P.O. BOX 119
GJOA HAVEN, NT X0E 1J0
TEL: (867) 360-6338
FAX: (867) 360-6369

kNK5 wmoEp5 vtmpq
NUNAVUT WATER BOARD
NUNAVUT IMALIRIYIN KATIMAYINGI

Water Licence Application Supplementary Questionnaire for Mine Development

Note: Figure 1 and Tables W1 to W2 Appended

SECTION 1 :

GENERAL

1. **Applicant** Wolfden Resources Incorporated
403-1113 Jade Court
Thunder Bay, Ontario
Ontario P7B 6M7

Tel: (807) 346-1668
Fax: (807) 345-0284
Email: andrew.mitchell@wolfdenresources.com

Corporate Address (if different from above): as above

Project Name: High Lake Project

Location: Approximately 50 km south of the Arctic coast, in the Coronation Gulf/Bathurst Inlet area (Figure 1 appended to this Supplementary Questionnaire).

Closest Community: Kugluktuk (approximately 175 km southeast)

Latitude/Longitude: 67°22' 24"North and 110°51' 33" West

Please refer to Figure PD.1 in the attached *Project Description Supporting Regulatory Applications* (herein referred to as the Project Description).

2. Environmental Manager: Mr. John Begeman tel: (807) 346-1668

Project Manager: Mr. Andrew Mitchell tel: (807) 346-1668

3. Indicate the status of the mine or mill on the date of application. (Check the appropriate space.) Indicate schedule or time table of project activities.

Design	✓
Under construction	________________
In operation	________________
Suspended	________________
Care and Maintenance	________________
Abandoned	________________

The proposed schedule of project activities is found in the attached Project Description (Table PD.1).

4. If a change in the status of the mine or mill is expected, indicate the nature and anticipated date of such change.

The High Lake Project is in the design feasibility phase**.**

5. Indicate the proposed schedule for the Mine/Mill operating schedule.

During the operation phase, the mill will operate 24-hours/day, year-round. Typically, shifts will be 12-hours/day, on a 2 week in – 2 week out rotation. Section 7 of the attached Project Description includes an estimate of the workforce requirements throughout the Project life. Complete information will be included in Vol. 3, Sec. 1 (Socio-economic) of Wolfden's *High Lake Project Proposal*, which Wolfden anticipates submitting in late October to NIRB.

6. How will the Project affect the traditional uses on Inuit Owned Lands?

The effects on traditional uses of Inuit Owned Lands will be described in Vol. 3, Sec. 4 of Wolfden's *High Lake Project Proposal*, which Wolfden anticipates submitting in late October to NIRB.

7. Have the Elders been consulted on effects to the traditional use on Inuit Owned Land? If so, list them. If not, why not?

Consultation with the Elders was carried out on several occasions through workshops, one-on-one meetings/interviews, and through site visits. Complete details will be described in Vol. 3, Sec. 1 and 4 of Wolfden's *High Lake Project Proposal*, which Wolfden anticipates submitting in late October to NIRB.

8. Has the proponent consulted Inuit Organization in the Area? If so, list them.

The High Lake Project is located on Inuit Owned Lands. Vol. 2 and Vol. 3 of Wolfden's *High Lake Project Proposal* will provide complete details on the consultation activities that have been carried out for the Project to date. The following two tables summarize the meetings and consultation events with Inuit Organizations and communities that have taken place between 2004 and 2006.

Inuit Organization Meetings / Consultation Events, 2004 to 2006

Organization	Location	Date
Nunavut Tunngavik Incorporated	Cambridge Bay Cambridge Bay Iqaluit, NU Cambridge Bay	• April 8, 2004 • February 21, 2005 • May 27, 2005 • May 30, 2005
Kitikmeot Inuit Association	Vancouver Kugluktuk Gjoa Haven Vancouver Kugluktuk Toronto Kugluktuk Gjoa Haven Taloyoak Toronto, ON Kugluktuk	• January 2004 • February 10, 2004 • April 6, 2004 • January 2005 • February 24, 2005 • March 7-8, 2005 • June 1, 2005 • June 1, 2005 • June 2, 2005 • March 7-9, 2006 • March 30, 2006

Community Visits, 2004 - 2005

Community	Organization	Date
Cambridge Bay	Community open house	• April 7, 2004 • May 30, 2005
	Hamlet Council and/or Staff	• April 7, 2004 • February 22, 2005 • May 30, 2005
	Hunters and Trappers Organization	• May 30, 2005[1]
	Local businesses: Kitnuna Corporation, Kitikmeot Supplies, Kitikmeot Foods, Inukshuk Enterprises and Kalvik Enterprises[2].	• May 30, 2005
Gjoa Haven	Community open house	• June 1, 2005
	Hamlet Council and/or Staff	• April 6, 2004 • April 28, 2005 • June 1, 2005 • August 4, 2005
	Local business: KAP Enterprises/ Central Arctic Services Ltd	• June 1, 2005
Kugaaruk	Hamlet Council and/or Staff	• August 3, 2005
Kugluktuk	Community open house	• February 9, 2004 • May 31, 2005
	Hamlet Council and/or Staff Hunters and Trappers Organization[3] and Regional Hunters and Trappers Association[4]	• February 9, 2004 • February 12, 2004 • May 31, 2005 • May 30, 2006 • February 24, 2005 • May 31, 2005 • May 31, 2006
	Local businesses: JMS Supplies, Mulco Ltd and Kikiak Contractors	
Taloyoak	Community Open House	• June 2, 2005
	Hamlet Council and/or Staff	• April 26, 2005 • June 2, 2005
	Hunters and Trappers Organization	• April 26, 2005
		• June 2, 2005

[1] Invited, but did not attend.
[2] Invited, but did not attend.
[3] Invited, but did not attend, May 31, 2005 meeting.
[4] Invited, but did not attend, May 31, 2005 meeting.

9. Has the proponent consulted surrounding communities on traditional water use areas? If so, list them. If not, why not?

The closest community, Kugluktuk, is located approximately 175 km to the northeast of the High Lake Project. Given the remoteness and inaccessibility of the High Lake site, there is limited traditional use of this area. Traditional use of the area will be described fully in Vol. 3, Sec.1 and 4 of Wolfden's *High Lake Project Proposal*.

10. Attach a detailed location map (1:50,000) drawn to scale showing all on site and off site facilities and activities. Show the relative locations of the (proposed) locations of the mine, mill, water treatment facilities, sewage and solid waste facilities, and tailings containment areas. The plan should include the water intake and pumphouse, fuel and chemical storage facilities, any existing or proposed concentrate, ore and waste rock storage piles, any existing and proposed drainage controls, piping distribution systems, gas, electric and water utility route locations, and transportation access routes around the site. The map also should include elevation contours, water bodies and an indication of drainage patterns for the area.

Please refer to the attached Project Description for figures showing the site layout and facilities. Figure PD.2 in the attached Project Description provides the overall site layout for the mine facilities. A Water Management Plan (with figures), will be presented in Vol. 8 of Wolfden's *High Lake Project Proposal*.

11. If applicable, provide a brief history of property development that took place before the present company gained control of the site. Include shafts, adits, mills (give rated capacity, etc.) waste dumps, chemical storage areas, tailings disposal areas and effluent discharge locations. Make references to the detailed map.

The property was first discovered in the mid 1950s though airborne reconnaissance prospecting by Kennarctic Explorations Limited. Fifty-two diamond drill holes were completed over 1956 and 1957. The property was dormant until 1991 when Kennecott Canada Inc., in conjunction with Aber Resources Inc., began a second phase of exploration. During the period 1991-1993, additional magnetic, electromagnetic, and gravity surveys were conducted, along with surface mapping, sampling and drill core re-logging. An additional 63 diamond drill-holes were drilled on the property and surrounding showings. Wolfden acquired both the Kennecott and Aber interests in 2000, and has since completed three diamond drill programs. These exploration programs have largely been focused on the AB and D Zones and definition and infill drilling of the West Zone.

