**FINAL ENVIRONMENTAL AND SOCIAL REVIEW CHECKLIST**

Micro-project title: Construction of a New Potable Water Pipeline in Jajur Community

Micro-project #: TSH-06

Is the environmental management plan (ESMP) developed?

Yes + No _____

Does ESMP provide a full list of potential impacts and establish adequate measures for their mitigation?

Yes + No _____

**Conclusion of the Final Environmental and Social Assessment**

<table>
<thead>
<tr>
<th>Conclusion</th>
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<tr>
<td>Micro-project rejected</td>
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+
### INSTITUTIONAL & ADMINISTRATIVE

<table>
<thead>
<tr>
<th>Micro-project number and title</th>
<th>TSH-06 Construction of a new potable water pipeline in Jajur Community</th>
</tr>
</thead>
<tbody>
<tr>
<td>Municipality, community</td>
<td>Shirak Marz, Jajur Community</td>
</tr>
<tr>
<td>Scope of site-specific activity</td>
<td>The water supply of the community is carried out through the cast-iron pipes of 100mm diameter with length of 4 km from “Mets Aghbyur” source. Water is supplied to daily run off pond (100c/m) which is in a good condition, then to distribution network. There are also “Sve” and “Gve” springs in the village that are being used by population. The distribution network (15km) is in a good condition, it was constructed in 1997 and 2007 by stages. The distributing network is constructed by polyethylene and cast-iron pipes. According to water use permit, water volume given to the village is 3.2 l/sec. In order to satisfy the water demand of the community, this micro-project will connect “Tuneli dzori” spring water to “Mets aghbyur” water pipeline by constructing a new water pipeline (2.25km). The pipeline will be constructed by steel pipes d=108x5.0mm. Air circulation and discharge pits with relevant equipment will be constructed on the water pipe. Open sections of the pipeline in ravines will be constructed ensuring thermal insulation. A sanitary zone in the area near the source’s area is also part of the micro-project design.</td>
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</table>

### Institutional arrangements (WB)

<table>
<thead>
<tr>
<th>Task Team Leader</th>
<th>Safeguards Specialist</th>
</tr>
</thead>
<tbody>
<tr>
<td>Erkin Mamadaliev</td>
<td>Darejan Kapanadze</td>
</tr>
</tbody>
</table>

### Implementation arrangements (RoA)

<table>
<thead>
<tr>
<th>Implementing entity</th>
<th>Works Supervisor</th>
<th>Works Contractor</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATDF</td>
<td>“Alternative” LTD</td>
<td>“MGM Group” LTD</td>
</tr>
</tbody>
</table>

### SITE DESCRIPTION

<table>
<thead>
<tr>
<th>Name of institution whose premises are to be rehabilitated</th>
<th>Water Department of Shirak Marzpetaran (regional governor office), Jajur Potable Water Pipeline NPO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address and site location</td>
<td>Address: Shirak Marz, Jajur Community.</td>
</tr>
<tr>
<td>Who owns the land?</td>
<td>The proposed land plots for reconstruction of water supply pipes are the property of the village Jajur according to the legal decision of land allocation N3, 08.02.2016. The allocated land is 3600sq. meter located in the land named ‘Getuk’ (cadaster code: 103-001-01)</td>
</tr>
</tbody>
</table>
| Description of physical and natural environment around the site (see maps and photo annex 1) | The whole route of the pipelines is passing through the lands which are property of the Community. The proposed land is not used by any private household; there are no structures, crops, trees or business in the proposed site. The surrounding area next to the route of the pipelines do not include private lands or traffic roads, thus restricted access to roads and private property and disruption of local traffic is not anticipated. There are no subterranean networks across the route of the pipelines. During the construction works no tree removal is intended. Endemic species and plants do not exist across the land plot provided for the construction works. 

The Community has permission for using water from “Tuneli dzor” source according to which water output in the source is 0.7 litre/sec. According to the certificate of sanitary inspection the water in the source ‘Tuneli dzor’ is fresh, without smell and taste and is usable for drinking. According to the conclusion of Hydrogeological Monitoring Center pollutants around the area of the source “Tuneli dzor” do not exist. 

