



Environmental Incident Reporting

Document Number: ENP0001A	Standard – Administrative	Facility: Oil Sands – EHS
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1.0 Purpose

To ensure that environmental incidents are reported promptly to regulatory agencies and other stakeholder groups, and to ensure that corrective actions are implemented. All Suncor employees and contractors are responsible with respect to their immediate area of operation to:

- a) Monitor facilities, equipment and emissions in order to ensure operation is being conducted in an environmentally acceptable manner,
- b) Initiate the appropriate corrective action to minimize/mitigate operations which are environmentally unacceptable, and
- c) Immediately report observed environmentally unacceptable conditions to their Supervisor, or any other appropriate individual, with respect to any location on the Suncor base plant-site. As a general rule, if the practice appears environmentally unacceptable it should be immediately reported and followed up with Environmental Affairs.

2.0 Procedure

All Employees/ Contractors

1. Monitor all equipment, facilities and emissions in your area of operation to ensure that all are functioning or occurring in a planned, controlled, and environmentally acceptable manner.
2. Immediately take corrective actions should any deviations from specified operational conditions or environmental standards occur.
3. Immediately report environmental incidents or unacceptable conditions in your area to your Supervisor as soon as it is safe to do so. Immediately report observed environmental incidents or unacceptable conditions in any other area to your Shift Supervisor or to the Shift Supervisor of the area involved. Alternately, you may contact Environmental Affairs directly at (780) 743-7780.
4. Immediately report all unlicensed or unapproved releases to either the Shift Supervisor or to Environmental Affairs directly at (780) 743-7780. **In the event the incident requiring the activation of the Emergency Response Plan**, Emergency Services should be contacted at 911 (plant site landline), or (780) 790-7001 (cell phone).

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A "release" is defined as: a spill, discharge, disposal of, spray, injection, inoculation, abandonment, deposit, leak, seep, pour, emission, throw, dump, placement, or exhaust to the surrounding environment. This includes solids, liquids, and gases..

Immediately report all releases of hazardous materials that may be of danger to humans or the environment as per the Environmental Spill Reporting Standard [ECS0101A](#).

Shift Supervisors

1. Ensure that corrective actions are implemented for all incidents or unacceptable conditions reported.
2. Once discovered, immediately report the incident to Environmental Affairs on call person at (780) 743 7780 as soon as it is safe to do so for:
 - a) Any incident listed in Appendix 1 - General Reportable Incidents, and
 - b) Any incident listed in the Appendix designated for your specific operating area:
 - Appendix 2 - Upgrading Reportable Incidents;
 - Appendix 3 - Energy and Utilities Reportable Incidents;
 - Appendix 4 - Extraction Reportable Incidents;
 - Appendix 5 - Mine Reportable Incidents; and
 - Appendix 6 - Tailings.
4. Include in the initial report to Environmental Affairs the following information:
 - a) the exact date, time, duration, and location of the incident,
 - b) a description of the circumstances leading up to the incident,
 - c) the details on the nature of the incident,
 - d) estimation of the quantity released
 - d) the corrective measures which have been initiated,
 - e) details on the plans for any additional required actions,
 - f) details of the cleanup or remedial actions undertaken, and
 - g) the name and contact number of the person making the report.
5. For all reported environmental incidents, the Incident Owner must prepare a report on the Incident using incident management tool (Enablon) before the end of the shift.

Contact Engineer

1. Evaluate the situation and inform the Manager of the operational area in which the incident occurred.
2. Within 24 hours of first notification of the incident or the next business day, calculate the quantities of all emissions or spills occurring during the incident. This is dependant on the severity of the incident.

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Operations Manager (or delegate)

1. Review the event in the incident management tool (Enablon) submitted by the Shift Supervisor/ Incident Owner. This review must include:
 - a) Verification of the content and accuracy of the report,
 - b) Verification of the risk ranking assigned to the report,
 - c) Verification and addition of any required information including emission calculations, and
 - d) Verification and inclusion of any mitigating or preventative actions taken and/or outstanding.

