



Approval Process for Special Liquid Waste Recycling to South Tank Farm or Disposal into Tailings Ponds

Document Number: RHP00009 (Previously ENP0009A)	Procedure – Administrative	Applies To: Oil Sands, Fort Hills, In Situ, DCL, Major Projects
Revision Date: 2018/03/06 Revision: 1 Review Cycle: 3 years	Document Owner (Title): Director, OS Environment and Regulatory	

Purpose

This procedure details the environmental approval process for diversion or disposal of liquid waste streams, with the goals of waste diversion, improving tailings ponds utilization and minimizing the effects on final pond reclamation.

[Appendix I](#) lists the liquid wastes generated on the Suncor Energy Oil Sands base plant site that are pre-approved for disposal into tailings ponds.

This approval procedure **does not cover** the physical disposal work; the authorizations for that work must be completed within the operational permitting system.

Scope

This document applies to work performed on and after the date noted on the signature page at Suncor Energy operating sites in the Wood Buffalo Region that includes:

- Oil Sands
- Fort Hills
- Firebag
- East Tank Farm
- MacKay River
- Drilling, Completions, Logistics (DCL), and
- Major Projects

Compliance

Operating Requirement:

Wastes are prohibited from disposal into the tailings ponds unless the wastes have been individually approved in accordance with this procedure or they are listed on the Pre-Approved List in [Appendix I](#) of this procedure.

If a waste stream has hydrocarbons, the South Tank Farm must first be considered as a diversion location before disposal occurs at the tailings ponds.

Roles and Responsibilities

The 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 procedure is necessary and that it aligns with management and company direction. |

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- Waste Advisor**
- Guides this process until a disposal and/or diversion option is found.
 - Advises on and approves the disposal of special liquid wastes into tailings ponds.
 - Retains copies of the completed Form [OSG-1006](#) Authorization for Special Liquid Waste Recycling to South Tank Farm or Disposal into Tailings Ponds and ensures that required information is entered into the Tailings Ponds waste tracking database.
 - Works with Regulatory Approvals to add liquid waste streams to the Pre-Approved List ([Appendix I](#)), when necessary.
Note: An EPEA amendment is required to add waste streams to the Pre-Approved List.
- South Tank Farm Personnel**
- Advises on and approves the disposal of special liquid wastes to the South Tank Farm.
 - Reviews, and approves or rejects each request for waste streams diversion into the South Tank Farm on Form [OSG-1006](#).
- Waste Advisor, Tailings Process Engineering Manager, and Fine Tailings Operations Manager**
- Maintains and manages [Appendix I](#) Pre-approved List of Liquid Wastes for Disposal into Tailings Ponds.
 - Annually reviews the volumes and types of wastes disposed into tailings ponds. Reviews must include both the pre-approved waste and the waste approved on an individual basis.
 - Reviews, and approves or rejects all requests for fluid wastes disposal into the Tailings Ponds on Form [OSG-1006](#).
- Waste Carrier**
- Obtains an approved [Off-Site Non-Hazardous Waste Manifest](#), as required.
 - Obtains the required safe work permits, as required.
- Maintenance Support Services (MSS) Pressure & Vac (P&V) Coordinator**
- Keeps records of the volume, type, and origin of all waste disposed into the tailings ponds.
 - Provides waste carrier with the relevant Emergency Preparedness Plan, a field tour, and shares Suncor's offloading process.
 - If the waste carrier is not a staged vendor, approves the carrier's Job Hazard Analysis and their training records.

References

- [RHP00010](#) Handling Off-Site Substances and Wastes
 - [OSG-1006](#) - Authorization for Special Liquid Waste Recycling to South Tank Farm or Disposal into Tailings Ponds
 - [Off-Site Non-Hazardous Waste Manifest](#)
 - Maintenance Support Services - [Procedure to Offload at Pond 2/3 Waste Dump](#)
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Procedure 1. Assess the Disposal Options

Consider the following options when disposing of fluid waste at Base Plant.