There has been no mine development activity on the High Lake property to date. The original exploration camp, located on the west shore of High Lake, continues to support exploration activity in the area. In 2007, construction of a new Weatherhaven camp near High Lake is proposed. It will eventually replace the existing camp and provide a safer, cleaner and more comfortable accommodation for crews working in the area. The proposed new camp facilities will include a treated potable water system and treated sewage system. Solid waste will be incinerated on site.

12. Give a short description of the proposed or current freshwater intake facility, the type and operating capacity of the pumps used, and the intake screen size.

Construction Phase:
Potable water will be pumped from Lake L5 to the construction camp and will be treated using a UV or other industry standard potable water treatment system. A pumphouse will be installed at the southeast shore of Lake L5, from which an insulated water line will run alongside the road to the mill and camp facilities. The demand for potable water is estimated to be up to 100 m^3/day during peak construction. The pump will have a capacity equivalent to the demand.

Operation Phase:
During the operation phase of the Project, water will be supplied from Lakes L5 and L4, although potable water will only be taken from Lake L5. Water required for processing of ore will be obtained from a combination of several sources:

- Recycling water from the tailings impoundment or polishing pond;
- Possibly from the open pits after any major storm events; and
- Fresh water for process make-up will be obtained from Lakes L4 and L5, located to the northeast of the camp/mill facilities.

A total of 1,400 m^3/day of water will be required for the mine facilities of which up to 100 m^3/day required for potable water from Lake L5 only. Water required for processing ore will be pumped from Lake L5 to Lake L4, and from Lake L4 to the mill via a separate water line. During the winter (October through May), approximately 70% of the process water will be sourced from Lake L5, and 30% from Lake L4. During the summer months (May through September) 100% of the process water withdrawal will be from Lake L4. Overall. approximately 94.3% of the water withdrawal will be from Lake L4, and 5.7% will be from Lake L5, over the summer. The estimated volumes of water to be taken from Lakes L4 and L5 are summarized below.

Water Use	**Source and Volume (m^3/day)**	
	Lake L4	**Lake L5**
Winter		
Process water	400	900
Potable water		100
Total Winter Volume	400	1,000
Summer		
Process water	1,300	
Potable water		100
Total Summer Volume	1,300	100

The pump intakes will be fitted with screens to prevent the entrainment of debris and fish into the pumps. The screen openings will be approximately 5 mm diameter.

13. At the rate of intended water usage for the *mining and milling activity*, explain water balance inputs and outputs in terms of estimated maximum draw down and recharge capability of the water source(s) from which fresh water will be drawn.

A water balance model has been developed for the fresh water supply. Wolfden's *High Lake Project Proposal* will present a Water Management Plan (Vol. 8), which will include details of the fresh water usage for the mining and milling activities. A summary of the estimated water withdrawal, draw down and loss of lake volume for each of Lakes L4 and L5 is presented below.

Drainage Basin Area and Runoff	**Lake L4**	**Lake L5**
Drainage Area (ha)	4,916	4,543
Annual runoff (m^3)	TBD	TBD
Winter Water Taking	**Lake L4**	**Lake L5**
Total amount of water withdrawal (m^3)	98,658	241,542
Days of water taking	243	243
Percent water withdrawal (%)	30	70
Daily water withdrawal (m^3)	406	994
Total loss of lake volume (%)	5.6	5.5
Loss of water depth (m)	2.1	2.4
Summer Water Taking	**Lake L4**	**Lake L5**
Total amount of water withdrawal (m^3)	161,040	19,440
Days of water taking	243	243
Percent water withdrawal (%)	94.3	5.7
Daily water withdrawal (m^3)	1,320	80
Total loss of lake volume (%)	<1.0	<1.0
Loss of water depth (m)	n/a	n/a

14. Will any work be done that penetrates regions of permafrost?
Yes__**X**____ No______

15. If "YES" above, is the permafrost continuous or discontinuous?

The permafrost is continuous in this area. Vol. 6, Sec. 1 (Landforms and Soils), Vol. 5, Sec. 2 (Hydrogeology) and Vol. 9 (Technical Supporting Documents) of Wolfden's *High Lake Project Proposal* will contain complete information on the nature of the permafrost in the area.

16. Were (or will) any old workings or water bodies (be) dewatered in order to conduct the exploration activity?

Yes _____ No __**X**___

17. If "YES" above, indicate the name of the water body, the total volume of water to be discharged and the chemical characteristics of the water. Also included should be the receiving water body and expected schedule of the dewatering.

Not applicable.

18. Was (or will) the above discharge (be) treated chemically ?
Yes_____ No______

Not applicable

19. If "YES" above, describe the applied treatment.

Not applicable

SECTION 2 :

GEOLOGY AND MINERALOGY

20. Physiography; Provide an analysis and interpretation of the geologic and hydrologic environment in the immediate vicinity of the mine or plant. The investigation should extend from ground surface downward to the base of the glacial drift. Include large-scale topographic map(s) covering the area where the mine, mill and waste disposal basin are (or were to be) located. The map(s) should provide information on groundwater patterns and permafrost variations in the area.

Vol. 6, Sec. 1 of Wolfden's *High Lake Project Proposal* will contain a discussion of permafrost conditions, and Vol. 5, Sec. 2 will contain a description of groundwater flows in the area.

21. Briefly describe the physical nature of the ore body, including known dimensions and approximate shape.

The West Zone comprises three lenses, the largest being about 275 m long, extending about 900 m down dip, and up to 40 m thick. The AB Zone comprises 12 separate lenses of mineralization, the largest of which is 150 m long, extends 360 m down dip, and is up to 80 m wide. The D Zone comprises four separate lenses of mineralization, the largest being about 150 m long, dipping down 320 m and up to 35 m thick.

22. Briefly describe the host rock in the general vicinity of the ore body (from the surface to the mineralized zone.)

The High Lake Volcanogenic Massive Sulphide (VMS) deposit is hosted within the High Lake greenstone belt in the northern part of the Slave structural province. Basement gneisses are overlain by sedimentary and volcanic rocks. The High Lake greenstone belt extends 140 km from the Coronation Gulf coast southward, ranging from 5 to 30 km in width. The belt is characterized by a higher proportion of felsics over mafic volcanics when compared to other Slave province greenstone belts. The belt exhibits greenschist grade metamorphism and is intruded by syn-volcanic mafic to intermediate plutons and post tectonic felsic intrusions. Proterezoic age northwesterly trending diabase dykes, which are part of the Mackenzie swarm, intrude the supracrustal sequence.

23. Provide a geological description of the ore minerals of the deposit. (If possible, include the percentage of metals.)

The central part of the High Lake property is underlain by north-trending basaltic to rhyolitic flows and fragmental volcanics. Intercalated with the rhyolitic volcanics, and at their eastern contact with andesitic rocks, are numerous carbonate-rich exhalite lenses. Argillites and greywacke underlie the easternmost part of the property. A large mass of plutonic rocks intrudes the supracrustal units in the western part of the property. Several prominent northwest and north-south trending brittle faults, including the regional High Lake fault, variably displace granitoid and volcanic units before the emplacement of the diabase dikes. Stratiform and stringer sulphide mineralization, typical of VMS deposits, occur at High Lake as discrete north and northeast trending bodies at the AB, D, and West Zones.

The High Lake VMS deposits are within the felsic volcanic sequence with the AB and D Zones at or near the contact with granodiorite intrusion. Each ore is distinctly different, although all copper mineralization in each ore type is in the form of chalcopyrite. No secondary minerals were detected. West Zone contains very high quantities of both pyrite (~41.5%) and pyrrhotite (~12.5%), which together with the chalcopyrite and sphalerite take the overall sulphide content of the ore to >70%. The remainder of the ore comprises mainly quartz and amphiboles along with minor quantities of phyllosilicates and iron oxides. Trace amounts of galena (0.51%) and molybdenite (0.14%) were also detected.