Environmental Affairs On-call Person

1. Respond to calls to the Environmental Hotline within 15 minutes of receiving a call as per the Environmental On-Call Manual.
2. Ensure that all details regarding the incident are obtained and confirmed with the Shift Supervisor or person reporting. Be sure the following details are recorded in the Environmental On-Call Log Book:
 - (a) Date and time of phone call,
 - (b) Name and phone number of reporting person, and
 - (c) Details of the incident including any approval contraventions
3. Determine if the incident is a reportable contravention by referencing the On-Call Manual. If the incident is determined to be reportable, telephone a report of the incident to the appropriate government authorities as required by regulations, operating licenses or other directives. Document conversation with regulators in the Environmental On-Call Log Book. Be sure the following details are recorded:
 - (a) Date and time of the phone call,
 - (b) Reported details from incident,
 - (c) Name of regulator informed of the incident, and
 - (d) Incident reference number.
4. Refer to the Environmental On-Call Manual for information on additional reporting or Communications requirements for non-routine events including:
 - (a) Releases to the Athabasca River or other watersheds,
 - (b) Off-site odour potential,
 - (c) Major fires or significant flaring events, or
 - (d) Any other significant event
5. If an incident is not reportable, but is discussed with any regulatory body (i.e Alberta Energy Regulator, Alberta Health Services, etc) , ensure the incident is documented in the Environmental Affairs Log Book as a notification and note the reference number, if applicable.
6. Notify Stakeholder relations on call (780-881-0295) for incidents that are not Stage 2 or higher but still require a courtesy notification.

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Environmental Affairs Business Unit Contact

1. Review the Report in the incident management tool (Enablon) and obtain any additional information on the incident from the event owner.
2. Work with the Contact Engineer and Operations to prepare a written report on the incident using the template according to the type of incident and regulatory body to which the incident was reported. Ensure the drafted report is reviewed by the appropriate Operations Manager (or delegate) and Process Engineering Manager. Forward the report to the appropriate government authorities as per the applicable regulations.
3. Ensure that an electronic copy of the incident report is stored in the Environmental Affairs electronic filing system.

3.0 Referenced Documents

- [ECS0101A](#) – Spill Reporting
- [ECS0103A](#) – Industrial Sewer System, Wastewater Treatment and Cooling Water
- [ECS0302A](#) – Waterworks
- [ECG0001A](#) – Potentially Odourous Streams
- [ECS0404A](#) – Upgrading Hydrocarbon, Acid Gas and Sour Water Acid Gas Flares
- [POW0019A](#) – Wastewater Outfall Monitoring
- [RGS0029A](#) – Wildlife Standard
- [ECS0109A](#) – SO₂ Emissions Rolling Average
- [ECS0303A](#) – NO_x Emissions from Boilers and Heaters

Appendix 1

GENERAL IMMEDIATELY REPORTABLE INCIDENTS

INCIDENT TYPE

Any fire where Emergency Response personnel utilize significant fire fighting equipment, which includes anything greater than a fire extinguisher;

Emergency plant shutdowns and start-ups;

A release of any material (solid, liquid and/or gas) occurring on-site or off-site (including releases from transportation systems such as pipelines) in quantities exceeding those stipulated in Environmental Spill Reporting Standard ([ECS0101A](#));

Any abnormal spill or disposal into a water system discharging to the river (e.g. the wastewater system or mine drainage systems);

Discharge of a substance to a tailings pond which could have the potential for off-site odour impacts, including excess diluent losses and off-spec sour water as defined in ECS0401A;

Any release of Halon or Freon or any ozone depleting substance (including R-22 Refrigerant) exceeding limits stipulated in Environmental Spill Reporting Standard ([ECS0101A](#)); Improper storage or disposal of a Hazardous Waste;

Unauthorized disposal to, or improper disposal practice at the industrial landfill;
Unauthorized disposal to the tailings pond;

Unauthorized construction, operation or maintenance activity within 200 feet (61 meters) of the Athabasca River;

Failure to collect regulated samples or perform required analyses as defined in Suncor's EPEA Operating Approval.

Any groundwater wells that are not locked or not protected from damage (Protection includes all of steel casings, caps, wooden quads, flagging and signage);

Any groundwater wells that are damaged or destroyed.

