

BAFFINLAND IRON MINES CORP - MARY RIVER PROJECT					DOC. NO. H337697-PX701-D460753		
			EQUIPMENT DATA SHEET				
			Packaged Sewage Treatment Plant				
Item	Rev	Title	Notes	UOM	Project Design Data	Supplier Data	Operation Data
IDENTIFICATION							
A1		Equipment Type		text	Packaged Sewage Treatment Plant		
A2		Type of Plant		text	Vendor to Specify		
A3		Equipment Number		text	N/A		
A4		Serial Number		text	N/A		
REFERENCE DOCUMENTS							
B1		Standard		text			
B2		Specification		text			
B3		Arrangement/Detail Drawing		text	N/A		
B4		P&ID		text	N/A		
B5		PFD		text	N/A		
GENERAL							
C1		Bidder company name		text	Vendor to specify		
C2		Technical quotation number		text	Vendor to specify		
C3		Manufacturer name		text	Vendor to specify		
C4		Model		text	Vendor to specify		
C5		Overall dimensions (footprint)		mm	Vendor to specify		
C6		Shipping Weight		kg	Vendor to specify		
C7		Operating Weight		kg	Vendor to specify		
C8		Lift - heaviest at install		kg	Vendor to specify		
C9		Lift - heaviest at maintenance		kg	Vendor to specify		
C10		Turndown Capacity		%	Vendor to specify		
PROCESS PARAMETERS							
D1		Design Flow					
D2		Average		m ³ /h	Vendor to specify		
D3		Peak		m ³ /h	Vendor to specify		
D4		Influent Quality					
D5		BOD ₅		mg/L	See Spec.		
D6		TSS		mg/L	See Spec.		
D7		NH3-N		mg/L	See Spec.		
D8		TP		mg/L	See Spec.		
D9		Effluent Quality					
D10		BOD ₅		mg/L	See Spec.		
D11		TSS		mg/L	See Spec.		
D12		Faecal Coliform		CFU/100 mL	See Spec.		
D13		Oil and Grease		mg/L	See Spec.		
D14		pH		--	See Spec.		
D15		Toxicity		---	See Spec.		
D16		NH3-N		mg/L	See Spec.		
D17		TP		mg/L	See Spec.		
EQUALIZATION / PRIMARY TREATMENT							
E1		Type of System / Proposed Technology		text	Vendor to specify		
E2		Equalization Chamber (if applicable)					
E3		Type of Construction		text	Vendor to specify		
E4		Tank Length		mm	Vendor to specify		
E5		Tank Width		mm	Vendor to specify		
E6		Tank Depth		mm	Vendor to specify		
E7		Minimum Useable Volume		m ³	Vendor to specify		
E8		Vessel Material of Construction		text	Vendor to specify		
E9		Surface Finish, lining, thickness (external and internal)		text	Vendor to specify		
E10		Screen (if applicable)					
E11		Screen Type		text	Vendor to specify		
E12		Screen Opening		mm	Vendor to specify		
E13		Aeration / Mixing (if applicable)					
E14		Type (Coarse Bubble)		text	Vendor to specify		
E15		Air Flowrate		Nm ³ /h	Vendor to specify		
E16		Pressure		bar	Vendor to specify		
E17		Motor Size		kW	Vendor to specify		
E18		Transfer Pumps (if applicable)					
E19		Type of Pump (Submersible - Grinder)		text	Vendor to specify		
E20		Manufacturer		text	Vendor to specify		
E21		Materials of Construction (wetted parts)		text	Vendor to specify		

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E22		Flowrate - Operating		m ³ /h	Vendor to specify		
E23		Pressure - Operating		kPag	Vendor to specify		
E24		Dead head Pressure		kPag	Vendor to specify		
E25		Motor Size		kW	Vendor to specify		
E26		Motor Enclosure (Explosion Proof - Class 1 Div 1)		text	Vendor to specify		
E27		Motor Temperature Code		text	Vendor to specify		
E28		Power Supply (voltage/phase/frequency)		text	Vendor to specify		
SECONDARY TREATMENT							
F1		Type of System / Proposed Technology		text	Vendor to specify		
F2		Primary Sedimentation (if applicable)					
F3		Type of Construction		text	Rectangular / Circular		
F4		Side Water Depth		m	Vendor to specify		
F5		Surface Overflow Rate for tank not receiving waste activated sludge		m3/(m2-d)	Vendor to specify		
F6		Surface Overflow Rate for tank receiving waste activated sludge		m3/(m2-d)	Vendor to specify		
F7		Inlet channel velocity		m/s	Vendor to specify		
F8		Weir Loading Rate		m3/(m-d)	Vendor to specify		
F9		Trough velocity		m/s	Vendor to specify		
