



**Summary of Environmental Management Plan - 2016
of Oyu Tolgoi Mine Deposit**

Ulaanbaatar

2016

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1. MITIGATION MEASURES

1.1. Biodiversity

Oyu Tolgoi LLC adopts Rio Tinto Group’s strategy on biodiversity “**Net positive impact (NPI) on biodiversity**”.

The Mitigation Hierarchy for biodiversity is: 1) avoidance, 2) rehabilitation, and 3) offset.

Table 1. Biodiversity mitigation requirements and their documents

№	Document Name	Implementation unit	Works undertaken
1	2003-2016 Environmental Impact Assessment Reports of Oyu Tolgoi mine’s main and sub-projects	Organizations and companies authorized to conduct EIAs in Mongolia	35 Detailed Environmental Impact Assessment Reports of Oyu tolgoi mine’s main and sub-projects
2	Environmental and Social Impact Assessment’s Annex 2012	International conservation charity and NGOs "Fauna and Flora International" and "The Biodiversity Consultancy"	<ul style="list-style-type: none"> • Biodiversity strategy • Assessments of critical habitat • Potential negative impacts for biodiversity and mitigation measures • Offset strategies • Predictions for “Net positive impact on biodiversity”

1.1.1. Potential negative impacts and mitigation measures

Table 2. Risk assessments for biodiversity from the above report

Biodiversity	Adverse Impacts	Likelihood	Impact	Risk category
Asiatic Wild Ass, Goitered Gazelle	Indirect habitat loss and fragmentation of animal populations due to avoidance of infrastructure	Likely	Serious	Critical
Asiatic Wild Ass	Indirect mortality from hunting facilitated by increased infrastructure and population increase	Possible	Major	Critical
Argali, Goitered Gazelle, Saker Falcon, Houbara Bustard, Saxual Forest	Indirect mortality from illegal hunting by increased infrastructure and population increase	Possible	Serious	High
Argali, Houbara Bustard	Indirect habitat loss due to avoidance of infrastructure	Likely	Medium	High
Great Bustard, Houbara Bustard, Saker Falcon	Direct mortality from collision with and electrocution by power transmission line	Almost certain	Medium	High
Mongolian Chesney, Asiatic, Wild Ass, Goitered Gazelle, Houbara Bustard, Mongolian Ground-Jay	Direct habitat loss from infrastructure	Almost certain	Medium	High
Houbara Bustard, Mongolian Ground-Jay	Indirect mortality from increased predation rates	Almost certain	Medium	High

In other words, Oyu Tolgoi LLC issued guidelines on mitigation and elimination of high risks as prioritized objectives for protection of biodiversity.

Table 3. Plan for mitigating potential adverse impacts on fauna

№	Environmental protection methods	Scope
1	Organize trainings about threatened and endangered species listed and protected in the Mongolian Red Book, Local Red list and International Union for Conservation of Nature Red List (IUCN) and other applicable laws and conventions	OT LLC’s employees and contractors

2	Install short-circuiting isolators on high risk transmission lines to prevent birds from electrocution.	6.3kW powerlines and substations of GKh
3	Use the data gathered from the satellite transmitters on the necks of Wild Asses to determine their movements and the exact times and crossings, and restrict vehicle movements when necessary.	OT-GS paved road
4	Conduct inspections at entrances and the airport to enforce regulations related to illegal poaching as well as harvesting wild plant species, trafficking and using their raw materials.	OT LLC's employees and contractors, guests
5	Conduct employee trainings to drive along approved roads and strips and adhere to speed limits and ensure its compliance to prevent wild animals bolting or roadkills.	Along OT-GS road, OT company's employees and contractors
6	Conduct researches on endangered species and its' habitat protection and review prior to obtaining Land Disturbance Permit (LDP), and deny permits when necessary	Project activity area
7	Monitor activities related to disposing and dumping food waste, prevent open dumping, and monitor omnivorous bird counts	Waste Management Center at the project area
8	Determine high potential areas at the project site for wildlife collision with vehicles; place warning signs and markings, and reduce the speed limits and inform warnings to staff.	Within the licensed area
9	Assess usage intensity of Oyu Tolgoi - Gashuun Sukhait paved road, and monitor any interference on the migration of rare mammals	OT-GS paved road
10	Remove and dispose of animal carcasses near project activity areas and along the infrastructures	Mine site, along the infrastructures
11	Construct 2 uniform crossings along Oyu Tolgoi - Gashuun Sukhait paved road, from Tsagaan Khad to the border, for wild animals.	Oyu Tolgoi - Gashuun Sukhait paved road, from Tsagaan Khad to the border

Table 4. Plan for mitigating potential adverse impacts on flora

No	Environmental protection methods	Scope
1	Conduct baseline researches on rare and endangered plant species, and review the summary and recommendations prior to obtaining Land Disturbance Permit (LDP), and deny permits when necessary	Project activity area
2	Organize trainings about threatened and endangered species listed and protected in the Mongolian Red Book, Local Red list and International Union for Conservation of Nature Red List (IUCN) and other applicable laws and conventions	OT LLC's employees and contractors
3	Conduct inspections and trainings to enforce regulations related to illegal harvesting wild plant species, trafficking and using their raw materials.	OT LLC's employees and contractors, guests
4	Organize pastureland health monitoring around the soum, and aid with improving rangeland management	Khanbogd
5	Prohibit vehicles from going off-terrain to mitigate negative impacts on pastureland, while some extent of pastureland may disappear	OT LLC's employees and contractors

1.2. Water resources and shortage, water quality issues

Table 5. Plan for mitigating potential adverse impacts on water resources

No	Environmental protection methods	Scope
1	Take more efforts to reduce water consumption and increase water recycling, explore additional opportunities, and conduct trainings on proper water use.	OT LLC's employees and contractors, guests

№	Environmental protection methods	Scope
2	Increase underground water resources, research and determine international rehabilitation practices and methods.	Within the project operations
3	Work on compliance of the water management plan, which was devised to regulate issues like TSF, acid rock runoffs, WWTP, open-pit seepage and drainage systems.	Within the project operations
4	Seepage water discharged from the open pit is constantly drained into sump and treated, and then it is used as dust suppressors around the waste rock stockpiles and shaft areas.	Within open pit mine operations
5	Monitor the safe conditions and use of industrial and domestic waste water transmission pipelines, and prevent from any damages, wear-outs, and punctures.	OT LLC's employees and contractors
6	Liquid waste and sludge are disposed at authorized treatment facilities.	When required
7	Focus on keeping water to smaller area at the TSF.	TSF, concentrator unit operations
8	Ensure whether diverted watercourse flow connects back to the main watercourse so as to maintain surface and subsurface water flow. Monitor the rehabilitated artificial Bor ovoо spring water.	OT LLC's employees, HSESC department ЭМААБООН ХЭЛТЭС
9	Monitor the underground water near the WWTP.	OT LLC's employees, Environmental department
10	To prevent GKh water level reduction from surpassing the permissible levels in the recommendations, water quality assessments will be conducted.	Gunii Khooloi wells
11	Constant monitorings are conducted in the wastewater entering the WWTP and the treated wastewater.	WWTP, Environmental department
12	Conduct complete water sample analysis each month for TSF, and determine the cause if any changes are detected.	HSE department
13	Prevent chemical substances from leaking into drinking water; regular water quality assessments will be conducted. In case of shipping chemicals, check the seals and completeness of the chemical containers during storage, application and transportation of the chemicals; and properly address the issues, if any, on how to collect and make safe the leaked materials and transport and remove them. And ensure the standards for handling chemicals are complied.	OT LLC's employees and contractors, guests
13	Identify storage conditions to fully prevent loss of fuel & lubricants, and properly address the issues, if any, on how to collect and make safe the leaked materials and transport and remove them.	Within the project operations
14	To dispose the chemical wastes by burning in designated furnace without placing it outdoor.	Within the project operations
15	Water specialists became members of Galba-Uush, Dolood Gobi's basin committee, started open water monitoring cooperation of OT, and acquiring advice on water resources protection and rehabilitation from the Basin committees.	Within the project operations
16	As specified in Oyu Tolgoi Investment Agreement, every 5 years or by 2016, an audit needs to be conducted to ensure compliance with the requirements specified in the water use and consumption documents through an independent organization.	Within the project operations
17	Drill additional 15 holes to expand the water monitoring program,.	Within the project operations
18	Continue the community-based monitoring program.	Within the project operations
19	Continue researching for methods to increase water recycling in industrial processes. To reduce the amount of water lost due to evaporation from the tailings facility, the fault of the tailings thickener is intensified.	Within the project operations