Oiled birds or wildlife, as per [RGS0029A](#)

Deceased birds or wildlife, as per [RGS0029A](#);

Appendix 2

UPGRADING REPORTABLE INCIDENTS

1) GENERAL UPGRADING

The below examples of reportable incidents must be reported IMMEDIATELY to 780-743-7780 unless otherwise stated below.

FOR SHIFT SUPERVISORS TO REPORT IMMEDIATELY TO ENVIRONMENTAL AFFAIRS

Unapproved operation of the plant without licensed pollution abatement or pollution monitoring equipment on-line. This includes, but is not limited to, the following equipment:

- Sulphur Recovery Units,
- Caustic Vent Scrubber (34C-2),
- 8F-5 Incinerator Stack CEMS,
- 52F-302 Millennium Coker Unit CEMS
- 53F-611 Millennium Thermal Oxidizer Stack CEMS,
- 66F-102 Millennium Naphtha Unit CEMS
- Bypassing the Tail Gas Treatment Unit (TGTU)
- Vapour Recovery Unit

2) FLARES AND FLARING ([ECS0404A](#))

FOR SHIFT SUPERVISORS TO REPORT IMMEDIATELY TO ENVIRONMENTAL AFFAIRS

Any significant emergency flaring events that may exceed 20 tonnes of sulphur dioxide emissions (SO₂); significant flaring events include:

- Wet Gas Compressor trips (5K1/5K5/52K401/52K402)
- Sulphur Recovery Unit trips
- Other plant shutdowns

Pilot flame-out on any flare stack;

Flare flame-out on any stack;

Low temperature on any flare stack.

Any unapproved flaring event that exceeds 20 tonnes of SO₂ emissions as per [ECS0109A](#);

FOR UGRADING'S PROCESS ENGINEERING TEAM / ON CALL ENGINEERING SUPPORT TO REPORT TO ENVIRONMENTAL AFFAIRS

Temperature below latent heat value;

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Upon notification from Environmental Affairs, Technical Regulatory Support on call to calculate SO₂ emissions from any unapproved flaring event that potentially exceeds 20 tonnes of SO₂ emissions;

Upon notification from Environmental Affairs, Technical Regulatory Support on call to calculate combined SO₂ emissions from all sources at the plant that may potentially affect the 360 tonnes per day based on a 24 hour rolling average period;

FOR TECHNICAL REGULATORY SUPPORT (TRS) TO REPORT TO ENVIRONMENTAL AFFAIRS

On normal work day basis, calculate emissions from any unapproved flaring event that exceeds 20 tonnes of SO₂ emissions within a given calendar month. Sources include intermittent flaring, continuous flaring and refinery fuel gases;

FOR ENVIRONMENTAL AFFAIRS TO REPORT

Combined sulphur dioxide emissions from all sources at the plant exceeding 82 tonnes per day based on a 365-day rolling average, on the specified timelines as per below:

Combined sulphur dioxide emissions from all sources at the plant exceeding 500 tonnes/day based on 24-hour rolling average period during a time period when it is necessary to start up U1 and U2 simultaneously to prevent freeze up;

Combined sulphur dioxide emissions from all sources at the plant exceeding 360 tonnes per day based on a 24-hour rolling average period;

3) SULPHUR AND SULPHUR RECOVERY UNITS ([ECS0404A](#)/ [ECG0001A](#))

FOR SHIFT SUPERVISORS TO REPORT IMMEDIATELY TO ENVIRONMENTAL AFFAIRS

Trip of any Sulphur Recovery Unit resulting in flaring emissions in excess of 20 tonnes of SO₂;

Incinerator burner (8F-10) off-line in which the Incinerator Stack (8F-5) tip temperature decreases below 400°C (752°F) at the stack tip for a one-hour average;

Incinerator stack (8F-5) emissions greater than 1.2 tonnes SO₂ per hour during normal operation;

Incinerator stack (8F-5) emissions greater than 3.0 tonnes SO₂ per hour during time periods of sulphur recovery plant (U1 or U2) start-up, shut-down, upset, and heat soaking of catalyst beds, and times when the Tail Gas Treatment Unit 1 - SuperClaus (8F-19) is bypassed;

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3) SULPHUR AND SULPHUR RECOVERY UNITS (ECS0403A/ ECS0401A) (cont'd)

The Millennium Thermal Oxidizer furnace (53F-610) in which the TOU #2 Stack (53F-611) tip temperature decreases below 624°C (1155 °F) for a one-hour average; (Interim authorization in place until repair of TOU2 Stack Tip Temperature Indication. Approval lists 538 °C (1000 °F)).