F10		Vertical to Horizontal slope of any submerged surface		V:H	Vendor to specify		
F11		Freeboard		mm	Vendor to specify		
F12		Vertical to Horizontal slope of sludge hopper		V:H	Vendor to specify		
F13		Sludge removal line velocity		m/s	Vendor to specify		
F14		Vessel Material of Construction		text	Vendor to specify		
F15		Surface Finish, lining, thickness (external and internal)		text	Vendor to specify		
F16		Membrane Bioreactor (if applicable)					
F17		Configuration			Submersed Membrane / External Membrane		
F18		Filtrate Flux		L/m2-hr	Vendor to specify		
F19		Type of Membrane		text	Vendor to specify		
F20		Total Number of Elements		Number	Vendor to specify		
F21		Element Dimensions		mm	Vendor to specify		
F22		Membrane Virus Removal		%	Vendor to specify		
F23		Membrane Bacteria Removal		%	Vendor to specify		
F24		Membrane TOC Reduction		%	Vendor to specify		
F25		Membrane Polymer		text	Vendor to specify		
F26		Nominal Molecular Weight Cut-off		Daltons	Vendor to specify		
F27		Cleaning Frequency / Duration		time	Vendor to specify		
F28		Disinfection Chemicals Used		text	Vendor to specify		
F29		Cleaning Chemicals Used		text	Vendor to specify		
F30		% O ₂ Transfer		%	Vendor to specify		
F31		kg O ₂ required / kg BOD reduced		kg O ₂ /kg BOD	Vendor to specify		
F32		Design F/M Ratio		d ⁻¹	Vendor to specify		
F33		Operating MLVSS		mg/L	Vendor to specify		
F34		Hydraulic Retention Time (HRT)		h	Vendor to specify		
F35		Circulation Pump (if applicable)					
F36		Type of Pump		text	Vendor to specify		
F37		Manufacturer		text	Vendor to specify		
F38		Materials of Construction (wetted parts)		text	Vendor to specify		
F39		Flowrate - Operating		m ³ /h	Vendor to specify		
F40		Pressure - Operating		kPag	Vendor to specify		
F41		Dead head Pressure		kPag	Vendor to specify		
F42		Motor Size		kW	Vendor to specify		
F43		NEMA Motor Enclosure Designation		text	Vendor to specify		
F44		Motor Temperature Code		text	Vendor to specify		
F45		Power Supply (voltage/phase/frequency)		text	Vendor to specify		
F46		Rotating Biological Contactor (if applicable)					
F47		Total Media Surface Area		m ²	Vendor to specify		
F48		Number of Stages / Banks		Number	Vendor to specify		

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F49		Unit Area in Each Stage Stage 1 Stage 2		m2	Vendor to specify		
F50		Rotational Speed		rpm	Vendor to specify		
F51		Sewage Flow: Parallel or Perpendicular to Media Shaft		test	Vendor to specify		
F52		Media Loading Rate		L/(m2-d)	Vendor to specify		
F53		RBC Tank Retention Time		min	Vendor to specify		
F54		Organic Loading to 1st Stage		kg BOD ₅ / (m2-d)	Vendor to specify		
F55		Total Media Submergence during normal operation		%	Vendor to specify		
F56		Aerobic Bioreactor (if applicable)					
F57		Type of Construction		text	Vendor to specify		
F58		Tank Length		mm	Vendor to specify		
F59		Tank Width		mm	Vendor to specify		
F60		Tank Depth		mm	Vendor to specify		
F61		Useable Volume		m ³	Vendor to specify		
F62		Hydraulic Retention Time (HRT)		h	Vendor to specify		
F63		Operating MLVSS		mg/L	Vendor to specify		
F64		F/M Ratio		kgBOD/kgMLVSS.d	Vendor to specify		
F65		Rake		text	Vendor to specify		
F66		Vessel Material of Construction		text	Vendor to specify		
F67		Surface Finish, lining, thickness (external and internal)		text	Vendor to specify		
F68		Aeration (if applicable)					
F69		Type (Fine Bubble)		text	Vendor to specify		
F70		Air Flowrate		Nm ³ /h	Vendor to specify		
F71		Pressure		bar	Vendor to specify		
F72		Motor Size		kW	Vendor to specify		
F73		% O ₂ Transfer		%	Vendor to specify		
F74		kg O ₂ required / kg BOD reduced		kg O ₂ /kg BOD	Vendor to specify		
F75		Liquid/Solid Separation (Final Settling - if applicable)					
