

### D.6 List of Operation Equipment Supply

	Item	Spec.	Q'ty	unit
1	Tractor shovel for sludge loading	1.2 m3	4	unit
2	Excavator	0.3 m3	5	unit
3	Excavator, large with crawler	1.0 m3	2	unit
4	Excavator, large with tire	1.0 m3	4	unit
5	Buldozer	13 ton	4	unit
6	Buldozer middle with ripper	13 ton	1	unit
7	Buldozer, large	26 ton	3	unit
8	Dump truck	10 ton	5	unit
9	Cargo truck, to be coupled with dump truck	10 ton	5	unit
10	Truck crane	20 ton	4	unit
11	Trailer	20 ton	2	unit
12	Trailer, large	40 ton	2	unit
13	Cargo truck	2 ton	10	unit
14	Tractor affixed with ice/asphalt breaker, tire	12 ton	1	unit
15	Tractor affixed with ice/asphalt breaker,	12 ton	3	unit
16	Truck with vacuum pump and tank	10 ton	10	unit
17	Road sweeper	10 ton	1	unit
18	4 wheel drive car for patrol	-	5	unit
19	Compressor	35kw	2	unit
20	Pipe fitter	12 ton	3	unit
21	Engine welder	20 KVA	7	unit
22	Pressure jet equipment with vehicle for cleaning pipe	-	4	unit
23	Mobile boiler for melting ice	-	3	unit
24	Potable flow meter, supersonic	-	3	unit
25	Mobile engine pump	200m3/h	3	unit
26	Oil hydraulic jack	-	2	unit
27	Mobile concrete mixer	0.05m3	2	unit
28	Work shop equipment for WTP/WWTP and ASA center work shop	-	3	lot

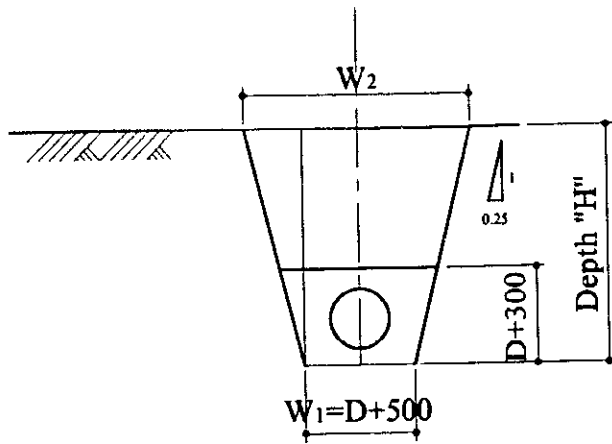
D.7 Breakdown of Operation and Maintenance (O&M) Cost

Table D7.1 Annual Power Consumption

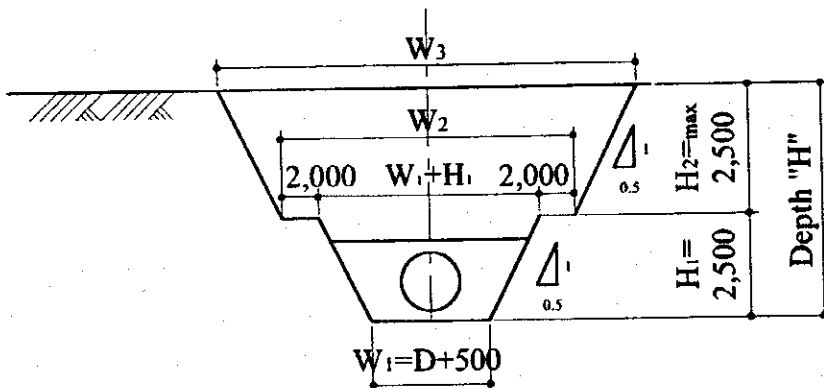
	1999	2010	difference
<b>Water Supply Facility</b>			
Vacheslavsky P/S	21.9 mil KWH	16.5 mil KWH	-5.4
WTP P/S (drinking water)	12.7 mil KWH	9 mil KWH	-3.7
WTP P/S (technical water)	5.6 mil KWH	5.6 mil KWH	0
Ishim Intake P/S	7.0 mil KWH	7 mil KWH	0
No.7 Booster P/S	4.4 mil KWH	4.4 mil KWH	0
<b>Subtotal</b>	<b>51.6 mil KWH</b>	<b>42.5 mil KWH</b>	<b>-9.1</b>
<b>Wastewater Facility</b>			
WWTP	17.6 mil KWH	20.0 mil KWH	2.4
Sewer P/S (existing)	5.9 mil KWH	6.6 mil KWH	0.7
Sewer P/S (new)	0 mil KWH	0.7 mil KWH	0.7
<b>Subtotal</b>	<b>23.5 mil KWH</b>	<b>27.3 mil KWH</b>	<b>3.8</b>
<b>Total Power Consumption</b>	<b>75.1 mil KWH</b>	<b>69.8 mil KWH</b>	<b>-5.3</b>
<b>Cost Difference of Power</b>	<b>-5.3million kWh x 3.84 tenge/kWH / 1.2(VAT) = -16.96million tenge</b>		

Table D7.2 Annual Wage and Salaries of ASA Personnel

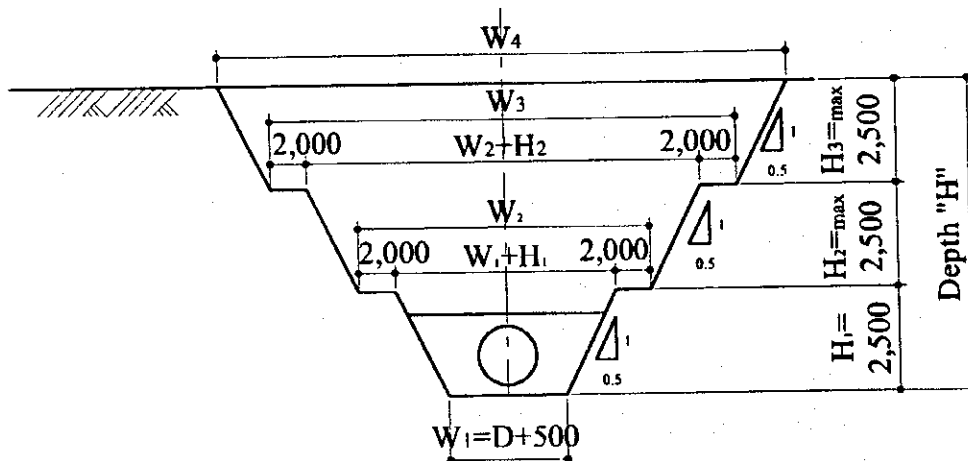
Category of Staff	Number of Staff			Averaged Annual Salary (1,000 tenge)	Total Difference (1,000 tenge)
	1999 (persons)	2010 (persons)	Difference (persons)		
<b>Indirect Staff</b>					
Administration / HSE	1	2	1	316	316
Wether Forecasting	1	4	3	316	948
Mechanical Engineering	150	150	0	280	0
Electric Engineering	34	51	17	294	4,998
Mechanical Work Shop	10	10	0	251	0
Repair and Construction	60	60	0	394	0
Emergency Services	24	24	0	268	0
Logistics Services	6	10	4	316	1,264
<b>subtotal</b>	<b>286</b>	<b>311</b>	<b>25</b>		<b>7,526</b>
<b>Technical Section (Direct)</b>					
Vyacheslavsky P/S	14	12	-2	246	-492
WTP	100	88	-12	235	-2,820
Supply Network No.1	15	23	8	244	1,952
Supply Network No.2	15	23	8	256	2,048
Supply Adjust, Watermeter	50	18	-32	198	-6,336
Sewerage	120	88	-32	240	-7,680
WWTP	110	68	-42	249	-10,458
<b>subtotal</b>	<b>424</b>	<b>320</b>	<b>-104</b>		<b>-23,786</b>
<b>Technical Section (R&amp;D)</b>					
Laboratory	10	10	0	237	0
Water Inspection	6	6	0	293	0
<b>subtotal</b>	<b>16</b>	<b>16</b>	<b>0</b>		<b>0</b>
<b>Technical Section (Plan/Construction)</b>					
Production Plan and Control	5	8	3	316	948
Construction	4	8	4	316	1,264
<b>subtotal</b>	<b>9</b>	<b>16</b>	<b>7</b>		<b>2,212</b>
<b>Total</b>	<b>735</b>	<b>663</b>	<b>-72</b>		<b>-14,048</b>



