



**SUNCOR ENERGY INC.
OIL SANDS**

**2025 BASE PLANT
FLUID TAILINGS MANAGEMENT REPORT**

*Submitted to:
Alberta Energy Regulator*

April 30, 2026

TABLE OF CONTENTS

	Page No.
1. EXECUTIVE SUMMARY	1
2. INTRODUCTION	1
2.1 Background	1
2.2 Base Plant Directive 085 Annual Measurement and Reporting Cycle	2
2.3 Results Summary.....	2
2.4 2025 Treatment Activities	3
2.4.1 DDA3.....	3
2.5 Concordance and Reporting Requirements	3
3. FLUID TAILINGS MANAGEMENT REPORT REQUIREMENTS	4
3.1 Fluid Tailings Volume Reporting Requirements	4
3.1.1 Project Site Summary of All Annual Fluid Tailings Volumes	4
3.1.2 Approved New and Legacy Profiles with Actual Fluid Tailings Volumes	5
3.1.3 Deviation of Activities from the Fluid Tailings Management Plan.....	5
3.1.4 Management Level for Operation’s Performance	6
3.1.5 Circumstances That Led to Increased Fluid.....	6
3.1.6 Site-Wide Water Balance	6
3.1.7 Water Volume for Each Treated Tailings Deposit and Fluid Tailings Pond.....	8
3.1.8 Fines Not Captured That Form Fluid Tailings.....	27
3.1.9 Estimate of Change in Fluid Tailings Volume Inventory.....	27
3.1.10 Map of Current Locations and Sizes of Fluid Tailings Ponds and Treated Deposits	28
3.1.11 Volume and Composition of Each Deposit Containing Fluid Tailings	30
3.1.12 Tonnage of Ore Processed and Average Composition	31
3.1.13 Fluid Tailings Treatment Technology	31
3.2 Monitoring Reporting Data Requirements.....	32
3.2.1 Monitoring Dataset.....	32
3.2.2 Monitoring Results for Treated Tailings Deposit and Fluid Tailings Ponds.....	33
3.3 Deposit Performance.....	72
3.3.1 Under-Performance Impacting Fluid Tailings Volumes.....	72
3.3.2 Under-Performance of RTR Tailings	73
3.4 Technology: Continuous Improvement and Development	73
3.4.1 Treatment Technology Operation.....	73
3.4.2 Technology Development Implementation	73

3.4.3	Progress Reports for any Pilots, Prototypes, or Demonstrations of Fluid Tailings Technologies.....	74
3.4.4	Performance Assessment of and Implications for Net Environmental Effects for All Treatment Technologies.....	75
3.5	Environmental Monitoring Results.....	76
3.5.1	Summary of Results from Environmental Performance Monitoring Reports Related to Fluid Tailings Management Activities	76
4.	ADDITIONAL REPORTING REQUIREMENTS	84
4.1	Base Plant Directive 085 Measurement System Plan.....	84
4.1.1	MD9 and MD9 South Performance	84
4.1.2	DDA3 Reporting	92
4.1.3	Measurement of Froth Treatment Tailings (FTT) Placement and Constituents of Potential Concerns (COPC) Identification.....	93
4.2	OSCA Approval No. 8535V.....	99
4.2.1	Condition 45	99
4.2.2	Condition 57	115
4.2.3	Condition 58.....	115
4.3	EPEA APPROVAL 94-03-00, as amended	118
4.3.1	Condition 5.4.13.....	118
4.3.2	Condition 5.4.14.....	118
5.	APPENDICES.....	122
Appendix A:	Concordance Table: 2025 Base Plant Fluid Tailings Management Report	122
Appendix B:	Abbreviations & Acronyms.....	126
Appendix C:	References	128
Appendix D:	Suncor Sharing on Tailings.....	130

LIST OF FIGURES

	Page No.
Figure 2-2: Directive 085 Measurement System Plan Annual Cycle.....	2
Figure 2-3: Fluid Tailings Inventory - Approved and Actual.....	3
Figure 3-1: Approved New and Legacy Fluid Tailings Profiles with Actual Fluid Tailings Volume.....	5
Figure 3-2: Site Wide Water Balance Schematic.....	7
Figure 3-3: Map of Current Locations and Sizes of Fluid Tailings Ponds and Treated Deposits	29
Figure 3-4: DDA3 Sampling Locations.....	34
Figure 3-5: Pond 2/3 Sampling Locations	35
Figure 3-6: Pond 6 Sampling Locations	36
Figure 3-7: Pond 7 Sampling Locations	37
Figure 3-8: SD8 Thin Fine Tailings Sampling Locations.....	38
Figure 3-9: SD9 Thin Fine Tailings Sampling Locations.....	39
Figure 3-10: STP Sampling Locations.....	40
Figure 3-11: MD9S Sampling Locations.....	41
Figure 3-12: DDA3 Solids Content (wt%)	46
Figure 3-13: DDA3 Fines Content (wt%).....	47
Figure 3-14: DDA3 CWR Content (wt%)	48
Figure 3-15: Pond 2/3 Solids Content (wt%).....	49
Figure 3-16: Pond 2/3 Fines Content (wt%).....	50
Figure 3-17: Pond 2/3 CWR Content (wt%)	51
Figure 3-18: Pond 6 Solid Content (wt%).....	52
Figure 3-19: Pond 6 Fines Content (wt%)	53
Figure 3-20: Pond 6 CWR Content (wt%).....	54
Figure 3-21: Pond 7 Solids Content (wt%).....	55
Figure 3-22: Pond 7 Fines Content (wt%)	56
Figure 3-23: Pond 7 CWR Content (wt%).....	57
Figure 3-24: SD8 Solids Content (wt%).....	58
Figure 3-25: SD8 Fines Content (wt%)	59
Figure 3-26: SD8 CWR Content (wt%).....	60
Figure 3-27: SD9 Solids Content (wt%).....	61
Figure 3-28: SD9 Fines Content (wt%)	62
Figure 3-29: SD9 CWR Content (wt%).....	63
Figure 3-30: STP Solids Content (wt%)	64
Figure 3-31: STP Fines Content (wt%).....	65
Figure 3-32: STP CWR Content (wt%)	66
Figure 3-33: MD9S Solids Content (wt%).....	67

Figure 3-34: MD9S Fines Content (wt%)	68
Figure 3-35: MD9S CWR Content (wt%).....	69
Figure 3-36: Groundwater Monitoring Network - Pond 5.....	79
Figure 3-37: Groundwater Monitoring Network - MD9.....	80
Figure 3-38: Groundwater Monitoring Network - DDA3.....	81
Figure 3-39: Groundwater Monitoring Network – DDA1 (8A).....	82
Figure 3-40: Groundwater Monitoring Network – SD8.....	83
Figure 4-1: MD9 Topography (August 2025)	86
Figure 4-2: MD9 Co-Disposal Isopach Thickness (July 2014 to August 2025)	87
Figure 4-3: MD9 Co-Disposal Isopach Thickness (August 2024 to August 2025).....	88
Figure 4-4: MD9 South Topography (August 2025).....	89
Figure 4-5: MD9 South Co-Disposal Isopach Thickness (June 2021 to August 2025).....	90
Figure 4-6: MD9 South Co-Disposal Isopach Thickness (August 2024 to August 2025)	91
Figure 4-7: DDA3 (CWR*100) Data	92
Figure 4-8: Light Hydrocarbon Content by Pond and Sample Depth.....	95
Figure 4-9: Pond 7 Zones of Elevated NORMs	96
Figure 4-10: Pond 7 FTT Discharge Locations (September 2024 to September 2025)	98
Figure 4-11: DDA3 Feed and Deposit Average CWR	102
Figure 4-12: Isopach June 2024 & June 2025 (Based on Top of SPMs).....	104
Figure 4-13: Selected Average Peak Undrained Shear Strengths	105
Figure 4-14: Pond 5 Cross-Section Showing Measured Undrained Shear Strengths.....	107
Figure 4-15: Pond 7 FTT Cross Section.....	109
Figure 4-16: Pond 7 FTT Cross Section.....	110
Figure 4-17: Conetec BGCPTu, GCPTu and sample investigation locations.....	112

LIST OF TABLES

	Page No.
Table 3-1: Summary of all Annual Fluid Tailings Volumes.....	4
Table 3-2: Site-Wide Water Balance	6
Table 3-3: Tailings Asset Water Volumes.....	8
Table 3-4: Conventional Parameters.....	10
Table 3-5: Major Ions	11
Table 3-6: Nutrients	11
Table 3-7: Hydrocarbons – BTEX	12
Table 3-8: Phenols.....	12
Table 3-9: Naphthenic Acids	13
Table 3-10: NORMs*	13
Table 3-11: Total Metals	14
Table 3-12: Dissolved Metals.....	17
Table 3-13: Total PAHs.....	19
Table 3-14: Alkylated PAHs	21
Table 3-15: Total VOCs.....	23
Table 3-16: Sampling Dates, Locations and Depths (if applicable).....	26
Table 3-17: Estimated Expressed Water	27
Table 3-18: Volume and Composition of Fluid Tailings in Each Deposit.....	30
Table 3-19: Average Composition of Ore	31
Table 3-20: DDA3 Sampling Locations	42
Table 3-21: Pond 2/3 Sampling Locations	42
Table 3-22: Pond 6 Sampling Locations.....	43
Table 3-23: Pond 7 Sampling Locations.....	43
Table 3-24: SD8 Sampling Locations.....	43
Table 3-25: SD9 Sampling Locations.....	43
Table 3-26: STP Sampling Locations	44
Table 3-27: MD9S Sampling Locations	44
Table 3-28: RTR Criteria.....	70
Table 3-29: Deposit Milestone Verification	71
Table 3-30: Groundwater Quality Result Summary for Indicator Parameters	77
Table 4-1: MD9 SOUTH MIXING RATIO	84
Table 4-2: Volume of Placed Treated Tailings and Associated CWR.....	84
Table 4-3: CWR Ranges and Corresponding Volumes of Treated Tailings.....	93
Table 4-4: Tailings Facility Gamma Count Per Second Ranges	94
Table 4-5: Available Storage Capacity.....	99

Table 4-6: Annual Fluid Storage Capacity and Volume Requirements (5 Years).....	100
Table 4-7: Expressed Water Volumes	103
Table 4-8: Proposed analytical testing plan sample counts.....	113

1. EXECUTIVE SUMMARY

The 2025 Base Plant Fluid Tailings Management Report has been prepared in accordance with the requirements of Directive 085 - Fluid Tailings Management for Oil Sands Mining Projects (Directive 085) (AER, 2022) and aligns with the 2025 Base Plant Directive 085 Measurement System Plan (MSP) (Suncor, 2025) and associated regulatory approvals.

Base Plant continues to demonstrate leadership in fluid tailings (FT) management, having reduced the total FT inventory since 2014. As of the end of the 2025 reporting period, Base Plant remained 2.3 million cubic metres (Mm³) below the approved FT profile.

In 2025, Base Plant treated 27.6 Mm³ of FT using the Permanent Aquatic Storage Structure (PASS) process, with treated material deposited into Dedicated Disposal Area 3 (DDA3). Mine Dump 9 South (MD9 South) continued to receive treated tailings from Dedicated Disposal Area 1 (DDA1) and remnant mature fine tailings (rMFT) from Pond 8B, both co-disposed with overburden from active mining operations.

The Pond 2/3 tailings facility assessment, initiated in 2024, was completed in 2025 and the results are summarized in this report. Test

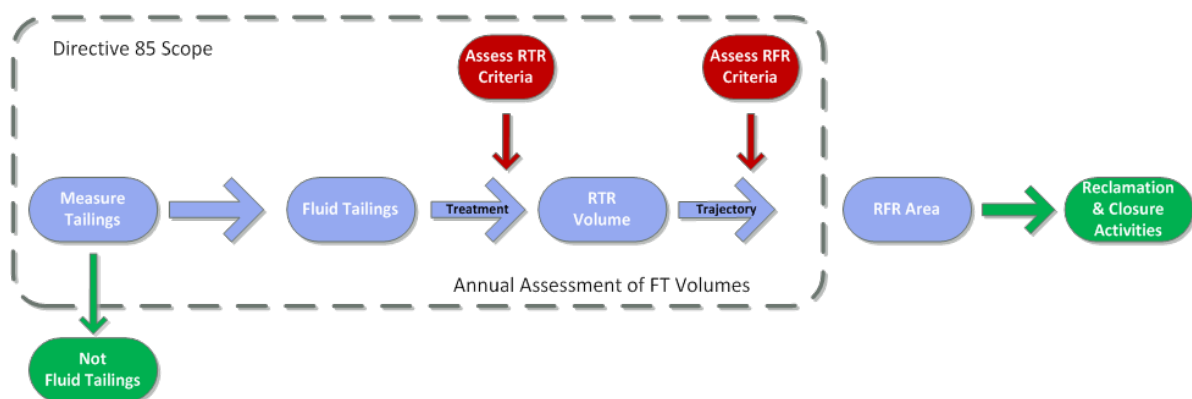
2. INTRODUCTION

2.1 BACKGROUND

The 2025 Base Plant Fluid Tailings Management Report is supported by the 2025 MSP (Suncor, 2025) and aligns with the approved Ready to Reclaim (RTR) Criteria outlined in *Oil Sands Conservation Act* (OSCA) Approval No. 8535V, Appendix C (AER, 2025).

The MSP (Suncor, 2025) defines the measurements used to quantify and report FT volumes to support annual assessment of tailings performance. The methodologies apply consistently to all FT on site and do not differentiate between “legacy” and “new” FT. Key components of Base Plant’s tailings management and reclamation activities, and their relationship to the scope of Directive 085, are illustrated in [Figure 2-1](#).

Figure 2-: Summary of Directive 085 Scope and Generic RTR/RFR Logic Flow Diagram



Note: There may be a delay between when a tailings deposit meets the Ready for Reclamation (RFR) criteria and when the area is designated as RFR. During this interim period, the area may continue to be used for other project purposes before final reclamation activities commence.

2.2 BASE PLANT DIRECTIVE 085 ANNUAL MEASUREMENT AND REPORTING CYCLE

The MSP follows an annual measurement and reporting cycle consisting of five key activities as shown in Figure 2-2:

1. Field program development
2. Field assessment activities
3. Modelling and analysis
4. Quality assurance and quality control (QA/QC)
5. Preparation of the annual Fluid Tailings Management Report

The annual cycle runs from October 1st to September 30th, with September 30th designated as year-end. Field assessments are typically completed during the summer months, when safe access to the deposits is available. Assets with the greatest influence on FT inventory are prioritized for assessment as close to year-end as practicable to minimize variability in reported volumes. Sufficient time is then incorporated following field activities to complete modelling, analysis, and QA/QC prior to reporting.