The Geological Engineering conditions are sufficient for construction works. In
terms of seismic zones the area is classified in 3th zone. Seismic stability is 9 point. Physical-geological phenomena do not exist in the area. The ground waters are located deeper than the pipelines are proposed to be constructed. The precipitations in the area generally have surface flood, and only the part of the water penetrate through the minerals and soil. The natural relief and landscape will be recovered after construction works.

### LEGISLATION

National & local legislation & permits that apply to project activity

Construction of a new potable water pipeline is not subject to the Environmental Impact Assessment and to the issuance of the expert environmental review conclusion. According to the Armenian legislation, the following permissions are required for this micro-project:

- (a) The chemical and bacteriological analysis of the source
- (b) Hydrogeological conclusion
- (c) Water use permit
- (d) Land allocation for captations, sanitary areas and pipeline construction
- (e) Construction permit

### PUBLIC CONSULTATION

When / where the public consultation process will take / took place

Public consultation was carried out in the Jajur Community on February 23, 2016

### ATTACHMENTS

Annex 1: Photos and plan of the construction site
Annex 2: Minutes of Environmental and Social Public Consultations
Annex 3: Copy of an agreement for construction waste disposal
Annex 4: Copy of the land allocation document
Annex 5: Water use permit
Annex 6: Hydrological conclusion
Annex 7: Copy of a Construction Permit
### ENVIRONMENTAL /SOCIAL SCREENING

<table>
<thead>
<tr>
<th>Activity/Issue</th>
<th>Status</th>
<th>Triggered Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Building rehabilitation</td>
<td>[ ] Yes</td>
<td>See Section A below</td>
</tr>
<tr>
<td>B. New construction</td>
<td>[+] Yes</td>
<td>See Section A below</td>
</tr>
<tr>
<td>C. Individual wastewater treatment system</td>
<td>[ ] Yes</td>
<td>See Section B below</td>
</tr>
<tr>
<td>D. Historic building(s) and districts</td>
<td>[ ] Yes</td>
<td>See Section C below</td>
</tr>
<tr>
<td>E. Acquisition of land&lt;sup&gt;1&lt;/sup&gt;</td>
<td>[ ] Yes</td>
<td>See Section D below</td>
</tr>
<tr>
<td>F. Hazardous or toxic materials&lt;sup&gt;2&lt;/sup&gt;</td>
<td>[ ] Yes</td>
<td>See Section E below</td>
</tr>
<tr>
<td>G. Impacts on forests and/or protected areas</td>
<td>[ ] Yes</td>
<td>See Section F below</td>
</tr>
<tr>
<td>H. Handling / management of medical waste</td>
<td>[ ] Yes</td>
<td>See Section G below</td>
</tr>
<tr>
<td>I. Traffic and Pedestrian Safety</td>
<td>[ ] Yes</td>
<td>See Section H below</td>
</tr>
</tbody>
</table>

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

<sup>2</sup> Toxic / hazardous material includes but is not limited to asbestos, toxic paints, noxious solvents, removal of lead paint, etc.
## PART C: MITIGATION MEASURES