Responsibility	Step	Action
Waste Generator	1.1	Ensure that all liquid wastes destined for disposal into tailings ponds were generated on a Suncor site. Note: Wastes generated off-site are covered by procedure RHP00010 Handling Off-Site Substances and Wastes.
Waste Generator	1.2	Use the information in the following table to determine your next action.

If the liquid wastes are:	Then ...
On the pre-approved list in Appendix I	Go to Step 2.
Approved by Upgrading Off-Plots Process Engineering, (if the waste is to be recycled through the South Tank Farm)	Go to Step 3.
Approved by the Waste Advisor, Supervisor Tailings Process Engineering, and Superintendent Fine Tailings Operations (if the waste is destined for disposal in the tailings ponds)	Go to Step 4.

Note: [Appendix IV](#) is a flowchart of this decision making process.

2. Assess Waste Stream Against the Pre-Approved List ([Appendix 1](#))

Responsibility	Step	Action
Waste Generator	2.1	Use the information in the following table to determine your next action.

When...	Then ...
A liquid waste is on the pre-approved list in Appendix I	The Waste Generator contacts the Maintenance Support Services (MSS) Pressure & Vac (P&V) Coordinator to facilitate disposing of fluid waste to the tailings ponds. AND The P&V Coordinator keeps records of the volume, type, and origin of the disposed waste. This spreadsheet must be updated regularly, as per the area's governing document.
A liquid waste is not on the pre-approved list in Appendix I	The Waste Generator contacts the Waste Advisor to discuss whether the waste stream can be diverted back into processing through the South Tank Farm or if it is suitable for storage in the Tailings Ponds. AND The Waste Generator fills out form OSG-1006 – Authorization for Special Liquid Waste Recycling to South Tank Farm or Disposal into Tailings Ponds, and submits it to the Waste Advisor along with any associated documentation (for example, SDS, lab analysis). Continue on to step 3 of this procedure.

3. Assess Waste Stream against the South Tank Farm Criteria ([Appendix III](#))

Waste Advisor makes a preliminary assessment of the waste stream's suitability against the South Tank Farm Criteria (see [Appendix III](#)).

Responsibility	Step	Action								
Waste Advisor	3.1	<p>The Waste Advisor judges whether the South Tank Farm is a valid option. If it is, the Waste Advisor recommends the option on OSG-1006 and sends it with its associated documents to the South Tank Farm personnel for assessment.</p> <table border="1"> <thead> <tr> <th>When...</th> <th>Then ...</th> </tr> </thead> <tbody> <tr> <td>Waste Stream is acceptable to South Tank Farm</td> <td>Follow step 3.2</td> </tr> <tr> <td>Waste Stream is acceptable to South Tank Farm and is generated at an Off-Site (outside of Oil Sands Base Plant) location</td> <td>Follow steps 3.2 and 3.3</td> </tr> <tr> <td>Waste Stream not acceptable to South Tank Farm</td> <td>Follow step 3.4</td> </tr> </tbody> </table>	When...	Then ...	Waste Stream is acceptable to South Tank Farm	Follow step 3.2	Waste Stream is acceptable to South Tank Farm and is generated at an Off-Site (outside of Oil Sands Base Plant) location	Follow steps 3.2 and 3.3	Waste Stream not acceptable to South Tank Farm	Follow step 3.4
When...	Then ...									
Waste Stream is acceptable to South Tank Farm	Follow step 3.2									
Waste Stream is acceptable to South Tank Farm and is generated at an Off-Site (outside of Oil Sands Base Plant) location	Follow steps 3.2 and 3.3									
Waste Stream not acceptable to South Tank Farm	Follow step 3.4									
South Tank Farm Personnel, Waste Advisor and Waste Generator	3.2	<p>If South Tank Farm Personnel accepts the waste stream, they return the OSG-1006 form to the Waste Advisor with that recommendation. The Waste Advisor shares the approval decision with the Waste Generator.</p> <p>The Waste Generator and Upgrading Sulphur / Offplots (USO) personnel discuss logistics and set up diversion of the waste stream back into the process at the South Tank Farm. See Appendix III for contact information.</p> <p>USO personnel (indicate role) can provide guidance documents to clarify the unloading process and to help with job planning.</p> <p>Some further logistical considerations for this process:</p> <ol style="list-style-type: none"> Any truck that comes to the current loading station must be able to pump off its own material (have a pump on the truck). Any truck that comes to the current loading station must be able to unload on the passenger side or provide hoses to connect to the 4" line. Inform the USO shift office of the number of trucks and the expected time period, and then obtain agreement that they can manage the extra work. If required, arrange for escorts. (These are not provided by USO). <p>Upon receiving approval on form OSG-1006, the Waste Generator retains a copy and gives a copy to the Waste Carrier.</p>								
Waste Advisor, Waste Generator and Off-site Waste Carrier	3.3	<p>If the waste needs to be transported to the Base Plant location, the Waste Generator must also complete the Off-Site Non-Hazardous Waste Manifest to allow off-site waste carriers entrance to the Base Plant site with their fluid waste destined for the South Tank Farm facility. Security Guards are familiar with the document and will grant entry when it is shown.</p> <p>The Waste Advisor signs the completed manifest form.</p>								

