



Spill Reporting

Document Number: ECS0101A	Standard – Administrative	Applies To: Oil Sands
Revision Date: 2015/01/09 Revision: 2 Review Cycle: 3 Years	Document Owner (Title): Director, Environment (Oil Sands)	Effective Date: As noted on signature page

Summary of Changes

Rev No.	Section Changed	Revision Made
2	Definitions	Removed definition of liquid spill
1	Revision	Revision 1 assigned as no previous revision number assigned
	All	Transfer to new template

Scope This standard applies to all Suncor Oil Sands personnel and provides the requirements for spill reporting.

Purpose This standard has been established to define spills that require environmental reporting as per Environmental Incident Reporting Procedure [ENP0001A](#), and to ensure that spills are immediately reported to the appropriate regulators as required by provincial and federal legislation.

Compliance All Suncor Oil Sands employees and contractors must comply with the requirements of this standard effective Dec 17th, 2014

Roles and Responsibilities **The following individuals and groups have the following roles and responsibilities:**

- Document Owner**
- Ensures this document is reviewed according to the required revision cycle.
 - Ensures the document is updated to accommodate changes to Suncor, provincial, and federal regulation.
 - Ensures the document is updated to mitigate risks found as the result of an incident.

- Document Approver**
- Ensures this standard is necessary and that it aligns with management and company direction.

References

- [ENP0001A](#) Environmental Incident Reporting

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Approved By: **Director, Environment (Oil Sands)**

Terms, Definitions and Acronyms The following terms, definitions and acronyms are used in this standard:

Adverse Effect	Impairment of or damage to the environment, human health or safety or property.
Control Area	Any area of the Suncor Energy Inc. lease which is: a) within the environmental buffer zone; b) within 200 feet (61 metres) of the Athabasca River, its tributaries or other natural water body; c) within 50 feet (15 metres) of any drainage system draining to the Athabasca River; d) within 50 feet (15 metres) of a groundwater well; e) within 50 feet (15 metres) of a water system; f) located on the Suncor Bridge over the Athabasca River; g) all drains that discharge to a water system; and/or h) located such that any spill onto the area will run or flow directly to any of (a), (b), (c), (d), (e) or (g) above.
Environmental Buffer Zone	An undisturbed area maintained between Suncor operations and a fish-bearing water body, including the Steepbank and Athabasca Rivers. Environmental Buffer Zones on Suncor plant site are required to be clearly marked.
Immediate Reporting	Notifying Environmental Affairs as soon as there is awareness that a spill has occurred or may have occurred.
Spill	An unplanned, accidental or unauthorized event resulting in a release of material either into the environment or into a location which does not usually contain the material. Releases include leaks, seeps, spills, contaminated sites, abandoned or dumped wastes, discharges, sprays, injections, inoculations, abandonment, depositions, emissions, and exhausts. Also included are chemical waste discharges into the industrial sewer unless prior authorization has been obtained from Suncor's Environmental Affairs group.
Water System	a) an industrial wastewater treatment system or a runoff treatment system that discharges to the environment; and/or b) a potable water treatment system or a sewage treatment system

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Standard**1. Operating Requirements**

	Item	Description
All Employees / Contractors	1.1	Ensure that corrective actions are <u>immediately</u> implemented for all spill incidents.
	1.2	Any liquid spill <ul style="list-style-type: none"> • That is released to a stream or water body other than an approved storage site or tailings pond • That is unplanned and is in excess of 2 cubic meters if released on an Oil Sand site (inside or outside an operating plant) must be <u>immediately</u> reported to Environmental Affairs at 780-743-7780 as per ENP0001A
	1.3	In addition to 1.2, all spills and releases to the receiving environment that are greater than the volumes specified in Appendix I, must be <u>immediately</u> reported to Environmental Affairs.
	1.4	Notification should be made to the immediate supervisor and operations shift supervisor.
	1.5	In some cases Security or Emergency Services should be contacted at 911 when using a plant-site phone, or 780-790-7001 when using a cellular phone.
	1.6	If a reportable spill quantity has not been determined after consulting Part A, refer to Part B of Appendix I. Part B provides a guideline for substances that may have reportable spill quantities as per Transportation of Dangerous Goods (TDG) materials for the spilled substance (usually provided on the product MSDS) to obtain a reportable spill quantity. If spill quantity is in excess of trigger volumes (or product is not TDG classified), <u>immediately</u> report spill to Environmental Affairs as per ENP0001A .
	1.7	Ensure that any spills to a Water System are <u>immediately</u> reported to Environmental Affairs, as per ENP0001A . <ul style="list-style-type: none"> • Industrial Wastewater System (Upgrading Offplots) • Industrial Runoff System (Mine Drainage) • Potable Water (East) (Epcor) • Potable Water (West) (Energy and Utilities) • Sewage Lagoons (West) to (Upgrading Offplots)
	1.8	If in doubt, as to whether a spill is reportable, notify Environmental Affairs.