The program incorporates continuous improvement through annual review of sampling, measurement, modelling, and analysis approaches. Adjustments to subsequent assessment scopes are implemented where warranted, and the MSP is updated as required to reflect program refinements or evolving regulatory requirements.

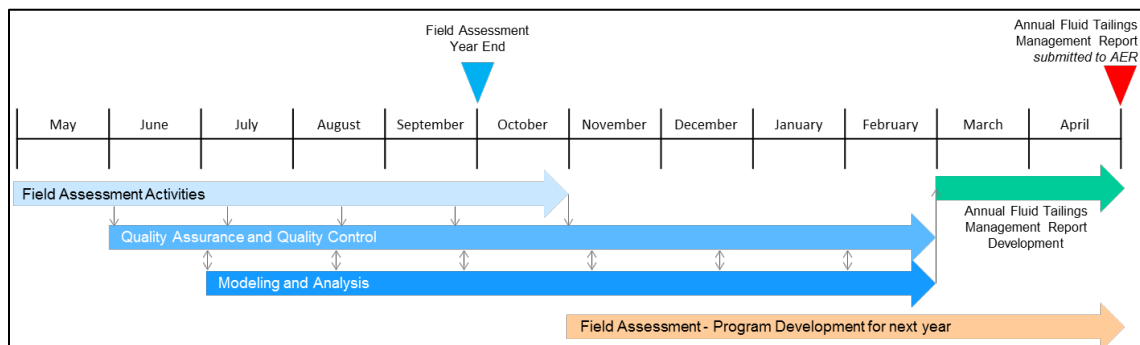


Figure 2-1: Directive 085 Measurement System Plan Annual Cycle

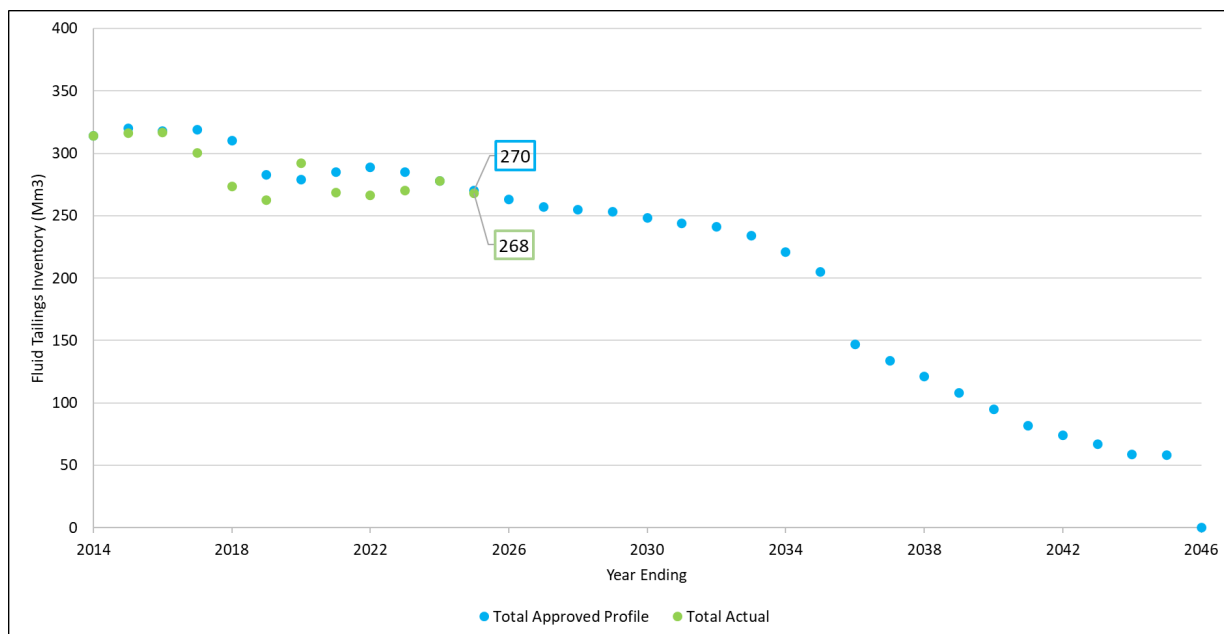
2.3 RESULTS SUMMARY

At the end of the 2025 reporting year, Base Plant's FT inventory was 267.7 Mm³, which is 2.3 Mm³ below the approved FT profile of 270 Mm³ (Figure 2-3).

Key FT management activities in 2025 included:

- Treatment of 27.6 Mm³ of FT using the PASS process and deposition of the treated material into DDA3.

Figure 2-2: Fluid Tailings Inventory - Approved and Actual



Note: Suncor submitted an application to modify the RTR Criteria for DDA3 as part of the 2020 Base Plant FT Management Report. The AER issued the Closing Letter for the 2020 FT Management Report prior to completing their review of the DDA3 RTR criteria application; therefore, the approved criteria was not included in the 2020 final approved inventory. Suncor claimed its FT inventory for the 2020 reporting year was 273Mm³, which is below the approved FT inventory.

2.4 2025 TREATMENT ACTIVITIES

2.4.1 DDA3

In 2025, 27.6 Mm³ of FT from South Tailings Pond (STP) were treated using the PASS process and deposited in DDA3.

Clay-to-water ratio (CWR) and total suspended solids (TSS) were measured to assess deposit dewatering and expressed water quality. Deposit sampling and modelling indicate that the majority of the treated FT exceeds the RTR CWR criterion of 0.3, with 99.7% of the total deposit volume above this threshold. The remaining 0.3% consists of recently deposited treated material that is expected to continue dewatering over time. Expressed water quality measurements showed an average TSS of 4.4 mg/L, meeting the approved RTR criterion.

Overall, no zones of concern requiring mitigation have been identified, and DDA3 performance remains on track to support closure outcomes outlined in the 2022 Life of Mine Closure Plan (LMCP) (Suncor, 2022d).

2.5 CONCORDANCE AND REPORTING REQUIREMENTS

The 2025 Base Plant Fluid Tailings Management Report has been prepared in accordance with Directive 085. Measurement methodologies applied in support of this report are defined in the 2025 MSP (Suncor, 2025).

This report also incorporates applicable conditions of OSCA Approval No. 8535V (AER, 2025) and *Environmental Protection and Enhancement Act* (EPEA) Approval 94-03-00, as amended (AER, 2025). A concordance table summarizing regulatory alignment is provided in Appendix A.

3. FLUID TAILINGS MANAGEMENT REPORT REQUIREMENTS

This report has been formatted to reflect the requirements identified in Section 6.2 of Directive 085. The italicised statements in Sections 3.1 to 3.5 are copied directly from Directive 085 to act as a guide for the content of this document.

3.1 FLUID TAILINGS VOLUME REPORTING REQUIREMENTS

3.1.1 Project Site Summary of All Annual Fluid Tailings Volumes

Include a project site summary of all annual fluid tailings volumes, as per the accounting table in appendix 3.

Refer to [Table 3-1](#) for the project site summary of all annual FT volumes.

Table 3-1: Summary of all Annual Fluid Tailings Volumes

Period End	Previous Year New FT Inventory	Previous Year Legacy FT Inventory	Fluid Tailings Inventory	Change In New FT Inventory	Change In Legacy FT Inventory	New FT Inventory	Legacy FT Inventory	Approved Profile New FT Inventory	Approved Profile Legacy FT Inventory	New FT Rolling Profile Deviation	Legacy FT Rolling Profile Deviation
2014	N/A	N/A	314	N/A	N/A	0	314	0	314	N/A	N/A
2015	0	314	316	23	-21	23	293	23	297	0.0%	-1.3%
2016	23	293	317	14	-14	37	280	37	281	0.0%	-0.9%
2017	37	280	300	16	-32	53	247	53	266	0.0%	-2.9%
2018	53	247	273	23	-50	76	197	76	234	0.0%	-6.1%
2019	76	197	263	25	-36	101	162	101	182	0.0%	-7.2%
2020	101	162	292	29	1	130	162	130	149	0.0%	-5.1%
2021	130	162	268	35	-59	165	103	165	120	0.0%	-7.8%
2022	165	103	267	35	-37	200	67	200	89	0.0%	-11.4%
2023	200	67	270	40	-36	240	30	240	45	0.0%	-14.9%
2024	240	30	277.7	32	-24	272	6	272	6	0.0%	-13.8%
2025	272	6	267.7	-4	-6	268	0	270	0	-0.1%	-15.5%

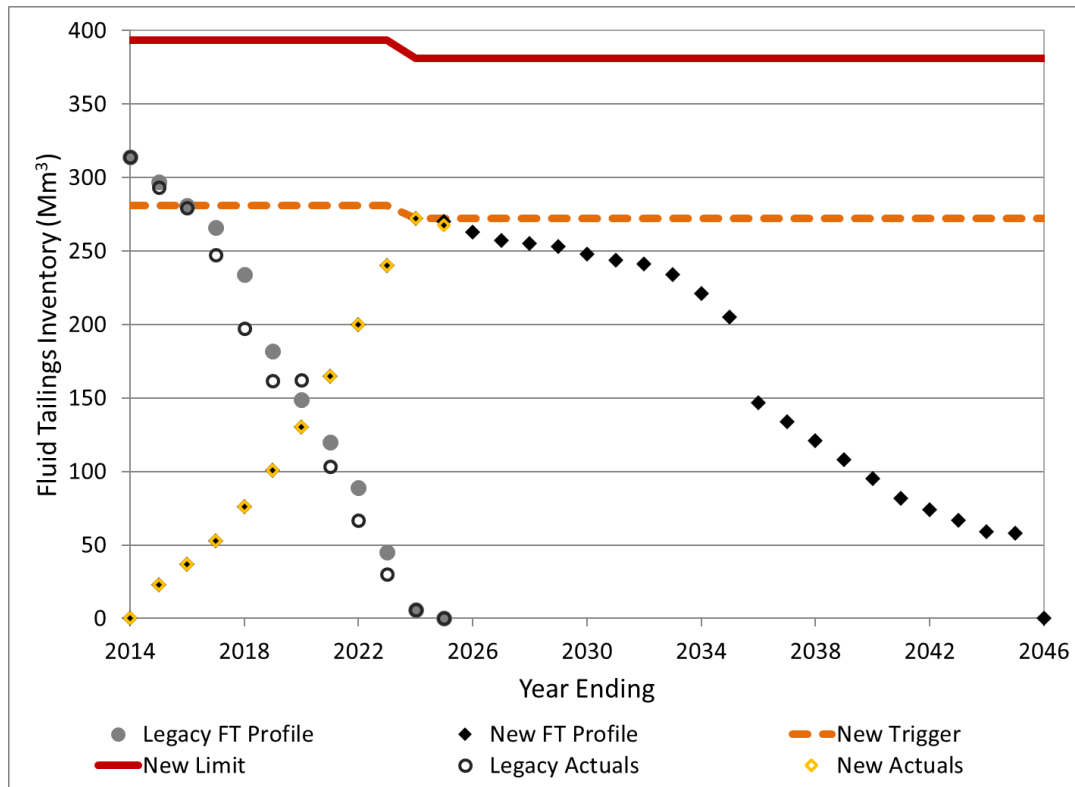
Note: Inventory volumes are shown in Mm³

3.1.2 Approved New and Legacy Profiles with Actual Fluid Tailings Volumes

- Show in a figure the approved new and legacy profiles with the actual fluid tailings volume and the three thresholds (profile deviation, total volume, and total volume limit).

Refer to [Figure 3-1](#) for details on approved new and legacy profiles.

Figure 3-1: Approved New and Legacy Fluid Tailings Profiles with Actual Fluid Tailings Volume



3.1.3 Deviation of Activities from the Fluid Tailings Management Plan

- Describe if and how activities have deviated from the fluid tailings management plan and any modifications made to improve performance.

The Pond 2/3 tailings facility assessment was not completed in the 2024 field season as planned. The assessment was initiated; however, sampling did not extend to the pond bottom due to sampler refusal, and the drilling equipment required to complete sampling was unable to return to site prior to the onset of freezing conditions at the end of the season.

The remaining sampling was completed at the beginning of the 2025 field season to complete facility assessment dataset, and results are included in this report.

Fluid Tailings treatment via PASS from Pond 7 to DDA3 did not start in the reporting period, deviating from the schedule submitted in the TMP (Suncor, 2022b). Fluid Tailings treatment via PASS from Pond 7 to DDA3 will begin in 2026.

3.1.4 Management Level for Operation's Performance

- Identify the management level (as described in the TMF) that the operation's performance falls within.

Base Plant is operating at Management Level 1, as per the Lower Athabasca Region Tailings Management Framework (TMF) for the Mineable Athabasca Oil Sands (GOA, 2015), and is compliant with the approved FT profile.

3.1.5 Circumstances That Led to Increased Fluid

- If the operation is deemed level 2 or higher, describe the circumstances that led to the increased fluid accumulation and any actions that are being taken to improve fluid tailings management performance.

Base Plant is operating at Management Level 1 under the TMF (GOA, 2015). Therefore, the requirement to describe circumstances related to increased fluid accumulation and associated management actions is not applicable.

3.1.6 Site-Wide Water Balance

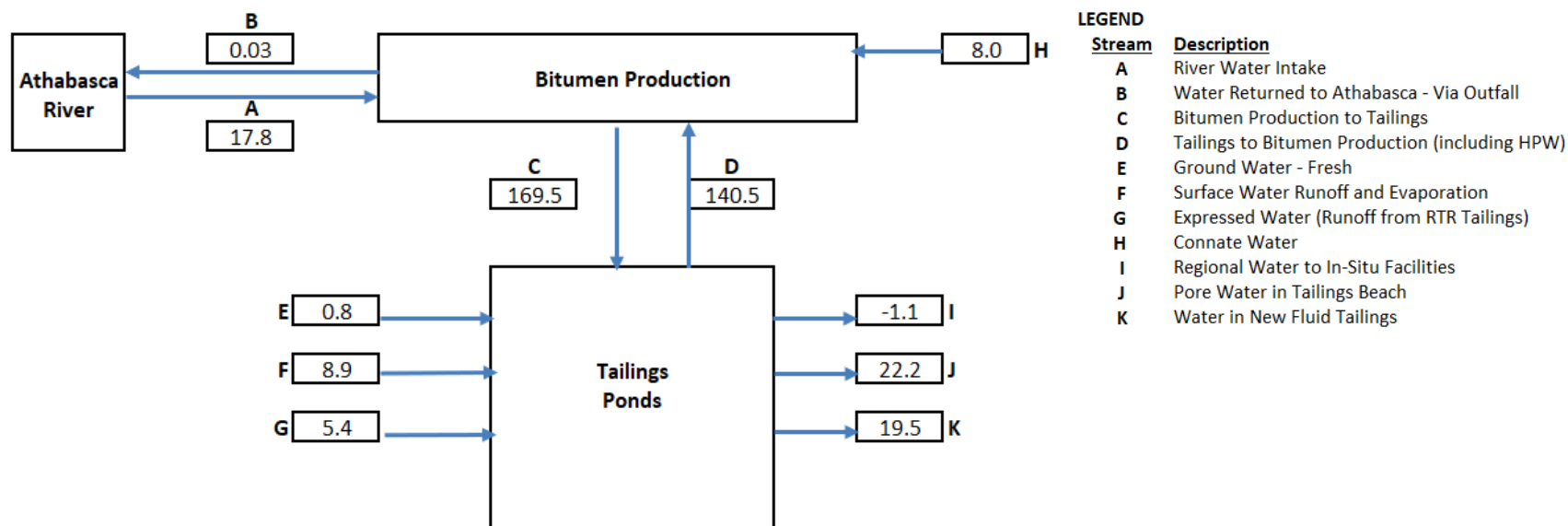
- Provide a site-wide water balance or provide the reference to another AER report and location where this information can be obtained.