H ≤ 3,000 Open Cut Excavation



3,000 < H ≤ 6,000 Open Cut Excavation

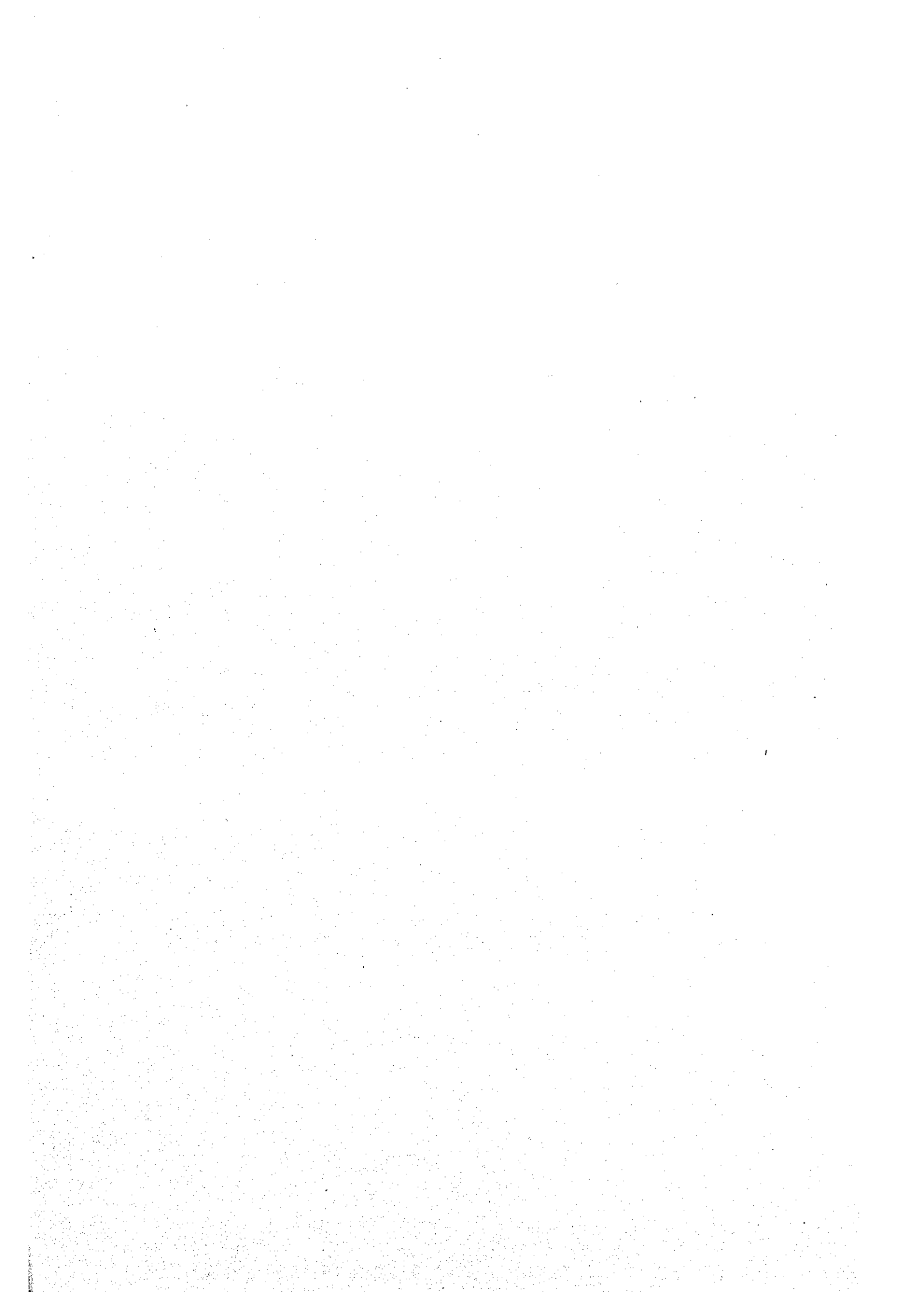


H > 6,000 Open Cut Excavation

Feasibility Study for Water Supply and Sewerage in the City of Astana

D.8  
Typical Section of Open Cut Excavation

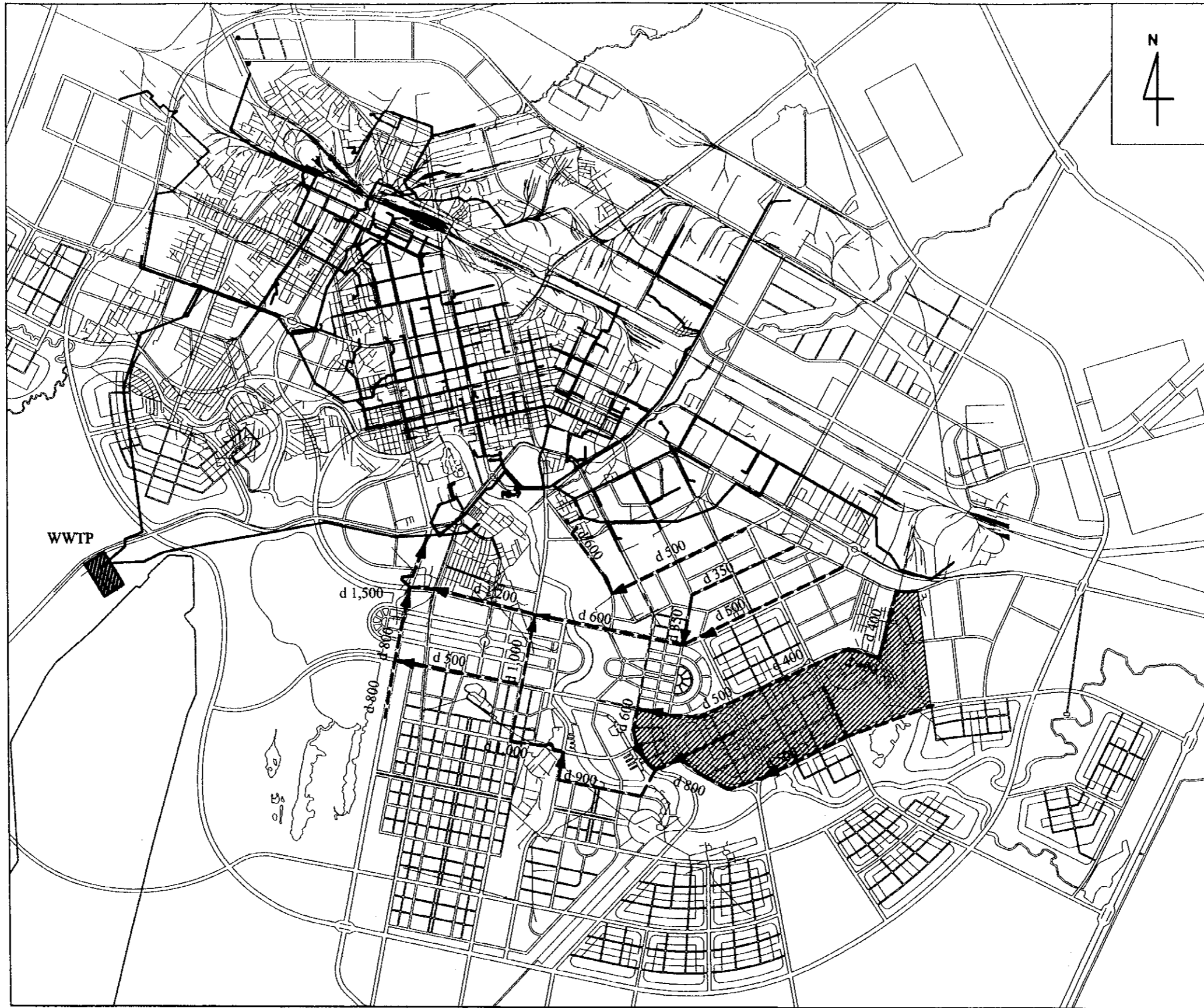
JAPAN INTERNATIONAL COOPERATION AGENCY





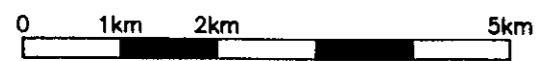
- Legend**
- Existing water treatment plant
  - Existing pipeline (greater than 400)
  - Existing pipeline (less than 300)
  - Proposed water treatment plant
  - - - Proposed pipeline (greater than 300)
  - - - Proposed pipeline (less than 250)
  - ▨ Uncommitted Development Area

<p>The Feasibility Study on Water Supply and Sewerage in the City of Astana</p>	<p>D.9 Plan of Distribution Pipeline Expansion in 2010 with Uncommitted Development Area</p>
<p>JAPAN INTERNATIONAL COOPERATION AGENCY</p>	



**Legend**

- Existing pump station
- Proposed pump station
- Existing collector
- - - Proposed wastewater collection system for 2010
- ▨ Uncommitted Development Area



The Feasibility Study on Water Supply and Sewerage in the City of Astana

JAPAN INTERNATIONAL COOPERATION AGENCY

D. 10

Proposed Wastewater Collection System in 2010 with Uncommitted Development Area

***E. FINANCIAL AND  
ECONOMICAL  
ANALYSIS***

### E.1 Financial Data of ASA

(Units: Thousands of USD)

	1997		1998		1999		2000/6	
<b>Income Statements</b>								
Total sales proceeds of water supply and sewerage services	7,385		7,245		4,873		2,336	
<b>Cost of water supply and sewerage services</b>								
Raw materials	818	10.61%	852	9.62%	448	7.82%	156	6.07%
Fuel	164	2.12%	239	2.70%	157	2.73%	95	3.69%
Power	2,954	38.34%	3,043	34.36%	1,693	29.55%	655	25.54%
Labour payments	2,106	27.33%	2,646	29.88%	1,846	32.22%	760	29.66%
Depreciation	577	7.49%	554	6.26%	502	8.77%	329	12.83%
Repairs	328	4.26%	301	3.39%	371	6.47%	175	6.83%
Other production expenses	132	1.71%	158	1.78%	204	3.56%	64	2.49%
Current periods expenses	626	8.13%	1,064	12.01%	508	8.87%	330	12.89%
Total cost	7,703	100.00%	8,856	100.00%	5,728	100.00%	2,564	100.00%
Loss on water supply and sewerage services	-261		-1,526		-855		-228	
<b>Assets and Liabilities</b>								
<b>Fixed Assets</b>								
Property, plant	3,507	21.90%	3,162	11.35%	6,606	31.82%	6,606	31.34%
Machines and equipment	13,794	86.15%	15,825	56.79%	12,387	59.66%	11,948	56.68%
Other fixed assets	509	3.18%	470	1.69%	713	3.43%	904	4.29%
Less: accumulated depreciation	-7,853	-49.05%	-7,627	-27.37%	-5,080	-24.47%	-5,455	-25.88%
Net book value	9,957	62.18%	11,829	42.45%	14,625	70.44%	14,003	66.43%
Work under construction	1,500	9.37%	8,146	29.23%	1,214	5.84%	1,238	5.87%
Total fixed assets	10,038	62.69%	19,975	71.68%	15,839	76.29%	15,241	72.30%
<b>Current assets</b>								
Inventory	3,199	19.98%	2,065	7.41%	1,038	5.00%	1,557	7.39%
Accounts receivables	2,498	15.60%	3,973	14.26%	2,640	12.72%	3,792	17.99%
Cash in hand and bank	40	0.25%	27	0.10%	202	0.97%	133	0.63%
Other current assets	238	1.48%	1,825	6.55%	1,042	5.02%	357	1.69%
Total current assets	5,974	37.31%	7,890	28.32%	4,923	23.71%	5,838	27.70%
Total assets	16,012	100.00%	27,865	100.00%	20,762	100.00%	21,079	100.00%
<b>Current liabilities</b>								
Accounts payable	3,271	20.43%	9,374	33.64%	2,779	13.39%	2,784	13.21%
Taxes	341	2.12%	369	1.32%	145	0.70%	293	1.39%
Accrued expenses	1,221	7.63%	6,523	23.41%	362	1.74%	702	3.33%
Total liabilities	4,832	30.18%	16,266	57.37%	3,286	15.83%	3,778	17.93%
Capital	11,180	69.82%	11,599	41.63%	17,476	84.17%	17,301	82.07%
Total Capital and Liabilities	16,012	100.00%	27,865	100.00%	20,762	100.00%	21,079	100.00%

