Introduction

This review form is designed to facilitate the documentation of the review of the EIS by the federal review team and the associated responses to comments from proponents.

Note: the focus of this review should be on the proponent's response to the March 2011 review comments. If during the course of the review a reviewer identifies a new issue that has not previously been addressed during the process and has the potential to affect the outcome of the review, this matter should be brought to the attention of the Agency immediately.

The proponent will be directed to respond to comments directly in this table. The federal review team will review the responses provided and will provide a disposition. This information will inform the conclusions in the comprehensive study report.

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	**EIS Review Form**			**Star-Orion South Diamond Mine Project**									
2	**Comment Number**	**Fed Dept**	**Volume / Document**	**Line Number / Table Number / Figure Number**	**Page**	**Topic**	**2012 Federal comment: Context / Preamble e.g., provide applicable background/rationale for providing the comment**	**2012 Federal Department Comment / Request for Additional Information:**	**2013 April Proponent Response**	**2013 June Federal Information Request (Agency Only)**	**2013 July Federal Information Request (Agency Only)**	**2013 June and July Proponent Response**	**2013 Federa Information Request (all departments)- TBD**
3													
4	1	CEAA	Various Sections		6	Project Description	Inconsistent project footprint values throughout report. Section 2.7, page 2-62 Table 2.7-1 Section 6.2.1.5, page 6-13, Table 6.2.1-2 Section 6.2.1.5, page 6-17, Table 6.2.1-5 Section 6.2.1.5, page 6-20, Table 6.2.1-6 Section 6.2.1.5, page 6-35 Table 6.2.1-12 Section 6.2.1.5, page 6-36 Table 6.2.1-13 Section 6.3 page 6-50 Table 6.3.2-1 indicates that 3,882 ha would be affected in the LSA. Section 6.4.3.4, page 6-122, Table 6.4.3-2 Section 10.1, page 10-1	Please confirm the correct value for total project footprint area.	The total Footprint of the project is 3,935.65 ha as listed in Table 2.7-1, which includes areas within the LSA and RSA. The LSA disturbance numbers (e.g., 3,882.2 ha in Table 6.2.1-6 summarizing Terrain disturbance) are for the LSA only. Therefore, there are 53.3 ha of disturbance outside of the LSA, but in the RSA. The LSA disturbance area in Table 6.4.3-2 of 3,880.96 ha should be 3882.2, but differs by 1.14 ha due to errors in rounding that occurred during grouping of linear disturbances. The value in Section 10, (page 10-1) which reported the total project area of 3,946 ha is incorrect and should be 3,936 ha (after rounding) to agree with Table 2.7-1.				
5	2	CEAA	Section 2.0	Section 2.5.3	2-21	Project Description	It is stated that the access road would connect to Highway 55 near Smeaton. However, according to page 3-28 of Section 3.0 it would be connected to Highway 55 near Shipman.	For information only.	The proposed access road would connect to Highway 55 approximately 9 km west of Smeaton, and approximately 1.5 km east of Shipman, Saskatchewan.				
6	3	CEAA	Section 2.0	Section 2.6.5	2-50	Project Description	The total footprint area for the PKCF should be 513.95 ha according to Table 2.7-1 on page 2-62.	Please confirm the correct value for total footprint area.	The total footprint of the PKCF is 513.59 ha, as is presented in Table 2.7-1.				
7	4	CEAA	Section 6.0	Section 6.1	6-5	EA Methodology	The list of project components in Table 6.1-1 erroneously includes a water management reservoir and omits the runoff pond and polishing pond.	For information only.	The water management reservoir has been removed from the project description, and, as the reviewer suggests, is listed in Section 6.1 in error.				
8	5	CEAA	Appendix 3.0-A Section 6.0	Section 5.1.2 Section 6.2.5.2	43 6-113	Physical Environment	The description of the installation of the diffuser does not refer to the use of a drop shaft and installation below the river bed as is indicated in the proponent's response to federal comments on the EIS and in Appendix 6.3.1-B.	For information only.	The drop shaft and river bed installation are detailed components of the diffuser as described in Appendix 6.3-1. These components have been considered in development of the Fish Habitat Compensation Plan (see information provided in response to DFO SIR #3).				
9	6	CEAA	Section 6.0	Section 6.2.7.5	6-149	Physical Environment	It is stated that runoff and seepage from the overburden and rock storage pile will report to "Ravine 101 Creek" whereas, on page 6-100 it is stated that discharges from Caution Creek, Caution Creek South and 101 Ravine will increase as a result of increased runoff from the pile.	Please confirm this apparent inconsistency.	Drainage and seepage from the Overburden and Rock Storage pile is modeled to report to the 101 Ravine and Caution Creek based on the facilities location in the drainage areas of these streams and the predicted closure drainage. Therefore, the statement on P. 6-100 is correct, and the sentence on page 6-149 should be updated to mention inputs to Caution Creek.				
10	7	CEAA	Section 6.0	Section 6.4.3.4	6-122	EA Methodology	Flaw in EA methodology. Disturbance is identified as a VC when it is an environmental effect.	For information only.	Shore agrees that disturbance is referenced as a VC in error.				
11	8	CEAA	Section 6.0 Section 9.0	Section 6.2.1.5 Section 6.5.2.2 Section 6.5.2.3 Section 9.4.10	6-8 6-9 6-11 9-22	Project Description	Reference is made to the water management reservoir which has been removed from the project.	For information only.	The water management reservoir has been removed from the project description, and, as the reviewer suggests, is listed in these Sections 6.1 in error.				
12	9	CEAA	Section 10		10-1	Physical Environment	EIS states significant effects to soil, vegetation and ravines in the immediate area of the Project while mine is in operation.	Please clarify if it is Shore's expectation that the "significant" effects discussed refer to residual effects, i.e. effects remaining after the implementation of proposed mitigation measures. What is the expected duration of these effects? When would reclamation and revegetation be expected to be in place?	The statement in Section 10 refers only to effects during operations. After closure, no significant effects are expected on soil and vegetation (See Table 8.2.-1). Significant effects in the LSA on ravines are limited to the removal of the East Ravine by excavation of the Star pit, and changes to flow in local ravines during operations. These changes in flow are mitigated by flow supplementation during operations, and are not significant after mitigation. Post closure, some small effects on flow are expected to extend into the long term until groundwater flow returns to premining conditions.		Provide an overall characterisation of the residual effects on Hydrology by combining the assessments of the tributaries and Saskatchewan River using the criteria listed in Section 6.1 of the EIS. Also include an overall conclusion on significance for this VC.	Refer to revised Hydrology Assessment.	
13	10	CEAA	Section 6.0	Table 6.2.2-4, 5 and 6	6-107, 6-108, 6-111		The EIS indicates that there would be significant impacts on Caution Creek, Caution Creek South, 101 Ravine, East Ravine, Duke Ravine, west Rvine and Stream F.	Please clarify if it is Shore's expectation that the "significant" effects discussed refer to residual effects, i.e. effects remaining after the implementation of proposed mitigation measures. In view of the fact that a fish habitat compensation plan is considered a mitigation measure, and that determination of the significance of the residual effects is to take mitigation measures into account, does this mean that Shore would anticipate significant impacts to fish habitat with the fish habitat compensation plan in place?	Shore anticipates that the proposed Fish Habitat Compensation Plan (see response to DFO SIR #3) mitigates loss of fish habitat, and as a result, after closure and completion of the Fish Habitat Compensation Plan, effects would not be significant. During operations, flow supplementation will mitigate negative effects on flows on fish and fish habitat.		Taking into account the proposed Fish Habitat Compensation Plan provided in Shore's April 2013 response, provide an updated characterisation of the residual effects on Fisheries and Aquatic Resources. Also provide a combined assessment of the tributaries and Saskatchewan River using the criteria listed in Section 6.1 of the EIS, including an overall conclusion on significance for this VC.	Refer to revised Fisheries Assessment.	
14	11	CEAA	Section 6.0	Section 6.3.1.5	6-13	Aquatic Environment	Figure 6.2.4-1 shows a tributary to East Ravine originating in the location of the Orion South pit. It is not clear if the impacts on fish habitat in East Ravine due to development of the Orion-South pit have been included in the assessment.	Please confirm.	All fish habitat in areas disturbed by the Project has been considered in the assessment and in the development of the Fish Habitat Compensation Plan. The surface water feature referred to in this comment originates from NTS data, and is not part of a defined channel nor provides fish habitat after examination of ground truthed baseline information.				
15	12	CEAA	Section 6.0	Section 6.3.1.8	6-31	Aquatic Environment	It is stated that DFO agreed that flow supplementation mitigation measures in 101 Ravine, Duke Ravine and English Creek were sufficient to avoid the need for compensation. Yet, Table 6.1.1-3 includes habitat losses in Duke Ravine and 101 Ravine that are to be offset by compensation.	Please explain this apparent discrepancy.	Habitat losses in the 101 and Duke Ravines presented in Table 6.3.1-3 quantify impacts due to construction of culvert road crossings in these Ravines. Effects of changes in flow on fish and fish habitat are mitigated by flow supplementation.				