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	Item	Description
Environmental Affairs On-Call Person	1.9	<p>Ensure that all pertinent details regarding the incident are obtained and confirmed with the person reporting the event, including:</p> <ul style="list-style-type: none"> • the exact date, time, duration, and location of the incident; • whether the release impacted a control area and/or environmental buffer zones; • a description of the circumstances leading up to the incident; • the details on the nature of the incident; • the corrective measures which have been initiated; • details on the plans for any additional required actions; • details of the cleanup or remedial actions undertaken; and • the name and contact number of the person making the report.
	1.10	Determine if spill conditions and volume are in violation of any regulations, operating licenses or other directives. If there is not enough information to properly assess the spill at the time of the event, then the On-Call person must err on the side of caution and <u>immediately</u> report the incident to the appropriate regulatory agencies. Document conversation with regulators in the On-Call Log Book.
	1.11	If required, <u>immediately</u> report the spill or release to appropriate regulatory agencies (i.e., Alberta Energy Regulator, Environment Canada, Department of Fisheries and Oceans, or the Northern Lights Health Region). Document conversation with regulators in the On-Call Log Book.
	1.12	Spills into the Athabasca River, or tributary or natural water body discharging into the Athabasca River, shall be reported by Suncor Environmental Affairs to directly affected downstream users as per section 110 (1) (e) of <i>AEPEA</i> . Downstream users, include Syncrude, Albion Sands and CNRL. Also, contact Stakeholder Relations to initiate communication with Fort McKay and Fort Chipewyan.
	1.13	If the event is non-routine or is likely to attract public attention, discuss need for public notification with the Communications department.
	1.14	If an incident is not reportable, but is discussed with Regulator(s), maintain a written record using the On-Call Log Book.
	1.15	Ensure an incident confirmation number is obtained from the government authority. Record in the On-Call Log Book.
Environmental Affairs Manager	1.16	Ensure that all Environmental Affairs On-Call staff understands the spill reporting standard and associated regulations, operating licenses or other directives.

End of Standard

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Appendix 1 – Environmental Spill Reporting Part A**A. Reportable Spill Quantities for Substances Used/Produced at Suncor**

If spills of any materials listed in Part A are in the Control Areas or off the plant site, then any amount must be reported immediately. Otherwise, the reportable quantities are:

Substance	Spills to be Reported if Amounts Equal or Exceed	Reporting Time Frame
<u>I. Petroleum and Petroleum Products</u>		
1. Any TDG regulated substance from a vehicle that has been/ will be operating off site	refer to Appendix I (B)	Immediate
2. Any petroleum product from any underground (a) storage tank, (b) piping or (c) sumps.	any quantity	Immediate
3. Any pipeline leak on Suncor Bridge	any quantity	Immediate
4. Diluted Bitumen	200 L (1.25 bbls)	Immediate
5. Fuel Additives	200 L	Immediate
6. Gas Oil ⁺	200 L (1.25 bbls)	Immediate
7. Gasoline	200 L	Immediate
8. Kerosene/diesel	200 L (1.25 bbls)	Immediate
9. Lubricating Oils/Greases ⁺	200 L	Immediate
10. Naphtha	200 L (1.25 bbls)	Immediate
11. Hydrotransport Slurry Fluid ⁺	2,000 L (12.6 bbls)	Immediate
12. Bitumen Froth ⁺	2,000 L (12.6 bbls)	Immediate
<u>II. Tailings and Tailings Water</u>		
13. Consolidated Tailings (CT) ⁺	2000 L (1.25 bbls)	Immediate
14. PEW ⁺	2,000 L (12.6 bbls)	Immediate
15. Tailings (DT)	2000 L (1.25 bbls)	Immediate
16. Tailings (Fine Tails)	5 L or 5 kg	Immediate
17. Tailings (MFT from Ponds 1 & 2/3)	2000 L (1.25 bbls)	Immediate
<u>III. Acids and Bases (TDG – Class 8)</u>		
18. Acetic Acid	5 L or 5 Kg	Immediate
19. Calcium Hydroxide	5 L or 5 Kg	Immediate
20. Calcium Oxide	5 L or 5 Kg	Immediate
21. Hydrochloric Acid	5 L or 5 Kg	Immediate
22. Magnesium Oxide	5 L or 5 Kg	Immediate
23. Nitric Acid	5 L or 5 Kg	Immediate
24. Phosphoric Acid	5 L or 5 Kg	Immediate
25. Potassium Hydroxide (Caustic Potash)	5 L or 5 Kg	Immediate
26. Sodium Hydroxide (Caustic Soda/Caustic)	5 L or 5 Kg	Immediate
27. Sulphuric Acid	5 L or 5 Kg	Immediate