AB Zone contains approximately 41% sulphides comprising chalcopyrite (~16%), pyrite (~17%) and pyrrhotite (~8%). Quartz is the dominant non-sulphide mineral (~30%) followed by phyllosilicates (~14%) and amphiboles (~10%). Over 4% of the ore is comprised of iron/manganese oxides.

Finally, D Zone is in contrast to the West Zone in that although it contains similar quantities of chalcopyrite and sphalerite it is dominated by non sulphide gangue minerals, particularly quartz (~39%) and phyllosilicates (~25.5%). Pyrite comprises only 9% and pyrrhotite is only 1.3%. Carbonates rather than oxides comprise the majority of the remainder.

24. Describe the geochemical tests which have been (or will be) performed on the ore, host rock, and waste rock to determine their relative acid generation and contaminant leaching potential. Outline methods used (or to be used) and provide test results in an attached report (i.e. Static, Kinetic tests.)

Geochemical studies conducted for the High Lake Project comprised assessment of ore body and host rock geology, selection of samples from exploration core drilling to represent different rock types, static testing for acid based accounting, and selection of set of samples for kinetic testing that is ongoing as at August 2006. In addition, samples of tailings materials and of other potential quarry rock sources have tested. Vol. 9 of Wolfden's *High Lake Project Proposal* will include complete details on this.

SECTION 3:

THE MINE

25. Indicate the type of mining method to be used on the property:

Open Pit	**X**
Underground	**X**
Strip mining	
Other mining activity	

Explain:

26. Outline any possible operational changes and when they might occur. (e.g. Open pit to underground)

The operation phase of mining is described in the attached Project Description, Section 2.5. Conceptual mine plans indicate that two of the deposits, AB and D Zones, can be mined most efficiently by open pit excavation initially, followed by subsequent underground mining accessed from the bottom of each pit. The third deposit, the West Zone, will be mined entirely from underground. The sequence of mining is shown on Table PD.1 of the attached to Project Description. Years minus 2 and Year minus 1 define the construction phase, and Years 1 through 14 define the operational phase of the Project.

Open Pit Mining	**Year**
AB Zone:	minus 1 to 3
D Zone:	3 to 4

Underground Mining	
West Zone:	3 to 14
AB Zone:	4 to 5
D Zone:	5 to 11

27. Describe the type(s) of explosives to be used in mining operations.

The type of explosive to be used for underground purposes will be Ammonium Nitrate Fuel Oil (ANFO). It will be premixed on the surface by means of a typical mixing plant. All of the ANFO produced for underground use will be packaged in 25 kg tote bags, transported underground and stored in powder magazines.

ANFO will also be used for surface mining operations. It will be mixed on a bulk explosives mixing truck and delivered directly into blast holes where required.

28. Indicate the number of shafts or other openings that are presently on the property. Signify whether or not the openings are presently in use. (Submit measurement in metres) Indicate if used seasonally.

None are presently on the property.

29. Are any entrances to shafts, adits, etc. below ground water level.

The entrance to the underground workings of the West Zone will be at the surface, above the groundwater level. Within the AB and D Pits, the underground workings will be above groundwater, within the zone of continuous permafrost.

30. Are permafrost conditions expected?

Yes, permafrost is continuous throughout this area. Vol. 6, Sec. 1, Vol. 5, Sec. 2 and Vol. 9 of Wolfden's *High Lake Project Proposal* will provide information on permafrost conditions in the area.

31. Indicate the expected life of the mine.

The anticipated operation life of the mine is 14 years in total. This estimate includes both open pit and underground mining operations.

32. Indicate the <u>present average</u> rate of production from all ore sources on the property.

Not applicable.

33. Indicate the <u>expected maximum</u> rate of production from all ore sources on the property.

The estimated maximum rate of production is 4,000 tonnes per day.

34. Outline all water usage in the mine. Indicating the source and volume of water for each use.

Mining methods for both open pits and underground will be essentially dry. Minor amounts of water will be used for dust suppression on haul roads, and will be sourced from surface runoff from non-fish-bearing lakes nearby.

35. Indicate the volume of natural ground water presently gaining access to the mine workings.

Not applicable

36. Outline methods used (planned) underground to decrease mine water flow. (For example: recycling)

The AB and D open pit mines will be dry. The West Zone underground will be dry to an elevation of –50 m elev. asl or approximately 440 m below ground surface, where mining will occur beneath the permafrost. Below this depth, there will be some groundwater flow. The access ramp and upper part of the West Zone will be configured to avoid intersection with thawed ground, known as taliks, beneath lakes. Alternatively, grouting might be considered.

37. Indicate the average daily volume of water to be discharged <u>from the mine</u> during normal operations.

Mine	**Duration**	**Timing**	**Annual Average (m^3)**	**Daily Average (m^3)**
AB Pit	Year 1 - Year 6	June - October	18,119	119
D Pit	Year 2 - Year 11	June - October	13,930	92
West Zone	Year 6 – Year 14	All Year	237,705	651

38. If a mill will be operating on the property in conjunction with mining, will all mine water (underground, open pit, etc.) be directed to the mill for reuse?

No, mine water from the AB and D Pit mines will be directed to the tailings facility and will not be directly recycled for use in the milling process. If required, the mine water from these locations will be pre-treated with lime prior to discharge into the High Lake Tailings Impoundment. Process water will then be recycled from the tailings impoundment. During extreme storm events, water that accumulates in the open pits may be redirected to the mill for use as make-up water if required.

Water from the West Zone underground mine will be routed to the mill and combined with the tailings prior to discharge into High Lake. Prior to being combined with the tailings, the deep groundwater will be pretreated with ferric sulphate to reduce cadmium levels to approximately 0.01 mg/L.

39. If not, indicate the proposed point and volume of discharge for the mine water.

See above.

40. What are the chemical and physical characteristics of the preceding minewater?

See Tables W1 and Table W2 (appended to the Supplemental Questionnaire), which summarize the predicted water quality of the mine water from the AB Pit, D Pit and the West Zone Underground.

41. Are there any treatment plans for minewater and will any chemicals be used in such treatment? Explain.

Water from the West Zone underground mine routed to the mill will be pretreated with ferric sulphate to reduce cadmium levels prior to being combined with the tailings. If required the mine water from AB and D Pit will be treated with lime prior to discharge into High Lake. A Water Management Plan (Vol. 8) will be included in Wolfden's *High Lake Project Proposal*, which will describe the details of proposed treatment of mine water.

SECTION 4:

THE MILL (PROCESSING PLANT)

42. Attach a copy of the (proposed) mill flow sheet. Indicate the points of addition of all the various reagents (chemicals) that are (or will be) used.

See the attached Project Description Figure PD.8.

43. If milling is in progress on the property at the present time, indicate the rate of milling.

___X___ not applicable (check) OR _______ tonnes/day

44. What is the present (or proposed) maximum capacity of the mill?

Maximum capacity of the mill is 4,000 tonnes per day.

45. List the types and quantities of all reagent used in the mill process (in kg/tonne ore milled.)

Please refer to Table PD.13 of the attached Project Description for a complete list of reagents and estimated annual consumption for processing.

46. Is the (proposed) milling circuit based on autogenous grinding?

Yes ________ No ___X_____ Partially

No. It will use conventional grinding.

47. Indicate the amount(s) of concentrate(s) produced in the mill.

The combined production of High Lake copper and zinc concentrates will peak at approximately 140,000 tonnes per year. Both silver and gold will be shipped with the concentrate for offsite extraction and refining. Over the life of the Project, silver production is estimated to be 20,900,000 ounces, and gold production 410,000 ounces.