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Responsibility	Step	Action
Waste Advisor and Waste Generator	3.4	<p>If South Tank Farm personnel do not accept the waste stream, they return OSG-1006 form to the Waste Advisor with that recommendation.</p> <p>The Waste Advisor informs Waste Generator of that decision.</p> <p>Continue on to step 4.</p>

4. Assess Waste Stream for Suitability for Disposal into Tailings Ponds

The Waste Advisor assesses the waste stream from an environmental perspective (including information in [Appendix II](#)) and fills out [OSG-1006](#) accordingly.

Responsibility	Step	Action						
Waste Advisor	4.1	<p>Use the information in the following table to determine your next action.</p> <table border="1"> <thead> <tr> <th>If ...</th> <th>then ...</th> </tr> </thead> <tbody> <tr> <td>If Waste Advisor deems waste stream acceptable into the tailings ponds</td> <td>The Waste Advisor fills out form OSG-1006 accordingly and sends it to the Tailings Process Engineering group for their assessment. Continue on to step 4.2.</td> </tr> <tr> <td>Waste Advisor deems waste stream unacceptable for disposal into the tailings ponds</td> <td>The Waste Advisor works with the Generator must pursue Alternative Options for disposal. Go to step 7.</td> </tr> </tbody> </table>	If ...	then ...	If Waste Advisor deems waste stream acceptable into the tailings ponds	The Waste Advisor fills out form OSG-1006 accordingly and sends it to the Tailings Process Engineering group for their assessment. Continue on to step 4.2.	Waste Advisor deems waste stream unacceptable for disposal into the tailings ponds	The Waste Advisor works with the Generator must pursue Alternative Options for disposal. Go to step 7.
If ...	then ...							
If Waste Advisor deems waste stream acceptable into the tailings ponds	The Waste Advisor fills out form OSG-1006 accordingly and sends it to the Tailings Process Engineering group for their assessment. Continue on to step 4.2.							
Waste Advisor deems waste stream unacceptable for disposal into the tailings ponds	The Waste Advisor works with the Generator must pursue Alternative Options for disposal. Go to step 7.							
Tailings Process Engineering	4.2	<p>Tailings Process Engineering conducts their assessment of the suitability of the waste stream for acceptance into the Tailings Ponds using information provided on form OSG-1006.</p> <p>Use the information in the following table to determine your next action.</p> <table border="1"> <thead> <tr> <th>If ...</th> <th>then ...</th> </tr> </thead> <tbody> <tr> <td>Tailings Process Engineering accepts the waste stream</td> <td>The Tailings Process Engineer signs form OSG-1006 and includes their recommendation, and then sends it to the Fine Tailings Operations group for their assessment. Continue on to step 4.3.</td> </tr> <tr> <td>Tailings Process Engineering does not accept the waste stream</td> <td>The Tailings Process Engineer includes their recommendation on form OSG-1006 and sends back to the Waste Advisor. Waste Advisor informs the Waste Generator and they will proceed to investigate Alternative Options for disposal. Go to step 7.</td> </tr> </tbody> </table>	If ...	then ...	Tailings Process Engineering accepts the waste stream	The Tailings Process Engineer signs form OSG-1006 and includes their recommendation, and then sends it to the Fine Tailings Operations group for their assessment. Continue on to step 4.3.	Tailings Process Engineering does not accept the waste stream	The Tailings Process Engineer includes their recommendation on form OSG-1006 and sends back to the Waste Advisor. Waste Advisor informs the Waste Generator and they will proceed to investigate Alternative Options for disposal. Go to step 7.
If ...	then ...							
Tailings Process Engineering accepts the waste stream	The Tailings Process Engineer signs form OSG-1006 and includes their recommendation, and then sends it to the Fine Tailings Operations group for their assessment. Continue on to step 4.3.							
Tailings Process Engineering does not accept the waste stream	The Tailings Process Engineer includes their recommendation on form OSG-1006 and sends back to the Waste Advisor. Waste Advisor informs the Waste Generator and they will proceed to investigate Alternative Options for disposal. Go to step 7.							