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Substance	Spills to be Reported if Amounts Equal or Exceed	Reporting Time Frame
<u>IV. Gaseous Substances</u>		
28. Acetylene	100 L and/or a sustained release of 10 minutes	Immediate
29. Ammonia (anhydrous)	any quantity	Immediate
30. Ammonia solutions (< 50% ammonia)	any sustained release of 10 minutes	Immediate
31. Ammonia solutions (> 50% ammonia)	any quantity	Immediate
32. Butane	100 L and/or a sustained release of 10 minutes	Immediate
33. Carbon Monoxide	any sustained release of 10 minutes	Immediate
34. Carbonyl Sulfide	any sustained release of 10 minutes	Immediate
35. Chlorine	any sustained release of 10 minutes	Immediate
36. Dimethyl Ether	100 L and/or a sustained release of 10 minutes	Immediate
37. Ethane	100 L and/or a sustained release of 10 minutes	Immediate
38. Freon (R22)	10 kg	Immediate
39. Freon (AZ50,R507,SUVA 134A)	any sustained release of 10> minutes	Immediate
40. Hydrogen	100 L and/or a sustained release of 10 minutes	Immediate
41. Hydrogen Chloride	any sustained release of 10 minutes	Immediate
42. Hydrogen Sulfide	any sustained release of 10 minutes	Immediate
43. Isobutane	100 L and/or a sustained release of 10 minutes	Immediate
44. Methane	100 L and/or a sustained release of 10 minutes	Immediate
45. Methyl Mercaptan	any sustained release of 10 minutes	Immediate
46. Nitrogen (compressed)	100 L and/or a sustained release of 10 minutes	Immediate
47. Propane	100 L and/or a sustained release of 10 minutes	Immediate
48. Sulphur Dioxide (from unapproved sources)	any sustained release of 10 minutes	Immediate
49. Sulphur Dioxide (from approved sources)*	see AEPEA approval s.4.1.26 and/or ECS0404A (Flare Standard)	n/a
50. Sulphur Hexafluoride	100 L and/or a sustained release of 10 minutes	Immediate

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Substance	Spills to be Reported if Amounts Equal or Exceed	Reporting Time Frame
<u>V. Miscellaneous Organic Substances</u>		
51. Acetaldehyde	200 L	Immediate
52. Acetone	200 L	Immediate
53. Antifoam	200 L	Immediate
53. Ballast Oil (no PCB) ⁺	25 L or 25 kg	Immediate
54. Ballast Oil (PCBs present or content unknown) ⁺	any quantity	Immediate
55. Citrikleen	5 L or 5 Kg	Immediate
56. Chloroform	5 L or 5 Kg	Immediate
57. Cyclohexane	200 L	Immediate
58. Cyclohexylamine	5 L or 5 Kg	Immediate
59. Demulsifiers	200 L	Immediate
60. Diethanolamines (including MDEA, DGA , DEA) ⁺	5 L or 5 Kg	Immediate
61. Diethylene Glycol ⁺	200 L	Immediate
62. Dimethyl Sulfide	200 L	Immediate
63. Ethylbenzene	200 L	Immediate
64. Ethylene Glycol	200 L	Immediate
65. Formaldehyde Solution (> 25%)	5 L	Immediate
66. Hexane	200 L	Immediate
67. Methanol	200 L	Immediate
68. Mercaptan (also see 46. Methyl mercaptan)	200 L	Immediate
69. Neutralizing Amine	5 L or 5 Kg	Immediate
70. Oxygen Scavenger	5 L or 5 Kg	Immediate
71. PCBs [PCB] > 50mg/L ⁺	Any quantity	Immediate
72. Pentane (n-Pentane)	200 L	Immediate
73. Propylene Glycol ⁺	200 L	Immediate
74. Sludge Conditioner ⁺	200 L	Immediate
75. Toluene	200 L	Immediate
76. Transformer Oil (no PCBs) ⁺	25 L or 25 kg	Immediate
77. Transformer Oil (PCB content unknown) ⁺	any quantity	Immediate
78. Vinylidene Chloride	200 L	Immediate
79. Xylene	200 L	Immediate