48. Will fresh water undergo treatment prior to use in the mill process? Explain.

No.

49. Indicate all uses of water in the mill. Include the quantity and source of the water for each use.

The attached Project Description (Section 2.3.2) provides for a discussion of water use in the processing of ore. In brief, water required for processing of ore will be obtained through recycling in the process plant and by pumping from the tailings impoundment. The total amount of water required for milling, assuming a maximum ore production of 4,000 tonnes per day, will be 8,000 m^3/day. This assumes that 2 tonnes of water are used for every tonne of ore processed. It is estimated that approximately 85% of the process water requirements will be met with through internal recycling within the mill and reclaim water pumped from the tailings. The quantity of reclaim water that will be pumped back to the mill is estimated at 3,100 m^3/day. The water quality of the reclaim water will vary as the water quality in changes over time as a result of mill effluent being deposited. A Water Management Plan will be included in Wolfden's *High Lake Project Proposal* which will contain details of the estimated water quality of the reclaim water.

The recycled water will be supplemented by fresh water obtained from Lakes L4 and L5. The amount of make-up water needed for processing is estimated to be 1,300 m^3/day as outlined in Item 12. The estimated water quality of the freshwater make-up is presented in Table W3 appended to the Supplementary Questionnaire.

50. Indicate the total volume of water discharged from the mill.

The total volume of water discharged from the mill to either High Lake (directly or through AB Pit) and D Pit is approximately 4,400 m^3/day which includes tailings supernatant, sewage discharge, and underground mine water in Years 6 through 14. An annual summary of the water quantity discharged from the mill is presented below. See Section 2.5.11 in the attached Project Description for further discussion of water management and use in relation to process water/use of recycled waters from the tailings impoundment.

Summary of Mill Discharge (m^3/day)

Year	Tailings Supernatant	Sewage	West Zone Mine Water	Total Daily Discharge
1	3280	80	0	3360
2	4381	80	0	4461
3	4332	80	0	4412
4	4308	80	0	4388
5	4305	80	0	4385
6	4373	80	1358	5811
7	4362	80	664	5106
8	4387	80	670	5137
9	4371	80	588	5039
10	4351	80	546	4977
11	3672	80	527	4279
12	3679	80	510	4269
13	3679	80	510	4269
14	1248	80	484	1812
Average	3909	3909	651	4522

51. Of the preceding volume, what quantity is (will be) recycled to other areas on the property (mine, mill, etc.)? Indicate location of use and quantity.

As outlined above, of the approximately 4,400 m^3/day of water discharged to High Lake, approximately 3,100 m^3/day will be recycled back to the mill from High Lake.

52. Based on yearly production, indicate the average quantity of tailings (Dry weight) discharged from the mill.

Please refer to Section 2.5.10 of the attached Project Description. Processing of 4,000 tonnes per day of High Lake ores will result in a tailings production rate of approximately 3,600 tonnes per day of tailings solids. Annual tailings production for the operational life of the mine is shown in Table PD.7 in the attached Project Description and summarized below.

Summary of Tailings Solids Production

Year	Annual Tonnes	Annual Volume	m3/month	tonnes/day
1	980146	720696	60058	2683
2	1309192	962642	80220	3584
3	1294618	951925	79327	3544
4	1287490	946684	78890	3525
5	1286582	946016	78835	3522
6	1306750	960846	80070	3578
7	1303551	958493	79874	3569
8	1310963	963943	80329	3589
9	1306324	960532	80044	3577
10	1300126	955975	79665	3560
11	1097441	806942	67245	3005
12	1099293	808304	67359	3010
13	1099293	808304	67359	3010
14	372817	274130	22844	1021
Average	1168185	858959	71580	3198

53. What is the average liquid-solid ratio of tailings leaving the mill?

By weight: 1.22 (55% liquid, 45% solids)
Liquid: Solid

By volume: 1.66
Liquid: Solid

54. If applicable, identify any chemical treatment applied to the liquid phase before being discharged to the tailings area. (Attach flow sheet if available.)

If required, the mill effluent will be treated with lime prior to discharge to the tailings facilities to enhance metals removal through precipitation. As well, flocculants may be used to facilitate the settling of tailings once deposited in the tailings facility. A Water Management Plan (Vol. 8) will be included in Wolfden's *High Lake Project Proposal*; it provides complete details on potential chemical treatment options.

55. Based on present production or bench test results, describe the chemical and physical characteristics of liquid mill wastes directed to the tailings area.

Bench scale flotation tests were carried out on samples of ore from each of the target ore zones (AB, D and West Zone) by G & T Metallurgical Services Ltd. Tailings supernatant was collected and sent to CanTest for analysis. A summary of these results is presented in Table W4 appended to the Supplementary Questionnaire

56. Provide a geochemical description of the solid fraction of the tailings.

Tailings samples for static testing from AB Zone, D Zone and West Zone have Neutralizing Potential Ratio (NPR) values <1.0 and can all be designated as potentially acid generating. The data indicate that tailings leachate does not exceed any of the Metal Mining Effluent Regulations (MMER) guidelines. However, cadmium, copper, mercury, and selenium concentrations in the leachate from all three simulated tailings samples are indicated to exceed CCME guidelines. It should be noted that both the cadmium and mercury CCME guidelines are lower than the detection limits used for the distilled water leachate analysis. However, there are values greater than detection, indicating that these metals are leached at measurable levels from these three tailings materials. In addition, lead and zinc concentrations in West Zone tailings leachate are reported to exceed CCME guidelines. While these results indicate that leachate from High Lake tailings materials could, if exposed, produce leachate that exceeds CCME guidelines, it is important to keep in mind that these concentrations will most likely be significantly diluted by freshet runoff into High Lake, as well as by the assimilative capacity of the Kennarctic River and that these results are best used to predict potential elements of concern, rather than absolute concentrations that will be realized in High Lake. Fresh tailings from the ore processing plant will be deposited subaqueously to prevent sulphide oxidation and the attendant acid and metal release. Complete information will be provided in Wolfden's *High Lake Project Proposal* (Vol. 9).

57. Identify the current source of power production.

There is no power source at present. Electricity will be generated using diesel generator sets, having a total installed capacity of 13.7 MW. The power demand when in full operation is 10.5 MW (13 Kva).

58. At present, is the mill handling custom lots of ore from other properties (or will the mill be handling any in the future)?

Not applicable, and not anticipated during milling operations.

59. If so, specify ore characteristics and describe any mill processes that will change as a result.

See above.

60. If tailings are being recovered in the mill or elsewhere for use as backfill etc.), indicate the quantity of solid tails (tonnes/day) recovered from the mill process.

Not applicable.

61. Will exits be bermed to prevent spills from escaping the mill?

Yes.

62. Will all sumps for process tanks have the required 110% holding capacity of the largest tank?

Yes. All sumps will be designed for 110% capacity of all process tanks.

SECTION 5:

THE CONTAINMENT AREAS

63. Is the tailings containment area (being) designed for total containment?

The containment area(s) are designed for total containment of solids. Complete details on the tailings containment will be provided in Wolfden's *High Lake Project Proposal*

64. Attach detailed scale plan drawings of the proposed (or present) tailings area. The drawings must include the following:

a. details of pond size and elevation;

b. precise details of all retaining structures (length, width, height, materials of construction, etc.);

c. details of the drainage basin, and existing and proposed drainage modification;

d. details of all decant, siphon mechanisms etc. including water treatment plant facilities;

e. the plan for tailings deposition and final tailings configuration;

f. details with regard to the direction and route followed by the flow of wastes and/or waters from the ore; and

g. indication of the distance to nearby major watercourses.