Source: EBRD Report, ASA



## E.2 The 1999 Budget of Astana City

(Unit: million TG)

Revenue		
Taxes:		
Value Added Tax	8,229.6	41.0%
Corporate income tax	2,379.5	11.8%
Income tax of individuals	774.4	3.9%
Other taxes	3,327.0	16.6%
Total taxes	14,710.5	73.3%
Non-tax revenue	264.9	1.3%
Revenue from state property	8.4	0.0%
Transfers (grants) received	5,102.5	25.4%
Total revenue	20,086.3	100.0%
Expenditures		
State administration	381.3	1.9%
Defense	204.7	1.0%
Police	582.8	2.9%
Education	3,542.7	17.6%
Healthcare	1,073.8	5.3%
Social expenditures	616.2	3.1%
Municipal services	1,033.9	5.1%
Leisure and culture	3,033.1	15.1%
Agriculture	37.7	0.2%
Transport and communications	224.5	1.1%
Other expenditures to support economy	8,948.2	44.5%
Total expenditures	19,679.0	98.0%
Lending	250.0	1.2%
Total expenditures and lending	19,229.0	99.2%
Proficit	157.3	0.8%

Source: Department of Statistics of Astana City of Agency of the Republic of Kazakhstan on Statistic

### **E.3 Summary of the Public Awareness Survey**

#### **E.3.1 Purpose of the Survey**

The Public Awareness Survey has been conducted to confirm the conclusions of our study which were based on the documents from ASA, Akimat, etc, because these conclusions might be biased in respect of the actual situation of citizens' life.

The main agenda of this survey is as follows:

- Water Management
- Willingness to pay for water charges
- Contentment for ASA's services

#### **E.3.2 Target Sample Number and Sampling Method**

In Astana City, number of households is assumed as 87,000 and number of enterprises is 1,000. Target sample number is 1,000 for individual and 100 for enterprise. It should be mentioned that there are citizens who are connected with centralized pipe lines and are not connected with centralized pipe lines. The sample numbers for each category are determined in proportion to the ratio of the population of those categories.

#### **E.3.3 Result of the Public Awareness Survey**

Following is the summary of the results of the Public Awareness Survey in terms of the agenda mentioned in E.3.1.

##### **(1) Water management**

###### **1) Public awareness for water saving**

Majority of interviewees in this Survey answered that they did not save water: only 21.7% of the citizens with a centralized water supply and sewerage system save water, 36.7% of the citizens without a centralized system, and only 36.0% of enterprises. This means that awareness for the water saving is low in Astana. Because water management is very important for protecting the environment and avoiding unnecessary water resource development, the enlightenment for water saving should be done more positively.

###### **2) Water leakage**

In this Survey, 60.9% of citizens with centralized water supply and sewage system noticed water leakage from distribution pipes in their houses. On the other hand, 30.0% of the enterprises interviewed noticed water leakage. From these results, it can be believed that majority of the people and enterprises will

save water if individual water meters are installed and a usage based water charge system is introduced.

(2) Willingness to pay

In respect of the present level of water charges, only few interviewees answered that they felt the current water charges are cheap. Almost all the interviewees feel water charges are high (individuals-53.3%, enterprises-32.0%) or proper (individuals-46.3%, enterprises-68.0%). According to these results, it is believed that the present water charges might be burdensome for a part of the citizens in Astana. As the result of the Survey, the average water charge which citizens of Astana are willing to pay per household is about 400 TG. Based on this result, average monthly water and sewerage charges per household calculated from Public Awareness Survey is 541 TG and higher than figures of the willingness to pay. Therefore, it is believed that it will be difficult for ASA to raise the tariff higher than the level of increasing of households' income.

(3) Contentment for ASA's services

Almost half of the interviewees in this Survey answered that they were not content with the services of ASA. The main reasons why they were not content with ASA's services were bad quality of services including "water quality" (individuals-35.2%, enterprises-36.1%), "water interruption" (individuals-20.1%, enterprises-25.3%), "low water pressure" (individuals-16.4%, enterprises-14.6%) and "high water charges" (individuals-21.0%, enterprises-10.8%).

Furthermore, majority of the interviewees in this Survey answered that they believed that it was possible for ASA to reduce the water supply cost. About the ways of reducing the cost, "repairing water leakage"(individuals-38.4%, enterprises-40.4%) and "increasing the efficiency of facilities" (individuals-35.2%, enterprises-33.5%) were the major answers. These problems may be a reason why citizens feel that water charges are just a little bit high.

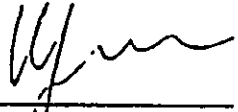
***F. MINUTES OF THE  
MEETING***



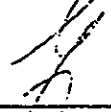
MINUTES OF MEETING  
ON  
SCOPE OF WORK  
FOR  
THE STUDY ON THE MASTER PLAN  
FOR  
THE DEVELOPMENT OF THE CITY OF ASTANA  
IN  
THE REPUBLIC OF KAZAKHSTAN

AGREED UPON BETWEEN  
MINISTRY OF FOREIGN AFFAIRS,  
AGENCY FOR STRATEGIC PLANNING AND REFORMS,  
CAPITAL DEVELOPMENT CORPORATION AND THE CITY OF ASTANA  
AND  
JAPAN INTERNATIONAL COOPERATION AGENCY

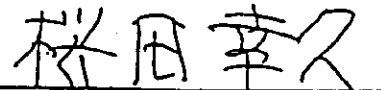
Astana  
5 October 1999



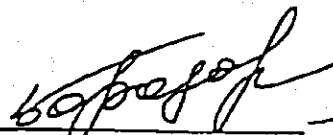
E. A. Idrissov  
Ministry of Foreign Affairs



E. A. Utembayev  
Agency for Strategic Planning,  
and Reforms



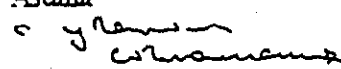
Yukihsa Sakurada  
The Preparatory Study Team  
Japan International Cooperation  
Agency



B. T. Orazov  
Capital Development  
Corporation



A. R. Dzhaksibekov  
City of Astana



The Japanese Preparatory Study Team (hereinafter referred to as "the Preparatory Team"), organized by the Japan International Cooperation Agency (hereinafter referred to as "JICA") headed by Mr. Yukihisa Sakurada (Managing Director, Social Development Study Department, JICA) visited the Republic of Kazakhstan from 23 September to 7 October 1999 to discuss and agree with the Government of the Republic of Kazakhstan (hereinafter referred to as "the Government of Kazakhstan") to the scope of "the Study on the Master Plan for the Development of the City of Astana" (hereinafter referred to as "the Study").

The Preparatory Team exchanged views and held a series of discussions with representatives of the Capital Development Corporation (hereinafter referred to as "the CDC") and other organizations concerned. The list of people met by the Preparatory Team is in Appendix.

Both sides have agreed to the Scope of Work for the Study. Minutes of Meeting sets forth major issues associated with the implementation of the Scope of Work.

## 1. LANGUAGE

The Scope of Work and the Minutes of Meeting were prepared in English and Russian. In case any contradiction arised in interpretation, the English text shall prevail.

## 2. DISTRICT PLAN

The CDC strongly requested the Preparatory Team to prepare the following three district plans under the Study:

- (1) Government Center,
- (2) Business Center, and
- (3) Embassy City.

The Preparatory Team understood the importance and needs for the district plans for these areas. It was agreed that a basic plan to describe the layout of major infrastructure and buildings at 1:2,000 will be prepared for the Government Center. On the other hand, as detailed development plans are not available for the Business Center and Embassy City, basic concepts which indicate principles for the district development at 1:5,000 - 10,000 will be prepared for these two areas.

## 3. FEASIBILITY STUDY

The CDC also made a strong request to the Preparatory Team to include the following four feasibility studies in the Study:

*Handwritten signatures and initials:*  
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- (1) Construction of purification facilities in Astana City in order to improve the quality of the water resources,
- (2) Improvement of water provision and drinking water supply system in Astana,
- (3) Modernization of Heat and Power Station in Astana, and
- (4) Development of telecommunication network in Astana City.

The Preparatory Team explained the CDC that only one of the above proposals could be considered due to the limited budget allocated for the Study. After various discussions, it was agreed that this matter would be further determined by the time of the submission of the Progress Report. In selecting a component for feasibility study, the level of urgency, results of the studies which the CDC is currently conducting, and possible funding source for the ensuing project will be considered.

#### 4. COOPERATION AND COORDINATION

It was confirmed that the Study will be conducted jointly by the Study Team and Kazakh counterpart personnel. Close cooperation and coordination between them should be ensured to facilitate efficient implementation of the Study and achieve fruitful Study results.