16	13	CEAA	Section 6.0, 10	Section 6.4.2.2	6-83, 10-2	Socio-Economy	Table 6.4.2-3 includes an impact that is considered to be significant (removal of a hunting area traditionally used by James Smith Cree Nation). Shore indicates in Section 10 that many of the socio-economic benefits of the Project may mitigate this effect.	How will Shore ensure that sufficient mitigation measures that are specific to the removal of a hunting area are implemented and that the measures are effective?	Note that the "Significant" rating referred to in this comment is for one component of the combined Hunting VC assessment. The combined Hunting VC for JSCN was rated as 'Not Significant' (Table 6.4.2-3, P-86 of Section 6.4). However, despite this rating, Shore acknowledges that there will be an effect on traditional hunting in the LSA, and therefore refers the reviewer to potential socio-economic benefits that mitigate this effect. To date, Shore anticipates that employment and contracting opportunities generated by the Project will mitigate these effects, especially if there is a direct link between economic development and community benefit.	In section 6.4.2.2, page 6-81, Shore describes hunting concentration zones of JSCN within the RSA and the JSCN hunting area potentially impacted by the project footprint (<1% of hunting polygons out of a total of 194). a) Provide the percentage and area of JSCN hunting polygons that are within the Local Study Area. b) Provide the percentage and area of hunting polygons within the LSA and RSA that intersect the Management, Protected and Sensitive Zones of the FaIC Provincial Forest Integrated Forest Land Use Plan.	While the Agency has an enhanced understanding of the extent of environmental effects in relation to the distribution of the Hunting VC for the JSCN, Shore's determination on the significance of residual effects on the Hunting VC for JSCN requires further clarification. Provide an overall characterisation of the bio-physical residual effects on the Hunting VC (JSCN) by combining both the LSA and RSA bio-physical assessments. The characterization should be based on the criteria listed in Section 6.1 of the EIS and include an overall conclusion on significance.	Refer to revised JSCN Hunting Assessment (biophysical).	
17	14	CEAA	Section 6.0	Section 6.4.2.2	6-92	Socio-Economy	Table 6.4.2-6 includes an impact that is considered to be significant (removal of Spy Hill, which is a culturally-important feature for JSCN).	What discussions have occurred to date between Shore and JSCN on this specific issue? How will Shore ensure that mitigation measures specific to the removal of Spy Hillare implemented and that the measures are effective?	To date, the specific discussion to occur between Shore and the James Smith Cree Nation about mitigations to impacts on Traditional Land Use was in a meeting held at JSCN on April 20, 2012 (Table 4.4-1 of the revised EIS). Shore specifically requested input into mitigation of any effects on TLU, however, the JSCN indicated that it would be inappropriate to discuss this mitigation, including the proposed removal of Spy Hill (also known as Bingo Hill) until they had reviewed the full, final EIS. As such, no additional information about mitigations were presented. As noted in the EIS, "Shore proposes to discuss this potential impact with JSCN, Provincial and Federal Regulators and other Aboriginal groups as appropriate to determine the best mitigation." Shore has continued to make efforts to meet with JSCN, and in November 2012, JSCN told Shore that they would like Shore Gold to address the IBA negotiations prior to meeting on any specific work done regarding the Star-Orion EIS. Shore had telephone contact on January 22, 2013 in an attempt to arrange a meeting with JSCN in early 2013. Repeated efforts to arrange this meeting have not been successful.	a) Describe how JSCN members currently use and access cultural sites, particularly Bingo (Spy) Hill, potentially affected by the Project (e.g. nature, frequency, time of year, etc.). Include their views on how these cultural sites may be adversely affected. b) Describe the technical and economic feasibility of implementing the following potential measures to avoid the removal of Bingo (Spy) Hill (section 6.4.2.2, page 6-91): • refinements of the pit slopes, • steepening of the slopes by engineered methods, and • sterilization of ore. The feasibility analysis must be sufficiently detailed to allow a comparison of the environmental effects on JSCN's traditional land use (Cultural Sites VC). It must also include Shore's preferred mitigation based on the relative consideration of effects, and technical and economic feasibility.	No further comments.	Refer to Traditional Use of Bingo (Spy) Hill Assessment.	
18													
19													
20	1	DFO	EIS	Sec. 6.3.1.5	6-14	Effects Assessment	The EIS indicates that streamflow within Duke Ravine will increase substantially. Table 6.2.4-2 shows that mean annual discharge may be as high as 365 percent above normal flow during operations, while maximum mean monthly discharge may be 419 percent in excess of normal flow. Table 6.3.1-2 indicates that these flow increases will result in a significant, long-term, negative effect to the aquatic environment. Potential negative effects presumably include increased channel degradation, erosion, and sedimentation of fish habitat. However, the EIS provides no indication as to how this stream will be monitored and assessed over time. Further, the mitigation measure provided in the EIS (Page 6-106) *-Erosion and sediment control will be installed where necessary and practical to control surface flows..., including Duke Ravine* - is too general.	Please provide an assessment of the channel and floodplain of Duke Ravine, including the identification of areas that are particularly erosion-prone. Include an assessment of the likelihood of significant channel erosion and sediment mobilization, and include mitigation measures that will be put in place prior to increases in streamflow resulting from the project, as required, to reduce the likelihood of negative effects. Details as to how this stream will be monitored over time should also be included.	Please see the attached file 'DFO SIR #1 Response to Duke Ravine Flow.pdf' prepared by Cannorth Environmental.				
21	2	DFO	EIS	Sec. 6.3.1.6	6-18	Changes in Flow	The EIS should include a statement of what will trigger the need to supplement flows in 101 Ravine, Duke Ravine and English Creek during the project and how this will be tracked (e.g., stream gauging). For example, the Victor Diamond mine supplements flows when natural flows are reduced by more than 15% from the seasonal norms. Care should be taken to ensure that flow supplementation does not have a negative impact on the water quality of the receiving environment (e.g., dissolved oxygen, water temperature, etc.).	Identify in some detail how flow supplementation will be managed during the project, including thresholds that will trigger flow supplementation (i.e., percent change from natural), where the water will come from, how water quality/quantity will be monitored during the flow supplementation period and how natural and supplemented flows will be monitored.	Flow supplementation will be sourced either from the East Ravine runoff pond or from the same location that provides the plant. As precipitation and surfical groundwater supply the East Ravine pond, water quality should be very similar to the water quality in the supplemented streams. Field measurements of ph, EC, temperature, dissolved oxygen and TSS will be taken from the source water, and the supplemented water, daily during the first week of pumping, then weekly thereafter for the duration of the program. East Ravine water and supplemented water is also sampled monthly for water quality as described in Table 7.4-1, so the compatibility of these waters should be well understood. Supplementation will be triggered once levels in any monitoring station on these waterways reach 115% of base flow, and will be managed to maintain or exceed 115% of base flow. This will ensure that fish habitat is not affected beyond baseline conditions. Flow rates into the water bodies will be measured by an inline gauge, while continuous level readings will continue as described in the response to DFO#5.				
22	3	DFO	EIS	Sec. 6.3.1.8	6-30	Fish Habitat Compensation Plan	The EIS states that a comprehensive FHCP report would be prepared "during the detailed design stage", presumably during the regulatory stage after completion of the federal EA. It is noted that the EIS provides a list of compensation options, including a preferred option to undertake fish habitat improvement along Peonan Creek. However, although the EIS identifies some of the work that will be conducted in order to develop a FHCP in the future, a specific FHCP has not been included within the EIS, and it has not been shown within the EIS that, as a result of the implementation of the FHCP to be prepared, impacts to fish and fish habitat resulting from the project will be fully offset. A FHCP is considered a mitigation measure under the CEA Act. In order to conclude the federal EA that will be conducted for the project, DFO must determine whether or not the project will result in "significant adverse environmental effects".	A FHCP must be provided to DFO and approved before the federal EA can be concluded. Final design details are not required within the EA. However, the FHCP should be described in text, tables, and conceptual maps and drawings as appropriate. The FHCP must quantitatively describe the loss in productive capacity of fish habitat that will result from the project and demonstrate clearly that this loss will be offset through implementation of the FHCP. The FHCP must have sufficient detail to satisfy DFO that the project will not result in a net loss of productive capacity of fish habitat. The FHCP must include, but is not limited to, the following elements: 1) assessments of the productive capacity of fish habitat to be negatively affected by the project after the implementation of mitigation measures, as determined through primary and secondary production estimates, habitat assessments, fish population characteristics, fish growth rates and condition, etc. 2) a detailed description of measures to be taken to offset the loss of productive capacity of fish habitat. DFO policy states that compensation ratios (amount of habitat compensation:reduction/loss of productive capacity) greater than 1:1 are expected when it is	Please see the attached file 'DFO SIR #3 Fish Habitat Compensation Plan March 2013.pdf'. Shore will obtain any permissions required to implement the proposed FHCP prior to project initiation. If these permissions are not obtained, then Shore will develop an alternate plan to replace equivalent fish habitat . Approval of the technical aspects of the proposed FHCP will facilitate open discussions with stakeholders about the details of the plan. Note that JSCN approved and participated in the 2012 field program on Pehonan Creek, and requested at a meeting heldat JSCN on April 20, 2012 that further discussion would only be appropriate once the FHCP was more fully developed and approved by DFO.				