VI. Miscellaneous Inorganic Substances

80. Aluminum Sulfate (Alum) ⁺	5 L or 5 kg	Immediate
81. Brine ⁺	2,000 L	Immediate
82. Carbon Disulfide	200 L	Immediate
83. Catacarb 100H (Corrosion Inhibitor)	5 L or 5 Kg	Immediate
84. Catacarb 400H	5 L or 5 Kg	Immediate
85. Disodium Phosphate ⁺	1 Kg	Immediate
86. Fly Ash Slurry ⁺	100 L	Immediate
87. Gypsum Slurry ⁺	37 850 L (10,000 gallons)	Immediate

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Substance	Spills to be Reported if Amounts Equal or Exceed	Reporting Time Frame
88. Hydrogen Fluoride	5 L or 5 Kg	Immediate
89. Mercury	any quantity	Immediate
90. Sulphur	25 Kg	Immediate
91. Polyaluminum Chloride (PAX, NIAD)	5 L or 5 Kg	Immediate
92. Potassium Permanganate	5 L or 5 Kg	Immediate
93. Powerhouse Ash ⁺	5 L or 5 Kg	Immediate
94. Sodium Hypochlorite	5 L or 5 Kg	Immediate
95. Sodium Nitrate	5 L or 5 Kg	Immediate

VII. Waste Products

96. Landfill Leachate ⁺	10,000 L	Immediate
97. Sewage ⁺	25 kg	Immediate
98. Upgrading Spent Catalysts	25 Kg	Immediate
99. Waste Oil	25 L or 25 Kg	Immediate
100. Other Hazardous Liquid or Solid Wastes	Dependent on TDG classification of waste (see Section B)	Immediate

IX. Water

101. Condensate (steam) ⁺	10,000 L	Immediate
102. Cooling Water (i.e., TCW) ⁺	2,000 L	Immediate
103. Groundwater (saline, i.e., > 4,000 mg/L TDS) ⁺	2,000 L	Immediate
104. Raw Water ⁺	10,000 L	Immediate
105. Sour water	2000 L	Immediate
106. PEW (see II. Tailings and Tailings Water)	-	-

VII. Ozone Depleters

	10 kg	Immediate
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REFER TO OZONE DEPLETING SUBSTANCES SEE STANDARD ECS0104A.

⁺ Not a TDG Regulated Substance

* SO₂ releases from unauthorized emission sources only (see S 4.1.2 of AEPEA Approval for authorized sources)

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Approved By: **Director, Environment (Oil Sands)**

APPENDIX I – ENVIRONMENTAL SPILL REPORTING PART ‘B’**B. Spill Quantities for Reporting Purposes**

<u>Substance</u>	<u>Class and Division</u>	<u>Spills to be Reported if Amounts Equal or Exceed</u>	<u>Reporting Time Frame</u>
i) Explosives	1	Any quantity that could pose a danger to public safety or 50 kg	Immediate
ii) Gases	2	Any quantity that could pose a danger to public safety or any sustained release of 10 minutes or more	Immediate
iii) Flammable Liquids	3	At least 200 L	Immediate
iv) Flammable Solids	4	At least 25 Kg	Immediate
v) Oxidizing Substances	5.1	At least 50 Kg or 50 L	Immediate
vi) Organic Peroxides	5.2	At least 1 Kg or 1 L	Immediate
vii) Toxic Substances	6.1	At least 5 Kg or 5 L	Immediate
viii) Infectious Substances	6.2	Any quantity that could pose a danger to public safety or 1 kg or 1 L	Immediate
ix) Radioactive Materials	7	Any discharge or a radiation level exceeding 10mSv/h at 200 µSv/h at 1m from the package surface	Immediate
x) Corrosives	8	At least 5 Kg or 5 L	Immediate
xi) Miscellaneous Products, Substances or Organisms	9	At least 25 kg or 25 L	Immediate

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The following individuals have approved and signed this document.

UserName: Sheila Chernys (schernys)

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Meaning: Approver 1 Signed

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