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>PARAMETER</th>
<th>MITIGATION MEASURES (provide costs where applicable)</th>
</tr>
</thead>
</table>
| **0. General Conditions** | Notification and Worker Safety | (a) The local construction and environment inspectorates and communities have been notified of upcoming activities  
(b) The public has been notified of the works through appropriate notification in the media and/or at publicly accessible sites (including the site of the works)  
(c) All legally required permits have been acquired for construction  
(d) The Contractor formally agrees that all work will be carried out in a safe and disciplined manner designed to minimize impacts on neighboring residents and environment.  
(e) Workers’ PPE will comply with international good practice (always hardhats, as needed masks and safety glasses, harnesses and safety boots)  
(f) Appropriate signposting of the sites will inform workers of key rules and regulations to follow. |
| **A. General Construction Activities** | Air Quality | (a) During interior demolition debris-chutes shall be used above the first floor  
(b) Demolition debris shall be kept in controlled area and sprayed with water mist to reduce debris dust  
(c) During pneumatic drilling/wall destruction dust shall be suppressed by ongoing water spraying and/or installing dust screen enclosures at site  
(d) The surrounding environment (sidewalks, roads) shall be kept free of debris to minimize dust  
(e) There will be no open burning of construction / waste material at the site  
(f) There will be no excessive idling of construction vehicles at sites |
| | Noise | (a) Construction noise will be limited to restricted times agreed to in the permit  
(b) During operations the engine covers of generators, air compressors and other powered mechanical equipment shall be closed, and equipment placed as far away from residential areas as possible |
| | Water Quality | (a) The site will establish appropriate erosion and sediment control measures such as e.g. hay bales and / or silt fences to prevent sediment from moving off site and causing excessive turbidity in nearby streams and rivers. |
| | Waste Management | (a) Waste collection and disposal pathways and sites will be identified for all major waste types expected from demolition and construction activities.  
(b) Mineral construction and demolition wastes will be separated from general refuse, organic, liquid and chemical wastes by on-site sorting and stored in appropriate containers.  
(c) Construction waste will be collected and disposed properly by licensed collectors  
(d) The records of waste disposal will be maintained as proof for proper management as designed.  
(e) Whenever feasible the contractor will reuse and recycle appropriate and viable materials (except asbestos) |
| **B. Individual wastewater treatment system** | Water Quality | (a) The approach to handling sanitary wastes and wastewater from building sites must be approved by the local authorities  
(b) Before being discharged into receiving waters, effluents from individual wastewater systems must be treated in order to meet the minimal quality criteria set out by national guidelines on effluent quality and wastewater treatment  
(c) Monitoring of new wastewater systems (before/after) will be carried out  
(d) Construction vehicles and machinery will be washed only in designated areas where runoff will not pollute natural surface water bodies. |
| **C. Historic building(s)** | Cultural Heritage | (a) If the building is a designated historic structure, very close to such a structure, or located in a designated historic district, notification shall be made and approvals/permits be obtained from local authorities and all construction activities planned and carried out in line with local and national legislation.  
(b) It shall be ensured that provisions are put in place so that artifacts or other possible “chance finds” encountered in excavation or construction are noted and registered, responsible officials contacted, and works activities delayed or modified to account for such finds. |
<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>PARAMETER</th>
<th>MITIGATION MEASURES CHECKLIST</th>
</tr>
</thead>
</table>
| **D. Acquisition of land** | Land Acquisition Plan/Framework | (a) If expropriation of land was not expected but is required, or if loss of access to income of legal or illegal users of land was not expected but may occur, that the Bank’s Task Team Leader shall be immediately consulted.  
(b) The approved Land Acquisition Plan/Framework (if required by the project) will be implemented |
| **E. Toxic Materials** | Asbestos management | (a) If asbestos is located on the project site, it shall be marked clearly as hazardous material  
(b) When possible the asbestos will be appropriately contained and sealed to minimize exposure  
(c) The asbestos prior to removal (if removal is necessary) will be treated with a wetting agent to minimize asbestos dust  
(d) Asbestos will be handled and disposed by skilled & experienced professionals  
(e) If asbestos material is stored temporarily, the wastes should be securely enclosed inside closed containments and marked appropriately. Security measures will be taken against unauthorized removal from the site.  
(f) The removed asbestos will not be reused |
| **F. Affected forests, wetlands and/or protected areas** | Protection | (a) All recognized natural habitats, wetlands and protected areas in the immediate vicinity of the activity will not be damaged or exploited, all staff will be strictly prohibited from hunting, foraging, logging or other damaging activities.  
(b) A survey and an inventory shall be made of large trees in the vicinity of the construction activity, large trees shall be marked and cordoned off with fencing, their root system protected, and any damage to the trees avoided  
(c) Adjacent wetlands and streams shall be protected from construction site run-off with appropriate erosion and sediment control feature to include by not limited to hay bales and silt fences  
(d) There will be no unlicensed borrow pits, quarries or waste dumps in adjacent areas, especially not in protected areas. |
| **G. Disposal of medical waste** | Infrastructure for medical waste management | (a) In compliance with national regulations the contractor will insure that newly constructed and/or rehabilitated health care facilities include sufficient infrastructure for medical waste handling and disposal; this includes and not limited to:  
 Special facilities for segregated healthcare waste (including soiled instruments “sharps”, and human tissue or fluids) from other waste disposal; and  
 Appropriate storage facilities for medical waste are in place; and  
 If the activity includes facility-based treatment, appropriate disposal options are in place and operational |
| **H. Traffic and Pedestrian Safety** | Direct or indirect hazards to public traffic and pedestrians by construction activities | (a) In compliance with national regulations the contractor will insure that the construction site is properly secured and construction related traffic regulated. This includes but is not limited to  
 Signposting, warning signs, barriers and traffic diversions: site will be clearly visible and the public warned of all potential hazards  
 Traffic management system and staff training, especially for site access and near-site heavy traffic. Provision of safe passages and crossings for pedestrians where construction traffic interferes.  
 Adjustment of working hours to local traffic patterns, e.g. avoiding major transport activities during rush hours or times of livestock movement  
 Active traffic management by trained and visible staff at the site, if required for safe and convenient passage for the public.  
 Ensuring safe and continuous access to office facilities, shops and residences during renovation activities, if the buildings stay open for the public. |
## Environment Monitoring Plan for construction and operation phases.