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	**EIS Review Form**			**Star-Orion South Diamond Mine Project**									
2	**Comment Number**	**Fed Dept**	**Volume / Document**	**Line Number / Table Number / Figure Number**	**Page**	**Topic**	**2012 Federal comment: Context / Preamble e.g., provide applicable background/rationale for providing the comment**	**2012 Federal Department Comment / Request for Additional Information:**	**2013 April Proponent Response**	**2013 June Federal Information Request (Agency Only)**	**2013 July Federal Information Request (Agency Only)**	**2013 June and July Proponent Response**	**2013 Federa Information Request (all departments)- TBD**
3													
23							This determination can only be made after an examination of proposed mitigation/compensation measures, which must be provided in sufficient detail within the EA to support the determination. Mitigation measures necessary to determine the significance of impacts on fish and fish habitat, and conclude the EA, must be provided within the EA, rather than during the regulatory phase. This information, together with content requirement of a FHCP, was provide to the proponent via e-mail on March 9, 2012.	uncertain that the compensation works will function as intended, or there will be a lag time before the compensation works become fully functional. 3) a description of measures to monitor the FHCP's implementation and to verify the extent to which the Plan's purpose (i.e., no net loss of productive capacity) will be achieved. The FHCP should include target biota; sampling locations; sampling methods, frequency, and timing; estimates of expected precision; supporting rationale, etc. as related to what is being proposed as compensation. 4) contingency plan(s) in the event the preferred FHCP cannot be achieved. In particular, the FHCP should include the following: 1. Introduction, background information, purpose of FHCP, etc. 2. Description/quantification of fish habitat to be lost for all components of the project. 3. Description of measures to be undertaken to offset habitat losses associated with the project, including: a) a rationale for each measure selected. For example, if the proponent wished to restore degraded fish habitat along Peonan Creek as compensation, it would be necessary for the proponent to demonstrate quantitatively the extent to which fish habitat had been degraded, through quantitative,					
24								scored riparian health assessments that had been conducted, for example. It would also be necessary to show that other land use activities within the Peonan Creek drainage, e.g., significant ongoing degradation of riparian habitat elsewhere along the creek, would not render the compensation measures ineffective. b) objectives and strategies (endpoints) to be achieved for each proposed habitat compensation component (if more than one). c) for each measure, a description of methods to be undertaken. For example, if livestock exclusion was proposed as one component of the FHCP, then conceptual drawings of the locations and areas where exclusion fencing would be undertaken, how long the fencing would remain in place, where and how (source) of off-site watering would be established, plans for restoring and revegetating areas impacted by livestock access, how revegetation survival would be assessed, and construction methods and sequencing, would be included. The FHCP would demonstrate that any legal agreement required to implement the FHCP (e.g., conservation easement with private landowner) would be in place.					
25								The timelines for each major compensation measure undertaken relative to the when the HADD of fish habitat would be undertaken should be stated. 4. Measures to determine success and contingency measures: e.g., description of all monitoring to be undertaken (e.g., "as built" assessments, fish stock assessments as per Saskatchewan government standards, fish passage monitoring, vegetation survival); criteria by which success would be measured; contingency measures to be undertaken if required.					
26	4	DFO	EIS	Sec. 6.3.1.8	6-35	Saskatchewan River	Disruption to fish habitat is not based on the percentage of time the disruption is in place compared to the lifespan of the project or calculated using a weighting factor. Fish habitat compensation is based on the HADD of fish habitat which includes the area of habitat that is disrupted in square meters. For installation of the diffuser, the HADD of habitat is the area that is temporarily not useable by fish, which in this case is area of habitat that is not useable during the period the diffuser is being built (3250 m2).	Provide the total area of fish habitat that will be disrupted during the construction of the diffuser.	The total area of fish habitat that will temporarily disrupted during the construction of the diffuser is 3250m2. Please see the attached file 'DFO SIR #3 Fish Habitat Compensation Plan.pdf', Section 2.3 and 2.4.				
27	5	DFO	EIS	Sec. 7.4.2.5	7-21	Hydrological monitoring	Table 8.2-1 indicates that changes in streamflow resulting from the project may have significant negative impacts on fish and fish habitat. For example, Stream F contains an abundant, diverse fish community, and potential reductions in streamflow in this creek could negatively affect fish populations within the stream. However, whereas the EIS identifies water bodies where water quality will be monitored (Table 7.4-1), a similar Table regarding streamflow monitoring has not been included. Rather, the EIS simply states that monitoring will include...*stream flow monitoring in area creeks*...	Identify which bodies of water will be monitored hydrologically. This can be presented in a table similar to Table 7.4-1. Streamflow monitoring should be undertaken in Duke Ravine, Peonan Creek and Stream F and in other water bodies as appropriate. The frequency, duration and type(s) of hydrological monitoring undertaken should be stated.	Previously monitored sites (English Creek, Caution Creek, 101 Ravine and East Ravine) will be monitored at the same sites that were used during baseline collection. These sites have established stage-discharge curves, and will be continuously monitored using water level gauges. Similar monitoring will be established on the lower reach of Duke Ravine, Peonan Creek and Stream F. Flow monitoring will also occur on upper reaches of Duke, 101, and East Ravine, and at the crossing of Division Road and English Creek. These upper locations are expected to detect any changes in flow earlier than the locations at the mouth. Once established, sites will be monitored continuously throughout operations.				
28	6	DFO	Appendix 6.3.1-A	Appendix 6.3.1-A	6-31	Stream F and Peonan Creek	The EIS (Table 8.2-1) indicates that groundwater dewatering could negatively affect fish and fish habitat within Peonan Creek and Stream F. In Stream F these potential impacts are expected to be significant, and long-term. However, the EIS does not identify mitigative measures that will be used to avoid or offset impacts to these streams due to groundwater dewatering. If mitigative measures sufficient to eliminate impacts are not identified, impacts not fully mitigated must be identified and quantified and considered as impacts that must be compensated for and included in the FHCP.	Identify pre-operational monitoring (i.e., biological, hydrological) monitoring that will be undertaken within Peonan Creek and Creek F to establish baseline conditions, monitoring that will be undertaken during operations to determine the nature and extent of impacts to fish and fish habitat within these streams, if any, and mitigation measures that will be employed to reduce or eliminate impacts. Impacts not fully mitigated should be identified and quantified, and considered in the FHCP.	Stream F and Peonan Creek will be incorporated into the Aquatic Monitoring Plan according to the principles currently described in the MMER (see 7.4.2.6, 7.4.2.7 and 7.4.2.8 of the revised EIS) and adjusted based on future requirements. Flow monitoring will occur in the lower reach of these streams but within a defined channel/valley to establish a stage-discharge curve. Once the stage discharge relationship is established, water level gauges will be installed and operated during the open water season to continuously record flows. Water quality monitoring will be conducted at the flow measurement stations and approximately 1500 m upstream as described in 7.4.2.6. Fisheries and aquatic resources will be monitored as described in 7.4.2.8 at the mouth of the Streams and the upstream location to establish baseline conditions, with monitoring of the upstream location throughout operations. Should changes in flow be detected, then operational monitoring of the mouth locations will resume. At this time, no impacts requiring habitat compensation are expected, however the potential for effects on Stream F was identified . Impacts to Stream F are considered significant only due to uncertainty. The baseline monitoring described above will be used to increase certainty on this stream, and identify any mitigation appropriate. Mitigation may include flow supplementation during low flow (as is considered on Duke Ravine, English Creek and 101 Ravine) or re-evaluation of the FHCP if necessary.				
29	7	DFO	EIS	Sec. 7.4.2.9	7-26	Water quality monitoring	Aquatic Resources monitoring Table 7.4-3 should also include water quality monitoring in Codette Reservoir, to ensure that water disposal in the SKR does not impact water quality and fish habitat in the reservoir.	Please confirm that water quality monitoring in Codette Reservoir will be undertaken.	Water quality monitoring will be conducted in Codette reservoir on a quarterly basis as part of the monitoring plan.				
30	8	DFO	EIS	Sec. 7.4.2.10	7-27	Sediment monitoring	Aquatic sediment monitoring should also include monitoring in Codette Reservoir to monitor long-term effects from TDS accumulation in reservoir sediments due to water disposal in the SKR.	Please confirm that aquatic sediment monitoring will include monitoring in Codette Reservoir to monitor long-term effects from TDS accumulation in reservoir sediments due to water disposal in the SKR.	Sediment monitoring will be conducted on an annual basis as part of the monitoring plan. Sampling frequency will be re-visited once results are available.				
31	9	DFO	EIS	Sec. 5.3.1	5-1	Fisheries and Aquatic Resources	In previous technical review comments provided to the proponent regarding the first draft of the EIS (April 2011), DFO indicated that certain streams that could potentially be affected by the project had not been included within the project local study area (LSA), and requested that these streams be included within the environmental assessment. The proponent has provided information on these streams in Appendix 6.3.1-A, but makes no reference to them in Sec. 5.3.1 Section 5.3.1 should indicate that these streams have been included in the LSA, and direct the reader to Appendix 6.3.1-A.	For information only.	Agreed. Relevant baseline information was collected and described in Appendix 6.3-A.				
32													
33	1	NRCan		EIS Section(s): 6.2.8 Environmental Health; Appendix 6.2.8-A. PSG Section(s): 2.3.2 Site Plan and Operations; 2.4.2 Geology, Hydrogeology and Soils; 2.9.1.1 Project-Specific Impacts		Physical Environment	Comment 103 Standards for F3 and F4 PHCs in groundwater, which the proponent could have used as TRVs, are listed in "Ministry of the Environment (MOE). Soil, Groundwater and Sediment Standards for Use under Part XV.1 of the Environmental Protection Act, Toronto, Ontario, July 27, 2009." The applicable Ontario MOE standard for both F3 and F4 PHCs is 500 µg/L. Based on estimated water quality in the WMR summarized in Table 6.2.8-3 and in Appendix 6.2.8-A, mean HQs for F3 and F4 PHCs are greater than 1 indicating that potential risks to ecological receptors cannot be ruled out and should be evaluated further (Section 6.2.8, p.168). Rationale: From Table 6.2.8-3 of Section 6.2.8, minimum, maximum and mean concentrations of F3 PHC in the WMR are estimated to be 190 µg/L, 7980 µg/L and 2431 µg/L, respectively. Using a TRV of 500µg/L, the corresponding HQ values are 0.38, 15.96 and 4.86. Similarly, for F4 PHC, minimum, maximum and mean concentrations are 33 µg/L, 2790 µg/L and 800 µg/L, respectively. The corresponding HQ values are 0.07, 5.58 and 1.6.	F3 and F4 PHCs are COPCs that merit more extensive consideration in discharge toxicity testing. Because of changes to the project water management scheme and updated estimates of Mannville groundwater quality, this comment is no longer relevant and NRCan considers the issue resolved.	Shore appreciates this feedback.				