Refer to [Table 3-2](#) and [Figure 3-2](#) for the site-wide water balance.

Table 3-2: Site-Wide Water Balance

	Water Inputs	Volume (Mm3)			Water Outputs	Volume (Mm3)
A	River Water Intake	17.8		B	Water Returned to Athabasca – Via Outfall	0.0
E	Ground Water - Fresh	0.8		I	Regional Water to In-Situ Facilities	-1.1
F	Surface Water Runoff and Evaporation	8.9		J	Pore Water in Tailings Beach	22.2
G	Expressed Water (Runoff from RTR Tailings)	5.4		K	Water in New Fluid Tailings	19.5
H	Connate Water	8.0				
Total		40.9		Total		40.6
Previous Years Water Inventory						78.7
Current Year Water Inventory						80.5
Previous Year Inventory + Water inputs - Water outputs - Current Year inventory						-1.5

Figure 3-2: Site Wide Water Balance Schematic



LEGEND

Stream	Description
A	River Water Intake
B	Water Returned to Athabasca - Via Outfall
C	Bitumen Production to Tailings
D	Tailings to Bitumen Production (including HPW)
E	Ground Water - Fresh
F	Surface Water Runoff and Evaporation
G	Expressed Water (Runoff from RTR Tailings)
H	Connate Water
I	Regional Water to In-Situ Facilities
J	Pore Water in Tailings Beach
K	Water in New Fluid Tailings

*Units in Mm³

3.1.7 Water Volume for Each Treated Tailings Deposit and Fluid Tailings Pond

- Provide a water volume (in tabular form) or provide the reference to another AER report and location where this information can be obtained. The table must include, for each treated tailings deposit and fluid tailings pond,
 - total volume of water at the beginning of the reporting period,
 - total volume of water at the end of the reporting period,
 - characterization of the quality of water,
 - the volume and quality of water recovered from fluid tailings and runoff from RTR tailings.

3.1.7.1 Total Volume of Water at the Beginning and End of the Reporting Period

Refer to [Table 3-3](#) for the total volume of water at the beginning and end of the reporting period. DDA1, Pond 5, and Pond 8B facilities are not included in [Table 3-3](#) as they are no longer water holding facilities.

Table 3-3: Tailings Asset Water Volumes

Asset	End 2024 Water (Mm ³)	End 2025 Water (Mm ³)
Pond 1A****	2.0	2.0
Pond 2/3*	4.0	4.5
Pond 6**	9.5	9.7
Pond 7	25.6	22.4
DDA3	18.9	16.1
STP	18.0	24.5
SD8(TFT)***	0.7	1.0
SD9(TFT)***	0.1	0.3
Total	78.7	80.5

Notes:

*Pond 2/3 data from 2024. Assessment cycle is every 2-3 years.

**Pond 6 from 2025. Assessment cycle is every 2-3 years.

***Sand Dump 8 and Sand Dump 9 (Thin Fine Tailings)

****Pond 1A data from 2023.

3.1.7.2 Characterization of the Quality of Water

Refer to [Table 3-4](#) through [Table 3-15](#) for the water quality characterization and [Table 3-16](#) for sampling dates, locations, and depths. DDA1 water quality characterization has been removed from the table as it is no longer a water holding facility.

Table 3-4: Conventional Parameters

Water Quality Parameter	Unit	Pond 1A	Pond 2/3	Pond 5	Pond 6	Pond 7	STP	Sand Dump 8 (SD8)	Sand Dump 9 (SD9)	Mine Dump 9 (MD9)	DDA3
Conductivity	uS/cm*	4200	4100	1200	6000	4200	4300	4000	4300	2600	5100
pH	-	8.37	8.38	8.23	8.59	8.44	8.49	8.53	8.55	8.33	8.42
Cation Sum	meq/L**	42	42	14	63	42	44	40	65	26	53
Anion Sum	meq/L	41	43	13	62	42	44	42	48	26	54
Ion Balance (% Difference)	%	0.83	1.1	3.3	0.87	0.39	0.13	2.1	15	0.6	1.1
Hardness (CaCO ₃)	mg/L	130	110	330	470	76	59	87	550	87	170
Alkalinity (PP as CaCO ₃)	mg/L	5.6	6.5	<1	38	13	13	15	<100	<1	9.9
Alkalinity (Total as CaCO ₃)	mg/L	740	770	420	910	750	700	720	940	180	760
Total Dissolved Solids (TDS) (Calc)	mg/L	2400	2500	740	3600	2500	2600	2400	3100	1600	3300
Total Suspended Solids (TSS)	mg/L	38	27	10	42	18	130	6.2	47000	11	4.4

Notse: * uS/cm = micro siemens/centimeter ** meq/L = Milliequivalent/litre

Table 3-5: Major Ions

Water Quality Parameter	Unit	Pond 1A	Pond 2/3	Pond 5	Pond 6	Pond 7	STP	SD8	SD9	MD9	DDA3
Bicarbonate (HCO ₃)	mg/L	900	920	510	1000	890	820	840	1100	220	900
Carbonate (CO ₃)	mg/L	6.7	7.8	<1	46	15	16	19	<100	<1	12
Hydroxide (OH)	mg/L	<1	<1	<1	<1	<1.0	<1	<1	<100	<1	<1
Chloride (Cl)	mg/L	680	730	45	1200	710	790	720	780	340	790
Sulphate (SO ₄)	mg/L	340	340	160	490	340	360	310	350	600	800

Table 3-6: Nutrients

Water Quality Parameter	Unit	Pond 1A	Pond 2/3	Pond 5	Pond 6	Pond 7	STP	SD8	SD9	MD9	DDA3
Nitrate (N)	mg/L	<0.04	<0.04	<0.04	0.08	<0.040	0.047	5.9	<0.4	<0.04	0.44
Nitrate plus Nitrite (N)	mg/L	<0.04	<0.04	<0.04	0.08	<0.040	0.047	5.9	<0.4	<0.04	0.44
Total Nitrogen (N)	mg/L	20	21	1.1	3.8	23	7.4	5.4	10	1.7	7.4
Total Kjeldahl Nitrogen (Calc)	mg/L	20	21	1.1	3.7	23	7.4	<0.4	10	1.7	7
Ammonia	mg/L	16	17	0.78	0.36	22	5.8	0.23	8.7	0.036	6.3

Table 3-7: Hydrocarbons – BTEX

Water Quality Parameter	Unit	Pond 1A	Pond 2/3	Pond 5	Pond 6	Pond 7	STP	SD8	SD9	MD9	DDA3
F1 (C6-C10) - BTEX	ug/L*	<100	<100	<100	<100	970	<100	<100	<100	<100	<100
F1 (C6-C10)	ug/L	<100	<100	<100	<100	1600	<100	<100	<100	<100	<100
F2 (C10-C16 Hydrocarbons)	mg/L	0.29	0.38	<0.1	0.51	2.2	0.22	0.13	0.74	<0.1	<0.1
F3 (C16-C34 Hydrocarbons)	mg/L	0.54	0.67	<0.1	1.4	4.3	0.46	0.33	2.7	0.4	0.13
F4 (C34-C50 Hydrocarbons)	mg/L	<0.2	<0.2	<0.2	0.21	0.27	<0.2	<0.2	0.92	<0.2	<0.2
Benzene	ug/L	<0.4	<0.4	<0.4	<0.4	16	<0.4	<0.4	<0.4	<0.4	<0.4
Toluene	ug/L	0.44	1.2	<0.4	<0.4	250	<0.4	<0.4	0.45	<0.4	<0.4
Ethylbenzene	ug/L	0.94	2	<0.4	<0.4	71	<0.4	<0.4	<0.4	<0.4	<0.4
m & p-Xylene	ug/L	7.1	13	<0.8	<0.8	240	<0.8	<0.8	0.95	<0.8	<0.8
o-Xylene	ug/L	2.2	4.8	<0.4	0.44	99	<0.4	<0.4	0.57	<0.4	<0.4
Xylenes (Total)	ug/L	9.3	18	<0.89	<0.89	330	<0.89	<0.89	1.5	<0.89	<0.89

Note: *ug/L = microgram/litre

Table 3-8: Phenols

Water Quality Parameter	Unit	Pond 1A	Pond 2/3	Pond 5	Pond 6	Pond 7	STP	SD8	SD9	MD9	DDA3
Phenols	mg/L	0.007	0.012	<0.0015	0.0037	1.6	<0.0015	0.0017	0.0024	0.002	<0.0015

Table 3-9: Naphthenic Acids

Water Quality Parameter	Unit	Pond 1A	Pond 2/3	Pond 5*	Pond 6*	Pond 7	STP	SD8	SD9	MD9*	DDA3
Naphthenic Acids (FTIR)	mg/L	81	82	5.8	160	84	73	64	97	40	42

Note: *These values were obtained through the Naphthenic Acids by IR: EPA 3510C R3 / FTIR method rather than the DCM.

Table 3-10: NORMs*

Water Quality Parameter	Unit	Pond 1A	Pond 2/3	Pond 5	Pond 6	Pond 7	STP	SD8	SD9	MD9	DDA3
Lead-210	Bq/L**	<1	<1	<1	<1	<1.0	<1	<1	<1	<1	<1
Potassium-40	Bq/L	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Radium 226	Bq/L	<1	<1	<1	<1	<1.0	<1	<1	<1	<1	<1
Radium-223	Bq/L	<0.5	<0.5	<0.5	<0.5	<0.50	<0.5	<0.5	<0.5	<0.5	<0.5
Radium-228	Bq/L	<0.5	<0.5	<0.5	<0.5	<0.50	<0.5	<0.5	<0.5	<0.5	<0.5
Thorium-227	Bq/L	<0.5	<0.5	<0.5	<0.5	<0.50	<0.5	<0.5	<0.5	<0.5	<0.5
Thorium-228	Bq/L	<0.1	<0.1	<0.1	<0.1	<0.10	<0.1	<0.1	<0.1	<0.1	<0.1
Thorium-230	Bq/L	<5	<5	<5	<5	<5.0	<5	<5	<5	<5	<5
Thorium-234	Bq/L	<1	<1	<1	<1	<1.0	<1	<1	<1	<1	<1
Uranium-235	Bq/L	<0.5	<0.5	<0.5	<0.5	<0.50	<0.5	<0.5	<0.5	<0.5	<0.5

Note: * NORMs = Naturally Occurring Radioactive Materials, ** Bq/L = Becquerels/litre

Table 3-11: Total Metals

Water Quality Parameter	Unit	Pond 1A	Pond 2/3	Pond 5	Pond 6	Pond 7	STP	SD8	SD9	MD9	DDA3
Total Aluminum (Al)	mg/L	1.30	1.30	0.01	0.06	0.72	9.80	3.80	44.00	4.90	0.10
Total Antimony (Sb)	mg/L	0.00	0.00	<0.0006	<0.0006	0.00	0.00	0.00	<0.012	0.00	0.00
Total Arsenic (As)	mg/L	0.02	0.02	0.00	0.01	0.02	0.02	0.01	0.04	0.00	0.01
Total Barium (Ba)	mg/L	0.13	0.13	0.04	0.12	0.12	0.15	0.10	0.34	0.06	0.16
Total Beryllium (Be)	mg/L	<0.001	<0.001	<0.001	<0.001	<0.0010	<0.001	<0.001	<0.02	<0.001	<0.001
Total Boron (B)	mg/L	5.40	5.20	1.30	18.00	3.90	4.20	3.80	6.40	1.60	6.60
Total Cadmium (Cd)	ug/L	0.03	0.04	<0.02	<0.02	0.17	0.07	<0.02	1.00	0.04	0.04
Total Calcium (Ca)	mg/L	25.00	22.00	93.00	81.00	14.00	10.00	17.00	13.00	19.00	35.00
Total Chromium (Cr)	mg/L	0.00	0.00	<0.001	0.00	0.00	0.03	0.01	0.12	0.01	<0.001
Total Cobalt (Co)	mg/L	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.05	0.00	0.00
Total Copper (Cu)	mg/L	0.00	0.00	<0.001	<0.001	0.00	0.01	0.00	0.04	0.01	<0.001
Total Iron (Fe)	mg/L	1.20	1.10	1.30	1.70	0.79	4.80	1.80	31.00	1.10	<0.06
Total Lead (Pb)	mg/L	0.00	0.00	<0.0002	0.00	0.00	0.01	0.00	0.06	0.00	0.00
Total Lithium (Li)	mg/L	0.27	0.24	0.07	0.99	0.24	0.24	0.22	0.36	0.16	0.09