<table>
<thead>
<tr>
<th>Activity</th>
<th>What (Is the parameter to be monitored?)</th>
<th>Where (Is the parameter to be monitored?)</th>
<th>How (Is the parameter to be monitored?)</th>
<th>When (Define the frequency / or continuous?)</th>
<th>Why (Is the parameter being monitored?)</th>
<th>Who (Is responsible for monitoring?)</th>
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<tbody>
<tr>
<td><strong>CONSTRUCTION PHASE</strong></td>
<td></td>
<td></td>
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<tr>
<td><strong>1. Supply of construction materials</strong></td>
<td>Purchase of the construction materials from licensed providers</td>
<td>Offices and warehouses of material suppliers, and borrowing sites</td>
<td>Checking documents; Inspection of material quality</td>
<td>In the process of signing the agreements for material provision</td>
<td>Ensure technical quality of construction; Protect human health and environment</td>
<td>ATDF</td>
</tr>
<tr>
<td><strong>2. Transportation of construction materials and waste</strong></td>
<td>Technical condition of construction vehicles and machinery; Adequacy of the loading trucks for transported types of cargo, and canopy coverage of cargo transported in open trucks; Movement of construction vehicles and machinery along pre-defined routes</td>
<td>Routes for transportation of construction materials and construction wastes</td>
<td>Inspection of roads adjacent to the construction site and included in the agreed-upon routes of transportation</td>
<td>Unannounced checks during the working hours</td>
<td>Avoid air and road pollution with dust and solid matter; Reduce traffic disruption</td>
<td>ATDF, Jajur Community Administration Office</td>
</tr>
<tr>
<td><strong>3. Generation of construction waste</strong></td>
<td>Temporary storage of inert and hazardous wastes</td>
<td>Construction site and base (if applicable); Visual</td>
<td>Checking documents; Visual</td>
<td>Entire period of construction</td>
<td>Avoid pollution of the environment</td>
<td>ATDF, Jajur Community Administration</td>
</tr>
<tr>
<td>Activity</td>
<td>Details</td>
<td>Method</td>
<td>Responsible Party</td>
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<tr>
<td>4. Accumulation of household waste</td>
<td>Provision of waste containers on-site; Agreement with local municipality for regular out-transporting of waste</td>
<td>Visual inspection</td>
<td>ATDF, Jajur Community Administration Office</td>
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<td></td>
<td>Construction site and base (if applicable)</td>
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<td></td>
<td>Inspection of the activities</td>
<td>Entire period of construction</td>
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<td></td>
<td>Visual inspection</td>
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<tr>
<td>5. Safety of labor</td>
<td>Provision of Special Clothes and protective means for the contractors;</td>
<td>Inspection of the activities</td>
<td>ATDF, Jajur Community Administration Office</td>
<td></td>
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<tr>
<td></td>
<td>- Consistency with the rules of exploitation of the construction equipment and usage of private safety means</td>
<td>Entire period of construction</td>
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<td></td>
<td>Construction site</td>
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<tr>
<td>6. Undertaking works within the settlement</td>
<td>Deparkation and fencing of work site; No parking of</td>
<td>Visual inspection</td>
<td>ATDF, Jajur Community Administration Office</td>
<td></td>
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<td></td>
<td>Construction site and nearly area</td>
<td>Entire period of construction</td>
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**Note:** Locations designated for waste disposal should be observed separately at the designated locations; Timely disposal of waste to the formally designated landfills; Hand-over of hazardous wastes to licensed deactivating and processing companies.
construction vehicles and machinery outside work site the way impeding free passage of traffic and pedestrians;