1.3. LAND USE MANAGEMENT PLAN

1.3.1. Monitoring land disturbance

Table 6. Measures to control land disturbances in 2016

#	Measures to be undertaken	Implementation documents
1	Obtain and provide LDPs prior to any land excavation activities	Environmental pre-inspection reports prior to LDPs; Recommendations and comments given by environmental and community relations teams; Approved LDPs;
2	Assess the implementation of the requirements specified in LDPs, and conduct progress inspections to verify the land disturbances to be within the approved sites	Inspection reports on the implementation of LDPs
3	Maintain a record of LDP registration	Geo-database; LDP registration sheet
4	Keep a record of disturbed land and report it	Geo-database; Seasonal, annual reports
5	If any, register unauthorized land disturbance as environmental violation and take the necessary corrective measures	Incident records in business solutions system; Violation investigation reports
6	Initiate building the paved road between OT – Khanbogd project	Annual Report
7	Complete building the 18km paved road between Tsagaan Khad to Gashuun Sukhait	Annual Report
8	The project to monitor OT vehicle use and to reduce the vehicle numbers has been successfully implemented; and currently has reduced and limited activities within and outside the project area by 20% of about 500 vehicles. The monitoring shall continue and the vehicle numbers may be reduced if necessary.	Annual Report
9	The management procedures for OT suppliers and contractors to drive only on approved routes and within speed limits have been improved. Performance analysis will be conducted in 2016.	Annual Report
10	Travel speeds and route navigations are fully monitored in 2015 through the installation of GPS systems on every OT vehicles and self-propelled machines; and GPS tracking systems are going to be installed on vehicles of permanent contractors in 2016.	Annual Report
11	Security staff must regularly monitor OT vehicles and ensure the vehicles are travelling only on approved roads.	Annual Report

1.3.2. Topsoil protection

Table 7. Control measures to protect topsoil for implementation in 2016 2016 онд хэрэгжүүлэх шимт хөрсийг хамгаалах хяналтын арга хэмжээнүүд

#	Measures to be undertaken	Implementation documentations/ evidence
1	Prior to any land disturbance activities, strip the topsoil at an appropriate depth, and keep in storage piles to use for reclamation after completion of the work.	Baseline environmental reports pre-disturbance; Approved LDPs;
2	Determine the correct topsoil storage area and monitor the stockpile construction (stockpile no taller than 3 meters, and leave 8 meters wide track for every 60 meters)	Approved LDPs; Fauna team reports
3	Keep long-term topsoil stockpile registration and labeling records	Geo-database; Topsoil registration sheet; Labels/sign boards by the stockpiles
4	Protect stockpiles from wind erosion, and continue with stockpile surface vegetation researches	Biological rehabilitation performance reports
5	Conduct quality control analysis on topsoil stockpiles (seasonally)	Laboratory test results; Annual environmental protection plan progress reports
6	Monitoring topsoil use: - prioritize using the topsoil stripped from a particular area for the rehabilitation of that land; - choose the older stockpiles in case of using long-term stockpiles;	Topsoil registration sheet; Technical rehabilitation performance reports

	<ul style="list-style-type: none"> - Distribute and monitor the topsoil at the technical rehabilitation site in accordance to the thickness corroborated by the environmental department; - Ensure the amount topsoil transported from the long-term stockpiles is no more than necessary; 	
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1.3.3. Measures to mitigate negative impacts on soil cover

Table 8. Plan for mitigating potential adverse impacts on soil cover

№	Environmental protection methods	Scope
1	Researches have been conducted to evaluate soil, vegetation and landscape changes around GKh groundwater deposit (conducted in 2014-2015, will continue in 2016).	GKh underground water deposit area
2	Various measures are taken to keep the land degradation to a minimum: transportation is allowed only on approved roads, not increasing buildings and construction around the area unless it is critically required, and rehabilitations.	Project area, Regularly
3	Rehabilitate and vegetate the areas that disturbed by mining operations and infrastructures in accordance to the periodic and mine closure rehabilitation plans.	Project area, Regularly
4	Soft-paved area will be covered with screened gravel	Total affected area; regularly
5	The walls and surfaces of the open-pit are constructed in a sustainable more stable way, and unstable and potentially hazardous pits and walls of tailings facilities are monitored regularly and appropriate fixes are being taken.	Open pit, WRD, Concentrator complex TSF
6	Topsoil is stripped, piled and stored prior to open pit and other operations.	Total project area
7	WRD and TSF management plans are constructed and implemented to prevent and protect from soil contamination due to acid rock runoffs from WRD and TSF, and other hazardous contaminants from other industrial operations, infiltration of soluble substances into soil, and acid formation from long-term tailings.	Open pit, WRD, Concentrator complex TSF
8	Prevent soil contamination due to waste – clean staff accommodation and canteen areas regularly.	Total project area
9	Preventing soil contamination by monitoring the concentration levels of fuel storage NOx, Sox, dust, and heavy metals regularly.	Fuel storage and filling stations
10	Prevent and monitor regularly fuel and lubricant spillage, install security measures around areas for potential spills, especially construct special lining or barricades around the storage tanks to collect fuel spilled during an emergency at the storage tank, install impermeable coating on pipelines connecting generators and storage tanks, place neutralization substances and materials in appropriate places in case of spills, and put warning signs, placards and safety signs.	Diesel power station area, during operations
11	Prevent soil contamination due to chemical spillage from the explosives plant and concentrator plant etc, in case of spills, neutralization and cleaning materials are provided, and MSDS must be at the workplace	Explosives plant area, during operations
12	Prevent wastewater infiltration into soil due to any malfunction from Wastewater treatment plant - regularly check the serviceability and safety of equipments, and take prompt measures in case of any damages	WWTP, during operations
13	To limit or mitigate the adverse impact from spillage and spread of toxic substance and materials, chemical substances are stored on an impenetrable stand , and is erected around the storage tank Line and barricade the liquid waste disposal stations with impermeable materials to prevent from leakage and substances from saturating into the soil (sand clay), and regular measurements are taken	Chemical storage, during operations
14	Rehabilitate the quarries and old roads, that are not used anymore, along the OT-GS road	Along OT-GS road
15	To prevent soil contamination along the OT- GS road, machineries have been improved and are allowed only on established roads	Project area
16	Continue with rangeland monitoring studies and develop further programs.	TSF, regularly