Water Quality Parameter	Unit	Pond 1A	Pond 2/3	Pond 5	Pond 6	Pond 7	STP	SD8	SD9	MD9	DDA3
Total Magnesium (Mg)	mg/L	16.00	15.00	20.00	64.00	11.00	9.90	11.00	17.00	10.00	20.00
Total Manganese (Mn)	mg/L	0.07	0.06	0.37	0.12	0.04	0.09	0.06	0.62	0.03	0.08
Total Mercury (Hg)	ug/L	0.01	0.01	<0.0019	<0.019	0.01	<0.019	<0.0038	0.09	0.00	<0.0019
Total Molybdenum (Mo)	mg/L	0.14	0.15	0.05	0.08	0.15	0.19	0.08	0.15	0.04	0.17
Total Nickel (Ni)	mg/L	0.02	0.02	0.00	0.01	0.02	0.03	0.01	0.11	0.01	0.03
Total Phosphorus (P)	mg/L	0.14	0.12	<0.1	0.38	<0.10	0.13	<0.1	0.61	<0.1	<0.1
Total Potassium (K)	mg/L	17.00	17.00	5.80	44.00	16.00	19.00	14.00	32.00	8.20	19.00
Total Selenium (Se)	mg/L	0.02	0.02	<0.0002	0.00	0.02	0.01	0.00	0.02	0.00	0.00
Total Silicon (Si)	mg/L	6.50	6.20	5.20	12.00	5.60	19.00	13.00	68.00	4.30	3.40
Total Silver (Ag)	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.00010	<0.0001	<0.0001	<0.002	<0.0001	<0.0001
Total Sodium (Na)	mg/L	880.00	900.00	150.00	1200.00	970.00	960.00	890.00	1100.00	560.00	1100.00
Total Strontium (Sr)	mg/L	0.60	0.59	0.50	1.10	0.51	0.45	0.54	0.61	0.51	0.98
Total Sulphur (S)	mg/L	130.00	130.00	56.00	200.00	120.00	140.00	110.00	140.00	200.00	280.00
Total Thallium (Tl)	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.00020	<0.0002	<0.0002	<0.004	<0.0002	<0.0002
Total Tin (Sn)	mg/L	<0.001	<0.001	<0.001	<0.001	<0.0010	<0.001	<0.001	<0.02	<0.001	<0.001

Water Quality Parameter	Unit	Pond 1A	Pond 2/3	Pond 5	Pond 6	Pond 7	STP	SD8	SD9	MD9	DDA3
Total Titanium (Ti)	mg/L	0.02	0.02	<0.001	0.01	0.01	0.08	0.03	0.29	0.17	0.01
Total Uranium (U)	mg/L	0.01	0.01	0.00	0.00	0.01	0.01	0.00	0.02	0.00	0.00
Total Vanadium (V)	mg/L	0.02	0.02	0.00	0.02	0.01	0.04	0.02	0.16	0.01	0.01
Total Zinc (Zn)	mg/L	0.03	0.02	<0.003	0.01	0.04	0.03	0.03	0.56	0.01	<0.003

Table 3-12: Dissolved Metals

Water Quality Parameter	Unit	Pond 1A	Pond 2/3	Pond 5	Pond 6	Pond 7	STP	SD8	SD9	MD9	DDA3
Dissolved Aluminum (Al)	mg/L	0.066	0.068	<0.003	<0.06	0.076	0.0059	0.013	18	0.22	0.046
Dissolved Antimony (Sb)	mg/L	0.00076	0.00091	<0.0006	<0.012	0.0014	0.0037	0.0012	<0.012	<0.0006	0.0013
Dissolved Arsenic (As)	mg/L	0.018	0.019	<0.0002	0.0066	0.02	0.012	0.0068	0.082	0.0016	0.0110
Dissolved Barium (Ba)	mg/L	0.12	0.12	0.039	0.12	0.12	0.1	0.083	2.3	0.048	0.16
Dissolved Beryllium (Be)	mg/L	<0.001	<0.001	<0.001	<0.02	<0.0010	<0.001	<0.001	0.024	<0.001	<0.001
Dissolved Boron (B)	mg/L	5.9	5.4	1.3	20	4.4	4.7	3.9	6.6	1.8	7.1
Dissolved Cadmium (Cd)	ug/L	0.03	<0.02	<0.02	<0.4	<0.020	0.036	0.022	1.2	<0.02	0.035
Dissolved Calcium (Ca)	mg/L	24	22	98	81	13	9.3	17	150	18	35
Dissolved Chromium (Cr)	mg/L	<0.001	<0.001	<0.001	<0.02	<0.0010	<0.001	<0.001	<0.02	<0.001	<0.001
Dissolved Cobalt (Co)	mg/L	0.0005	0.00052	0.0004	<0.006	0.00055	0.0027	0.0015	0.35	0.00062	0.0045
Dissolved Copper (Cu)	mg/L	<0.001	<0.001	<0.001	<0.02	<0.0010	<0.001	<0.001	0.038	0.0041	<0.001
Dissolved Iron (Fe)	mg/L	0.23	0.16	<0.06	0.8	0.084	<0.06	<0.06	13	<0.06	<0.06
Dissolved Lead (Pb)	mg/L	0.00047	0.00037	<0.0002	<0.004	<0.00020	<0.0002	<0.0002	0.25	0.0002	<0.0002
Dissolved Lithium (Li)	mg/L	0.28	0.26	0.071	1	0.21	0.25	0.25	<2	0.15	0.096

Water Quality Parameter	Unit	Pond 1A	Pond 2/3	Pond 5	Pond 6	Pond 7	STP	SD8	SD9	MD9	DDA3
Dissolved Magnesium (Mg)	mg/L	16	15	22	64	11	8.6	11	44	10	20
Dissolved Manganese (Mn)	mg/L	0.047	0.044	0.39	0.12	0.026	0.035	0.023	1.1	<0.004	0.074
Dissolved Mercury (Hg)	ug/L	<0.0019	<0.0019	<0.0019	<0.0019	0.0045	<0.0019	<0.0019	<0.0019	<0.0019	<0.0019
Dissolved Molybdenum (Mo)	mg/L	0.11	0.12	0.053	0.021	0.14	0.19	0.085	0.18	0.035	0.16
Dissolved Nickel (Ni)	mg/L	0.0089	0.01	0.0031	<0.01	0.012	0.012	0.0068	0.58	0.0088	0.024
Dissolved Phosphorus (P)	mg/L	<0.1	<0.1	<0.1	0.28	<0.10	<0.1	<0.1	<10	<0.1	<0.1
Dissolved Potassium (K)	mg/L	18	17	6.4	45	14	18	14	43	8	20
Dissolved Selenium (Se)	mg/L	0.0077	0.011	<0.0002	<0.004	0.017	0.0069	0.0045	0.014	0.0019	0.0012
Dissolved Silicon (Si)	mg/L	4.9	4.7	5	12	4.2	3.5	6.6	<50	1.2	2.4
Dissolved Silver (Ag)	mg/L	<0.0001	<0.0001	<0.0001	<0.002	<0.00010	<0.0001	<0.0001	<0.002	<0.0001	<0.0001
Dissolved Sodium (Na)	mg/L	870	880	160	1200	890	960	870	1200	560	1100
Dissolved Strontium (Sr)	mg/L	0.59	0.57	0.53	1.1	0.55	0.41	0.53	3.2	0.5	0.99
Dissolved Sulphur (S)	mg/L	130	130	51	200	140	130	110	130	200	270
Dissolved Thallium (Tl)	mg/L	<0.0002	<0.0002	<0.0002	<0.004	<0.00020	<0.0002	<0.0002	<0.004	<0.0002	<0.0002
Dissolved Tin (Sn)	mg/L	<0.001	<0.001	<0.001	<0.02	<0.0010	<0.001	<0.001	<0.02	<0.001	<0.001

Water Quality Parameter	Unit	Pond 1A	Pond 2/3	Pond 5	Pond 6	Pond 7	STP	SD8	SD9	MD9	DDA3
Dissolved Titanium (Ti)	mg/L	0.0011	<0.001	<0.001	<0.02	0.0033	<0.001	0.0011	0.37	0.023	0.0064
Dissolved Uranium (U)	mg/L	0.0054	0.0055	0.00029	<0.002	0.0085	0.0096	0.0034	0.035	0.0044	0.0048
Dissolved Vanadium (V)	mg/L	0.013	0.014	<0.001	<0.02	0.0026	0.0099	0.0053	0.25	0.0037	0.0054
Dissolved Zinc (Zn)	mg/L	0.0079	0.0076	<0.003	0.093	<0.0030	0.0054	0.0037	0.96	0.0061	<0.003

Table 3-13: Total PAHs

Water Quality Parameter	Unit	Pond 1A	Pond 2/3	Pond 5	Pond 6	Pond 7	STP	SD8	SD9	MD9	DDA3
Quinoline	ug/L	0.32	0.55	<0.2	0.21	1.3	<0.2	<0.2	0.46	<0.2	<0.2
Naphthalene	ug/L	<0.1	<0.1	<0.1	<0.1	1.4	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	ug/L	0.026	0.051	<0.0085	0.25	0.023	<0.0085	<0.0085	0.11	<0.0085	<0.0085
Benzo(k)fluoranthene	ug/L	<0.0085	<0.0085	<0.0085	0.024	<0.0085	<0.0085	<0.0085	0.011	<0.0085	<0.0085
Benzo(e)pyrene	ug/L	<0.05	0.052	<0.05	0.46	<0.050	<0.05	<0.05	0.1	<0.05	<0.05
Benzo(a)pyrene	ug/L	0.023	0.038	<0.0075	0.52	0.01	0.0093	<0.0075	0.05	<0.0075	<0.0075
Perylene	ug/L	<0.05	<0.05	<0.05	<0.05	<0.050	<0.05	<0.05	0.14	<0.05	<0.05
Acenaphthylene	ug/L	<0.1	<0.1	<0.1	<0.1	<0.10	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-cd)pyrene	ug/L	<0.0085	<0.0085	<0.0085	0.023	<0.0085	<0.0085	<0.0085	0.016	<0.0085	<0.0085
Dibenz(a,h)anthracene	ug/L	<0.0075	<0.0075	<0.0075	0.039	<0.0075	<0.0075	<0.0075	0.013	<0.0075	<0.0075

Water Quality Parameter	Unit	Pond 1A	Pond 2/3	Pond 5	Pond 6	Pond 7	STP	SD8	SD9	MD9	DDA3
2-Methylnaphthalene	ug/L	<0.1	<0.1	<0.1	0.16	0.46	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	ug/L	<0.1	0.19	<0.1	<0.1	0.26	<0.1	<0.1	0.69	<0.1	<0.1
Fluorene	ug/L	<0.05	<0.05	<0.05	<0.05	0.067	<0.05	<0.05	0.094	<0.05	<0.05
1-Methylnaphthalene	ug/L	<0.1	<0.1	<0.1	<0.1	0.24	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	ug/L	0.015	0.05	<0.0085	0.19	0.0097	<0.0085	<0.0085	0.037	<0.0085	<0.0085
Phenanthrene	ug/L	<0.05	0.06	<0.05	0.23	0.45	<0.05	<0.05	1.2	<0.05	<0.05
Anthracene	ug/L	0.023	0.029	<0.01	0.15	<0.010	<0.01	<0.01	<0.01	<0.01	<0.01
Benzo(c)phenanthrene	ug/L	<0.05	<0.05	<0.05	<0.05	<0.050	<0.05	<0.05	<0.05	<0.05	<0.05
Fluoranthene	ug/L	0.027	0.054	<0.01	0.12	0.027	<0.01	<0.01	0.2	<0.01	<0.01
Benzo(g,h,i)perylene	ug/L	<0.0085	0.011	<0.0085	0.059	<0.0085	<0.0085	<0.0085	0.026	<0.0085	<0.0085
Benzo(b&j)fluoranthene	ug/L	0.024	0.035	<0.0085	0.24	0.014	0.012	<0.0085	0.091	<0.0085	<0.0085
Acridine	ug/L	<0.04	<0.04	<0.04	<0.04	<0.040	<0.04	<0.04	<0.04	<0.04	<0.04
Pyrene	ug/L	0.28	0.32	0.06	2	0.095	0.098	<0.02	0.83	<0.02	<0.02

Table 3-14: Alkylated PAHs

Water Quality Parameter	Unit	Pond 1A	Pond 2/3	Pond 5	Pond 6	Pond 7	STP	SD8	SD9	MD9	DDA3
C1-Acenaphthene	ug/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
C1benzobjkfluoranthene /benzoapyrene	ug/L	0.11	0.22	<0.0075	1.2	0.076	0.063	0.0076	0.44	<0.0075	<0.0075
C1-biphenyl	ug/L	<0.02	0.053	<0.02	0.03	0.033	<0.02	<0.02	0.035	<0.02	<0.02
C1benzo(a)anthracene /chrysene	ug/L	0.29	0.49	0.014	1.4	0.18	0.12	0.021	0.97	0.048	0.015
C1-dibenzothiophene	ug/L	0.15	0.4	<0.02	1.2	0.58	<0.02	<0.02	2.9	<0.02	<0.02
C1-fluorene	ug/L	0.13	0.23	<0.05	0.27	0.34	0.054	<0.05	1.2	<0.05	<0.05
C1-Naphthalene	ug/L	<0.1	0.12	<0.1	0.19	0.66	<0.1	<0.1	<0.1	<0.1	<0.1
C1phenanthrene/anthracene	ug/L	0.24	0.5	<0.05	1.2	1.5	0.17	<0.05	6.9	<0.05	<0.05
C1fluoranthene/pyrene	ug/L	0.79	0.93	0.068	4.3	0.36	0.38	0.052	2.5	0.074	0.035
C2benzobjkfluoranthene /benzoapyrene	ug/L	0.067	0.093	<0.0075	0.49	0.051	0.037	<0.0075	0.26	0.012	<0.0075
C2-biphenyl	ug/L	0.065	0.11	<0.02	0.15	0.13	<0.02	<0.02	0.16	<0.02	<0.02
C2benzo(a)anthracene /chrysene	ug/L	0.85	1.3	0.012	3.6	0.7	0.28	0.044	3.3	0.09	0.036
C2-dibenzothiophene	ug/L	1.4	3.7	0.22	4.3	2.7	0.4	0.093	15	0.25	0.083
C2-fluorene	ug/L	0.55	0.97	0.069	0.79	0.9	0.17	0.075	4.6	0.2	0.053
C2-Naphthalene	ug/L	0.22	0.38	<0.1	0.48	0.3	<0.1	<0.1	0.16	<0.1	<0.1
C2phenanthrene /anthracene	ug/L	0.6	1.5	0.061	1.8	2	0.27	0.068	11	0.13	0.058
C2fluoranthene/pyrene	ug/L	0.93	1.3	0.036	3.8	0.62	0.49	0.072	3.7	0.11	0.048

