

Master Aspects List

Note that Significant Aspects, highlighted in red, have either a Score ≥ 39 or Severity ≥ 7

ID	Department	Activity / Product / Service	Aspect	Impact / Risk	Opportunity	Applicable Regulatory Requirement	Notes / Operational Controls for Significant Aspects	Score (F x C)	Frequency (f)	Probability (p)	Scale (c2)	Duration (c3)	Severity (c1)	F (Avg of f & p)	C (Avg of c1, c2, c3)
BEP-03	Bio-Energy Plant	H2S Scrubbing	Activity Error	Air Quality / Contamination		EPEA Approval # 107	BEP WI, ERP WI	75	10	5	4	3	10	8	10
BEP-02	Bio-Energy Plant	H2S Scrubbing	Equipment Malfunction	Air Quality / Contamination		EPEA Approval # 107	BEP WI, ERP WI	65	10	3	4	3	10	7	10
MAINT-12	Maintenance	Use of Radioactive Source (Measurex & TMP)	Spill / Accidental Release	Radiation Exposure		EPEA: 107,111,112; Release Reporting Regulation: 3; Acts and Regulations under the CNSC	Radiation Safety Policy Manual (FCD-0386)	55	10	1	2	8	10	6	10
OPS-08	Operations	Chip Handling	Explosion / Fire	Air Quality / Contamination		-	BCTMP WI	55	10	1	6	2	10	6	10
OPS-15	Operations	Storage of Pulp	Explosion / Fire	Air Quality / Contamination		-	BCTMP WI	55	10	1	6	2	10	6	10
GEN-12	General	Transportation, Offloading, Storage, & Use of Chemicals	Spill / Accidental Release	Effects on Secondary Treatment Operations, Air Quality, Groundwater Contamination, Soil Contamination		EPEA: 107,111,112; Release Reporting Regulation: 3; Environmental Emergency Regulations: 2-10; Secondary Containment Guideline for Containers and Above Ground Storage Tanks: 4.2.6; TDG Act	Aqua ammonia scrubbing system and bin filter dust collector system in use while offloading products	60	10	5	6	3	8	8	8
WWT-03	Wastewater Treatment	Operation of Clarifiers (Primary & Secondary)	Equipment Malfunction	Water Quality / Contamination		EPEA Approval #107	BCTMP WI, Enviro Testing WI	53	10	5	2	8	7	8	7
WWT-04	Wastewater Treatment	Operation of Clarifiers (Primary & Secondary)	Activity Error	Water Quality / Contamination		EPEA Approval #107	BCTMP WI; Enviro Testing WI	53	10	5	2	8	7	8	7
WWT-10	Wastewater Treatment	Operation of Biobasin	Activity Error	Water Quality / Contamination		EPEA: 107,111,112; Release Reporting Regulation: 3.	Equipment in Wastewater Treatment System is part of essential services	53	10	5	2	8	7	8	7
BEP-04	Bio-Energy Plant	Operation of Anaerobic Hybrid Digesters	Equipment Malfunction	Air Quality / Contamination	Converts BOD to biogas thus reducing energy and nutrients needed in aerobic system to treat influent and reduction in generation of sludge	EPEA: 107,111,112; Release Reporting Regulation: 3.	BEP WI, ERP WI. Some BEP equipment is connected to essential services to minimize emergency situations	49	10	4	4	8	7	7	7
WWT-02	Wastewater Treatment	Operation of Biobasin	Equipment Malfunction	Water Quality / Contamination		EPEA: 107,111,112; Release Reporting Regulation: 3.	Equipment in Wastewater Treatment System is part of essential services	49	10	4	4	8	7	7	7
BEP-05	Bio-Energy Plant	Operation of Anaerobic Hybrid Digesters	Activity Error	Air Quality / Contamination	Converts BOD to biogas thus reducing energy and nutrients needed in aerobic system to treat influent and reduction in generation of sludge	EPEA: 107,111,112; Release Reporting Regulation: 3.	BEP WI, ERP WI. Some BEP equipment is connected to essential services to minimize emergency situations	46	10	3	4	8	7	7	7