Millennium Thermal Oxidizer Stack (53F-611) emission greater than 1.7 tonnes SO₂ per hour during normal operation,

Millennium Thermal Oxidizer Stack (53F-611) emission greater than 4.7 tonnes SO₂ per hour during normal operation, during time periods of sulphur recovery plant (U1 or U2) start-up, shut-down, upset, and heat soaking of catalyst beds, and times when the Tail Gas Treatment Unit 2 is bypassed

True Vapour Pressure measurements of the oil layer in the sour water tanks 10D-17 or 53D-100 in excess of 12 PSIA at any time;

Uncontrolled release of sulphur from the sulphur pad or pit to ground, in excess of 25 kg;

Fire on the sulphur pad or in the sulphur pit where Emergency Response personnel deployed fire fighting equipment;

Incinerator Stack (8F5) SO₂ emissions of greater than 51 tonnes SO₂ per day;

Incinerator stack (8F-5) concentration greater than 9,000 ppm SO₂ per hour during normal operation, or greater than 20,000 ppm SO₂ per hour during time periods of sulphur recovery plant (U1 or U2) start-up, shut-down, upset, and heat soaking of catalyst beds, and times when the Thermal Oxidizer Unit 1 - SuperClaus (8F-19) is bypassed;

Millennium Thermal Oxidizer Stack (53F-611) SO₂ emissions greater than 28.3 tonnes per day;

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3) SULPHUR AND SULPHUR RECOVERY UNITS (ECS0403A/ ECS0401A) (cont'd)

FOR ENVIRONMENTAL COMPLIANCE TO REPORT TO ENVIRONMENTAL AFFAIRS

U1 Incinerator Stack (8F-5) or Millennium (U2) Thermal Oxidizer Stack (53F-611) CEMS operational for less than 90 % of the time on a monthly basis;

FOR ENVIRONMENTAL AFFAIRS TO REPORT

Failed Stack Compliance Test or Relative Accuracy Test Audit (RATA) for U1 Incinerator Stack (8F-5) or Millennium (U2) Thermal Oxidizer Stack (53F-611) CEMS;

End Failure to complete four manual stack surveys on each of the U1 Incinerator Stack (8F-5) and Millennium (U2) Thermal Oxidizer Stack (53F-611) CEMS in a calendar year, unless authorized by Alberta Energy Regulator;

End Failure to meet compliance requirements in accordance with the CEMS Code on each of the U1 Incinerator Stack (8F-5) and Millennium (U2) Thermal Oxidizer Stack (53F-611) CEMS in a calendar year, unless authorized by Alberta Energy Regulator (including routine inspections and maintenance, stack testing and cylinder gas audits).

FOR PLANNING AND LOGISTICS TO REPORT TO ENVIRONMENTAL AFFAIRS

Disposal of sulphur to the Suncor landfill in excess of 5600 tonnes on a calendar year basis

Failure to achieve combined sulphur recovery of 99.5% on a quarterly basis, or 99.8% on an annual basis, based on sulphur recovery in U1, U2;

4) COOLING WATER AND WASTEWATER (DOMESTIC/ INDUSTRIAL) OUTFALLS ([ECS0103A](#))

FOR SHIFT SUPERVISORS TO REPORT IMMEDIATELY TO ENVIRONMENTAL AFFAIRS

Pond E (FDG/4G2 Cooling Water) Outfall Oil and Grease concentration greater than 5 mg/L (gross) based on a confirmed grab sample;

Industrial Wastewater (Pond E) Outfall in exceedance of the following daily limits:

PARAMETER	DAILY LIMIT
Chemical Oxygen Demand	> 200 mg/L
Total Suspended Solids	> 100 mg/L
Oils and Grease	> 10 mg/L
pH	Between 6.0 – 9.5

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Overflow of any Wastewater pond or unauthorized modifications to Wastewater operation;

Industrial Wastewater (Pond E) Outfall daily or monthly loading exceeding limits specified in the table below based on composite or grab sample chemical analysis, as described in procedure [POW0019A](#) – Wastewater Outfall Monitoring.