Note: Individual detailed large-scale drawings of any facility (dam, decant system, ditch, dike, water treatment plant, etc.) (to be) constructed <u>must</u> be attached. Specific details with regard to the methods of construction, materials (to be) used, etc., are required.

Please refer to the figures included in the attached Project Description. A report entitled *Conceptual Design of Tailings Containment Facility* (BGC Engineering Inc. 2006) will be included in Wolfden's *High Lake Project Proposal* (Vol. 9)**.**

65. Explain your choice of location for the tailings pond design by rationalizing rejection of other options. Consider the following criteria in your comparisons; subsurface strata, permeability, abandonment of tailings, recycling/reclaiming waters, and assessment of runoff into basins. Attach a brief summation.

Complete information on the tailings disposal options will be included in Vol. 9 of Wolfden's *High Lake Project Proposal.*

66. The total area for the existing tailings basin in hectares and for any proposed tailings area is **102.3** hectares.

High Lake:	90.0 ha
AB Pit:	7.3 ha
D Pit:	5.0 ha
Total area:	102.3 ha

67. The average depth of the tailings basin is ________ metres.

High Lake
The average depth of the High Lake basin is 10.6 m with a maximum depth of 37 m. At the end of the operational mine life, the elevation of the tailings solids surface is essentially the same as the current surface elevation (283 m). This corresponds to an average depth of tailings solids of approximately 10.6 m with 5 m of water cover above the tailings.

AB Pit
The bottom elevation of AB Pit is 165 m and the spill elevation is 288. From Year 7 to Year 10 tailings solids will be placed in AB Pit up to the spill elevation, resulting in an overall depth of tailings of 122 m. The tailings will then be capped with NAG waste rock.

D Pit
The bottom elevation of D Pit is 193 m and the spill elevation is 291 m. From Year 12.5 on, tailings solids and supernatant will be deposited into D Pit. At end of the operational mine life the elevation of the tailings solids surface will be 278 m and the water surface elevation will be 291 m, resulting in a water cover of 13 m.

68. Indicate the total capacity for the existing tailings area by using water balance and stage volume calculation and curves. (Attach a description of inputs and outputs along with volume calculations.)

Not applicable.

69. Indicate the total capacity for the proposed tailings area using water balance and stage volume calculation and curves. (Attach a description of inputs and outputs along with volume calculations.)

High Lake: 8.5 M m^3
AB Pit: 3.5 M m^3
D Pit: 1.5 M m^3

The capacity for High Lake includes additional capacity that could be utilized in the event that D Pit is not available at the time it is needed. The capacities of the proposed tailings areas are designed to contain the entire production from the mill for the life of the Project. Details of the capacity and water balance for the proposed tailings area will be provided in a Water Management Plan, which will be included in Wolfden's *High Lake Project Proposal* (Vol. 8).

70. Will the present tailings area contain the entire production from the mine-mill complex for the life of the project?

Not applicable.

71. If "NO' above, or if production output increases tailings volumes. Indicate what plans have been made for future tailings disposal on the property.

Not applicable.

72. Has any land in the immediate area been identified as native or crown land or withdrawn pending native claim settlement?

The land status in the immediate area is shown in Figure 1 (appended to this Supplementary Questionnaire). Both Inuit Owned Land (CO 29) and Crown lands are affected.

73. Do the tailings area and all related treatment facilities lie on company held claims?

Yes. Wolfden's *High Lake Project Proposal* will include figures/maps that show the facilities in relation to mining leases held by Wolfden.

74. If not, indicate mine claim boundaries (and owners) on tailings area plan map. Also, attach a copy of all pertinent agreements signed with the owners of the claims not held by the company.

75. Will the proposed tailings area engulf or otherwise disturb any existing watercourse?

The primary tailings disposal area is High Lake. In addition, it is planned to deposit tailings in both the AB and D pits, but neither of these locations are watercourses.

76. If "YES", attach all pertinent details (name of watercourse, present average flow, direction of flow, proposed diversions, etc.).

Vol. 8 (Water Management Plan) and Vol 5. (Aquatic Environment) will be provided with Wolfden's *High Lake Project Proposal*, which will provide these details. Also see Section 2.2.9 of the attached Project Description for discussion of the proposed tailing containment structures.

77. If any natural watercourse will gain access to the proposed tailings are, what methods will be used to decrease the amount of runoff water entering the containment area? Indicate the volume of water that will enter the tailings area from the source(s) in question and attach all pertinent details of proposed diversions.

High Lake was selected for tailings impoundment in part because the High Lake drainage area is a small area with minimal inflows. The water from the Upper High Lake sub-drainage (L21 – L24) will continue to flow into High Lake. Drainage from Lake L15, draining into the northwest corner of High Lake, may be diverted north to Granite Lake (L4). Drainage of Lake L18, south of High Lake, will be diverted towards the Kennarctic River. Control of water entering the tailings along with details on the proposed diversions will be described in the Water Management Plan (Vol. 8), which will be provided with Wolfden's *High Lake Project Proposal*

78. Indicate on the tailings area plan drawing all sources of seepage presently encountered in the vicinity of the tailing area, the volume of each seepage flow (m^3/day), and the direction of each flow.

Water balance details for future seepage will be presented in Vol. 8 (Water Management Plan), and in Vol. 5 (Aquatic Environment) of Wolfden's *High Lake Project Proposal*

79. Are the seepage flows from the property presently being treated chemically? ________ If so, describe how.

Not applicable.

80. If NOT, explain.

Not applicable.

81. Please attach a conceptual abandonment and restoration plan for all tailings areas being developed. Describe the measures that have been (or will be) taken to contain and stabilize the tailings area(s) against leaching and seepage after operations on the property cease.

A Preliminary Reclamation and Closure Plan (Vol. 8) will be presented in Wolfden's *High Lake Project Proposal.*

82. Describe the proposed or present operation, maintenance and monitoring of the tailings area.

A Tailings Monitoring Plan will be prepared at a later stage.

SECTION 6:

WATER TREATMENT

83. Describe the methods of chemical treatment that are presently being used and/or will be used to control the quality of the tailings effluent. Attach engineering drawings where applicable and a process flow chart. If a pilot test has been conducted please attach description of methodology and results.

The Water Management Plan (Vol. 8), which will be provided in Wolfden's *High Lake Project Proposal,* will describe the details on proposed water treatment methods.

84. List the names of chemicals to be used in the water treatment process.

The Water Management Plan (Vol. 8), which will be provided in Wolfden's *High Lake Project Proposal,* will describe the details on proposed water treatment methods.

85. What is the proposed or present <u>average</u> rate of effluent treatment of the plant (if applicable)?

A water treatment plant per se is not proposed. Various chemicals are added at different stages in the treatment of tailings, and will be described in the Water Management Plan (Vol. 8), which will be included in Wolfden's *High Lake Project Proposal.*

86. What is the proposed or present maximum effluent treatment capacity of the plant (if applicable)?

Not applicable.

87. Will treated effluent be discharged directly to a natural water body or will polishing or settling ponds be employed? Describe location control structures and process of water retention and transfer. Attach any relevant design drawings.

A polishing pond is proposed; however the primary effluent treatment will be at or close to the effluent source. The polishing pond will provide secondary treatment of effluent. See Figure PD.3a and Figure PD.3b in the attached Project Description.

88. Name the first major watercourse the discharge flow enters after it leaves the area of company operations.

The discharge flow will enter the Kennarctic River, once it passes through the polishing ponds.

89. In terms of rate of effluent release and volume and flushing rate of the receiving watercourse, estimate the extent of the mixing zone within the receiving waters and where background levels of constituents for that watercourse will be attained.

Wolfden's *High Lake Project Proposal* will include Vol. 5, Sec. 3 (Freshwater and Sediment Quality) and a Water Management Plan (Vol. 8), which will provide details on effluent release, mixing zone, and predicted concentrations in the receiving environment.

