Industry and Trade of the Republic of Kazakhstan
(dtd ____ 1998 No ____)

Note Although members of the Kazakhstan Petroleum Association participated in developing these regulations, this participation does not necessarily constitute full agreement with all of the provisions contained therein by the Kazakhstan Petroleum Association or its member companies. Nevertheless, the Kazakhstan Petroleum Association recommends adoption of these regulations in order to provide a regulatory basis for the timely exploration and development of the offshore territories of Kazakhstan and to form the basis for future modifications and improvements.

TABLE OF CONTENTS

1	Definitions and Terminology	6
2	General	11
3	Authority, Functions and Coordination Procedures of Central and Local Executive Bodies	12
4	Contractor's Obligations	19
5	Project Design and Procedure of Granting Permits	21
6	Requirements to Petroleum Operations	29
7	List of Documents, Incorporated by Reference	33
8	Certificate about agreeing of the Draft Instruction on Compliance with the Environmental Protection Norms During Planning and Conducting of Petroleum Operations Offshore, in the Coastal Area and in Internal Water Bodies of the Republic of Kazakhstan	43

1 DEFINITIONS AND TERMINOLOGY

The terms used in the Instruction for Compliance with the Environmental Protection Norms During Planning and Conducting of Petroleum Operations Offshore in the Coastal Area and Internal Water Bodies of the Republic of Kazakhstan shall have the following meaning

Aquatic Area	surface of a water body water site (110) ²
Architectural --City Planning Activity	purposeful creation of favorable environment for a human by property development, placement of work power development of the cities, settlements, villages and other living places and territories development of production, social, engineering and transportation infrastructures, design construction reconstruction rehabilitation modernization capital repairs of the buildings facilities and their structures, improvements and landscaping (13)
Coastal Area	<p>area geographically located between the normal median intersect of a sea or internal water body during seasonal fluctuations and the historically documented sub-sea elevation of the adjacent land and surface drainage area which may be flooded with rising water during a 10 year event and where potential contaminants from near coastline petroleum operation facilities might reasonably be expected to reach the offshore environment</p> <p>For purposes of this definition, petroleum operation facilities which have proven capability to prevent rising water from entering, and subsequently receding into the seaward coastal area during a 10 year flood occurrence shall be excluded</p>

² -an original number of the referenced regulations (documents) listed in Section 7 of the present Instruction

Competent Body of the Government of the Republic of Kazakhstan for conclusion and implementation of contracts with subsoil users in the Republic of Kazakhstan (hereinafter the Competent Body) the state body to which the Government of Kazakhstan delegates the rights directly related to conclusion and implementation of contracts for conduct of petroleum operations in compliance with the established procedures (1)

Contractor a user of the subsurface which concludes the contract with the Competent Body in accordance with the Edict of the President of the Republic of Kazakhstan "About Petroleum" (2)

Contract Territory a territory allocated for conducting of petroleum operations and which is defined by geographical co-ordinates (2)

Development of Oil Fields all types of operations related to the oil and gas extraction and sale

E m e r g e n c y Ecological/Environmental Situation unfavorable environmental situation at a certain territory resulted from human activities or natural disasters and which is characterized by strong and stable adverse environmental changes which are dangerous for human health and vegetation and wildlife (10)

Emergency Situation situation at the certain territory resulted from an accident disaster or catastrophe that caused or may cause fatalities of humans, damage of their health, economic and environmental damage considerable material losses and disruption of population's vital activities (8)

Environment combination of natural entities, including natural resources both animate and inanimate, including atmospheric air, soil, water, reserves, flora & fauna and also the climate in their interaction (10)

Environmental Safety	condition of protection of vital interests and human and society rights from threats caused by anthropogenic and natural impact on the environment (10)
Exploration Works	petroleum operations conducted at the Contract Territory to determine the reserves of the discovered oil & gas fields
Facility	all fixed or mobile platforms drilling rigs wells production facilities, oil & gas pipelines, artificial islands channels dikes buildings, roads directly used during prospecting exploration and development for oil & gas
Human Environment	environment, combination of natural anthropogenic and social conditions in which human activity takes place (110)
Internal Water Bodies	lakes, artificial water bodies and other surface water resources (2)
Job Description	a document, approved by the management of an enterprise which sets the functions and responsibilities of an employee
License	a permission granted by the Government of the Republic of Kazakhstan to a User of the subsurface for conducting Exploration and Production for a fixed term within a Contract Territory (2)
Licensing Body (Licensor)	an executive body, authorized under the Decree About Subsoil and Subsoil Protection to issue licenses
Management System of Health, Safety & Environment (HSEMS)	a document, developed by a Contractor, which sets Contractor's HSE policies, evaluates risks and outlines measures to reduce risks, assigns responsibilities to employees in routine and emergency situations, contains procedures for filing and auditing, analysis of work results, training programs, briefings, testing of knowledge, etc (36-38)

Natural Situation	Emergency	an emergency caused by natural calamities (earthquakes avalanches mud streams floods and others) natural fires epidemics and epizooties destruction of agricultural plants and forests by diseases and pests (8)
Nature Use		use of nature resources in the course of economic and other human activity (10)
Operator		a legal entity, established by Contractor (Contractors) for organizing and implementing of work at the Contract territory
Petroleum Operations		all types of operations related to Exploration Production and associated with them in a single technological cycle storage of petroleum and its piping by pipeline transport (2)
Practically Acceptable		preferable or reputable experience of management or technology
Prospecting Works		petroleum operations conducted at the Contract Territory before discovery of oil & gas reserves
Right of the Land Use		a right granted to an entity (a person) to own and use a plot of land, which is the state property, permanently (permanent land use) or for a certain term (temporary land use) Land user has the right to dispose of his right of land use under the terms and conditions set forth by the Edict of the president of the Republic of Kazakhstan "About Land" (17)
Sanitary - Epidemiological Wellness, Toxicological and Radiation Safety		state of the human environment which ensures maintenance and improvement of the health of population (7)

Sanitary Rules and Standards, Hygiene Regulations official documents containing criteria for evaluation of the sanitary-epidemiological status of the human environment and requirements to the promotion of sanitary-epidemiological wellness (7)

Sea the surface and layer of water the surface of the bottom of the Caspian and Aral Seas (lakes) from the initial coastline of its entire extent within the boundaries of the Republic of Kazakhstan to its exterior marine frontiers which are established on the basis of the treaties between the Republic of Kazakhstan and the Seaboard States (2)

Special Ecologically Sensitive Area area, used by some species to nest, spawn and graze (fish)

Standard in the broad meaning of the word - example model or pattern accepted as original to be compared with, a regulatory document on standardization, establishing a set of norms rules requirements to the standardized subject

Subcontractor a legal entity which contracted to render certain services to the Operator at the Contract Territory

Technical Conditions category of regulatory (normative) documents that are developed by enterprises companies, organizations and which set requirements for certain products, services and processes while requirements of technical conditions must meet the standards (18)

Technogenic Emergency Situations an emergency caused by industrial, transportation and other accidents, fires (explosions) accidents with discharges (threat of discharges) of powerful toxic, radioactive and biologically dangerous substances, sudden collapse of buildings and facilities, dam outbreaks, accidents with electric power utilities and communication systems, treatment facilities (8)

Water Fund Lands

lands covered by bodies of water (rivers lakes water storage reservoirs channels internal sea territorial waters) glaciers swamps hydrotechnical & other water facilities and also land allocated for water protection areas They represent one of the seven categories of land (17)

2 GENERAL

- 2.1 The present "Instruction For Compliance With the Environmental Protection Norms During Planning and Conducting of Petroleum Operations Offshore in the Coastal Area and Internal Water Bodies of the Republic of Kazakhstan" (hereinafter referred to as the Instruction) is developed in pursuance of the Resolution of the Government of the Republic of Kazakhstan of June 06 1996 No 693 "About Approval of the regulation On the Procedure for Conducting Offshore Scientific Research Related to the Petroleum Operations Offshore and in Internal Water Bodies and the Order of the Ministry of Energy Industry and Trade of the Republic of Kazakhstan of march 11 1998, No 39
- 2.2 The provisions of the present Instruction shall cover all enterprises and organizations which conduct petroleum operations offshore, in the coastal area and internal water bodies of the Republic of Kazakhstan, regardless the type of property and a country of origin
- 2.3 The Instruction provides a mechanism to establish procedures and methods of conducting petroleum operations in the aquatic area and in coastal areas of seas and internal water bodies of the Republic of Kazakhstan and as a regulatory document contains norms and rules, which determine the procedures and conditions of conducting operations by the Contractor
- 2.4 The Contractor shall, in an orderly manner (3,4), be responsible for compliance with the requirements of the present Instruction, regardless whether petroleum operations are conducted by the Contractor, the Operator or subcontractors
- 2.5 Changes and additions to the Instruction shall be introduced by the government body regulating petroleum operations, which approved the Instruction, or by its successor upon agreement with interested state supervising bodies, which exercise control over safety, and shall be brought to the attention of all Operators
- 2.6 General provisions for ensuring environmental safety shall be set by the laws of the Republic of Kazakhstan (2-20)

- 2 7 The State supervision over enforcement of the Instruction shall be exercised by the Central and local executive bodies of the Republic of Kazakhstan in compliance with the applicable Provisions (1 21-26)
- 2 8 If international treaties or agreements ratified by the Republic of Kazakhstan specify other norms for the contract territory, than those set forth in the Instruction provisions of the international treaties and agreements shall apply
- 2 9 Whenever these Regulations contradict specific provisions of existing rules and regulations of the Republic of Kazakhstan these Regulations shall prevail

3 AUTHORITY, FUNCTIONS AND COORDINATION PROCEDURES OF CENTRAL & LOCAL EXECUTIVE BODIES

- 3 1 The following entities of the Republic of Kazakhstan have rights to regulate and control issues related to environmental safety during petroleum operations conducted offshore and in internal water bodies
- 3 1 1 The Competent Body of the Government of the Republic of Kazakhstan for conclusion and implementation of contracts with Subsoil Users in the Republic of Kazakhstan (hereinafter - the Competent Body) (1,2) -
- supervises the enforcement of contractual terms & conditions
 - analyzes and approves design feasibility studies developed by Subsoil User in order to implement the contract,
 - appoints experts and consultants to conduct an independent evaluation of the drafts of contract documents, collect regular and ad hoc reports from Subsoil Users, monitor and systematically evaluate how Subsoil Users enforce the terms and conditions of the contract and appoint other auditing companies, representatives of the state executive bodies
- 3 1 2 The Republican State Body for Management of Architectural - City Planning Activities (13)
- approves State norms for architectural -city planning activities and controls their enforcement,

- manages State Experts Committee for projects (compliance with fire and explosion safety reliability of structures and stability of operation) and the State Architectural Inspection
- issues suspends or cancels licenses (permits) for architectural -city planning work,
- suspends construction of facilities and projects which violate the design and regulations requirements by decision of the State Architectural-City planning Inspection

3 1 3 The Central Executive Body for Emergencies of the Republic of Kazakhstan (8,20)

- approves and coordinates rules & regulations and keeps state records of emergencies,
- manages The State Experts Committee and The State Inspection for Emergency Prevention and Response,
- arranges investigations and manages emergency response operations
- conducts certification and issues licenses to physical persons who are engaged into rescue operations and emergency response and restoration work,
- issues mandatory instructions for prevention of and response to emergency situations caused by natural & technogenic factors

3 1 4 Regional, oblast and city meeting of people's deputies - Maslikhat (14) has the right to adopt mandatory rules with administrative liability for their violation in the following areas

- protection of atmospheric air aqueous resources, vegetation and wildlife, protection and maintenance of lands and forests,
- fire and road safety, water safety,
- protection of utility & communication lines,
- preservation of public order in situations of natural disasters and other emergencies,

- prevention of and response to natural disasters or other emergencies and mitigation of their consequences

3 1 5 Akim - Head of Administration of Oblast Region and City (9 10 14 17) -

- manages property of administrative-territorial unit
- issues land lots for private ownership and use
- collects data from companies, enterprises and organizations about their projects, designs, plans and actions which may have environmental consequences,
- coordinates designs and work plans which affect the environment
- exercises state supervision over environmental protection and efficient use of natural resources,
- arranges for the development of programs for environment protection ecological examination, construction and reconstruction of environment protection facilities,
- suspends economic activities and/or construction of facilities in a case of severe violation of environmental legislation and takes necessary measures,
- sets the amount of fines for environmental pollution and the amount of nature use payments,
- takes specific measures, which are in compliance with the law, in case of natural disasters, ecological catastrophes, fires

3 1 6 The Central Executive Body for Environmental Protection of the Republic of Kazakhstan (10)

- approves within its authority or coordinates quality norms and standards for environment and ecological standards for economic and other activities,
- issues licenses (permits) for environmentally dangerous types of economic activities, discharges and emissions of pollutants into environment in compliance with the procedures set by the Government of the Republic of Kazakhstan,

- issues nature use permits
- conducts state monitoring of the environment
- arranges for the state ecological examinations and issues the conclusions
- exercises state environmental control within its authority over protection reproduction and use of flora and fauna

3 1 7 The State Body for Water Resources Management of the Republic of Kazakhstan (9)

- issues permits for special water use upon coordination with environmental protection authorities
- issues technical standards/requirements for all types of water use and coordinates work plans/designs which might affect quality of water
- exercises state supervision over use and protection of water resources

3 1 8 The State Sanitary-Epidemiological Service of the Republic of Kazakhstan (7)

- approves sanitary rules and norms, hygiene norms
- arranges sanitary - epidemiological examination, has a right to decline for approval of preliminary planning and design documentation for construction and renovation of living quarters, public and production facilities which violate the established standards and norms
- conducts sanitary-epidemiological monitoring, shuts down or suspends the existing facilities until elimination of detected violations,
- informs general public about sanitary-epidemiological conditions of the environment and its effects on human health

3 1 9 The Central Executive Body for Land Management (17)

- exercises state supervision over use and protection of lands

25

- 3 1 10 Authorized Body for Use and Protection of Mineral Resources (5 31 32)
- supervises completeness of studies of mineral resources rational and economic use of resources prevention of dangerous technogenic processes, pollution of resources enforcement of the established order of use of mineral resources
 - issues permits for construction of facilities in the areas of occurrence of mineral resources and use of subsurface waters
 - keeping records and storage of geological data and other information related to mineral resources
- 3 1 11 The Body of State Management of Transportation (16) exercises control over enforcement of safe transportation and environmental rules during operation of transportation devices
- 3 1 12 The State Body for Standardization Metrology and Certification (18)
- exercises state supervision over compliance with standards and technical regulations,
 - imposes fines, suspends or prohibits sales and use (operation) of products, performance of work and services in a case of violation of regulations and technical norms, cancels or suspends certificates of compliance/adequacy unreasonably issued by certification entities
- 3 2 Central and local executive bodies in accordance with established procedures shall be responsible for enforcement of environmental protection regulations and shall enforce and supervise the present Instruction by means of
- Operation Plans examination and coordination,
 - Operator report analysis
 - Inspection of operations,
 - taking the following measures rejection of the Operations Plan, Hearings, Fines, Criminal penalty, prohibition of operations

3 3 Inspection Procedures

3 3 1 Central and local executive bodies which exercise supervision over petroleum operations, must coordinate time of routine inspections in order to plan joint inspections with the Competent Body. Before conducting a joint inspection a consolidated inspection program must be developed which will define the purpose of the inspection and individual tasks for each representative of inspecting authorities. A consolidated inspection statement is prepared based on findings of the inspection (28). Standardized inspection plans and their amendments for various types of petroleum operations can be published or brought to the attention of all Operators.

3 3 2 At arranging routine inspections the Competent Body shall notify the Operator, at least 5 days prior to the inspection date on the following

- the coverage of the inspection - general or specific tasks,
- the duration of the inspection,
- the number of inspectors and their organizations,
- required preparation (testing type titles of data, reports to be reviewed or copied),
- needs in transport, protective clothes, food housing)

3 3 3 The central and local executive bodies can conduct inspections without prior notification in the following cases,

- if there are grounds to suspect violations of petroleum operations procedure and safety regulations,
- in order to review response measures to clean the spills of oil and other substances

3 3 4 On the way to the facility and during the stay on it, the inspectors shall follow the health, safety environment protection and other rules established by the Operator

3 4 To coordinate the activities of the central and local executive bodies companies and organizations a commission for emergency prevention and response under the local state body for emergencies shall be formed(27) with participation of operator representatives The Commission shall submit to the Operator a list of contact persons, equipment and appliances that can be used by government authorities to support the Operator s activities during the response to emergency situations as well as the interaction procedure If the Operator proves to be unable to respond to emergency situations, the Commission is eligible to involve other subcontractors

3 5 Amendment of the applicable regulations and adoption of new ones shall be accomplished in an orderly manner (29 30) While amending the applicable regulations and adopting the new ones, related to the regulation of off-shore petroleum operations, the central and local executive bodies shall be guided by the following considerations

- establishment of working groups, representatives of the Operator involved conducting hearings (informal conferences) and comprehensive revision of all regulations every three years,
- hearing opportunity provided to the Operators, providing them and submitting by them materials that can justify the change of regulatory requirements
- publication of amendments of regulations or bringing them to the attention of all Operators

3 6 The Competent Body shall establish an inter-agency coordination group for project approval, within the framework of the Government Authorities, accomplishing expert study of operational projects (non-departmental, emergency ecological, sanitary - epidemiological one), as well as the coordinating agencies (local executive bodies water management boards, subsoil use and protection authorities) The objective of the group shall be to eliminate conflicts and to prepare agreed conclusions on the project within a limited period of time

3 7 Hearings

3 7 1 The Operator may demand hearings to be held by the central and local executive bodies, and the Competent Body shall assist at arranging the hearing process in the following cases

- in case the conclusion on the project is negative or approving or granting a permit for special water use nature use or land use is rejected and the Operator does not agree with the grounds
- if the Operator does not agree with the sanctions imposed,
- if the Operator thinks it is reasonable to change the requirements stipulated by the applicable regulations, and it has sufficient evidence for that
- if the Operator is prescribed to conduct the operations not considered by the project, or at any other actions taken by the central and local executive bodies that can cause damage to the Operator

3 7 2 The central or local executive body, that received a hearing request shall

- within 30 days notify the Operator on hearing opportunity date place and procedure, thus inviting the interested parties to attend the hearing,
- within 90 days of the hearing date notify the Operator on either accepting or rejecting the request of the latter as well as on the period of time within which the Operator shall ensure the compliance with the decision made and appealing procedure

3 8 The central executive bodies for emergencies and environment protection shall register and archive operational projects, and their changes and amendments reports submitted, as well as analyze them The documents shall be open for the public of the Republic of Kazakhstan and the Operators to familiarize themselves and to make copies, except for the data, whose reliability have not been proved

4 CONTRACTOR'S OBLIGATIONS

4 1 The basic obligations have been established by the legislation of the Republic of Kazakhstan (2,5)

4 2 Prior to the commencement of the petroleum operations, the Contractor shall obtain ecological insurance (10) as a part of the mandatory insurance of petroleum

operations (31) the operational project drafted an approved in an orderly manner (32) required permits (33, 34 35 42) and the health safety and environment protection management system (36, 37 38)

4 3 To submit information concerning emergency situations in an orderly manner (39) in compliance with the emergency criteria (40) and to take urgent response measures using the best technologies and methods to record all oil spills over 10 liters and in case their volume exceeds 100 liters or other types of emergency situations occurring, to inform the Competent Body immediately

4 4 In case of emergency, the Operator shall commence urgent response operations in accordance with the plan If it is necessary to amend the plan the Operator is eligible to verbally agree the changes with the Commission for the prevention of and response to emergency situations, with consequent written record The Operator shall submit a verbal daily report to the Commission, containing performance data

4 5 To establish a procedure and to record monitoring data, the operations with plant wastes, toxics, supervision over the operations conducted by the Operator and subcontractors, to ensure the compliance with the environment protection standards description of response measures and etc , all the above mentioned documents shall be open for the inspection by supervising authorities The data and records enlisted shall be archived within 5 years, unless otherwise is prescribed by the Competent Body

4 6 To submit statistical information on environment protection in an orderly manner (39) The list of the required reports is given bellow

- Form No 1 (environment protection) "Report on Environmental Accidents Suspended Facilities and Violations of Nature Protection Law" for a half-year,
- Form No 2-TP (ambient air) "Report on Ambient Air Protection", for a half-year and a year,
- Form No 3 (toxics) "Report on Generation and Disposal of Toxics" for a year,
- Form No 4-OS "Report on Current Expenses for Environment Protection, Environmental and Natural Resource Payments" - for a year

- 4 7 To submit the programs of briefings training examinations and monitoring data to the Competent Body
- 4 8 The Operator is responsible for timely notification the Competent Body and submitting to it proposals on required changes of operational project requirements in case of significant changes in the terms of operations
- 4 9 The Operator shall participate in hearings, working groups and informal conferences held by the central and local executive bodies to improve regulatory documents and to establish a system ensuring the implementation of their requirements

5 PROJECT DESIGN AND PROCEDURE OF GRANTING PERMITS

- 5 1 Environmental component of petroleum operations shall include the following phases
- 5 1 1 The state body regulating petroleum operations, and the central executive body for environment protection in the Republic of Kazakhstan shall jointly develop the Plans of sector development and allocation (60) that include the Review of Environment Quality, conclusions on technical and economic possibility to preclude adverse environmental impact and on necessity to conduct engineering and environmental study
- 5 1 2 During the investment program tender for the right to get a license for natural resource exploration and/or exploitation (57), the Licensing Body shall draft the tender conditions and consider offerings, representatives of central executive bodies for emergency situations and environment protection involved Information packages disseminated to tender participants shall include the Review of Environment Quality, developed in an orderly manner (58)
- 5 1 3 The Section of "Operation Program" of the contract for conducting petroleum operations shall contain preliminary assessment of environmental impact caused by planned operations, developed by the Contractor in an orderly manner (58) The contract shall be agreed with government authorities in an orderly manner (2)
- 5 1 4 The general procedure of operational projects development, agreement, approval and amendment, as well as permit issue shall be performed in an

orderly manner (32 42) and in accordance with the requirements of this Instruction

5 2 The requirements to the development of the sections of the operational project related to environmental safety

5 2 1 The section of "Environment Characteristics

5 2 1 1 Environment characteristics shall be based on two-year of data of ambient air samples in the area of operations as well as those of surface and groundwater, bed sediments and soil, biological diversity flora and fauna quality, population health using two-year historical data from different sources Information shall be sufficient to accomplish projections of environment component changes caused by the planned operations

5 2 1 2 The surveyed area shall make at least the area of oil spills during potential emergency situations or dispersion of air emissions when pollutant concentrations exceed MAC The frequency and density of sampling network shall be sufficient to monitor time and territorial changes in environment quality

5 2 1 3 The Operator shall apply the state or international methods of conducting study and analyses, agreed with the Competent Body (46-56)

5 2 1 4 The central executive body for environment protection can establish specific requirements for individual off-shore and internal water bodies or their parts to study the environment characteristics, giving grounds for boundaries, parameters and reasons, under agreement with the Competent Body, and it is highly probable to hold open meetings

5 2 1 5 The programs of environment study shall be approved by the Competent Body

5 2 1 6 The Operator is eligible to request that the Competent Body and the central executive body for environment protection conduct public hearings, where it can make a presentation of the grounds to conduct shorter and less detailed study of environment characteristics, where reasonable, and to ask for their approval

5 2 2 The section of "Environment Protection Measures" contains characteristics of impact sources, amount and types of wastes, calculation of maximum admissible emissions to the atmosphere and discharges to water environment, as well as the data on measures taken at similar facilities and their effectiveness. Measures are drafted to protect ambient air, water resources, flora and fauna, soil, subsoil and waste handling.

5 2 3 The section of "Risk Analysis and Emergency Prevention and Response Plan" includes the analysis of probability of emergency, such as damage of a vessel, barge, platform, oil pipeline, explosion, fire, toxic spills, open oil or gas flowout. Plans to prevent and response to significant potential type of emergency are developed. The plan of oil spill response shall include the following:

- the locations of facility where oil spills are probable,
- the inventory, location and type of equipment, vehicles, materials, staff and methods to respond to various categories of spills
- list of dispersants that can be used,
- estimate of time required to commence operations and eliminate various categories of spills,
- time schedule of training personnel and inspection of equipment and machinery,
- the list of designated persons, their location, the procedure of government bodies notification.