1.4. Air quality management

Table 9. Plan for mitigating potential adverse impacts on air quality

№	Environmental protection methods	Scope
1	Watering the roads to suppress dust emissions	Every necessary roads, warm seasons
2	Road repairs and maintenance	Internal roads at the project site, regularly
3	Place speed limit signs, and monitor and assess GPS-data installed on vehicles	Project area; throughout the year
4	To ensure the amount of vehicle exhaust fumes doesn't exceed the standard limit by putting in place a regular maintenance service.	Every vehicles and heavy machinery operated at the mine; regularly
5	Some works will be restricted during strong winds; especially blasting work will be prohibited.	Open-pit area, regularly
6	Ensure the surface of the waste is sufficiently humid.	Concentrator units TSF, throughout the year
7	To mitigate the unfavourable odor or toxic gas released from WWTP, sludge and the thick, solid wastes will be transported in closed containers, will be disposed at waste disposal area and will be covered with soil to decrease the unpleasant odours.	WWTP; regularly
8	To prevent release of toxic gases from the exhaust pipes of the incinerator into the air, filters are replaced regularly.	WMC
9	Determine ways to reduce pollutant contents in the exhaust fume.	Central Thermal Station
10	Continue with exploring different methods to reduce dust emission from TSF.	TSF
11	Ensure sustainability of the dust emission reduction and foam system.	Primary crusher, ore storage
12	In case of unpleasant odours from the waste disposal area, it is covered with soil and environmentally friendly smell suppressing products are used to decrease the unpleasant odours.	WMC

2. REHABILITATION PLAN

2.1. Technical rehabilitation

Table 10. Technical rehabilitation areas for 2016

Д/д	Name of area	Area /hectares/
1.	Licensed area	8.55
1.1	JDCC office area and parking lot	5.67
1.2	Shaft-1 north side of the closed road	1.66
1.3	Sand quarry	1.22
2.	Outside the licensed area	25.99
2.1	Worker's temporary camp A	3.80
2.2	Worker's temporary field settlement /improvement of Manlai road/	0.92
2.3	BP-ML01 quarry /Improvement of Manlai road/	5.74
2.4	BP-ML02 quarry /Improvement of Manlai road/	0.25
2.5	BP-ML03 quarry /Improvement of Manlai road/	1.58
2.6	BP-ML04 quarry /Improvement of Manlai road/	1.16
2.7	BP-ML05 quarry /Improvement of Manlai road/	0.98
2.8	BP-KB01 quarry /Improvement of Manlai road/	2.52

2.9	BP-KB02 quarry /Improvement of Manlai road/	0.62
2.10	BP-R38 quarry	0.48
2.11	BP-R39A quarry	2.91
2.12	Near the old drilling road by the old Khar khad well	5.03
3.	Drilling sites	8.50
3.1	Check rehabilitation of 34 drilling sites	8.50
Total area		43.04

Table 11. Roads that need rehabilitation requested by herders

Д/д	Road name	Area /hectares/
1	Old coal road from the Thermal Station to Tavan Tolgoi's paved coal road	8.81
2	Old road from south of licensed area to Javkhant bagh	25.43
Total area		34.24

2.2. Biological rehabilitation

Table 12. Biological rehabilitation plan - 2016

#		Rehabilitation goal	Rehabilitation activity	Scope	Area, hectares	Scope	Area, hectares	Implementation timeframe, months
1	BR	The aim of the biological rehabilitation of OT project is to be in accordance with the Mongolian National Standard MNS 5915:2008, to create fertile rangeland, to vegetate and enhance the fertility of the soil degraded during industrial operations, and to mitigate adverse impacts on the environment.	Using Hydro and Drill Seeder	Along Gunii Khooloi pipeline clusters	49.8	CTP #3	14.5	IV-V
	CTP #4					17.91	IV-V	
	CTP #5					17.39	IV-V	
	BR		Plant 2-3-year-old <i>Zyg.xan</i> , <i>Eur.cer</i> etc saplings grown at NPPC	Quarries, gravels and filling materials for the construction work of Gunii Khooloi road, camps and old airport	47.5	BP-PL 04	2.97	VIII-X
	BR					Ger camp B	3.56	V-VII
	BR					North camp	14.82	V-VII
	BR					Khaliv sand deposit	14.10	VIII-X
	BR					Seeding outside the old airport area	12.00	VIII-X
	BR-2					Plant 2-3-year-old saplings grown at NPPC	Additional rehabilitation for areas rehabilitated previous years	33.1
	BR-2		Rehabilitation of boreholes drilled during exploration of Gunii Khooloi	3.5	Boreholes – A5, A4, A3, B6, B3, U1, U2; Manlai – B1, B2, B9-B12	3.5	VIII-X	
TS	Using Hydroseeder plant native species seed with <i>Med.fal</i> .	Vegetation of the long-term topsoil stockpile	5.0	Keep the quality through vegetation method of the topsoil stockpile TSF-1 area in the licensed area	5.0	V		

Area for biological rehabilitation: 97.2
 Additional actions for the rehabilitated area: 36.6
 Topsoil stockpile vegetation: 5.0
Total: 138.8

2.2.1. Green facilities

Currently, Oyu Tolgoi LLC established 2.87 hectares of green facilities at the mine site, and irrigation and treatments are performed constantly every year.

Table 13. Plans for the licensing area in 2016

	Location	Area, ha	Saplings to be planted,	Timeframe	Required materials	Required manpower, equipment	Irrigation, watering
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			pieces				
1	Conveyor /right side/	0.07	120	IV.21-25	Topsoil, fertilizer	5 people, hoe, watering truck	Watering truck, twice a week
2	Undai River's /fenced/	0.19	240	IV.21-25	Topsoil, fertilizer	5 people, hoe, watering truck	Watering truck, twice a week
3	Waste water pipeline	0.3	900	IV.21-25	Topsoil, fertilizer	5 people, hoe, watering truck	Watering truck, twice a week
Total		0.56	1260				
Additional required items							
4	Watering will be done by 2 employees twice a week			V-X	Watering truck		

3. OFFSET ACTION PLAN

Table 14. Offset action plan

№	Directions for offset action	Offset action	Scope	Implementation timeframe and frequency
1	Correspond the policies and approaches used for the offset action plan with the methods and standards used nationwide	Research the methodology and approaches developed by the Ministry of Environment, Green Development and Tourism and the international organization TNC; develop a plan in accordance with the guidelines and introduce it to the Department of Environment and Tourism of Umnugobi and implement it.	Discuss and finalize with the Department of Environment and Tourism of Umnugobi	
2	Reduction of illegal hunting program	Continue the reduction of illegal hunting program launched in 2014 by the Wildlife Conservation Society through the OT LLC's request. Conduct additional trainings for the units and parts fighting against poaching activities, and regularly carry out patrols and inspections against illegal hunting.	Manlai, Nomgon, Bayan Ovoo and Khanbogd soums of Umnugobi aimag, and Khatanbulag and Khuvsgul soums of Dornogobi aimag	The information line on illegal hunting is operational 24-hours every day. Patrols and inspections on poaching are conducted in the winter months and start in October.
3	Support for the development of rangeland management plans	Provide information and technical assistance for the development of rangeland management plans for Khanbogd soum, and implement rangeland monitoring programme with the participation of herders.	Territory of Khanbogd soum, Umnugobi province	Conduct rangeland monitoring programme with the participation of herders, and provide information and technical assistance for the development of rangeland management plans for soums.
4	Rehabilitation of saxaul tree forest along Gunii Khooloi pipeline	Using 10 hectare area $\geq 20'000$ seedlings, rehabilitation and saxaul forestation works will be organized in the territory of Khanbogd soum. This year will emphasize choosing areas destroyed by non-OT operations or naturally deteriorated area.	Territory of Javkhant and Nomgon baghs in Khangod soum	The will will be organized in spring and fall seasons to allow expansion of saxaul forests and to offset the affected forests.
5	Restoration of Bor Ovoo spring and offset action	Organize offset action by planting some plants from humid places along New Bor Ovoo spring's 1 hectare area. The 2-year-old seedlings (trees and shrubs) from the nursery of natural plants in Khanbogd soum of OT project will be used for the plantation.	Territory of Javkhant bagh of Khanbogd soum	The vegetation area will be selected with the three-sided advisors and the size of the area will be finalized in January, 2016. After that works like fencing, transferring and planting of plants that will grow in humid environments from the nursery of natural plants, irrigation and maintenance, and monitoring will be undertaken.