PARAMETER	DAILY LOADING (KG/D)	MONTHLY AVERAGE (KG/D)
Chemical Oxygen Demand	4500	3000
Phenols	7.5	2.0
Sulphides	7.0	3.8
Ammonia Nitrogen	70	25
Total Phosphorus	20	10
Total Nitrogen	1300	680
Total Chloride	37000	20000
Oil and Grease	350	150
Total Suspended Solids	2000	1250

PARAMETER	LIMITS
Acute lethality test using rainbow trout (<i>Oncorhynchus mykiss</i>)	50% or greater survival in 100% industrial wastewater sample
pH	≥ 6.0 and ≤ 9.5 pH units
Flows from Pond E (FGD, BFWTP Rejects) and Pond E Effluents	Must not exceed the maximum flow objectives set in the proposed Pond E flow management plan as described in the SIR response of March 18, 2011 of the Application 059-94, unless otherwise authorized by the Director

4) COOLING WATER AND WASTEWATER (DOMESTIC/ INDUSTRIAL) OUTFALLS ([ECS0103A](#)) (cont'd)

Failure on Wastewater (Pond C or E) Outfall grab sample collected for an Acute Lethality Test using Rainbow Trout (i.e. sample does not achieve 50 % or greater survival rate for a 100 % industrial wastewater sample);

Wastewater (Pond C or E) continuous pH and flow measurement devices operational for less than 90 % of the time on an annual basis;

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Domestic Wastewater (Sanitary Sewer) Outfall monthly average CBOD loading exceeding 25 mg/L.

Failure to collect samples or perform analysis as defined in Suncor's AEPEA Environmental Operating Approval and Standard [ECS0103A](#).

5) COKERS AND HEATERS ([ECS0303A](#))**FOR COMPLIANCE REPORTING (CALGARY) TO REPORT TO ENVIRONMENTAL AFFAIRS**

NO_x emissions from the Millennium Coker Heater Stacks (52F-300, 52F-301, Millennium Steam Reformer Heater Stack (54F-102), Millennium diluent heater stacks (57F-1A/ B), or from the Millennium Vacuum Heater Stacks (57F-2A/B), in excess of AEPEA Approval 94-02-04 Amendment Limits on a monthly basis (Table 4.1 – C);

Source of Air Emission	Air Contaminant	Limit
Millennium coker charger heater stack (52F-302) (Capacity 504 GJinput/hr)	Nitrogen oxides(expressed as NO ₂)	≤ 20.2 kg/hr per stack (monthly average of CEMS Data)
Each of two Millennium coker charger heaters stacks (52F-0300 and 52F-0301) (Capacity 456 GJinput/hr)	Nitrogen oxides(expressed as NO ₂)	18.2 kg/hr per stack
Millennium hydrogen reformer furnace stack (54F-102) (Capacity 957 GJinput/hr)	Nitrogen oxides(expressed as NO ₂)	≤ 38.3 kg/hr per stack
Each of two Millennium diluent heaters stacks (52F101A/B) (Capacity 168 GJinput/hr)	Nitrogen oxides(expressed as NO ₂)	≤ 6.7 kg/hr per stack
Each of two Millennium diluent heaters stacks (57F-1A/B) (Capacity 175 GJinput/hr)	Nitrogen oxides(expressed as NO ₂)	≤ 7.0 kg/hr per stack
Each of two Millennium vacuum heaters stacks (57F-2A/B) (Capacity 222 GJinput/hr)	Nitrogen oxides(expressed as NO ₂)	≤ 8.9 kg/hr per stack
Hydrogen Reformer Furnace Stack 66F-102 (Capacity 408 GJinput/hr)	Nitrogen oxides(expressed as NO ₂)	≤ 16.3 kg/hr per stack (except for the start-up, shut-down and upset periods)

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FOR ENVIRONMENTAL COMPLIANCE REPORT TO ENVIRONMENTAL AFFAIRS

MCU Coker Heater Stack 52F-302 NO_x (expressed as NO₂) in excess of 20.2 kg/hr (monthly average of CEMS data).