5 2 4 The section of "Environment and Human Health Impact Assessment" (EIA)

5 2 4 1 EIA shall take into consideration the following:

- EIA is developed for planned operations that can cause environment impact,
- EIA shall not be prepared for engineering and geological prospecting, seismological exploration, if the parameters of generating acoustic signals are used, that were previously used in similar conditions, and a positive expert conclusion is available for them,

- EIA shall not be developed for the operational projects if similar surveys were conducted under similar climatic and environmental conditions
- 5 2 4 2 EIA shall be accomplished in an orderly manner (58-60) thus potential impacts are assessed, based on environment protection measures and emergency prevention and response plan, proposed by the Operator
- 5 2 5 The section of "Calculation of Payments for Nature Use and Potential Environmental Impact Caused by Emergency Situations"
- 5 2 5 1 Payments for land and water resource use shall be calculated in accordance with the applicable rates (90)
- 5 2 5 2 Payments for admissible emissions (discharge) of pollutants (contaminants) and those exceeding MAC, as well as plant and consumption waste disposal shall be calculated in accordance with the methodologies of the central executive body for environment protection (79 81 82 86) based on the rates fixed by the local executive bodies
- 5 2 5 3 Calculation of losses and/or damage of fish stock caused by various operations and violations of the applicable requirements shall be accomplished in an orderly manner (87-89)
- 5 2 6 The section of "Monitoring Programs"
- 5 2 6 1 Monitoring program consists of three parts monitoring of environment contamination sources, environment quality monitoring and monitoring of emergency situations
- 5 2 6 2 The program of monitoring contamination sources is based on the assessment of environment impact caused by the planned operations Thus, certain area and environmental parameters under impact shall be monitored Monitoring duration shall be influenced by the impact duration The program shall be annually re-agreed and re-approved

5 2 6 3 The program of environment quality monitoring shall be based on the program of studying the parameters of (background) environment quality thus to be accomplished in order to monitor environmental changes within the whole period of petroleum operations including 2 years of consequent controlling observations and to determine the correlation of the changes identified with the petroleum operations conducted based on the following principles

5 2 6 3 1 Use of specific monitoring stations that were used during background observations

5 2 6 3 2 Observations covering all environmental components in terms of specific parameters and sampling frequency

5 2 6 4 At developing the environment monitoring program the following considerations shall be taken into account

5 2 6 4 1 Surface water samples shall be taken on a quarterly basis, unless otherwise agreed with the central executive body for environment protection, with less volume and frequency to study pH, general content of dissolved and suspended solids, carbon compounds heavy metals, specific hydrocarbon compounds associated with petroleum operations

5 2 6 4 2 The necessity to monitor groundwater shall be determined by the Competent Body for subsoil use and protection based on justification of availability or potential availability of water resources, that can be used to supply potable water thus general content of soluble solid making 3000, the monitoring shall be required only in case the integrity of well combination string can not be proved Monitoring wells shall be drilled all around the field or around the oil well, if its integrity can not be proved and there are valuable aquifers to protect In such wells, annual analysis of inorganic substances, associated with the petroleum operations shall be conducted Monitoring shall be continued until the reasons for that are removed, or until the end of petroleum operations, with consequent abandonment of monitoring well in an orderly manner

5 2 6 4 3 Air quality can be monitored within the framework of contamination source monitoring program The content

of sulfuric dioxide nitrogen oxide H S carbon monoxide as well as the particles with the diameters below 10 and meteorological data shall be monitored close to the nearest residence (or receptor) for the pollutant(s) that exceed the MPC Depending on the circumstances sampling may be accomplished on a continuous daily monthly basis etc

5 2 6 4 4 Physical and chemical properties of bed sediments shall be studied initially annually as well as the changes of adjacent coastal area bed topography in order to determine if any changes are caused by the petroleum operations

5 2 6 4 5 Off-shore and adjacent coastal flora and fauna shall be studied annually, thus every species shall be surveyed during the periods typical for them Based on the findings of all surveys environment quality maps shall be developed

5 2 6 5 Emergency monitoring shall be immediately commenced as soon as the emergency situation occurs, and continue until environment impact is assessed During oil spillage, migrations of oil spills shall be monitored and cases of perished species of fauna shall be registered, and after cleaning operations are completed comprehensive measures shall be taken to assess the impact of oil spillage over all environmental components

5 2 6 6 At demand of local population or sanitary-epidemiological service impact over human health or live-stock may be monitored This type of monitoring is not a component of the monitoring program, included into the operational project thus it is developed individually and agreed with appropriate authorities

5 2 6 7 Monitoring programs shall contain the grounds of selecting the location of the station, parameters studied, sampling frequency, description of sampling methods, analyses and result interpretations, or references to the effective regulations

5 2 6 8 Quality and quality control of the monitoring conducted shall be ensured in accordance with the international rules

5 2 6 9 The monitoring programs shall include terms of reporting and names of the governmental bodies where reports shall be submitted Comments of appropriate bodies shall be revised, or they shall be answered within 1 month In case any disputes arise, hearings shall be held in accordance with the procedure, established by the present Instructions

5 3 The procedure of agreeing expert studies and project approvals

5 3 1 Operational project approved by the Contractor alongside with the materials on informing local population, considering its comments statement on environmental impact, statement on project prospecting work cost shall be submitted by the Operator to the Competent Body for approval and arrangement of its agreeing and expert examination

5 3 2 The operational project planning to use floating rigs and not to construct facilities, shall not be sent for approval and expert study to the following bodies

- local executive body,
- state water management board,
- state independent expert study

5 3 2 1 The projects, that do not plan subsoil study and use shall not be submitted to the authorized body for subsoil use and protection

5 3 2 2 The well construction projects shall not be submitted for examination to the state independent expert study

5 3 3 The Operator and all interested bodies shall receive conclusions on project approval, or appropriate comments within maximum 30 days

5 3 4 Project expert study shall be accomplished in an orderly manner (91-100) Expert authorities, within maximum two weeks after receiving the materials, shall inform the Operator on whether the materials are sufficient, and on the decision concerning the project expert study The expert conclusion on the project shall be forwarded to the Operator and all stakeholders within 2 months, and environmental expert conclusion - within 3 months

5 3 5 Upon agreement with the Competent Body the Operator resolves reasonable comments made by the central and local executive bodies The comments, that can cause considerable impact over the operational project, shall be resolved by the Competent Body upon agreement with the Contractor and the appropriate agencies All changes and amendments to the operational project shall be approved by the

Competent Body and the Contractor and consequently disseminated to all interested parties

5 4 Procedure of Issuing Permits

5 4 1 The permit to accomplish planning operations at natural resource deposits and allocation of underground facilities that are not associated with the production of natural resources, shall be issued by the Competent Body for subsoil use and protection, based on geological and mining study Act on non-occurrence of natural resources in the subsoil shall be signed or acts that certify the permits in an orderly manner (35)

5 4 2 The permit for land use shall be issued by local executive bodies based on land tenure plan in an orderly manner (101)

5 4 3 Permits for special water use shall be issued within a month by the State water management board - for surface water use, and by the authorized body for subsoil use and protection - for groundwater, after agreeing the terms of water use in an orderly manner (34)

5 4 4 Within a month, the central executive body for environment protection shall issue the following in an orderly manner (33)

- a permit to dispose wastes-1, products-2 or materials-3,
- a one-year permit to emit pollutants into ambient air,
- a one-year permit to discharge waste waters

1 - the wastes mean plant and consumption wastes,

2 - the products mean those ready for consumption, that can be stored over three (3) months, such as heavy metal concentrates, solid and liquid petroleum products, coal acids, alkalis, and other toxic substances,

3 - the materials mean recycled materials, construction materials (cement, asphalt-bitumen mixture, etc), that can be stored over 3 months

6 REQUIREMENTS TO PETROLEUM OPERATIONS

- 6 1 Personnel Training List of employee categories shall be drafted who obtained some experience and passed environmental training before the commencement of the operations thus the programs of their systematic refreshing training and in-job skill improvement shall be developed Depending on the employee category training requirements can include the following knowledge of HSE management system prevention plans and emergency response procedures, handling wastes and hazardous materials, environmental policy of the company regulatory requirements environmental situation in the area, etc The data on training programs and the results of examinations shall be open for the inspection of supervising authorities
- 6 2 Waste handling
- 6 2 1 All practical measures shall be taken to recycle all types of industrial and consumption wastes
- 6 2 2 Collection and discharge of ballast, waste water, food wastes rubbish and wastes of burnt rubbish produced at vessels and floating facilities shall be accomplished in an orderly manner (118)
- 6 2 3 Handling the wastes produced at facilities
- 6 2 3 1 At drilling the upper ranges of wells, their depth making up to 30 m, using sea water as circulating fluid chipping can be discharged to the sea bed,
- 6 2 3 2 It is allowed to discharge to the sea bed the following the materials used for the construction of ditches, island dam, as well as bed sediments, extracted during site leveling and dredging, in accordance with the projects,
- 6 2 3 3 It is prohibited to discharge to the sea all other types of wastes, associated with petroleum operations (mud, reservoir fluids, formation sand, shale below 30 m, materials, equipment, their package and containers)
- 6 2 3 4 It is allowed, on a short-term basis, to burn oil and gas produced at well testing, as well as combustible wastes in accordance with the projects

6 2 3 5 It is allowed to discharge food waste to the sea from vessels in an orderly manner after having agreed that with sanitary-epidemiological service

6 2 3 6 It is allowed to discharge waste water in an orderly manner (103-106) and in accordance with the operational projects. The quality of the discharged water shall not be lower than that of the sea thus weekly comparative analysis of appropriate samples shall be conducted

6 2 4 Waste record, storage recycling, disposal and reporting

6 2 4 1 At operated facilities, all types of wastes shall be recorded thus the date of production shall be registered as well as short description (type) marking name of materials that are carcinogenic, mutagenic, tetragenic when contacting people, flora and fauna date and method of storage recycling and disposal. The records shall be open for inspection by supervising agencies

6 2 4 2 Various types of wastes shall be stored separately and storage method shall be consistent with the toxicity of the material. In case various types of wastes are mixed, they shall be handled as if they were the most toxic of the substances. The terms of establishing the standards of admissible volumes of toxics and their disposal shall be determined in an orderly manner (68-78)

6 2 4 3 Waste disposal in underground facilities and specially equipped ponds shall be accomplished in an orderly manner (73-76). In case the tailing pond is used by several Operators they shall appoint one person in charge of the pond monitoring and safety

6 2 4 4 For wastes reporting shall be submitted to the Competent Body in an orderly manner

6 3 Requirements to transportation, construction, materials and equipment

6 3 1 Within specially ecologically sensitive areas, additional measures shall be taken to mitigate the environmental impact of transport, e.g. traffic route reconnaissance, limitation of flight altitude, only specific types of vessels acceptable, limitation of traffic intensity, etc

6 3 2 Parameters design and the equipment installed at the facilities shall not limit fish spawning neither shall they attract and negatively affect birds cause noise impact and electromagnetic emission that can adversely affect fauna or cause long-term changes of its habitat

6 3 3 It is prohibited to disturb sea bed sediments and soils outside the areas fixed by the operational projects

6 3 4 The materials, constructions and protective measures shall not adversely affect the environment components

6 3 5 Dry materials, weighting materials and chemical reagents shall be transported and stored in containers, in sealed package

6 3 6 Circulating fluid shall be transported in closed tanks containers or by mud line

6 4 Requirements to Specific Operations

6 4 1 During engine operation, products of incomplete combustion and waste gases shall be precluded from discharge to the sea

6 4 2 During seismic works in special ecologically sensitive areas it is allowed to use airguns with the capacity up to 790 cubic inches in shallow waters with use of the sea bottom spit, up to 2000 cubic inches in deep waters with use of towed spit explosion of Dynoseis charges or similar type of charges up to 680 g in wells with a depth of at least 2 m without additional EIA studies

6 4 3 During well drilling, contamination of aquifers shall be prevented in case they are significant for potable water supply, and measures shall be taken to prevent or limit deterioration of reservoir properties of oil formations

6 4 4 At burning formation fluids during well testing, all practical measures shall be taken to limit the drop out of liquid products to the sea

6 5 Pipeline operation Monitoring of environment and systematic equipment testing shall be accomplished, that is used to identify corrosion to ensure reliable shut-down system and repair and treatment lines, thus the results reported to the Competent Body

6 6 Oil tanker operation

- 6 6 1 Tanker transportation of oil and oil products extracted at well testing and at the initial stage of the field development is allowed
- 6 6 2 Operation of tankers is accomplished in an orderly manner (108)
- 6 6 3 Tankers shall be used that can demonstrate the compliance of the equipment and procedures with the state and international standards for vessel integrity including those applicable to international tanker fleets
- 6 6 4 List of all tankers planned to be used shall be submitted to the Competent Body and the central executive body for emergency situations. These bodies can reject the use of individual tankers if they have enough grounds. The Operator may refuse to load or unload any tanker that fails to meet the operator's standards
- 6 7 Storage of hydrocarbons in coastal area
- 6 7 1 Tanks shall be placed inside the impervious bunds (dums) of sufficient capacity to hold the contents of the largest tank, to prevent oil spill leaching to drainage layers connected with water body, water courses or subsoil waters
- 6 7 2 To develop a plan of spillage prevention and removal which shall be revised in an orderly manner if there are spills over 200 l a year
- 6 7 3 To maintain the minimum agreed inventory of spill control equipment in fit for purpose condition
- 6 8 Off-shore storage of oil and oil products. It is allowed temporarily to store oil extracted during well testing, and maintain oil stocks sufficient for the operation of the facility for the design duration
- 6 9 Storage of hazardous chemicals. Hazardous chemicals that shall be specially handled or toxic for human health (acids, detergents, etc.) shall be recorded, stored in safe facilities with a limited access, precluding any spillage. Points of storage shall be marked in special maps
- 6 10 Monitoring and removing leakage from abandoned wells

6 10 1 Abandoned well monitoring shall be accomplished in accordance with the procedures or plans of well abandonment (32)

6 10 2 At discovering leakage from abandoned wells the agency in charge of removing leakage shall identify the reasons develop special plan and take response measures (32)

7 0 LIST OF DOCUMENTS INCORPORATED BY REFERENCE

- 1 Provisions About Competent Body of the Government of the Republic of Kazakhstan for Conclusion and Implementation of Contracts with Subsoil Users in the Republic of Kazakhstan Approved by the Resolution of the Government of the Republic of Kazakhstan of May 27 1996 No 646
- 2 Decree of the President of the Republic of Kazakhstan having the force of Law "About Petroleum", of June 28, 1995
- 3 Code of the Kazakh SSR About Administrative Violations of March 22 1984, with amendments and changes
- 4 Criminal Code of the Republic of Kazakhstan, of July 16 1997 No 167
- 5 Decree of the President of the Republic of Kazakhstan having the force of Law "About Subsoil and Subsoil Use" of January 27, 1996 No 2828
- 6 Law of the Republic of Kazakhstan "About Health Protection of the citizens of the Republic of Kazakhstan", of May 19, 1997, No 111-1
- 7 Law of the Republic of Kazakhstan "About Sanitary-epidemiological Wellness of the population", of July 8, 1994
- 8 Law of the Republic of Kazakhstan "About Emergencies Caused by Natural Calamities or Human Activities", of July 5, 1996, No 29-1
- 9 Water Code of the Republic of Kazakhstan, of March 31, 1993, No 2061-XII
- 10 Law of the Republic of Kazakhstan "About Environment Protection", of July 15, 1997
- 11 Law of the Republic of Kazakhstan "About Special Protected Environmental Territories", of July 15, 1997, No 162-13PK

- 12 Law of the Republic of Kazakhstan About Ecological Expertise of March 18, 1997, No 85-13PK
- 13 Law of the Republic of Kazakhstan ' About Architecture and City Construction in the Republic of Kazakhstan' of October 22 1993 No 2473-XII
- 14 Law of the Republic of Kazakhstan "About Local Representative and Executive Bodies of the Republic of Kazakhstan' of December 10 1993
- 15 Law of the Republic of Kazakhstan "About Protection Reproduction and Use of fauna", of October 21, 1993
- 16 Law of the Republic of Kazakhstan "About Transport of September 21 1994
- 17 Decree of the President of the Republic of Kazakhstan having the force of law, "About Land' of December 22, 1995, No 2717
- 18 Law of the Republic of Kazakhstan About Standardization and Certification of January 18, 1993
- 19 Law About Licensing Decree of the President of the Republic of Kazakhstan of April 17, 1995, No 2200
- 20 Law of the Republic of Kazakhstan "About Emergency-Rescue Service and Status of rescue teams", of March 27, 1997, No 87-1
- 21 Provisions About Ministry of Energy Industry and Trade of the Republic of Kazakhstan Approved by the Resolution of the Government of the Republic of Kazakhstan of November 22, 1997, No 1642
- 22 Provisions About Committee for Emergencies of the Republic of Kazakhstan Approved by the Resolution of the Government of the Republic of Kazakhstan of November 17, 1997, No 1593
- 23 Provisions About Ministry of Ecology and Natural Resources of the Republic of Kazakhstan Approved by the Resolution of the Government of the Republic of Kazakhstan of November 20, 1997 No 1622
- 24 Provisions About the Ministry of Agriculture of the Republic of Kazakhstan Approved by the Resolution of the Government of the Republic of Kazakhstan of November 19, 1997, No 1608

- 25 Provisions About the Ministry of Health Care of the Republic of Kazakhstan Approved by the Resolution of the Government of the Republic of Kazakhstan of July 19, 1997 No 1268
- 26 Provisions About the Ministry of Transport of the Republic of Kazakhstan Approved by the Resolution of the Government of the Republic of Kazakhstan of November 22, 1997, No 1641
- 27 Provisions About the State System of Emergency Prevention and Response Actions Approved by the Resolution of the Government of the Republic of Kazakhstan of August 28, 1997, No 1298
- 28 Instructions About Procedure of Coordination of Activities of Specially Designated Authorities, Supervising Water Use and Protection Approved by eight ministries of the former USSR in 1983
- 29 Procedures to Develop Regulatory Documents PR Republic of Kazakhstan 50 1 20-95
- 30 Provisions About Procedure of State Registration of Departmental Regulations Approved by the Resolution of the Cabinet of Ministers of the Republic of Kazakhstan of March 16 1994, No 279
- 31 Provisions About Procedures for Arrangement and Conditions for Conduct of Mandatory Insurance of Petroleum Operations Approved by the Resolution of the Government of the Republic of Kazakhstan of July 18 1996 No 916
- 32 Technical Rules for Construction of Facilities During Conduct of Petroleum Operations Offshore and In Internal Water Bodies of the Republic of Kazakhstan (draft)
- 33 Temporary Procedure to Issue Nature Use Permits Ministry of Ecology and Natural Resources, November 12, 1997
- 34 Procedure of Agreeing and Issuing Permits for Special Water Use Approved by the Resolution of the Cabinet of Ministers of the Republic of Kazakhstan of December 29, 1994, No 1482
- 35 Provisions About Procedure of Issuing Permits for Construction of Premises on the Territories of Occurrence of Mineral Resources Approved by the Resolution of the Government of the Republic of Kazakhstan of January 27, 1997, No 109

- 36 Recommendations of the E&P International Petroleum Forum related to the Health, Safety and Environment Management Systems
- 37 Recommendations of IADC for HSE protection
- 38 Recommendations of IACC for HSE protection
- 39 Provisions About Procedure to Submit Information About Emergency Prevention and Response Approved by the Resolution of the Committee for Emergencies of the Republic of Kazakhstan of March 24, 1997 No 7
- 40 Emergency Situations Criteria Approved by the Resolution of the Committee for Emergencies of the Republic of Kazakhstan of March 24, 1997 No 7
- 41 Procedures to Develop Current Summary Reports Regarding Work Performed Regarding Types of Activities in 1998 Instruction of the Committee for Statistics and Analysis of January 25, 1998, No 09-8-05/2
- 42 Provisions About Procedure and Conditions of Issuing Permits for Construction and Operation of Artificial Islands, Dams Installations and Facilities During Conduct of Petroleum Operations in the Republic of Kazakhstan Approved by the Resolution of the Government of the Republic of Kazakhstan of June 24, 1996 No 772
- 43 Ecological Researches During Engineering Investigations RD 51-01-11-85 Ministry of Gas Industry (MinGasProm) USSR
- 44 Engineering-Ecological Investigations for Construction SP 11-102-97 (State Department for Construction /Gosstroj/ Russia)
- 45 Provisions About Procedure for Conduct of Scientific Research Studies, related with Petroleum Operations Offshore and In Internal Water Bodies of the Republic of Kazakhstan Approved by the Resolution of the Government of the Republic of Kazakhstan of June 5, 1996, No 693
- 46 GOST 17 3 08-82 Environment protection Hydrosphere Rules of Marine Water Quality Control
- 47 GOST 17 1 5 01-80 Environment protection Hydrosphere General Requirements to Sampling of Bottom Sediments of Water Bodies for Pollution Analysis
- 48 GOST 17 1 5 04-81 Environment protection Hydrosphere Instruments and Devices for Sampling, Initial Treatment and Storage of Water Samples

- 49 GOST 17 1 4 01-80 Environment protection Hvdrosphere General Requirements to the Methods of Oil Products Identification in Natural and Waste Water
- 50 GOST 17 1 3 07-82 Environment protection Hvdrosphere Rules of Water Quality Control in Water Bodies and Water Sluces
- 51 Methods of Hydrobiological analysis of Surface Water and Bottom Sediments Guidance State Committee for Hydrometeorology USSR 1982
- 52 Methodical Instructions for Identification of Toxic Contaminating Substances in Marine Water Compared to the Background Level State Committee for Hydrometeorology USSR 1982
- 53 Methodical Instructions for Chemical Analysis of Salt-reduced Water of Marine Estuaries of Rivers and Epicontinental Seas State Committee for Hydrometeorology USSR 1984
- 54 Methodical Instructions for Determination of Radioactive Contamination of Bottom Sediments State Committee for Hydrometeorology USSR 1979
- 55 Methodical Instructions for Determination of Radioactive Contamination of Water Reservoirs State Committee for Hydrometeorology USSR 1986
- 56 Procedure of Application of International, Regional and National Standards of Foreign Countries in the Republic of Kazakhstan PR RK 05 1 21-96
- 57 Provisions About Procedure for Conduct of Investment Programs Tender for the Right to Get License for Exploration and/or Production of Mineral Resources in the Republic of Kazakhstan Approved by the Resolution of the Government of the Republic of Kazakhstan of January 27, 1997, No 107
- 58 Temporary Instruction About Procedure of Evaluation of Environment Impact by Planned Activities Ministry of Ecology and Bioresources of the Republic of Kazakhstan, RND 3 02 01-1993
- 59 Recommendations for Evaluation of Bioresources (soil, flora, fauna) Impact by Planned Activities Ministry of Ecology and Bioresources of the Republic of Kazakhstan, RND, 211 3 02 05-96

- 60 Temporary Instruction About Procedure for Evaluation of Environment Impact During Preparation of Offshore Hydrocarbon Deposits Development Projects Ministry of Oil and Gas Industry (Minnftegasprom) USSR RD-39-018-90
- 61 Procedure to Develop Environment Quality Standards in the Republic of Kazakhstan Approved by the Resolution of the Cabinet of Ministers of the Republic of Kazakhstan of January 24, 1992, No 70
- 62 Generalized List of Maximum Allowed Concentrations (MAC) and Approximately Safe Impact Levels (ASIL) of Hazardous Substances for Water Reservoirs Inhabited by Fish Ministry of Fishing Industry (Minrybhoz) USSR, 1990
- 63 Instruction for Determination of Norms of Contaminant Discharges into Water Reservoirs of the Republic of Kazakhstan RND 211 2 03 01-97
- 64 Methods for Calculation of Maximum Allowed Discharges (MAD) of Contaminants in the Waste Water into Water Reservoirs of the Republic of Kazakhstan Ministry of Ecology and Bioresources of the Republic of Kazakhstan, 1995
- 65 List of Maximum Allowed Concentrations (MAC) and Effective Approximately Safe Impact Levels (ASIL) of Pollutants in Atmosphere in Inhabited Areas Ministry of Ecology and Bioresources of the Republic of Kazakhstan, 1992
- 66 Instruction for Determination of Norms of Pollutants Emission in Atmosphere RND 211 2 02 01-97
- 67 Methods for Calculation of Hazardous Substances Content in the Atmosphere, emitted into air with enterprise waste emissions OND-86 State Committee for Hydrometeorology (Goscomgidromet), USSR
- 68 Procedure of Accumulation, Transportation, Neutralization and Burial of Toxic Industrial Wastes San PiN 3183-84
- 69 Maximum Content of Toxic Compounds in Industrial Wastes (MCTCIW), Categories and Classification on the basis of MCTCIW in San PiN 3170-84
- 70 Maximum Amount of Accumulated Toxic Industrial Wastes on-site San PiN 3209-85

48

- 71 Maximum Content of Toxic Compounds in Industrial Waste in Accumulation Chambers, located outside the territory of the enterprise San PiN 4015-85
- 72 Temporary Classifier of Toxic Industrial Wastes and Methodical recommendations to Define the Toxicity Class of Industrial Wastes San PiN 4286-87
- 73 SNIP 2 01 28-85 Industrial Toxic Waste Neutralization and Burial Areas General Design Provisions
- 74 Provisions About Procedure of Keeping State Register of Hazardous and Radioactive Waste Burial Areas and Waste Water Discharge in Subsoil Resolution of the Government of the Republic of Kazakhstan of October 18 1996, No 1285
- 75 Provisions About Procedure of Radioactive Waste Burial in the Republic of Kazakhstan Resolution of the Government of the Republic of Kazakhstan of October 18, 1996, No 1283
- 76 Provisions About Procedure of Hazardous Waste Burial and Waste Water Discharge in Subsoil 1996
- 77 Procedure to Define Standard Amounts of Industrial Waste Accumulation and Disposal RND 03 1 0 3 01-96
- 78 Methodical Recommendations to Define the Level of the Environment Components Pollution with Toxic Substances from Industrial and Consumption Wastes RND 03 3 04 01-96
- 79 Procedure of Charging Payments (Fines?) for Environment Pollution Approved by the Resolution of the Cabinet of Ministers of the Republic of Kazakhstan of October 15, 1993, No 1024
- 80 Temporary Procedure for Determination of Damage to the Environment resulted from Violation of Environment Protection Legislation Ministry of Ecology and Bioresources of the Republic of Kazakhstan, 1995
- 81 Methods for Determination of Payments for Environment Pollution Ministry of Ecology and Bioresources of the Republic of Kazakhstan, 1994
- 82 Temporary Methodical Recommendations for Calculation of the Damage to the Environment resulted from Waste Disposal in Excess of Permitted Levels and Unapproved Disposal RND 03 4 0 5 01-96

- 83 Methods for Determination of Charges for Atmosphere Pollution from Mobile Sources RND 211 1 03 01-96
- 84 Methodical Recommendations for Determination of Charges for Air as a natural resource (Oxygen in Atmosphere) RND 211 1 03 01-97
- 85 Provisions About Procedure for Calculation Charging and Execution of Payments for the Use of Water resources of the Surface Reservoirs in Different Industries of the Republic of Kazakhstan Resolution of the Government of the Republic of Kazakhstan of August 7 1997 No 1227
- 86 Temporary Methods of Calculation of the Amount of Damage in cases of air pollution, land and water contamination with oil products or formation waters and in case of unapproved location of oil stores Ministry of Ecology and Bioresources of the Republic of Kazakhstan, 1996
- 87 Temporary Methods for Evaluation of Damage to Fish Resources resulting from Construction, Reconstruction and Enlargement of Enterprises Installations and other Facilities, and from activities in Water Reservoirs Used for Commercial Fishing Ministry of Fishing Industry (Minrybhoz) USSR, 1989
- 88 Amounts of Compensation for Unpermitted Fishing Haul and Extermination of Precious Species of Fish, Marine Mammals and Invertebrates Attachment to the Resolution of the Cabinet of Ministers of the Republic of Kazakhstan of March 26, 1992, No 281
- 89 Methods for Calculation of damage to Fish Industry resulting from Violation of Legislation related to Protection of Fish Resources RND 211 3 01 08-97 Ministry of Ecology and Bioresources of the Republic of Kazakhstan 1997
- 90 Rates of Charges for Water Resources, Withdrawn from Surface and Subsurface Reservoirs Resolution of the Government of the Republic of Kazakhstan of December 31, 1996, No 1744
- 91 Procedure of Expert Examination of Architectural - City -Construction documents Approved by the Resolution of the Cabinet of Ministers of the Republic of Kazakhstan of July 26, 1994, No 830
- 92 Procedure to Determine the Cost of Expert Examination of Architectural - City -Construction documents on the territory of the Republic of Kazakhstan Ministry of Construction of the Republic of Kazakhstan 1995