34	2	NRCan		EIS Section(s): 5.2.3 Metal Leaching and Acid/Alkaline Rock Drainage; 6.2.7 Surface Water Quality; 6.2.8 Environmental Health; Appendix 6.2.7-A; Appendix 6.2.8-A PSG Section(s): 2.3.2 Site Plan and Operations; 2.4.2 Geology, Hydrogeology and Soils; 2.9.1.1 Project-Specific Impacts		Physical Environment	Comment 104 For reference, the Metal Mine Effluent Regulations (MMER) 4, includes Ni as a "deleterious substance", for which the maximum authorized monthly mean concentration in discharge is 0.5 mg/L. Therefore, the predicted discharge would exceed the MMER standards for Ni, inasmuch as the quality of mine water discharged at the end of the pipe is the same as that within the WMR. Rationale According to the proponent (Section 6.2.8, p.6-162), approximately 90% of the water contained within the WMR will be derived from the Mannville Formation. Therefore, the proponent has used Mannville water quality measurements obtained during exploration shaft dewatering (Appendix 6.2.8-A) as surrogates for measurements in the WMR (Section 6.2.8.1, p.6-163) in order to screen and identify COPCs in surface water. Background concentrations of Ni in Mannville groundwater average 0.847 mg/L (Appendix 6.2.7-A, Table 3-5) and Ni is identified as a COPC (Section 6.2.8.1, Table 6.2.8-1) with minimum, maximum and mean HQs of 0.22, 58 and 8.5, respectively (Section 6.2.8.1, Table 6.2.8-3). Hazard Quotients greater than 1 indicate that potential risks to ecological receptors cannot be ruled out and should be evaluated further (Section 6.2.8, p.168). Standard Waste Extraction Procedure (SWEP) leaching tests performed on samples of processed kimberlite yield an average Ni leachate concentration of 2.18 mg/L (Section 5.2.3.6, Table 5.2.3-7, p. 5-62). Laboratory column testing on processed kimberlite samples (Section 5.2.3.6, p.5-64,65) also indicate the potential for significant leaching of Ni (Figure 5.2.3-29). Assuming an average metal load of 0.05 mg Ni/kg of sample (Figure 5.2.3-29), for a 10 kg sample leached by 500 mL of water, this is equivalent to a leachate Ni concentration of 1 mg/L. According to the proponent (Section 5.2.3.4, p. 5-49), laboratory kinetic testing that simulates	The proponent should provide additional details on the derivation of results presented in Figure 3-48 of Appendix 6.2.7-A which show dissolved concentrations of Ni in the WMR versus time, specifically information on the data and methodology used to predict the Ni loadings of the various inflows to the WMR. Because of changes to the project water management scheme and updated estimates of Mannville groundwater quality, this comment is no longer relevant and NRCan considers the issue resolved.	Shore appreciates this feedback.				

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	**EIS Review Form**			**Star-Orion South Diamond Mine Project**									
2	**Comment Number**	**Fed Dept**	**Volume / Document**	**Line Number / Table Number / Figure Number**	**Page**	**Topic**	**2012 Federal comment: Context / Preamble e.g., provide applicable background/rationale for providing the comment**	**2012 Federal Department Comment / Request for Additional Information:**	**2013 April Proponent Response**	**2013 June Federal Information Request (Agency Only)**	**2013 July Federal Information Request (Agency Only)**	**2013 June and July Proponent Response**	**2013 Federa Information Request (all departments)- TBD**
3													
35	3	NRCan		EIS Section(s): 5.2.1 Deposit and Local Area Geology; 5.2.7 Groundwater Resources; Appendix 5.2.7-A PSG Section(s): 2.4.2 Geology, Hydrogeology and Soils		Physical Environment	Comment 105 The proponent's representation of the paleochannel in the numerical groundwater flow model is not consistent with geological observations presented in section 5.2.1 and 5.2.7 of the EIS. The paleochannel represents a possible hydraulic connection between shallow and deep aquifer systems (Appendix 5.2.7-A, p22) and should be represented more faithfully. Rationale The proponent has recognized gaps in data and uncertainties in the hydrogeological understanding of the groundwater systems in the vicinity of the proposed Star and Orion-South pits including the hydraulic connection between shallow and deep groundwater systems in the area of the paleochannel (Appendix 5.2.7-A, p.22). In the opinion of NRCan, understanding of the hydrogeological significance of the paleochannel may be enhanced by revising its aerial extent and internal stratigraphy in the numerical flow model. Figure 5.2.1-4 shows the aerial extent of a paleochannel incised through Sutherland Till and Colorado Group as mapped by an airborne EM survey. However, the paleochannel as represented in the numerical flow model (Appendix 5.2.7-A, Figure 3) appears to "dead-end" and does not include the north-west extension revealed in Figure 5.2.1-4. The paleochannel is interpreted to be 3000 m across and up to 150 m in thickness (Section 5.2.1.2, p.5-6). Paleochannel fill deposits consist of Saskatoon Group tills underlain by sand-dominated fluvio-deltaic deposits (Section 5.2.7.2, p.5-111; Table 5.2.7-1; Section 5.2.7.6, p.5-132; Figure 5.2.7.7). According to the proponent, it is	The proponent should revise the representation of the paleochannel in the numerical groundwater flow model by a extending it to the northern and eastern General Head Boundaries (GHB) as per Figure 5.2.1-4; b) introducing a high conductivity sand unit in the lower portion of paleochannel. NRCan is satisfied with the revised representation of the paleochannel in the SRK (2011) groundwater flow model and considers the issue resolved.	Shore appreciates this feedback.				
36	4	NRCan		EIS Section(s): 5.2.1 Deposit and Local Area Geology; 5.2.7 Groundwater Resources; Appendix 5.2.7-A PSG Section(s): 2.4.2 Geology, Hydrogeology and Soils		Physical Environment	Comment 106 The internal stratigraphy of the Lower Colorado Group in the vicinity of the Fort à la Corne kimberlite swarm is more complex than the proponent's representation would suggest. A more faithful representation of hydrostratigraphic heterogeneity within this aquitard unit may improve calibration of the numerical groundwater flow model. Rationale According to the proponent, the intermediate aquitard hydrostratigraphic unit (section 5.2.7.3, p.5-112) is aerially extensive but may be thin or absent in some areas such as where it is incised by the paleochannel or where kimberlite intrusives penetrate the lower Colorado shales. In these areas, there is potential for increased vertical hydraulic connection allowing greater groundwater flow between shallow and deep aquifer systems. However, the degree of hydraulic connection may be limited (section 5.2.7.8 p.5-148) by remaining aquitard material or by the low conductivity of emplaced material (paleochannel fill or kimberlite). Rather than attempt to fit an equivalent homogeneous vertical conductivity to the Joli Fou shale through calibration (Appendix 5.2.7-A, section 3.2.4, p.11), it may be helpful to refine the hydrostratigraphy within the unit. In the opinion of ESS, hydrogeological information provided by the proponent indicates potential higher-conductivity features within the Lower Colorado Group that should be considered in the numerical groundwater flow model: The upper few metres of Colorado Group shales are reported to have been fractured due to glaciation (Section 5.2.7.2, p.5-108) and this may have created a thin higher-conductivity layer at the top of the Colorado Group and beneath the discontinuous	The proponent should refine hydrostratigraphic units within the Colorado shale aquitard in order to improve model calibration. The representation of the Colorado Group in the SRK (2011) groundwater model is unchanged from the earlier model. NRCan regrets that the proponent has not acted on the suggestion aimed at improving model calibration but considers this comment resolved nonetheless.	Shore appreciates this feedback.				