BEP-10	Bio-Energy Plant	Operation of System Components (Process Effluent Discharge)	Equipment Malfunction	Groundwater Contamination		EPEA Approval #107	BEP WI, Technical Services WI, Monthly Inspections, Reportable Spills, ERP, BMP	48	10	6	4	8	6	8	6
BEP-11	Bio-Energy Plant	Operation of System Components (Process Effluent Discharge)	Activity Error	Groundwater Contamination		EPEA Approval #107	BEP WI, Technical Services WI, Monthly Inspections, Reportable Spills, ERP, BMP	48	10	6	4	6	6	8	6
LAB-01	Laboratory	Sampling & Testing	Equipment Malfunction	Water Quality / Contamination		EPEA Approval #107	Enviro Testing WI	42	10	4	7	3	6	7	6
LAB-02	Laboratory	Sampling & Testing	Equipment Malfunction	Air Quality / Contamination		EPEA Approval #107	Enviro Testing WI	42	10	4	4	6	6	7	6
WWT-09	Wastewater Treatment	Sludge Transport	Noise	Nuisance		Town of Whitecourt Bylaw 1475: 5-7		43	9	8	3	2	5	9	5
GEN-06	General	Natural Gas Usage	Use of Non-Renewable Resource	Depletion of Non-Renewable Natural Resource	Power generation, GHG savings from not using coal based power	TIER	Greenhouse Gas Reporting, Corporate Sustainability Reporting. Influence only, no control over where natural gas is sourced.	40	10	10	8	8	4	10	4
OPS-09	Operations	Pulp (final product)	Use of Non-Renewable and Renewable Resource	Depletion of Renewable Natural Resource, Depletion of Non-Renewable Natural Resource	Renewable, Recyclable, Biodegradable, Reusable,	EPEA Approval# 107	Direct control through QMS/EMS	40	10	10	10	10	4	10	4
OPS-16	Operations	Storage Pulp (Offsite)	Explosion / Fire	Air Quality / Contamination		Fisheries Act		35	6	1	6	4	10	4	10
BEP-09	Bio-Energy Plant	Operation of Incinerator	Equipment Malfunction	Air Quality / Contamination	Converts CH4 to CO2 which is a less harmful to the ozone the venting CH4 to atmosphere	EPEA: 107,111,112; Release Reporting Regulation: 3.	CEMS	36	6	6	6	3	6	6	6
LAB-03	Laboratory	Sampling & Testing	Activity Error	Water Quality / Contamination		EPEA Approval #107	Enviro Testing WI	36	10	2	5	3	6	6	6
MAINT-13	Maintenance	Waste Oil Storage	Spill / Accidental Release	Effects on Secondary Treatment Operations	Used oil recycled offsite	EPEA: 107,111,112; Release Reporting Regulation: 3.	Waste WI, Monthly Inspections, Annual Reporting	36	10	2	3	8	6	6	6
OPS-17	Operations	Transport Trucks	Spill / Accidental Release	Groundwater / Soil Contamination		EPEA: 107,111,112; Release Reporting Regulation: 3; Soil Monitoring Directive 2.1.6.1	Influence only, corporate decision	33	10	1	6	6	6	6	6
MAINT-08	Maintenance	Preventative Maintenance on Environmental Loops	Activity Error	Air Quality / Contamination		EPEA Approval # 107	E/I WI	18	1	5	6	2	6	3	6



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MAINT-09	Maintenance	Preventative Maintenance on Environmental Loops	Activity Error	Groundwater Contamination		Soil Monitoring Directive 2.1.6.1; Surface Water Quality Guidelines for Use in Alberta	E/I WI	9	1	2	4	8	6	2	6