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Responsibility	Step	Action
Fine Tailings Operations	4.3	Fine Tailings Operations conducts their assessment of the suitability of the waste stream for acceptance into the Tailings Ponds using the information provided on form OSG-1006 .

Use the information in the following table to determine your next action.

If ...	then ...
Fine Tailings Operations accepts the waste stream	Fine Tailings Operations signs form OSG-1006 , includes their recommendation and sends the form to the Waste Advisor and the Tailings Process Engineering group. Continue on to step 5.
Fine Tailings Operations does not accept the waste stream	Fine Tailings Operations includes their recommendation on form OSG-1006 and sends it back to the Waste Advisor. The Waste Advisor informs the Waste Generator and they will investigate Alternative Options for disposal, see step 7.

5. Waste to Tailings Ponds Authorizations

Responsibility	Step	Action
Waste Advisor	5.1	The Waste Advisor accepts the completed form OSG-1006 . The Waste Advisor clarifies with Tailings Process Engineering and Fine Tailings Operations groups any stipulations that might go along with the acceptance of the waste into the ponds (for example, which ponds, the disposal rates, etc.) and includes this information on form OSG-1006 . The Waste Advisor informs the Waste Generator of the recommendation and sends them the completed form OSG-1006 .
Waste Generator	5.2	Upon receiving approval in form OSG-1006 , Waste Generator retains a copy and provides a copy to the Waste Carrier.
Waste Generator	5.3	Waste Generator sets up the logistics of the job and complies with all site operational regulations as detailed in step 6.
Waste Generator	5.4	After the waste has been disposed of, the Waste Generator: Records the ACTUAL volume disposed on form OSG-1006 Authorization for Special Liquid Waste Recycling to South Tank Farm or Disposal into Tailings Ponds Sends a copy of form OSG-1006 back to the Waste Advisor, for waste reporting purposes.