37	5	NRCan		EIS Section(s): Section 5.2.7; Appendix 5.2.7-A, 3.2.4 PSG Section(s): 2.4.2 Geology, Hydrogeology and Soils		Physical Environment	Comment 1.3 of NRCan March 3 2011 submission to CEAA (not captured in Federal-Provincial IR table) The proponent's numerical groundwater flow model is not sufficiently well calibrated to steady-state pre-mining conditions for the purpose of predicting possible impacts to groundwater and surface water bodies from pit dewatering with the degree of confidence required in an Environmental Impact Statement at the Comprehensive Study level. Rationale The results of groundwater flow model calibration to measured water levels are displayed in Figures 8a, 8b, 8c, 8d and 8e of Appendix 5.2.7-A. For piezometers in the till and Joli Fou shale (Figure 8c) modeled heads systematically overestimate measured values by up to 50 m. For piezometers in the kimberlite (Figure 8d), there is a similar bias and modeled heads are up to 30 m greater than observed values. The proponent has recognized gaps in data and uncertainties in the hydrogeological understanding of the groundwater systems in the vicinity of the proposed Star and Orion-South pits including the hydraulic connection between shallow and deep groundwater systems (Appendix 5.2.7-A, p.22). In the opinion of ESS, the poor model calibration to heads measured in piezometers screened in the till, Joli Fou shale and kimberlite, suggests the need to revise the conceptual model of the regional aquitard unit separating the shallow and deep (Mannville) groundwater flow systems. In particular, representations of the Joli Fou shale and the paleochannel in the numerical groundwater flow model may need revision. Inflow data from dewatering of the Star and Orion-South test shafts are available	The proponent should revise the numerical groundwater flow model in order to ensure a calibration adequate for predictive simulations of effects of pit dewatering on groundwater and surface water bodies. NRCan recommends that inflow measurements from test shaft dewatering be used in the model calibration. While the calibration of the SRK (2011) groundwater flow model may have improved over that achieved for the SRK (2010) model of the draft EIS, it is not yet adequate for performing the predictive simulations that underpin much of the project water management scheme, including the estimation of capacity requirements for the diffuser system. Steady-state calibration results presented in Figure 13 c) of Appendix 5.2.7-A still reveal a systematic overestimation of heads, by up to 40 m, in the aquitard units (upper and lower Tills, Colorado Group). Calibration results, shown in Figure 13 e), also suggest that the model is unable to reproduce low heads observed near the Lower Till-Colorado interface. The low heads may be indicative of a thin permeable layer possibly consisting of discontinuous Empress Group sediments or heavily brecciaed and fractured shale within the top 10 m of the Colorado Group (Clifton Associates, 2011, p.8). Calibration results for the 20-day pump test (Appendix 5.2.7-A, Fig. 16) show poor model matches to observed heads in near-field low-permeability units (Upper Mannville, Colorado Group, kimberlite) whereas heads in	Please see the attached file NRC #5 Response.pdf and supporting information.				
38	6	NRCan		EIS Section(s): 6.2.6 Regional Geology and Hydrogeology; 7.5.6.4 Closure and Reclamation Plan-Pit Areas PSG Section(s): 2.9.1.10 Decommissioning, Reclamation and Closure		Physical Environment	Comment 1.6 of NRCan March 3 2011 submission to CEAA (not captured in Federal-Provincial IR table) The proponent has not addressed the following items from section 2.9.1.10 of the Project Specific Guidelines (PSGs) related to water quality in the final pit lakes: • contamination of surface water bodies from surface flow or breakthrough from groundwater sources and effects on potential water users, aquatic life, recreation, agriculture etc.; • quality and quantity of leachate from outdoor stockpiles (e.g., overburden, coarse processed kimberlite, low grade), proposed measures to contain, and treat, if required, leachate to minimize potential effects on local and regional groundwater and human and environmental health; • Describe the anticipated long-term water level and quality of the water in the pit and how these will impact the proposed end-use (recreational) including access and fisheries potential; Rationale The proponent has provided only a very preliminary discussion of water quality of the pit lakes in sections 6.2.6.6 (p.6-136) and 7.5.6.4 (p.7-38) of the EIS. ESS also notes that overflow from the Star pit lake to the Saskatchewan River via the East Ravine is variously estimated at 2800 m³/d (p.6-136) and 4100 m³/d (p.7-38).	The proponent should complete a modelling study of water quality in the Star and Orion-South pit lakes, as directed in the PSGs. NRCan is satisfied that the requested analyses of pit lake water quality have been presented in section 6.2.7 of the revised EIS and in Appendix 6.2.7-A. NRCan considers the issue resolved.	Shore appreciates this feedback.				
39	7	NRCan		EIS Section(s): 5.2.7.10; Appendix 5.2.7-A PSG Section(s): 2.4.2; 2.9.1.1		Physical Environment	New comment #1 The proponent estimates recharge from precipitation to the Upper Surficial sand as 20 mm/yr or 4.2% of average annual precipitation (Appendix 5.2.7-A, sec. 3.2.3, p.14). However, this recharge estimate appears unrealistically low and is provided without any supporting arguments or analysis. Rationale For relatively flat terrain and permeable sandy surficial sediments, recharge rates on the order of 15% of annual precipitation would be expected. The proponent's runoff coefficients for natural upland (Appendix 6.2.7-A, Table 2.1, Table 2.2) are quite low (0.04) implying that infiltration coefficients should be correspondingly high. Recharge is a key component of the groundwater balance equation and needs to be estimated accurately if groundwater model predictions are to be accepted with confidence.	NRCan requests that the proponent provide a supporting analysis for groundwater recharge estimates. NRCan requests that the proponent run the steady-state pre-development groundwater flow model using a constant-head water table upper boundary condition and calculates the ensuing recharge flux. This flux should be compared to net precipitation (precipitation – evapotranspiration) and to current recharge estimates.	The estimate of recharge to the upper surficial sand was developed using on-site surface water flow measurements from 2006 to 2008 (Section 5.2.6.5 of the Revised EIS document p5-94 to p5-96, Aug 2012). For the period of surface water flow measurements, the daily discharge hydrographs for several basins were plotted together and expressed as unit runoff (m3/s/km2). A lower envelope was described from this plot, which represents base flow in the streams. This base flow, reflective of groundwater recharge to the streams, was taken to represent infiltration to the surficial sand. Within the water balance, use of a higher recharge rate would lead to much higher base flows and annual flows than measured. The low runoff coefficients are therefore reflective of recorded discharges in the area. Note that potential evapotranspiration (PET) and precipitation (P) are almost equal at the Project Site and precipitation mostly falls during the growing season (May to August) in the area. Approximately 60% of all precipitation (256 mm out of an annual precipitation of 425 mm) falls during the summer (based on long term climate data at Prince Albert). With annual PET>P, there is typically a moisture deficit over the summer, with opportunities for significant infiltration through the rooting zone limited to high intensity storms. Precipitation accumulated as snow between November and April is released during the spring freshet, with large amounts of water reaching surface water bodies by runoff over frozen ground (thus limiting infiltration). The moisture deficit over the summer and significant surface runoff in the spring may help explain the lower than anticipated recharge estimate calculated from the site specific flow data in local ravines. Work in the area (Barr et. al., 2012, attached NRC#7) looked at outflows from both an energy and stream flow basis for a watershed to slightly to the north of the project area. This study (Barr, et. al, 2012) and earlier work have shown great variability in outflows based on soil type, type of land cover and the amount of vegetation. This study (Barr, et. al, 2012) found Aspen forests have a characteristically low outflows, with values that range from zero during dry years to 75 mm y-1 during wet years. Whereas, the upland jack pine forests maintain a relatively high outflow (122–270 mm y-1). Interestingly they also found that the most hydrologically dynamic areas are the wetland fens and the lowland black spruce forests which have high outflows of up to 250 mm y-1 during wet years and low outflows of (20 mm y-1) during dry years. The outflow numbers that were calculated in this study would consider both surface runoff to surface water features during the spring freshet and shallow groundwater discharge to local streams. In the Barr et. al. (2012) study, non-contributing areas of the watershed were removed from area considered prior to calculating these outflow values (i.e. on a total watershed basis the calculated outflows may be less depending if there were any non-contributing areas of the watershed and the percent of these non-contributing areas). As pointed in the Barr study, the non-contributing areas varied from year to year. For the years to which the model is being calibrated, the amount of non-contributing areas is unknown (i.e. drainage to non conected wetlands). In the SRK model the recharge rate of 20 mm/yr was applied to all areas of the area. As a result due to the higher evaporatranspiration of the project area relative to the Barr et. al. study areas, the fact that their outflows would consider both surface water and shallow groundwater recharge and the fact that the non-contributing areas were removed prior to the calculation of the outflow numbers, the recharge rate of 20 mm/yr used in the groundwater flow model is considered reasonable. With respect to use of a constant head boundary condition in the upper aquifers, this approach would lead to the determination of the maximum possible recharge, and would lead to underestimation of potential effects in the assessment. In addition, estimates based on field observations (as described above) would be considered more appropriate than modeled results. Should a higher recharge be used in the model, under non-mining conditions, the additional water would most likely report to local creeks. In the predictive simulations of mining conditions, the additional water would then be available to offset the lowering of the water table induced by mining, resulting in smaller effects on surficial aquifers and therefore on neighbouring water wells. Therefore, use of a low recharge rate is conservative, and likely over-predicts effects on surficial aquifers.				

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	**EIS Review Form**			**Star-Orion South Diamond Mine Project**									
2	**Comment Number**	**Fed Dept**	**Volume / Document**	**Line Number / Table Number / Figure Number**	**Page**	**Topic**	**2012 Federal comment: Context / Preamble e.g., provide applicable background/rationale for providing the comment**	**2012 Federal Department Comment / Request for Additional Information:**	**2013 April Proponent Response**	**2013 June Federal Information Request (Agency Only)**	**2013 July Federal Information Request (Agency Only)**	**2013 June and July Proponent Response**	**2013 Federa Information Request (all departments)- TBD**
3													
40	8	NRCan		EIS Section(s): 6.2.6.4, Appendix 5.2.7-A, sec. 3.5, 3.7 PSG Section(s): 2.9.1.10		Physical Environment	New comment #2 In sections 3.5 and 3.7 of Appendix 5.2.7-A, the proponent describes how Star pit backfilling and Orion-South pit-lake infilling are implemented in the numerical groundwater flow model. However, based on the proponent's description, the modeling does not appear to have considered the discharge of Orion-South process water in the Star pit beginning in year 18 of the project. Rationale Under the current mining scenario, it is proposed to discharge 67,000 m3/day of Orion-South process water into the Star pit beginning in year 18 of the project (EIS, sec. 6.2.6, p.6-122,123). In NRCan's opinion, discharge of this amount of process water into the Star pit has significant implications for groundwater flow patterns, pit water balance and pit water quality in the later mine life and post-closure period. The proponent's water quality predictions for pit lakes in the post-closure period (Appendix 6.2.7-A, Figures 3-96 to 3-138) do not appear to reflect the presence of process water in the Star pit at closure.	NRCan requests that the proponent incorporate the discharge of Orion-South process water to the Star pit in the groundwater flow model. NRCan also requests that the proponent clarify statements in Table 2.11 of Appendix 6.2.7-A where the depth of the Star pit lake after infilling is variously given as 50 m and 230 m.	Orion South processed kimberlite and process water were considered in the closure pit lake infilling model as a one time-interval flux. The requested detail is included in the attached Memo and was considered in the Revised EIS. Please see file named (NRC #8 and 9- SIR- Pit Lake Infilling Simulation_Memo_SRK 2011.pdf). The depth of Star Pit lake will be 50 m and Orion South lake will be 230 m. Reference to the Star Pit as 230 m is an error- this depth is for the Orion South Pit.				