Water Quality Parameter	Unit	Pond 1A	Pond 2/3	Pond 5	Pond 6	Pond 7	STP	SD8	SD9	MD9	DDA3
C3benzo(a)anthracene /chrysene	ug/L	0.14	0.22	<0.0085	0.5	0.16	0.071	<0.0085	1	<0.0085	<0.0085
C3-dibenzothiophene	ug/L	1.4	2.4	0.079	2.3	1.5	0.26	0.075	7.9	0.26	0.06
C3-fluorene	ug/L	<0.05	2.3	0.095	1.9	1.6	0.33	0.15	9.1	0.46	0.11
C3-Naphthalene	ug/L	0.56	0.91	<0.1	0.65	0.54	0.14	<0.1	2	0.15	<0.1
C3phenanthrene /anthracene	ug/L	1	2.1	<0.05	1.8	1.8	0.34	0.075	9.5	0.24	0.064
C3fluoranthene/pyrene	ug/L	1.4	2	<0.02	3.6	1.1	0.65	0.12	6.2	0.31	0.084
C4benzo(a)anthracene /chrysene	ug/L	0.021	0.032	<0.0085	0.067	0.028	0.016	<0.0085	0.2	<0.0085	<0.0085
C4-dibenzothiophene	ug/L	0.65	1	<0.02	1	0.5	0.17	<0.02	3.5	0.18	0.032
C4-Naphthalene	ug/L	1.1	1.6	<0.1	0.87	1.1	0.25	<0.1	5.9	0.26	0.1
C4phenanthrene /anthracene	ug/L	0.58	0.86	<0.05	1.3	0.51	0.2	<0.05	3.1	0.11	<0.05
C4fluoranthene/pyrene	ug/L	0.47	0.61	<0.02	1.7	0.44	0.23	0.055	2.8	0.22	0.034
Dibenzothiophene	ug/L	0.044	0.075	<0.02	0.37	0.064	<0.02	<0.02	0.16	<0.02	<0.02
Indeno(1,2,3-cd) fluoranthene	ug/L	<0.0085	<0.0085	<0.0085	<0.0085	<0.0085	<0.0085	<0.0085	<0.0085	<0.0085	<0.0085
Retene	ug/L	<0.05	<0.05	<0.05	<0.05	<0.050	<0.05	<0.05	0.14	<0.05	<0.05
Biphenyl	ug/L	<0.02	<0.02	<0.02	<0.02	<0.020	<0.02	<0.02	<0.02	<0.02	<0.02

Table 3-15: Total VOCs

Water Quality Parameter	Unit	Pond 1A	Pond 2/3	Pond 5	Pond 6	Pond 7	STP	SD8	SD9	MD9	DDA3
Total Trihalomethanes	ug/L	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3
Bromodichloromethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.50	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	ug/L	<0.5	<0.5	<0.5	<0.5	<0.50	<0.5	<0.5	<0.5	<0.5	<0.5
Bromomethane	ug/L	<2	<2	<2	<2	<2.0	<2	<2	<2	<2	<2
Carbon tetrachloride	ug/L	<0.5	<0.5	<0.5	<0.5	<0.50	<0.5	<0.5	<0.5	<0.5	<0.5
Chlorobenzene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.50	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	ug/L	<1	<1	<1	<1	<1.0	<1	<1	<1	<1	<1
Chloroethane	ug/L	<1	<1	<1	<1	<1.0	<1	<1	<1	<1	<1
Chloroform	ug/L	<0.5	<0.5	<0.5	<0.5	<0.50	<0.5	<0.5	<0.5	<0.5	<0.5
Chloromethane	ug/L	<2	<2	<2	<2	<2.0	<2	<2	<2	<2	<2
1,2-dibromoethane	ug/L	<0.2	<0.2	<0.2	<0.2	0.51 (1)	<0.2	<0.2	<0.2	<0.2	<0.2
1,2-dichlorobenzene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.50	<0.5	<0.5	<0.5	<0.5	<0.5
1,3-dichlorobenzene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.50	<0.5	<0.5	<0.5	<0.5	<0.5
1,4-dichlorobenzene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.50	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-dichloroethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.50	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-dichloroethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.50	<0.5	<0.5	<0.5	<0.5	<0.5

Water Quality Parameter	Unit	Pond 1A	Pond 2/3	Pond 5	Pond 6	Pond 7	STP	SD8	SD9	MD9	DDA3
1,1-dichloroethene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.50	<0.5	<0.5	<0.5	<0.5	<0.5
cis-1,2-dichloroethene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.50	<0.5	<0.5	<0.5	<0.5	<0.5
trans-1,2-dichloroethene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.50	<0.5	<0.5	<0.5	<0.5	<0.5
Dichloromethane	ug/L	<2	<2	<2	<2	<2.0	<2	<2	<2	<2	<2
1,2-dichloropropane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.50	<0.5	<0.5	<0.5	<0.5	<0.5
cis-1,3-dichloropropene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.50	<0.5	<0.5	<0.5	<0.5	<0.5
trans-1,3-dichloropropene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.50	<0.5	<0.5	<0.5	<0.5	<0.5
Methyl methacrylate	ug/L	<0.5	<0.5	<0.5	<0.5	<0.50	<0.5	<0.5	<0.5	<0.5	<0.5
Methyl-tert-butylether (MTBE)		<0.5	<0.5	<0.5	<0.5	<0.50	<0.5	<0.5	<0.5	<0.5	<0.5
Styrene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.50	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1,2-tetrachloroethane	ug/L	<1	<1	<1	<1	<1.0	<1	<1	<1	<1	<1
1,1,2,2-tetrachloroethane	ug/L	<2	<2	<2	<2	<2.0	<2	<2	<2	<2	<2
Tetrachloroethene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.50	<0.5	<0.5	<0.5	<0.5	<0.5
1,2,3-trichlorobenzene	ug/L	<1	<1	<1	<1	<1.0	<1	<1	<1	<1	<1
1,2,4-trichlorobenzene	ug/L	<1	<1	<1	<1	<1.0	<1	<1	<1	<1	<1
1,3,5-trichlorobenzene	ug/L	<0.5	<0.5	<0.5	<0.5	<0.50	<0.5	<0.5	<0.5	<0.5	<0.5

Water Quality Parameter	Unit	Pond 1A	Pond 2/3	Pond 5	Pond 6	Pond 7	STP	SD8	SD9	MD9	DDA3
1,1,1-trichloroethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.50	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-trichloroethane	ug/L	<0.5	<0.5	<0.5	<0.5	140 (1)	<0.5	<0.5	<0.5	<0.5	<0.5
Trichloroethene	ug/L	<0.2	<0.2	<0.2	<0.2	<0.20	<0.2	<0.2	<0.2	<0.2	<0.2
Trichlorofluoromethane	ug/L	<0.5	<0.5	<0.5	<0.5	<0.50	<0.5	<0.5	<0.5	<0.5	<0.5
1,2,4-trimethylbenzene	ug/L	0.78	1.1	<0.5	<0.5	41	<0.5	<0.5	<0.5	<0.5	<0.5
1,3,5-trimethylbenzene	ug/L	0.61	1.7	<0.5	<0.5	14	<0.5	<0.5	<0.5	<0.5	<0.5
Vinyl chloride	ug/L	<0.5	<0.5	<0.5	<0.5	<0.50	<0.5	<0.5	<0.5	<0.5	<0.5

Table 3-16: Sampling Dates, Locations and Depths (if applicable)

Asset	Pond 1A	Pond 2/3	Pond 5	Pond 6	Pond 7	STP	SD8	SD9	MD9	DDA3
Sample Location	dock on SE corner of pond	dock on the pond during winter months, syphon drain outside of winter months	sump pump discharge	pump 81G-339A/B discharge	pump 300G/42A/ B/ C/ D suction	pump 86G-93A/B or 86G-94 suction	SD8 TFT barge	Pump 86G-84/ 87/ 90 suction	sump pump discharge	pump 502G-92240/92260 discharge if ADW treatment offline, MIV-21115-1 if ADW treatment online
Sample Depth (m)	0.5	0.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Sampling Date	30-Aug-2025	30-Aug-2025	31-Aug-2025	30-Aug-2025	25-Aug-2025	31-Aug-2025	31-Aug-2025	31-Aug-2025	31-Aug-2025	30-Aug-2025

3.1.7.3 Volume and Quality of Water Recovered from Fluid Tailings and Runoff from RTR Tailings

Refer to [Table 3-4](#) through [Table 3-15](#) for the quality of water recovered from FT and runoff from RTR tailings.

Refer to [Table 3-17](#) for estimated expressed water (runoff) from RTR tailings.

Table 3-17: Estimated Expressed Water

Expressed Water	
Asset	(Mm ³)
DDA1	0.0
DDA3	4.8
Pond 5	0.2
MD9*	0.4
MD9S**	0.0

Note: *The expressed water for MD9 was estimated by comparing 2025 and 2024 topographic surfaces over the reporting period and assuming the change in ground elevation is due to expression of water from consolidation.

**MD9s unable to report expressed water as active placement is ongoing

3.1.8 Fines Not Captured That Form Fluid Tailings

- Provide information about fines that were not captured, which form fluid tailings, including,
 - quantity of fines in the ore processed during the reporting period, and
 - quantity of fines in fluid tailings.

3.1.8.1 Quantity of Fines in Ore Processed During the Reporting Period

The quantity of fines in ore processed during the reporting period was 18.1 Mt.

3.1.8.2 Quantity of Fines in Fluid Tailings

The quantity of fines in FT during the reporting period was 129.0 Mt.

3.1.9 Estimate of Change in Fluid Tailings Volume Inventory

- Estimate the change in fluid tailings volume inventory as a result of settling and consolidation and provide an explanation if inconsistent with the predictions.

The majority of Base Plant's FT deposits are mature and exhibit slow settlement rates. As a result, many do not demonstrate measurable settlement over a 12-month period.

Active tailings assets, including STP, SD8, and SD9, are difficult to assess due to ongoing FT deposition and removal by submersible pumps or dredges. These activities result in differential loading and unloading, leading to lateral and vertical movement within the deposits. The

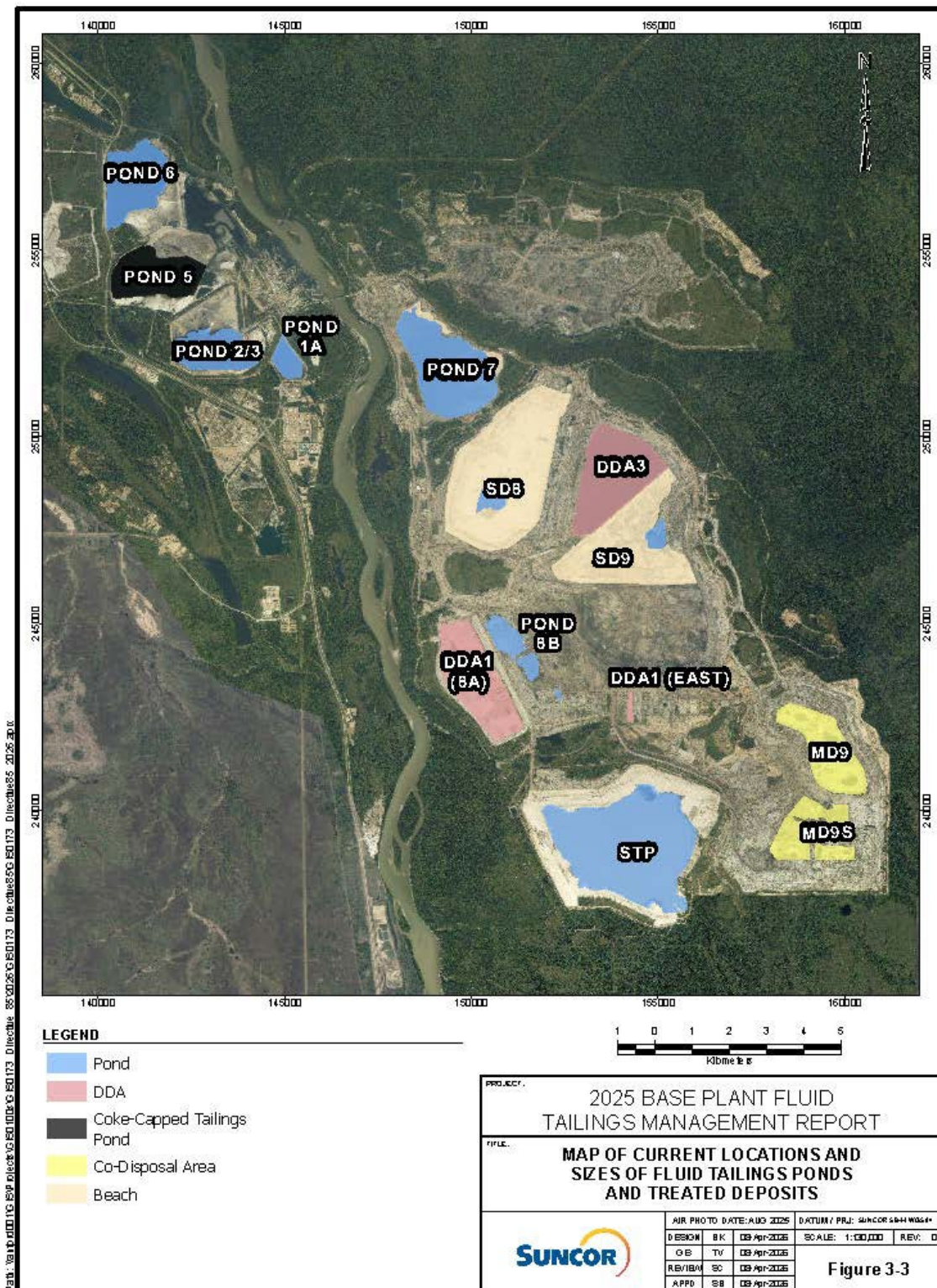
continual replacement of mature FT with newly deposited FT limits the ability to isolate consolidation behaviour with a high degree of confidence. Given these uncertainties, consolidation is not explicitly incorporated into the material balance component of planning. Instead, a representative single density is applied to FT volumes.

3.1.10 Map of Current Locations and Sizes of Fluid Tailings Ponds and Treated Deposits

- *Provide a status map of the current locations and sizes of all fluid tailings ponds and treated deposits for the project.*

Refer to [Figure 3-3](#) for the map of current locations and sizes of all FT ponds and treated deposits.

Figure 3-3: Map of Current Locations and Sizes of Fluid Tailings Ponds and Treated Deposits



3.1.11 Volume and Composition of Each Deposit Containing Fluid Tailings

- Provide tables indicating the volume and composition of each deposit containing fluid tailings (including the volume of fluid tailings, of treated and placed fluid tailings meeting RTR status, and of water).

Refer to [Table 3-18](#) for the volume and composition of each deposit containing FT.