6. Waste to Tailings Ponds Permitting and Logistics Information

Responsibility	Step	Action
Waste Generator	6.1	<p>The Waste Generator makes transportation arrangements to move liquid waste from the point of generation or storage to the diversion or disposal site.</p> <p>For offloading at the tailings ponds, contact the Maintenance Support Services (MSS) Pressure & Vac (P&V) coordinator at 780-370-5213.</p> <p>The MSS and P&V area follows the Procedure to Offload at Pond 2/3 Waste Dump.</p>

When the waste is generated:	Then ...
On-Site	<p>Crews working at Base Plant with the Maintenance Support Services (MSS) Pressure & Vac (P&V) group are covered under the P&V general permit and do not need a specific permit to offload at the tailings ponds.</p>
Off-Site	<p>Waste carriers from off-site must obtain a Safe Work Permit from the MSS and P&V Coordinator because this work is non-routine.</p> <p>The P&V Coordinator will walk them through the process for offloading as part of the required field tour.</p> <p>The Coordinator will also provide the carrier with the Emergency Preparedness Plan (EPP).</p> <p>Off-Site Waste Manifest Form</p> <p>The Waste Generator completes an Off-Site Non-Hazardous Waste Manifest for the off-site carrier and obtains the Waste Advisor's signature.</p> <p>Off-Site waste carriers require the form, which allows them entrance to the site with their fluid waste destined for disposal in the tailings ponds.</p> <p>Security Guards are familiar with the document and will grant entry when it is shown.</p>

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Responsibility	Step	Action
Waste Generator	6.2	<p>The Waste Generator must use only approved carriers to transport wastes from off-site.</p> <p>If waste carrier is not a staged MSS vendor, the Waste Carrier will be required to provide a Job Hazard Analysis to offload, and the following training records must be provided to the MSS and P&V Coordinator:</p> <ul style="list-style-type: none"> • Air Purified Respirator (APR) Training – with Fit Test • Suncor Oil Sands Site Orientation (SOSSO) • Permit Training <p>Waste Generator must ensure that the Waste Carrier:</p> <ul style="list-style-type: none"> • Is approved to transport the special liquid waste • Has been instructed on safe work procedures • Has necessary safety equipment for safe disposal of the waste • Has obtained a safe work permit from the location that generated the waste • Has obtained a safe work permit from the MSS and P&V Coordinator, and • Disposes of the waste as per the instructions outlined on the approved (signed) form OSG-1006 <p>If specified, ensure sub-surface disposal is used. This precaution is required for selected wastes due to their odour potential. Sub-surface disposal dictates that waste be discharged via a hose submerged beneath the surface of the pond.</p>
Waste Generator	6.2	<p>If you encounter or suspect that you may encounter any environmental issues (such as air, odours, incidents, spills) during the completion of the work, contact Environmental Affairs at 780-743-7780 for assistance.</p>

7. Find alternative options for disposal if South Tank Farm and the Tailings Ponds are NOT OPTIONS for disposal.

Responsibility	Step	Action
Waste Generator, Waste Advisor	7.1	<p>The Waste Generator consults with Waste Advisor to explore other alternative options for disposal of the requested waste stream.</p> <p>Guidance may be obtained from other resources, such as the Landfill and Hazardous Waste Yard contractors.</p>
Waste Generator, Waste Advisor	7.2	<p>Assess the waste stream for the available alternative options for diversion or disposal of that waste stream. Possible options might include:</p> <ul style="list-style-type: none"> • Off-site Third Party receptors (specialty landfills, downhole facilities, specialized facilities, etc.) • Other Suncor options (other parts of the process, other Suncor sites with different receiving capabilities, etc.) <p>Note: Certain alternative options might require regulatory approvals. These approvals can take a variable amount of time to complete. Please check with the Waste Advisor and they can liaise with the Regulatory Approvals group to confirm.</p>

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Responsibility	Step	Action	Initial/Date
Waste Generator	7.3	The Waste Generator decides on a course of action for the disposal of the waste stream and sets up the logistics of the job.	
Waste Generator	7.4	The Waste Generator disposes of waste at the chosen location.	