#### 5. TECHNOLOGY TRANSFER

(1) The CDC requested the Preparatory Team training programs in Japan for the Kazakh counterpart personnel. The Preparatory Team explained the CDC that only one person could be invited for counterpart training each year and indicated possibility of group training courses aside from counterpart training. The Preparatory Team promised the CDC to convey CDC's request to the JICA headquarters to consider training in Japan for as many counterpart personnel as possible.

(2) Both sides agreed to hold two seminars under the Study, one for the presentation of the Interim Report and the other for the Draft Final Report. Details of the seminars will be determined in the course of the Study.

#### 6. COUNTERPART PERSONNEL

The Preparatory Team requested the CDC to appoint counterpart personnel for the Study Team. The CDC agreed to prepare and submit JICA, by the commencement of the Study, a list of counterpart personnel based on the list of expertise necessary for the Study which will be prepared by JICA.

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*[Handwritten signature]* F-3

*[Handwritten signature]*



## 7. STEERING COMMITTEE

The CDC indicated that it would organize a steering committee for the Study. Members of the steering committee would include representatives of government organizations related to the development of Astana. The CDC will submit a list of the steering committee members to JICA prior to the commencement of the Study.

## 8. REPORTS

- (1) In principle the CDC agreed to disclose the main report and summary of the Final Report. Any confidential information according to the laws and regulations in force in Kazakhstan will be included in a separate volume, which will not be disclosed.
- (2) All the report except the Progress Report will be prepared in English and Russian as indicated in the Scope of Work. However, regarding the Draft Final Report and the Final Report, the main report and summary will be prepared in both languages while other documents such as data sets, maps and drawings will be only in English.

## 9. DATA, INFORMATION AND MAPS

The CDC promised to the Preparatory Team to do its best to provide the Study Team with existing data, information and maps related to the Study. However, if any difficulty arises on this matter, the CDC and JICA will discuss to seek a suitable solution.

## 10. VEHICLES

The CDC promised to provide the Study Team with at least three chauffeur driven cars.


## Attendants List

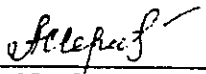
B.D. UTEMURATOV	Assistant to the President Administration of the President
E.A. IDRISOV	First Vice Minister, Ministry of Foreign Affairs
V. P. ZVERKOV	Head, International Economic Cooperation Department Ministry of Foreign Affairs
E. A. UTEMBAYEV	Chairman, Agency on Strategic Planning and Reforms
Tomikazu INAGAKI	Senior Advisor (JICA Expert), Agency on Strategic Planning and Reforms
P.K. CHODIEV	Chairman, Capital Development Corporation
B. T. ORAZOV	General Director, Capital Development Corporation
A. R. DZHAKSYBEKOV	Mayor, Astana City Administration
F. H. GALIMOV	First Deputy Mayor, Astana City Administration
B. F. DOSMAGAMBETOV	Head, Department of Architecture Astana City Administration
Atsushi SUDA	Second Secretary, Embassy of Japan in Republic of Kazakhstan
Yukihisa SAKURADA	Leader, JICA Preparatory Study Team
Katsuro NAGAI	Member, JICA Preparatory Study Team
Eri HONDA	Member, JICA Preparatory Study Team
Jitsuya ISHIGURO	Member, JICA Preparatory Study Team
Mamoru OSADA	Member, JICA Preparatory Study Team
Toshiaki ARISAWA	Member, JICA Preparatory Study Team
Hayao TESHIMA	Member, JICA Preparatory Study Team
Kumiko IKAWA	Interpreter, JICA Preparatory Study Team


MINUTES OF MEETING  
FOR  
THE PROGRESS REPORT MEETING  
FOR  
THE STUDY ON THE MASTER PLAN  
FOR  
THE DEVELOPMENT OF CITY OF ASTANA  
IN  
THE REPUBLIC OF KAZAKHSTAN


AGREED UPON  
AMONGST  
THE MINISTRY OF FOREIGN AFFAIRS,  
THE CAPITAL DEVELOPMENT CORPORATION,  
THE CITY OF ASTANA,  
AND  
JAPAN INTERNATIONAL COOPERATION AGENCY

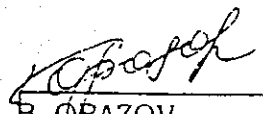
ASTANA,  
14<sup>th</sup> APRIL, 2000

  
F. GALIMOV  
First Deputy Akim  
of Astana City

  
S. AISAGALIYEVA  
Director,  
Investment Policy Dept.  
Ministry of Economics

  
V. ZVERKOV,  
Director of External  
Economic Relations Dept.  
Ministry of Foreign Affairs

  
Dr. Kisho KUROKAWA  
Team Leader,  
JICA Study Team

  
B. QRAZOV  
General Director,  
Capital Development Corporation



The Japanese Study Team (hereinafter called "the Study Team") for the Master Plan for the Development of City of Astana in the Republic of Kazakhstan (hereinafter called "the Study"), organized by the Japan International Cooperation Agency (hereinafter called "JICA"), headed by Dr. Kisho KUROKAWA, Team Leader, together with Ms. Eri Honda of JICA, visited Kazakhstan from 10<sup>th</sup> of April to 18<sup>th</sup> of April, 2000, to discuss the contents of the Progress Report for the Study.

The discussion concerning the Progress report was held in the afternoon of 12<sup>th</sup> of April, 2000, at the Inter-Continental Hotel Conference Room, attended by representatives of concerned organizations and agencies. The following are the items agreed upon by the concerned parties as represented by the undersigned.

1. The future land use plan prepared by the JICA Study Team was in principle accepted. The Kazakhstan side expressed appreciation to the work done by the JICA Study Team. In specific locations, however, the conflicts were pointed out with regard to the on-going and approved construction. Problems pertaining to the relocation of dacha's and a village were also pointed out. Such conflicts shall be considered by the Study Team for modification and adjustment of the future land use plan in the course of the Study.
2. The Feasibility Study to be conducted by JICA shall cover the sectors of water supply and sewerage, combining the urgent projects of the both sectors.
3. The comments expressed in the Progress meeting with regard to the Master Plan and Feasibility Study shall be discussed and considered in the course of the Study carefully.
4. In order to make a more comprehensive and appreciable Master Plan, all the concerned organizations and agencies are requested to provide relevant data and information.

This Minutes of Meeting is prepared in English and Russian. In case any contradiction should arise in interpretation, the English text shall prevail.

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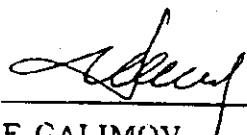
## List of Attendants

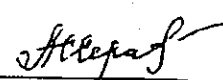
Kubashev Ye.	Ministry of Foreign Affairs of the RK
Khairov	Ministry of Foreign Affairs of the RK
Galimov F.	First Deputy Akim of Astana City
Dosmagambetov B.	Chief Architect of Astana City
Nurpeissov	Management Office of the President
Orazov B.	Capital Development Corporation
Kulushov B.	Ministry of Transport and Communications of the RK
Saudabayev D.	Ministry of Transport and Communications of RK
Erzhanova L.S.	Ministry of Economy of the RK
Dostiarov B.	Ministry of Finances of the RK
Shardarbekov E.	Agency for Investments of the RK
Khashimoto F.	JICA Adviser to the Ministry of Economy of the RK
Kanafin B.	General Director "Astanatelecom"
Yakovleva T.M.	Department of Economy and Small Business Development
Lukinykh	Committee for Water Resources, Ministry of Natural Resources of the RK
Rustambekov S.	DCC "Ak Orda"
Demeuova A	Department of Employment and Social Security of Astana City
Gabdullin Zh.	Committee for Construction Affairs, Ministry of Energy, Industry and Trade of the RK
Ashenov G.	Ishim Basin Water Management Department
Popov V.	President JSC "Karaganda GIIZ & Co"
Kazhibayev V.	OJSC "KEGOC"
Katarbekov Zh.	Deputy Director of Housing Department
Kim T.	Department for Emergency Cases
Kostenko M.	Chief Sanitary Doctor, Head of Sanitary Control Department
Meiramov E.	Head, Territorial Department for Environmental Protection, Ministry of Natural Resources of the RK
Baizhaxhanov B.	Head, Department for Transport and Communications
Merkushev V.	Department for Public Utilities Management
Syundikov V.	"Gorvodokanal"
Seitzhanov K.	Fund of Communal Property
Yerezhepov B.	Director, Department of Capital Construction
Honda E.	Deputy Director, First Development Study Division, Social Development Study Department, JICA
Dr.K.Kurokawa	Team Leader, JICA Study team
Yamada K.	Co-Leader, JICA Study Team
Shibata T.	Co-Leader, JICA Study Team

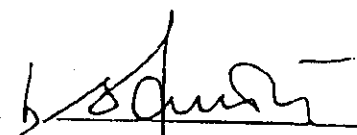
MINUTES OF MEETING  
FOR  
THE SCOPE OF THE FEASIBILITY STUDY  
FOR  
THE PRIORITY PROJECT  
PROPOSED UNDER  
THE MASTER PLAN FOR  
THE DEVELOPMENT OF THE CITY OF ASTANA  
IN  
THE REPUBLIC OF KAZAKHSTAN

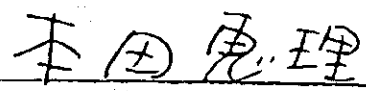
AGREED UPON  
AMONGST  
THE MINISTRY OF FOREIGN AFFAIRS,  
THE CAPITAL DEVELOPMENT CORPORATION,  
THE CITY OF ASTANA,  
AND  
JAPAN INTERNATIONAL COOPERATION AGENCY

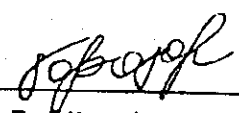
ASTANA,  
14<sup>th</sup> APRIL, 2000

  
F. GALIMOV  
First Deputy Akim  
of Astana City

  
S. AISAGALIYEVA  
Director,  
Investment Policy Dept.  
Ministry of Economics

  
V. ZVERKOV,  
Director of External  
Economic Relations Dept.  
Ministry of Foreign Affairs

  
Eri HONDA,  
Deputy Director, Social,  
Development Study Dept.  
JICA

  
B. ORAZOV  
General Director,  
Capital Development Corporation

In response to the request of the Government of the Republic of Kazakhstan (GOK), the Government of Japan (GOJ) has decided to conduct the Study on the Master Plan for the Development of the City of Astana (the Study). Accordingly, the Japan International Cooperation Agency (JICA) dispatched the preparatory study team to discuss and agree with the GOK officials to the scope of the Study. During the preparatory study, it was agreed that the Study be composed of a masterplan study and a feasibility study, and a component for the feasibility study be selected by the time of the submission of the progress report, as recorded in the Scope of Work and the Minutes of Meeting signed by the Ministry of Foreign Affairs, Agency for Strategic Planning and Reforms, the Capital Development Corporation (CDC), the City of Astana and the preparatory study team on 5 October 1999.