- 93 Provisions About Expert Examination of Preliminary Estimation Documents for Compliance with Safety Rules and Standards in the Republic of Kazakhstan Industry Approved by the Resolution of the Board of Gosgortekhnadzor of the Republic of Kazakhstan of July 12 1993 No 24
- 94 List of Tariffs and Scientific Creative Services rendered by Mangistau Oblast Department for Emergencies, 1997
- 95 Manual for Clients and Drafters of Preliminary Design and Design Documents to Arrange Public Opinion Study and Consideration During Conduct of Assessment of Environment Impact by Planned Economic Activity Ministry of Ecology and Natural Resources Draft submitted for approval
- 96 Instruction for State Ecological Expert Examination of Preliminary Design and Design Documents in the Republic of Kazakhstan Ministry of Ecology and Bioresources of the Republic of Kazakhstan 1997
- 97 Instruction for Procedure of Consideration of Disputes between Clients Drafters of preliminary Design and Design Documents and Expert Agencies of the Ministry of Ecology and Bioresources of the Republic of Kazakhstan Ministry of Ecology and Bioresources of the Republic of Kazakhstan 1993
- 98 Procedure of Paying and utilizing of the resources of state ecological expertise in the Republic of Kazakhstan Approved by the Resolution of the Cabinet of Ministers of the Republic of Kazakhstan of June 29, 1993, No 549
- 99 Provisions About Procedure to Conduct Sanitary-Epidemiological Expert Examination 1995 Approved in Oblasts ?
- 100 Price List for Conduct of Sanitary—Hygienic, Toxicological, Microbiological Virological, Parasitologic, Radiological Investigations, Physical Measurements (expert studies), and other services Approved by State Pricing Committee of Almaty, April 24, 1997, No 4
- 101 Provisions About Procedure of Granting Private Property Rights for Land Plots and Land-use Rights Resolution of the Government of the Republic of Kazakhstan of June 20, 1996, No 760
- 102 Norms of Land-plots Allocation to Citizens and legal Entities Resolution of the Government of the Republic of Kazakhstan of April 8, 1996, No 401
- 103 Surface Water Protection Rules of the Republic of Kazakhstan RND 1 01 03-94

- 104 Rules for Prevention Contamination of Marine Shelf Waters Approved by four ministries of the USSR in 1984
- 105 Sanitary Rules and Norms for Surface Water Protection from Contamination in the areas of water consumption by population San PiN No 4631-88
- 106 Sanitary Rules and Norms for Surface Water Protection from Contamination San PiN No 4630-88
- 107 Manual for Prevention of Contamination by Vessels Ministry of Fishing Industry (Minrybgoz) USSR, 1988
- 108 International Marine Code for Safe Vessel Operations and Prevention of Contamination of Marine Environment
- 109 Large Soviet Encyclopedia (third edition volumes 1-30, Moscow 1970 - 1977)
- 110 Dictionary of Russian Language (eighth edition Moscow, 1970)



CERTIFICATE

About agreeing of the Draft Instruction on Compliance with the Environmental Protection Norms During Planning and Conducting of Petroleum Operations Offshore in the Coastal Area and in Internal Water Bodies of the Republic of Kazakhstan

The Draft is Submitted by the Ministry of Energy Industry and Trade of the Republic of Kazakhstan

Results of agreeing of the Draft

ITEMS UNDER CONSIDERATION	MINISTRIES OR DEPARTMENTS	PERSON RESPONSIBLE FOR CONSIDERATION	RESULTS OF CONSIDERATION
	Ministry of Justice of the Republic of Kazakhstan		
	Ministry of Education, Culture and Health Care of the Republic of Kazakhstan		
	Ministry of Agriculture of the Republic of Kazakhstan		
	Ministry of Transport and Communications of the Republic of Kazakhstan		
	Ministry of Ecology and Natural Resources of the Republic of Kazakhstan		
	State Committee for Investments of the Republic of Kazakhstan		
	Committee for Emergencies of the Republic of Kazakhstan		
	Akimat of Atyrau Oblast,		
	Akimat of Mangistau Oblast		

APPENDIX B

**TECHNICAL RULES FOR CONSTRUCTION OF FACILITIES
DURING CONDUCT OF PETROLEUM OPERATIONS OFFSHORE
AND IN INTERNAL WATER BODIES OF THE REPUBLIC OF
KAZAKHSTAN**

DRAFT

Ministry of Energy, Industry and Trade
of the Republic of Kazakhstan

State Technical Rules

**TECHNICAL RULES
FOR CONSTRUCTION OF FACILITIES DURING CONDUCT OF PETROLEUM
OPERATIONS OFFSHORE AND IN INTERNAL WATER BODIES OF THE REPUBLIC OF
KAZAKHSTAN**

RTP 98

AKMOLA - 1998

55

Ministry of Energy, Industry and Trade
of the Republic of Kazakhstan

Approved by
the Minister of Energy, Industry and
Trade of the Republic of Kazakhstan
_____ M K Ablyasov
“ _ ” _____ 1998

TECHNICAL RULES
FOR CONSTRUCTION OF FACILITIES DURING CONDUCT OF PETROLEUM
OPERATIONS OFFSHORE AND IN INTERNAL WATER BODIES OF THE REPUBLIC OF
KAZAKHSTAN

RTP 98

AKMOLA - 1998

Developed by The Working Group, created on the order of the Ministry of Energy Industry and Trade of the Republic of Kazakhstan No 39 of March 11 1998, with participation of JSS "KazakhstanCaspianShelf", Hagler Bailly Consulting Inc , Kazakhstan Petroleum Association (KPA), and facilitated by the United States Agency for International Development (USAID)

Agreed with Atyrau Oblast Akim
Mangistau Oblast Akim
Ministry of Justice of the Republic of Kazakhstan
Ministry of Education, Culture
and Health Care of the Republic of Kazakhstan
Ministry of Agriculture of the Republic of Kazakhstan
Ministry of Transport and Communications
of the Republic of Kazakhstan
Ministry of Ecology and Natural Resources
of the Republic of Kazakhstan
State Committee for Investments of the Republic of Kazakhstan
Committee for Emergencies of the Republic of Kazakhstan (see Appendix)

Approved by Positive Conclusion of the Department for Environmental Expertise
of the Ministry of Ecology and Natural Resources of the Republic
of Kazakhstan (dtd ____ 1998, No ____)
Positive Conclusion of the Sanitary-Epidemiological Expertise
of the Kazakh Republican Sanitary-Epidemiological Station
(dtd ____ 1998, No ____)
Decision of the Scientific- technical Council of the Ministry
of Energy, Industry and Trade of the Republic of Kazakhstan
(Minutes No ____ of _____ 1998)

Note although members of the Kazakhstan Petroleum Association participated in developing these regulations, this participation does not necessarily constitute full agreement with all of the provisions contained therein by the Kazakhstan Petroleum Association or its member companies. Nevertheless, the Kazakhstan Petroleum Association recommends adoption of these regulations in order to provide a regulatory basis for the timely exploration and development of the offshore territories of Kazakhstan and to form the basis for future modifications and improvements.

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CONTENTS

1	Definitions and Terminology	6
2	General	7
3	Rights and Obligations of the Central Executive Body of the Republic of Kazakhstan Regulating Petroleum Operations	9
4	Project and Engineering Design Procedure	9
5	Tentative Scope of the Oil and Gas Prospecting, Exploration and Development Projects	10
6	Operational Requirements	13
7	List of Documents, Incorporated by Reference	18
8	Certificate about agreeing of the Draft Technical Rules for Construction of Facilities During Conduct of Petroleum Operations Offshore and in Internal Water Bodies of the Republic of Kazakhstan	20

1 DEFINITIONS AND TERMINOLOGY

The terms used in the Technical Rules for Construction of Facilities During Conduct of Petroleum Operations Offshore and In Internal Water Bodies of the Republic of Kazakhstan shall have the following meaning

Competent Body of the Government of the Republic of Kazakhstan for conclusion and implementation of contracts with subsoil users in the Republic of Kazakhstan (hereinafter the Competent Body)	the state body to which the Government of Kazakhstan delegates the rights directly related to conclusion and implementation of contracts for conduct of petroleum operations in compliance with the established procedures (1)
Contractor	a user of the subsurface which concludes the contract with the Competent Body in accordance with the Edict of the President of the Republic of Kazakhstan "About Petroleum" (2)
C o n t r a c t Territory	a territory allocated for conducting of petroleum operations and which is defined by geographical co-ordinates (2)
Development of Oil Fields	all types of operations directly related to the oil and gas extraction and sale
Environment	combination of natural entities, including natural resources both animate and inanimate, including atmospheric air, soil, subsoil, water, flora & fauna and also the climate in their interaction (3)
Exploration Works	petroleum operations conducted at the Contract Territory to determine the reserves of the discovered oil & gas fields
Facility	all fixed or mobile production platforms, drilling rigs, wells, production facilities, oil & gas pipelines, , artificial islands, channels, , , directly used during prospecting, exploration and development for oil & gas

Internal Water Bodies	lakes, artificial water bodies and other surface water resources (2)
Job Description	a document, approved by the management of an enterprise, which sets the functions and responsibilities of an employee
Operator	a legal entity, established by Contractor (Contractors) for organizing and implementing of work at the Contract territory
Petroleum Operations	all operations directly related to Exploration, Production and associated with them in a single technological cycle, storage of petroleum and its piping by pipeline transport (2)
Practically Acceptable	preferable or reputable experience of management or technology
Prospecting Works	petroleum operations conducted at the Contract Territory before discovery of oil & gas reserves
Sea	the surface and layer of water, the surface of the bottom of the Caspian and Aral Seas (lakes) from the initial coastline of its entire extent within the boundaries of the Republic of Kazakhstan to its exterior marine frontiers which are established on the basis of the treaties between the Republic of Kazakhstan and the Seaboard States (2)
Standard	a document on standardization, establishing a set of norms, rules requirements to the standardized subject
Subcontractor	a legal entity which is contracted to render certain services to the Operator

2 GENERAL

2.1 Each design, construction, maintenance, suspension and abandonment operation for all facility types both at offshore and in-country reservoirs shall comply with these Technical Rules for Construction of Facilities During Conduct of Petroleum Operations Offshore and In

Internal Water Bodies of the Republic of Kazakhstan (hereinafter referred to as the Rules) and effective regulatory documents of the Republic of Kazakhstan related to the above issues. The provisions of these Rules shall apply to each organization and entity conducting petroleum operations offshore, in internal water bodies regardless of the type of property and country of origin.

2.2 These Rules include the major requirements to the procedures and methods of conducting operations by the Contractor and by the Operator company (hereinafter referred to as the Operator).

2.3 Operator shall be responsible for compliance with these Rules in an orderly manner.

2.4 Any amendments and/or additions to these Rules shall be introduced by the supervising executive body, regulating the petroleum operations, who has approved these Rules or its successor upon agreement with the concerned safety supervision authority. Such amendments and/or additions shall be made available to the operators.

2.5 When an authorized representative of the regulator makes a prescription to the Operator to conduct operations in accordance with a procedure not stipulated by these Rules, then the liability for the consequences [i.e. financial as well as safety] shall be vested in the relevant regulator.

2.6 The Operator shall have the right and, in the cases preconditioned in the regulatory documents, shall be obliged to develop and enforce its internal instructions for its own units in order to detail the requirements of these Rules in a standard manner.

2.7 All the operations shall be conducted generally as per tasks and projects, which shall be developed in accordance with these Rules, agreed, through an established procedure, with the supervising bodies (5, 11) and approved by the Competent Body and the Operator.

2.8 Design and Construction of the Facilities shall be performed by legal entities and physical persons, who obtained through the established procedure (13, 14) a state license for the appropriate type of activities.

2.9 Each utilized methodology, technical means, equipment, constructions, instrument, material shall have statutory certificates or passports (15 - 18) and shall fit for purpose and meet operational conditions, as well as effective standards and regulations.

2 10 If the project and engineering design cites foreign or international standards and regulations, they shall be registered, through an established procedure (6) in the Republic of Kazakhstan

2 11 Operation launching dates for specific facilities, suspension of the operations for a certain period or their shut-down shall be effected in accordance with the decisions of the Contractor or Operator

2 12 Operator has the right, as per agreement with the Competent Body to amend the project and engineering design to be accompanied by the relevant decisions provided these amendments do not result in the increased impact on the environment or increased risks to the personnel and population health Any other amendments shall be also agreed with the relevant control and supervising bodies

2 13 The Operator may change the design of the Plan under emergency situations but only if the right to make changes has been stipulated in the original project and engineering design which was approved

2 14 If international treaties or agreements, ratified by the Republic of Kazakhstan, provide for other norms, than specified in these Rules, the provisions of such international treaties/agreements shall apply

3 RIGHTS AND OBLIGATIONS OF THE CENTRAL EXECUTIVE BODY OF THE REPUBLIC OF KAZAKHSTAN REGULATING PETROLEUM OPERATIONS

3 1 Shall have the right to request any information from the Operator, effect inspections of the Operator's petroleum operations May suspend operations at certain sites in cases of significant deviations from the approved projects and these Rules when they are resulting in significant damage or potential damage to the personnel, adjacent population, environment, property, oil and gas fields or quality of the operations

3 2 Assist the Operator in arrangements for petroleum operations, in obtaining relevant agreements and permits from the state supervising and controlling bodies

4 PROJECT AND ENGINEERING DESIGN PROCEDURE

4 1 Facility construction or refurbishment design shall be preceded by a site prospecting (including hydrographic, geodetic, geological, hydrometeorological and environmental surveys) in accordance with the effective requirements (7) The Operator shall be responsible for the completeness and reliability of the data received during site prospecting

4 2 Relevant projects shall be prepared for site prospecting and approved by the Competent Body. The results of the site prospecting shall be submitted to the Competent Body and used in the project and engineering design justification. The results of the site prospecting must be sufficient for design preparation, and for safe and quality operations.

4 3 The following projects shall be prepared for the corresponding stages of petroleum operations, planned to be conducted at the contract territories, certain structures and fields:

- oil and gas prospecting project,
- oil and gas exploration project,
- oil and gas field development project

The above projects shall include assessment of the planned stage operation feasibility, operation procedure, features of the installations to be constructed, technology and equipment utilized, expected results and the sections on the HSE operation arrangements.

4 4 Field development project shall be in accordance with the established procedure (8).

4 5 If after the approval of the prospecting, exploration and oil and gas field development projects a need arises as to construction of additional installations and wells then separate projects on them may be compiled. The scope of such projects may be simplified as compared with the prospecting, exploration and field development projects and reflect amendments and additions only.

4 6 Feasibility studies (TEO) to assess the efficiency of the major technological solutions and also data and features essential for design may be developed for the big and complex enterprise and facility construction at a planning stage. In this case construction projects (working documentation) are developed and approved by the Operator for big and complex enterprise or facility on the basis of the TEO approved by the Competent Body.

5 TENTATIVE SCOPE OF THE OIL AND GAS PROSPECTING, EXPLORATION AND DEVELOPMENT PROJECTS

5 1 General explanatory note. Project feasibility study, objectives and general characteristics of the planned operations, data on project originators and developers, availability of essential licenses. Confirmation of the project's conformity with the statutory norms, regulations, standards, original data and contracts for conduct of petroleum operations.

5 2 Location, Environment - climate conditions and socio-economic conditions of the operation area Data on the populated places population composition and activities industries oil and gas pipelines, railways and vehicle roads airports, marine and river ports types of communications, environment and climate conditions, hygienic and epidemiological conditions, etc necessary for the design preparation or to be likely affected by the planned operations Outline map to be attached

5 3 Environmental characteristics Developed as per established procedure (11)

5 4 Geological structure of the area (field) and justification of operations Available geological and geophysical data, results, quality and their assessment from the planned operation justification point of view Tectonic location, brief description of the structure and litho-stratigraphic section Revealed oil and gas bearing potential, and prospective, hydrogeological characteristic of the section Geological tasks of the planned operations justification of the seismic lines, wells and their depths location, drilling sequence Geological conditions for well drilling, rock hardness and abrasiveness scales, formation pressures temperatures, breakdown pressure, possible complications (slide rocks, well bore constriction, absorption, bittern shows, etc) Tectonic chart, summary geological and geophysical section, profiles, maps, etc are attached

5 5 Construction and operation plan

5 5 1 General requirements Justification of the spacing pattern, selection of building design installation, communications, utility, , technology, equipment, instruments, material types with the major drawings attached Demand for the major technological resources, quantitative and qualitative assessment of the employee composition, management of operations Construction and operation procedure, technological flow diagram

5 5 2 Seismic operation planning shall include the following data in addition to those, listed in section 5 5 1

- vehicles, equipment and instruments for field operations, processing and interpretation, operation base,
- equipment mobilization and demobilization,
- Tentative - methodical operations, methods of field operations, processing and result interpretation methodology

5 5 3 Platform and artificial island construction planning shall include the following data in addition to those, listed in section 5 5 1

Description of materials and construction methods drawings information about operation life calculation of loads, quality standards, quality control procedure, methods and scopes of the audits Where prefabricated structures are used, their previous operation and stresses have to be considered In case of a temporary facility, dismantling operations have to be included

5 5 4 Well construction design shall include the following data in addition to those listed in section 5 5 1

5 5 4 1 Drilling rig Justification of the drilling rig and foundation selection assembly methods, brief characteristics of equipment and its location chart Rig mobilization and demobilization plan

5 5 4 2 Well design and mud characteristics Well design shall ensure geological and geophysical survey and, if scheduled, efficient formation operation, subsoil protection and accident risk minimization Justify size of the hole, casing and landing depth Drilling mud shall ensure quality drilling in the reservoir and low-risk drilling Mud volume monitoring during drilling and hoisting, spare mud volume, H₂S neutralization in mud, recording of the gas content in mud and in the possible mud gas emission and accumulation areas, ventilation equipment Sound and visual alarm devices shall be provided Drilling interval parameters periodicity of control Assessment of essential materials for mud preparation and their minimal stock at the rig

5 5 4 3 Drill string structure and drilling duty Justification and determination of essential drilling tools and drilling parameters base on the drilling intervals

5 5 4 4 Geological and geophysical survey, coring and formation testing Prospecting well survey scope shall ensure litho-stratigraphic breakdown of a section, determination of the reservoir oil-gas ratio for the entire section, radioactivity study, temperature for the entire section, study of the formation water properties not studied in the area before Prospecting and exploratory well survey shall be sufficient to identify geological structure of the area, reservoir properties of the productive horizons, formation fluid properties, and prepare oil and gas reserve evaluation Also, surveys on casing cementing quality, well bore trajectory and others necessary to ensure well drilling technology or clarification of the seismic acoustic conditions of section shall be conducted

5 5 4 5 Casing and cementing program As to their durability casing and casing cementing shall resist the maximal expected pressures under the accidental conditions, preclude outcasing

mud flow, inter-formation overflow and mud gryphons and be corrosion-resistant Casing cementing and quantity of the required materials has to be assessed

5 5 4 6 Blow-out preventer equipment, well-head connections and casing leakage test

Depending on specific geological conditions, drilling rig type and site conditions one has to develop a design and select the necessary equipment for wellhead connecting on the basis of the model design approved by the emergency supervision authorities Leakage test methods (pressure, fluid density, level decrease) shall be justified

5 5 3 7 Formation testing in the cased well Calculation of tubing for testing methods of perforation, influx stimulation methods, connections design and hydrodynamic survey Oil and gas collection or burning unit

5 5 4 8 Post-construction well abandonment, suspension or commissioning program Well abandonment and suspension operations shall ensure safe containment of formations fluids to preclude the inter-formation overflows and formation fluid seepage to the surface The well-heads of the abandoned wells shall be cut-off below bottom sediment and the well-heads of suspended wells shall be equipped with the valving and protecting constructions

5 5 4 9 Logistics Procedures and conditions of logistics are described Vehicle routes and periodicity are established

5 6 Sections “Environment protection measures”, “Risk analysis, Emergency Prevention and Response Plan”, “EIA and Population Health Assessment”, “Calculation of Payments for Nature Use, and Possible Damage to the Environment or Facilities in Emergencies’ and “Monitoring Program” are developed in an orderly manner (11, 12)

5 7 Expected results Calculation of the expected oil and gas reserves, assessment of cost and efficiency of planned operations

6 OPERATIONAL REQUIREMENTS

6 1 The Contractor shall be responsible for all operations conducted by the Operator and the Subcontractor, including

- Safe conduct of petroleum operations,
- Timely and complete submission of statutory reporting to the governmental authorities,

- Construction, maintenance, shut in and abandonment of installations in accordance with the approved projects and technological schedules

- Timely proposals on the amendments to the project solutions which are determined by the changed geological and other conditions,

- Statutory documentation filing

6 2 Before the start of the relevant operations the Operator shall have the following documents decision about the appointment of a responsible manager, job description for each employee, designs and technological schedules approved in an orderly manner HSE management system, safety and operation manuals for each equipment and mechanism certificates and technical specifications for materials and equipment, facility commissioning certificates The above documents shall be made available to the state authority examinations

6 3 Technological schedules for certain operations shall be approved by the Competent Body and shall give more detailed description of the methods and procedures of operations These schedules may be both model or specific The list of the minimal required schedules

- engineering investigations,

- construction of artificial islands and canals,

- construction of fixed platforms,

- installation of floating offshore drilling rigs,

- mud preparation and quality check,

- well bore preparation, hoisting, cementing, casing cementing quality check,

- well-head equipment, casing leakage testing, blow-out preventer equipment operation agreed with the emergency supervision authorities,

- coring, core transportation, study and storage,

- well accident response,

- petroleum signs and open flowing response agreed with the Emergency Supervision Authorities,

- oil spill clean-up agreed with the environmental protection authorities
- well surveys and processing of results,
- perforation, influx stimulation well stimulation and testing
- well suspension agreed with the Emergency Supervision Authorities,
- well shut in and abandonment procedures for proper plugging and notification of environmental protection and Emergency Supervision Authorities

6 4 Operation commissioning procedure for constructed facilities (apart from wells)

6 4 1 Completely constructed facilities shall be commissioned after a certificate is signed by the acceptance commissions called by the Operator and consisting of the representatives of the Competent Body (Chairman), of the Operator, project authors, subcontractors conducting construction and operation, and state supervisory authority. The commission composition depends on the facility type and shall be determined by the Competent Body.

6 4 2 Acceptance commissions shall

- check availability of the designs, safety and each equipment and mechanism operational manuals, certificates, technical specification or other documents verifying quality of the utilized materials, structures, parts and equipment,
- study reports or executive documents (drawings, acceptance certificates for latent works, etc) on conformity of the actual operations to the designs elaborated by the persons responsible for construction and assembly operation,
- get familiarized with the downhole work certificates, certificates of interim acceptance of certain structures, individual testing of assembled equipment, production pipelines, power networks, heating, ventilation, alarm units, communications, explosion and lightning protection units, etc
 - Note Relevant state control authority representatives have to be invited to the equipment testing
- have the right to issue prescription on remedial actions or sign the acceptance certificate for any facility
 - Note All of the above documents and certificates shall be kept until any facility operation period is over

6 5 Operator shall keep records of a well and other installations which shall include description, characteristics and results of the work, copies of certificates reports and decisions Document filing procedure forms of certificates and reports shall be agreed with the Competent Body Well and installation logs shall be kept until their abandonment and the major data thereon, to be agreed with the Authority, shall be kept until the operations on the contract area are over, all of the data shall be made available to the state authority examination

6 6 Each facility and installed equipment, instruments and technical means shall be subject to periodical tests, maintenance and control tests generally in accordance with the operational and repair manuals approved by the Operator The operations implemented shall be duly recorded

6 7 Operator shall compile relevant certificates as to casing hoisting, cementing leakage testing and blow-out preventer equipment testing and well testing

6 8 Well logs shall have the reports on the mud parameters and components, drilling tool arrangement and drilling schedule, methods, scope and results of the geological and geophysical operations, description of accident response, impediments and suspension and abandonment operations

6 9 Each accident, near-miss and incident resulting in production stoppages or temporary employee disability for a period of more than one day shall be subject to registration and investigation registration and investigation of the accidents and major accidents shall be implemented through an established procedure(9, 10) Registration and investigation of the accidents, near-misses and incidents which haven't caused a threat to human's life and health, or damaged equipment, machinery or mechanisms shall be implemented within the procedure set up by the Operator

6 10 Wells shall be deemed completely constructed, when all the operations contemplated by their design including the abandonment or preparatory operations for oil and gas production are implemented Operator shall compile a certificate of the well construction completion to be approved by the Competent Body

6 11 Suspension of the completely constructed wells due to expected production, and incompletely constructed wells due to the weather or technical reasons shall be made by the Operator's decision Well suspension operations shall comply with the design or technological schedule

6 12 Abandonment of any well shall be effected upon decision of the Operator or Contractor after consultation with the Competent Body when no productive horizons have been discovered in the well or the discovered productive horizons are deemed non-profitable Abandonment of

an incompletely constructed well due to an accident or geological or technical impediments shall be effected after notification to the Competent Body that such accident or technical impediment has occurred. If delay in abandonment will endanger the future productivity of the deposits or create a Health or Safety problem, the Operator shall take whatever steps are necessary to reduce the risk. The Operator shall also document procedures used during correction of the emergency to assist follow-up investigation by the Competent Body. Abandonment operations shall be implemented in accordance with design or technological schedule.

6.13 Environmental Protection and Emergencies supervision authorities representatives shall be invited to the well abandonment operations where they sign joint certificates on the work done.

