PACIFIC SILICA AND ROCK QUARRY LTD. Aggregates and Quarry Materials Application Requirements List

The following information is sourced from Pacific Silica and Rock Quarry Ltd. Ministry approved Mine Plan and Notice of Work Application. Please refer to these documents for further details.

SECTION A – PROJECT OVERVIEW

OBJECTIVE

Pacific Silica and Rock Quarry Ltd, herein referred to as PS&RQL, is focused on correcting mining practices previously executed by others while creating much needed aggregates for the South Okanagan. The latter goal is the most challenging in that it must meet current regulations while overcoming the challenges created by C&MS and other lessors. PS&RQL proposes to extract the silica mineral deposit without tailings, overburden, rejects or other waste rocks as PS&RQL has the ability to market all quarry materials including what is considered waste material in standard mining operations.

SITE INFORMATION

PS&RQL is located 1 km North of Oliver, B.C. within the Okanagan Valley. Below is a list of the claims under tenure application.

<u>Crown Granted</u> <u>Claim</u>	Lot Number	<u>Area (ha.)</u>	Type of Zoning	<u>Granted</u>
GYPO	L3098s	15.95	Heavy Industrial	1927
RODERICK DHU	L3581s	5.08	Heavy Industrial	1937
LUCY WYLLIE	L3582s	13.44	Heavy Industrial	1937

Quarry Type:	Open pit
Owner:	Pacific Silica and Rock Quarry Ltd.
Mine Manager:	Steve Tait
Phone:	250-498-6665 (After Hour Emergency 250-498-9787)
Fax:	250-498-2384
Email:	psilica@telus.net

LOCATION INFORMATION - NOW 2010
Name of Mine (What will the operation be called when in production?): <u>Pacific Silica and Rock Quarry Ltd.</u>
Street Address of Property, if applicable: ~ 37024 – 97st, Oliver
Access route from nearest town to property: Approximately 1 km North of Oliver, 300m east of Gypo claim.
B.C. Geographic System Map Sheet Number(s) [i.e. TRIM 093L.006] TRIM 82E.013 AND TRIM 82.023
Northing: <u>5452527.417</u> Easting: <u>313583.812</u> UTM Zone: <u>11</u>
or NTS Map Sheet Number(s) [i.e. NTS 093L/14E]:
Latitude:o/'/" Longitude:o/'/"

HISTORY

The Gypo Group has been mined since 1927 for high purity silica, mainly by Teck Metals Ltd., previous known as CM&S Ltd. The Gypo claim was crown granted in 1927, while the remaining claims under application were granted in 1937. From 1926 to 1955, 23,242 tons of silica rock was extracted. Pacific Silica Ltd. took over the development of the property in 1955 and although no annual production statistics are available, it is believed that an annual average of 46,000 tons was removed between 1956 and 1966. In 1969 a major slide ceased this operation. This historic data suggests that 400,000 to 500,000 tons of quartz was removed to date.

The silica removed from the quarry was mainly used for flux in the mineral industry; however it was also marketed as decorative material, stucco dash, patio aggregate, poultry grit, ferrosilicon and silicon carbide. Fibre optics and silicon chips, which require very high grade silica, appear to be a probable market for the potentially significant mineral deposit remaining.

MINING PROGRAM

Surface development by PS&RQL has been to correct mining developments by others, while producing needed aggregates for the South Okanagan. This surface development is integral to PS&RQL and the source of marketable product for the company's operation and revenue. The advantage PS&RQL enjoys over previous owners is the ability to market what is considered waste materials in standard mining operations. The waste is processed into products such as rip rap, decorative stone, crush, pit run and other high demand aggregate materials.

PS&RQL intends to expand the Tiger Rock Landing in order to facilitate stability in the 1968 slide area and create a processing landing for the waste materials left by previous lessors. Limited space for stockpiling processed waste material has created the need to create another landing, herein referred to as Pupp Landing.

Timber removal will be minimal and focused on dead or infected hazardous trees. All necessary permits and approvals will be obtained.

EXTRACTION

PS&RQL will perform core samples as deemed necessary to verify mineral deposit. The Mine Plan drawing illustrated the current stockpile location. It is PS&RQL goal to utilize all material extracted thereby creating no tailings, overburdens, rejects or other waste rocks.

Blasting operations conducted will be performed by certified contractors. Any residence within 300m of the blast site will be notified 24 to 48 hours prior and their contact information secured in the general office. The blast will be preceded by a 5 minute siren audible to all nearby residents. There are no plans to disturb highway traffic as it is located over the minimum precautionary distance. During a blast the access to the pit will be guarded or locked up.