41	9	NRCan		EIS Section(s): 6.2.6; Appendix 6.2.7-A PSG Section(s): 2.9.1.10		Physical Environment	New Comment #3 In Appendix 6.2.7-A, the proponent presents a water balance model for the pit lakes during the post-closure period. Sources of inflow and outflow from the pits during this period are listed in Table 2.8. However, the proponent does not present any quantitative indication of the relative magnitudes of the inflows and outflows to the pits over time. NRCan requires this information in order to assess the proponent's water balance predictions. Rationale As noted by the proponent (EIS, sec. 6.2.6, p.6-16) removal of the aquitard layer in the open pits will create a hydraulic connection between the deep and shallow groundwater flow systems. The spill elevation of the Star Pit is 378 m (Appendix 6.2.7-A, p.6-12), and the pre-mining heads in the Mannville Formation are in the order of 400 m (Appendix 5.2.7-A, Table 6). As the heads in the Mannville Formation recover during the post-closure period, the backfilled and flooded pit will form a regional discharge area for the deep groundwater flow system. Depending on the relative inflow rates of fresh surface water and brackish Mannville water upwelling through processed kimberlite fines, the quality of water spilling from the pit to the East Ravine in perpetuity could be quite poor.	NRCan requests that the proponent provide quantitative estimates of the inflows and outflows to the pits over time during the post-closure period.	The requested information is included in the attached file (NRC #8 and 9- SIR- Pit Lake Infilling Simulation_Memo_SRK 2011.pdf).				
42	10	NRCan		EIS Section(s): 5.2.7; Appendix 5.2.7-A; 6.2.6; 6.2.7; Appendix 6.2.7-A PSG Section(s): 2.4.2; 2.9.1.2		Physical Environment	New comment #4 In Appendix 6.2.7-A (p.6-7), the proponent estimates that 1000 m3/day will seep from the PKCF. The proponent also assumes (p. 6-3) that 90% of this seepage will be captured and pumped back while the remaining 10% will report to nearby wetlands. The proponent has no information with which to quantify seepage from other mine facilities (p. 6-7). Overall, the proponent does not appear to have verifiable estimates of seepage fluxes from the various mine facilities with which to perform water balance and water quality modeling. Rationale Seepage rates from mine facilities are important components of site water balance and water quality models presented in Appendix 6.2.7-A and summarized in sections 6.2.6 and 6.2.7 of the EIS. The rates and patterns of seepage discharge to local drainages are also important for predicting environmental effects on surface waters.	NRCan requests that the proponent develop a numerical model of the shallow groundwater flow system covering the catchments impacted by project facilities, for the pre-development, operations and post-closure periods. The purpose of the model shall be to confirm recharge estimates, estimate seepage from waste piles and estimate baseflow discharge to local drainages.	All inputs, including runoff and infiltration at the project facilities were considered in the water balance and water quality model. As the coarse PK and overburden are placed at a free drained moisture content, inputs at these facilities are calculated from precipitation using a mas balance approach. Only the PKCF contains unlined ponded water, therefore, the PKCF seepage was the only one calculated, and was considered an additional input in the water balance. Impacts to hydrology are presented in Section 6.2.4 of the revised EIS, and include all available information, including incorporation of effects on stream base flow determined by the hydrogeological model, changes in drainage area, and movement of water through or over project facilities. Also see information contained in NRC#10 Shallow Groundwater Flow.pdf which contains an analytical description of water movement at the PKCF.				
43	11	NRCan		Section 2. Project Description, section 2.6.9.1		Physical Environment	New Comment #5. Seepage from the PKCF will be treated by using a natural wetland system, or pumped back into either the PKCF or the PKCF polishing pond. The system used will depend upon the water quality at the time. Processed kimberlite static leaching tests (Table 5.2.3-7) showed that elevated concentrations of chromium and nickel may occur. In addition, results from laboratory column leach tests suggest that processed kimberlite may leach Al, As, Co, Cr, Fe, Mb, and Tl.	NRCan requests that the proponent assess the ability of the natural wetland to mitigate the metals identified through the static leaching and the laboratory column leach tests over both the short and long term, and explain what quality criteria that will govern the decision for recycling the seepage back to PKCF, to the PKCF polishing pond and to the natural wetland.	The ability of natural wetlands to mitigate metals is described in "NRC #11 Wetland Treatment.pdf". Recycling would occur after the wetland if Saskatchewan Water Quality Objectives were not met, or before the wetland if seepage water quality was such that meeting the SSWQ after the wetland would not be possible based on predicted treatment efficiencies. Note that predicted water quality prior to release into the wetlands has been updated based on changes to the water management strategy.				
44													
45	1	TC		Section 6.4.2	6-74 to 6-6-169	Public Involvement	Impacts to aboriginal rights related to potential *Navigable Waters Protection Act* Approvals. Transport Canada intends to rely on the environmental assessment review process to meet it's duty to consult to the extent possible, as such Transport Canada requests information related to the effects of it's potential approvals on aboriginal rights.	This information request pertains to Aboriginal groups' issues in related to potential works including the bridge over the White Fox River and the water diffuser in the Saskatchewan River, where approval may be required from Transport Canada under the Navigable Waters Protection Act. Please provide information about any concerns raised by Aboriginal groups with respect to Transport Canada's potential approvals of these two works.	No specific concerns have been raised about the expansion of the existing bridge on the White Fox River or about construction of the diffuser in the Saskatchewan River; however, the James Smith Cree Nation traditional land use study (see Section 5,4,2) did identify use of the Saskatchewan River for transportation.				
46	2	TC		Section 6.2.5.3	6-114 to 6-115	Physical Environment	Shore indicates that the the bridge over the White Fox River "was designed to meet the requirements of the Department of Fisheries and Oceans Canada, Transport Canada, and the Saskatchewan Ministry of the Environment (CanNorth 2006).	Please confirm that the existing bridge was approved under the Navigable Waters Protection Program in TC by providing the approval number. Please also provide conceptual design of the alterations that will be done to the bridge.	The existing bridge was approved by Transport Canada on May 28, 2007 by letter referencing file number 8200-06-6026. Conceptual design is described on page 2-21 of the revised EIS, and is described in detail in the attached design basis memorandum prepared for the feasibility study (TC #2 Conceptual Bridge Expansion.pdf).				
47	3	TC		Section 6.2.5.2	6-113 to 6-114	Physical Environment	All works in, on over, under and through a navigate water way requires a *Navigable Waters Protection Act* Approval.	Please note an application for Approval to the Navigable Waters Protection Program for the water discharge outfall into the Saskatchewan River will be required during the regulatory stage including a detailed description of any temporary works that may be required.	Shore appreciates this comment and notes the requirement for an application for Approval to the Navigable Waters Protection Program for the outfall proposed in the Saskatchewan River.				
48													
49	1	HC		EIS Section 6.4.5.2	6-141	Traffic Safety	The EIS indicates that for the effects assessment of VCs (including traffic) lies within HC's scope of review. HC does not house expertise in traffic safety. HC suggests the appropriate jurisdiction be referenced.	For information only.	Shore appreciates this feedback and this comment is noted.				
50	2	HC	FedProv IR_FINAL.pdf	Cross reference with Section 6.4.5.3 in EIS.	9	Country Foods Impacts	The EIS states "An assessment of country foods was completed, as requested in the revised EIS. Country food exposure pathways are predicted to be insignificant. It is recommended that country foods baseline sample collection be completed prior to project development to document naturally occurring levels of metals. This will provide a baseline for additional country foods assessments if changes in soil, water, or vegetation quality are found in the future. Re-evaluation of country foods should be considered if the metal concentrations in the soil, vegetation and water within the RSA show an increase over time." HC supports the Proponent's recommendation that country foods baseline sample collection be collected prior to project development to document naturally occurring levels of metals. However, HC notes that this commitment is not included in Section 10.0: Conclusions and Commitments.	Please confirm that this commitment will be included.	Shore commits to the collection of baseline country food information prior to project development. Initial baseline data is being gathered, including collection of roseihip, bearberry, hazelnut, blueberry, raspberry, choke cherry and white-tailed deer .				
