



River Water Intake

Document Number: ECS0301A	Standard – Administrative	Applies To: Oil Sands
Revision Date: 2015/02/10 Revision: 1 Review Cycle: 3 Years	Document Owner (Title): Manager, EH&S Environmental Affairs	

Summary of Changes

Rev No.	Section Changed	Revision Made
1		Revision number assigned as no previous revision number assigned. Document template updated.

Scope This standard applies to all Suncor Oil Sands personnel and provides the requirements for water withdrawal from the Athabasca River.

Purpose To set the minimum environmental operating requirements for the fresh water and cooling water ponds and the intake forebay including river water withdrawal rates and dredging requirements.

Compliance All Suncor Oil Sands employees and contractors must comply with the requirements of this standard effective February 12, 2015.

Roles and Responsibilities

The following individuals and groups have the following roles and responsibilities:

- | | |
|--------------------------|---|
| Document Owner | <ul style="list-style-type: none"> • 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 | <ul style="list-style-type: none"> • Ensures this standard is necessary and that it aligns with management and company direction. |

References

- [ECS0107A](#) Sampling, Monitoring, Reporting and Plant Modifications
- [ECS0108A](#) Environmental Reporting Requirements and Accountabilities
- [ENP0001A](#) Environmental Incident Reporting

Terms, Definitions and Acronyms

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

SWWMC	Site Wide Water Management Committee
AEPEA	Alberta Environmental Protection and Enhancement Act

Standard**1. Operating Requirements**

Item	Description
1.1	All operations must comply with Environmental operating requirements as detailed in ECS0107A Sampling, Monitoring, Reporting and Plant Modifications.
1.2	Business areas including Upgrading, Extraction, Firebag, Energy and Utilities, Tailings, Growth Planning, and Environmental Affairs shall work collectively to minimize water import from the Athabasca River through participation in the Site Wide Water Management Committee (SWWMC).

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Item	Description
1.3	Environmental Affairs is responsible for tabulating river import data on a weekly basis and revising the annual import estimate, using a method approved by the SWWMC. The SWWMC is responsible for establishing annual target withdrawal volumes below the river import limit, and for developing short and long term strategies for achieving target withdrawals.
1.4	Environmental Affairs, at the request of Energy and Utilities, shall notify and obtain prior approval from Alberta Energy Regulator and Fisheries & Oceans Canada before performing instream dredging activities in the vicinity of the intake forebay. Such approval may be verbal or written at the discretion of the regulating agency and may be subject to additional terms and conditions as deemed necessary at that time.

2. Limits and Standards – River Import Limits

Item	Description
2.1	The maximum annual withdrawal limit for surface water from the Athabasca River is 59.8 Mm ³ per year.
2.2	The maximum instantaneous withdrawal for surface water from the Athabasca River is 3.79 m ³ per second.

3. Limits and Standards – Intake Forebay and Freshwater/Cooling Water Pond Operations

Item	Description
3.1	Energy and Utilities must inform Environmental Affairs a minimum of four weeks prior to any planned activities associated with the river water diversion system, including the intake inlet, pumping systems and the fresh water pond.
3.2	Environmental Affairs is responsible for obtaining approval or authorization from Alberta Energy Regulator for any dredging activities of the river intake forebay or the freshwater/cooling water pond. In addition, Environmental Affairs will obtain authorization from Fisheries & Oceans Canada for river intake forebay dredging.
3.3	Energy and Utilities shall provide and maintain appropriate fish guards on all inlet pipes or openings where Athabasca River water is diverted for usage in the Suncor operation.
3.4	Energy and Utilities must conduct any dredging operation of the river intake forebay between July 15 and September 15 of a calendar year.

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Item	Description
3.5	Energy and Utilities must conduct any dredging operation of the freshwater/cooling water pond during the months of June, July and August.
3.6	The dredged spoil must be directed to the tailings ponds, unless otherwise approved by Environmental Affairs.
3.7	Energy and Utilities must obtain prior approval for the establishment of any means of water diversion other than the existing low lift pump house system. New systems must be set up such that: <ul style="list-style-type: none"> • intakes are submerged with the approach water velocity at the intake opening in a horizontal direction not exceeding 0.1 m/s. • intakes are protected by screens with a maximum mesh size of 2.5 mm or other suitable alternate acceptable by the Alberta Energy Regulator and the Fisheries & Oceans Canada. • on-shore pumps must be set in an impervious dyke lined with plastic or similar membrane and clean sand to ensure that no liquids(including water, fuel or oils) may return to the river. • the pumping system must be inspected on a frequent basis to ensure that no leakage occurs. • accurate measurement of water imported through the new system can be obtained.
3.8	All equipment and machinery that has been used in the United States shall be washed clean of all mud and dirt before being used in or near any streams in Alberta to reduce the potential spread of Whirling Disease in fish.

4. Monitoring Requirements

Item	Description
4.1	Suncor is required as per our AEPEA approval to record and retain the following information in respect to any sampling conducted or analyses performed in association with dredging activities: <ul style="list-style-type: none"> • Place, date, and time of sampling • Dates the analyses were performed • Analytical techniques, methods, or procedures used in the analyses • Names of the persons who collected and analyzed each sample • Results of the analyses.
4.2	All monitoring information shall be kept in the Environmental Affairs library for a minimum of ten years, or otherwise as specified in writing by Alberta Energy Regulator.

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5. Reporting Requirements

Item	Description
5.1	Immediately upon discovery of an exceedance of river import limits or contravention of other conditions of this standard, or any other abnormal activity associated with the River Intake system or Fresh Water/ Cooling Water Ponds, the person making the discovery must take steps to correct the condition and must notify Environmental Affairs at (780) 743-7780, as per ENP0001A.
5.2	Energy and Utilities must notify Syncrude Canada Ltd. of their dredging proposal in writing four weeks prior to commencement of dredging. Should Syncrude Canada Ltd. have any concern, Energy and Utilities must alleviate those concerns prior to proceeding. Should Energy and Utilities decide to cancel the dredging operations, Syncrude Canada Ltd. is to be notified accordingly.
5.3	Energy and Utilities must provide Environmental Affairs with a follow-up report on any dredging activities (either of the river inlet or Fresh Water Pond). The report must detail the: <ul style="list-style-type: none">• period of dredging activity• amount of materials dredged• deposition of dredged materials• any other information required by Environmental Affairs.
5.4	Environmental Compliance shall provide the Alberta Energy Regulator with an annual water use report on January 31 of each calendar year, as per ECS0108A. The report shall include: <ul style="list-style-type: none">• Periods and rates of diversion• Total monthly quantities of water diverted and returned to the Athabasca River• Any such other information as may be required by the Director.

End of Standard

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The following individuals have approved and signed this document.

UserName: Sheila Chernys (schernys)

Title: Dir EH&S Environment / IH Oil Sands

Date: Monday, 09 March 2015, 05:28 PM Mountain Time

Meaning: Approver 1 Signed

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