MCU Coker Heater Stack 52F-302 or Millennium Hydrogen Reformer Furnace Stack (66F-102) CEMS operational for less than 90 % of the time on a monthly basis;

FOR ENVIRONMENTAL AFFAIRS TO REPORT

Failed Manual Stack Survey or Relative Accuracy Test Audit (RATA) for MCU Coker Heater Stack (52F-302) CEMS or Millennium Hydrogen Reformer Furnace Stack (66F-102)

Failure to complete four manual stack surveys on either the MCU Coker Heater Stack (52F-302) or Millennium Hydrogen Reformer Furnace Stack (66F-102) CEMS in a calendar year, unless authorized by Alberta Energy Regulator;

Failure to meet compliance requirements in accordance with the CEMS Code on either the MCU Coker heater Stack (52F-302) or Millennium Hydrogen Reformer Furnace Stack (66F-102) CEMS in a calendar year, unless authorized by Alberta Energy Regulator (including routine inspections and maintenance, stack testing and cylinder gas audits).

7) OFFPLOTS (TANK FARMS AND VAPOUR RECOVERY)

FOR SHIFT SUPERVISORS TO REPORT IMMEDIATELY TO ENVIRONMENTAL AFFAIRS

Any emergency downtime of the Vapour Recovery Unit in which all 3 compressors are unable to collect vapours from the South Tank Farm and Extraction Plants 4, 16, and 87;

Any emergency stack venting (i.e. disc rupture) of the Vapour Recovery Unit;

Tank Venting from any tank that triggers H₂S alarms, any venting in excess of 3 minutes from South Tank Farm tanks tied into the VRU

FOR REGULATORY COMPLIANCE CALGARY TO REPORT TO ENVIRONMENTAL AFFAIRS

Significant Refinery Fuel Gas flaring events from the Vapour Recovery Unit resulting in excess SO₂ emissions;

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FOR UPO CONTACT ENGINEER TO IMMEDIATELY REPORT TO ENVIRONMENTAL AFFAIRS

True Vapour Pressure (TVP) value on North Tank Farm floating roof tanks exceeding limits specified in the table below, based on a three hour rolling average.

TANK ID NO.	DESCRIPTION OF TANK	MAX TVP (PSIA)
20D-14	Coker Naphtha	11
20D-15	Product Naphtha or Diluted Bitumen	12.5
20D-31	Coker Naphtha or Swing Products	12.5
20D-34	Coker Naphtha or Kero	11
20D-55	Low/Ultra Sulphur Diesel (Product Kero) or Swing Products	12.5
20D-56	Product Naphtha or Swing Products	12.5

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Appendix 3

ENERGY AND UTILITIES REPORTABLE INCIDENTS

INCIDENT REPORT:

1) GENERAL ENERGY AND UTILITIES

INCIDENT TYPE

Unapproved operation of the plant without licensed pollution abatement or pollution monitoring equipment on line. This includes, but is not limited to, the following equipment:

- Electrostatic Precipitators (ESP's),
- Flue Gas Desulphurization Unit (FGD),
- FGD (Stack 37) CEMS,
- Powerhouse (Stack 31) CEMS,
- Gas Turbine Generators GTG-5 and GTG-6 CEMS.

2) BOILERS AND STACKS

FOR SHIFT SUPERVISORS TO IMMEDIATELY REPORT TO ENVIRONMENTAL AFFAIRS

Visible emissions from the Powerhouse Stack (31F-7) to the atmosphere with an opacity >40% averaged over a period of six minutes as assessed by CEMS for four consecutive 6-minute averages

Powerhouse Stack (31F-7) SO₂ mass emission greater than 14.2 tonnes SO₂ per hour;

Powerhouse Stack (31F-7) SO₂ concentration greater than 4,700 ppm SO₂ by volume on an hourly average;

Powerhouse Stack (31F-7) SO₂ emissions of greater than 259 tonnes SO₂ per day;

Flue Gas Desulphurization Stack (37F-01) NO_x mass emission greater than 1.8 tonnes NO_x per hour;

Any unapproved planned downtime of the Flue Gas Desulphurization Unit;