51	3	HC		EIS Section 6.4, Appendix 6.4.5-A, Subsection 3.2.2 (Surface Water COPC)	13-14	Country Foods Impacts	In Section 3.2.2 Surface Water COPC, the EIS discusses only those parameters with potential to accumulate in fish tissue and result in adverse human health effects are relevant. The screening list of COPCs does not inculde mercury, arsenic or molybdenum.	HC advises that mercury, arsenic and molybdenum be included in the screening list of COPCs.	Mercury, arsenic and molybdenum are not expected to be released by the proposed Project, however, these substances will be considered in the screening list of COPCs during baseline data collection mentioned in the response to HC #2.				
52	4	HC		EIS Sections 6.2.6.5 (Mitigation Measures) and 7.4.2.5 (Hydrogeology and Hydrology)	6-132 and 7-20 respectively	Drinking Water Quality Impacts	*The EIS states* " Potential effects from lowering of groundwater levels due to pit dewatering. To address uncertainties in the analysis and assess the need for possible mitigation measures for potential impacts to area wells, a program of water level monitoring in private wells and monitoring wells will be implemented." and "Limited domestic wells in surficial sands will also be monitored. Project activities that have the potential to lower groundwater levels in areas of private wells could affect groundwater quantity and quality." The Proponent should also consider potential effects on and changes to water quality in groundwater and the potential impacts on well water quality resulting from the project.	In addition to monitoring water quantity levels at private wells, HC advises that baseline water quality be collected to assess the potential for incremental water quality impacts from the project. If potential impacts on drinking water sources are identified, it is advised that a description of the measures to be employed to inform all potentially affected well owners and/or treatment facilities, and to mitigate risk to human health (measures to eliminate/reduce predicted changes, treatment, use of alternate sources, etc.) be included.	Shore agrees that baseline water quality sampling will be part of the well monitoring program. Shore is committed to ensuring that any water quality or quantity impact on private wells is appropriately mitigated, in consultation with the well owner, such that no effects on human health occur.				
53	5	HC	FedProv IR_FINAL.pdf	Figure 6.2.6-9: Private Wells and Predicted Drawdown in Lower Till	31	Drinking Water Quality Impacts	The Proponent's response to Comment Ref #203: "The water levels in the final pits upon closure are predicted to be lower than the present day groundwater level at the same location, so in the long term, groundwater flow will be towards the pit lakes. However, groundwater effects that result from the mine, can only affect areas downgradient of the mine between the mine and the groundwater discharge area. For this site, groundwater flow from the mine facilities is towards the north side of the Saskatchewan River and tributaries of the Saskatchewan River on the north side of the river, so the resulting downgradient area from the mine can extend from the mine to the north side of the Saskatchewan River only. There are no groundwater wells in this area that can be affected by changes in groundwater quality in this area." From Figure 6.2.6-9, drawdown levels of 35 m are predicted for private wells located in the James Smith Indian Reserve.	What is the potential effect of this drawdownon the aquifer supplying the drinking water source for this reserve?	Section 6.2.6 includes information about wells on James Smith Cree Nation (JSCN). JSCN drinking water is supplied by a series of shallow wells in the surficial sand aquifer. Drawdown in the surficial sands will not reach JSCN wells (Figure 6.2.6-7). Deeper wells on JSCN that may be impacted by deeper aquifer drawdown are not currently used, but will be included in the monitoring program depending on discussions with JSCN.				
54	6	HC		EIS Section 5.4.4.4 (Environmental Health) and Appendix 5.4.2-B (James Cree Nation Project Specific Traditional Land Use Study)	5-107 and figure 4.6 respectively	Noise Impacts	This section of the EIS indicates that there are almost no local residences within 10 km of the proposed pit so the populations potentially exposed to noise is limited to recreational users in the FalC provicial forest. However, Figure 4.6 of Appendix 5.4.2-B appears to show substantial areas of camping within 0-5 km along the Saskatchewan River. Non recreational activities (e.g. resource harvesting) may be undertaken at these area. Additionally, the 45 dBA limit used in the EIS may not be protective of potential impacts such as sleep disturbance in such temporary residences (e.g. tents).	HC advises that the proponent provide additional information regarding the assessment of potential effects to aboriginal camping areas within and near the local study area and provide additional mitigation as appropriate.	As shown in Figure 6.2.3-2 Noise Isopleths Inside the Star Pit and in the Nearest Vicinity and Figure 6.2.3-3 Noise Isopleths Within the Local Study Area, sound levels are predicted to be less than the 45 dBA limit. These figures represent updated modeling, and replace any other drawings previously submitted. Note that the camping areas near the Saskatchewan River will be buffered from noise effects by the River valley. Also, note that all blasting will occur during the day, thus limiting noise most disruptive to sleep.				

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	**EIS Review Form**			**Star-Orion South Diamond Mine Project**									
2	**Comment Number**	**Fed Dept**	**Volume / Document**	**Line Number / Table Number / Figure Number**	**Page**	**Topic**	**2012 Federal comment: Context / Preamble e.g., provide applicable background/rationale for providing the comment**	**2012 Federal Department Comment / Request for Additional Information:**	**2013 April Proponent Response**	**2013 June Federal Information Request (Agency Only)**	**2013 July Federal Information Request (Agency Only)**	**2013 June and July Proponent Response**	**2013 Federa Information Request (all departments)- TBD**
3													
55	7	HC		EIS Section 6.2.3 (Noise Impact Assessment)	6-75 to 6-92	Noise Impacts	While HC does not provide advice on occupational exposure to noise, it is acknowledged that off-duty workers who reside in worker camps or in nearby locations may be impacted by project noise. These individuals may be viewed as temporary residential receptors. Potential sleep disturbances experienced by off-duty workers who reside on or near a project site in worker camps should be considered in the assessment of the acoustic environment.	HC advises that suitable noise protection measures be considered for off-duty workers to limit sleep disturbance and related human health impacts.	Indoor noise levels will be lower than ambient levels due to sound transmission loss (TL) in the camp walls which are made of composite materials of a total thickness over 10 cm (on average). Also note that the camp is only operational during the construction phase (first 4 years). The camp is approximately 6 km from the Star Phase 1a Pit and approximately 4 km away from the plant construction site. As such ambient noise is expected to be low. It can be expected that TL will be similar to those reported in Table 6.2.3-5, and additional noise protection is not anticipated.				
56	8	HC		EIS Section 6.2.3.5 (Noise Effects) and Tables 6.2.3.3 and 6.2.3.6	6-78, 6-82, and 6-85, respectively	Noise Impacts	The noise impact assessment expresses a maximum blast limit criterion and predicted blasting noise levels in dBA weighting. The A-weighting used in the noise impact assessment reduces the contribution from low and high frequencies to capture the mid-frequency range to which the average human ear is sensitive. So the low-frequency noise associated with blasting would be de-emphasized, underestimating the intensity of the predicted overall impact to human receptors. A more typical manner to express blasting criteria and model predicted sound pressure levels from blasting would be the use of a Z weighted scale. Z-weighting is a flat frequency response of 10Hz to 20kHz ±1.5dB. This response replaces the older "Linear" or "Unweighted" responses as these did not define the frequency range over which the meter would be linear.	HC advises that the proponent use the Z-weighting (expressed as dBZ or dBZ)) for the expression of criterion used in the noise impact assessment, and calculations of predicted blasting noise levels, or provide appropriate justification for the use of a C-weighting.	The dBZ-weighting is the abbreviation for decibel zero-weighting, which is equal to unweighted or linear characteristic of sound. In the text preceding Table 6.2.3-6 explanation is given how the reported values were calculated. It states that "Table 6.2.3-6 shows unweighted peak sound pressure levels..." therefore the table actually shows dBZ values (often reported as just dB). A typing error was made and correction should be made in Table 6.2.3-6 replacing (dBA) with (dBZ).				
57													
58	1	EC			section 3.5.5.1, page 3-23	Aquatic Environment	Shore Gold is still proposing to discharge the Mannville groundwater directly to the Saskatchewan River without any treatment although the chronic toxicity testing failed following the acclimation of the Ceriodaphnia species to 200 and 500 mg/L hardness.	Based on the current toxicity information provided by Shore Gold Inc. (the Proponent) in the revised EIS, EC has concluded that the Mannville groundwater is deleterious as defined under the Fisheries Act and its deposit into the Saskatchewan River is prohibited under that Act.	Please see the attached document describing the amended water management plan (EC#1 Updated Water Management.pdf) Complete water quality modeling is presented in the attached Technical Memo (EC#1 Updated Water Quality Model.				
59	2	EC		Attachement1, Provincial and Federal Technical Comments in Information Requests, Comment Ref 152	page 6-161, page 3-22,	Physical Environment	As proposed, the surrounding wetlands will be used as a passive effluent treatment system to treat seepage or runoff from the PKCF and the Coarse PK pile. The EIS states that runoff and seepage from the overburden pile will flow to the 101 Ravine and sedimentation will be prevented if required. This may be a viable approach. However, as per Shore Gold's response to question 152 of the Federal Information Requests, 23.9Mm3 or 4% of the total volume of the overburden has been identified as potentially acid generating, and that the ARD/metal leaching tests indicate that the MMER limits may be exceeded for nickel.	EC does not believe that the revised EIS sufficiently documents the basis upon which Shore Gold has concluded that wetlands treatment will be adequate to protect water quality in the long term and that the potential ARD/metal leaching issue from runoff and seepage from the overburden pile is adequately assessed. These deficiencies should be addressed by Shore Gold.	The ability of natural wetlands to mitigate metals is described in detail in the attached response to "NRC #11 Wetland Treatment.pdf". Note that water quality in seepage water will change based on the updated water management strategy.				