Table 3-18: Volume and Composition of Fluid Tailings in Each Deposit

Assets	FT Volume End of 2025	Water	Mineral	Bitumen
	(Mm3)	(Wt. %)*	(Wt. %)	(Wt. %)
Pond 1A*****	10.4	56.9	38.6	4.5
Pond 2/3****	37.2	35.3	57.5	7.3
Pond 6	32.4	32.5	64.9	2.5
Pond 7	80.2	45.0	50.4	4.5
Pond 8B*****	7.6	57.0	41.1	1.8
STP	96.9	63.5	35.1	1.4
SD8	1.1	48.6	46.9	4.5
SD9	1.7	45.7	49.6	4.7
DDA3	0.3	81.9	16.7	1.4
Total	267.7	-	-	-
RTR FT				
Pond 5**	24.0	20.3	77.2	2.4
DDA3	116.2	57.9	39.6	2.5
MD9***	0.5	29.3	69.2	1.6
MD9S	0.0	0.0	0.0	0.0
Total	140.8	-	-	-

Notes: * Weight Percent

** Pond 5 data from 2025 RTR assessment, continued settlement monitoring, assessment no longer required.

*** MD9 data from 2024. MD9 is no longer receiving treated tailings and does not require an assessment.

**** Pond 2/3 data from 2024. Assessment cycle is every 2-3 years.

***** Pond 1A data from 2023. Assessment cycle is every 2-3 years.

***** Pond 8b composition data from 2022. Assessment is no longer completed due to access limitations. FT volume from 2025.

3.1.12 Tonnage of Ore Processed and Average Composition

- *Provide tonnage of ore processed and average composition (bitumen, water, solids) or provide the reference to another AER report and location where this information can be obtained.*

Oil sands mined tonnage from January 2025 through December 2025 totalled 150.8 Mt. The oil sands mined tonnage and grade are cross-referenced from the 2025 Operating Criteria (OC) Report (Suncor, 2025b), Table 4.1.

Refer to [Table 3-19](#) below for the average composition of the mined oil sand ore.

Table 3-19: Average Composition of Ore

Average Composition of Ore (Wt. %)	
Bitumen	11.6
Mineral	83.2
Water	5.2

3.1.13 Fluid Tailings Treatment Technology

- *For each fluid tailings treatment technology,*
 - *provide volume of fluid tailings treated and where they were placed,*
 - *provide chemical and physical properties of the treated fluid tailings and the water recovered from treatment, and*
 - *if the technology is not performing as predicted, provide mitigation measures to rectify performance (address any impacts on the deposit performance).*

3.1.13.1 Volume of Fluid Tailings Treated and Where They Were Placed

In 2025, 27.6 Mm³ of FT from South Tailings Pond (STP) were treated using the PASS process and deposited in DDA3 and a total of 4.5 Mm³ from dMFT from DDA1 and rMFT from Pond 8B were treated using co-disposal and deposited in MD9S.

3.1.13.2 Chemical and Physical Properties of Treated Fluid Tailings and Water Recovered from Treatment

Refer to [Table 3-4](#) through [Table 3-15](#), [Table 3-18](#), [Table 4-1](#), and [Table 4-2](#) for the chemical and physical properties of the treated FT and the water recovered from treatment.

3.1.13.3 Mitigation Measures to Rectify Technology Performance

PASS technology is performing as predicted and is meeting key milestones. Refer to [Section 3.4](#) for a summary of technology performance.

3.2 MONITORING REPORTING DATA REQUIREMENTS

3.2.1 Monitoring Dataset

For each monitoring dataset required in the annual fluid tailings management report,

- *identify any uncertainties and*
- *explain the dataset adequacy.*

3.2.1.1 Monitoring Dataset Uncertainties

a) Mass Balance

Streams within the mass balance include typical levels of measurement uncertainty related with:

- Flow measurement
- Density measurement
- Sample lab analyses

b) Fluid Tailings Volume

The uncertainty associated with datasets used to define the total volume(s) for a tailings asset (e.g., FT and expressed water or water cap) is considered acceptable for reporting purposes.

Deposit measurements are conducted in accordance with, or supplementary to, the methodology outlined in Guidelines for Tailings Deposit Sampling and Measuring Tools (COSIA, 2015a) and (COSIA, 2015b) as described in the 2025 MSP (Suncor, 2025).

3.2.1.2 Monitoring Dataset Adequacy

a) Mass Balance

Mass balance data comes from multiple sources including instrumentation related to flow and density measurement and laboratory analyses that characterize the material composition.

Mass balance data is used to compare predicted deposit behaviour from tailings planning models with annual deposit measurements. Improving prediction accuracy based on production and process data supports efficient material handling planning and system optimization to enhance deposit performance.

Areas of continuous improvement include:

- Forecasting of meteorological conditions to improve quantification of runoff and evaporation
- Refining determination of pond fluid profiles and inventories through pond assessments incorporating seasonal influences.

b) Fluid Tailings Volume

The boundary data for pond bottom and mudline surfaces is considered adequate from a geostatistical perspective. FT volume is defined by interpolating the as-built survey datasets, using an inverse distance method, to establish pond bottom and mudline surfaces. The survey density, as specified in the MSP (Suncor, 2025), supports accurate calculation of contained FT volumes.

3.2.2 Monitoring Results for Treated Tailings Deposit and Fluid Tailings Ponds

For each treated tailings deposit and fluid tailings ponds and their surrounding environment provide monitoring results, including the following:

- *a map and tabular data showing the survey locations of tailings deposits; and*
- *representative cross-sections to illustrate the variation of tailings characteristics;*

3.2.2.1 Tailings Deposits Sampling Locations

Locations of tailings deposits are shown in [Figure 3-3](#).

Refer to the following figures for the survey locations:

- [Figure 3-4: DDA3 Sampling Locations](#)
- [Figure 3-5: Pond 2/3 Sampling Locations](#)
- [Figure 3-6: Pond 6 Sampling Locations](#)
- [Figure 3-7: Pond 7 Sampling Locations](#)
- [Figure 3-8: SD8 Thin Fine Tailings Sampling Locations](#)
- [Figure 3-9: SD9 Thin Fine Tailings Sampling Locations](#)
- [Figure 3-10: STP Sampling Locations](#)
- [Figure 3-11: MD9S Sampling Locations](#)

Pond 1A, DDA1, and MD9 are not included in the figures above. The deposits did not receive fluid tailings deposition during the reporting period and were not assessed this year.

Pond 5 is not included in the figures above as the FT have met RTR criteria.

Pond 8B is not included in the figures above due to equipment access limitations, however, mudline and volume determinations will continue to be provided.

The following tables provide tabular data with survey locations of tailings deposits:

- [Table 3-20: DDA3 Sampling Locations](#)
- [Table 3-21: Pond 2/3 Sampling Locations](#)
- [Table 3-22: Pond 6 Sampling Locations](#)
- [Table 3-23: Pond 7 Sampling Locations](#)
- [Table 3-24: SD8 Sampling Locations](#)
- [Table 3-25: SD9 Sampling Locations](#)
- [Table 3-26: STP Sampling Locations](#)
- [Table 3-27: MD9S Sampling Locations](#)