Any emergency downtime of the Flue Gas Desulphurization Unit;

Any event resulting in the bypass of the Flue Gas Desulphurization Unit by one or more coke fired boilers, except during periods of shut-down or start-up of the FGD plant;

Any downtime of the Electrostatic Precipitators (ESP's) by the coke fired boilers;

Gas Turbine Generators GTG-5 and GTG-6 Main Stack Nitrogen Oxide (NO₂) mass emission greater than 94 kilograms per hour;

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BOILERS AND STACKS (cont'd)

FOR ENVIRONMENTAL COMPLIANCE TO REPORT IMMEDIATELY TO ENVIRONMENTAL AFFAIRS

Operation of the Flue Gas Desulphurization Unit less than 90% of the time when the coke fired boilers (when using coke as a fuel source) are operational within a calendar year

Powerhouse (31F-7) or Flue Gas Desulphurization Unit (37F-1) or Gas Turbine Generators GTG-5 and GTG-6 CEMS operational for less than 90 % of the time on a monthly basis;

FOR ENVIRONMENTAL AFFAIRS TO REPORT IMMEDIATELY TO REGULATOR

Failed Manual Stack Survey or Relative Accuracy Test Audit (RATA) for Powerhouse (31F-7) or Flue Gas Desulphurization Unit (37F-1) or Gas Turbine Generators GTG-5 and GTG-6 CEMS;

Failure to meet Particulate compliance limit of less than 0.20 kg/1000 kg of effluent adjusted to 50% excess air on either the Powerhouse (31F-7) or Flue Gas Desulphurization Unit (37F-1) stacks as measured during a Particulate (Compliance) Survey.

Failure to meet compliance requirements in accordance with the CEMS Code on either the Powerhouse (31F-7) Flue Gas Desulphurization Unit (37F-1) CEMS, Gas Turbine Generators GTG-5 and GTG-6 in a calendar year, unless authorized by Alberta Energy Regulator (including routine inspections and maintenance, stack testing, cylinder gas audits, CO, CO₂ and PAHs test).

RIVER INTAKE AND POND MANAGEMENT ([ECS0103A](#))

FOR SHIFT SUPERVISORS TO IMMEDIATELY REPORT TO ENVIRONMENTAL AFFAIRS

Overflow of the Fresh Water or Cooling Water Ponds;

Any dredging of the Fresh Water Pond being conducted during any month except for June, July, or August;

Dredging of the River Intake Forebay being conducted at any time except from July 15 – September 15;

Any dredging of the River Intake Forebay that is conducted without prior authorization from Alberta Energy Regulator and the Department of Fisheries and Oceans;

Discharge of Pond 4G2 wastewater to the Athabasca River in excess of 1800 USGPM.

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*Continued - Appendix 3 - Energy and Utilities Reportable Incidents***FOR ENVIRONMENTAL AFFAIRS TO REPORT IMMEDIATELY**

River intake in excess of Suncor's License Limit of 59.8 million m³ on an annual basis;

FOR SHIFT SUPERVISOR TO REPORT IMMEDIATELY TO ENVIRONMENTAL AFFAIRS

Use of the diesel pumps or other unmetered temporary pumps for river water intake;

Failure to collect gypsum slurry and Pond 4G2 outfall samples and perform analysis as defined in Suncor's AEPEA Environmental Operating Approval;

Failure to collect the weekly coke sample for GHG compliance.

POTABLE WATER ([ECS0302A](#))