90. Describe the present (proposed from pilot tests) chemical and physical characteristics of the tailings effluent (Decant).

Not applicable.

SECTION 7:

ENVIRONMENTAL MONITORING PROGRAM

91. Have elders been consulted in the establishment of the monitoring program?

Monitoring Plans are being developed. Elders will be consulted where appropriate and relevant.

92. Has Traditional Knowledge of the area been considered?

Yes. Vol. 3, Sec. 4 (Inuit Qaujimajatuqangit) of Wolfden's *High Lake Project Proposal* will describe the traditional knowledge of the area.

93. Has any baseline data been collected for the main water bodies in the area prior to development?

Yes. Baseline data for the aquatic environment will be included in Vol. 5 of Wolfden's *High Lake Project Proposal.*

94. If "YES" include all data gathered on the physical, biotic and chemical characteristics at each sampling location. Identify sampling location on a map.

The following sections of Wolfden's *High Lake Project Proposal* contains details of sampling locations for water quality, sediment quality, fish and fish habitat and hydrology:

- Hydrology (Vol. 5, Sec. 1);
- Freshwater and Sediment Quality (Vol. 5, Sec. 3); and
- Freshwater Aquatic Organisms and Habitat (Vol. 5, Sec. 4)

95. Provide an inventory of hazardous materials on the property and storage locations. (Attach separate Map)

An Emergency Response and Contingency Plan (Vol. 8) will be included in Wolfden's *High Lake Project Proposal*, which will contain this information. See also Figure PD.3a and PD.3b the attached Project Description for the locations of facilities at the mine site, including those used for storage of hazardous materials.

96. Attach the present or proposed contingency plan that describes course of action, mitigative measures and equipment available for use in the event of system failures and spills of hazardous materials.

An Emergency Response and Contingency Plan (Vol. 8) will be included in Wolfden's *High Lake Project Proposal.*

97. Provide a conceptual abandonment and restoration plan for the site, detailing the costs to carry out the plan, and a proposal for a financial assurance that covers the costs to carry out the plan.

A Preliminary Reclamation and Closure Plan will be contained within Wolfden's *High Lake Project Proposal.*

98. Provide a detailed emergency response plan for the project.

See Questions 95 and 96 above.

99. Provide a description of the pollution control systems and environmental management procedures.

Various pollution control measures have been incorporated into the project design. These measures include dust suppression, enclosed conveying and transport of concentrate, storage of concentrate, lined fuel dispensing areas, high efficiency incinerator, use of low sulphur fuel, etc. Vol. 8 of Wolfden's *High Lake Project Proposal* will present several environmental management plans.

SECTION 8:

ENVIRONMENTAL ASSESSMENT AND SCREENING

100. Has this project ever undergone an initial environmental review, including previous owners.

No. This is a new project.

101. Has any baseline data collection and evaluation been undertaken with respect to the various biophysical components of the environment potentially affected by the project (e.g. wildlife, soils, air quality), i.e. in addition to water related information requested in this questionnaire?

Yes. Vol. 3 to 6 of Wolfden's *High Lake Project Proposal* will describe the baseline studies that have been completed over the past three years in relation to this Project.

102. Describe any cumulative impacts the project may create?

Vol. 7 of Wolfden's *High Lake Project Proposal* will provide an assessment of cumulative effects associated with this Project.

103. Has any meteorological data been collected at or near the site? (E.g. precipitation, evaporation, snow, wind).

a) If so, please include the data and attach copies of reports or site titles, authors and dates.

Meteorological data has been collected at High Lake and Ulu since 2004 when weather stations were installed at both sites to record precipitation, wind speed and direction, humidity. A complete discussion of this can be found in Wolfden's *High Lake Project Proposal*, to be submitted to NIRB in late October (Vol. 4, Sec. 1).

104. If no, are such studies being planned? Briefly describe the proposals.

105. Has authorization been obtained or sought from the Department of Fisheries and Oceans for dewatering or using any water bodies for containment of waste?

Discussions with Fisheries and Oceans Canada are ongoing with respect to any Fisheries Act Authorizations that may be required for this project.

106. Please attach an outline briefly describing any options or alternatives considered or reflected for the various mine components outlined in this questionnaire (e.g. mill site, water supply sources, location for ore and waste piles).

A discussion of alternatives that were considered for the various mine components will be included in the *High Lake Project Proposal*.

107. Has a socio-economic impact assessment or evaluation of this project been undertaken? (This would include a review of any public concerns, and water and cultural uses of the area, implication of land claims, compensation, local employment opportunities, etc.)

Yes.

108. If yes, please describe the proposal briefly.

A discussion of the socio-economic impact assessment can be found in Wolfden's *High Lake Project Proposal*, to be submitted to NIRB in late October (Vol. 3, Sec. 1).

An Inuit Impact and Benefits Agreement is being negotiated in relation to the socio-economic impact assessment.

109. If no, is such a study being planned? Yes________ (When) OR No_________

110. Does the project alter the quantity or quality or flow of waters through Inuit Owned Lands?

Yes.

111. If yes, has the applicant entered into an agreement with the Designated Inuit Organization to pay compensation for any loss or damage that may be caused by the alteration.

Compensation will be negotiated with the Kitikmeot Inuit Association (discussions ongoing).

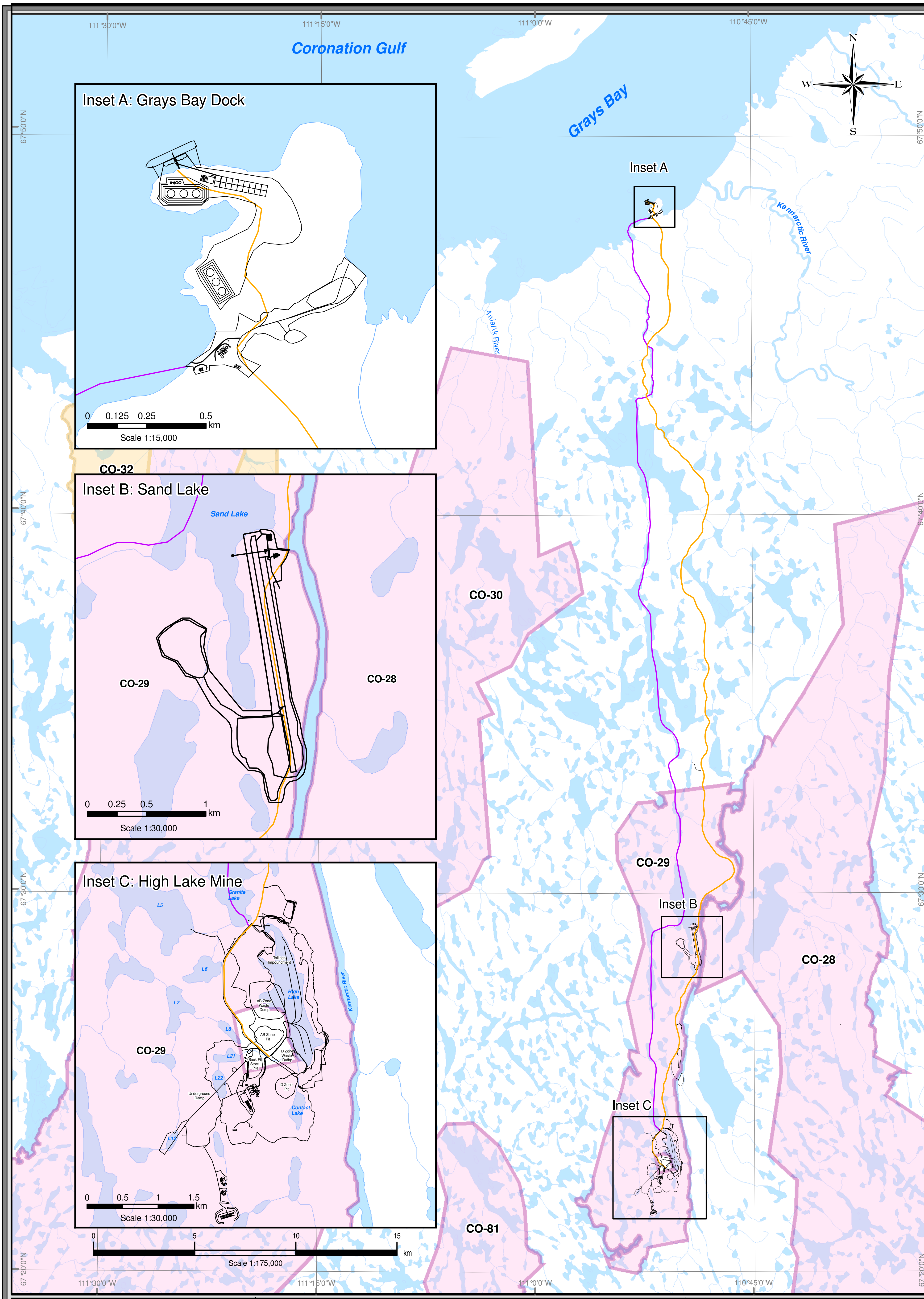
112. If no compensation arrangement has been made, how will compensation be determined?