60	3	EC		comment no. 99, 101	6-99 to 6-100	Terrestrial Environment	EC acknowledges the proponent's revised commitment in Section 6.3.3.7 to "conduct clearing and grading activities outside of sensitive wildlife periods (March 15 to April 15/green-up, 15 May to 15 June calving and 1 September- 15 October rut for elk and moose) for ungulates, and during breeding season (1 April -31 August for birds) where appropriate" (p. 6-99).	EC suggests that the proponent clarify this text and confirm that they will conduct clearing "outside" of the breeding season rather than "during" the breeding season. EC also notes that the proponent plans to "maintain (mow) the access right-of-way to maximize visibility for traffic and wildlife" (p. 6-100) and reminds the proponent that mowing and any habitat clearing/destruction activities should avoid the period from April 1 to August 31, to reduce the impacts on species at risk and migratory birds.	EC is correct that Shore intends to clear "outside" the breeding season. "During" was submitted in error. As EC suggests, Shore will conduct ROW maintenance in the fall, after August 31.				
61	4	EC		comment no. 100	6-99 to 6-100	Terrestrial Environment	In response to the Species at Risk setback guidelines provided by EC, the proponent has indicated that "these best management practices and restriction guidelines for species of conservation concern are included in the mitigation section of the EIS addendum", however EC has not found our SAR setbacks and timing restrictions listed in the referenced Section 6.3.3.7, or any section of the EIS addendum.	Please confirm.	Shore commits to minimum setback distances prescribed by EC from active nests as suggested in EC comment #100 on the draft EIS. The setbacks were not listed in the revised EIS in error, and are reproduced below as a commitment: Common nighthawk 200 m Olive-sided flycatcher 300 m Canada warbler 300 m Rusty blackbird 300 m Chimney swift 100 m Whip-poor-will 100 m Horned grebe 100 m from the high watermark of the wetland or water body containing the nest.				
62	5	EC		table no. 3.3.2-3 comment no. 186-191	6-56; 6-57; 6-87;	Terrestrial Environment	EC notes that the proponent has revised its commitments regarding wetlands and in its response has indicated that "wetland habitats have been avoided to the extent possible" and "as a result, direct impact to fen habitats has been limited to 9 ha". EC notes however that although the project redesign is "intended to avoid wetlands and riparian areas, with the exception of those associated with the Star pit footprint and possibly the upper reaches of creeks associated with the overburden pile and Process Kimberlite Containment Facility", the effects of drawdown on wetlands in both the LSA and RSA remain. Areas affected by drawdown greater than 0.5 m in depth include 10% of the wetlands in the LSA and 7% of wetlands in the RSA at the end of mining (p. 6-56). Table 6.3.2-3 (p. 6-57) further indicates that large proportions of some wetlands types (e.g., 100 % (76 ha) of the Willow-Shrubby rich Fen, 100% (4ha) of the deciduous-mixedwood swamp, 94% (2ha) of the seaside-arrowgrass-marsh, 47% (68 ha) of the Black Spruce-tamarack-Treed Swamp, 33% (1ha) of the Tamarack-treed fen, etc.) in the LSA will be affected by drawdown, with impacts continuing well beyond the local study area into the RSA. Additionally, the EIS indicates that "No affected wetlands are expected to be reclaimed" (p. 6-87) and also that "given the extended time frame required for bog and fen vegetation type restoration, time required to fill the pit lakes, and lag time in restoration of the water table, effects of drawdown have the potential to persist into the long term" (p. 6-56).	EC recommends that the proponent actively reclaim wetland areas within the project area to restore the function, type and area of wetlands lost directly as a result of this project, and from drawdown.	The statement on pG-87 of the wildlife assessment meant that no specific wetlands disturbed by the project will be reclaimed in the same spot or exactly to the same wetland type. In addition to the open water created at closure which is expected to provide waterfowl habitat, the Closure and Reclamation Plan commits to reclamation of 101 ha of BP 25-Willow shrubby rich fen, and 124 ha of BP 28 Seaside arrow grass marsh ecosites (see attached table 'EC#5 Reclaimed Wetland Areas). This reclamation exceeds the direct loss of 9 ha of wetlands, and provides some mitigation for potentially impacted wetlands resulting from groundwater drawdown. Note that the areas potentially affected by drawdown do not equate to a 'loss' of those ecosites, rather, these sites will be monitored for vegetation changes over time, and are expected to return to wetland vegetation types post-closure. Note also that wetland areas associated with the Duke Ravine, 101 Ravine and English Creek may also benefit from Shore's commitment to supplement low flow in these streams.				
63	6	EC		comment no. 195		Terrestrial Environment	EC notes that although the proponent plans to monitor "the water management reservoir, sewage lagoon, kimberlite and overburden piles for wildlife use with an assessment of wildlife that might be in distress as a result of using these areas" (initial EIS), the proponent has indicated that "no active deterrents are planned".	EC recommends that the proponent clarify what measures they will implement to prevent or deter migratory birds, species at risk and other wildlife from accessing the water management reservoir and any other project areas that may be hazardous to these species as the project is carried out.	Shore has committed to fence the sewage lagoon to prevent access, however, no other deterrents are proposed. Any Project areas are considered 'attractive' to wildlife are not harmful to wildlife. Mining operations, the plant site, and the overburden pile are only physically hazardous during heavy equipment operation. The sensory stimulae associated with these activities is sufficient deterrent to prevent injury to wildlife. The PKCF will contain ponded water for the duration of mining at Star. The ponded water quality is predicted in Section 6.2.7 (and associated appendices) of the revised EIS and, should migratory birds or other wildlife access the ponded water, no effects are expected.				
64	7	EC			p. 2-30	Aquatic Environment	The Project Description states that the two-cell sewage lagoon system will discharge continuously into the Duke Ravine. Any such discharges will need to be non-deleterious prior to release to waters freqented by fish. Inputs of camp wastewater will increase ammonia, BOD, phosphorus, and TSS in the receiving environment, and it is not clear whether this was incorporated into the water quality modeling.	EC recommends that the proponent clarify whether camp wastewater inputs were included in the modeling of stream water quality and whether predicted treatment levels will achieve effluent quality that is non-deleterious.	Camp waste water inputs were considered in the water quality model. The proposed sewage lagoon was designed so that discharge meets the Saskatchewan Environment publication EPB 203 Guidelines for Sewage Works Design..				
65	8	EC		Section 2.6.9.1	Page 2-55	Aquatic Environment	Flow changes to ravine streams are proposed to be mitigated by the discharge of water of "suitable quality" to the ravines. This would include wetland-treated seepage water, as well as minewater collected from the upper benches. Such inputs may contain elevated ammonia and TSS; EC recommends that all discharges to surface waters be tested and shown to be of acceptable quality prior to release.	EC recommends testing of any discharges to surface waters be monitored for quality and that the Proponent ensure they are non-deleterious.	Shore agrees that water quality will be monitored prior to use as flow supplementation to ensure that the water meets the relevant regulatory and legislative requirements.				
66	9	EC		Section 6.2.7.1	Page 6-136	Aquatic Environment	Five principal studies are referred to in this section, and include the fifth bullet which states: "Star and Orion South pit lakes water quality sampling conducted by AMEC and incorporated mine closure plans,...".	EC seeks clarification from the proponent of the data used for pit water quality assessment.	The fifth bullet should have indicated that "water quality modeling" was used, not sampling. The data used for pit water quality assessment were obtained from modeling, which considered sampled water chemistry obtained from exploration plant operation and results of the metal leaching studies.				
67	10	EC		Appendix 6.2.7-A Section 2.4.2; Figure 2.4 Closure Water Balance	page 6-18	Aquatic Environment	Once the Star pit is mined out, it will be used to receive PK and process water from the Orion pit, as well as overburden material. Upon closure, there will be a 3 m depth of process water in the pit, or approximately 28,511 million cubic meters. Water quality predictions are based on the "worst case" scenario of a fully mixed pit lake. However, it is not clear what contributions to the pit lake water quality were included to account for that process water. The tables showing inputs and the closure schematic do not appear to include that volume nor present its predicted chemistry. EC is concerned the concentrations may have been underestimated for the Star pit lake parameters.	EC requests clarification from the proponent whether the process water chemistry was estimated, and whether that was used as a model input for the Star pit lake water quality.	Process water chemistry was modeled using source water chemistry, results of the metal leaching studies on kimberlite from Orion South, and measured chemistry obtained during exploration during processing of Orion South Kimberlite. Inputs for the Star pit lake water quality model included precipitation/evaporation, inflows/outflows from deep and surficial aquifers, surface runoff and process water/fine processed kimberlite placement. Further information about input water volumes is contained in 'NRC #8 and 9- SIR- Pit Lake Infilling Simulation_Memo_SRK 2011.pdf'.				
68	11	EC		Section 6.2.6.4	Page 6-131	Aquatic Environment	The EIS describes the length of time for the pits to fill as being in the order of 320 years for the Star Pit, and >1000 years for the Orion pit. Predictions are based on modeling into the far future, and will be subject to the uncertainty which is inherent to all models. Passive filling of the Star and Orion pits would represent a significant closure liability, and would require ongoing monitoring.	EC recommends that the proponent clarify whether the option of active filling of the mined out pits was evaluated.	Shore has not formally evaluated the option of active filling of the Star pit, however this would be an option during detailed design as we agree that there is the potential to reduce environmental effects long term should active filling be completed. Active filling could also be evaluated during operations for inclusion in final decommissioning through regular Closure and Reclamation Plan review and updates. For the revised EIS, assessing the Project with no active filling represents a 'worst case' scenario and is conservative.				
69													