Immediate	If chlorine residuals in the water entering the distribution system are less than 0.2 mg/L
Immediate	If chlorine residuals in the water in the distribution system are less than 0.1 mg/L
Immediate	If treated water turbidity is greater than 0.1 NTU with an exception of less than 0.3 NTU for a cumulative time of 15 minutes per day/unit
Immediate	If treated water particle counts (particles greater than 2µm) are greater than 20 particles/ml with an exception of 200 particles/ml cumulative time of 30 minutes per day/unit
Immediate	If water entering the distribution system has a pH less than 6.5 or greater than 8.5
Immediate	If the running annual average for Total Haloacetic Acid exceeds 80 µg/l
Immediate	If the running annual average for Total Trihalomethanes exceeds 110 µg/l
Immediate	Bacteriological samples containing any confluent growth or total coliforms;
Immediate	Any structural or equipment malfunction including breaks and leaks or a depressurization in the waterworks system that may affect the quality or supply of potable water
Immediate	Failure to comply with the limits and monitoring requirements specified in the Potable Water Regulation, the Canadian Drinking Water Quality Guidelines and the Standards and Guidelines for Municipal Waterworks, Wastewater and Storm Drainage Systems. Notification is required to Alberta Environment and Parks and Alberta Health Services-as outlined in the ECS0302A Waterworks (Potable Water) standard
Immediate	Failure of the continuous monitoring equipment for more than 24 hrs
Immediate	Use of any chemicals not approved by the National Sanitation Foundation
Immediate	Any wet areas or any seepages and/or discharges from the treated sanitary wastewater disposal infiltration field.
Immediate	Failure to use government approved analytical procedures on licensed samples.

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Appendix 4

EXTRACTION REPORTABLE INCIDENTS

GENERAL EXTRACTION

FOR SHIFT SUPERVISORS TO REPORT IMMEDIATELY TO ENVIRONMENTAL AFFAIRS

Unapproved operation of the plant without licensed pollution abatement or pollution monitoring equipment on line. This includes, but is not limited to, the following equipment:

- Naphtha Recovery Unit (NRU)
- NRU Iron Sponge Absorber System (16C-5).

Any quantity of untreated tails or Upgrading wastewater (diluent overhead water or stripped sour water) discharged on an emergency or non-emergency basis to the tailings ponds from the NRU.

Any bypass of the NRU Iron Sponge Absorber System (16C-5)..

Any venting that occurs from Plant 4 or 16 (with the exception of 16C-5)

Any process line breach or other event resulting in a release of material in excess of quantities defined in the Spill Reporting Standard [ECS0101A](#).

FOR CONTACT ENGINEER TO REPORT TO ENVIRONMENTAL AFFAIRS

Diluent loss will not exceed 4.0 volume of diluent per 1000 volume of bitumen

Appendix 5**MINE REPORTABLE INCIDENTS****GENERAL MINING****FOR SHIFT SUPERVISORS TO REPORT IMMEDIATELY TO ENVIRONMENTAL AFFAIRS**

Any fire where Emergency Response personnel utilize major fire fighting equipment;

Any process line breach, tailings dyke seepage, or other event resulting in a release of material in excess of quantities defined in the Spill Reporting Standard [ECS0101A](#).

Any release of tailings dyke drainage, coke/sulphur drainage, or other release from a collection system to the river, receiving environment or environmental buffer.

Industrial Runoff Control System (Mine Drainage) release exceeding limits specified in the table below based on a grab sample chemical analysis,

PARAMETER	DAILY LIMIT
Chemical Oxygen Demand	200 mg/L
Total Suspended Solids	100 mg/L
Oils and Grease	10 mg/L
pH	Between 6.0 – 9.5

Failure to collect Industrial Runoff grab samples and perform analyses as defined in Suncor's AEPEA Environmental Operating Approval Table 4.2-D

Any significant geotechnical failure.

Any tree clearing activities outside of site approval boundaries, or without proper authorization in place.

Any soil salvage activities outside off site approval boundaries, without proper authorization in place, or not in line with soil salvage approved practices.

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Approved By: Sheila Chernys, Director OS Enviro & Reg

Appendix 6

TAILINGS REPORTABLE INCIDENTS

FOR SHIFT SUPERVISORS TO REPORT TO ENVIRONMENTAL AFFAIRS

Unauthorized disposal to the tailings pond as defined in [RHP00009](#)

Immediate Any process line breach (line rupture), tailings dyke seepage, or other event resulting in a release of material in excess of quantities defined in the Spill Reporting Standard [ECS0101A](#).

Immediate Any release of tailings dyke drainage, coke/sulphur drainage, or other release from a collection system to the river, receiving environment or environmental buffer.



The following individuals have approved and signed this document.

UserName: Sheila Chernys (schernys)

Title: Dir OS Enviro & Reg

Date: Tuesday, 03 April 2018, 10:33 AM Mountain Time

Meaning: Approver 1 Signed

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