F76		Type of Construction		text	Rectangular / Circular		
F77		Side Water Depth		m	Vendor to specify		
F78		Vertical to Horizontal slope of any submerged surface		V:H	Vendor to specify		
F79		Freeboard		mm	Vendor to specify		
F80		Inlet channel velocity		m/s	Vendor to specify		
F81		Diameter		m	Vendor to specify		
F82		Hydraulic Retention Time (HRT)		h	Vendor to specify		
F83		Overflow Rate		m ³ /d/m ²	Vendor to specify		
F84		Weir Loading Rate		m3/(m-d)	Vendor to specify		
F85		Vertical to Horizontal slope of sludge hopper		V:H	Vendor to specify		
F86		Sludge removal line velocity		m/s	Vendor to specify		
F87		Vessel Material of Construction		text	Vendor to specify		
F88		Surface Finish, lining, thickness (external and internal)		text	Vendor to specify		
F89		Media Filter (if applicable)					
F90		Type of Media		text	Vendor to specify		
F91		Media Depth (coarse and fine media)		text	Vendor to specify		
F92		Freeboard		%	Vendor to specify		
F93		Backwash Flowrate		m/h	Vendor to specify		
F94		Service Flowrate		m/h	Vendor to specify		
F95		Backwash Duration		min	Vendor to specify		
F96		Inlet Distributor Type		text	Vendor to specify		
F97		Bottom Lateral Type		text	Vendor to specify		
F98		Vessel Material of Construction		text	Vendor to specify		
F99		Surface Finish, lining, thickness (external and internal)		text	Vendor to specify		
F100		Maximum Operating Pressure		kPag	Vendor to specify		
F101		Vessel Design Pressure Rating		kPag	Vendor to specify		
F102		Relief Valve Included (yes/no) and type (thermal, full flow PRV)		yes/no	Vendor to specify		
F103		Average Waste Flowrate		m3/hr	Vendor to specify		

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F104		Peak Waste Flowrate		m3/hr	Vendor to specify		
F105		Waste Suspended Solids Concentration		mg/L	Vendor to specify		
F106		Provision for air scour included		yes/no	Vendor to specify		
F107		Air Scour Flowrate		m/h	Vendor to specify		
F108		Backwash Pump (if applicable)					
F109		Type of Pump		text	Vendor to specify		
F110		Manufacturer		text	Vendor to specify		
F111		Materials of Construction (wetted parts)		text	Vendor to specify		
F112		Flowrate - Operating		m ³ /h	Vendor to specify		
F113		Pressure - Operating		kPag	Vendor to specify		
F114		Dead head Pressure		kPag	Vendor to specify		
F115		Motor Size		kW	Vendor to specify		
F116		NEMA Motor Enclosure Designation		text	Vendor to specify		
F117		Motor Temperature Code		text	Vendor to specify		
F118		Power Supply (voltage/phase/frequency)		text	Vendor to specify		
F119		Sludge Generation					
F120		Waste Sludge Production (dry)		kg/d dry solids	Vendor to specify		
F121		Sludge % Solids Content		%	Vendor to specify		
F122		Waste Sludge Production (at specified %)		m ³ /d	Vendor to specify		
F123		RAS Pump (if applicable)					
F124		Type of Pump		text	Vendor to specify		
F125		Manufacturer		text	Vendor to specify		
F126		Materials of Construction (wetted parts)		text	Vendor to specify		
F127		Flowrate - Operating		m ³ /h	Vendor to specify		
F128		Pressure - Operating		kPag	Vendor to specify		
F129		Dead head Pressure		kPag	Vendor to specify		
F130		Motor Size		kW	Vendor to specify		
F131		NEMA Motor Enclosure Designation		text	Vendor to specify		
F132		Motor Temperature Code		text	Vendor to specify		
F133		Power Supply (voltage/phase/frequency)		text	Vendor to specify		
DISINFECTION							
G1		Type of System / Proposed Technology		text	Vendor to specify		
G2		Chlorination (if applicable)					
G3		Type		text	Vendor to specify		
G4		Tank Length		mm	Vendor to specify		
G5		Tank Width		mm	Vendor to specify		
G6		Tank Depth		mm	Vendor to specify		
G7		Useable Volume		m ³	Vendor to specify		
G8		Manufacturer name		text	Vendor to specify		
G9		Model		text	Vendor to specify		