End of Procedure

Feedback: Please submit your feedback for this document to your Supervisor.	Comments on this document (Is this document up to date?):
	Suggested Improvements:
Sign: _____ Date: _____ yyyy/mm/dd	
Print: _____	

Summary of Changes

Rev No.	Section Changed	Revisions Made
1	Throughout Appendix III Appendix IV	Regionalized document - changed procedure number from ENP0009A to RHP00009 Integrated South Tank Farm diversion option for fluid wastes Removed reference to MSP0003A, replaced with link to current Offloading Procedure Added link to OSG-1006 (updated) Added South Tank Farm criteria as Appendix III Added Decision Process Flowchart as Appendix IV

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Appendix I – Pre-Approved List of Liquid Wastes for Storage in Tailings Ponds

NOTE: This list is currently in effect. However, an EPEA application has been sent (early 2018) to the Alberta Energy Regulator for approval of changes. When the approval is received, this list will be updated – expected date: late Q3 of 2018.

BITUMEN PRODUCTION/MINING /EXTRACTION

BP-001 MEM north and south steam bay sumps
EXT-001 Exchanger wastes
MEM-001 Shovel grease (for subsurface disposal)
MOP-001 Prill and emulsion waste (from explosives silo's and trucks)

FIREBAG

FB-001 Drill cuttings <8% bitumen (Firebag) (Pond 6 Disposal)
FB-002 Drill cuttings >8% bitumen (Firebag) (recycle to active mine bench - arrange through Plant 86)
FB-004 Sludge from Firebag pipeline pigging (waste generated at Enbridge as a result of Suncor activity)

UPGRADING

UP-001 Amine Sump (Plant 8/ sump waste only)
UP-002 Compressor seal oil (Plant 10) - sub-surface disposal required
UP-003 Exchanger wash pad (Scaffold yard #2)
UP-004 Main product pipeline sump (east side of North Tank Farm)
UP-005 Plant 25 Sump – must be approved by Water Chemistry Specialist, Extraction
UP-006 6D-6 Carbonate sump
UP-008 Plant 53 Caustic Solution (neutralization)
UP-009 Plant 53 amine residue from amine reclamation (potentially to HWY tank)
UP-010 API Sump sludge (includes both Millennium Upgrader and Base Plant API Separators)
UP-011 Plant 56 PHE sumps (Off Plots)
UP-012 Plant 56 Chemical Injection Building sump (Off Plots)

UTILITIES

UT-001 Boiler ash
UT-003 Spent carbon filter media (Water treatment plant)
UT-004 Spent alpha floc filter media (Condensate filters)
UT-005 Reverse osmosis membrane cleaning
UT-006 Sump water from “Glycol Pre-Heat” Building and “Balance of Facilities” Building
UT-007 Fly Ash Pond dredgings to Pond areas as approved by Process Engineering

GENERAL - ALL AREAS

GE-001 Uncontaminated excavation materials (solids to be placed on dyke)
GE-002 Truck rinse water

OTHER

OTH-001 Rinse water from scaffolding yard
OTH-003 Waste listed in s.4.2.7 of our Alberta Environment Operating approval which reads as follows:
a) Extraction plant tailings;
b) Seepage collected from the dyke drainage collection system;
c) Wastewater generated as a result of mine depressurization;
d) Liquid waste as described in Appendix VII of Application No. 026-94 (Appendix 1) and the current Application for Approval Renewal, May 2005 (Appendix 2)
e) API diversion water;
f) Condensate water;
g) DRU overhead water;
h) Stripped sour water;
i) Dredge spoil from dredge operations in the wastewater ponds and ash pond; and Industrial runoff, as required.