The Study was commenced in January 2000 and the progress report was submitted to GOK on 12 April 2000. The JICA advisory team comprising Ms. E. Honda, Deputy Director, First Development Study Division, Social Development Study Department, JICA, visited Kazakhstan from 10 to 20 April 2000 to discuss with the GOK officials on the contents of the progress report and the scope of the feasibility study. This Minutes of the Meeting summarizes the discussions related to the feasibility study.

1. Objectives of the Feasibility Study

The objectives of the feasibility study are to:

- (1) assess the technical, financial and economic viability, and environmental and social soundness of the priority projects in water supply and sewerage; and
- (2) pursue technology transfer to the counterpart personnel in the course of the feasibility study.

2. Study Area

The feasibility study will cover the City of Astana.

3. Scope of the Feasibility Study

The feasibility study will be conducted with close reference to the pre-feasibility studies conducted by CDC and submitted to GOJ as of November 1999. In order to maintain the consistency, the feasibility study will be conducted in close coordination with the masterplan study. The feasibility study will cover the following items.

- (1) Review and analyses of the current conditions of water supply and sewerage systems

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- (i) water supply facilities and service levels
- (ii) sewerage facilities and service levels
- (iii) public health and sanitation conditions
- (iv) topographic and geological conditions
- (v) environmental conditions
- (2) Review of institutional arrangements for water supply and sewerage services
  - (i) roles, functions and responsibilities of Gorvodacanal
  - (ii) organizational set-up of Gorvodacanal
  - (iii) technical and financial capabilities of Gorvodacanal
  - (iv) funding mechanisms including government subsidies
  - (v) operation and maintenance systems
  - (vi) cost covery including tariff structures
- (3) Identification of bottlenecks and problems of the current water supply and sewerage systems
- (4) Forecast of future demands for water supply and sewerage
- (5) Assessment of social, financial and environmental impacts of alternative plans and identification of the most suitable plans
  - (i) rehabilitation of the existing water supply system
  - (ii) construction of new water supply facilities
  - (iii) rehabilitation of the existing sewerage system
  - (iv) construction of new sewerage facilities
  - (v) improvement of Taldy Kol impounding reservoir
- (6) Preparation of preliminary designs
- (7) Cost estimates
- (8) Preparation of a construction schedule
- (9) Environmental impact assessment
- (10) Economic and financial evaluation
- (11) Recommendations for organizational arrangements
- (12) Preparation of an action plan for implementation

#### 4. Tentative Schedule

The feasibility study will be conducted in accordance with the attached tentative schedule.

#### 5. Reports

JICA will prepare and submit the following reports in English and Russian to GOK. In case any contradiction arised in writing, the English text shall prevail.

##### (1) Inception report

Twenty (20) copies within one (1) month after the commencement of the feasibility study. The inception report will outline the approach and implementation schedule of the feasibility study.

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(2) Intern report

Twenty (20) copies within four (4) months after the commencement of the feasibility study. The interim report will present current conditions and problems, future demands, and outline of the most suitable alternative plans.

(3) Draft final report

Twenty (20) copies within seven (7) months after the commencement of the feasibility study. The draft final report will summarize overall study results. GOK will provide JICA with its comments within one (1) month after the receipt of the draft final report.

(4) Final report

Thirty (30) copies within one (1) months after the receipt of the GOK's comments on the draft final report.

6. Undertaking of GOK

(1) To facilitate the smooth conduct of the feasibility study, GOK shall take the following necessary measures in accordance with laws and regulations in force in Kazakhstan:

- (i) to secure the safety of the Japanese study team;
- (ii) to permit the members of the Japanese study team to enter, leave and sojourn in Kazakhstan for the duration of their assignment therein and exempt them from foreign registration requirements and consular fees;
- (iii) to exempt the members of the Japanese study team from taxes, duties, fees and any other charges on equipment, machinery and other materials brought into and out of Kazakhstan for the conduct of the feasibility study;
- (iv) to exempt the members of the Japanese study team from income tax and charges of any kind imposed on or in connection with any emoluments or allowances paid to the members of the Japanese study team for their services in connection with the implementation of the feasibility study;
- (v) to provide necessary facilities to the Japanese study team for remittance as well as utilization of funds introduced into from Japan in connecton with the implementation of the feasibility study;
- (vi) to secure permisson for entry into private properties and restricted areas for the implementation of the feasibility study;
- (vii) to secure permission for the Japanese study team to take all data and documents related to the feasibility study out of Kazakhstan to Japan; and
- (viii) to provide the medical servies as needed. Its expenses will be chargeable on the members of the Japanese study team.

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(2) GOK shall bear claims, if any arises, against the members of the Japanese study team resulting from, occurring in the course of, or otherwise connected with the discharge of their duties in the implementation of the feasibility study, except when such claims arise from gross negligence or willful misconduct on the part of the members of the Japanese study team.

(3) CDC and the City of Astana shall be the executing agencies for the feasibility study and also as coordinating bodies in relation with other governmental and non-governmental organizations concerned for the smooth implementation of the feasibility study.

(4) CDC and the City of Astana shall provide the Japanese study team with the followings, in cooperation with other organizations concerned:

- (i) available data and information related to the feasibility study,
- (ii) counterpart personnel,
- (iii) suitable office space with necessary equipment in Astana,
- (iv) credentials or identification cards, and
- (v) one (1) vehicle with a driver.

7. Undertaking of JICA

For the implementation of the feasibility study, JICA shall take the following measures:

- (1) to dispatch the study team to Kazakhstan; and
- (2) to pursue technology transfer to the Kazakhstan counterpart personnel in the course of the feasibility study.

8. Consultation

CDC, the City of Astana and JICA shall consult with each other in respect of any matter that may arise from or in connection with the feasibility study.

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Tentative Schedule of the Study


Items/Month	1	2	3	4	5	6	7	8	9	10	11	12
Work Period	—————											
Report	IC/R ▲			IT/R ▲			DF/R ▲		F/R ▲			


Note: IC/R: Inception Report  
 IT/R: Interim Report  
 DF/R: Draft Final Report  
 F/R: Final Report

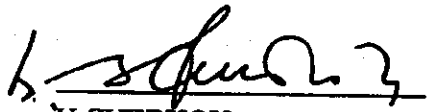
MINUTES OF MEETING  
THE STUDY ON THE MASTER PLAN  
FOR  
THE DEVELOPMENT OF THE CITY OF ASTANA  
IN  
THE REPUBLIC OF KAZAKHSTAN


AGREED UPON  
AMONGST  
THE MINISTRY OF FOREIGN AFFAIRS,  
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THE CAPITAL DEVELOPMENT CORPORATION,  
THE CITY OF ASTANA,  
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THE JAPAN INTERNATIONAL COOPERATION AGENCY

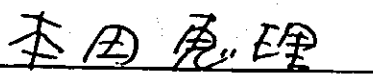
ASTANA,  
25<sup>th</sup> JULY, 2000


  
S. YESSILOV  
Deputy Akim  
of Astana City

  
S. AISAGALIYEVA  
Director,  
Investment Policy Dept.  
Ministry of Economics

  
V. ZVERKOV,  
Director of External  
Economic Relations Dept.  
Ministry of Foreign Affairs

  
Dr. Kisho KUROKAWA  
Team Leader,  
JICA Study Team

  
Eri HONDA,,  
Deputy Director, First Social  
Development Study Div  
JICA

  
B. ORAZOV  
General Director, Capital  
Development Corporation

A meeting to discuss the progress of the Study on the Master Plan for the Development of the City of Astana (the Master Plan Study) and the Feasibility Study for Water Supply and Sewerage (the Feasibility Study) was held on 25 July 2000 at the Conference Room of Astana City. The meeting was attended by representatives from the relevant organizations of Kazakhstan, the Japan International Cooperation Agency (JICA) and the Japanese Study Team.

The major topics in the meeting were (A) Inception Report for the Feasibility Study and (B) Progress of the Formulation of the Master Plan.

The following are the items agreed upon by the concerned parties as represented by the undersigned.

(A) Inception Report for the Feasibility Study

1. The Kazakhstan side basically approved the contents of the Inception Report of the Project.
2. In order to make a more comprehensive and appreciable feasibility study, all the concerned organizations and agencies are requested to provide relevant data and information.

(B) Progress of Master Plan

1. The future land use plan which was prepared by the JICA Study Team at the Progress Meeting in April and modified as per comments received in and after the Meeting, was accepted by the Kazakhstan side. The Kazakhstan side expressed appreciation to the work done by the JICA Study Team.
2. The Kazakhstan side requested JICA that the gas supply plan be prepared under the Master Plan, and the possibility of introduction of incineration be studied as part of the solid waste management plan of the Master Plan. JICA will consider this request.