PROCESSING AND STOCKPILING

The majority of materials will be processed and stockpiled on the Roderick Dhu and Lucy Wyllie Claims. Processing will be crushing and screening, currently performed by contractors on a batch basis. Processing for 2012 materials was and is currently delayed until this matter is rectified. A market analysis will be conducted to determine the financial benefits of introducing a bagging plant.

ROADWAYS

All roadways will be clearly marked and a map illustrating them, the signage and the emergency evacuation route will be posted at the office. The Gypo Group is accessible through existing roadways.

ENVIRONMENTAL IMPACTS

As mentioned previously PS&RQL is based just north of Oliver, within the Okanagan Valley. This valley is labelled as a Pocket Desert, which is part of the Great Basin Desert which in turn is part of a network of deserts that extend southward to the Sonoran Desert in Mexico. Due to the orientation of the valley in reference to the Coastal and Monashee mountain ranges a rain shadow is created resulting in a low annual average precipitation of approximately 300mm¹ a year. PS&RQL has incorporated a stormwater management plan is available in the Mine Plan

¹ Environment Canada - Canadian Climate Normals or Averages 1971-2000

documentation. The stormwater management plan will mainly consist of rip rap lined trenches, slope management, rock pits, check dams and filter fabric fences where necessary.

AERIAL PHOTO ILLUSTRATING DISTURBED AREAS BY OTHERS

1974 Aerial Photograph



2004 Google Earth Aerial Photograph



SECTION B – PROJECT DESCRIPTION

PS&RQL proposes to extract the silica mineral deposit without tailings, overburden, rejects or other waste rocks as PS&RQL has the ability to market all quarry materials including what is considered waste material in standard mining operations.

LAND USE - NOW 2010

CULTURAL HERITAGE

Are you aware of any cultural heritage resources present on the property?

Yes - please attach a plan for the conservation of cultural heritage resources on the property

No - if cultural heritage resources are discovered while mining, you are required to report them to the Mining Division.

Describe measures proposed to prevent inadvertent access of unauthorized persons on the mine site (i.e. fencing, vegetative barriers, berms, etc.): <u>The main access is fenced, and signed. Alternate access are deactivated and/or signed.</u>

Are measures proposed to minimize noise	impacts of the c	pperation? (i.e. equipment selection	on, restrictions on hours
of operation, noise barriers, etc.)	🗌 No	Yes - Please describe: _	The current hours
of operation are Monday to Saturday, 7:00a	am to 5:30 pm.		

Are measures proposed to minimize dust in	npacts of the	proposed operation? (i.e. apply dus	t suppressants, water
sprays, wind breaks, vegetation, etc.)	🗌 No	Xes - Please describe: _	Dust suppressants are
placed on high use roadways and a vegetal	tive barrier co	mposed mainly of mature pine trees	s will remain on the east
boundary of the Gypo claim as long as no ir	nmediate thre	eat is evident	

Are measures proposed to minimize visual impacts of the proposed operation? (i.e. vegetative barriers, berms, green belts, etc.)

No Xes - Please describe: A vegetative barrier composed mainly of mature pine trees will remain on the east boundary of the Gypo claim as long as no immediate threat is evident.

MINE DEVELOPMENT PLAN NOW 2010

Proposed start date (y/m/d): <u>ongoing</u>	Proposed finish date (y/m/d): <u>2050</u>
The mining operation will generally be (check one)	Continuous (operates throughout the year)
Seasonal,	usually operates from to
	t (occasionally operates with extended periods of inactivity)
Estimate total mineable reserves over the <u>life</u> of the	mine: <u>>1 million</u> tonnes, or m ³
Estimated annual extraction from site:	18,000 tonnes/yr, or m³/yr
Description of Work (Check appropriate boxes):	
Excavation of Pit Run	Washing - please complete Schedule B
⊠ Crushing ⊠	Blasting - please complete Schedule C
Mechanical Screening	Timber Clearing * - estimate volume of timber: m ³
* Timber Clearing on Crown Land requires a Free	e Use Permit or License to Cut from the Ministry of Forests
	pposed work schedule (i.e. hours, days of usual operation): and reclaiming waste material from previous lessors. These

<u>PS&RQL is currently removing overburden material and reclaiming waste material from previous lessors. These</u> materials are processed into structural materials and decorative stone to meet the growing demands of the South <u>Okanagan. The current schedule is 'intermittent' with hours of operation from Monday to Saturday, 7:00 am to</u> 5:30pm

As mentioned above PS&RQL is located 1 km North of Oliver, B.C. within the Okanagan Valley. The following table illustrates the land zoning.