See above.

Figures

- **Figure 1. Project Overview**

File: 41012_C1_Fig_5.3.1_SurfaceTenure_11Sep06.mxd



Legend

Proposed Project Components
- All-season Road
- Winter Road
- Project Footprint

Hydrological Features
- Watercourse
- Waterbody

Land Tenure
- Federal Crown Land
- Inuit Owned Land (surface and subsurface)
- Inuit Owned Land (surface)

WOLFDEN Resources Inc.

High Lake Project

Project Overview

References:

Project componets provided by Wolfden Resources Inc.

National Topographic Database (NTDB) provided by the Government of Canada, Natural Resources Canada at 1:250,000.

Inuit owned lands compiled by Nunavut Tunnavik Incorporated. Inuit owned lands are approximate, based on the designated map plan, and are not based on any plan of survey.

Projection: UTM Zone 12 NAD 83

Revision: 1

Date: September 11, 2006

Gartner Lee

Figure: 1

Tables

Table W1. Mine Water Quality from AB and D Pits

`	AB Pit					D Pit				
	Jun	**Jul**	**Aug**	**Sep**	**Oct**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**
Water Temperature	2	10	10	5	2	2	10	10	5	2
pH	7.8	7.9	8.2	8.3	8.4	7.9	7.9	8.2	8.4	8.6
Alkalinity	43.2	55.1	96.3	145.1	183.2	45	56.2	99.8	161.4	257.5
Hardness	38.03	45.66	78.48	119.35	211.51	28.83	34.80	59.33	91.36	145.14
Sulphate	31	36	53	83	216	24	26	39	59	150
Nutrients / Organics										
Total Phosphate	0.1	0.2	0.3	0.5	1.4	0.1	0.1	0.2	0.4	1.2
Total Metals										
Aluminum	0.0443	0.0569	0.1048	0.1622	0.1718	0.0497	0.0632	0.1196	0.2054	0.3071
Antimony	0.0313	0.0385	0.0673	0.1194	0.3558	0.0217	0.0268	0.0468	0.0831	0.2479
Arsenic	0.0766	0.0958	0.1711	0.3088	0.9337	0.0665	0.0831	0.1484	0.268	0.811
Barium	0.0294	0.036	0.0284	0.0209	0.0104	0.0136	0.0166	0.0285	0.028	0.014
Beryllium	0.0001	0.0001	0.0003	0.0004	0.001	0.0001	0.0001	0.0002	0.0003	0.0006
Bismuth	0.0002	0.0002	0.0004	0.0007	0.0022	0.0002	0.0002	0.0004	0.0007	0.002
Boron	0.0914	0.1125	0.1958	0.3468	1.0315	0.0611	0.075	0.1305	0.231	0.6872
Cadmium	0.0008	0.0008	0.0012	0.00129	0.00158	0.00072	0.00072	0.00105	0.0011	0.00131
Calcium	8.8	10.7	18.4	25.7	22.2	6.6	8	13.7	19.6	10.3
Chromium	0.0003	0.0004	0.0006	0.001	0.0029	0.0002	0.0003	0.0005	0.0008	0.0022
Cobalt	0.0043	0.0044	0.0063	0.0069	0.0098	0.0037	0.0037	0.0053	0.0058	0.0078
Copper	0.3938	0.3938	0.4495	0.4509	0.4567	0.3389	0.3387	0.3855	0.3849	0.3835
Iron	0.0002	0.0002	0.0001	0.0001	0.0001	0.0002	0.0001	0.0001	0.0001	0.0001
Lead	0.0015	0.0016	0.0017	0.0021	0.0031	0.0013	0.0013	0.0015	0.0017	0.0024
Lithium	0.0028	0.0033	0.006	0.0098	0.027	0.0022	0.0026	0.0046	0.0075	0.0206
Magnesium	3.9	4.6	7.9	13.4	37.9	3	3.6	6.1	10.3	29
Manganese	0.0459	0.0492	0.0861	0.1094	0.215	0.0353	0.0371	0.0651	0.078	0.1363
Mercury										
Molybdenum	0.0097	0.012	0.0209	0.0371	0.1104	0.0072	0.0089	0.0155	0.0275	0.082
Nickel	0.0043	0.0048	0.0075	0.011	0.0272	0.004	0.0045	0.0071	0.0106	0.0267
Potassium	4.9	6.1	10.7	18.9	56.2	4.9	6	10.5	18.7	55.7
Selenium	0.0056	0.0068	0.0119	0.021	0.0625	0.0025	0.0031	0.0054	0.0094	0.028
Silicon	2	2.4	4.1	7	20.2	1.8	2.2	3.8	6.4	18.6
Silver	0.0001	0.0001	0.0001	0.0002	0.0005			0.0001	0.0001	0.0004
Sodium	0.0038	0.0046	0.008	0.0142	0.0419	0.0056	0.0069	0.0119	0.0211	0.0626
Strontium	0.0233	0.0278	0.0466	0.0786	0.2239	0.0171	0.0203	0.0338	0.0565	0.1594
Thallium			0.0001	0.0001	0.0003			0.0001	0.0001	0.0003
Tin	0.0004	0.0004	0.0008	0.0014	0.0041	0.0004	0.0005	0.0008	0.0015	0.0043
Titanium	0.0004	0.0005	0.0009	0.0017	0.005	0.0007	0.0009	0.0015	0.0026	0.0079
Uranium	0.0002	0.0003	0.0005	0.0008	0.0024	0.0001	0.0002	0.0003	0.0005	0.0014
Vanadium	0.0016	0.0018	0.0033	0.0058	0.0176	0.0015	0.0019	0.0033	0.0058	0.0174
Zinc	0.2635	0.2636	0.4081	0.4081	0.4109	0.2285	0.2287	0.3541	0.3549	0.3608

WOLFDEN Resources Inc.