No piling and no scattering of construction materials and waste outside the work site

<table>
<thead>
<tr>
<th>OPERATION PHASE</th>
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</thead>
<tbody>
<tr>
<td>1. Protection of soils</td>
</tr>
<tr>
<td>2. Protection of water</td>
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</tbody>
</table>
Attachment 1. Photos and plan of the site
Attachment 2. Minutes of Public Consultation Meeting

MINUTES

Of Public Consultations
on draft Environmental and Social Management Plan
for the construction of a new potable water supply system in Jajur community

A stakeholder consultation meeting on the draft Environmental and Social Management Plan (ESMP) for the construction of a new potable water supply system in Jajur Community was held on February 23, 2016 in Jajur, Shirak Marz.

The announcement for the meeting in Armenian and English languages, including its date and time, was disclosed on the ATDF web page (www.atdf.am). Information on the meeting day and time was posted on information boards of Jajur Community Administration Office; in addition, the Administration conducted telephone calls to ensure participants’ attendance.

The public consultation was carried out by ATDF Social Specialist Sonya Msryan and ATDF Environmental Specialist Asya Osipova. 23 participants were present at the meeting, among which 5 women (about 22%).

At the very beginning, Head of the Community Mr. S. Suvaryan introduced the main purpose of the consultation and ATDF specialists.

A.Osipova introduced the main purpose as well as World Bank requirements and Armenian legislation on conducting environmental and social assessment. She introduced ESMP for the construction of a potable water supply system in Jajur Community and outlined likely negative environmental impacts related to the Micro-project implementation. These include pollution of air, generation of construction waste.

Ms. Osipova explained what measures ATDF will apply to mitigate possible negative impacts, including construction waste transportation. It was mentioned that ESMP covers the issue of the transportation and disposal of construction wastes and excessive soil.

Since the construction site is located far from the Community, A. Osipova outlined that disturbance to community life due to construction activities is not anticipated. Technical supervisors on monthly basis will keep under control the fulfillment of all the environmental mitigation measures included in ESMP, and report the deviations to ATDF.

S. Msryan presented the main provisions of the ESMF concerning to the social aspects of the Project. She talked about possible social risks and ways of their mitigation. She emphasized that the project does not involve any resettlement as proposed area of the construction is public property; however she briefly introduced key features of Resettlement Policy Framework.

S. Msryan talked also about main socio-economic challenges including engagement of women, youth and vulnerable groups in distribution of benefits. She outlined that these groups should have equal opportunities to be engaged in project benefits. The concept was welcomed by
participants, who suggested involve constructors from the Community mentioning that it will reduce unemployment in Community and labor immigration for seasonal works.

Ms. Msryan explained mechanisms of public engagement and grievance redress mechanism (GRM) to be applied during project implementation. Elected grievance focal point at the community level Surik Grigoryan was introduced to the community members. S. Msryan explained the purpose of Focal points at local level and welcomed participants to apply to Surik in case of questions/feedback or grievances concerning to the project implementation.

S. Msryan informed the beneficiaries that they also have the option to contact ATDF directly to communicate their grievance if they are unable to, or do not wish to, go through the PIC grievance focal point. S. Msryan explained all the canals of grievance submition involving e-mail address, hot line telephone number, postal address and web-site link and outlined that ATDF contact information is referred on the booklets delivered to the participants, as well as on the information desk already available in public visible places in the Community. S. Msryan introduced that information on Micro-project details permanently will be available on the information desks, as well as on-going announcements and references. She outlined that these will support to raising public awareness and early identification, assessment and resolution of complaints on Project activities.

The participants were welcomed to raise other questions regarding to the discussed questions. The following issues were raised by the participants.