Table 15. Additional Environmental protection actions

№	Directions of environmental protection actions	Environmental protection action	Scope
1	Improvement of public ecological education	* World Migratory Bird Day	Throughout Umnugobi aimag
		* National Tree Planting Day Organization of training on plantation and maintenance of trees and shrubs	
		* World Soil Day	
2	Public disclosure of the results of the biodiversity studies	Deliver more information about biodiversity to the mass media; prepare news for the local newspaper to distribute to the public.	Nationwide, Khanbogd, Manlai and Bayan Ovoo

4. RELOCATION AND COMPENSATION ACTION PLAN

Table 16. Relocation and compensation action plan for 2016

№	Environmental protection action	Scope	Performance criteria
1	Monitoring of implementation of the agreements with herder families which are relocated and compensated	Khanbogd soum, Umnugobi province	Annual report on monitoring and evaluation

5. ACTION PLAN FOR HISTORICAL AND CULTURAL HERITAGE PROTECTION

№	Хөтөлбөр	Хийгдэх ажил	Description
	Cultural heritage management system	Instructions for cultural heritages	Provide basic trainings and local guidelines for OT employees and contractors working at the mine and excavation works about the procedures in case of finding historical/ cultural heritages.
		Conduct observation and monitoring at historical and cultural sites	Continue monitoring 19 popular destination monumental sites around OT mine in cooperation with local residents.
		Organization of exploration and rescue measures for historical/ cultural heritages during land disturbance works implemented through new OT investments	Check LDP requested areas whether there were any exploration and excavation works and ensure the compliance to the Mongolian National law on Protection of Cultural Heritage. For example: <ul style="list-style-type: none"> Continue with paleontological monitoring at the construction site of the Water Treatment and Bottling Plant to be built in Khanbogd soum in 2016. Proceed with the laboratory work to separate the sediments of the paleontological resources found during the construction of GK in 2012. Relocating Bor Ovoo located at the open-pit and implementing Bor Ovoo protection plan with local parties.
	Implementation of cultural heritage program	-	Continue the Cultural Ger – in collaboration with the elders of Khanbogd soum. Relay the projects presented by professional organizations and locals to the Communications Committee established under Partnership to commence the implementation of the management plan for Shartsav's dinosaur tracks in Manlai soum and the Khurdet cave in Khanbogd soum.

6. CHEMICALS' RISK MANAGEMENT PLAN

Table 17. Chemicals' risk management plan

№	Environmental protection method Байгаль орчныг хамгаалах арга хэмжээ	Scope
1	Reduce chemical waste if possible, and make full use of the chemical substances.	OT mine site
2	Substances that are incompatible with each other should not be stored together during using and storing chemicals.	OT mine site

№	Environmental protection method Байгаль орчныг хамгаалах арга хэмжээ	Scope
3	Container seals should be regularly checked when storing, using, or transporting any chemical substances.	OT mine site
4	Water contaminated with chemicals, should not be dumped openly.	OT mine site
5	Oil filters, as well as towels and cloth contaminated by combustibles and lubricants will be burned in high temperature in the waste incinerator as a safety precaution.	OT mine site
6	Every chemical substance is stored, used and transported in conditions, specified in MSDS.	OT mine site
7	Every chemical and hazardous substances are stored in specific containers and conditions, specified in MSDS. Regular monitoring is conducted on storing, using and transporting chemical and hazardous substances.	OT mine site
8	Chemical left-overs are conducted in accordance to the specific regulations.	OT mine site
9	The chemicals should not be stocked more than necessary.	OT mine site

7. WASTE MANAGEMENT PLAN

Table 18. Waste management plan

№	Environmental protection action	Scope
1	Move chemical wastes stored at the temporary waste collection point to the new WMC	Waste Management center (WMC)
2	Reuse all the waste iron and plastics from project operations	WMC
3	Continue with laboratory testings to identify the pollution levels in contaminated soil	Contaminated soil storage area
4	Conduct experimental works to produce fertilizer using food waste	WMC
5	Keep record of waste registration, and deliver the reports within the established timeframe to Khanbogd soum administration.	WMC
6	Developed instructions for transporting hazardous waste; and the hazardous waste is not mixed with other types of waste, transported separately, and stored only in specific containers.	Respective departments producing waste
7	Maintain the waste registry in accordance with the approved form, "Coded list of waste at its source" and deliver the reports within the established timeframe to Khanbogd soum administration.	Waste Management Specialist
8	OT will cooperate with local recycling companies, and will provide guidelines and recommendations for their operations to meet OT and international standards.	Water and waste management teams, Compliance team

8. THE IMPLEMENTATION OF THE ORGANIZATION AND ARRANGEMENT PLAN OF THE ANNUAL ENVIRONMENTAL MANAGEMENT PLAN

Table 19. Organization and arrangement plan

№	Planned works	Description
1	Environmental Audit	In accordance with the Environmental Protection law, provision of Article 10 ¹ .1, Oyu Tolgoi LLC has carried out environmental audit in 2014, and submitted progress report on the implementation of the recommendations specified in the audit report to the Ministry of Environment, Green Development and Tourism in 2015. In accordance to the above provision, environmental audit will be conducted in 2016.
2	Environmental Assessment	As there were additional changes to the technical and economic assessment for the project for processing copper and gold from Oyu Tolgoi by Oyu Tolgoi LLC, changes to the detailed environmental assessment is planned to be conducted. 80 000 000 (eighty million) Tugriks are planned for the implementation of the environmental management plan.
3	Introduce environmental activities to state authorities	In 2016, Oyu Tolgoi LLC is planning to introduce environmental protection activities at the site to state authorities (Ministry of Environment, Green Development and Tourism) and provide experts opportunities to work at the site to receive some methodological advice.