Figure 3-4: DDA3 Sampling Locations

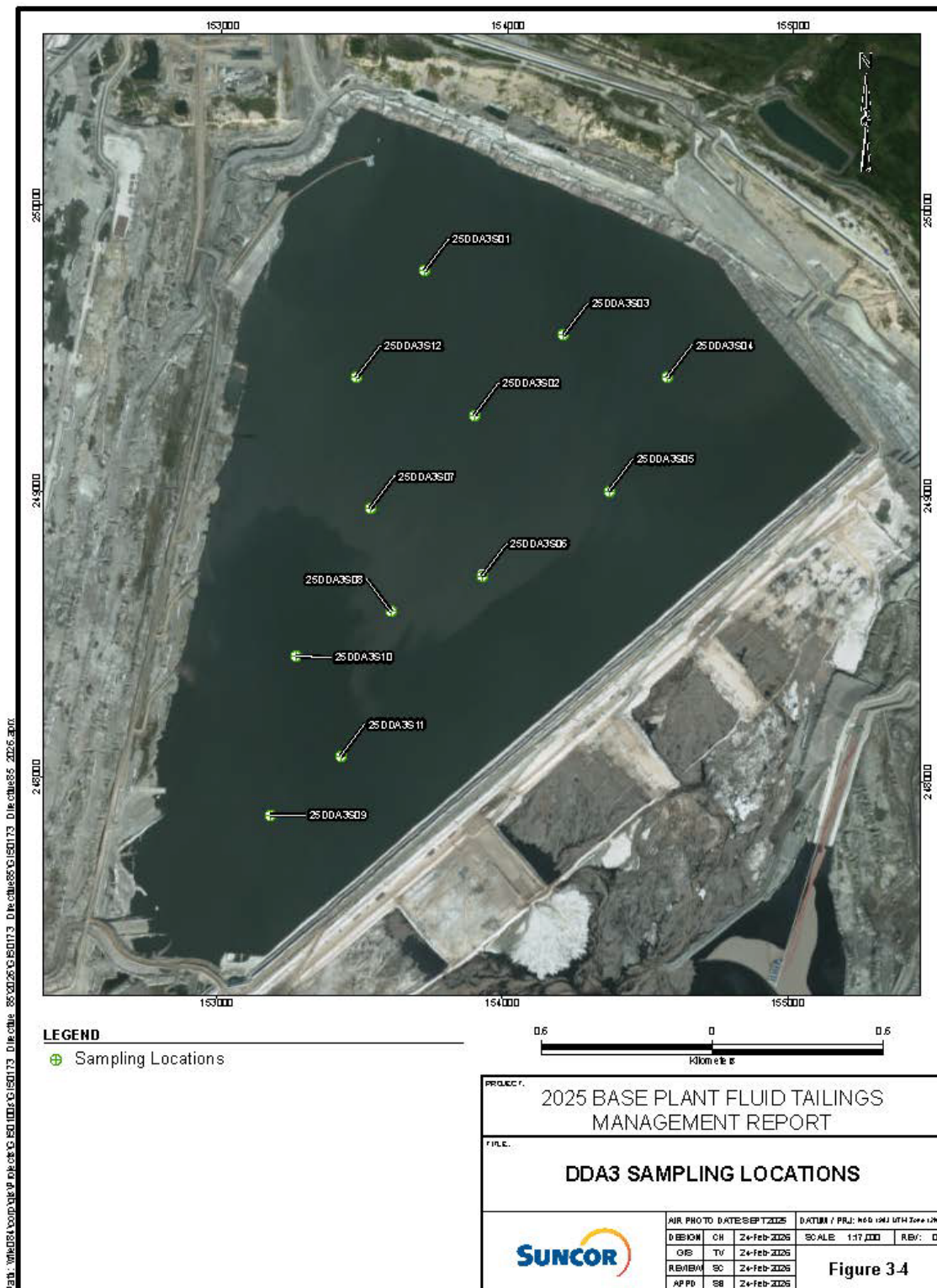


Figure 3-5: Pond 2/3 Sampling Locations

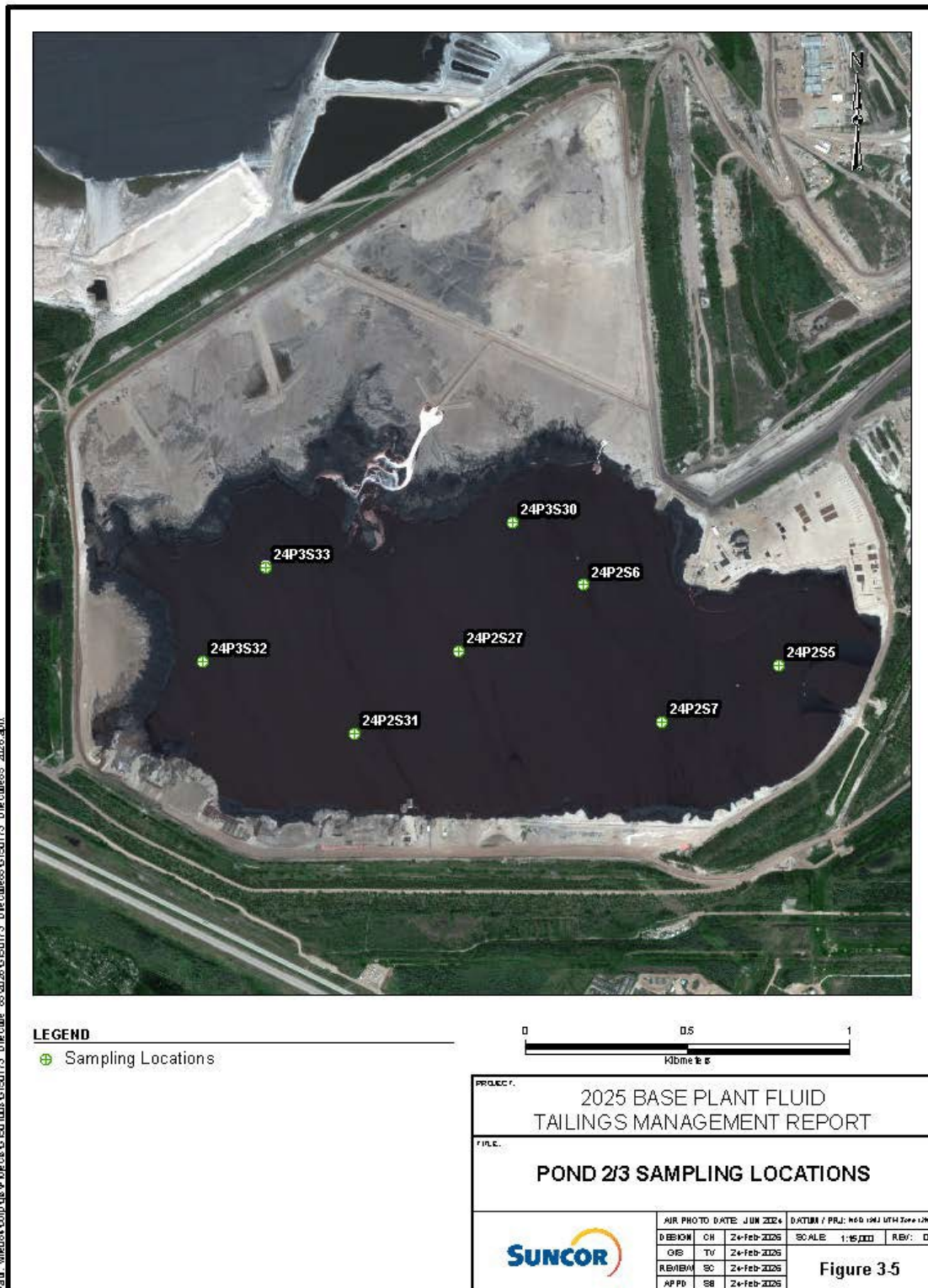


Figure 3-6: Pond 6 Sampling Locations

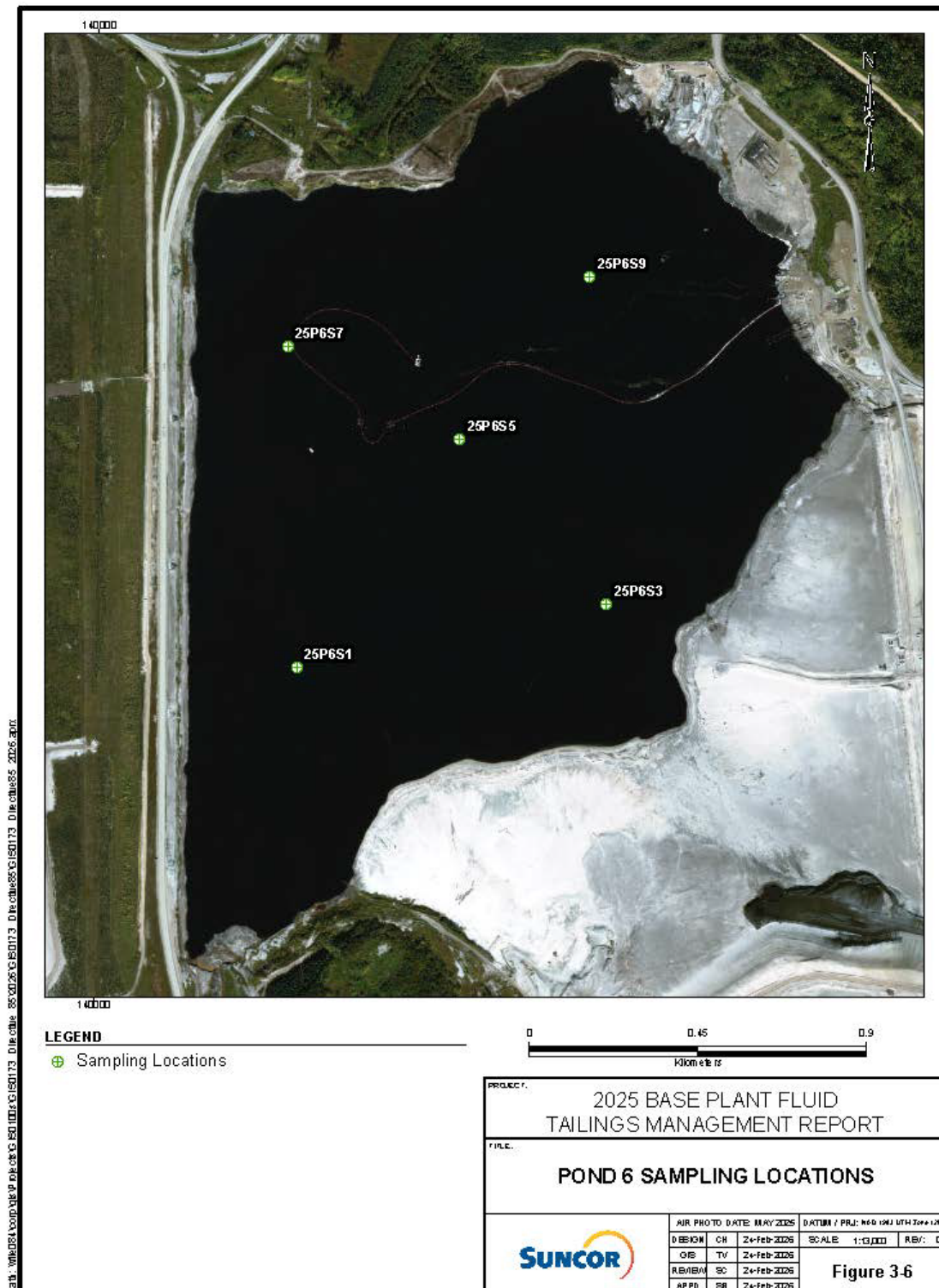


Figure 3-7: Pond 7 Sampling Locations

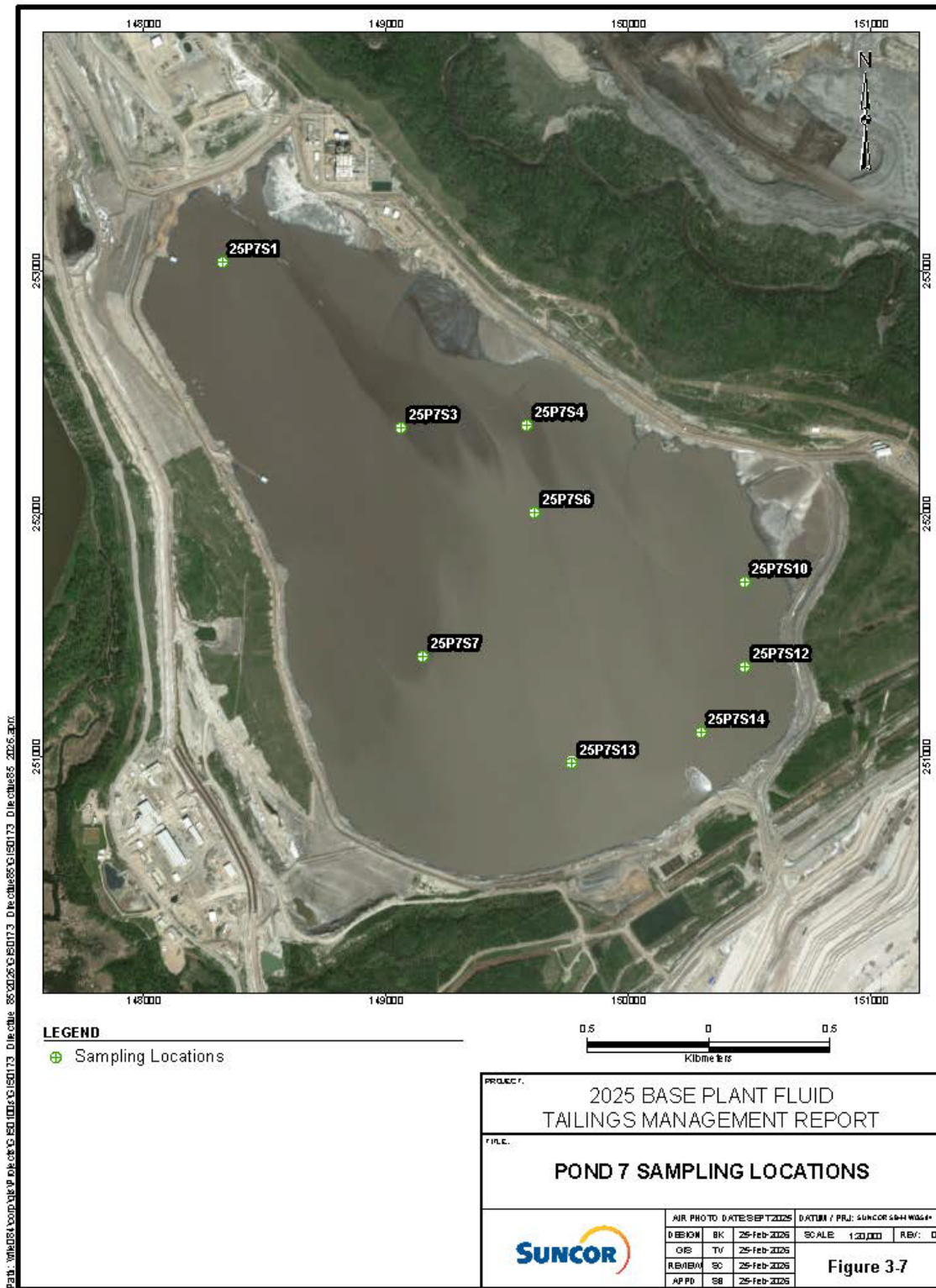


Figure 3-8: SD8 Thin Fine Tailings Sampling Locations

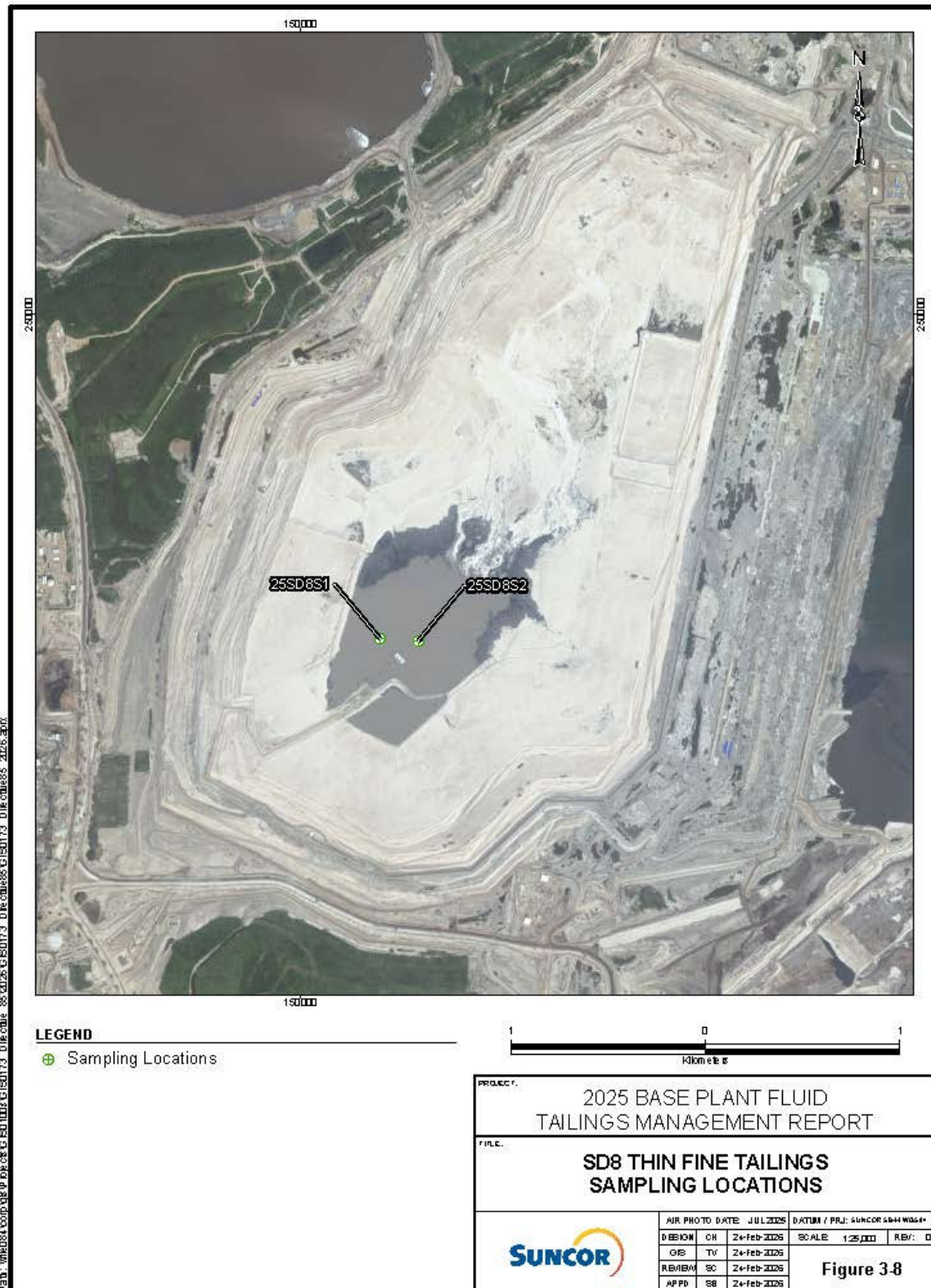


Figure 3-9: SD9 Thin Fine Tailings Sampling Locations

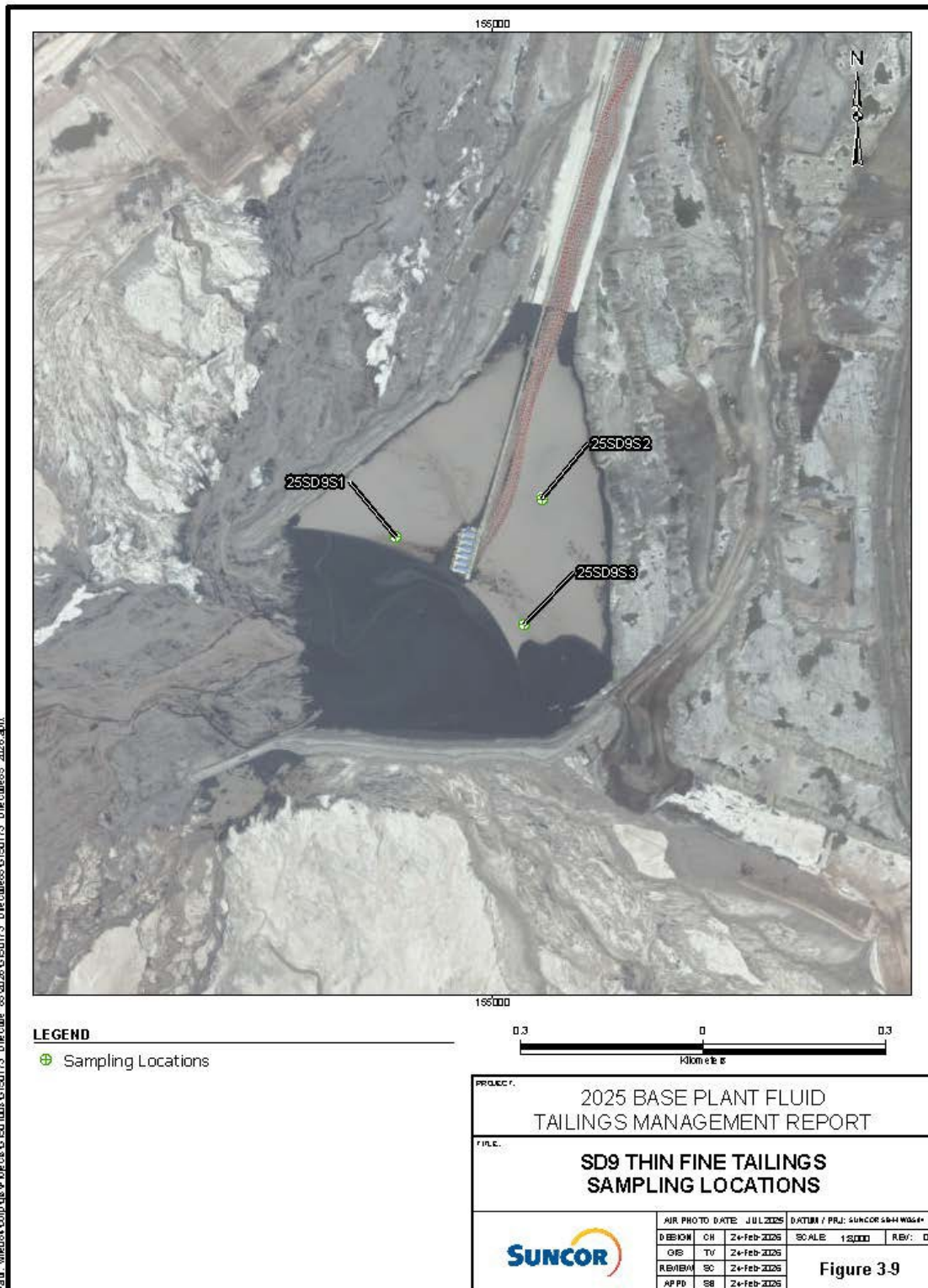


Figure 3-10: STP Sampling Locations

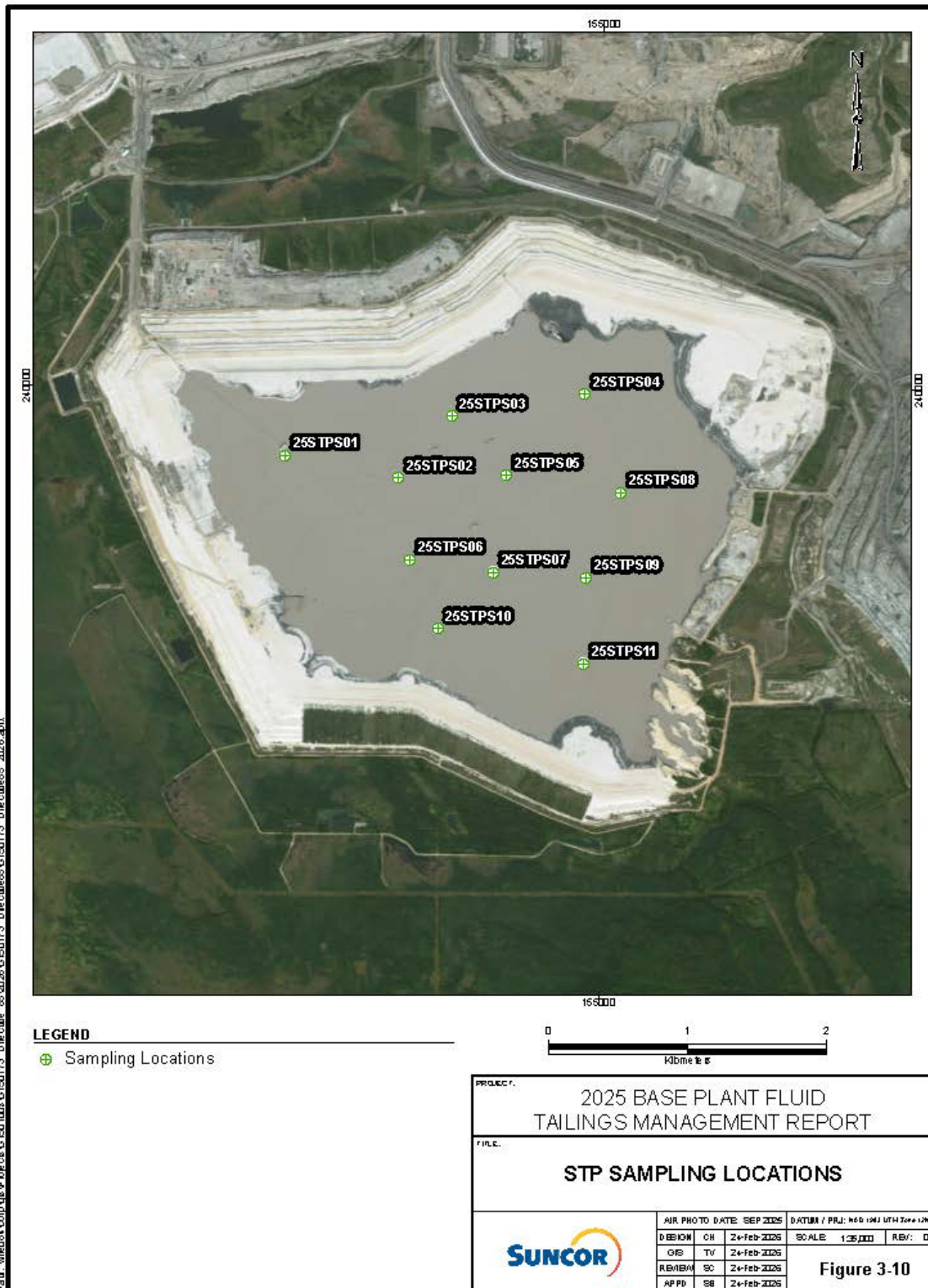


Figure 3-11: MD9S Sampling Locations



Table 3-20: DDA3 Sampling Locations

Sample ID	Northing* (m)**	Easting* (m)	Elevation (m)
25DDA3S01	249781.0	153714.5	304.2
25DDA3S02	249275.8	153891.3	304.4
25DDA3S03	249558.2	154202.8	304.2
25DDA3S04	249413.2	154567.6	304.2
25DDA3S05	249013.0	154363.7	304.3
25DDA3S06	248713.6	153922.7	304.2
25DDA3S07	248947.8	153528.4	304.2
25DDA3S08	248588.2	153601.5	304.2
25DDA3S09	247871.6	153182.8	304.2
25DDA3S10	248428.6	153269.6	304.2
25DDA3S11	248079.7	153429.5	304.2
25DDA3S12	249406.2	153477.8	304.3

Note: * Steepbank Coordinates, ** meters

Table 3-21: Pond 2/3 Sampling Locations

Sample ID	Northing* (ft)**	Easting* (ft)	Elevation (ft)
24P2S5	52630.2	50544.8	1192.8
24P2S6	54368.8	49298.5	1192.8
24P2S7	52771.0	49234.0	1192.8
24P2S27	54473.4	47867.3	1192.8
24P3S30	55282.1	49025.3	1192.8
24P2S31	54329.6	46534.5	1192.8
24P3S32	55766.0	45615.7	1192.8
24P3S33	56232.1	46669.9	1192.8

Note: * Lease 86/17 Coordinates, ** feet

Table 3-22: Pond 6 Sampling Locations

Sample ID	Northing* (ft)	Easting* (ft)	Elevation (ft)
25P6S1	70239.3	47735.1	988.4
25P6S3	69264.8	50330.3	988.4
25P6S5	71173.3	50003.5	988.4
25P6S7	72664.3	49163.6	988.4
25P6S9	71771.8	51730.4	988.4

Note: * Lease 86/17 Coordinates

Table 3-23: Pond 7 Sampling Locations

Sample ID	Northing* (m)	Easting* (m)	Elevation (m)
25P7S1	253037.1	148325.2	323.9
25P7S3	252354.1	149062.5	323.9
25P7S4	252364.1	149583.7	323.9
25P7S6	252005.1	149612.8	323.9
25P7S7	251414.2	149155.0	323.9
25P7S10	251719.1	150479.1	323.9
25P7S12	251371.9	150480.9	323.9
25P7S13	250975.5	149766.8	323.9
25P7S14	251100.7	150299.3	323.9

Note: * Steepbank Coordinates

Table 3-24: SD8 Sampling Locations

Sample ID	Northing* (m)	Easting* (m)	Elevation (m)
25SD8S1	248334.0	150410.0	393.2
25SD8S2	248323.0	150608.0	393.2

Note: * Steepbank Coordinates