Crown Granted Claim	Lot Number	<u>Area (ha.)</u>	Type of Zoning	<u>Granted</u>
GYPO	L3098s	15.95	Heavy Industrial	1927
RODERICK DHU	L3581s	5.08	Heavy Industrial	1937
LUCY WYLLIE	L3582s	13.44	Heavy Industrial	1937

To the best of my knowledge the claims noted above have been used for mining purposes initiating in 1927. All claims have been approved for Mining purposes by the Ministry.

NOW 2010		
Are settling ponds or other structures propos	ed to control sedimentation in su	urface run off?
No Xes - please	complete Schedule B	
What is the average depth to the high ground	lwater table at the proposed exc	cavation? Approximate 75 m
Elevation of the groundwater table was deter	mined from (check applicable bo	oxes):
Existing area wells	Test wells drilled for this pu	rpose
Test pits	☑ Other (describe) Google Ea	arth and BCGS mapping
Describe measures proposed to protect grou mining activity (i.e. fuel management program		
Note that excavations below the	roundwater table may require	e special approval from the Inspector
Will fuel/lubricants be stored on site?	🛛 No 🗌	Yes
If yes, handling, transportation and s "Summary of Environmental Standa edition"	-	vironment standards as detailed in dling, Transportation and Storage, 2 nd
Shortest distance between proposed excava	ion to nearest residence: <u>200</u>	m, or km
Shortest distance between proposed excava	ion to nearest residential water	source: <u>370</u> m, or <u>k</u> m
LAND USES – NOW 2010		
Is the site within the Agricultural Land Reserv	re?	
No Yes - authorization District must be obtained. Provide		eserve Commission and Regional ilable:
Is the site within the Forest Land Reserve?		
No Yes - authorization	rom the Land Reserve Commis	sion must be obtained
Is the site within a Tree Farm License?		
No Yes - state the TFL	number:	
Name of TFL h	older:	

Does the local government have a Soil Removal Bylaw?

🖂 No	🗌 Yes -	please be aware	that a Soil Re	moval Permit mav	/ be required b	y the local government

Official Community Plan designation for the site is: <u>n/a</u>

Current land use zoning for the site is: <u>13 (Industrial Three Zone; for current operation site), and RA (Resource</u> Area)

Proposed end land use is: Commercial and/or Residential_

III. RECLAMATION PROGRAM

The mining standards prior to PS&RQL possession of the Gypo Group were inadequate. Land was stripped of its resources; waste rock was stacked as benches and little if anything was done for reclamation. PS&RQL continues to bring the existing conditions left by previous lessors to today's standards. Removal of old deleterious buildings and accumulated scrap iron from pervious lessors was completed this past year. As part of the reclamation process all disturbed lands will be revegetated to a self sustaining state using native plant species. PS&RQL will accumulate, stockpile and blend nitrogen and carbon rich organics such as grass clippings and prunings to create a rich organic matter to be used in the reclamation process. To ensure long term stability all mining activities and reclamation procedure will commence as per the regulations, The Mines Act, and The Health, Safety and Reclamation Code for Mines in British Columbia.

NOW 2010

Reclamation measures and schedule proposed to achieve end land use objectives as per part 10.7.4 and 10.7.5 of the Health Safety and Reclamation Code for Mines in British Columbia (hereafter referred to as the Code): <u>In 2000</u> <u>Pacific Silica and Rock Quarry Ltd. (PS&RQL) acquired the Gypo Group (7 crown granted claims). PS&RQL initial objectives were to reorganize quarry operation, correct road and access inefficiencies, bring the pit and production to Ministry of Energy, Mines and Petroleum Resources (MEMPR) current standards of practice and develop an achievable reclamation programs. To date PS&RQL has corrected many of the past quarry errors and produced marketable rip rap, decorative stone and crush from previously stockpiled waste materials. PS&RQL will maintain existing trees as a buffer at the Gypo east property boundary, as long as no immediate threat is evident. Disturbed areas, not used in operation, will be reclaimed by grass seeding with an approved native grass mixture and grapes will be planted where feasible.</u>

SECTION C – ADDITIONAL INFORMATION

I. Environmental

Prior to Pacific Silica and Rock Quarry's ownership the Gypo Mine was an abandoned deleterious site. Pacific Silica and Rock Quarry, at a great expense, have spent the past twelve years restoring this site to standards approved by the Ministry of Energy and Mines. Please refer to the Mine Plan drawings for details on the site.

II. Socio-Community

Noted above

I trust all documentation is in order. Should you require further information please contact the undersigned.

Sincerely,

Kelly Venables

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