GEN-08	General	Operation of Mobile Equipment (bobcat, loader, clamptucks, switchmaster, trucks, lawnmower)	Air Emissions	Air Quality / Contamination		TIER		38	10	5	6	2	5	8	5
WWT-07	Wastewater Treatment	Sludge Spreading	Noise	Nuisance	Soil enhancer for receiving environment	Town of Whitecourt Bylaw 1475: 5 - 7		33	5	8	3	2	5	7	5
MAINT-01	Maintenance	Daily Maintenance Activities	Spill / Accidental Release	Effects on Secondary Treatment Operations		EPEA Approval #107		30	10	2	2	7	5	6	5
OPS-14	Operations	Stock Spill	Equipment Malfunction	Effects on Secondary Treatment Operations		EPEA Approval #107		32	10	6	2	3	4	8	4
BEP-12	Bio-Energy Plant	Reciprocating Engine	Activity Error	Air Quality / Contamination	Power generation, GHG savings from not using coal based power	EPEA Approval # 107; Air Monitoring Directive; Stack Sampling Code; CEMS Code	CEMS	30	8	7	7	7	4	8	4
BEP-13	Bio-Energy Plant	Reciprocating Engine	Equipment Malfunction	Air Quality / Contamination	Power generation, GHG savings from not using coal based power	EPEA Approval # 107; Air Monitoring Directive; Stack Sampling Code; CEMS Code	CEMS	30	8	7	7	7	4	8	4
GEN-07	General	Operation of Mobile Equipment (bobcat, loader, clamptucks, switchmaster, trucks, lawnmower)	Noise	Nuisance		Town of Whitecourt Bylaw 1475: 5 - 7		30	10	5	5	2	4	8	4
OPS-13	Operations	Stock Spill	Activity Error	Effects on Secondary Treatment Operations		EPEA Approval #107		28	10	4	2	3	4	7	4
OPS-06	Operations	Operation of Pulp Drying Systems	Equipment Malfunction	Air Quality / Contamination		EPEA Approval #107	Process flow directed through cyclone seperators	26	10	3	6	6	4	7	4
BEP-01	Bio-Energy Plant	Engine Cooling Water	Equipment Malfunction	Water Quality / Contamination		EPEA: 107,111,112; Release Reporting Regulation: 3.		24	10	2	5	2	4	6	4
GEN-02	General	Discharge to Athabasca River	Site Disturbance	Alteration / Damage to Aquatic Habitat or Species	Water returned to receiving environment with little environmental effects	EPEA Approval #107	BCTMP WI, BMP, ERP WI, Enviro Testing WI,	24	10	2	8	8	4	6	4
GEN-09	General	Operation of Mobile Equipment (bobcat, loader, clamptucks, trackmobile, trucks, lawnmower)	Spill / Accidental Release	Groundwater Contamination		EPEA: 107,111,112; Release Reporting Regulation: 3; Soil Monitoring Directive: 2.1.6.1	ERP WI	24	10	2	2	8	4	6	4
MAINT-02	Maintenance	Daily Maintenance Activities	Spill / Accidental Release	Soil Contamination		-		24	10	2	3	8	4	6	4
WWT-08	Wastewater Treatment	Sludge Transport	Spill / Accidental Release	Soil Contamination	Soil enhancer for receiving environment	EPEA: 107,111,112; Release Reporting Regulation: 3; Soil Monitoring Directive: 2.1.6.1	Standards and Guidelines for the Land Application of Mechanical Pulp Mill Sludge to Agricultural Land	24	9	3	6	3	4	6	4
OPS-11	Operations	Transport Trucks	Air Emissions	GHG		TIER	Influence only, corporate decision	30	10	10	8	5	3	10	3
MAINT-06	Maintenance	Operation and Maintenance of Equipment Using Refrigerant	Spill / Accidental Release	Depletion of Ozone		Ozone-Depleting Substance and Halocarbon Alternatives Regulations: 2,11. EPEA: 107,111,112; Release Reporting Regulation: 3; Federal Halocarbon Regulation: 3, 13, 32, 32		21	10	4	10	4	3	7	3