6.14 Operator shall be responsible for conditions and monitoring of the suspended and abandoned wells until the licensed areas are returned to the Republic of Kazakhstan.

6.15 After the contract areas are handed over to the Republic of Kazakhstan, monitoring of the abandoned wells shall be assigned to the environmental protection authorities. In case of any oil signs in the abandoned well, the well repairing and containment operations shall be implemented by the central executive body regulating petroleum operations.

6.16 Suspension and abandonment of the installations (other than wells) shall be in accordance with the designs or plan agreed with the Competent Body.

6.17 Operator shall keep files on the health, safety and environment protection issues, where developed and approved in an orderly manner: programs, protocols, decisions, reports and results of the production control shall be registered. All the above documents shall be made available to the state authority examination.

6.18 Operator shall submit information on facility location and description, which were constructed or abandoned within the contract territory, to the relevant local administrations of the relevant oblasts.

6.19 Operator shall get Water Fund Lands allocations from local executive bodies if facilities are constructed outside the contract territory.

7 LIST OF DOCUMENTS INCORPORATED BY REFERENCE

- 1 Provisions About the Competent Body of the Government of the Republic of Kazakhstan for conclusion and Implementation of Contracts with Subsoil Users in the Republic of Kazakhstan Approved by the Resolution of the Government of the Republic of Kazakhstan of May, 27, 1996, No 646, DB#5580
- 2 Edict of the president of the Republic of Kazakhstan having the force of law "On Petroleum", June 28, 1995 DB#5629
- 3 Law of the Republic of Kazakhstan "On Environment Protection" July 15, 1997 DB#8035
- 4 Water Code of the Republic of Kazakhstan March 31, 1993, No 2061-XII DB#5632
- 5 Regulations of Procedure and Conditions for Issuance of the Permits on Construction and Operation of the Artificial Islands, Dams, Installations and Units for the Petroleum Operations in the Republic of Kazakhstan Approved by the Resolution of the Government of the Republic of Kazakhstan, 1996, No 772 DB#5519
- 6 Procedure of Application of International, Regional and National Standards of foreign countries in the Republic of Kazakhstan State Standardization Organization of the Republic of Kazakhstan PR RK 50 1 21-96 DB#6016
- 7 Engineering Investigations on the Continental Shelf Ministry of Gas industry of the USSR 1985 VSN 51 2-84 DB#2149
- 8 Unified Rules for Development of Oil and Gas Fields in the Republic of Kazakhstan, 1996 DB#5524
- 9 Instruction for Technical Investigation and Recording of Accidents, which did not Entail any Injuries or Damage to Life and Health of People on Facilities and Enterprises Supervised by the ComGorTechNadzor under the Cabinet of Ministers of the Republic of Kazakhstan, 1994 RD 03-01-95? DB#8037
- 10 Provisions On Investigation and Recording of Accidents, Which Entailed Injuries and Damage to Health and Life of Employees, 1994 DB#5545

- 11 Instruction for Compliance with Environmental Protection Norms During Planning and Conducting of Petroleum Operations Offshore in the Coastal Areas and in Internal Water Bodies of the Republic of Kazakhstan 1998
- 12 Safety Regulations During Conduct of Petroleum Operations Offshore and In Internal Water Bodies of the Republic of Kazakhstan, 1998
- 13 List of State Bodies (Licensers) Authorized to Issue Licenses including Patents, for Types of Activities Subject to Licensing Appendix 1 to the Resolution of the Government of the Republic of Kazakhstan, December 29, 1995, No 1894 DB#5604
- 14 List of Types of Activities and Services Subject to Licensing, which Require Certificates Issued by Sanitary, Environmental and Mining - Technical Supervision Authorities Appendix 4 to the Resolution of the Government of the Republic of Kazakhstan, December 29, 1995, No 1894 DB#5604
- 15 List of Products (Works, Services) Subject to Mandatory Certification for Compliance with Mandatory Standards or other Regulations, Ensuring its Safety for Life, Health, Property of citizens and to the Environment Approved by the Resolution of the Government of the Republic of Kazakhstan, July 15, 1997, No 1112 DB#8306
- 16 Procedure of Import of Products (Goods) to the Republic of Kazakhstan, which are Subject to Mandatory Certification Order of the State Customs Committee, July 4, 1997, No 175-P DB#8307
- 17 Procedure of Products Certification ST RK 3 4-94 GSS RK DB#8308
- 18 Procedure for Foreign Certificates Acceptance RD 50 RK 3 3-94 GSS RK DB#8309

CERTIFICATE

About agreeing of the Draft Technical Rules for Construction of Facilities During Conduct of Petroleum Operations Offshore and in Internal Water Bodies of the Republic of Kazakhstan

The Draft is Submitted by the Ministry of Energy, Industry and Trade of the Republic of Kazakhstan Results of agreeing of the Draft

Items under consideration	Ministries or departments	Person, responsible for consideration	Results of consideration
1	2	3	4
■	Ministry of Justice of the Republic of Kazakhstan		
■	Ministry of Education, Culture and Health Care of the Republic of Kazakhstan		
■	Ministry of Agriculture of the Republic of Kazakhstan		
■	Ministry of Transport and Communications of the Republic of Kazakhstan		
■	Ministry of Ecology and Natural Resources of the Republic of Kazakhstan		
■	State Committee for Investments of the Republic of Kazakhstan		
■	Committee for Emergencies of the Republic of Kazakhstan		
■	Akimat of Atyrau Oblast		
■	Akimat of Mangistau Oblast		

APPENDIX C

**SAFETY REGULATIONS FOR CONDUCTING PETROLEUM
OPERATIONS OFFSHORE AND IN INTERNAL WATER BODIES
OF THE REPUBLIC OF KAZAKHSTAN**

DRAFT

**Ministry of Energy Industry and Trade
of the Republic of Kazakhstan**

**SAFETY REGULATIONS
FOR CONDUCTING PETROLEUM OPERATIONS
OFFSHORE AND IN INTERNAL WATER BODIES
OF THE REPUBLIC OF KAZAKHSTAN**

RND 98

Akmola, 1998

Draft

Ministry of Energy, Industry and Trade
Republic of Kazakhstan

Approved by
the Minister of Energy, Industry and
Trade of the Republic of Kazakhstan
_____ M K Ablyasov
_____, 1998

**SAFETY REGULATIONS
FOR CONDUCTING PETROLEUM OPERATIONS
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OF THE REPUBLIC OF KAZAKHSTAN**

RND 98

Akmola, 1998

Coordinated by The Working Group, created on the order of the Ministry of Energy Industry and Trade of the Republic of Kazakhstan No 39 of March 11 1998 in pursuance of the Government Resolution No 105 of January 27 1997

Developed by JSS "KazakhstanCaspShelf" with participation of Hagler Bailly Consulting Inc , Kazakhstan Petroleum Association (KPA), Scientific - Research Center for Safety (accident prevention) of the Scientific - Research Industrial Institute "CaspMunaGas" and facilitated by the US Agency for International Development (USAID)

Agreed with Ministry of Ecology and Natural Resources
Committee for Emergencies

Note Although members of the Kazakhstan Petroleum Association participated in developing these regulations, this participation does not necessarily constitute full agreement with all of the provisions contained therein by the Kazakhstan Petroleum Association or its member companies Nevertheless the Kazakhstan Petroleum Association recommends adoption of these regulations in order to provide a regulatory basis for the timely exploration and development of the offshore territories of Kazakhstan and to form the basis for future modifications and improvements

CONTENTS

I General Part	5
Part II Safety Rules	14
Part III Industrial Hygiene and Sanitation	51
Appendix List of References	57

1. GENERAL PART

1 1 Introduction and Sphere of Application of the Regulations

All operations directly related to the prospecting, exploration and development of oil and gas offshore and in internal water bodies of the Republic of Kazakhstan shall be conducted in accordance with these Safety Regulations for Conducting Petroleum Operations Offshore and in Internal Water Bodies of the Republic of Kazakhstan (hereinafter The Regulations) and the laws, regulations, and standards of the Republic of Kazakhstan currently in force which have relation to the Safety and Occupational Hygiene issues. These Regulations are mandatory to all the organizations and companies conducting offshore and internal water bodies Petroleum operations, without respect to the type of property, sources of financing and to the country of origin.

When ever these Regulations contradict specific provisions of existing rules and regulations of the Republic of Kazakhstan the present Regulations shall prevail.

The Regulations shall not set forth provisions, applicable to the conduct of offshore seismic studies and explosion operations, or during laying and operation of underwater oil and gas pipelines, power transmission and communication cables, since those are covered by the other regulations, referenced in these Regulations. The list of the above mentioned regulations is given in the Appendix.

These Regulations shall apply to those facilities where the operational environment is similar enough to offshore operations to warrant the application of different health and safety requirements as those imposed onshore. An onshore facility shall retain that status by having adequate protection against rising water (i.e. dams, dikes, barriers).

1 2. General Provisions

The Regulations shall define minimum requirements necessary to provide safe operational conditions, which shall be considered recommendations rather, than mandatory conditions, and shall not limit the initiative of the Contractor in selection of methods and ways to achieve those, if the activities of the Contractor are based on safe procedures, methods, technologies and practices of safe operation, accepted in the international offshore petroleum industry.

The Regulations shall be considered as a basis for external Safety audits and inspections.

When a designated representative of a supervising state body prescribes the Operator to conduct operations in accordance with procedures which are not set forth by the present Regulations and contradict those, accepted in international practice of safe conduct of offshore

petroleum operations, responsibility for the operations is borne by the supervising state body who issued the prescription

All international, regional and foreign standards can be applied on the territory of the Republic of Kazakhstan through the appropriate procedure of their acceptance by the Republic of Kazakhstan standardization agencies (1)

Some international standards, which were used in drafting these Regulations are listed in the Appendix

When international labor protection norms, standards and treaties provide for requirements to Safety and Occupational Hygiene stronger than the Kazakhstan norms and standards the Contractor may follow the international requirements

1.3 Definitions and Terminology

Definitions and terms used in these Regulations shall have the meanings as defined below

Continuously manned facility is one in which an operating crew is on duty 24 hours/day, 7 days/week. It does not include facilities, which operate only part of the day

Contractor means a subsoil user holding a contract, concluded with a competent body, and a license for the conduct of operations within the contract territory, issued in accordance with the Republic of Kazakhstan legislation

Contract Territory means a plot of land which was awarded to a Contractor to conduct petroleum operations in accordance with the legislation of the Republic of Kazakhstan

Facility means all platforms, fixed or mobile, drilling rigs, wells, , artificial islands, canals, dams, buildings and other production units directly involved in the prospecting, exploration and development of oil and gas deposits

Hot Work means all activities, when open flame is used or sufficiently powerful sparks are likely to occur, which may cause ignition. These activities include but are not limited to welding, cutting, burning and grinding

Mandatory Objective(s) means safety goals to be necessarily achieved during conduct of various operations

Minimum requirements means a list of minimum requirements or recommendations to be followed by or taken into account by a Contractor while selecting an alternative method to achieve the objective during conduct of various operations

Operator means a legal entity, established by Contractor(s) for organizing and implementing the work at the Contract Territory

Practical means a preferred and well proven practice or technological operation

Safety Operation Plan means a part of a Technical Project or an appendix to it describing safety procedures which will be used by a Operator during conduct of offshore petroleum operations

Standard means a widely accepted measure(s) or quality(ies), , that defines the required degree of performance

Supervising body means a state body designated to control, supervise, and inspect companies compliance with the Republic of Kazakhstan legislation in the sphere of health, safety and environment protection Hereinafter, this definition shall mean (but not be limited to) the Committee for Emergencies, the Ministry of Energy, Industry and Trade, the Ministry of Labor and Social Protection, the Ministry of Culture, Education and Health Care, the Ministry of Ecology and Natural Resources, the Ministry of Transport and Communications, the Ministry of Agriculture, and also oblast bodies, departments and representative offices of the above mentioned ministries In view of possible changes in the names of the ministries hereinafter they will be mentioned without official name For example, the Ministry of Ecology and Natural Resources will be mentioned as the National Designated Authority for Environment Protection

Temporary Refuge means a place giving shelter or protection from a major emergencies such as fire, unconfined explosion or release of toxic gas, for a short predetermined length of time, required to start organized evacuation

Warning/Hazardous Signs. all warning/hazardous signs shall meet the existing requirements, shall be made in graphic representation or in the working language used on the facility

Working Language means the language used for internal documents on the offshore facility

Workstation a work site normally occupied all day throughout the use of the facility

1 4 Rights, obligations and responsibility of the Contractor

1 4 1 The Contractor shall be responsible for

- safe operations performed under the contract, by himself or his subcontractors, in the exploration and/or production of oil and/or natural gas within the contract territory and in other regions
- keeping required safety documentation and orderly reporting to the state bodies regarding all the operations, including those performed by subcontractors,

1 4 2 The Operator shall assign his representative for each offshore facility The assigned representative shall be responsible for safe conduct of operations and for coordination with supervising bodies during inspections

1 4 3 The Operator shall provide free access to his facilities for the inspectors of the supervising bodies or shall arrange their transportation to the inspected facility within the agreed terms taking into consideration weather conditions availability of transport, and safety of the crew inspectors and operations

1 4 4 The Contractor shall be responsible for compliance with the present Regulations If the Regulations do not suggest specific methods to achieve stated objectives the Contractor shall make every effort to follow the intent of the Regulations using good engineering practices and the safest efficient available technologies

1 4 5 The Operator shall perform all operations in a safe and workmanlike manner and shall maintain all equipment in a safe condition in order to protect the health and safety of the crew, and the preservation and conservation of environment and property

1 4 6 The Operator shall take all necessary precautions to control, remove or otherwise correct any hazards

1 4 7 The Operator has the right and in predetermined cases is obliged by the supervising state body to develop and introduce internal instructions, and use new or alternative methods, procedures, equipment, or technologies, aimed to improve and detail the requirements of the present Regulations, provided the Contractor informs the supervising bodies about it

1 4 8 The Operator shall provide coordination and facilitation of inspections conducted by state supervising bodies and execution of their legitimate prescriptions in established terms

1 4 9 The Contractor shall notify local government 15 days prior to the proposed start of operation of offshore installation, the latter can form an Acceptance Commission of representatives of state supervising bodies to accept the facility and allow operation. The Contractor shall provide assistance to the Commission when the Contractor does its pre-start audit

1 5 Provisions on Uniform Health, Safety and Environment Protection Management System

1 5 1 The Operator shall develop and/or have Health, Safety and Environment Management System (HSEMS) prior to the start of operations within his contract territory. Health, Safety and Environment Management System shall define the Contractor's policy in the sphere of Health, Safety and Environment Protection, contain hazard identification and proposed measures to minimize risks, determine HSE duties of employees in routine conditions and in emergency, suggest procedures for filing and controlling, schedule audits, provide recommendations for analysis of operations and their results, as well as the development of correction and improvement measures, define health controls, schedule frequency and types of medical examination of the personnel, determine training programs, briefings and HSEMS knowledge tests, and outline other issues

Operator's HSE policy shall be published, that is available to everyone who is willing to familiarize with it

1 5 3 The Operator shall provide each continuously manned facility with copies of designs, technological procedures, rules and manuals, related to the performed operations, equipment and testing certificates, including equipment safety control test certificate, records about preventive maintenance, Health and Safety manuals for specific operations and occupations, equipment operation and maintenance manuals, and other safety related documents

1 6 Suspension of Production or Other Operations

1 6 1 The supervising bodies within their jurisdiction may suspend or prohibit operations on the facilities if the Contractor did not comply with requirements of the present Regulations and, thus, caused serious harm or damage to health of personnel or

population, to the environment property or subsoil or there is a real threat of such harm or damage

- 1 6 2 When supervising bodies suspended operations in accordance with above described they may require the Contractor to
- 1) do specific study of the site of operations in order to evaluate the hazard(s) which was the cause for suspension of operations, and to evaluate potential damage(s)
 - 2) take measures to mitigate the hazard(s),
 - 3) submit updated Safety Operation Plan
- 1 6 3 In choosing between alternative mitigating measures one shall balance the cost and the expediency of the required measures against the effects of mitigation or reduction in damage or harm to health or life, property, or the environment

1 7 Safety Operation Plan

- 1 7 1 The Contractor shall be required to submit to the National supervising body for emergencies and to other supervising bodies a Technical Project together with a Safety Operation Plan, containing detailed description of specific safety measures and procedures, which will be performed by the Contractor during conduct of petroleum operations The Contractor may use existing documents like "Safety case" or "Safety Manual" as a Safety Operation Plan, or he may develop the required document on the basis of the present Regulations
- 1 7 2 Safety Operations Plan as one of the mandatory conditions shall contain an Emergency Section describing emergency response measures by the Operator to any accidents likely to cause serious damage to life and health, and also major spills and emissions of oil, gas and chemicals The Emergency Section shall also discuss the following drilling of a killing well in case of open uncontrolled well flowing, drilling rig failure response measures, measures to be taken in case of a fire or explosion in the oil and gas preprocessing equipment, and in accidents with offshore support vessels for each situation and condition for which it is applicable
- 1 7 3 The Operator shall, upon request of the supervising body, submit for review all standards or procedures which are incorporated by reference in the Safety Operation Plan

1 8 Safety Operation Plan Submission and Approval Procedure General Requirements

- 1 8 1 The Operator shall conduct exploration, development and production activities basically in accordance with the Technical Project and the Safety Operation Plan approved by the supervising bodies
- 1 8 2 A proposed Safety Operation Plan may apply to one or more contract territories licensed to the Contractor
- 1 8 3 The Operator shall in an orderly manner submit to the supervising bodies the Safety Operation Plan at least 45 days prior to the proposed start of operations
- 1 8 4 Within 30 days of submission of the Safety Operation Plan the supervising bodies shall accomplish one of the following 1) Approve the Safety Operation Plan 2) Require the Operator to modify any plan which is inconsistent with the provisions of the present Regulations or Technical Rules, 3) Disapprove the Plan if the Operator did not comply with subsection 2)
- 1 8 5 The supervising bodies shall notify the Operator in writing of the reason(s) for disapproving the Safety Operation Plan or for requiring modification of a Plan The supervising bodies shall also notify the Operator in writing of the conditions that must be met for Plan approval
- 1 8 6 The Operator may resubmit the Safety Operation Plan, as modified, to the Supervising bodies in the same manner as a new plan Only information related to the proposed modifications need to be resubmitted The Supervising bodies shall approve, disapprove, or require modifications of the resubmitted plan within 30 days of the resubmission date
- 1 8 7 If the Supervising bodies fail to respond within 30 days of submission or resubmission of the Safety Operation Plan, then the plan shall be considered approved

1 9 ACCIDENT AND INCIDENT REPORTS AND INVESTIGATIONS

- 1 9 1 The Operator shall promptly within the limits possible, but not later than 24 hours, notify the appropriate National Executive Body for Emergencies of all serious accidents which entailed any death or serious injury resulting in apparent disability, or injury of a group of people, and shall arrange investigation in accordance with the established procedure (2)

- 1 9 2 The Operator shall notify about all the emergency situations such as emergency event, fire, explosion, blowouts, gas emissions, oil spills and vessel collision which represent threat or possible threat to population environment other offshore or coastal facilities Notification shall be made in an orderly manner (3) immediately or not more than one hour after emergency occurred or is revealed All subsequent notifications to other supervising bodies shall be the responsibility of the National Executive Body for Emergencies
- 1 9 3 In emergencies, which involved marine vessels, hydro-technical constructions and/or occurred during transportation by sea, the Chief Navigation Safety Inspection of the National Executive Body for Transport and Communications of the Republic of Kazakhstan shall be notified in an orderly manner (4) by the National Executive Body for Emergencies
- 1 9 4 The Contractor shall inform the corresponding local department of the National Executive Body for Emergencies about an accident, an emergency occurred or likely to occur, and the latter shall inform its headquarters and local government
- 1 9 5 If the emergency occurred on the Operator's facility and entailed significant damage to the environment, population, state property or to a third party investigation of such emergency shall be conducted by specially designated state commission with participation of the Operator After investigation this Commission shall determine the damage and the responsibility of the Operator
- 1 9 6 If the emergency occurred and entailed significant damage to the Contractor's property only, investigation of such emergency shall be conducted by the Contractor

1.10 PENALTIES AND FINES

Whenever the Supervising bodies determine, on the basis of available evidence, that a violation of or failure to comply with any significant provision of the Safety Regulations for Conducting Petroleum Operations Offshore and in Internal Water Bodies of the Republic of Kazakhstan probably occurred and that such violation continued beyond actual notice of the violation and the expiration of any reasonable period allowed for corrective action or that the violation may have constituted a threat of harm or damage to life of personnel and population, damage to property, environment or mineral deposit, the Supervising bodies may direct that an incident investigation be initiated

Upon review of the evidence, The Supervising bodies shall notify in writing the party alleged to have committed the violation of the applicable provisions of the Regulations

The Supervising bodies may assess administrative penalties that conform with the existing standard(s) for penalty assessment according to the laws of the Republic of Kazakhstan

The party alleged to have committed the violation shall have the right to examine all evidence and have copies of all evidence used in the incident investigation

1 11 Hearings

The party alleged to have committed the violation shall have the right to a hearing before the Supervising bodies prior to any finding of fact regarding the alleged violation

Within 30 days after receipt of notice of violation, the accused party may request in writing a hearing before the Supervising bodies specifying the particular issues which are in dispute, or submit any written evidence in lieu of a hearing, or pay the penalty amount specified in the notice

If the request in writing is not submitted within the specified terms, the decision of the Supervising bodies shall be final, but subject to Appeal

1 12. Appeals

Any appeal of a decision of the Supervising bodies together with any supporting evidence or arguments, shall be submitted to the Supreme Arbitration of the Republic of Kazakhstan in accordance with the legislation of the Republic of Kazakhstan, if other Arbitration Courts are not stipulated in the appropriate agreements between the Contractor and the Government of the Republic of Kazakhstan

1 13 Administrative Penalties

If the Supervising bodies determine that an administrative penalty is to be assessed, the penalty shall be in accordance with the administrative penalties as according to the laws of the Republic of Kazakhstan

If the Supervising bodies' decision is appealed to the Supreme Arbitration of the Republic of Kazakhstan, payment of an administrative penalty shall not be due until after the Supreme Arbitration's decision on the appeal is issued

PART II SAFETY RULES

2 0 PERSONNEL REQUIREMENTS

2 1 Responsible executive

Mandatory Objective(s)

- 2 1 1 The Operator shall appoint a responsible person(s) on the facility (Offshore Installation Director or Manager) in charge of the safe operations aboard the facility and safety of the crew. Such responsible executive shall have the skills and competence required to execute his duties.
- 2 1 2 Information about the responsible executive (position, name, contact phone number) who is in charge of operations on the facility, and is responsible for the safety of operations, shall be included into the Safety Operation Plan.
- 2 1 3 For a mobile offshore facility, the Operator shall distinguish between the authority and responsibilities of the Director and the Captain so, that in different stages of operations and in different circumstances only one responsible executive will make final decisions.

2 2 Training

Mandatory Objective(s)

- 2 2 1 The Operator shall ensure that personnel have sufficient experience and are given the necessary and proper information and training to perform their functions in the proper operation of equipment, methods of operation and techniques.
- 2 2 2 Members of the crew and visitors who are new to the facility shall be given introduction training on arrival, to familiarize them with the safety requirements on the facility and actions to be taken in the most likely emergencies.
- 2 2 3 The Contractor shall ensure that every work place has written instructions specifying rules to be observed for the safety and health of workers and the safe use of equipment.
- 2 2 4 The Operator shall ensure that all employees receive comprehensible health and safety instructions in the working language. The Operator shall provide every

employee with a copy of written instructions and have every employee sign the confirmation of obtaining those and the Operator shall check their knowledge of the instructions

- 2 2 5 All the personnel, working on the offshore facilities, should have certificates - permits confirming that they are physically fit and trained to survive at sea

3 0 Protective and Rescue Equipment

Mandatory Objective(s)

- 3 1 The Operator shall provide personal protective equipment (PPE) on the installation fit for purpose of protecting the persons on board against likely risks to their health and safety
- 3 2 Personnel, working on board, shall be provided with the personal protective equipment required for their working conditions This equipment shall be fit for purpose and meet effective standards Personnel shall be trained in proper use of the personal protective equipment and shall be responsible for its preservation
- 3 3 Design, construction, installation and maintenance of all the rescue and protective equipment shall be performed in accordance with international standards accepted in Kazakhstan, or their equivalents

Minimum Requirements

- 3 4 The personal protective equipment shall be protected from damage and located in readily accessible areas The personal protective equipment shall provide protection for head, arms, legs, sight and hearing The overall for cold season operations shall protect from cold and moisture Personal protective equipment set shall include breathing apparatus on the facilities where toxic gas may be a hazard
- 3 5 Sufficient, suitable evacuation and marine (water immersion) survival equipment shall be provided, designed for the emergency, the climate and weather conditions in which they will be used This equipment will include ropes, rope netting, storm-ladders, survival suits, life-jackets, life-buoys, life-rafts totally enclosed motor-propelled safety craft (TEMPSC), and amphibious vehicles for rescue on ice where necessary

- 3 6 There shall be 100% more individual marine rescue means (life-jackets and immersion suits) than is necessary to equip every individual that is on the facility at any one time (one complete set in the sleeping rooms and the other one - in evacuation point) Individual rescue means shall be of orange color and shall have luminescent strips and warning light activated in water
- 3 7 Required minimum individual survival set kept in living quarters shall include a survival suit, a life-jacket (or floating survival suit) a smoke-protection hood fire-proof gloves and an electric torch
- 3 8 There shall be 50% more marine collective survival equipment (TEMPSC, life-rafts) than is necessary to rescue staff permanently onboard the facility There must also be sufficient TEMPSC capacity to evacuate all onboard if one TEMPSC is disabled or not available for evacuation Each employee or visitor shall know his muster station and his evacuation vehicle
- 3 9 The marine (water immersion) survival equipment shall be of bright color (orange or red) to make them conspicuous when in use in either day or night time and equipped with devices which can be used to attract the attention of rescuers including radio and other tracking gear Survival craft shall be capable of evacuating the crew in ice conditions, if it is planned to conduct operations in the freezing sea
- 3 10 Required minimum set of personnel protective equipment for a worker outside the quarters includes 1) hard hats (helmets), 2) protective footwear with metallic toe-caps and back area of the foot, 3) fire retardant overalls, 6) gloves or mittens 7) goggles and hearing protectors and self rescue means (protection against gas) - when needed
- 3 11 A list of rescue, evacuation and survival, and protective equipment shall be indicated in the Safety Operation Plan

4 0 Medical services provision

- 4 1 All continuously manned facilities shall be equipped with a dedicated Sick Bay (First-Aid Room) that is adequate for the size of the installation and number of occupants
- 4 2 The Sick Bay shall have suitable equipment, facilities and medicines
- 4 3 The Operator shall have procedures of medical evacuation and shall conduct periodical medical evacuation exercises

Minimum Requirements

- 4 4 The Sick Bay should be located as close as possible to the helicopter access or to the evacuation station by vessels. The Sick Bay shall be equipped with litters and other means necessary to safely deliver the injured or sick.
- 4 5 Safety Operation Plan or internal procedures of the Operator shall contain recommendations for provision of First Aid to the injured within the first minutes (resuscitation) and during the evacuation period (stabilization).
- 4 6 The Contractor shall provide the facility with a sufficient number of First-Aid kits. The Operator shall ensure that the facility always has several trained workers and kits for giving First-Aid and also treatment or medical evacuation under the direction of a qualified medic.
- 4 7 Remote permanently manned offshore facilities with more than 50 people present at the facility at any one time shall have aboard the facility a medic and medical equipment for resuscitation and stabilization (artificial breathing apparatus with appropriate reserve of oxygen, defibrillator etc.).
- 4 8 Eye-bathing stations shall be available aboard the facility in the areas where the potential risk of traumatizing eyes with extraneous particles or chemicals is high.