Table W2. Summary of West Zone Underground Mine Water Quality (mg/L)

	Year 6 - 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14
Conventional Parameters								
pH	7	7	7	7	7	7	7	7
Alkalinity	39.5	43.73	43.73	43.73	43.73	43.73	43.73	43.73
Hardness	30837	30899	30899	30899	30899	30899	30899	30899
Chloride	30670	30670	30670	30670	30670	30670	30670	30670
Sulphate	181.3	184.23	184.23	184.23	184.23	184.23	184.23	184.23
Nutrients / Organics								
Total Phosphrous		0.001	0.001	0.002	0.002	0.003	0.003	0.004
Total Metals								
Aluminum T-Al	0.684	4.66	4.66	4.66	4.66	4.66	4.66	4.66
Antimony T-Sb		0.004	0.004	0.004	0.004	0.004	0.004	0.004
Arsenic T-As		0.004	0.006	0.008	0.011	0.014	0.017	0.02
Barium T-Ba		0.01	0.01	0.01	0.01	0.01	0.01	0.01
Boron T-Bo	2.227	2.237	2.237	2.237	2.237	2.237	2.237	2.237
Cadmium T-Cd	0.088	0.101	0.101	0.101	0.101	0.101	0.101	0.101
Calcium T-Ca	12094	12106	12106	12106	12106	12106	12106	12106
Chromium T-Cr	0.322	0.32	0.32	0.32	0.32	0.32	0.32	0.32
Cobalt T-Co	0.46	0.51	0.51	0.51	0.51	0.51	0.51	0.51
Copper T-Cu	0.158	4.35	4.35	4.35	4.35	4.35	4.35	4.35
Iron T-Fe	0.937	1.36	1.36	1.36	1.36	1.36	1.36	1.36
Lead T-Pb	0.922	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Lithium T-Li	0.182	0.19	0.19	0.19	0.19	0.19	0.19	0.19
Magnesium T-Mg	155	163	163	163	163	163	163	163
Manganese T-Mn	0.978	1.4	1.4	1.4	1.4	1.4	1.4	1.4
Molybdenum T-Mo		0.0004	0.0006	0.0008	0.0011	0.0014	0.0017	0.0021
Nickel T-Ni	0.678	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Potassium T-K	69.13	70.62	70.62	70.62	70.62	70.62	70.62	70.62
Selenium T-Se		0.001	0.001	0.001	0.002	0.002	0.002	0.002
Silicon T-Si	7.22	10.44	10.44	10.44	10.44	10.44	10.44	10.44
Sodium T-Na	4797	4799	4799	4799	4799	4799	4799	4799
Strontium T-St	221.6	221.65	221.65	221.65	221.65	221.65	221.65	221.65
Thallium T-Tl		0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
Tin T-Sn		0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
Uranium T-U		0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003
Vanadium T-V		0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
Zinc T-Zn	0.113	3.32	3.32	3.32	3.32	3.32	3.32	3.32

WOLFDEN Resources Inc.

Table W3. Freshwater Supply Water Quality (mg/L)

Conventional Parameters	Water Supply mg/L
Water Temperature	Winter (Oct - May) - 2.0, Summer 7.0 (June - Sept)
pH	7.21
Alkalinity	12.5
Hardness	15.4
Chloride	3
Sulphate	4.3
Nutrients / Organics	
Total Ammonia	0.02
Nitrate	0.009
Nitrite	0.005
Total Phosphate	0.0055
Ortho-phosphate	0.001
Total Organic Carbon	2.39
Dissolved Organic Carbon	1.84
Cyanides	
Free cyanide	
WAD cyanide	
Total Cyanide	
Cyanate	
Thio-cyanate	
Total Metals	
Aluminum T-Al	0.0074
Antimony T-Sb	0.0001
Arsenic T-As	0.00016
Barium T-Ba	0.00218
Beryllium T-Be	0.0005
Bismuth T- Bi	0.0005
Boron T-Bo	0.01
Cadmium T-Cd	0.00005
Calcium T-Ca	4.07
Chromium T-Cr	0.0005
Cobalt T-Co	0.0001
Copper T-Cu	0.00269
Iron T-Fe	0.03
Lead T-Pb	0.000098
Lithium T-Li	0.005
Magnesium T-Mg	1.36
Manganese T-Mn	0.002637
Mercury T-Hg	*0.000025*
Molybdenum T-Mo	0.00005
Nickel T-Ni	0.0005
Potassium T-K	2
Selenium T-Se	0.001
Silicon T-Si	0.2
Silver T-Ag	0.00001
Sodium T-Na	2
Strontium T-St	0.00708
Thallium T-Tl	0.0001
Tin T-Sn	0.00326
Titanium T-Ti	0.01
Uranium T-U	0.00001
Vanadium T-V	0.001
Zinc T-Zn	0.003

Table W4. High Lake Bench Scale Flotation Tests Supernatant Water Quality

Sample ID	AB Zone	D Zone	West Zone
Conventional Parameters			
Conductivity	241	406	1239
pH	8.8	9.5	11.6
Alkalinity	552	570	672
Hardness	76	108	468
Total Suspended Solids	4	54	16
Chloride	13.3	22.3	18.3
Sulphate	37.8	85.5	319
Nutrients / Organics			
Total Ammonia	0.083	0.064	0.096
Nitrate	0.122	0.119	0.093
Nitrite	0.011	0.003	0.002
Total Metals			
Aluminum	0.19	1.23	1.02
Antimony	0.002	0.002	0.012
Arsenic	0.001	0.002	0.005
Barium	0.017	0.027	0.014
Beryllium	0.001	0.001	0.001
Bismuth	0.001	0.001	0.002
Boron	0.06	0.12	0.09
Cadmium	0.0002	0.0002	0.0002
Calcium	26.4	40.1	187
Chromium	0.001	0.001	0.001
Cobalt	0.001	0.001	0.005
Copper	0.07	0.014	0.01
Iron	0.76	1.93	0.63
Lead	0.013	0.082	0.055
Lithium	0.001	0.001	0.001
Magnesium	2.41	1.91	0.18
Manganese	0.005	0.018	0.009
Mercury	0.00002	0.00002	0.00002
Molybdenum	0.016	0.032	0.045
Nickel	0.001	0.001	0.002
Potassium	4.5	12.5	13.8
Selenium	0.013	0.03	0.086
Silicon	1.1	3.6	1
Silver	0.00025	0.00025	0.00025
Sodium	8.32	29.6	23
Strontium	0.098	0.16	0.45
Thallium	0.0001	0.0004	0.0005
Tin	0.001	0.001	0.001
Titanium	0.002	0.012	0.001
Uranium	0.0005	0.0005	0.0005
Vanadium	0.001	0.001	0.001
Zinc	0.021	0.041	0.032
Dissolved Metals			
Aluminum	0.038	0.074	0.67
Antimony	0.002	0.002	0.012
Arsenic	< 0.001	0.001	0.005
Barium	0.017	0.02	0.011
Beryllium	< 0.001	< 0.001	< 0.001
Bismuth	< 0.001	< 0.001	< 0.001
Boron	0.06	0.11	0.09
Cadmium	< 0.0002	< 0.0002	< 0.0002
Calcium	26.7	35.6	156
Chromium	< 0.001	< 0.001	< 0.001
Cobalt	< 0.001	< 0.001	0.004
Copper	0.017	< 0.001	< 0.001
Iron	< 0.05	< 0.05	0.06
Lead	< 0.001	< 0.001	< 0.001
Lithium	0.001	< 0.001	< 0.001
Magnesium	2.28	0.41	0.06
Manganese	0.002	0.002	< 0.001
Mercury	< 0.02	< 0.02	< 0.02
Molybdenum	0.017	0.03	0.055
Nickel	< 0.001	< 0.001	0.003
Potassium	< 0.15	< 0.15	< 0.15
Selenium	0.012	0.025	0.1
Silicon	0.9	1.7	0.8
Silver	< 0.00025	< 0.00025	< 0.00025
Sodium	8.23	26	20
Strontium	0.1	0.14	0.4
Thallium	< 0.0001	< 0.0001	< 0.0001
Tin	< 0.001	< 0.001	< 0.001
Titanium	< 0.001	< 0.001	< 0.001
Uranium	< 0.0005	< 0.0005	< 0.0005
Vanadium	< 0.001	< 0.001	< 0.001
Zinc	0.006	< 0.005	< 0.005