BEP-06	Bio-Energy Plant	Operation of Clarifiers (DAF)	Equipment Malfunction	Water Quality / Contamination		EPEA Approval #107	DAF WI, ERP WI, Enviro Testing WI	20	10	3	2	8	3	7	3
GEN-10	General	Parking Lot	Spill / Accidental Release	Groundwater Contamination		EPEA: 107,111,112; Release Reporting Regulation: 3; Soil Monitoring Directive 2.1.6.1	ERP WI	20	10	3	2	8	3	7	3
WWT-06	Wastewater Treatment	Sludge Spreading	Generation of Non-Hazardous Waste	Air Quality / Contamination, Landfill Use / Waste Disposal	Soil enhancer for receiving environment	EPEA Approval # 107; Waste Control Regulation: Part 3; Standards and Guidelines for the Land Application of Mechanical Pulp Mill Sludge- Agricultural Land	Standards and Guidelines for the Land Application of Mechanical Pulp Mill Sludge to Agricultural Land	20	5	8	6	4	3	7	3
BEP-07	Bio-Energy Plant	Operation of Clarifiers (DAF)	Activity Error	Water Quality / Contamination	Reduction of power and nutrients needed at aerobic system to treat solids	EPEA Approval #107	DAF WI	18	10	2	2	8	3	6	3



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BEP-08	Bio-Energy Plant	Operation of Incinerator	Air Emissions	Air Quality / Contamination	Converts CH4 to CO2 which is a less harmful to the ozone the venting CH4 to atmosphere	EPEA: 107,111,112; Release Reporting Regulation: 3.	CEMS	18	6	6	6	3	3	6	3
MAINT-10	Maintenance	Operation and Maintenance of Equipment Using Refrigerant	Activity Error	Depletion of Ozone		Ozone-Depleting Substance and Halocarbon Regulation: 2; 11; EPEA: 107,111,112; Release Reporting Regulation: 3; Federal Halocarbon Regulation: 3, 13, 32, 32	E/I WI	18	10	2	10	6	3	6	3
OPS-05	Operations	Operation of Glycol Heat Exchangers	Spill / Accidental Release	Effects on Secondary Treatment Operations	Reduce the use of natural gas in boiler, dryers and heaters, GHG savings	EPEA Approval #107		5	2	1	2	6	3	2	3
GEN-04	General	Fibre Supply	Use of Renewable Resource	Depletion of Renewable Natural Resource	Renewable sustainable resource	DFMP; FSC; CoC	Production Chip Testing, PAC Meeting, Wood Chips, Influence only to MWFP Solid Wood	20	10	10	7	10	2	10	2
MAINT-04	Maintenance	Daily Maintenance Activities (waste oil, waste solvents, lighting, batteries, oily rags, sandblast sand, sorbents, etc.)	Storage of Hazardous Waste	Landfill Use/Waste Disposal	Items sorted and recycled accordingly	EPEA Approval #107; Hazardous Waste Storage Guidelines; Waste Control Regulation: Part 1	BCTMP WI, Waste WI, Annual Reporting, Used Oil Area	20	10	10	7	4	2	10	2
OPS-04	Operations	Generation of Solid Waste (clothing changes, cores, wrap)	Generation of Non-Hazardous Waste	Landfill Use		EPEA Approval #107; Waste Control Regulation: Part 3	BCTMP WI, Waste WI, Annual Reporting, Used Oil Area	20	10	10	3	2	2	10	2
GEN-11	General	Road Usage	Air Emissions	Air Quality / Contamination		NPRI Reporting		15	10	5	4	7	2	8	2
OPS-03	Operations	Filling Tanks with Propane	Air Emissions	Air Quality		-	BCTMP WI, Propane filling training	15	10	5	1	1	2	8	2
OPS-12	Operations	Steaming Chips (temperature, VOCs & PM)	Air Emissions	Air Quality / Contamination		EPEA Approval #107		15	10	5	1	6	2	8	2