9. ENVIRONMENTAL MONITORING PROGRAM

9.1. Air quality monitoring

Table 20. Air quality monitoring

No	Monitoring indicators	Types and approaches for conducting tests	Location
1	Weather	Air temperature, wind speed and direction, relative humidity, pressure, rain&snow, evaporation and sun ray	Mine site
2		Wind speed and direction	Monitoring station 1, Monitoring station2, Monitoring station 3, Monitoring station 4
3		Air temperature, wind speed and direction, relative humidity, pressure	At air quality and noise monitoring points
4	Dustiness	PM2.5 and PM10	18 dust monitoring points at and nearby mine site or DMP-LA01, DMP-LA02, DMP-LA03, DMP-LA04, DMP-LA05, DMP-EP01 (Explosives plant), DMP-EP02 (Explosives storage), DMP-QrBP (Dugat Khyar pebble deposit), DMP-CHP (Central thermal station), DMP-PDS01 (Petrol station), DMP-PDS02 (Fuel storage), DMP-TSF01, TSF02 (Concentrator complex tailings), DMP-WMC (Waste processing center), DMP-Khaliv, DMP-OP01, OP02 (Open pit), DMP-COS01, COS02 (Concentrator complex ore warehouse)
5		TSP (total amount of dust)	21 dust monitoring points at and nearby mine site or DMP-LA01 (3 samples), DMP-LA02, DMP-LA03, DMP-LA04, DMP-LA05, DMP-PAP (Khanbumbat airport), DMP-QrBP (Dugat Khyar pebble deposit), DMP-EP01 (Explosives plant), DMP-EP02 (Explosives storage), DMP-TSF01, DMP-TSF02 (Concentrator complex TSF), DMP-PDS01 (Petrol station), DMP-PDS02 (Fuel storage), DMP-COS01 (Concentrator complex ore warehouse), DMP-DS01 (around diesel station), DMP-OP01 (Open-pit), DMP-CHP (Central thermal station), DMP-WaHo (Central storage), DMP-BaPl (Concrete batch plant), DMP-WMC (Waste processing center), DMP-UnRi (area adjusted at Undai River)
6		PM2.5, PM10 and TSP (total amount of dust fall-Heavy metals (Ag, As, Cu, Se, Hg, Al, Mo, Sb))	Monitoring station 1, Monitoring station2, Monitoring station 3, Monitoring station 4
7	Dustiness	Heavy metals (Cd, Hg, Sb, As, Pb, Cr, Se, Cu, Ag, Mo, Al)	4 dust monitoring points at and nearby mine site or DMP-LA01, DMP-Manlai camp, DMP-TSF01 (TSF at the concentrator unit), DMP-WMC (Waste processing center)
8	Ambient gas in the air	SO2, NO2, CO, CO2	31 hazardous gas monitoring points at the mine site or GEMP-LA01, GEMP-LA02, GEMP-LA03, GEMP-LA04, GEMP-LA05, GEMP-PDS01 (Petrol station), GEMP-PDS02 (Fuel storage), GEMP-DS01, GEMP-QrBP (Dugat Khyar pebble deposit), GEMP-WWTP (Water treatment plant), GEMP-LaFi (Landfill), GEMP-WaHo (Central storage), GEMP-EP01 (Explosives plant), GEMP-EP02 (Explosives storage), GEMP-BoBP (batch plant), GEMP-WMC, GEMP-TWEP (Wastewater pond), GEMP-TSF (Concentrator complex TSF), GEMP-OP01 (around Open-pit area); GEMP-CHP (Central thermal station),
9		Hydrocarbon	GEMP-PDS01 (Petrol station), GEMP-PDS02 (Fuel storage)
10		SO2, NO2, NOx, CO, O3, VOC	Monitoring station 1, Monitoring station2, Monitoring station 3, Monitoring station 4
11	Dustiness	PM10 ба PM2.5	Area adjusted at Undai River UNRI01-03
12		O2, SO2, NO2, CO	Area adjusted at Undai River UNRI01-03
13		PM10	At Gunii Khooloi groundwater deposit area or DMP-PL01, PL02, PL03, PL04, PL05, мөн DMP-AmTo (Amtgai pond), DMP-ShTo (Shar tokhoi)
14		PM10	4 points along the water supply pipeline or DMP-PL06, PL07, PL08, PL09; 4 points within 2km from the pipelines or DMP-PL01, PL02, PL03, PL04
15		PM10 and PM2.5	When road becomes operational - 5 points at the beginning, end and along the road or around Bugtur Khuuvur area (DMP-BuKh), around Durvuljin Teeg (DMP-DoTe), around Khongor Ovoo (DMP-KhO), around Tsagaan Khad (DMP-TsKh), around Gashuun Sukhait (DMP-GaSu)

No	Monitoring indicators	Types and approaches for conducting tests	Location
16	Ambient gas in the air	CO, SO ₂ , NO ₂ ,	When road becomes operational - 5 points at the beginning, end and along the road or around Bugtur Khuuvur area (DMP-BuKh), around Durvuljin Teeg (DMP-DoTe), around Khongor Ovoo (DMP-KhO), around Tsagaan Khad (DMP-TsKh), around Gashuun Sukhait (DMP-GaSu)
17		NO ₂ , SO ₂ , CO	GEMP-PAP (around Khanbumbat airport strips and roads)
18	Dustiness	PM _{2.5} , PM ₁₀ , TSP	DMP-PAP (around Khanbumbat airport strips and roads)
19	Pollutants in the exhaust fume	CO, SO ₂ , NO ₂ , ash	Steam boilers of the central thermal station and Khanbumbat airport and the incinerator of the waste processing center
20	Dustiness	PM ₁₀ and PM _{2.5}	Loading and unloading area of concentrate MY01-02
21		External and internal dust levels	5 monitoring points
22		PM ₁₀ and PM _{2.5}	From Tsagaan Khad to Gashuun Sukhait: During construction phase –3 points 5km apart 100m south east of the temporary road used during the road construction, 1 points respectively 50m apart along the wind direction around the concrete batch plant and crusher area; During operational phase: 3 points south east of the newly constructed road
23	Dustiness	PM ₁₀ and PM _{2.5}	Along the OT-Khanbogd road, OT's coal road, OT-Manlai roads
24	Ambient gas in the air	NO _x , SO ₂ , CO	From Tsagaan Khad to Gashuun Sukhait: During construction phase –3 points 5km apart 100m south east of the temporary road used during the road construction, 1 points respectively 50m apart along the wind direction around the concrete batch plant and crusher area; During operational phase: 3 points south east of the newly constructed road
25		Methane (CH ₄)	Waste burial site, exhaust pipeline
26	Noise	Noise levels in outdoor environment, from blasting and in workplaces	Around 8 noise-monitoring points at the mine site or: NMP-LA01, NMP-LA02, NMP-LA03, NMP-LA04, NMP-LA05, NMPLA06, NMP-LA10, NMP-LA11
27		Maximum level, minimum level, average level	After the road becomes operational: beginning, end, 1 point along the road with the most stops, and 2 points along the road
28		Noise levels, dB (day and night-time measurements during construction phases, day-time measurements during operation)	3 points along Tsagaan Khad to Gashuun Sukhait
29		Noise levels, dB	Total of 6 points (NMP-PAP01, PAP02, PAP03, PAP04, PAP05, PAP06)
30	Vibration	Noise and vibration from blasting	Nearby openpit mining area, mine camp and winter quarters of herder families, and 8 points near Khanbogd soum or GVMP-0T01, GVMP-0T02, GVMP-0T03, GVMP-0T04, GVMP-0T05, GVMP-0T06, GVMP-0T07, GVMP-0T08

9.2. Soil quality monitoring

Table 21. Soil quality monitoring

No	Monitoring indicators	Types and approaches for conducting tests	Location
1	Soil quality	Soil contamination, humus content, pH, salinity, humidity, NO ₃ -N, P ₂ O ₂ , K ₂ O	SMP-CHP (Central thermal station), SMP-PDS01 (Petrol station), SMP-WWTP (Wastewater treatment plant), SMP-QrBP (Crusher), SMP-Sh01 (Shaft 1) and (around Landfill), SMP-WMC01-06 (Waste processing center)