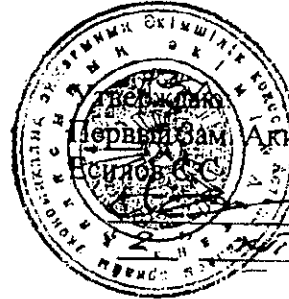
3. In order to make a more comprehensive and appreciable Master Plan, all the concerned organizations and agencies are requested to provide relevant data and information.

This Minutes of Meeting is prepared in English and Russian. In case any contradiction should arise in interpretation, the English text shall prevail.

## List of Attendants

Karapischenko G.	Head, Section, Presidential Operational Office
Baigarin O.	Head, Construction Section Ministry of Foreign Affairs, Department for Diplomatic Missions
Kubashev E.	Department, International & Economic Cooperation, Ministry of Foreign Affairs, RK
Kalymbetov Z.	Referent, Department of International Economic Cooperation Ministry of Foreign Affairs
Kerimbekov A.	Deputy Director of the Department Agency on Investment
Gabdullin Zh.	Head of the Section for Architecture and Urban construction
Abaidildin U.	Head of Section of Amelioration and Water Resources Ministry of Agriculture
Dyisenbaeva G.	Head, Ministry of Finances RK
Arynov E.	Deputy Director, Dpt. on Investment Policy, Ministry of Economy RK
Zharov T.Zh.,	Deputy General Director (economics)RSE "Irtys- Karaganda Canal"
Irgibayev M	Head, Section, Astana City Akimat
Zhunussov	Deputy Director, Dpt. of Architecture and Urban Planning
Nurkenov Zh.	Manager, Gorvodocanal
Kostenko M.	Head, Sanitary & Epidemiological Control Dpt.
Belousova T.	Ishim Basin Dpt.
Merkushev V.	Deputy Director, Communal Dpt.
Frolov	Gorkommunhoz
Repin N	Chief Engineer Astanagorproject
Pushkin I.	Dpt. of Major Construction
Meiramov E.	Head, Environmental Protection Dpt.
Kukunova K.	Head, Inspection for monument protection
Yakovleva T.	Director, Dpt. for economy and small business
Kalika V.	Deputy Chairman for Land Resources
Suzuki	JICA Adviser
Rustambekov S.	President, "Ak Orda"
Kim S.	Deputy Director, "Astana Su"
Yamada K	Co-Team Leader, M/P JST
Shibata T	Co-Team Leader, M/P JST
Okazaki K.	Co-Team Leader, F/S JST

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Сергей Зам Ақима г. Астана

2000

**Техническое Задание**  
по разработке ТЭО по проектам водоснабжения и канализации в г. Астана

1	Наименование проектных работ	1.1. ТЭО по проектам водоснабжения и канализации в г. Астана
2	Основа для ТЭО	2.1. Межгосударственное соглашение, подписанное Президентом РК и Премьер-министром Японии 8 декабря, 1999 в Токио 2.2. Объем работ подписанный в октябре, 1999 (по Генеральному плану) 2.3. Протокол встречи по Вводному Отчету подписанный 9 февраля, 2000 (по Генеральному плану) 2.4. Протокол встречи по Текущему Отчету (ТО) подписанный 14 апреля, 2000 (по Генеральному плану) 2.5. Протокол встречи по Вводному Отчету подписанный 25 июля, 2000 (по ТЭО)
3	Заказчик	3.1. Корпорация развития столицы и г. Астана
4	Организационная структура ТЭО	4.1. Кисе Курокава Architects and Associates (ККАА) 4.2. Ниппон Коей Со. Ltd. 4.3. Японский международный центр развития
5	Рубежный год	5.1. Год начала исследования: 2000 5.2. Рубежный год ТЭО: 2010
6	Исходные данные по проектированию	6.1. Топографические карты местности в масштабе 1:10 000 (выпуск 1998 года) 6.2. План очистных сооружений, системы разводящих сетей и коллекторов в масштабе 1:10 000 и 1:500 6.3. Существующие данные по водоисточникам и водопотреблению, данные по существующим насосным станциям и очистным сооружениям.
7	Полевые работы и сбор данных	7.1. Определение естественных условий обследуемой территории 7.2. Проведение инвентаризации на территории НФС, канализационных очистных сооружений, станций водозабора, насосной станции, магистральных и распределительных сетей водоснабжения и канализации. 7.3. Состояние здоровья населения и осведомленность общества 7.4. Социально – экономические аспекты 7.5. Аспекты влияния на окружающую среду
8	Полевые работы, проводимые Субподрядчиком	8.1. Топографическая съемка, в том числе контурная съемка площади 60 га, маршрутная съемка и съемка, с отображением объектов, находящихся на обследуемой территории.

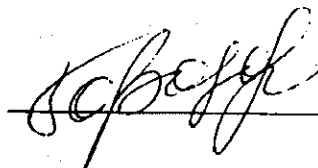


		<p>8.2. Геотехнические исследования, включая бурение 10 скважин, зондирование и анализ 20 образцов проб почвы</p> <p>8.3. Исследования качества воды, включая анализ 60 образцов проб воды по 26 ингредиентам</p> <p>8.4. Экологическая экспертиза, заключающаяся в оценке воздействия систем водоснабжения и канализации на окружающую среду местности, уровень загрязненности</p> <p>8.5. Изучение общественного мнения (по результатам опроса 1000 жилых домов и 100 коммерческих учреждений)</p>
9	Прогноз водопотребления	<p>9.1. Анализ и принятие норм водопотребления и очистка стоков (норма водопотребления на коммунально-бытовые, коммерческие промышленные и общественные нужды)</p> <p>9.2. Прогноз по нормам водопотребления и очистке стоков на 2010, 2020 и 2030 года.</p>
10	Базовое проектирование	<p>10.1. Альтернативные исследования по развитию трубопроводных систем водоснабжения и канализации.</p> <p>10.2. Альтернативные исследования по развитию сооружений системы водоснабжения и канализации.</p> <p>10.3. Проектное предложение по сооружениям и системам водоснабжения</p> <p>(1) Работы по восстановлению водозаборных сооружений Вячеславского водохранилища.</p> <p>(2) Работы по восстановлению водозаборных сооружений на реке Ишим, включая зоны санитарной охраны.</p> <p>(3) Работы по восстановлению сооружений НФС</p> <p>(4) Работы по восстановлению сооружений насосных станций</p> <p>(5) Работы по восстановлению распределительных систем</p> <p>10.4. Проектное предложение по сооружениям системы канализации</p> <p>(1) Работы по восстановлению канализационных очистных сооружений</p> <p>(2) Система отведения очищенных сточных вод</p> <p>(3) В случае сброса сточных вод в реку, предусмотреть доочистку.</p> <p>(4) Работы по восстановлению и/или переносу иловых площадок</p> <p>(5) Работы по восстановлению сооружений насосных станций</p> <p>(6) Работы по восстановлению коллекторов.</p> <p>(7) Проработать утилизацию осадка ила.</p> <p>(8) Предусмотреть вторичное использование очищенных сточных вод</p> <p>10.5. Сметы на строительство</p>
11	План проведения строительства	<p>11.1. Определение методов и принятие спецификаций строительства</p> <p>11.2. Закупка строительных материалов, оборудования и транспортных средств.</p> <p>11.3. Составление графика строительных работ и программа выполнения проекта</p>

12	План эксплуатации и проведения технического обслуживания	12.1. План сокращения утечки воды путем введения установки расходомеров 12.2. Уменьшение неучтенных объемов воды путем сокращения утечек, неоплачиваемых объемов воды и введения системы по сбору платы за водопотребление 12.3. Подбор персонала и утверждение групп для работ с ГП «Астана Су Арнасы» 12.4. Обеспечение транспортных средств и оборудования, обучение персонала 12.5. Создание районных производственных баз
13	Организация и управление	13.1. Исследование организационной системы 13.2. Исследование и/или усовершенствование законов и положений 13.3. Введение программ по обучению персонала 13.4. Усовершенствование системы финансирования и управления 13.5. Определение тарифной системы
14	Оценка воздействия на окружающую среду (ОВОС)	14.1. Природное и социально-экономическое исследование 14.2. Рассмотрение и утверждение соответствующих законов и положений 14.3. Проведение встреч с организациями, занимающимися проблемами окружающей среды 14.4. Оценка воздействия естественных и социально-экономических факторов
15	Экономическая и финансовая оценка	15.1. Экономическая оценка по параметрам экономических норм прибыли внутри страны (ЭНПС) 15.2. Финансовая оценка по параметрам финансовых норм прибыли внутри страны (ФНПС) 15.3. Финансовое обеспечение для осуществления проекта
16	Подготовка плана действий	16.1. Организационная поддержка со стороны ГП «Астана Су Арнасы» 16.2. Принятие программы на получение государственных субсидий 16.3. Координирование действий с задействованными в проекте организациями
17	Завершение ТЭО	к концу марта 2001

**Заказчик**

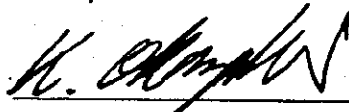
Генеральный директор, корпорация развития столицы



Б. Оразов

**Проектная организация:**

Зам. руководителя  
Исследовательской группы ЯАМС



К. Окааки

First Deputy Akim of the City of Astana

" 2 "