5 0 INDUSTRIAL FACILITIES REQUIREMENTS

5 1 Facility location

Mandatory Objective(s)

- 5 1 1 A geo-technical investigation of the site sea bottom shall be conducted for each offshore facility proposed for construction to ensure safe construction and operation.
- 5 1 2 The primary objectives of the site investigation shall be survey for the presence or absence of any pipelines, cables or other facilities, the attainment of reliable geo-technical data concerning the sea floor properties in order to properly design the facility to the desired structural safety level.
- 5 1 3 The facility location shall be selected so as not to interfere with fixed navigation courses, especially access to harbors.

5.2 Safety zones

Mandatory Objective(s)

- 5 2 1 A "Safety Zone" around any single facility dedicated for drilling and production shall be defined by the present Regulations as the area encircling the facility within 500 meters from its external edges
- 5 2 2 The "Safety Zone" for offshore underwater pipelines is defined within 500 meters to both sides of the pipeline axis
- 5 2 3 Unauthorized vessels are prohibited to enter the "Safety Zone" of the offshore facility. Support vessels and support aircraft shall notify permanently manned facilities about intended entrance into the "Safety Zone" and shall obtain permission to enter from the Director of the facility
- 5 2 4 Without specific permission from the Operator, marine vessels shall not be allowed to anchor, trawl, bottom fish and dredge within the "Safety Zone" of underwater pipelines, offshore wellheads and other underwater offshore constructions used to produce oil and gas
- 5 2 5 The Contractor shall in good time submit offshore site location data with exact coordinates to the Navy Department of the Ministry of Defense and to the port authorities of the Republic of Kazakhstan

5 3 PLATFORMS AND STRUCTURES

Mandatory Objective(s)

- 5 3 1 The Contractor shall ensure that the facility and all of its essential components are designed, fabricated, installed and maintained for the purpose for which it is intended and to ensure its structural integrity for its anticipated use
- 5 3 2 The Contractor shall ensure that the facility and its essential components will perform adequately under all expected actions and specific environmental conditions at the facility location, including oceanographic, meteorological, ice and seismic or tectonic conditions prevalent in that region

- 5 3 3 The Contractor shall ensure that the facility and its essential components are designed, fabricated, installed and maintained in accordance with internationally accepted standards (5)
- 5 3 4 The Contractor's activities related to construction and operation of platforms and other structures shall be consistent with the effective requirements in the Republic of Kazakhstan (6)
- 5 3 5 Floating offshore units, such as barges floating platforms vessels and equipment for safe navigation shall be certified by the Marine Register of the National Executive Body for Transport and Communications of the Republic of Kazakhstan
- 5 3 6 Technological equipment for drilling and production of oil and gas installed on the floating units, shall be under supervision of the National Executive Body for Emergencies

5 4 Safety Requirements to the Working Areas and Workstations

Mandatory Objective(s)

- 5 4 1 All Workstations shall be designed, constructed and maintained to ensure the health and safety of the workers
- 5 4 2 All the personnel and visitors on the facility shall wear protective equipment in all areas outside the accommodation area and visitors shall be briefed and workers shall be trained in safety procedures

Minimum Requirements

- 5 4 3 Workstations must be organized in such a way that workers can use them without danger and leave them swiftly and safely in an emergency
- 5 4 4 When workers are employed at full time outdoor workstations, such workstations will be protected against inclement weather conditions
- 5 4 5 Workstations shall provide protection from excessive noise levels or from other harmful external influences such as gases, vapors or dust
- 5 4 6 Any readily accessible hot surfaces with temperature exceeding 70 C shall be fenced or covered with heat-insulating material

94

- 5 4 7 Every effort shall be made to provide a stable and safe work area floor. Work area floors shall be non-skid and protected from unfenced holes, bumps or slopes capable to cause falls and trauma. Low ceilings or constructions likely to cause head trauma, shall be painted in bright colors.
- 5 4 8 Work stations elevated for more than 1 meter from the floor level shall be fenced with banisters. All the stairs shall also have banisters. The pitch and width of the stairs, as well as their covering and fence shall meet the existing safety requirements.
- 5 4 9 Doors shall be designed to open outward towards the evacuation point or to slide.
- 5 4 10 Special glass (reinforced with metallic wire) or other approved materials shall be used for fire and explosion resistance in hazardous work places.
- 5 4 11 Workstations likely to be affected by hazardous gases shall be artificially ventilated.
- 5 4 12 In the areas where flammable concentrations of gas may be present in normal operation, lighting and electrical equipment shall be explosion proof or intrinsically safe (explosion proof, low voltage).
- 5 4 13 Hazardous or dangerous areas must be clearly and conspicuously marked in the working language used on the facility or pictorially.

5 5 Assembly, Transportation, Operation, Repair and Dismantling of Platforms and Facilities

Mandatory Objectives

- 5 5 1 The Contractor shall ensure that the design, fabrication, installation, operation and maintenance of all facilities is adequate to assure their structural integrity for the safe conduct of drilling and/or production operations, considering the specific environmental conditions at the facility location.
- 5 5 2 The Contractor shall ensure structural strength and integrity of the facility in general after final field erection.
- 5 5 3 The structural condition of all facilities used or installed offshore shall be maintained and inspected periodically in accordance with internationally accepted standards and practices.

5 5 4 After completion of all operations the Contractor shall rehabilitate the site or take other measures according to the Plan approved by the local executive body for environment protection

Minimum Requirements

5 5 5 For each facility the Operator shall conduct inspections and record the results of these inspections describing the facility inspected the extent and area of inspection and the type of inspection employed (visual electromagnetic ultrasonic or other methods) A summary of the testing results, shall be prepared indicating what repairs, if any were needed and the overall structural condition of the facility The Operator shall indicate where such records are filed for the external auditors if required Downrating is permitted where the permissible load is also reduced

5 5 6 A detailed rig or oil field facility move/assembly Plan shall be prepared as a part of the Technical Project The Plan shall include move program, weather forecasts sea bed surveying method(s) at the facility location, type, sizes and weight of supplies to the facility during offshore operations, anchor pattern and test tension and/or ballast program, communication responsibilities, contingency plan and responsibilities

5 5 7 Cradles and safety harnesses shall be provided for the works at elevation overboard the offshore facility These works can be conducted in daylight in good weather with a rescue vessel stand-by or any other appropriate craft The employees performing these works shall be wearing life-jackets

5 6 Platform Hoisting and Equipment/Supply Handling Cranes

Mandatory Objective(s)

5 6 1 All cranes installed on or used offshore to support offshore facilities and operations shall be fit for purpose and shall meet safety requirements

5 6 2 All cranes installed on or used offshore to support offshore facilities and operations shall be operated and maintained in accordance with internationally accepted standards or standards that have been recognized as essentially equivalent

5 6 3 All associated lifting equipment shall be certified and registered in accordance with the Marine Register provisions This applies to air winch lines, chains, hooks, slings, lifting eyes, chain hoists, etc

Minimum requirements

- 5 6 4 Records of inspection of all lifting equipment testing, preventive maintenance and crane operator qualification in accordance with the approved standards shall be kept by the Operator during the whole period of operation of the equipment on the territory of the Republic of Kazakhstan
- 5 6 5 The Operator shall develop and include in the Safety Operation Plan instructions for lifting operations One of the key-points of such instructions shall be procedures for the lines quality control and scrapping, sling-operations and coordination between sling-operators and a crane operator Color coding of lines is recommended
- 5 6 6 Where facilities are equipped with heliports upon completion of hoisting and supplies handling crane booms shall be stowed or positioned so that they do not interfere with the operation of the helicopter
- 5 6 7 The Operator shall have a safety manual for transportation of people from the vessel to the offshore facility (and backward) in the boarding basket by crane if this method of transportation is employed

5 7 Living Quarters

Mandatory Objective(s)

- 5 7 1 Accommodation shall be provided on all continuously manned facilities Facilities which are regularly visited but not normally manned shall have sufficient shelter from wind and rain for the number of visitors in the event that they are stranded by bad weather or transportation failure
- 5 7 2 Facility's accommodation area(s) shall meet the hygiene standards and shall be located at a maximum possible distance from the working areas A Temporary Refuge shall be provided on continuously manned hydrocarbon facilities to protect the crew in the event of explosion, fire or gas The Temporary Refuge may be part of or may be separate from the facility living quarters
- 5 7 3 The facility's temporary refuge area(s) shall be suitably protected against the effects of unconfined vapour cloud explosion, the infiltration of smoke and gas and the outbreak and spread of fire for the time required to safely evacuate the crew

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Minimum Requirements

- 5 7 4 The facility's accommodation area(s) shall be separated at a sufficient distance from the most hazardous working areas the wellhead area the engine area the pump area and the drilling mud area, as well as from areas where crude fuel and lubricant tanks are placed
- 5 7 5 The facility's accommodation area(s) and the Temporary Refuge shall be located at the maximum possible safe distance from the oil and gas treatment and transportation units, other hydrocarbon equipment operating under pressure (separators heat-exchange units compressors oil products pipelines) The facilities accommodation area(s) shall have the main emergency exit located on the opposite side from the oil and gas treatment unit
- 5 7 6 The facility's accommodation area(s) shall be provided at each level with at least two independent exits and escape routes One of the exits shall be in the most fire - and explosion - protected side of the building
- 5 7 7 The facility's accommodation area(s) shall contain sufficient beds or bunks for the number of persons expected to sleep on the installation plus extra bunks for temporary workers
- 5 7 8 Large-sized refrigerators and freezers with access of personnel inside them shall be equipped with doors, which can be opened from inside or an outer alarm system initiated from inside, and manual light switch

6 0 HAZARDS REDUCTION AND EMERGENCY PREVENTION MEASURES

6 1 Mechanical Hazards

Mandatory Objective(s)

- 6 1 1 All machinery, tools, pipes, tanks and all other production related equipment installed or used on the facility shall be fit for the purpose for which it is intended and certified
- 6 1 2 All production related machinery, tools, pipes, tanks and all other equipment installed or used on the facility shall be designed, constructed, installed and maintained in accordance with existing state standards or internationally accepted standards

Minimum Requirements

6 1 3 Open moving or revolving parts of mechanisms shall be fenced jacketed or screened where it is practical and applicable

6 2 Electrical Hazards

Mandatory Objective(s)

6 2 1 All electrical equipment shall be fit for purpose for which it is intended and shall be designed constructed installed and maintained in accordance with the existing state standards or internationally accepted standards or standards that have been recognized as essentially equivalent Maintenance of electrical equipment shall be performed to minimize the risk of ignition and explosion of hazardous atmospheres

6 2 2 All electrical equipment located in areas classified (coded) as hazardous zones shall be intrinsically safe (explosion proof, low voltage) in accordance with article 6 9 of the present Regulations

6 2 3 High Voltage electrical systems shall be maintained by qualified personnel having permits to work with high voltage

Minimum Requirements

6 2 4 Drilling derrick shall be protected from lightning where it is necessary

6 2 5 Electric equipment operating personnel shall be equipped with tools and Personal protective equipment with dielectric properties Power tools shall be double insulated and supply cables fitted with Earth leakage circuit breakers

6 3 Permit to Work System

Mandatory Objective(s)

6 3 1 The Operator shall institute a "Hazardous Work Permit" system which will require a permit approved and issued by the appropriate authorized officer to perform any hazardous or non-routine activity

6 3 2 The Permit system shall ensure that there is proper authorization (work order - permit) with description of precautions to be taken for any non-routine or hazardous activity, including maintenance on vessels under pressure, hot work, work on

electrical conductors operations in confined space and the handling of radioactive materials and explosives

- 6 3 3 The Permit system will provide as a minimum requirement
- information about operations being conducted in writing and available for each employee, witnessed by the person responsible for Health and Safety of the work showing that the necessary precautions were performed
 - confirmation by the employee, performing the work or the person responsible for conduct of this work stating, that they understood all the safety procedures
 - procedures of lock in and use of special tags, aimed to preclude from unauthorized operations or from access of unauthorized personnel
 - show current status of operations when new shift takes up the duties
- 6 3 4 All operational personnel shall be trained and knowledgeable in the "Hazardous Work Permit" system
- 6 3 5 Procedures for the Permit system shall be specified in the Operator's Operating Manual and included into the Safety Operation Plan, which is submitted for approval to the state Supervising bodies of the Republic of Kazakhstan

6 4 Surveillance (Monitoring) and Alarms

Mandatory Objective(s)

- 6 4 1 There shall be a system to detect and respond to the presence of fire (flame heat or smoke) and to initiate the appropriate alarms and action
- 6 4 2 On hydrocarbon facilities (including hydrocarbon drilling rigs), there shall be a gas detection system to detect the presence of flammable and toxic (where H₂S occurrence is expected) gases and to initiate the appropriate alarms and action

Minimum Requirements

- 6 4 3 The detection of fire, flammable and explosive atmospheres or toxic gases shall initiate the appropriate alarm and action at concentrations which are established in the Safety Operation Plan
- 6 4 4 All fire and gas detection systems shall have automatic sensors that give a site wide audible alarm (with visible signal in high noise areas) to give warning of the

emergency to all persons on the installation. Manual call points shall activate similar alarms.

- 6 4 5 The Operator shall have monitoring system to control unauthorized isolation of detection and alarm systems and similar control functions. The detection and alarm systems shall indicate their status to the personnel if isolated.
- 6 4 6 All detection systems must be capable of remaining operational in the event of the main or emergency power supply failure for the period of time specified in their specifications for the work with emergency batteries, the time limits shall be shown in the Safety Operation Plan.
- 6 4 7 The audible and visual alarm signals will be combined to give distinctive and different warning signals for fire, toxic gases Prepare to Abandon Platform Alarms (PAPA), and also Man Overboard, if such signal is used.
- 6 4 8 PAPA is initiated manually when the Director (Manager) or Captain of the offshore facility makes this decision on the bases of particular circumstances and in accordance with the Operator's internal procedures, which are indicated in the Emergency Response Section of the Safety Operation Plan.
- 6 4 9 Fire and toxic gas detection systems shall be capable of early detection of fires and gas leakage.
- 6 4 10 The manual call stations to initiate alarm signals shall be installed in suitable and easily accessible locations, preferably outside exit points from work areas.

6 5 Emergency Electrical Equipment

Mandatory Objective(s)

- 6 5 1 The offshore installation shall be equipped with an Emergency Electric Supply that is able to maintain Essential Services and to start automatically in the event of the failure of the main electric system. The Safety Operation Plan shall specify the design criterion for emergency power supply, and the consequent endurance required for evacuation of the crew.

Minimum Requirements

- 6 5 2 Essential Systems, serviced by the emergency supply, shall include the emergency lighting, communication equipment, navigation control systems fire and gas

monitoring BOPE fire-control (detection systems well control systems diver s safety systems, and emergency heating in winter

- 6 5 3 The Emergency Power Supply and Emergency Battery System shall be tested at least once a month and the results of the test shall be entered in the Installation Log Book
- 6 5 4 The Emergency Power Supply shall be placed as far as practical from the main power supply system and from a likely fire or explosion and shall have a separate autonomous fuel supply
- 6 5 5 The offshore installation's Emergency Power Supply shall include an Emergency Battery System that is able to run automatically in the event of the failure of the main and emergency power supply systems
- 6 5 6 The Emergency Battery System shall be of such capacity and capability to continuously power the fire and gas monitoring, visual and audible alarm warning systems, essential communication equipment and emergency lighting system for the period of time specified by the Safety Operation Plan which shall be at least equal to the time required to evacuate the crew

6 6 Emergency Drills

Mandatory Objective(s)

- 6 6 1 The Operator shall develop, implement and practice at regular intervals with appropriate installation employees emergency drills for likely emergencies. Emergency drills shall include but not be limited to Well Blowout prevention, Emergency Evacuation, Man Overboard, Medical Evacuation, and Fire and Oil Spill Response, depending on the actual situation and type of operations currently under way
- 6 6 2 Employees who have been assigned specific tasks with emergency equipment operation shall be trained in the correct use and operation of the emergency equipment

Minimum Requirements

- 6 6 3 Each emergency drill shall include at least one unannounced malfunction of a system or absence of a key person to test back-up procedures

6 7 Weather Forecasts

Mandatory Objective(s)

- 6 7 1 The Operator shall collect and record weather information in the area of operations for this purpose offshore facilities will be equipped with appropriate meters and appliances to collect weather information
- 6 7 2 Continuously manned offshore facility shall be regularly informed about short-term and long-term weather forecasts storm forewarning and other unfavorable weather conditions

Minimum Requirements

- 6 7 3 The Operator shall provide all collected weather data to the appropriate state agency responsible for collection of weather information upon request in the format in which it was collected

6 8 Rough Weather Model Procedures

Mandatory Objectives

- 6 8 1 The Operator shall develop and include within the Safety Operation Plan an adverse weather policy and a contingency plan in order to ensure safety of operations in adverse weather conditions likely to be encountered in the environment where the operations take place

Minimum Requirements

- 6 8 2 The adverse weather policy and contingency plan shall address how the Operator will 1) minimize risk to personnel, 2) minimize storm damage to the facility and all associated exposed components, 3) minimize the possibility of pollution

6 9 Hazardous Zones Requirements

- 6 9 1 Zones, classified by the present Regulations as "Hazardous", are (1) where hydrocarbon gases periodically appear during normal operation (Zone 1), and (2) the zones, where flammable gases are not normally present but may appear through equipment failure (Zone 2)

6 9 2 Zone 1 hazardous areas include

- the zone of 10 m in radius around the well center on the rig floor extended to 5 m upwards and 10 m downwards from the rig floor
- the zone extended to all the directions from the open mud circulating system to a distance of 5 m,
- any unventilated enclosed area/room/space containing hydrocarbon equipment where explosive atmospheres are likely to accumulate

The zone extended to all the directions from the processing equipment operating under pressure to a distance of 7,5 m on the production platforms is considered Zone 2 hazardous area,

6 9 4 Electrical Equipment and Combustion Engines, permanently located in the Zone 1 hazardous areas shall be capable to ensure safe operation in explosive atmospheres and shall meet the following requirements

- power generators, fittings, and other fixed electrical equipment shall be explosion-proof according to the state standards of the Republic of Kazakhstan or internationally accepted standards, or standards accepted as essentially equivalent,
- Main switchboards for fixed equipment shall be located outside Zone 1 hazardous areas
- Combustion engines and gas turbines located in Zone 1 hazardous areas shall be hermetically sealed and enclosed in air-tight compartments Air-inlets and air-outlets shall be located outside the Zone 1 hazardous areas
- Low power instrumentation and communications equipment may be used in hazardous areas provided it is intrinsically safe (explosion-proof low voltage) the available power must be insufficient to create an ignition spark under failure conditions

6 9 5 Electric equipment located in the Zone 2 hazardous areas shall meet the existing standards for electrical equipment, manufactured for the purposes of oil and gas industry, and normally operating without sparks and hot surfaces sufficient to trigger explosion of air-gas mixtures

6 10 Offshore Fire and Explosion Prevention, Detection and Control Procedures

Mandatory Objective(s)

6 10 1 The Operator shall take all practical measures necessary to prevent the uncontrolled release of flammable or explosive substances and prevent fires and explosions in compliance with existing standards (7)

6 10 2 The Operator shall prevent the accumulation of combustible flammable or explosive substances other than in equipment designed for their containment

Minimum Requirements

6 10 3 Constantly manned offshore facilities shall have personnel assembly station for fire emergencies, each employee shall know his duties and functions in case of fire or in fire drills

6 10 4 Each offshore facility shall be provided a fire-fighting plan A copy of the fire-fighting plan shall be kept at the assembly station

6 10 5 Safety Operation Plan shall include description of functions of all the personnel aboard the facility and of all the members of the fire-fighting team during emergencies, particularly in case of fire Fire-fighting shall not be required where it may place people at risk only in order to protect assets

6 10 6 Smoking is permitted only in those areas clearly marked as smoking areas

6 10 7 Each facility shall maintain Hot Work permit procedures

6 10 8 Living quarters and workstations shall have at least two exits

6 10 9 Enclosed work stations where flammable gases are likely to accumulate shall be equipped with exhaust ventilation capable to prevent gas accumulation in hazardous concentrations sufficient to inflame and/or explode in normal working conditions

6 10 10 Emergency shut down of combustion engines, gas turbines, and other possible ignition sources shall be provided in case of contingent gas leakage

6 10 11 Oil field processing equipment operating under pressure shall be equipped with emergency shut down and decompressing devices

6 10 12 All flammable substances shall be stored in special boxes, located in predetermined areas, where additional fire protection measures shall be taken Oiled rags and other materials capable of spontaneous combustion shall be stored in fire-proof containers

6 10 13 Automatic detectors connected to the fire alarm system shall be located in the areas with high risk of inflammation

- 6 10 14 Constantly manned offshore facilities shall be equipped with fire pumps fire water mains, fire hydrants and hoses and nozzles for firefighting
- 6 10 15 Safety Operation Plan shall specify the sufficient number of fire pumps allowing for water supply to the fire water main at 100% of designed throughput by the rest of fire pumps in case of one pump failure
- 6 10 16 The stand-by vessel fire pump capacity when such vessel is used as a part of firefighting shall be sufficient to supply water to the upper deck of the facility
- 6 10 17 The facility shall be equipped with an adequate amount of portable fire extinguishers located in conspicuous and readily accessible areas The fire extinguishers shall allow for their prompt utilization and shall be appropriate for the use in the potential type of fire event
- 6 10 18 The continuously manned facility shall be equipped with at least two fire boxes with two sets of firefighting equipment, tools and outfit, including artificial breathing apparatus The fire boxes shall be located on opposite sides of the facility remote from the potential fire sources
- 6 10 19 All the electric equipment located in Zone 1 hazardous zone defined in article 6 9 2 shall be fire-proof as a minimum requirement in accordance with the existing standards of the Republic of Kazakhstan (8) and requirements to the explosion safety of the electric equipment (class V-1 V-1g, V-1a) or in accordance with standards of international Electric Engineering Commission (IEC) of European Community for Standardization (CENELEC) Combustion engines and heating equipment in Zone 1 hazardous areas shall not have hot exposed surfaces capable to cause inflammation or explosion when contacting with flammable gases
- 6 10 20 All electric equipment in Zone 2 hazardous areas shall be spark-proof in accordance with the effective standards of the Republic of Kazakhstan (explosion safety class V-1b), or in accordance with the internationally accepted standards (protection type "n")
- 6 10 21 If firefighting systems are installed in limited fire-hazardous areas the Contractor shall install fire-resistant walls and partitions with minimum fire endurance up to 30 minutes and employ other passive firefighting methods, where appropriate, to segregate hazardous zones

- 6 10 22 Automatic firefighting systems where provided shall be adequately designed installed and maintained for the environment in which they will be used
- 6 10 23 A fire control system, which can include fire hydrants and hoses water deluge systems and water monitors, automatic sprinkler systems gas extinguishing systems foam systems and other products shall be installed on the offshore facility to provide protection from fire Automatic firefighting system shall be installed in the most hazardous areas (fuels and lubricants stores diesel generators gas turbines) and also in remote and hard-to-reach areas with high risk of inflammation only temporarily visited by personnel
- 6 10 24 A fire control system shall be installed to provide the required protection specified in the Safety Operation Plan
- 6 10 25 The fire control system on manned facilities shall also provide an adequate amount of portable and movable easy-to-use fire extinguishers filled with proper extinguishing products, protected from damage by fire or weather and located in readily accessible areas to allow for their prompt utilization
- 6 10 26 Sufficient special personal protective equipment necessary to equip and protect the installation's fire fighting crew in emergency from heat, smoke and other hazardous effects of fire will be provided

6 11 Evacuation Procedures

Mandatory Objective(s)

- 6 11 1 The Operator shall develop and implement an Emergency Evacuation Plan covering different emergencies
- 6 11 2 The Operator shall arrange sufficient suitable transportation equipment to ensure the safe evacuation of all installation crew in emergency, taking into account that one transport can be missing The evacuation must be completed within the time limits, specified in the project for protection of the crew in the Temporary Refuge, and in any environmental conditions, in which the facility is planned to operate Evacuation means for safe evacuation on ice shall be provided when necessary

Minimum Requirements

- 6 11 3 The Emergency Evacuation Plan shall describe designated evacuation routes and safe assembly areas, muster (assembly) system and a description of the employee s duties and responsibilities during an emergency
- 6 11 4 Evacuation Plans and Directions (Station Bills) shall be posted throughout the installation showing the directions of evacuation routes
- 6 11 5 The Emergency Evacuation Plan shall include clear and adequate descriptions of the provisions for evacuation at sea in emergency Plan of evacuation from the offshore facility shall include the options to use the standby (emergency) vessel and helicopters
- 6 11 6 The Temporary Refuge shall be designed to protect the persons on board from the effects of fire, heat, smoke, toxic gases and, as far as possible from the effects of explosion Evacuation routes to and from the Temporary Refuge shall be protected from fire and heat and shall be passable all time during the emergency
- 6 11 7 The installation shall be constructed and operated in such a way that no single incident will hinder the safe mustering (assembly) and evacuation with the use of multifunctional means and routes of evacuation, and safe assembly points
- 6 11 8 In order to support the constantly manned offshore facility in the event of fire the standby vessel shall be capable to accept evacuated personnel from the facility and have first aid medical equipment The possibility to evacuate all the personnel in any weather conditions during the designed endurance time of the Temporary Refuge shall be ensured

6 12 Communications

Mandatory Objective(s)

- 6 12 1 The offshore facility shall have continuously working and reliable communication means, operated by the personnel, for communication between the installation and Operator's shore based support services
- 6 12 2 A permission to use radio frequencies shall be issued to the Contractor at his request by the National Executive Body for Transport and Communications

Minimum Requirements

The combination of different types of communication equipment shall ensure consistent and reliable communications in the environment for which it is intended to be used. Use of weather dependent communications is allowed when alternative communication equipment not affected by weather conditions is also provided.