№	Monitoring indicators	Types and approaches for conducting tests	Location
2	Soil quality	pH, total nitrogen, total phosphorus, bacteria in 1 cubic cm, pathology	At the sullage from the Wastewater treatment plant and around the miner's settlement area
3	Soil contamination	Crude oil and petroleum products, hydrocarbons	SMP-PDS01 (Petrol station), SMP-PDS02 (Fuel storage)
4	Soil quality	Physical property soil, organic matter, total nitrogen, carbonates, Ca, Mg, P ₂ O ₅ , K ₂ O, pH, Pb, Cd, As, Zn, Ge	Along the Oyu Tolgoi-Gashuun Sukhait road, Bor khoshuu, Khongor Ovoo, Tsagaan Khad, Gashuun Sukhait border
5	Soil quality	Humidity	Bulan Sukhait, eastern point of Undai River, north eastern area of Galba Gobi, Gunii well, Steppe Bor Ovoo, south part of Alag Bayan, west part of Amtgai pond
6	Soil contamination	Petroleum products, lead	Petrol unloading area, loading area
7	Land surface	Changes in the general landscape	The total confining bed area of groundwater
8	Soil quality	pH, humus content, thickness and mechanical structure of the humus layer, total nitrogen, total phosphorus, heavy metals and bacteria in 1 cm ³ ,	Carry out sampling at total 14 points including 5 points (SMP-PL01, PL02, PL03, PL04, PL05) on Gunii khooloi aquifer 5 points along the Water supply pipeline, Alag bayan mountain valley (SMPAIBa), Amtgai toirom (SMP-AmTo), Gunii us well, Shar tokhoi (SMP-ShTo) (within 2 kilometers along the pipeline, in an area that has been only slightly affected with antropogenic impacts) and on all rehabilitated areas
9	Soil contamination, degradation	Environmental changes and human induced changes	Carry out ecology-economic assessment and erosion mapping on the plant monitoring points in the vicinity of Gunii khooloi
10	Soil quality	Chemical and physical properties of soil, organic matters, total nitrogen, carbonate, Ca, Mg, P ₂ O ₅ and K ₂ O, soil pH, concentrations of Pb, Cd, As, Zn, Ce, morphological description, concentration of petroleum, hydrocarbons and petroleum products: Tiofyenol, phenol, benzene, motor oil, Pb	At 1-2 km distance away from the two sides of the road, at minimum 5 points: Bugtur khuuvur, Durvuljin teeg, Khongor ovoo, Tsagaan khad, Gashuun sukhait border checkpoint (SMP-BuKh, SMP-DoTe, SMP-KhOv, SMP-GS, SMP-TsKh)
11	Soil quality	pH, sulfate, nitrate	0.5 km to the east of Oyut airport border, at 1point
12	Soil quality	Agrochemical characteristics: humus, pH, mobile bases, nitrogen, soil salinity, carbonates, soil mechanical composition, texture, density, humidity, sulfates, nitrates and heavy metals	0.5 km to the east of Khanbumbat airport, at 1 point, rehabilitated area
13	Soil quality	Fertility, moisture, pH, salinity and thickness of layers, concentrations of heavy metals	Soil quality analysis at 2 points lower than the partially adjusted areas by the river outside the mining area
14	Soil quality	Fertility indicators (N ₂ , K ⁺ , NH ₄ , NO ₂ , NO ₃ , pH, etc.), soil mechanical components, heavy metals, radioactivity	TSF, 4 monitoring points
15	Soil quality	Chemical and physical properties of soil, heavy metals	Around Oyut airport, Around Khanbumbat airport, quarries and piles of topsoil along OT-KB road During construction: 5 points including temporary camp, waste disposal site, road work sites, quarry site, temporary roads, During operation: downwind areas likely to be affected by road along the left side of the new road
16	Soil quality	Bacteriology, health monitoring	Greywater pond area at the mine site

9.3. Fauna and flora monitoring

Table 22. Integrated fauna and flora monitoring program

№	Monitoring indicators	Types and approaches for conducting tests	Location
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№	Monitoring indicators	Types and approaches for conducting tests	Location
1	Soil quality indicators	Gather 0-5, 5-10cm depth soil samples from topsoil stockpiles, vegetation monitoring and rehabilitation areas and use both sifting and cultivating methods	8 from topsoil stockpiles, 32 from fauna monitoring and 10 from rehabilitation area
2	Seed reserve in the soil	Composition and quantity of the seeds in the soil, sprouting and survival	5 areas from the topsoil stockpile
		Composition and quantity of the seeds in the soil, sprouting and survival	32 areas from fauna monitoring and 2 areas from rehabilitation area
3	Soil ecology studies	Determine the total microbial biomass and composition of the microflora in the soil	47 points from 5 topsoil stockpile; 10 biological rehabilitation points to represent the biological rehabilitation from previous years
4	Fauna monitoring	Growth, development and biomass of flora and vegetation cover, soil moisture, soil sample, temperature, pH, saltiness, soil stability	32 points at Khanbogd soum level
5	Quality monitoring of the biological rehabilitation	The same kind of monitoring, mentioned above, on areas rehabilitated in the previous year	On 4 areas along the Gunii khooloi pipeline where biological rehabilitation was carried out
		Monitoring the growth and winter survival of the seedlings planted at the rehabilitation areas in the previous years	Seedlings planted at 4 areas along Gunii Khooloi pipeline
6	Monitoring the seedlings planted for green facilities	Composition and quantity of the trees and shrubs, sprouting and survival	Seedlings planted in Khanbogd, Manlai, Bayan-Ovoo, Dalanzadgad and OT site
7	Plant penology	Dominant plant community dynamics, seeds fall and yield	At Khanbogd soum level
	Community-based plant monitoring	Monitoring the tree growth through photographs	Elm trees of Undai River
	Community-based plant monitoring	Conduct community based rangeland monitoring consisting of representatives from the local community and include in the annual pasture management plan	Khanbogd, Manlai, Bayan-Ovoo soum levels
8	Reptiles	Composition of the species, population density and abundance	6 areas near the mine site or: FMP-01, FMP-02, FMP-03, FMP-04, FMP-05, FMP-06, 2 areas along the pipeline: FMP-07, FMP-08
9	Birds	Species component, migration, spread and location of rare birds	Water points at the mine site, along the power lines and roads, Gashuun sukhait road, along 220 kW transmission line
10	Small rodents	Species component, population dynamics	6 areas near the mine site: FMP-01, FMP-02, FMP-03, FMP-04, FMP-05, FMP-06, 2 areas along the pipeline: FMP-07, FMP-08
11	Monitoring of animals inhabiting along the project area	Species component, population, location	At the mine site
12	Monitoring of animals inhabiting along the project infrastructure	Impacts on birds such as electrocution, collision with power lines and cars etc	Power lines, buildings, and roads at the mine area, Gunii Khooloi power lines 6 and 35kW, Gashuun Sukhait road, 220kW power line
13	Monitoring of wild animals with the support of local citizens	The head number, dispersion, and location of hoofed animals, birds, and reptiles	Khanbogd soum-wide, and some areas of Small Gobi B Strictly Protected Area, southwest of Khatanbulag soum of Dornogobi province