**Terms of Reference**  
for feasibility Study on Water Supply and Sewerage in the City of Astana

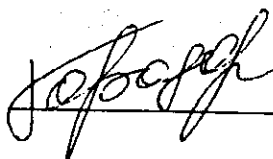
1	Name of Designing Work:	The Feasibility Study on Water Supply and Sewerage in the in the City of Astana
2	Basis of the Feasibility Study:	2.1. Inter-state Agreement signed by the President of the republic of Kazakhstan and the Prime-Minister of Japan on Dec. 8, 1999 in Tokyo 2.2. S/W signed on Oct., 1999 (for the Master Plan) 2.3. M/M on Inception Report signed on Feb. 9, 2000 (for the Master Plan) 2.4. M/M on Progress Report (PR) signed on April 14, 2000 (for the Master Plan) 2.5. M/M on Inception Report (PR) signed on July 25, 2000 (for the Feasibility Study)
3	Customer:	2.1. Capital Development Corporation (CDC) and Astana City
4	Feasibility Study Organization:	4.1. Kisho Kurokawa architect and associate (KKAA) 4.2. Nippon Kowi Co., Ltd 4.3. International Center of Japan
5	Estimated Study Target Year:	5.1. Base Year: 2000 5.2. Target Year for the Feasibility Study: 2010
6	Basic Data for Designing:	6.1. Topographic Maps of 1:10,000 compiled in 1998 6.2. Water supply distribution network and sewerage collectors plan of 1:10,000 and 1:500 6.3. Existing data of water source, water consumption, existing pump stations and sewerage facilities
7	Field Survey and Data Collection	7.1. Natural condition survey of the study area 7.2. Inventory survey of water treatment plant, sewage treatment plant, intake pumping stations and transmission and distribution pipes for water supply and sewage 7.3. Condition of public health and public awareness 7.4. Socio-economic aspects 7.5. Environment aspects
8	Field Survey by Sub-Contractor	8.1. Topographic Survey including 60ha planimetric survey, route survey and inventory survey 8.2. Geotechnical Survey including 10 borings, sounding and soil testing of 20 samples 8.3. Water Quality Survey including 60 samples and water quality tests for 26 items

		<p>8.4. Environmental Impact Assessment including local environment, pollution control and natural environment in compliance with water supply and sewerage system improvement</p> <p>8.5. Public Awareness Survey for 1000 households together with 100 commercial and public utilities</p>
9	Demand Forecast	<p>2.1. Analysis and set up of unit water demand and water waste generation. (For water supply, domestic, commercial, industrial, and public unit water demand)</p> <p>2.2. Water demand and wastewater generation projection for 2010, 2020, and 2030</p>
10	Basic Design	<p>10.1. Alternative study for the future water supply and sewerage system</p> <p>10.2. Alternative study for future water supply and sewerage facilities</p> <p>10.3. Planning of water supply facilities</p> <p>(1) Vyacheslavsky reservoir intake facilities rehabilitation works</p> <p>(2) Ishim river raw water intake facilities rehabilitation works and sanitary protection zones</p> <p>(3) Water treatment plant facilities rehabilitation works</p> <p>(4) Pumping facilities rehabilitation works</p> <p>(5) Distribution facilities rehabilitation works</p> <p>10.4. Planning of sewage system</p> <p>(1) Sewage treatment plant rehabilitation works</p> <p>(2) Treated wastewater disposal system</p> <p>(3) Advanced treatment for discharging wastewater to any water bodies</p> <p>(4) Rehabilitation and/or relocation of sludge drying bed</p> <p>(5) Pumping facilities rehabilitation works</p> <p>(6) Rehabilitation of collectors</p> <p>(7) Sludge utilization</p> <p>(8) Reuse of treated wastewater</p> <p>10.5 Construction cost estimate</p>
11	Constructions Plan	<p>11.1. Establishment of construction method and specification</p> <p>11.2. Procurement of construction material, equipment and vehicles</p> <p>11.3. Construction scheduling and implementation programs</p>
12	Operation and Maintenance Plan	<p>12.1. Leakage improvement plan by conducting full metering system</p> <p>12.2. Reduction of Unaccounted for Water reducing leakage, non-revenue water and water charge collection system</p> <p>12.3. Staff arrangement and establishment of organization in Astana Su Arnasy</p> <p>12.4. Provision of vehicles and equipment, and staff training</p> <p>12.5. District workshops</p>

13	Institution, Organization and Management	13.1. Establishment of organizational structuring system 13.2. Establishment and/or improvement of laws and regulations 13.3. Establishment of staff training and education program 13.4. Financial and management improvement 13.5. Establishment of tariff system
14	Environmental Impact Assessment (EIA)	14.1. Natural and socio-economic investigation 14.2. Identification and review of relevant laws and regulations 14.3. Interview of environmental related organizations 14.4. Natural and socio-economic impact assessment
15	Economic and Financial Evaluation	15.1. Economic evaluation by the parameter of EIRR 15.2. Financial evaluation by the parameter of FIRR 15.3. Financial procurement for the project implementation
16	Preparation of Action Plan	16.1. Organization strengthening of Gorvodokanal 16.2. Establishment of Governmental subsidy arrangement program 16.3. Coordination among the relevant organizations
17	Completion of the Study	17.1. By the end of March 2001

**Customer**

General Director, Capital Development Corporation



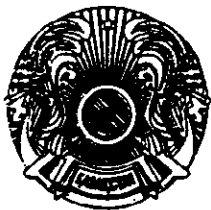
B. Orazov

**Team co-leader**

JICA Feasibility Study Team



K. Okazaki



СӘУЛЕТ ЖӘНЕ ҚАЛА ҚҰРЫЛЫСЫ ДЕПАРТАМЕНТІ  
ДЕПАРТАМЕНТ АРХИТЕКТУРЫ И ГРАДОСТРОИТЕЛЬСТВА  
DEPARTMENT OF ARCHITECTURE AND TOWN PLANNING

473000, Астана қаласы,  
Әуезов көшесі, 40

473000, город Астана,  
ул. Ауэзова, 40

473000. Astana city,  
Auezov str., 40

№ 1609

29, 09 2000 г.

Первому заместителю  
Акима г.Астаны

Г-ну Есилову С.С.

Департамент архитектуры и градостроительства г.Астаны согласовывает представленное Вами техническое задание по разработке ТЭО по проектам водоснабжения и канализации в г.Астана.

Директор Департамента  
архитектуры и  
градостроительства г.Астаны



В.Лаптев

**DEPARTMENT OF ARCHITECTURE AND URBAN PLANNING**

473000, Astana City, Auezov st., 40

Date: September 29, 2000

**To the First Deputy of Akim  
Of the City of Astana  
Esilov S.**

The Department of Architecture and Urban Planning of the City of Astana approves the Terms of Reference submitted by Feasibility Study Team on Water Supply and Sewerage in the City of Astana.

**Director**

**Laptev V.**

ҚАЗАҚСТАН РЕСПУБЛИКАСЫ  
ТАБИИ РЕСУРСТАР ЖӘНЕ ҚОРШАҒАН  
ОРТАНЫ ҚОРҒАУ МИНИСТРЛІГІ

АСТАНА ҚАЛАЛЫҚ АУМАҚТЫҚ  
ҚОРШАҒАН ОРТАНЫ ҚОРҒАУ  
БАСҚАРМАСЫ



МИНИСТЕРСТВО ПРИРОДНЫХ РЕСУРСОВ И  
ОХРАНЫ ОКРУЖАЮЩЕЙ СРЕДЫ  
РЕСПУБЛИКИ КАЗАХСТАН

ГОРОДСКОЕ ТЕРРИТОРИАЛЬНОЕ  
УПРАВЛЕНИЕ ОХРАНЫ ОКРУЖАЮЩЕЙ  
СРЕДЫ г. АСТАНА

Мекен жайымыз: 473022  
Астана қаласы, Дружба көпесі, 29 «б»  
Сым тегік 75-12-95, 75-29-08, 75-28-37

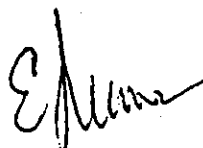
473022 г. Астана, ул. Дружбы, 29 «б»  
тел./факс 75-12-95, 75-29-08, 75-28-37

29.09.2000 № 4-4/590  
на № \_\_\_\_\_ от \_\_\_\_\_

Первому заместителю  
акима г. Астаны  
г-ну Есипову С.

Территориальное управление охраны окружающей среды г. Астаны, рассмотрев материалы Технического задания по разработке ТЭО «Водоснабжение и канализация города Астаны», согласовывает их с условием включения в раздел «Базовое проектирование» пункта «Доочистка и использование очищенных сточных вод».

Начальник управления

 Э. Мейрамов.



Ministry of Natural Resources and Environmental Protection  
of the Republic of Kazakhstan

**Environmental Protection Administration of the City of Astana**

473022, Astana City, Druzhba st., 29  
tel/fax: 75-12-95, 75-29-08

Date: September 29, 2000

**To the First Deputy of Akim  
Of the City of Astana  
Esilov S.**

Environmental Protection Administration of the City of Astana has reviewed the Terms of Reference for the Feasibility Study on Water Supply and Sewerage in the City of Astana and hereby informs that they will be approved if the Section "Basic Design" contains the item "Advanced treatment and reuse of treated wastewater".

**Head of Administration**

**Meiramov E.**

ҚАЗАҚСТАН РЕСПУБЛИКАСЫ  
АСТАНА ҚАЛАСЫ

“Астана Су Арнасы”  
МЕМЛЕКЕТТІК КӘСПОРНЫ



РЕСПУБЛИКА КАЗАХСТАН  
ГОРОД АСТАНА

ГОСУДАРСТВЕННОЕ ПРЕДПРИЯТИЕ  
“Астана Су Арнасы”

474021, Астана қ., Абай даңғылы, 223 үй  
өспн айыр. шоты 000508001 ОАО “Темірбанк”  
МФО 195301712, РНН 031400062190  
тел.: 34-12-13, дисп. 34-43-65, 34-43-95

474021, г.Астана, Пр. Абая, 223  
р/с 000508001 ОАО “Темірбанк”  
МФО 195301712, РНН 031400062190  
тел.: 34-12-13, дисп. 34-43-65, 34-43-95

№ № 3-13/4016  
1.11.2001.

Первому заместителю  
Акима г.Астаны  
ЕСИЛОВУ С.С.

ГП «Астана Су Арнасы» рассмотрело представленное исследовательской группой ЯАМС техническое задание на разработку ТЭО по проектам водоснабжения и канализации г.Астаны.

После обсуждения и внесения поправок техническое задание согласовывается за исключением п.п. 13.2;13.4;13.5.