- 6.12.4 Marine and air emergency channels shall be continuously manned and monitored at continuously manned offshore facility(s) and the onshore support facility(s)
- 6.12.5 Radio beacons shall be installed on continuously manned facilities with helidecks to provide guidance for support aircraft
- 6.12.6 The rescue and survival water and air craft used to support the offshore operations shall be equipped with the proper receivers of signals from the guidance beacons
- 6.12.7 The installation shall be required to have a "one-to-many" Public Address system to communicate to all persons on the constantly manned facility
- 6.12.8 All communication equipment shall be fit for purpose and of a type designed, installed, used and maintained in accordance with effective Health and Safety state standards or internationally accepted H&S standards or H&S standards that have been recognized as essentially equivalent. Equipment may be used if its design was developed after the standards but must be proven by the Operator to be fit for purpose

7.0 GEOPHYSICAL OPERATIONS

7.1 Seismic Acquisition Operations

Mandatory Objective(s)

All seismic acquisition operations shall be conducted in accordance with established procedures (9), (10), (11)

7.2 Electric Logging (Wireline) Operations

Mandatory Objective(s)

- 7.2.1 All wireline operations in a well, drilled in a productive stratum, shall use a lubricator assembly containing at least one wireline valve

- 7 2 2 The wireline lubricator shall be successfully pressure tested to the anticipated maximum surface pressure. Open hole logging shall be excluded from meeting this requirement.
- 7 2 3 The storage and transport of radioactive source materials used for geophysical studies shall be conducted in accordance with the effective regulations of Republic of Kazakhstan.
- 7 2 4 Only qualified personnel having a special permit to work with radioactive sources and subject to special monitoring and precautions shall be allowed to handle and operate the radioactive sources outside their transport containers.
- 7 2 5 All radioactive source materials shall be housed in dedicated, separately located, leak-proof, unsinkable carrying shields when not in use.

7 3 Well Explosive and Perforating Operations

Mandatory Objective(s)

- 7 3 1 All operations involving the use of explosives shall be performed under the Permit to Work system.
- 7 3 2 The storage, transport and use of explosives is performed in the established order (12).
- 7 3 3 The Operator shall develop procedures (manuals) for all activities involving the use of explosives as a part of the Safety Operation Plan.

Minimum Requirements

- 7 3 4 All explosives shall be transported and stored in separate containers from detonators.
- 7 3 5 Only specially trained personnel shall be allowed to handle and operate explosives and related equipment.
- 7 3 6 Casing perforation shall be conducted in compliance with blowout prevention requirements. Perforation with underpressure is permitted, provided appropriate pressure tested Christmas tree and well head equipment is installed. Perforation with overpressure is permitted, provided blowout prevention equipment or a perforator

valve and a lubricator is used. In any event, there shall be sufficient amount of drilling mud for well squeezing, not less than two times the volume of the well.

- 7.3.7 It is allowed to temporarily store the explosives on the offshore facility for the period of time necessary to conduct perforation-explosion operations. The explosives shall be stored in portable containers placed on the special tables. The table shall be equipped with a special device to dump the containers in the sea or onto the ice in the event of big fire.

8.0 WELL DRILLING, COMPLETION AND MAINTENANCE OPERATIONS

8.1 General Requirements

Mandatory Objectives(s)

- 8.1.1 Derricks, masts, substructures, and related equipment shall be fit for purpose and certified. The equipment shall be selected, designed, installed, used and maintained so as to be adequate for the potential loads that may be encountered during the proposed operations.
- 8.1.2 The Operator shall provide information and data on the preparedness of the facility to conduct the proposed well drilling or workover operations to the Local Government as required by the article 1.4.8 of the present Regulations.

Minimum Requirements

- 8.1.3 Derricks, masts, substructures and related equipment shall be capable of withstanding the oceanographical, meteorological and ice conditions for the proposed seasons and location of operations.
- 8.1.4 The movement of well drilling/workover rigs and related equipment on and off a platform or from well to well on the same platform shall be conducted in a safe manner. All wellheads in the same well-bay, where flowing well operation is conducted shall be protected prior to moving any loads over them.
- 8.1.5 All drilling rigs shall be equipped with a safety device operated from the driller's control console and designed to prevent accidental starting of a drawworks, automatic spinner or a rotary table when rotary bushing is elevated.
- 8.1.6 Drilling mud pressure line, a riser, a hose and a kelly shall be pressure tested up to the maximum pump operating pressure. Drilling pump shall be equipped with automatic

pump engine shut down and pressure relief device actuated when injection pressure raises to 110% - 115 % of the operating pressure

8 2 Round Trip Operations

Mandatory Objectives(s)

8 2 1 The Operator shall develop safety procedures for round-trip operations drill-rig feed from rack to rig floor (and back), drill pipe stand transfer from pipe setback (and back), screwing up and breaking out of joints using spinners or air tongs and other works The Operator shall also develop safety procedures for round trip operations in case of limited visibility, strong wind frost and other inclement weather conditions

Minimum Requirements

8 2 2 All well drilling/workover rigs shall be equipped with a safety device which is designed to prevent the traveling block from striking the crown block (traveling block limit switch), and derrick load or drilling line load limitation The device shall be checked for proper operation weekly and before each round trip operation

8 2 3 Mud should be added to maintain the level while running out of hole according to the Drilling Program (technological parameters)

8 2 4 Drill pipe stands set on the rack shall be prevented from falling down Adjustable monkey board for a derrickman shall be used when difference in the length of stands exceeds 0 75 m Derrickman shall not be permitted to work without safety harness

8 2 5 Preventive maintenance survey of hoisting equipment (traveling block, hook-block swivel, slings, wire-line, elevators, spiders and others) shall be performed at least every month in accordance with the manufacturer operation instruction The results of the survey shall be entered in the log

8 2 6 Wire-line shall be subjected to periodical drawing depending on the quantity of round-trip operations and hook loading Periodical change of the wire-line string-up shall ensure safety of the traveling system operation

8 3 Emergency Shut Down Systems

Mandatory Objectives(s)

- 8 3 1 On drilling rigs a manually controlled Emergency Shut Down System for electric equipment and combustion engines shall be installed near the driller s console or at Operator's work station for well servicing and an alternate by the living quarters near the emergency exits
- 8 3 2 Diesel engines installed in hazardous areas shall be equipped with a device to automatically shut down the engine in event of a runaway

8 4 Blow Out Preventer Systems and System Components

Mandatory Objectives(s)

- 8 4 1 Wellhead diverter shall be used during shallow drilling to divert shallow gas blowouts before conductor casing is cemented and blowout preventer is installed
- 8 4 2 Suitable Blowout Prevention equipment shall be provided for use during drilling completion, maintenance and workover operations to protect against blowouts Blow Out Prevention Equipment shall meet requirements of the internationally accepted standards (13) Casing string shall be securely anchored in the hole in order to enable Blow Out Prevention equipment effectively control the well once conductor casing has been cemented
- 8 4 3 The Blow Out Preventer Systems shall be fit for the prevailing well and operational conditions

Minimum Requirements

- 8 4 4 Blow Out Prevention Equipment shall be specified on the Well Drilling Project with any known or expected subsurface conditions such as under or over pressured formations, presence of Hydrogen Sulfide and other conditions
- 8 4 5 Drillers and toolpushers and the personnel performing well maintenance and workover shall have certificates, confirming their knowledge of well control issues and experience in operating of the Blow Out Prevention Equipment, and have refresher training every two years Certification procedure shall meet internationally accepted standards

8 4 6 Upon initial rig up and before drilling cement plugs pressure testing of the casing string and each component of the Blow Out Prevention Equipment shall be performed in accordance with the drilling project technological schedules and specification parameters of blow out prevention equipment Pressure testing shall be documented and the results shall be retained by the Operator for inspection for the whole period of well construction Flange and coupling connections shall be pressure tested for leaks on each Blow Out Preventer rig up

8 4 7 Blow Out Prevention Equipment shall be visually inspected (external inspection) and a preventer function test (open- close) shall be performed on each round trip but not more than once every twenty four hour (24) period Results of the operating tests shall be entered the shift log

8 4 8 Blow Out Prevention Equipment shall consist at a minimum

- Surface BOP Two pipe rams, one annular, one blind ram and two hydraulic valves kelly cock and one strippable type valve
- Tapered Drilling Strings Variable bore rams installed in cavities or two sets for the large drill string and one set for the small drill string, Kelly cock and strippable type valve
- Sub-Sea BOP's two pipe rams, one annular one blind shear, kelly cock and one strippable type valve, sub-sea with dual control pods
- For wells drilled in complicated geological conditions (H2S and AHP) a shear ram blowout preventor shall be provided according to the existing requirements (14)

8 4 9 Blowout preventor shall be connected with kill line and choke line the latter shall be pressure tested to the operating pressure

8 4 10 A supplementary remote BOP control station in addition to one on the rig floor shall be operational at all times and located in an easily accessible and observed location

8 4 11 A closing handwheel of a ram-type blowout preventor installed under the rig floor shall be equipped with a baffle metal plate to protect from fire exposure

8 5 Drilling Fluid System

Mandatory Objectives(s)

8 5 1 The Operator shall develop drilling mud processing, production and circulation procedures to have stable drilling mud, which by its physical properties will be fit for

purpose of the drilling environment and surface and subsurface conditions which are to be expected

- 8 5 2 The drilling fluid or circulation system shall be a closed system with a system of waste water and drill cuttings gathering which meets environmental requirements

Minimum Requirements

- 8 5 3 Operable mud gas separator(s) and/or operable degasser(s) shall be installed in the mud system prior to commencement of the drilling operations and shall be maintained for use throughout the drilling of the well
- 8 5 4 The Operator shall maintain mud testing equipment fit for purpose on the facility at all times while conducting drilling operations and mud tests shall be performed as conditions warrant and in accordance with the internationally accepted methods and technologies
- 8 5 5 The Operator shall install appropriate mud-monitoring equipment with rig floor indicators that shall include recording mud-pit indicator to determine mud-pit volume gains and losses with both visual and audible alarms, gas detection equipment to monitor drilling mud returns with both visual and audible alarms
- 8 5 6 Mud-handling areas where dangerous concentrations of combustible gas may accumulate shall be ventilated and equipped with gas detectors
- 8 5 7 The Drilling Fluid Program will include the use of inhibitors, absorbers degassing and other chemical agents and devices to reduce the effect of H₂S on equipment if H₂S is expected
- 8 5 8 Work stations and air pollution preventive measures shall be taken when oil mists and aromatics oil-based mud is used Total maximum allowed concentration of hydrocarbons in the work stations atmosphere shall not exceed 300 mg/m³

8 6 Well Control Drills

Mandatory Objectives(s)

- 8 6 1 The drill crew shall be prepared to respond quickly and correctly to all likely emergencies Non-routine operations shall be preceded by a tool-box briefing of each drill crew

Minimum Requirements

- 8 6 2 Well control drills shall be conducted for each crew at least once a week.
- 8 6 3 Well control drills should simulate blowout prevention operations as realistically as possible but should be scheduled and conducted in such a way that normal drilling operations are not endangered or altered.
- 8 6 4 Well control drills will be discussed with the crew at their conclusion and a record of the drill will be included in the Daily Drilling Report.

8 7 Well Shut In and Abandonment

Well Shut In and Abandonment shall be conducted in accordance with the Technical Project for well construction and Technical Rules for Construction of facilities During Conduct of Petroleum Operations Offshore and in Internal Water Bodies of the Republic of Kazakhstan [There is also a regulation for well abandonment which should be referenced]

8 8 Abandonment of Radioactive Source

Mandatory Objectives(s)

- 8 8 1 The Operator will notify the appropriate Supervising bodies of the loss of a radioactive source in a well bore before undertaking efforts to find and retrieve it. The Operator will make all reasonable efforts to find and retrieve the tool.
- 8 8 2 The wellbore section in which radioactive source is abandoned and can not be retrieved shall be securely isolated from the rest of the wellbore so as to prevent mechanical disintegration of the radioactive source and radioactive contamination of either drilling mud or formation fluids.

9 0 WELL TESTING AND STIMULATION

9 1 Open & Cased Hole Testing

Mandatory Objectives

- 9 1 1 All equipment used in well testing shall be fit for purpose and fully certified for its intended use.

- 9 1 2 The local supervising bodies shall be notified 48 hours prior to well productivity test if the well contains hydrogen sulfide
- 9 1 3 The Operator shall comply with Safety and Operation Procedures which he developed for Open And Cased Hole Testing that have been submitted as part of the Safety Operation Plan
- 9 1 4 Opening of a well via Drill Stem Tests or through perforation of a string with following flow stimulation shall be carried out in daylight The remainder of the production test can continue during hours of darkness with sufficient artificial illumination
- 9 1 5 Testing operations shall follow the Permit to Work System

Minimum Requirements

- 9 1 6 Wellhead equipment (BOP or tree), manifold block, choke bank, flow lines separators and other connected equipment shall be pressure tested to the expected wellhead pressure
- 9 1 7 Pressure gauges and formation fluid flow indicators shall be installed to control the producing well Pressure gauges shall be installed in lifting and annulus casing string
- 9 1 8 Wells, producing high-pour point crude or gas-condensate with high water content shall be heated by steam or hot water to prevent freezing of wellhead connection in cold periods (strong frost) Heating of wellhead connection by open fire is prohibited

9 2 Stimulation

Mandatory Objectives

- 9 2 1 All equipment used in Stimulation operations (fracturing and acidising) shall be fit for purpose and fully certified for its intended use
- 9 2 2 All pressure related equipment shall be pressure tested to a maximum pressure above the expected pressure to be encountered during the proposed operations
- 9 2 3 All stimulation activities shall performed under the Permit to Work system

9 3 Injection Wells

Mandatory Objectives

- 9 3 1 Injection wells shall be cased and the casing cemented in compliance with the Project
- 9 3 2 The well head shall be equipped with pressure observation valves for each annulus of the well
- 9 3 3 The Operator shall pressure test the casing the tubing and packer assembly through which the formation is injected to the maximum allowed injection pressure
- 9 3 4 The Operator shall monitor the injection pressure and injection rate of each injection well on at least a monthly basis and keep records in an orderly manner

10 0 OIL AND GAS PRODUCTION PROCESS & EQUIPMENT REQUIREMENTS

Mandatory Objectives(s)

- 10 1 The Contractor shall ensure that the production process equipment is designed installed, used, maintained and tested for the environment in which they will be used to assure the safety and protection of the human, marine and coastal environments Automatic emergency response systems shall be provided for the technological processes, where accumulation of explosive atmospheres is possible to prevent such accumulations Automatic emergency response systems shall be also provided for other emergencies, such as deviation of parameters of the processes from the maximum allowed values in all the operating regimes to ensure safe shut down and process reversion to the safe condition

10 2 Subsurface Safety Devices

Mandatory Objectives(s)

- 10 2 1 All tubing installations open to hydrocarbon-bearing zones that are capable of natural flow shall be equipped with surface controlled subsurface safety devices that will shut off the flow from the well in the event of an emergency
- 10 2 2 The valves will be fit for purpose for types of fluids and gases that the well bore will produce and have an operating pressure exceeding the expected wellhead shut-in pressure

118

Minimum Requirements

- 10 2 3 The Contractor shall ensure that the subsurface safety devices are of a type designed built, installed, operated and maintained in accordance with the state standards internationally accepted standards or standards that have been recognized as essentially equivalent

10 3 Surface Safety Devices

Mandatory Objectives(s)

- 10 3 1 All production facilities including separators treaters compressors headers and pipelines shall be designed and maintained to fit for purpose and take into account the prevailing well and operational conditions

Minimum Requirements

- 10 3 2 All pressure and fired vessels shall be designed, fabricated, certified and maintained in accordance with effective state standards, internationally accepted standards or standards that have been recognized as essentially equivalent for boilers and pressure vessels
- 10 3 3 Pressure relief valves shall be designed installed and maintained in accordance with effective state standards, internationally accepted standards or standards that have been recognized as essentially equivalent for boilers and pressure vessels Testing frequency shall be annually for the first year and every three years thereafter except that Operators who have no records of test-as-found shall remain on a one year cycle
- 10 3 4 Manifold leading from the wellhead up to the first relief valve shall be rated for the well head pressure of the well Manifold leaks on manned facilities will be detected by gas detectors initiating closure of sub-surface and surface safety valves

10 4 Production Safety System Testing & Records

Mandatory Objectives(s)

- 10 4 1 Relief valves and process safeguarding systems shall be regularly inspected and tested according to prevailing operating conditions and historical performance

Minimum Requirements

- 10 4 2 The Operator shall maintain test records for a two year period of each subsurface and surface safety device installed

11 0 RAW MATERIAL AND OTHER SUPPLIES REQUIREMENTS

Mandatory Objectives(s)

- 11 1 The Operator shall use drilling supplies which are fit for purpose of the environment and conditions in which they will be used

Minimum Requirements

- 11 2 All tubular goods used in drilling completion and workover operations shall be designed, manufactured maintained and tested in an orderly manner

11 3 Material handling, transportation and storage procedures

Mandatory Objectives(s)

- 11 3 1 Personnel required to handle and use drilling supplies such as drilling muds, additives and other associated chemicals or other hazardous chemicals shall be instructed in their safe handling, use and disposal Personnel shall be aware of their potential hazards and the required personal protective equipment

Minimum Requirements

- 11 3 2 Hazardous chemicals shall be separated from benign chemicals and from each other as appropriate (fire hazards)
- 11 3 3 Warning signs indicating the appropriate hazards shall be posted on or near the hazards in the working language used on the facility or pictorially
- 11 3 4 Gas cylinders shall be transported in a special basket, skid or container, subject to lifting equipment certification and inspection requirements
- 11 3 5 Gas cylinders shall be stored on the open sites, protected from the effects of sun and rain

120

- 11 3 6 Other than cylinders in use cylinders with compressed combustible gases (propane acetylene and others) shall be stored separately from cylinders with oxygen. Such cylinders are stored in latticed containers, where gas cylinders are vertically oriented.
- 11 3 7 Any continuously manned facility shall have a list of all hazardous chemicals used on the facility kept in the first aid room. First aid room shall be equipped to neutralize the effects of skin or eyes contamination or swallowing or inhalation of said chemicals.
- 11 3 8 The Operator shall develop safety procedures to be included in the Safety Operation Plan that will describe the transferring of tubular goods and other equipment to the rig floor.

12 0 CONSTRUCTION, OPERATION, REPAIR AND DISMANTLING OF UNDERWATER (SUBSEA) PRODUCTION EQUIPMENT AND PIPELINES

Mandatory Objectives

- 12 1 All construction, operation, repair and dismantling of underwater pipelines shall be conducted in an orderly manner (16)

13 0 TRANSPORT

13 1 Transportation Over Ice

Mandatory Objectives

- 13 1 1 The Operator shall develop safety procedures for transportation over ice if this is planned, and have appropriate reliable safe equipment for transportation over ice.

13 2 Vessel Operations

Mandatory Objectives

- 13 2 1 All vessel operations and associated procedures shall comply with the Republic of Kazakhstan rules and regulations for marine vessel operations as administered by the Maritime and River Register of the Ministry of Transport and Communications of the Republic of Kazakhstan.

Minimum Requirements

- 13 2 2 The Operator shall develop safety procedures for vessel operations which shall describe the procedures used for both crew and material transportation and emergency procedures
- 13 2 3 The offshore facility shall have mooring for support vessels and a ladder to the upper deck for safe change or evacuation of the personnel

13 3 Aircraft Operations

Mandatory Objectives

- 13 3 1 All helicopter operations and associated procedures shall comply the Republic of Kazakhstan rules and regulations for helicopter operations as administered by the Ministry of Transport and Communications

Minimum Requirements

- 13 3 2 The Operator shall develop and implement a Helicopter Operations Plan which shall be included in the Safety Operation Plan The plan shall describe the procedures used for both crew and material transportation (if any), and emergency procedures
- 13 3 3 All personnel traveling by helicopter to and from an offshore installation shall be briefed on safety procedures prior to aircraft boarding
- 13 3 4 Personnel making more than 6 helicopter trips/year to the offshore facility shall be given helicopter underwater escape training (HUET) Refreshing training shall be given at least every 4 years
- 13 3 5 The Operator shall ensure that all continuously manned facilities with helidecks have a trained and equipped helideck firefighting crew, one of whom dressed in firefighting suit shall be present at every landing and take off Foam fire extinguisher shall be available and ready for its prompt utilization
- 13 3 6 Helicopter landing and take-off operations on continuously manned facilities shall be directed by the Helicopter Landing Officer (HLO)

122

14 0 DIVING OPERATIONS

Mandatory Objectives

- 14 1 All diving operations shall be performed in an orderly manner (17)
- 14 2 If diving is envisaged, The Operator shall have a Diving Operations Plan which shall be included in the Safety Operation Plan. The plan shall describe the procedures used to assure that all diving operations protect the safety of all personnel and equipment associated with such activity.
- 14 3 All Diving/ROV operations shall be performed under the Permit-to-Work system.

15 HYDROGEN SULFIDE

Mandatory Objective(s)

- 15 1 The requirements of this section shall apply to any operations during well construction and workover, and during production of oil and gas if the well products contain H₂S and to drilling operations in areas where the presence of H₂S is known or expected.
- 15 2 The Operator shall develop and have at the offshore facility a H₂S Preventive Measures Plan and Safety Manuals that clearly demonstrates how all necessary and practical precautions and measures to protect personnel from the toxic effects of H₂S will be taken, and to mitigate the adverse effects of H₂S to equipment and the environment.