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Appendix II – Criteria for Storage of Liquid Wastes in the Tailings Ponds

Reminder: TAILINGS PONDS **MUST NOT** BE USED FOR DISPOSAL OF:

1. UNUSED CHEMICALS
2. SOLID MATERIALS

Take the following factors into consideration when submitting and reviewing a request to add a liquid waste to the "Pre-approved List of Liquid Wastes for Disposal into Tailings Ponds" ([Appendix I](#)):

- 1) Is the waste stream one which is currently being recycled by others in the industry?
- 2) If recycling companies and/or technologies are available, how much investment would be required by Suncor Energy to avail itself of such services and/or technologies?
- 3) Is the waste classified as "hazardous waste" under Schedule I of the Waste Control Regulation (WCR) of the Alberta Environmental Protection and Enhancement Act (AEPEA)?
- 4) Does the waste contain any compounds that are required to be reported by Suncor into Environment Canada's National Pollutant Release Inventory (NPRI) or Accelerated Reduction/ Elimination of Toxics list (ARET)?
- 5) How many times per year will loads of this liquid waste be disposed of into tailings ponds? Wastes that will be disposed of less than once per year will be handled on a case-by-case basis.

Appendix III – South Tank Farm Acceptance Criteria for Fluid Waste Recycling

Alternative disposal options, like the South Tank Farm, are the preferred option for disposal of hydrocarbon-based waste with up to 95% water.

The protocol for involving the South Tank Farm in the assessment of waste streams is as follows:

1. If the South Tank Farm is a possibility, forward the information to the South Tank Farm for their assessment.
2. The South Tank Farm uses the details of the following criteria (Table 1) as well as their current operational situation, capacity availability, and their knowledge of the mechanical constraints of the South Tank Farm to make their determination.
3. When more information is required from the Waste Generator, the Waste Advisor will facilitate the gathering of this information and will send it to the South Tank Farm personnel.
4. The South Tank Farm personnel will make a decision on whether the waste liquid material is suitable for acceptance at the South Tank Farm.
 - i) If the South Tank Farm will **accept** the material, then the Waste Generator contacts the Upgrading Sulphur / Offplots supervisor (780-788-8787) to develop a plan to attain the required permitting and to complete the diversion of the approved material into the South Tank Farm.
 - ii) If the request for the South Tank Farm is **rejected** then the Waste Generator will proceed to Section 4 of this procedure to determine if the waste can be authorized for one-off disposals to the tailings ponds.

Table 1: South Tank Farm (STF) Criteria

Description	STF Criteria
Material: Diluent*, naphtha, hydrocarbon condensate and diluted bitumen	Currently Acceptable at STF
All other Materials seeking disposal	Not acceptable at this time at STF.
State: Clean, wet material only, 0-95% water – while water can be accommodated, minimum sand, no other significant contaminants	Understand minimum sand might not be specific, but even if a sand limit could be given, when there is reclamation from a spill, the exact amount of sand would not be known Bottom line, sand / soil needs to be minimized, which means the last amount vacuumed up likely needs to go to the ponds, not STF.
Ambient Temperature ~5° to 25°C	Acceptable at STF

Note: * Diluent technical specifications at Suncor’s Base Plant are a Reid Vapor Pressure (RVP) of 1.0-2.0 psi. On that basis and so as not to overload the DRUs and/or Extraction with high RVP material, the restrictions in Table 2 must apply:

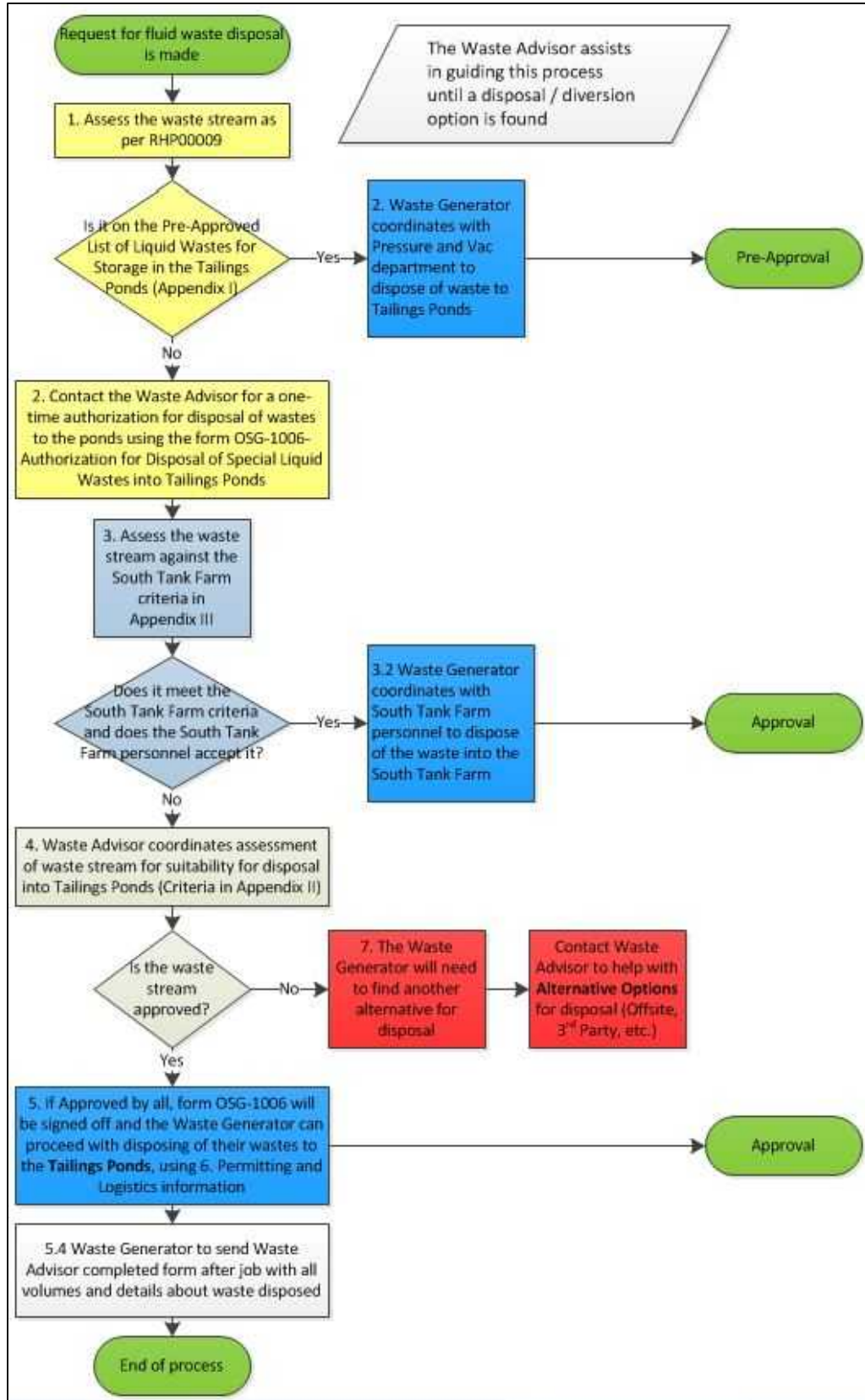
Table 2: South Tank Farm Restrictions

Restrictions
<ol style="list-style-type: none"> 1. 2.0-3.0 psia – max 600m³ / 4000bbbls into the STF in one day 2. 3.0-4.0 psia – max 500m³ / 3000bbbls into the STF in one day 3. 4.0-5.0 psia – max 300m³ / 2000bbbls make up into the STF in one day 4. 5.0-8.0 psia – max 150m³ / 1000bbbls make up into the STF in one day 5. 8.0-11.0 psia – max 80m³ / 500bbbls make up into the STF in one day

Note: While Restrictions 1-3 are unlikely to pose any practical problem, RVPs higher than 5.0 psi would need to be closely monitored versus amount of slops.

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Appendix IV – Criteria for Storage of Liquid Wastes in the Tailings Ponds – Fluids Waste Management Decision Tree



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The following individuals have approved and signed this document.

UserName: Sheila Chernys (schernys)

Title: Dir OS Enviro & Reg

Date: Wednesday, 07 March 2018, 11:10 AM Mountain Time

Meaning: Approver 1 Signed

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