Считаем, что согласование этих вопросов не входит в компетенцию ГП «Астана Су Арнасы».

Генеральный директор

Ж.Е.Нуркенов

Исп. Сяндюков В.В.  
341202

**Republic of Kazakhstan  
The City of Astana**

**State Enterprise  
“Astana Su Arnasy”**

---

474021, Astana City, Abai av., 223  
tel. 34-12-13

December 1, 2000

**To the First Deputy Akim  
of the City of Astana  
Esilov S.**

State Enterprise “Astana Su Arnasy” has reviewed the Terms of Reference submitted by JICA Feasibility Study Team on Water Supply and Sewerage Development in the City of Astana.

After discussions, amendments and corrections, the Terms of Reference are approved except the following items: 13.2., 13.4., 13.5.

The approval of the above mentioned items is outside the capacity of SE “Astana Su Arnasy”.

General Director

Nurkenov Zh.E.

Executor: Syundyukov V.V.  
34-12-02

## F.6 Agreement with the Construction Committee

**ҚАЗАҚСТАН РЕСПУБЛИКАСЫ**  
ЭНЕРГЕТИКА, ИНДУСТРИЯ ЖӘНЕ  
САУДА МИНИСТРЛІГІНІҢ  
**ҚҰРЫЛЫС ІСТЕРІ ЖӨНІНДЕГІ**  
**КОМИТЕТІ**



**РЕСПУБЛИКА КАЗАХСТАН**  
**КОМИТЕТ ПО ДЕЛАМ**  
**СТРОИТЕЛЬСТВА**  
МИНИСТЕРСТВА ЭНЕРГЕТИКИ,  
ИНДУСТРИИ И ТОРГОВЛИ

473000, Астана қаласы Районный түйігім, 15/1  
тел. 34-62-73, факс: (3172) 34-62-84

473000, город Астана, переулок Районный, 15/1  
тел. 34-62-73, факс (3172) 34-62-84

№ 44-05-1-23 от 23.11. 2000 г.  
на № FAS-00-68 от 14 ноября 2000 г.

**Руководителю исследовательской  
группы по разработке ТЭО по  
проектам водоснабжения и  
канализации г.Астаны г-ну  
Оказакн К**

Комитет по делам строительства МЭИиТ РК, рассмотрев представленные дополнительные материалы по нормам водопотребления для г.Астаны, сообщает следующее.

Предлагаемые Вами скорректированные нормы водопотребления, включающие хозяйственно-питьевое водопотребление, потребление коммерческих и бюджетных организаций входят в рамки нормативных требований СНиП 2.04.02-84 «Водоснабжение. Наружные сети и сооружения».

Учитывая изложенное считаем, что в согласовании Комитетом по делам строительства представленных норм водопотребления нет необходимости.

Председатель

Ш. Шардарбек

Джаниманов Б.Е.346418

**Republic of Kazakhstan**

**Construction Committee  
Ministry of Energy, Industry and Trade**

---

Raiomy Str. 15/1, Astana City 473000  
Tel: 34-62-73  
Fax: (3172) 34-62-84

No. IIIII-05-1-938 as of November 23, 2000

To: Mr. Okazaki  
Leader of the F/S Team  
in Astana City

The Construction Committee under the Ministry of Energy, Industry and Trade of RK, having looked through the submitted additional materials concerning water use rates for Astana City, informs you of the following.

Your proposed revised water use rates, which include domestic water consumption, commercial and public water use, comply with the standard requirements SNiP 2.04.02-84 "Water supply. Surface nets and facilities".


Taking into account the aforesaid, we think that there is no need for coordination of the above-mentioned water use rates with the Construction Committee.

Chairman

Shardarbek Sh.

MINUTES OF MEETING  
FOR  
THE FEASIBILITY STUDY  
ON  
WATER SUPPLY AND SEWERAGE IN THE CITY OF ASTANA  
AGREED UPON  
AMONGST  
THE MINISTRY OF FOREIGN AFFAIRS,  
THE MINISTRY OF ECONOMICS,  
THE CAPITAL DEVELOPMENT CORPORATION, AND  
THE CITY OF ASTANA  
OF  
THE REPUBLIC OF KAZAKHSTAN,  
AND  
JAPAN INTERNATIONAL COOPERATION AGENCY

November 30 2000



S. YESSILOV  
Deputy Akim  
of Astana



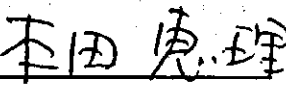
B. BAISHEV  
Director,  
Investment Policy Dept.  
Ministry of Economics



M. TASHIBAYEV  
Acting Director of External  
Economic Relations Dept.  
Ministry of Foreign Affairs



Dr. K. KUROKAWA  
Team Leader,  
JICA Study Team



E. HONDA  
Deputy Director,  
First Social  
Development Study  
Div. JICA



B. ORAZOV  
General Director,  
Capital Development  
Corporation

A meeting to discuss the Interim Report for the Feasibility Study on Water Supply and Sewerage in the City of Astana (the Feasibility Study) was held on 30 November 2000. The meeting was attended by representatives from the relevant organizations of Kazakhstan, the Japan International Cooperation Agency (JICA) and the Japanese Study Team.

The Contents of the Interim Report was basically approved by the Kazakhstan side. The comments and opinions expressed in the Meeting shall be duly considered in the course of the Feasibility Study and be integrated in the Draft Final Report scheduled for submission in January 2001.

The following are specific items agreed upon by the concerned parties as represented by the undersigned.

1. The Kazakhstan side basically agreed to the strategies, methodologies, plans and designs of water supply and wastewater disposal facilities in this Feasibility Study. They include expansion and rehabilitation of water and wastewater treatment plants, pump stations, pipelines and other relevant facilities for the target year of 2010.
2. It was agreed that the cost estimate and financial assessment for the Project of the Third Transmission Pipeline shall be eliminated in the Feasibility Study. As the Project is planned to be implemented by the Kazakhstan side in the future, the Feasibility Study only includes technical analysis with regard to the Project.
3. Water supply and sewage facilities proposed on the left bank of the Ishim River is based on the preliminary land reclamation and road plans prepared by the JICA Master Plan. It was confirmed that the review of the facility designs in view of the ground formation should be made after completion of the detailed land reclamation and road network plans in the future.
4. It was agreed upon that managerial capacity of ASA needs to be improved for the smooth implementation and facilitation of the ensuing project. For this purpose it was pointed out that dispatching of an expert shall be requested to the Government of Japan.
5. It was confirmed that the participation and cooperation of the concerned organizations of the Kazakhstan side is essential for the effective implementation of the Feasibility Study. Accordingly, such organizations were requested to provide the Feasibility Study Team with relevant data and information.

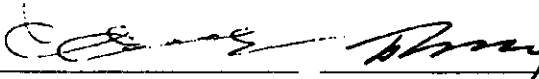

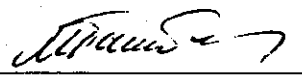
The Minutes of Meeting is presented in English and Russian. In case any contradiction should arise in interpretation, the English text shall prevail.

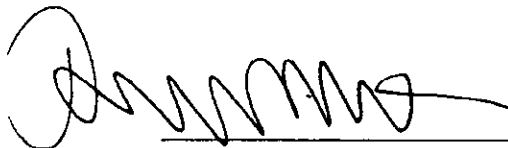
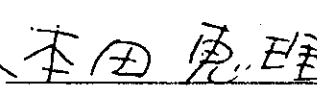
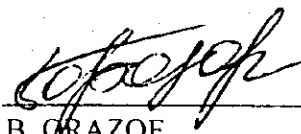
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MINUTES OF MEETING  
FOR  
THE FEASIBILITY STUDY  
ON  
WATER SUPPLY AND SEWERAGE IN THE CITY OF ASTANA  
AGREED UPON  
AMONGST  
THE MINISTRY OF FOREIGN AFFAIRS,  
THE MINISTRY OF ECONOMICS,  
THE CAPITAL DEVELOPMENT CORPORATION,  
THE CITY OF ASTANA  
OF  
THE REPUBLIC OF KAZAKHSTAN,  
AND  
JAPAN INTERNATIONAL COOPERATION AGENCY

January 29 2001

 S. YESSILOV Deputy Akim of Astana	 B. BAISHEV Director, Investment Policy Dept. Ministry of Economics	 M. TASHIBAYEV Acting Director of Economic Policy Dept. Ministry of Foreign Affairs
--	--	--

 Dr. K. KUROKAWA Team Leader, JICA Study Team	 E. HONDA Deputy Director First Social Development Study Div. JICA	 B. CRAZOF General Director, Capital Development Corporation
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A meeting to discuss the Draft Final Report for the Feasibility Study on Water Supply and Sewerage in the City of Astana (the Feasibility Study) was held on 29<sup>th</sup> January 2001. The meeting was attended by representatives from the relevant organizations of Kazakhstan, the Japan International Cooperation Agency (JICA) and the Japanese Study Team.

The Contents of the Draft Final Report was basically approved by the Kazakhstan side. The comments and opinions expressed in the Meeting shall be duly considered in the drafting of the Final Report scheduled for submission in March 2001.

The following are specific items agreed upon by the concerned parties as represented by the undersigned.

1. The Kazakhstan side will take necessary actions for internal approval of economic, ecological and technical aspects of the project proposed under the Feasibility Study.
2. It is agreed that an implementation organization is to be created to handle technical and financial management of the project as proposed in the Draft Final Report. Such an organization shall arrange design works as soon as possible for plot preparation prior to the detailed design of the infrastructure on the left bank of the Ishim River.
3. It is agreed that this Draft Final Report will be used as a basis for discussion with foreign funding organization. The items to be covered by the loan and any pre-conditions will depend on further discussion covering technical, financial and institutional aspects.

The Minutes of Meeting is presented in English and Russian. In case any contradiction should arise in interpretation, the English text shall prevail.

JICA