15 3 H₂S Preventive Measures Plan

Minimum Requirements

- 15 3 1 The Operator's H₂S Preventive Measures Plan shall include safety procedures, equipment, training, and drills.
- 15 3 2 The local supervising bodies for emergency to be notified in case of serious H₂S emission within 1 hour.
- 15 3 3 H₂S concentrations in the workstations atmospheres to be measured. Contingency procedures to be initiated with proper response and use of protection equipment when

H2S concentrations exceeds the MAC (maximum allowed concentration) equal to 10 mg/m

15 4 H2S Equipment

Mandatory Objective(s)

- 15 4 1 If H2S is expected the Operator shall ensure that all Blow Out Preventers wellhead and associated technological equipment and tubing shall be corrosion-resistant and fit for purpose of resisting or preventing H2S embrittlement
- 15 4 2 The facility shall have a flare line, equipped with automatic ignition device or a continuously operating burner

15 5 H2S Monitoring

Mandatory Objective(s)

- 15 5 1 The drilling or production facility where H2S is expected shall have a H2S monitoring and detection system that initiates audible and visual alarms throughout the facility when the H2S concentration in atmosphere reaches 10 mg/m³

Minimum Requirements

- 15 5 2 If H2S is expected the facility shall have, at a minimum, fixed H2S sensors at the bell nipple, connecting BOP with chute, shale shaker, drilling fluid area for transportation and storage of drilling fluids, driller's station, ventilation intake area(s) and also near wellhead connection, manifolds, processing equipment operating under pressure where gas leakages are likely to occur Personnel working in other poorly ventilated or enclosed areas shall be equipped with portable H2S gas detectors
- 15 5 3 The facility shall have sufficient portable H2S detection devices that are readily available and easy to use in the event of the failure of a fixed H2S sensor
- 15 5 4 Personnel working on fluids processing sites, where H2S is present shall have personal exposure monitors which provide visual signals when the TWA of 10 ppm has been exceeded

15 6 Personal Protective Equipment for H2S

Mandatory Objective(s)

- 15 6 1 All personnel required to work in contaminated atmospheres (when H2S concentration exceeds 10 mg/m³) shall be equipped with positive pressure breathing apparatus

Minimum Requirements

- 15 6 2 All personnel on the facility where H2S is contained in produced well crude shall have readily accessible self-rescue breathing apparatus sufficient for escape from the gas contaminated zone
- 15 6 3 All support craft (vessels, helicopters, etc) which are designated for emergency evacuation in the H2S contingency plan shall be equipped with enclosed crew space and appropriate safe air supply Personnel working on deck during evacuation shall be provided with appropriate breathing apparatus
- 15 6 4 The manned facility where H2S is present shall have additional protection equipment including 1) chalkboards and chalk for communications in gas masks unless the masks are equipped for speech, 2) wind indicators, 3) bull horns 4) resuscitators 5) retrieval ropes and safety harnesses

15 7 Operations in H2S Bearing Zones

Mandatory Objective(s)

- 15 7 1 Once potential H2S bearing formations are reached, H2S levels shall be continuously monitored in drilling work areas and protective breathing apparatus on standby and ready to use within 30 seconds when 1) pulling tools, 2) mud circulating, 3) cementing operations, 4) logging operations and perforation, 5) well testing

PART III INDUSTRIAL HYGIENE AND SANITATION

16 GENERAL REQUIREMENTS

Mandatory Objective(s)

- 16 1 The Contractor shall ensure that living and working conditions of personnel on the offshore facility* meet internationally accepted standards for industrial hygiene and are not lower than the requirements of the state regulations (18) (19) (20)
- 16 2 When the Contractor has the option to select applicable oil industry standards during design and operation of offshore facilities he shall give priority to the higher standards and norms, providing safe, healthy and comfortable working and living conditions for the personnel

Minimum requirements

- 16 3 The following documents should be available for each offshore facility
- the facility sanitary log, or a section of facility (shift) log designated for records related to sanitary issues,
 - a certificate of rodent control (or exemption from it),
 - the present Regulations
 - the facility sanitary certificate for the right to float (for self-propelled rig)
- 16 4 Each crew member shall have a Medical card of a Sailor or other document certifying his physical fitness and confirming that he passed the general medical examination according to the company standards or resident country standards (not less than once a year), and Medical Certificate on Vaccination Persons working in the kitchen shall have appropriate documents, certifying, that they passed regular prophylactic medical examination in accordance with standards applied to the public catering workers

17 Continuously Manned OFFSHORE FACILITIES DESIGN*

* Note Hereinafter under offshore facilities understood constantly manned offshore facilities

Mandatory objective(s)

- 17 1 Continuously manned Offshore facilities shall be designed constructed renovated or maintained in accordance with the highest modern internationally accepted standards and regulations applied to industrial hygiene and sanitation

Minimum Requirements

- 17 2 Design and engineering documentation for offshore facility shall be agreed with sanitary-epidemiological Supervision bodies of the Republic of Kazakhstan
- 17 3 Living quarters of the facility shall be fit for the climate and environmental conditions in the region of operations and shall be capable of protecting personnel from adverse weather Living quarters area shall at least meet the standards of Sanitary norms
- 17 4 Living quarters shall have natural and artificial illumination, ventilation and air conditioning as required by the effective standards
- 17 5 Accommodations, which are insufficiently illuminated by natural source of light shall have permanent power supply and sufficient artificial illumination as required by (21)
- 17 6 Living quarters on the facility shall be protected from excessive noise as a minimum requirement, according to (22) and from gas and smoke
- 17 7 In accordance with the accepted sanitary and hygiene standards the continuously manned offshore facility shall be equipped with sufficient amount of sanitary-hygienic premises for individual or collective use The latter shall have separate premises for women Wash-hand rooms shall be supplied with potable hot and cold water Bathrooms and showers can be supplied with washing water
- 17 8 Any room intended to be used as a sleeping room, shall have enough space for the personnel to keep their clothes and belongings Sufficient space shall be provided to store overalls and personal protective equipment in a separate location at the accommodation exit Separate living premises shall be arranged for women
- 17 9 Materials used for construction and finishing of living quarters shall be safe for human health, easy to remove dust and dirt, and preventing insects and rodents appearance All the inhabited premises shall be protected from flying insects Appropriate measures shall be provided against rodents

- 17 10 Asbestos shall not be used to finish living quarters partitions and ceilings When offshore facilities are constructed with use of asbestos appropriate operations shall be conducted to either remove or isolate asbestos In the latter case the Operator shall develop clear instructions for the personnel regarding handling asbestos
- 17 11 The offshore facility shall have public premises namely rest rooms and canteens
- 17 12 It is recommended to have a special room for smoking The Operator shall develop and enforce smoking policy which limits smoking in all the premises and protects the health of non-smokers
- 17 13 Sanitary-hygienic premises shall have appropriate equipment and appliances to wash bed clothes and overalls (if clean clothes and overalls supply from onshore facilities is not planned) and of personal items of the personnel, as well as drying ironing and storing
- 17 14 It is recommended to separate WC rooms for the kitchen personnel from the meals compartment Provide WC rooms for the employees of the remote technological complexes near the work station or within the accommodation area with an exit to the open deck
- 17 15 When the number of the personnel aboard offshore facility exceeds 50 the facility shall have in addition to the Sick Bay equipped to receive patients an infirmary to accept an injured or sick The infirmary shall be equipped with individual sanitary-hygiene unit Medic's room shall be located next to the medical room Infirmary (or medical room) shall have two exits, one - to the open deck, and the other to the inner premises Free access to the deck shall be provided to enable easy evacuation of sick or injured on litters
- 17 16 The meals compartment shall be equipped with appliances and inventory made of the materials accepted by the sanitary epidemiological service for this purposes
- 17 17 Meals compartment and canteen shall be located in one accommodation area and remote from sanitary premises, medical room, and stores of poisonous substances and those having strong smell
- 17 18 The design of meals compartment and food processing technology shall prevent intersection of raw and cooked products, clean and dirty dishes and tableware
- 17 19 Separate trenchers and cutting boards and instruments shall be used to cut raw and cooked products

- 17 20 Basins for dish-washing and the cooking battery shall be stainless steel enamel or porcelain. A separate room or a separated area in the kitchen shall be provided to wash dirty tableware and to store the clean tableware.
- 17 21 Appropriate freezers shall be provided to store meat and fish capable to keep temperature below - 18 C. Also refrigerated rooms or refrigerators shall be provided to store other raw food products in accordance with recommended temperature regimes. Dry food products, which do not require refrigerating shall be stored in dry and ventilated pantry with stable temperature suitable to store the products.
- 17 22 A separate coffee-room is recommended in addition to the canteen to drink tea and coffee.
- 17 23 The offshore facilities shall have a ship-store to sell the necessities and individual hygiene items. Medicines, alcohol and perishables shall not be sold at the ship-store.
- 17 24 Auxiliary rooms and technological premises, equipment, tools and work stations shall meet the standards of ergonomics and shall not cause excessive psychological and physical fatigue.
- 17 25 Automation and mechanization of technological processes is required to prevent personnel overloading in excess of the maximum allowed values.
- 17 26 Each continuously manned offshore facility shall have potable and washing water supply system, ensuring water reserves, treatment and distribution, the quality of water shall meet existing sanitary standards (23). Sea water distilling units installed aboard the facility, shall be certified by the sanitary service in the port of registration or by the State Sanitary Supervision Agencies of the Republic of Kazakhstan.
- 17 27 Water storage tanks shall be made of stainless steel or covered by corrosion-proof materials, permitted for the intended use in established order.
- 17 28 To comply with the sanitary standards of sea protection from pollution each offshore facility shall have appropriate equipment to collect, separate and dispose of oiled water, and equipment to prevent spills and leakage of oil products, fuels and lubricants in accordance with established procedures.
- 17 29 To protect the marine environment from pollution the offshore facilities shall have waste water and sanitary waste water collection and treatment system. Equipment for waste grinding, waste water cleaning and disinfecting shall ensure required cleaning.

standards, provided by (24) (25) shall have manufacturer certificates and a permit to use issued by the corresponding supervising bodies. If waste water collection system is not equipped with treatment facilities, waste waters shall be transferred to the special collector ships.

- 17 30 Each offshore facility shall have equipment for waste collection and treatment (grinding, pressing or burning). Waste collection and treatment devices shall have the Maritime Register certificates.

18 Offshore Facility Operation

Mandatory objective(s)

- 18 1 All the premises of offshore facilities must be clean. The Operator shall ensure that the personnel is living in safe and harmless conditions. The personnel shall be provided with good quality potable water and healthy food.
- 18 2 The Operator shall ensure reliable protection of the personnel from harmful effects of electromagnetic fields of radio frequencies, any type of radioactive radiation, infrared and ultraviolet radiation exceeding permitted levels. The Operator shall ensure reliable protection of the personnel from effects of toxic chemicals and dust exceeding MAC, and vibration and noise, exceeding maximum allowed levels (26).
- 18 3 Waste water discharge in the sea shall be performed in the established order (24, 25).

Minimum requirements

- 18 4 Industrial premises with noise level exceeding 85 dB shall have warning signs located at the entrances, indicating the need to use hearing protection means.
- 18 5 Living quarters shall be cleaned daily. All the crew members shall be provided clean bed clothes. Appropriate procedures and devices shall be provided to limit access of the personnel in dirty and/or oil covered footwear and overalls.
- 18 6 When method of self-service is used in a canteen, an appropriate food-hatch shall be arranged between the kitchen and the canteen and trays to bring food to the dinner tables.
- 18 7 Food products acceptance, storage and cooked food service shall meet the existing sanitary - hygienic requirements.

- 18 8 Emergency food store in collective rescue means shall be replaced at least every two years
- 18 9 Meals compartment personnel shall comply with the rules of personal hygiene take care of the sanitary status of the meals compartment and follow the recommended dish washing regime
- 18 10 Personnel working with dry (friable) and other chemicals shall be provided with adequate eye and breathing protection if required
- 18 11 Potable water tanks and supply system shall be operated in the way preventing its pollution, tanks shall be properly protected When potable water is stored in tanks for more than 10 days, or stored for more than 5 days at the temperature exceeding 10 C special measures for its preservation and/or disinfecting shall be arranged
- 18 12 Personnel shall have limited access to medicines, The Medic shall supervise the storage and utilization of medicines, especially drastic and narcotic medicines If the Medic is not included in the staff of the facility Manager/Director of the facility shall be in charge of storage and distribution of medicines (if he has special medical training or after consultation with a medical)

APPENDIX 1

LIST OF REGULATIONS REFERENCED BY THE PRESENT REGULATIONS

- 1 Procedure of application of international, regional and foreign state standards in the Republic of Kazakhstan PR Republic of Kazakhstan 50 1 21-96
 - 2 "Provisions About Investigation and Reporting of Accidents " Resolution of the Cabinet of Ministers of the Republic of Kazakhstan dated December 15, 1994 No 1414
 - 3 About procedure of Notification and State Filing of Emergencies of Natural or Technical Origin Resolution of the State Emergency Committee, March 24, 1997 No 7
 - 4 About Approval of the Provisions About Classification Investigation and Filing of Transport Emergency Events Occurring at the Internal Navigation Routes of the Republic of Kazakhstan Order of the Ministry of Transport and Communications of the Republic of Kazakhstan, July 26, 1995, No 151
 - 5 International Standardization Organization Document No 13819-1, Petroleum and Natural Gas Industries - Offshore Structures - Part 1 General requirements, 1996 (DB No 8177)
 - 6 Provisions About Procedure and Terms of Issuing Permits for Construction and Operation of Artificial Islands, Dams and Constructions, and Facilities During Conduct of Offshore Petroleum Operations in the Republic of Kazakhstan Resolution No 772, June 24, 1996
 - 7 International Standardization Organization Document No 1370B, Petroleum and Natural Gas Industries - Offshore Platform Systems - Functional Requirements And Guidelines For The Control And Mitigation Of Fires And Explosions, 1996 (DB No 8178)
 - 8 Safety Rules for Petroleum Industry, 1995
 - 9 Safety Rules for Offshore Geophysical Operations (Committee for Mining Supervision /Gortekhnadzor, 1995)
 - 10 Marine Geophysical Safety Manual IAGC¹
 - 11 Instruction for Safe Operations with Explosives During Marine Seismic Studies (Committee for Mining Supervision /Gortekhnadzor, 1996)
 - 12 Uniform Safety Rules for Operations with Explosives (????), Gosgortekhnadzor, 1994
 - 13 International Standardization Organization Document No 10418, Petroleum and Natural Gas Industries - Offshore Production Platforms - Analysis, Design, Installation, And Testing of Wellhead Safety Systems, 1993 (DB No 8179)
 - 14 Temporary Instruction for Prevention of Oil and Gas Uncontrolled Open Flows and Blowouts During Construction of Wells on the Fields with High H₂S Content and other Hazardous and Aggressive Substances, 1988
 - 15 Provisions About Procedure of Oil And Gas Wells Shut In and Abandonment (No 63-121- 95 of June 02, 1995)
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32

- 16 Safety and Environment Protection Rules for Construction Laying Operation and Maintenance of Underwater Pipelines Power and Communication Cables, Related to the Petroleum Operations Resolution of the Government of the Republic of Kazakhstan No 732
- 17 Uniform Safety Rules for Diving Operations, 1981
- 18 Sanitary Rules for Floating Drilling Rigs, 1 06 062-94
- 19 Sanitary Rules for Petroleum Industry 1 06 061-94
- 20 Threshold limit values for chemical substances and physical agents Biological exposure indices ACGIH (required by pSA)
- 21 Norms of Artificial Illumination on the marine vessels
- 22 GOST 12 1 003-83 "Noise Protection Methods and Means"
- 23 GOST 2874-82 "Potable Water Hygienic Standards and Quality Control"
- 24 International Convention On Prevention of Sea Pollution from Vessels (MARPOL -73-78)
- 25 Water Code of the Republic of Kazakhstan, March 31, 1993
- 26 Law of the Republic of Kazakhstan About Ratification of the International Labor Convention, No 148, 1997, "About Protection of the Workers from Occupational Risk, Caused by Air Pollution, Noise and Vibration at the Work Stations"

Certificate of Coordination (Agreeing) of the Draft “Safety Regulations for Conducting Petroleum Operations Offshore and in Internal Water Bodies of the Republic of Kazakhstan”

The Draft introduced by The Ministry of Energy, Industry and Trade of the Republic of Kazakhstan

Results of the Coordination (Agreeing) of the Draft

Sections	Ministry or Department	Person coordinated (agreed) the Draft	Results of the Coordination (Agreeing)
1	2	3	4
	Ministry of Ecology and Natural Resources Committee for Emergencies		

APPENDIX D

**METHODICAL RECOMMENDATIONS TO DEFINE THE LEVEL
OF DAMAGE CAUSED TO MARINE AND INTERNAL
RESERVOIRS RESULTING FROM PHYSICAL
ENVIRONMENTAL IMPACT AND VIOLATIONS OF NATURE
USE NORMATIVES**

METHODICAL RECOMMENDATIONS TO DEFINE THE LEVEL OF DAMAGE CAUSED TO MARINE AND INTERNAL RESERVOIRS RESULTING FROM PHYSICAL ENVIRONMENTAL IMPACT AND VIOLATIONS OF NATURE USE NORMATIVES

1 GENERAL PART

1 1 Introduction and Sphere of Applications of the Recommendations

- 1 1 1 These procedures define assessment parameters and calculations for determining the level of damage to marine and internal water reservoirs resulting from unauthorized discharges of pollutants or from accidental releases to the environment during all stages of operations related to the exploration, development and production of oil and gas in the Republic of Kazakhstan
- 1 1 2 These regulations provide methodical recommendations to define payment for the physical environmental impact caused to marine and internal reservoir from permitted activities which are necessary to Petroleum Operations but have an unavoidable environmental impact. Such activities for which the Operator is responsible for reimbursing payment include
- Mechanical impact or disturbance caused by explosions associated with seismic exploration activities which is deemed to have created a temporary or permanent stress on offshore wildlife and fish resources and their food supply
 - Mechanical impacts or disturbance of the Offshore or Reservoir bottom sediment from seismic explosion, ship movement, pipeline and cable construction or other Petroleum related activity
 - Acoustical or vibratory disturbance from seismic explosion or the use of air guns which may be sufficient to degrade the aquatic environment to the extent that a loss of resource occurs in the area of the activity
- 1 1 3 These regulations do not include activities causing lesser physical environmental impacts which may be incidental to the conduct of normal Petroleum Operations. Also excluded are those temporary physical impacts where diligent measurement cannot be made or where standards of defining payment do not exist. These include

- Thermal impact resulting from the use of open flame fire operation of combustion engines furnaces kilns and oil treatment equipment Fire associated within the burning of spilled crude oil shall be considered part of an assessment from Damages to the Environment and covered under those regulations
- Acoustic impacts resulting from normal noise produced by ship engines, from oil pumps and from equipment used during the drilling of a well
- Electromagnetic impact associated with fields generated by high voltage lines, electrical devices, radio relays and telecommunication transmission stations and electrical welding
- Vibration impacts generated by the normal operation of equipment at offshore facilities, drilling equipment, and pressurized pipelines and
- Impacts of light on the water at night

1 1 4 Payments for exceeding nature use permit limitations shall be calculated in accordance with procedures set forth in Section 5 2 5 of the Instructions for Environmental Protection and are excluded from these recommendations unless a discharge to the Offshore occurs and natural resources are measurably damaged

1 2 **General Administrative Provisions**

- 1 2 1 The provisions of this document shall cover all enterprises and companies which conduct petroleum operations offshore, in the coastal area and internal water reservoirs regardless of the type of property or country of origin
- 1 2 1 Whenever these Regulations contradict specific provisions of existing rules, regulations and assessment calculations the present recommendations and calculation methodology shall prevail
- 1 2 3 Changes and additions to any calculation methodology or assessment rate in these Recommendations shall be introduced by the government body responsible for setting and receiving assessments and payments and shall be brought to the attention of all Operators after hearing as set forth in Section _____

1 2 4 The Contractor is responsible for making all payments assessments and reimbursement for damaged or destroyed Offshore natural resources resulting from a damage event regardless of who conducts petroleum operations Operator or Subcontractor

1 3 Definitions and Terms

---- Baseline means the range of concentration levels for each environmental media constituent which have been established for the Operator s Contract Territory prior to the beginning of Petroleum Operations

---- Coastal Area means that area of land geographically located between the median coastline intersect of a sea or internal water body during normal seasonal fluctuations and the historically documented sub-sea elevation of the adjacent land and surface drainage area which may be flooded with rising water during a 10 year event, and where potential contaminants from near coastline petroleum operation facilities might reasonably be expected to reach the offshore environment

For purposes of this definition, facilities which have proven capability (dams, barriers, dikes) to prevent rising water from entering and subsequently receding into the seaward coastal area during a 10 year flood occurrence shall be excluded from these regulations

---- Damage Event means any unauthorized discharge or disposal of waste, release of toxic substances during emergency situations or mechanical disturbance or resulting from operating errors related to Offshore Petroleum Operations which has resulted in pollution to the offshore environment and is a violation of regulations

---- Designated Authority means the Central Executive State Body, Ministry of Ecology and Natural Resources (MENR), Committee, Local Executive Body or other entity specifically empowered by the Laws and Edicts of the Republic of Kazakhstan to investigate pollution occurrences and physical environmental impact events for purposes of making damage assessments and calculating payments to the Government of Kazakhstan

---- Facility means any installation or device which is part of the drilling and production process and is permanently or temporarily attached to the sea or lake bed and is used for oil and gas exploration, development or production activities or has been installed for pollution control Any vessel

used to transfer production from an offshore facility shall be considered part of the facility if it is included into the unit's technological process related to crude oil and natural gas producing streams. Ambient and pollution monitoring stations and equipment are excluded from this definition unless they are an integral part of the technological process or an offshore pollution cleanup activity.

- Maximum Acceptable Emission (MAE) means the upper acceptable volume of pollution emission per unit time
- Maximum Concentration Level (MCL) means the upper acceptable concentration for each polluting constituent relative to petroleum operations above which degradation of environmental media is deemed to occur
- Offshore means the surface water portion of any sea, lake or body of water within the Republic of Kazakhstan that is bounded by a coastline at any given point in time, but shall not include the "dry zone" of the Aral Sea using a dated shoreline as a point of reference unless included as a definition by Consortium or Production Sharing Agreement with the Republic of Kazakhstan
- Operator means a legal entity established by the Contractor(s) for organizing and implementing the work of the Contract Territory
- Payment means any amount which the Operator is obligated to transfer to the environmental protection fund or reimburse the Government of Kazakhstan for an adverse physical impact or assessed damages to the environment resulting from violations either by intention or accident
- Petroleum Operations means any activity relating to the exploration and production of oil and gas which may occur after the initial license has been issued to the Contractor to conduct activities on the Contract Territory
- Physical Environmental Impact means unfavorable environmental effects caused by physical factors associated with petroleum operations
- Responsible Person means the Contractor or Operator of an offshore facility or operator of a vessel from which an unauthorized discharge of oil or other endangering substance has occurred or is otherwise identified by a central or local executive committee as having conducted an activity that resulted in a loss of natural resources to the offshore area

---- Subcontractor means a legal entity which is contracted to render certain services to the Operator at the Contract Territory or is contracted by the Government of Kazakhstan to respond to an environmental emergency situation

2 AUTHORITY, FUNCTIONS AND COORDINATION PROCEDURES OF CENTRAL AND LOCAL EXECUTIVE BODIES

- 2 1 The Competent Body of the Republic of Kazakhstan has the authority to
- 2 1 1 Define the level of damage to the marine and internal water reservoir environment resulting from violations during the conduct of Petroleum Operations,
 - 2 1 2 Define the level of physical environmental impact from the conduct of certain necessary Petroleum Operations which may by their nature cause loss of marine biological resources but are not violations
 - 2 1 3 Assess Contractors and Operators penalties and payments to be paid to the Government of Kazakhstan or designated entity in accordance with the Laws of the Republic of Kazakhstan,
 - 2 1 4 Supervise the enforcement of collection of assessments, penalties or payments and take appropriate action for non-compensation by the Contractor or Operator,
 - 2 1 5 Enter into negotiated settlements with Contractors and Operators for the expeditious restoration, rehabilitation, replacement and compensation for the injured or damaged natural resources
- 2 2 The following entities of the Government of the Republic of Kazakhstan have the right to investigate damage resulting from pollution to the offshore environment caused by Petroleum Operations resulting from violation of environmental protection laws, regulations and instructions
- 2 2 1 The Central Executive Body for Environmental Protection of the Republic of Kazakhstan under authority of Article 8 of the Law on Protection of the Environment
 - Exercises state environmental control within its authority over protection, reproduction and the use of flora and fauna

- Approves plans for the restoration rehabilitation and replacement of injured marine resources

Approves within its authority, and coordinates the assessment of payments and compensations for marine resources injured by Petroleum Operations from physical damage events and violations of regulations

- Conducts investigations of offshore pollution occurrences and physical environmental impact events to assure restoration of marine resources to as near to pre-event condition as possible
- Cooperates with local executive bodies to standardize assessment and payment calculation procedures and to provide state ecological expertise in developing restoration and remediation schemes

2 2 2 The Central Executive Body for Emergencies of the Republic of Kazakhstan

- Investigates physical environmental impact events develops plans and maintains readiness for response and keeps records of emergency situations addressed by Operators and Contractors or by its own response activities
- Manages the State Experts Committees, provides State inspection for Emergency Prevention and Response and coordinates with local executive bodies to form Committees to investigate incidents of environmental damage and physical impact
- Supervises emergency response and corrective actions taken by responsible persons during the conduct of oil spill area containment and cleanup operations
- Coordinates with other legally authorized entities to provide emergency response in those cases where the responsible person fails to take expeditious action to minimize damage to the marine environment

2 2 3 Regional, Oblast and city meeting of people's deputies - Maslikat has the

right to adopt mandatory rules and schedules for assessment of penalties and payments for damages to the Offshore environment resulting from violations or necessary Petroleum exploration activities and carries out the following activities

- Cooperates with the State Central Executive body to develop written sets of procedures and criteria for damage assessment and physical environmental impact analysis to be used by incident investigation committees
- Sets the amount of fines for environmental pollution to offshore resources within its jurisdiction for damages resulting from violations or physical environmental impact events based on schedules consistent with those developed through cooperation with the Central Executive Body under Sections 2 2 1 and 2 2 2
- Suspends economic activities and or construction of facilities where incidents of pollution has occurred and the Operator has not taken proper or effective action to cause the pollution source to cease

2 3 The Central and local executive bodies in accordance with established procedures shall be responsible for enforcing these recommendations so as to eliminate the potential of assessing multiple reimbursements and payments for the same incident or related series of incidents This shall be accomplished by

- 2 3 1 Coordinating review and examination of reports submitted by the Operator (responsible party) or by the investigating governmental entity,
- 2 3 2 Cooperating on the inspection of remedial or corrective actions by the responsible party
- 2 3 3 Providing jointly sponsored hearings on matters relative to fines and payments which have been appealed by the Contractor or Operator of the Offshore Contract Area where the incident took place

2 4 Operator Analysis of Damage or Physical Impact on Environmental or Human Health

The Operator shall provide the Designated Authority an analysis of the short and long term effects to both the Offshore ecosystem and human health of any reported Offshore Physical Environmental Impact or Damage event related to Petroleum Operations. The Designated Authority may consider the Operator's analysis and supporting data along with its own investigative findings in calculating Payments or assessing damages. Such analyses shall take into account at a minimum the following:

- 2 4 1 The location of the situation in relation to Coastal Area population centers which may have received adverse health effects or documented and demonstrated discomfort from the incident
- 2 4 2 The location of the Event in relation to Critical Wildlife or Aquatic Species habitats, or Ecologically Protected Areas on or adjacent to the Caspian Sea or other Specially designated offshore protected Natural Territories as defined under the Laws of Kazakhstan
- 2 4 3 The length of time which is required to make short and long term analysis of damages or impacts meaningful but not to exceed two years after the date of the incident unless the Designated Authority in negotiated agreement with the Operator authorized a longer period of time

2 5 Hearings

- 2 5 1 The Operator may request hearings to be held by the appropriate central or local executive bodies and the Competent Body shall assist in arranging the hearing opportunity in the following cases:
 - 2 5 1 1 An Operator, upon receipt of a notice to remit a Payment for a particular Physical Environmental Impact determination, may make written request for a hearing or informal conference where said Operator is aggrieved as to the amount calculated by the Competent Body assessing the payment
 - 2 5 1 2 The Operator has requested and concluded an informal conference regarding a payment or assessment amount and is not satisfied with the result of negotiations through informal conference. Request for hearing must be based on data, documentation and information which shows why the payment calculation was inaccurately conceived and why results of the informal conference are not valid

2 5 1 3 The calculated payment was based on standards or methods which were not included in these regulations by direct statement or incorporated by reference

2 5 1 4 The calculated payment is for an activity which can be proven by the Operator to not have applicability to the offshore or coastal area environment or where the Operator should not be deemed a nature user

2 5 1 5 The Operator had been assessed a payment penalty for a petroleum related activity which has caused a physical impact but was not included under the applicability and scope of these regulations as set forth in Section 1 1 2

2 5 2 The Designated Authority, on its own motion, may set a matter related to the calculation of Physical Environmental Impact or assessment for damages due to violation of environmental protection regulations for informal conference or hearing in accordance with the following procedures

2 5 2 1 When the Designated Authority finds that an Operator has habitually caused excessive physical impact to occur in the offshore environment due to the use of explosive devices when internationally recognized available alternative technologies would have minimized an adverse impact, it may set the issue for hearing to resolve the matter In setting the matter for hearing, the Designated Authority shall notify the Operator in writing of the intention to hold a hearing and set out a listing of the deficiencies which require resolution or response