G10		Design Parameters		text	Vendor to specify		
G11		Sodium Hypochlorite Dosage		mg/L	Vendor to specify		
G12		Contact Time		min	Vendor to specify		
G13		Sodium Bisulfite Dosage		mg/L	Vendor to specify		
G14		Ultraviolet Irradiation (if applicable)					
G15		Type of Lamp		text	Low pressure/low intensity; Low pressure/high intensity; Medium pressure/high intensity		
G16		Germicidal UV Output per Lamp		W	Vendor to specify		
G17		Effective Lamp Life		Hrs	Vendor to specify		
G18		Automatic Cleaning Mechanism		Included (yes/no)	Vendor to specify		
G19		Type of Ballast (electromagnetic, electronic)		text	Vendor to specify		
G20		Ballast Cooling Mechanism		text	Vendor to specify		
G21		Reactor Type		text	Open Channel or Closed Channel		
G22		UV Dosage		(mW·s)/cm2	Vendor to specify		
G23		UV Housing Material of Construction		text	Vendor to specify		

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SLUDGE HANDLING & DIGESTION							
H1		Type of System / Proposed Technology		text	Vendor to specify		
H2		Aerobic Digestion (if applicable)					
H3		Type		text	Vendor to specify		
H4		Total Volume		m ³	Vendor to specify		
H5		Number of Stages		Number	Vendor to specify		
H6		Side Water Depth		m	Vendor to specify		
H7		Freeboard		mm	Vendor to specify		
H8		Solids Retention Time (SRT)		d	Vendor to specify		
H9		Air Supply		L/(m ³ ·s)	Vendor to specify		
H10		Air Flowrate		Nm ³ /h	Vendor to specify		
H11		Pressure		bar	Vendor to specify		
H12		Motor Size		kW	Vendor to specify		
H13		Volatile Suspended Solids (VSS) Reduction		%	Vendor to specify		
H14		Waste Sludge Production (dry)		kg/d dry solids	Vendor to specify		
H15		Stabilized Sludge % Solids Content		%	Vendor to specify		
H16		Sludge Thickening (if applicable)					
H17		Type (Centrifugation, sludge drying bed, filter press...)		text	Vendor to specify		
H18		Conditioning Chemical Type (if applicable)		text	Vendor to specify		
H19		Conditioning Chemical Dosage		mg/L	Vendor to specify		
H20		Average Energy Requirement		kWh/dry tonne	Vendor to specify		
CHEMICAL CONSUMPTION							
I1		Chlorine (as Sodium Hypochlorite)		kg/d	Vendor to specify		
I2		Other		kg/d	Vendor to specify		
I3		Fresh Water (washing)		m ³ /d	Vendor to specify		
CONTROLS AND AUTOMATION							
J1		Local Operating Panel			Vendor to specify		
J2		Type (PLC)		text	Vendor to specify		
J3		Components (e.g. pushbuttons, switches)		text	Vendor to specify		
J4		Enclosure (NEMA 12)		text	Vendor to specify		
J5		Actuated Valves (indicate whether pneumatic or electric)		text	Vendor to specify		
J6		Instruments Make/Model		text	Vendor to specify		
J7							
J8							
J9							
J10							
ENERGY CONSUMPTION							
K1		List All Components		kWh/d	Vendor to specify		
K2							
K3							
K4							
K5							
K6							
K7							
K8							
K9							
K10							
K11							
K12		Total Energy Consumption		kWh/d	Vendor to specify		
K13				kWh/m ³	Vendor to specify		
ELECTRICAL REQUIREMENTS							
L1		List All Components		(V/Hz/Phase)	Vendor to specify		
L2							
L3							
L4							
L5							
L6							

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L7							
L8							
L9							
L10							
AIR REQUIREMENTS							
M1		Instrument Air		Nm3/hr, kPag	Vendor to specify		
M2		Plant Air		Nm3/hr, kPag	Vendor to specify		
SOUND							
N1		Equipment Sound Level		dBA	Vendor to specify		
NOTES							
1							
2							
3							
4							
Revision	Issue Status	Prepared By / Date	Checked By / Date	Approved By / Date	Client Approval / Date		
C	Approved for Enquiry	R. Kapadia 2011-09-23	A. Zlatic 2011-09-23	J. Cleland 2011-09-23			
B	Approved for Enquiry	R. Kapadia 2011-08-12	A. Zlatic 2011-08-12	J. Cleland 2011-08-12			
A	Internal Review	R. Kapadia 2011-08-01	A. Zlatic 2011-08-01	J. Cleland 2011-08-01			