GEN-01	General	Boneyard Storage	Site Disturbance	Alteration / Damage to Wildlife Habitat or Species, Soil Contamination		Soil Monitoring Directive 2.1.6.1		13	10	3	3	8	2	7	2
OPS-07	Operations	Operation of Pulp Drying Systems	Noise	Nuisance		Town of Whitecourt Bylaw 1475: 5 - 7		13	10	3	5	2	2	7	2
LAB-04	Laboratory	Use of Laboratory Chemicals (reagents)	Generation of Non-Hazardous Waste	Landfill Use/Waste Disposal		EPEA Approval #107; Hazardous Waste Storage Guidelines; Waste Control Regulation: Part 1	Waste WI, Monthly Inspections, Annual Reporting	11	10	1	7	5	2	6	2
LAB-05	Laboratory	Use of Laboratory Chemicals (reagents)	Spill / Accidental Release	Effects on Secondary Treatment Operations		EPEA Approval #107		8	5	3	2	2	2	4	2
GEN-03	General	Electricity Usage	Use of Non-Renewable and Renewable Resource	Depletion of Renewable Natural Resource, Depletion of Non-Renewable Natural Resource		TIER	Corporate Sustainability Reporting, Cost (Goals). Influence only, no control over how grid power is generated or supplied.	10	10	10	8	8	1	10	1
GEN-05	General	Generation of Solid Waste (paper, plastic, wood, metals, domestic garbage)	Generation of Non-Hazardous Waste	Landfill Use	Items sorted and recycled accordingly	EPEA Approval #107; Waste Control Regulation: Part 3	Waste WI, Monthly Inspections, Annual Reporting	10	10	10	6	10	1	10	1
GEN-13	General	Water Usage	Use of Renewable Resource	Depletion of Renewable Natural Resource		Water Act; Licence to Divert Water #34297 & 210931	BCTMP WI, Monthly Reporting. Influence only Town of Whitecourt sole supplier.	10	10	10	8	8	1	10	1
GEN-14	General	Woodwaste	Storage of Non-Hazardous Waste	Soil Contamination	Woodwaste incinerated offsite to generate power	EPEA Approval # 107: 4.4.19-4.4.22; Waste Control Regulation: Part 3	BCTMP WI	10	10	10	2	3	1	10	1
MAINT-03	Maintenance	Daily Maintenance Activities (lumber, filings, rubber, welding rods, plastic)	Storage of Non-Hazardous Waste	Landfill Use/Waste Disposal	Items sorted and recycled accordingly	EPEA Approval #107; Waste Control Regulation: Part 3	Corporate Sustainability Reporting	10	10	10	5	3	1	10	1
MAINT-05	Maintenance	Daily Maintenance Activities (welding, grinding, cutting, burning)	Air Emissions	Air Quality / Contamination		EPEA Approval #107		9	8	10	3	2	1	9	1
MAINT-11	Maintenance	Use of Petroleum Products (diesel, gas, oil, lubes, solvents, propane, natural gas, acetylene, kerosene)	Use of Non-Renewable Resources	Depletion of Non-Renewable Resources		EPEA: 107,111,112; Release Reporting Regulation: 3; Soil Monitoring Directive 2.1.6.1	Waste WI, Monthly Inspections	7	10	4	6	9	1	7	1



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WWT-01	Wastewater Treatment	Final Effluent Discharge	Equipment Malfunction	Water Quality / Contamination		EPEA: 107,111,112; Release Reporting Regulation: 3.		6	10	2	4	3	1	6	1
OPS-10	Operations	Pulp Spill Clean-up (with water)	Use of Renewable Resource	Depletion of Renewable Natural Resource		Water Act; Licence to Divert Water #34297 & 210931	ERP WI	5	5	5	8	2	1	5	1
MAINT-07	Maintenance	Operation of Diesel Fire Pump	Air Emissions	Air Quality / Contamination		NPRI Reporting		2	1	3	5	2	1	2	1

Total Number of Aspects	69
Number of Significant Aspects	20