2 5 2 2 Pursuant to the Designated Authority's responsibilities under Section 2 2 3 to revise the Methods for Calculating Payments or Assessments as becomes necessary, a notice that a hearing shall be held when

- Newly developed calculation methods, criteria and guidelines have been proposed for adoption
- Payment and assessment amounts based on new calculation methodologies or rate setting criteria may cause the Operator to substantially modify the Environmental Protection Plan for the site
- The changes in the Payment amount are based on recently developed research studies which the Designated Authority

believes may have applicability but may be unknown to the Operator

- Operators respond with a demonstration of significant interest in the changes within fifteen days of the date of the hearing notice

2 5 3 Hearing Procedures Filing of Testimony and Supporting Documents

The Designated Authority shall use the procedures established under Section 3 7 of the Environmental Protection Instructions on the conduct of hearings and the use of hearing procedures and shall include at a minimum, the following parts

- Deadlines for the prefiling of testimony and data support documents
- Instructions on the acceptable format and content of prefiled testimony
- Procedures for intervenor participation in hearing proceedings

2 5 4 Notification of Decision by Designated Authority Timeliness

Notification to the Operator who requested a hearing under Sections 2 5 1 or 2 5 2 of its determination within forty-five (45) days of the closing of the date of hearing In its notification, the Designated Authority shall include the following information

- Approval or denial of the Operator's request for modification of the Payment or assessment amount
- Any modification or adjustment to the calculated amount which shall not exceed the original calculation unless specific reasons are stated
- If the Operator's request is modified or summarily denied the period of time which the Operator has to make the Payment or assessment

2 5 5 Procedures for Appeal, Applicability and Limitations

The Designated Authority shall, as a part of the notification under Section 2 5 4, advise the Operator of the appropriate appeals procedures to pursue if he is still aggrieved by the final decision, after hearing Such advisement shall include

145

- The appropriate court or ministry for appeal
- Issues and matters related to the initial hearing which are *de novo* and can only be appealed on the basis of new information or evidence And which are *res judicata*

2 6 Duties and Responsibilities of Operators of Petroleum Operations

The Operator is responsible for maintaining compliance with the Environmental Protection Normative Regulations for Offshore Petroleum Operations thus minimizing Damage causing events The Operator shall be responsible for the following

2 6 1 Baseline Monitoring Plans Assistance to Designated Authority

Each Operator shall maintain baseline environmental monitoring media reports and data presentations as required under of the Environmental Protection instructions in such level of historical detail and trend analysis as to be readily used by the Operator and the Designated Authority in determining an equitable assessment calculation for a Damage or Physical Environmental Impact Event Such information shall be maintained separately for each Contract Territory

2 6 2 Assist in Developing Maximum Contaminant Levels(MCLs)

Each Operator of a Contract Territory shall assist the Designated Authority in maintaining a listing of current internationally accepted standards and criteria for MCLs to be used in damage determination calculations and assessments for each constituent of oilfield related compounds which are of concern to either human health or the offshore biological ecosystem This assistance shall be provided through

2 6 2 1 Requesting the opportunity for hearing before the Designated Authority as provided in Section 2 5 1 or

2 6 2 2 Responding as a participant in the hearing processes established under Sections 2 5 1 and 2 5 2 where the hearing opportunity is set by the Designated Authority under its own motion

2 7 Inspection and Damage Evaluation and Analysis for Affected Areas

State and Oblast inspections of damage and physical impact events are to be coordinated among entities during their determination of risks to human health or the offshore ecosystem, documentation of reported observations and the

seriousness and identification of the Normative violation

2 7 1 Preliminary Field Investigation By Authorized Personnel of Designated Authority

The Designated Authority shall conduct a preliminary field investigation to determine whether an offshore natural resource damage assessment is necessary, and if so, the scope of the assessment. In carrying out such investigations, the Designated Authority shall

2 7 1 1 Use personnel for such investigations who have been adequately trained and certified in writing by the Designated Authority to make risk and damage assessment observations and determinations on each affected environmental media in offshore situations

2 7 1 2 When appropriate develop a procedure for coordinating initial and follow up on-site investigations of damage and physical impact events with personnel representing other authorities have investigation or damage assessment responsibilities

2 7 1 3 Coordinate Damage or Physical Impact Assessment reporting and data documentation forms used for initial and followup inspections so that all groups responsible for investigation use standard parameters for assessment and Payment determination

2 7 2 By Oblast and Local Authorities, Applicability, Limitations

Investigators representing Oblast and local administrations who have statutory responsibilities to assess and make calculations for damages to the offshore environment from Petroleum Operations shall exercise every opportunity to coordinate activities with the Designated Authority. Such coordination shall be achieved by

2 7 2 1 Conducting joint initial and followup investigations of a Damage Event with the State Designated Authority personnel, and cooperating to develop standard investigation, data documentation and reporting forms and

2 7 2 2 Developing and adopting an agreed to sets of procedures for calculating damage assessments and violation seriousness based on Section 3 of these regulations and any documents currently in effect which are incorporated by reference

2 7 3 Preliminary Field Investigation Components

The Designated Authority shall conduct a preliminary field investigation of to determine whether a natural resource damage assessment is necessary and if so, the scope of the natural resource damage assessment. The same procedure shall be used for suspected loss of offshore flora or fauna from physical environmental impact events. A preliminary field investigation may include, but is not limited to

2 7 3 1 Sampling of surface waters for reference information such as temperature, pH, total suspended solids salinity dispersion and other parameters relevant to the fate and effects of oil and its degradation constituents, or produced water,

2 7 3 2 Sampling of sediments and shoreline materials for reference and for oil and its degradation constituents,

2 7 3 3 If discharged oil the identification of its properties

2 7 3 4 An evaluation of the observable fish and wildlife mortality and the potential for acute or chronic effects

2 7 3 5 A determination of location in reference to Ecologically Sensitive or Specially Protected Natural Resource Areas

2 7 3 6 A utilization of appropriate methods to delineate the extent of exposure in the assessment area

2 7 3 7 Identification of potentially reduced services or economic benefit provided by the natural resources in the assessment area

2 7 4 The Designated Authority shall notify the responsible Operators of its intention to perform an Assessment within sixty (60) days of the Operator's notice that cleanup of the incident is complete. Such notice to perform an assessment under Section 3 of these regulations shall include

2 7 4 1 A summary of the activities conducted during the preliminary field investigation,

2 7 4 2 A description of the incident, the quantity of spillage (if oil) the length of time oil remained on the water or along the coastal area,

2 7 4 3 An evaluation of the impact of response activities by the Operator

on the Natural Resources and

2 7 4 4 if available information from the Operator s incident report describing the quality and effectiveness of containment and removal actions and special measures taken to lessen loss of natural resources

2 7 5 Determination of Risk from Damage, Environmental, Human Health

On the basis of any investigation of any reported Offshore Damage Event related to the conduct of Petroleum Operations, the Designated Authority shall consider the short and long term risk to both the environment and human health in determining the basis for calculating damage payments as set out in procedures in Section 3 In the process for determining risk the Designated Authority shall consider the following

2 7 5 1 The location of the Damage or Impact Event in relation to coastal population centers or offshore and Coastal critical habitat areas which may receive adverse health effects from either consuming the water, coming in contact with a shoreward migration of oil spillage within an unsecured area, or received adverse shock vibrations or acoustical discomfort

2 7 5 2 The defined area around a spill site where the contamination by total organic hydrocarbon compounds exceeds the published MCLs and the length of time the MCLs are exceeded

2 7 5 3 Any emissions of hydrogen sulfide gas which may have been released to the air during the fluid release and could have endangered the health of those working at the facility if proper equipment was not immediately available to prevent exposure to the gas

2 7 5 4 In making necessary determinations of risk from damages or Physical Environmental Impact, the State and Local Executive Bodies for environmental and health protection shall coordinate their efforts to develop one set of data which will result in a single set of conclusions

3 ASSESSMENT AND PAYMENT PROCEDURES AND PROTOCOLS FOR DETERMINING, CALCULATING, QUANTIFYING AND VALUING NATURAL RESOURCE INJURY AND LOSS OF SERVICES

3 1 The Designated Authority may select any reliable incident-specific methods and procedures to determine and quantify injury to and loss of use of natural resources and the offshore environment. In selecting the appropriate assessment procedures and protocols, the following shall be considered:

- The unique characteristics and the locations of the natural marine resource affected by the event
- If the event involved the unauthorized or accidental spillage of oil, the adverse environmental impacts caused by response activities should also be considered in the assessment
- The method selected shall be designed to ensure that the cost of any restoration, rehabilitation, replacement or remedial project shall not be disproportionate to the value of the resource prior to the injury
- The assessment generated by the Designated Authority shall be reasonable and the costs of conducting the evaluation (assessment) of the problem shall have a rational connection to the value of the damaged resource

3 1 1 The Designated Authority may determine that the offshore natural resources have been damaged when:

- The offshore or coastal area was exposed to oil from an unauthorized or accidental discharge and
- there is evidence of a pathway between the natural resource and the point or area of discharged oil or point of documented physical environmental impact (explosion, airguns etc) and
- reliable methodologies indicate adverse effects on natural resources resulting from exposure to discharged oil or a physical impact causing event, or
- the natural resource was adversely impacted by response activities by the Operator or its Subcontractors

3 1 2 The procedures and protocols to determine and quantify injury and loss of use of the offshore natural resources may include:

3 1 2 1 A determination that the offshore natural resources' ability to provide economic or ecological use has been reduced as a result of the discharge or physical impact activity

3 1 2 2 A determination that public use of the offshore or Coastal area has

been reduced

- 3 1 2 3 Sampling of surface waters for temperature pH total suspended solids, salinity dispersion sediments and shoreline materials and other parameters relevant to the fate and effects of oil and its degradation,
- 3 1 2 4 Sampling of biota to determine bioaccumulation acute toxicity chronic toxicity, reproductive effects, physical deformation ecosystem structure and other relevant parameters
- 3 1 2 5 Analysis of the properties of the discharged oil
- 3 1 2 6 An evaluation of the observable mortality and the potential for acute and chronic effects,
- 3 1 2 7 Surveys of any Specially Protected Areas, Ecologically Sensitive areas, Red Book species or other natural areas which are within or adjacent to the assessment area
- 3 1 2 8 Studies to determine the actual and potential mortality and biological and behavioral impacts of the discharged oil or physical impact event on biota including reviews of reliable scientific literature,
- 3 1 2 9 Toxicity testing of the discharged oil to measure impacts on biota actually located in the assessment area
- 3 1 2 10 Studies to determine the natural rate of recovery of the injured resource considering seasonality, cumulative impacts and natural variations and the additional impact on economic or ecological use of the resource
- 3 1 2 11 in conjunction with the Operator, the reliable cost estimates of alternative restoration plans

3 2 Basis for Damage or Physical Impact Payment

The Designated Authority may use, but are not limited to the following incident-specific methods in determining the monetary damage or payment for physical environmental impact due to the Republic of Kazakhstan by the Operator for damages resulting from violations or physical impact activities

3 2 1 Fish and Wildlife Damage to Fishery Sector

The document entitled ' Methodology for Calculation of Damage Caused to Fishery Sector as a Result of Violation of Legislation on Fish Stock Protection' which was approved by the Ministry of Ecology and Natural Resources in 1997 may be used to value the loss of fish resources and their supporting offshore habitat. In using this reference for calculation the Designated Authority shall

- Use the results of the assessment in determining the payment for an unauthorized discharge of oil and
- Document the actual incident- specific assessment numbers used to as a basis for calculation
- Apply this methodology to offshore physical impacts resulting from petroleum related seismic activities

3 2 2 Factor income method

When a lost or damaged natural resource and/ or use affects a production process, the factor income methodology may be used. The methodology may be applied to estimate the loss in service or use resulting from the Damage or Physical impact event. When the price of the goods or commodity has not been affected by the damages or loss of use this method shall not be considered applicable.

3 2 3 Market Price Method

3 2 3 1 The Designated Authority may use the following in determining assessments for loss of marketable fish and aquatic fauna

- The measure of damages to consumers of the lost or injured resource as a comparison between the price of the marketed resource with and without the injury or
- Where the supply is fixed, the observed change in market price may be used as a substitute for damages per unit of affected natural resource. This may be calculated differently for each injured species of marketable resource

3 2 4 Habitat or species replacement cost method

This method involves estimating the damages in terms of the cost of obtaining from alternate sources the equivalent of the damaged resource. This estimate may be arrived at by

- Calculating the cost of partially or completely replacing the habitats that support multiple species
- Determining the loss of species occurring from the onset of the unauthorized discharge or physical impact event through full recovery

In applying this method, the Designated Authority should

- 3 2 4 1 Quantify a total discounted measure of lost services or revenue over the estimated full duration of the damage or injury, taking into account the extent of recovery of the resource or economic use with time
- 3 2 4 2 Determine the total discounted measure of use provided by restoration or replacement of the resource during the full life of the lost species or habitat
- 3 2 4 3 Calculate the appropriate degree of restoration or replacement such that the discounted services provided is equivalent to the total discounted value of interim lost services, and
- 3 2 4 4 Estimate the cost of implementing the restoration or replacement of the species or habitat
- 3 2 5 Benefit Transfer Method The Designated Authority may derive a valuation from a calculation based on a study of an incident with a similar set of circumstances. The loss of natural resources or the use of the resource can be compared as long as the quality of the study upon which the valuation comparison is based is similar

3 3 Damage Assessment Options for Designated Authority

3 3 1 Expedited Damage and Payment Assessment

3 3 3 1 The expedited damage assessment may be utilized when the following circumstance exist

- The discharge of oil or physical environmental impact has caused limited observable mortality
- The extent of damage can be determined and a restoration plan can be

initiated within twelve (12) months of completion of spill response actions
---- The quantity of oil discharged was less than 1000 gallons or ton equivalent

3 3 3 2 The Designated Authority has determined that the expedited damage assessment method is the most cost effective technically feasible method for achieving timely restoration of the damaged natural resource

3 3 2 Comprehensive Damage Assessment

When an unauthorized spillage of oil has occurred and its long term damage to the offshore natural resources cannot be determined within one year from the completion of initial response by the Operator or other parties, the Designated Authority may make a determination that sampling modeling and other scientific procedures are needed to make a rational and reasonable determination of the extent of damage or physical environmental impact. In such cases the Designated Authority shall

3 3 2 1 Complete the comprehensive damage assessment within twenty (20) months of the completion of cleanup activities unless the Government of Kazakhstan grants the Designated Authority an extension to complete the extension

3 3 2 2 Develop an statement of the objectives of the assessment study design which includes the determination that damage has occurred the extent of damage and the value of the damage. Such assessment may include use of the resource and passive use values. The Authority shall select studies which are cost-effective and technically feasible

3 3 2 3 The Designated Authority, in consultation with the Operator, may decide to use a restoration project from the equivalent resource plan described in Section 3 3 5 for the purposes of compensating for damages or impact on natural resources which have been identified under the comprehensive assessment

3 3 3 Negotiated Assessment between Designated Authority and Operator

The Designated Authority and the Operator, either through informal conferences or hearing procedures under Section 2 5 1, may negotiate an assessment with the Operator for a Damage or Physical Environmental Event or the replacement, rehabilitation or replacement of an injured

resource with the following procedures

3 3 3 1 The Operator (responsible person) submits a request to the Authority to participate in a negotiated settlement or restoration ated project The Operator shall make such request in writing within fifteen (15) days of receipt of a notice from the Designated Authority that its intends to perform an assessment

3 3 3 2 The Designated Authority shall respond to the Operator s request for negotiated assessment within fifteen (15) days of receipt If the request is rejected and the Operator's request was made in accordance with Section 3 3 3 1 the Designated Authority shall provide reasons

3 3 3 3 At any time during a negotiated assessment either the Operator or the Designated Authority may decide to terminate the agreement Each party shall prepare a written statement of the factual basis for terminating the agreement and the statement shall be included in the Assessment Record

3 3 4 Plans for Restoration, Rehabilitation, Replacement and /or Acquisition of the Equivalent of the Lost or Damaged Resource

The Designated Authority, either in agreement with the responsible Operator or of its own initiative, may develop and implement a plan for the restoration replacement rehabilitation and/ or acquisition of the equivalent marine natural resource in accordance with the following

3 3 4 1 Develop a list of projects for areas where oil field related contamination has occurred the restoration or remediation of the site is considered feasible and the expense of remediation is equivalent in monetary value to the loss from the Damaged or Physically Impacted Area offshore area Such projects may be onshore or offshore

3 3 4 2 Each restoration plan shall

- include an analysis of the natural recovery alternative and other alternative restoration plans
- be cost-effective and technically feasible
- allow for corrective revisions of the plan
- provide for a period of monitoring sufficient to determine the effectiveness of the plan and
- not have costs disproportionate to the value of the lost

resource or the economic use of the resource prior to the damage causing event

3 3 4 3 The restoration plan may be developed simultaneously with other portions of the assessment except that

---- restoration plans shall be developed as early as practicable during the conduct of an expedited damage assessment

---- restoration plans may be developed in phases when the Designated Authority and the Operator determine that study is required to establish the feasibility of restoration natural recover is selected as the alternative or there is a potential for continuing injury resulting from a release of oil

3 3 4 4 The Designated Authority shall determine restoration to be complete when performance standards of the agreement have been achieved, natural changes have occurred to make further restoration cost ineffective and the damaged resource can maintain viability without further human intervention

3 3 5 Equivalent Resource Plans

If an equivalent resource plan has been developed for the ecosystem encompassing the Caspian Sea or associated Coastal Area of Kazakhstan or portions thereof, the Designated Authority may utilize the information and data from restoration projects identified in that plan for purposes of compensating for the damages resulting from a particular unauthorized discharge of oil or seismic impact event. The Designated Authority, in consultation with the responsible Operator, may use this method to determine compensation if

---- there is an ecological relationship between the damaged resource and the objectives of that project,

---- the direct, on-site, in-kind restoration of the damaged resource is not technically feasible or cost effective and

---- utilization of an equivalent resource plan project will result

in a level of uses similar to those lost as a result of the unauthorized discharge of oil or physical impact event

3 3 6 Assessment Record The Designated Authority shall be responsible for serving as the central repository and maintainer of all assessment records

3 3 6 1 Each assessment record shall contain at a minimum

---- Documents used in selecting assessment procedures and protocols, and in developing restoration plans

---- Data relied upon for the assessment

---- Any notice of intent to perform assessments

---- the preliminary field investigation report, reports of the Operator, and other pre-assessment information

---- a copy of the assessment and restoration plan as presented to the Operator or developed in cooperation with the Operator

---- all correspondence agreements or other documents relating to the role of the Operator in the assessment process and

---- comments received from the Oblast Government and other public or government entities

3 3 6 2 Exceptions Certain documents and data may be excluded from the assessment record including

---- Drafts, pre-decisional, deliberative inter-agency documents and unverified data

---- Documents describing analysis of liability, any attorney-client privilege documents or attorney work product documents

4 PENALTIES, PAYMENTS AND RECOVERY OF DAMAGES

This Section sets forth the various penalties payments monetary damage assessments and recovery of damage costs for which the Operator will pay to the Designated Authority or the Government of Kazakhstan for the Damage or Physical Environmental Event

4 1 Penalties for Damages Caused by Violations of Environmental Rules

The Operator judged responsible for causing damage to the marine environment from an offshore or coastal facility shall pay the following amounts for the violation, which shall be paid separately to the Government of Kazakhstan for the infraction

4 1 1 Accidental Spillage of Oil into Offshore Waters

When the Operator accidentally spills oil from an offshore or coastal facility the automatic penalty shall be as follows in tenge equivalents to US Dollars

4 1 1 1 For less than 1000 gal or tonnage equivalent, \$500 up to a maximum of \$1000 or tenge equivalent for a release of 1000 to 10000 gal, \$ 2500 up to a maximum of \$5000 and for more than 10000 gal, \$5000 up to a maximum of \$10000 For each additional spill during a calendar year, the Designated Authority may increase the the penalty by multiplying the amount by the number of spills which occurred

(For example, three spills of less than 1000gal each would be \$3000 and one spill of less than 1000 gal and two of 2000gal would be \$1000+ \$5000 + \$10000= \$16000 for the year)

4 1 1 2 Where the spillage has occurred in an Specially Designated Protected Natural Area or Ecologically Sensitive Area of the Caspian Sea, the penalty calculation under 4 1 1 1 shall be used except that the Designated Authority may assess the Operator twice the recommended ranges shown in 4 1 1 1

4 1 1 3 If the oil spill was accidental, but the Operator refused to take responsibility for cleanup, the penalties under Sections 4 1 1 and 4 1 1 2 shall be increased by a factor of three

4 1 1 4 Failure to report the spill in accordance with procedures set for in the Instructions for Environmental Protection shall be \$2000 for

the situations covered under Section 4 1 1 1 and \$5000 for situations covered under 4 1 1 2. Additionally, if the Operator fails to report more than two spills exceeding 1000 gal during a three year period, the Designated Authority may recommend that the Operator's license be reviewed.

4 1 2 Intentional Releases of Oil or Produced Water from Offshore Facilities

In the event the Designated Authority's investigation or preliminary assessment reveals the discharge was intentional or was due to gross negligence, the Operator shall be fined no less than \$ 10000 or more than \$50000 per incident.

4 1 2 1 The Designated Authority may recommend suspension of the Operator's License if two such incidents occur over a three year period.

4 1 2 2 If the Operator is able to provide documented proof that the intentional release was necessary to avoid a larger environmental problem or created a health or safety situation at the offshore facility, the Designated Authority shall treat the release as if it was accidental.

4 1 3 Releases of Produced Water to the Marine Environment

Assessments for accidental releases of produced saline water or brine shall be calculated under actual damages to the marine reservoir since an investigation by the Designated Authority would be necessary to assess the damages and determine the calculated amount.

4 1 4 Permitted Activities

Nothing in this Section shall apply to those cases where the Operator exceeds the maximum permitted quantities for Nature Use permits. Any payments owed by the Operator to the Designated Authority will be calculated in the normal manner as a permit exceedance.

4 1 5 Activities Physical Environmental Impact

Damage to the marine biota or the sea floor resulting from seismic explosion or the use of air guns shall not be considered violations because

the Designated Authority has approved the activity as a part of the site design for Petroleum Operations Damages will be assessed and calculated under procedures set forth in Section 4.2 of these recommendations

4.2 Recovery of Damages Based on Assessments, Payment by Operator

In addition to the penalties to be paid under applicable Sections of 4.1 each Operator is responsible for paying for clean up of released spillage and restoring the damaged offshore resources to as near to pre-incident conditions as possible. The following shall apply in calculating costs of assessments and other activities conducted by the Designated Authority for damages to the Offshore Resources of the Republic of Kazakhstan

4.2.1 Operator Control of the Spill Cleanup and Associated Costs

If the Operator voluntarily implements its Spill Contingency Plan and begins proper response measures to contain the spillage and clean it up expeditiously, the Designated Authority shall not intervene but will limit its activity to determining the extent of damage in accordance with procedures set forth in Section 3. Providing the Operator takes full responsibility for response activities, the Designated Authority shall not charge the Operator monetary amounts for its supervision of the Operator's actions

4.2.2 The Designated Authority shall be eligible to recover costs for the following damages or activities related to implementing preliminary investigations or comprehensive assessments and the reimbursement to the State or Oblast for the damaged or lost resource. The Designated Authority may recover

4.2.2.1 The costs of the assessment under Sections 3.2 and 3.3 including, but not limited to

- the supports costs for State personnel making the assessment (salary, overhead, transportation lodging and per diem)
- the costs of sampling and analysis of oil and natural resources, including reference areas
- the costs of laboratories, experts and consultants retained to assess injury and determine damages
- the costs of hearings requested by the Operator under Section 2.5

---- any other costs associated with assessing the damaged natural resources and for developing and implementing plans for restoration or rehabilitation of the damaged resource

4 2 2 2 the costs of restoration, rehabilitation, replacement and/ or acquisition of equivalent resources in compensation for the damage to natural resources sustained as a result of a spill or physical environmental impact event This section shall not apply where by agreement, the Operator has assumed full financial responsibility for all activities listed above

4 2 2 3 The costs to avoid further damage to natural resources from the time of initial discharge until the time restoration is complete and use is restored This section shall only apply to parts where the Operator has not taken full financial responsibility

4 2 2 4 The decrease in value of the natural resource (fish marine organisms, etc) and their value as determined by procedures set forth in Section 3 2 The decrease in value shall be calculated from the time the discharge took place until restoration is complete

4 2 2 5 Fees, economic rent or any payments collectible by the Designated Authority to compensate private parties for the temporary loss of income from the use of the natural resources

4 3 Designated Authority Costs

In the event, the responsible Operator is unwilling to assume responsibility for any activities related to monitoring, restoration, rehabilitation, spill cleanup or replacement of damaged natural resources, the Designated Authority shall use procedures set for in Section 3 and 4 as an accounting of costs to the State If

4 3 1 The State has an Offshore Protection Fund to assume liability for contracting response to the spill and subsequent restoration, the State shall make that fund available to the Designated Authority for response expenditure

4 3 2 The responsible Operator is conducting Petroleum Operations in the Republic of Kazakhstan, the Designated Authority may order reimbursement of the Fund of all costs to the State

4 4 Negotiated Settlement

The Operator and the Designated Authority may enter into a negotiated settlement, which is a binding agreement where the Operator agrees to pay the Authority a certain amount based on assessment calculations or perform the restoration rehabilitation and other activities itself. Release of such agreement shall not occur until the Designated Authority certifies the work as being complete. This method can also be used for instances such as seismic work where the opportunity to restore a damaged resource may be limited.

3 3 2 Fauna

Damage calculations for loss of fish population due to a spillage of oil or seismic event shall be based on the following:

3 3 2 1 The Document entitled "Provisional Manual of Methods on the Assessment of Damage to the Fish Stock as a Result of the Suggested Construction Activities, Refurbishment and Extension of Enterprise, Facilities and other Objects, Diverse Activities at the Fish Producing Areas" Moscow, 1990

3 3 2 2 Decree N281 of the Cabinet of Ministers of the Republic of Kazakhstan, dated March 26, 1992 "Concerning Additional Measures for Protection of Fauna "