No	Monitoring indicators	Types and approaches for conducting tests	Location
14	Migration and movements of Khulan	Migration of satellite transmitter collared Khulan, impacts of infrastructure	Umnugobi and Dornogobi provinces
15	Migration and movements of black-tailed gazelle	Migration of satellite transmitter collared black-tailed gazelles, impacts of infrastructure	Umnugobi and Dornogobi provinces
16	Traffic control	Intensity of road-use, vehicle types and speed	Oyu Tolgoi-Gashuun Sukhait paved road
17	Survey and concensus on carcasses of Khulan	Number of Khulan carcasses, location and determining the reasons	Khanbogd, Bayan-Ovoo, Manlai, Khatanbulag, Khuvsgul, Ulaanbadrakh, Mandakh soums
18	Nest research of short-toed-snake-eagle and other raptors	Registration of all dens, and observation of actively-used dens	Within 20 km radius of OT, along the Khanbogd soum array and Undai river swash

9.4. Water level and quality monitoring

Table 23. Water level monitoring

No	Monitoring indicators	Types and approaches for conducting tests	Location
Environmental monitoring program to be implemented in Shivee Tolgoi, Javkhlant, and Oyu Tolgoi mine site			
1	Water level	Water level, photomonitoring, longest and deepest part of runoff	Total of 72 water monitoring stations, and 18 wells like New Bor Ovoo, Khukh khad, Maanit, Burkhan spring, Khukh khad's spring
2	Surface runoff	Flood runoffs	6 points along Undai River
3	Hygienic	Number of total microorganisms, thermotolerant coliforms and pathogenic microorganisms in 100 ml	All sources of water being used, kitchen-sink faucets
4	Water quality monitoring (on site)	Common indicators of water quality: pH, temperature, TDS, EC	Hand wells and springs
5	Chemical and physical properties	pH, T ⁰ , TDS, EC, anion, cation, suspended solids, heavy metal content, CaCO ₃ , Ca, Mg, Na, K, SO ₄ , NH ₄ , As, Cd, Cu, Hg, Pb, Zn, Cr, Fe, Ni	Water points like new Bor ovoo, Khukh khad, Maanit, Ekhen Burkhan, Khaliv River wells etc. Industrial water supply wells, and industrial waste water
6	Chemical, physical and microbiological properties of treated water	pH, electrical conductivity, TDS, chloride, ammonia, nitrite, nitrate, orthophosphate and sulfate, Ca, Mg, Na, K, Ag, Al, As, B, Ba, Be, Cd, Co, Cr, Cu, Mn, Mo, Na, Ni, Pb, SB, Se, Sr, Zn, temperature, number of total microorganism and pathogens	Water to and from Water Treatment Facility
7	Contamination of acidic runoffs	ARD laboratory results from tailings of TSF	Tailings of TSF
		Common indicators of water quality: pH, T ⁰ , TDS, EC, pH, TDS, (CaCO ₃), dissolved O ₂ , Ca, Mg, Na, K, SO ₄ , NO ₂ , NO ₃ , NH ₄ , As, Cd, Cu, Hg, Pb, Zn, Cr, Fe, Ni, taste, smell, color	Monitoring boreholes of the landfill area (wells projected and drilled and equipped)
Environmental monitoring program to be implemented during the operation of Gunii Khooloi pipeline			

№	Monitoring indicators	Types and approaches for conducting tests	Location
8	Surface and groundwater	Water level	Include water points such as Ulaan del, Baruun suu, Ergen Tovog, Shorvog shand, Burkheestei, Sevkhul, Guchin us, Khatsavch etc. At the zone of Gunii khoooloi water usage groundwater wells, 10 boreholes
		Water quality field monitoring: pH, TDS, EC, T ⁰	All hand wells
		pH, TDS (total dissolved salt (by weight)), total hardness (CaCO ₃), Ca, Mg, Na, K, SO ₄ , NO ₂ , NO ₃ , As, Cd, Cu, Hg, Pb, Zn, Cr, Fe, Ni contents, perform recordings in springs, temporary streams, and artificial waterpools nearby the water supply pipeline, and determine the dimensions	4 hand wells including Khevtee bor khudag, Sukhai us, Shavagiin well, Ergiin us At 12 points including the project site and the nearby springs and the pool 8-10 boreholes around Gunii khoooloi
Environmental monitoring program to be implemented during the construction work and operation of Gashuun Sukhait infrastructure			
9	Surface and groundwater	Water level	Bugtur khuuvriin khudag, Dugat, Bor khoshuu , Gashuun sukhai, Khavtsal, Bulan ders, Daravgain khudag
		Common indicators of water quality: pH, T ⁰ , TDS, EC	Hand wells and springs
		Common indicators of water quality: pH, T ⁰ , TDS, EC, pH, (CaCO ₃), Ca, Mg, Na, K, SO ₄ , NO ₂ , NO ₃ , NH ₄ , As, Cd, Cu, Hg, Pb, Zn, Cr, Fe, Ni,	Monitoring hand wells and wells used in operations
Environmental monitoring program to be implemented for Undai River Protection and Partial Diversion Project			
10	Hand well, surface flow	Water level, Water quality field monitoring: pH, TDS, EC, T ⁰	Springs and manual wells of herders along Undai River, 11: Khukh Khad, Zurkh zuun salaa, Buurlyn spring, Ehen burkhant, Saglagar sair us, Khulsan well, artificial Bor-ovoo spring
12	Groundwater	Water level, pH, electrical conductivity, contents of HCO ₃ , TDS, Ca, Mg, Na, K, SO ₄ , NO ₂ , NH ₄ , As, Cd, Cu, Hg, Pb, Zn, Cr, Fe, Ni, taste, color, smell	Hand well and 5 monitoring stations
13	Acidic flow	Regular monitoring on acidity of water, closing water, changes in water direction, sand accumulated in the tailings and water samples	Tailings pond

11. SCHEDULE FOR REPORTING THE IMPLEMENTATION OF THE ANNUAL ENVIRONMENTAL MANAGEMENT PLAN TO THE AFFECTED RESIDENTS AND STAKEHOLDERS

Oyu Tolgoi LLC's Environmental team of HSESC department will discuss with the Regional offices and will select the most efficient and clear methods to deliver information about environmental protection projects, the pros of environmental monitoring and compliance programs and the results to the soum and bagh communities. And will continue to organize and implement some activities from previous years, such as the successful "Participants monitoring program" and incorporating local communities in biodiversity restoration activities.

In addition to traditional celebration of World Water Day, World Migratory Bird Day, National Tree Planting Day and World Day to Combat Desertification etc, and delivering environmental protection works to the public, presentations and introductions are given at fairs and events organized through the governor and administration of Khanbogd soum.