Mr. J. Baghdasaryan outlined that the community currently has several essential issues. Particularly the majority of the households are socially disadvantaged. The residents have lack of financial resources to construct new houses for growing families. That is the reason why youth escape to marry which leads to demographic issues.

Mr. N. Mkhitaryan emphasized that the village is not supplied with gas system. Community does not have Communal Center, as well as Kindergarten. The first floor of school building is used as kindergarten for nearly 60 kids.

Mr S. Suvaryan added that the building of school also needs reconstruction as it was constructed 16 years ago within the framework of ASIF Projects.

Mr. Gasparyan Artush raised the question of absence of sewage system. He outlined that the drainage waters are filled into Jajur reservoir. The drainage system is also missing and during rainy weathers the waters are not removed from the streets.

Mr. H. Rafayelyan said that seasonal migration is also essential issue in the Community. They hope the construction works will be started as soon as weather conditions will be sufficient and job opportunities will be available for community members.

The list of participants and photos are attached.
List of participants

1. [Signature]
2. [Signature]
3. [Signature]
4. [Signature]
5. [Signature]
6. [Signature]
7. [Signature]
8. [Signature]
9. [Signature]
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11. [Signature]
12. [Signature]
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16. [Signature]
17. [Signature]
18. [Signature]
19. [Signature]
20. [Signature]
21. [Signature]
22. [Signature]
23. [Signature]
Photos of Public Consultation
Attachment 3. Copy of an agreement for construction waste disposal

Reference

This is to inform you, that within the framework of construction of Potable water supply system in Jajur Community

1. The soft soil for refilling may be taken from the area 0.5 km far from the site
2. The generated construction waste will be transported to the waste dump located 1.5 far from the site.
3. The temporary dump of the soil is not determined.

Head of Community S. Suvaryan (signed)
Attachment 4: Copy of the land allocation document
Community Council of Jajur Community RA

Decree

08 Feb., 2016 Number 3

On land allocation of the purpose of potable water pipeline construction by Armenian Territorial development fund

According to the 27th point of 1st part of 16th article of law on Local Self-Government and 1st point of 1st part of 75th article of Land Code of the Republic of Armenia, and support by the Head of the Community, the Community Council of Jajur Community

Made a decision

1. Allocate 3600sq. meter land plot in the area named “Getuk” (cadaster code 103-001-01), which is Community property to carry out the construction of 2260 meter drinking water supply system and as sanitation zone in Jajur Community within the framework of Social Investment and Local Development Project implemented by Armenian Territorial Development Fund.

   Vote for 3, Against – 0, abstain from voting - 0

Signed by

1. Suren Grigoryan
2. Yengoyan Samvel
3. Rafayelyan Murad

Head of Community Sokrat Suvaryan
Annex 5: Water use permit

Non-official translation of the above attached document:

Ministry of Nature Protection
Water Resources Management Agency
Water use permit N000017

3-1 J/K-S-N

Jajur Community Administrative Office
RA Shirak Region
Signed and stamped by
Minister of Ministry of Nature Protection A. Grigoryan
Head of Community S. Suvaryan
Give on 12.02.2016
Is in force until 12.02.2021
Annex 6: Hydrological conclusion
Հավասարական պետության համապատասխանությամբ: Հավասար բուժերն են ջութակի գլխավորը:

Որբեր ջերմաստիճանը 6.6°C է ու 2 °C դեպքում: Որբեր այսպիսի դեպքերի, աշխատանք, աշխատակիցները՝ նրանց պաշտպանության, ապահույռուկության և օգտագործության վերաբերյալ:

Այս բուժասառը ցուցանիշների հիմանվարումային է, որպես զանգվածներ համապատասխան 0.30գ/լ է, պիթհանգի կենդանազգետներ 3.68պ.հա/լ, PH - 7.6:

Այսպիսով, մսամբ միաժամանակ աշխատանքը ցուցակի համապատասխան պահանջման ցուցանիշները:

Այսինքն, բուժասառույթների համապատասխան պահանջման ցուցակի համապատասխան պահանջված կազմակերպության:

Պատվություն ՀՀՀՊ քարտացուցակի ավարտավճար:

Ավարտ ՀՀՀՊ քարտացուցակի ավարտավճար

10.12.2015թ.
Անբաժանություն

Արծվածություն

1. Սայտ - կարճի, սողամուրակղզի - երկրի, բեզուկընթաց ։ ծովի, երկրի համար
2. Սառույցի կերպի հատակագծում - զարգացման շրջադրություն
3. Սառույցի - երկրի
4. Հոլիստիկ կազմակերպման սայլար - երկրի
5. Վիճակագրության X=40° 52' 03.8'' Y= 43° 55' 33.8'' H=1910d
6. Երկրի կազմակերպման լինի գեղարվեստ (տարածք) - 4.5բ
7. Սույնացույցի համար 1:100000 ձևակերպման - K-38-112
8. Սույնացույցի առաջարկ - << ինքնագիտության >>
9. Անբաժանություն մասնակցություն - Օտ. <<երկր. և երկր. պաշտոն. նախասա. Արմ. ՀՀ>> և միջին հիմնականության համախմբությունական խորհուրդների
10. Այցելուների հերթականություն - Ագաթա Ս. Ա.
11. Այցելուների հերթականություն - 01365

II.Սույնացույց վերաբերում ստեղծություն

1. Սույնացույցի նկար, սողա, մարզաշխատակազմ
2. Սողամուրակղզում սայլար - զարգացման շրջադրություն
3. Երկրի կազմակերպում կենտրոն - աշխատանք
4. Սողամուրակի կենտրոն - աշխատանք
5. Վիճակագրության ձև - չի հավասարաչափական
6. Սույնացույցի նկար - չի հավասարաչափական
7. Տաքացույցի ձև - հավասարաչափական է միջին
8. Վիճակագրության ձև - չի հավասարաչափական է միջին
9. Սրահովի կարճ և ծովի խեղեղություն կարճատևություն - 0.71 մ/ס, ծովի խեղեղություն
III.Կերպարվածքի բնագիտություն
1. Կերպարվածքի զարգացման պայմաններ - մնացորդով նման միջազգային համակարգի համակարգերի և հյուրարարության հատուկ պայմաններ, սովորունման վարկարկեր, ուսուցչության վարկարկեր, ֆիզիկական զարգացման պայմանները:
2. Կերպարվածքի զարգացման պայմաններ - միջազգային գիրքի համարից համակարգեր և հյուրարարության պայմաններ, հիմ բնագիտության ոլորտի կանխիցումների արդյունքում տեղում են:
IV.Զարգացման պայմաններ
1. Սոցիալական ծառայություն - 2015թ.
2. Գրության ծրագիր - 6.6°C
3. Սերմենիստ գիտություն (PH) - 7.6
4. Սուրբորիկ փուլերիչություն - 3.6 մ/ժ, հուլ.
5. Զեռ միջուկային - 222 մ/ժ
6. Հորա - աղև
7. Զուբր - աղև
8. Գոլդ - աղև
9. Տրիխատին տարբեր ապրանքահանգստի մուկ
Cl - 8.52, SO\(^4\) - 18.0, H CO\(^3\) - 195.2, (Na+K)\(^+\) - 3.68, Ca\(^2+\) - 41.68, Mg\(^2+\) - 18.97
V. Սորության մակերես ծառայություն (զարդ Կերպար)

\[
\begin{align*}
M_{0.3} &= \frac{HCO_3^{-} \times \text{SO}_4^{2-}}{10} \\
&\quad \text{Ca}^{2+} : \text{Mg}^{2+} : 41
\end{align*}
\]
VI. Կերպարից տեղակայություն - հյուրարարության վիճակագրությունը

Ագարդեմ ՀՀԿՀԱՀ բարձր գործակալ մասնագիտ Պ.Հայրենի
Անություն ՀՀԿՀԱՀ բարձր գործակալ հոգակցության
Հ.Պղնդյան
Հ.Սերգանյան
Annex 7: Copy of a Construction Permit

Non-official translation of the above attached document

Republic of Armenia
Shirak Region, Community Jajur
Construction Permit N 1, 24.03.2016
This is given for the Construction of a New Potable Water Pipeline
in Jajur Community

The design documents are
1. developed by “Zrtuk” LTD

S. Suvaryan