12. PROPOSED ACTION PLANS IN ACCORDANCE TO THE REVIEW BY JOINT INSPECTION OF RELEVANT AGENCIES AND DEPARTMENTS OF SOUTH GOBI

Table 24. List of proposed work

№	Recommendations	Proposed work in accordance to the recommendations
1	Within the context of changing the methods to reduce poaching and increasing results, include outposts and volunteer rangers to help with the monitoring studies, provide equipments and guidance for the day-to-day observations.	This program is implemented not only in Mongolia, but is carried out through the internationally experienced professional organization Wildlife Conservation Society. The results of this program will not be quickly noticeable as it is a long term progressive program. The methodologies of this program are based on scientific grounds; and for our project we are emphasizing more on sustainable and tangible results. Meetings with specialists of the Environment and Tourism Department of Umnugobi province will be arranged, and further clarifications on this recommendation will be enquired.
2	Include in the management plan to collaborate with environmental protection community partnerships, environmental protection clubs and environmental activists.	<ul style="list-style-type: none"> • The representatives of the Umnugobi law enforcement, specialists of Small Gobi strictly protected area, conservationists, soum environmental inspectors and rangers are involved in reducing poaching offset plan. And community-based environmental monitoring works are continuing. • 2 local companies were selected to rehabilitate saxaul trees in 2016 in the framework of offset action plan. • Continue with the joint community-based environmental monitoring program. • Additionally, we are exploring further opportunities to work with local community partnerships and companies.
3	Establish monitoring points downwind of the tailings dam to monitor soil, vegetation and dust levels. Monitor regularly and report the results to the public.	<p>The following monitoring will be conducted in the framework of environmental management plan 2016:</p> <ul style="list-style-type: none"> • Vegetation monitoring - 4 points • Dust monitoring - 3 points • Soil monitoring - 4 points
4	Deliver the results of reports and research to applicable local government administration officials /environmental protection specialists, environmental policy experts/ promptly. There has been failure of not sending EMP reports and plans, and EIAs of new projects promptly.	Oyu Tolgoi LLC submitted the Implementation of environmental management plan – 2014 and Environmental management plan – 2015 immediately after approval by the Ministry of Environment, Green Development and Tourism on May 22, 2015 with reference number #1243 to the Department of Environment and Tourism of Umnugobi province, Specialized inspection agency, Governor’s office of Khanbogd soum respectively. Oyu Tolgoi LLC has been cooperating and submitting approved reports and plans promptly and consistently to the Governor’s office of Khanbogd soum and will continue the cooperation in the future.
5	In collaboration with the local government administration include activities related to public cleanup events and reducing waste impacts in the Environmental Management Plan and implement it, as local residents of Oyu Tolgoi LLC does not participate in soum public cleanup events.	<p>The Environmental department of Oyu Tolgoi LLC has a tradition of organizing spring and fall cleanups at specified areas and submitting the reports to the local community. And will continue this work in 2016. Including:</p> <ul style="list-style-type: none"> • Cleaning up water points at Khanbogd soum • Road cleanup along OT-Coal road • Collecting garbage along OT-KhB road, using OT LLC’s waste transportation vehicle <p>Cleaning up after waste is disposed is not the most optimal method; the most effective method is organizing long term, sustainable works like increasing environmental and ecological education of community members to prevent open disposal of waste.</p>
6	Sort the wastes disposed at the waste management center, supply business units that process secondary raw materials, reduce food waste and help supply to auxiliary units.	<p>In order to improve the quality and results of sorting waste, the following tasks will be conducted:</p> <ul style="list-style-type: none"> • Take effective measures aimed at sorting waste and improve workers’ knowledge about sorting waste during pre-start meeting. • Investigate experiences of other mines and look for methods to implement at OT.
7	In the framework of biodiversity offset plan, study impacts of mines, determine offset methods and implement the offset action plan approved in April, 2015 Resolution No. 55 through the provincial CRKh.	Evaluation and research activities to establish the effects and negative impacts of mine on biodiversity have been conducted; and are continuing. In collaboration with the Wildlife Conservation Society and foreign researchers, OT has been conducting comprehensive long-term biodiversity monitoring program since 2013. Studies with satellite transmitters on collars of Khulan and black-tailed gazelles and hoofed animal census survey are parts of the project. Meetings with the Provincial Environmental

№	Recommendations	Proposed work in accordance to the recommendations
		Department will be arranged to consult about solutions to merge the OT LLC's biodiversity offset action plan with the regulations and resolutions approved through Umnugobi provincial CRKh in 2015.
8	Develop mid-term planning for the implementation of the program "1 ton resource - 1 tree", approved in April, 2015 through the Resolution 56 of the provincial CRKh. Within the framework of the program "1 ton resource - 1 tree", increase elms of Undai River. For example, develop staged plans to implement and plant trees, establish forest lands, and increase green facilities around settlement areas in 2016.	OT is one of the first mining companies to initiate the project to breed natural herbal plants, especially desert plants. The company created 21 jobs for locals and has been cooperating with provincial and soum centers, and community partners, and donated a total of 53675 saplings from 2012-2015. These seedlings and saplings are 2-year-old native species; and have been in a greenhouse for 1 year and outdoors for 1 year, which are results of 2 years worth of work of a team consisting of about 20 people. Hence, we believe it is appropriate to determine the survival count of each distributed seedlings and saplings and reveal the results as part of our work performance. If the success rates of distributed seedlings are disregarded, we think it is applicable to terminate this work. Tree planting areas will be determined and planted with the authorities of Umnugobi province's Khanbogd soum in the future. Additionally, conduct relevant research to increase the amount of elms along Undai River and determine suitable areas to plant.
9	Rehabilitate coal transportation dirt road, Ikh Ger – OT dirt roads, and conduct regular dust monitoring at operational dirt roads, and use dust suppression methods until the construction of paved roads.	Determine road networks damaged through OT project operations, and determine no longer used areas that need rehabilitation and rehabilitate possible parts. The methodology currently used by OT mine is not suitable for monitoring road dust; therefore, will determine a more suitable method and the best monitoring points with consulting company. Will conduct monitoring in accordance to the determined methodologies.
10	Turn the dirt road between the route Coal transportation dirt road-OT-Khanbogd into paved roads	The paved road along the path Khanbogd - OT – Javkhlant route is planned to be built in 2016, and "S E C" LLC, environmental assessment company is performing the Environmental Baseline Studies and Environmental Impact Assessment for the project.
11	Arrange Khaliv sand deposits' direction to the road flooding channel. In case of joint decision of local residents and administratives of Galba-Uush Dolood basin, initiate the works to establish reservoirs and ponds.	Get it reviewed by the 3-sided board meeting with the community, and collaborate in accordance to the decisions with the corresponding basin authorities. The sand mine closure will be done in accordance to the law after operations.
12	Monitor Undai River continuously. The water and the flow were hindered in June, 2015. Wild animals and livestock drink water from this area.	Continue the current monitorings at Undai river, review the results, and report to the Ministry of Environment, Green Development and Tourism.
13	Introduce the measurements of environmental monitoring program at soum and bagh meetings, and prepare easy-to-read materials/brochures for the residents.	The Environmental team of the HSE Department of Oyu Tolgoi LLC will discuss and select with the Regional departments the optimal methods to deliver understandable and accessible information to soum and bagh residents about Oyu Tolgoi's ongoing environmental conservation activities, especially environmental monitoring programs and their pros and results.
14	By diverting Bor Ovoo spring, straw, dolgono etc of that area stopped growing. This offset action needs special attention.	Vegetation monitoring was conducted from 2010-2012 by Oyu Tolgoi project around Bor Ovoo spring, and based on the results, a Draft proposal for vegetating New Bor Ovoo Spring developed and presented at the meeting with the local community. The final decision had not been decided for the New Bor Ovoo Spring land issues during that time; hence, the vegetation proposal was on hold. By the end of the year, the land issue was resolved and it was decided to leave the Spring area as it is. The flora team of OT project updated the 2016 vegetation proposal and introduced the updated version at the three-sided meeting on December 11, 2015. Therefore, OT will continue to focus on this project.