Table 3-25: SD9 Sampling Locations

Sample ID	Northing* (m)	Easting* (m)	Elevation (m)
25SD9S1	247354.5	154840.8	287.9
25SD9S2	247416.9	155081.6	287.9
25SD9S3	247210.8	155053.2	287.9

Note: * Steepbank Coordinates

Table 3-26: STP Sampling Locations

Sample ID	Northing* (m)	Easting* (m)	Elevation (m)
25STPS01	239509.4	152719.8	384.8
25STPS02	239350.1	153542.1	384.7
25STPS03	239798.5	153920.6	384.7
25STPS04	239960.1	154881.1	384.7
25STPS05	239373.6	154316.3	384.7
25STPS06	238762.3	153623.5	384.7
25STPS07	238676.7	154225.3	384.8
25STPS08	239253.3	155143.4	384.8
25STPS09	238637.6	154894.8	384.7
25STPS10	238269.2	153828.5	384.8
25STPS11	238022.2	154882.4	384.8

Note: * Steepbank Coordinates

Table 3-27: MD9S Sampling Locations

Sample ID	Northing* (m)	Easting* (m)	Elevation (m)
ML25-GT0311-SN1	238855.8	159878.5	478.7
ML25-GT0312-SN1	238849.8	159574.0	478.4
ML25-GT0313-SN1	239059.6	158218.4	470.2
ML25-GT0314-SN1	238920.8	158592.2	469.8
ML25-GT0315-SN1	239359.9	158783.8	470.0
ML25-GT0316-SN1	239643.3	158462.6	470.2
ML25-GT0317-SN1	239501.3	159220.1	470.0
ML25-GT0318-SN1	239973.5	158877.6	459.4
ML25-GT0319-SN1	239943.8	159781.5	461.4

Note: * Steepbank Coordinates

3.2.2.2 Cross-Sections

Representative cross-sections using variable vertical exaggerations in the following figures illustrate the variation of tailings characteristics:

- Figure 3-12: DDA3 Solids (wt%)
- Figure 3-13: DDA3 Fines (wt%)
- Figure 3-14: DDA3 CWR Content (wt%)
- Figure 3-15: Pond 2/3 Solids Content (wt%)
- Figure 3-16: Pond 2/3 Fines Content (wt%)
- Figure 3-17: Pond 2/3 CWR Content (wt%)
- Figure 3-18: Pond 6 Solids Content (wt%)
- Figure 3-19: Pond 6 Fines Content (wt%)
- Figure 3-20: Pond 6 CWR Content (wt%)
- Figure 3-21: Pond 7 Solids Content (wt%)
- Figure 3-22: Pond 7 Fines Content (wt%)
- Figure 3-23: Pond 7 CWR Content (wt%)
- Figure 3-24: SD8 Solids Content (wt%)
- Figure 3-25: SD8 Fines Content (wt%)
- Figure 3-26: SD8 CWR Content (wt%)
- Figure 3-27: SD9 Solid Content (wt%)
- Figure 3-28: SD9 Fines Content (wt%)
- Figure 3-29: SD9 CWR Content (wt%)
- Figure 3-30: STP Solids Content (wt%)
- Figure 3-31: STP Fines Content (wt%)
- Figure 3-32: STP CWR Content (wt%)
- Figure 3-33: MD9S Solids Content (wt%)
- Figure 3-34: MD9S Fines Content (wt%)
- Figure 3-35: MD9S CWR Content (wt%)

Figure 3-12: DDA3 Solids Content (wt%)

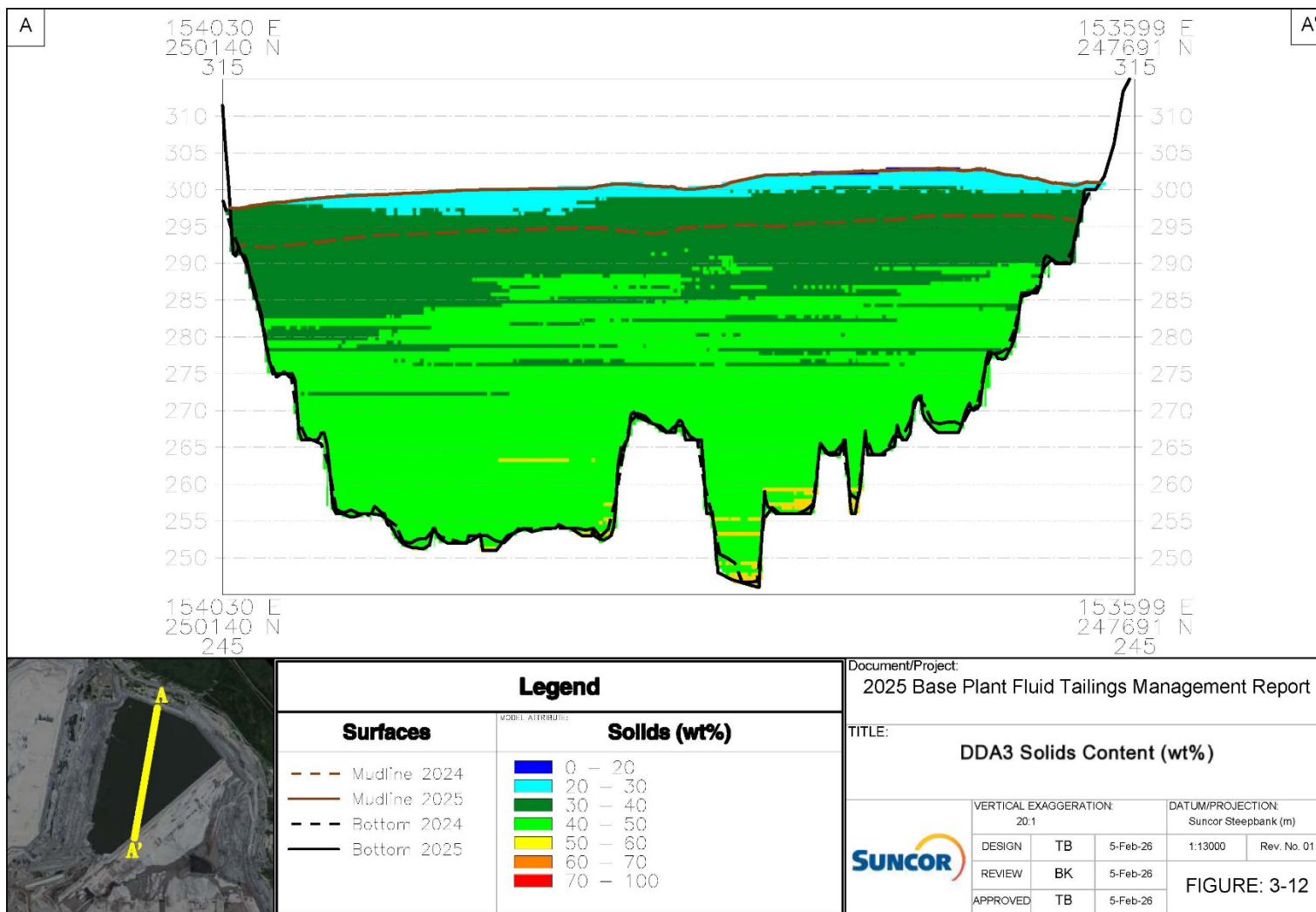


Figure 3-13: DDA3 Fines Content (wt%)

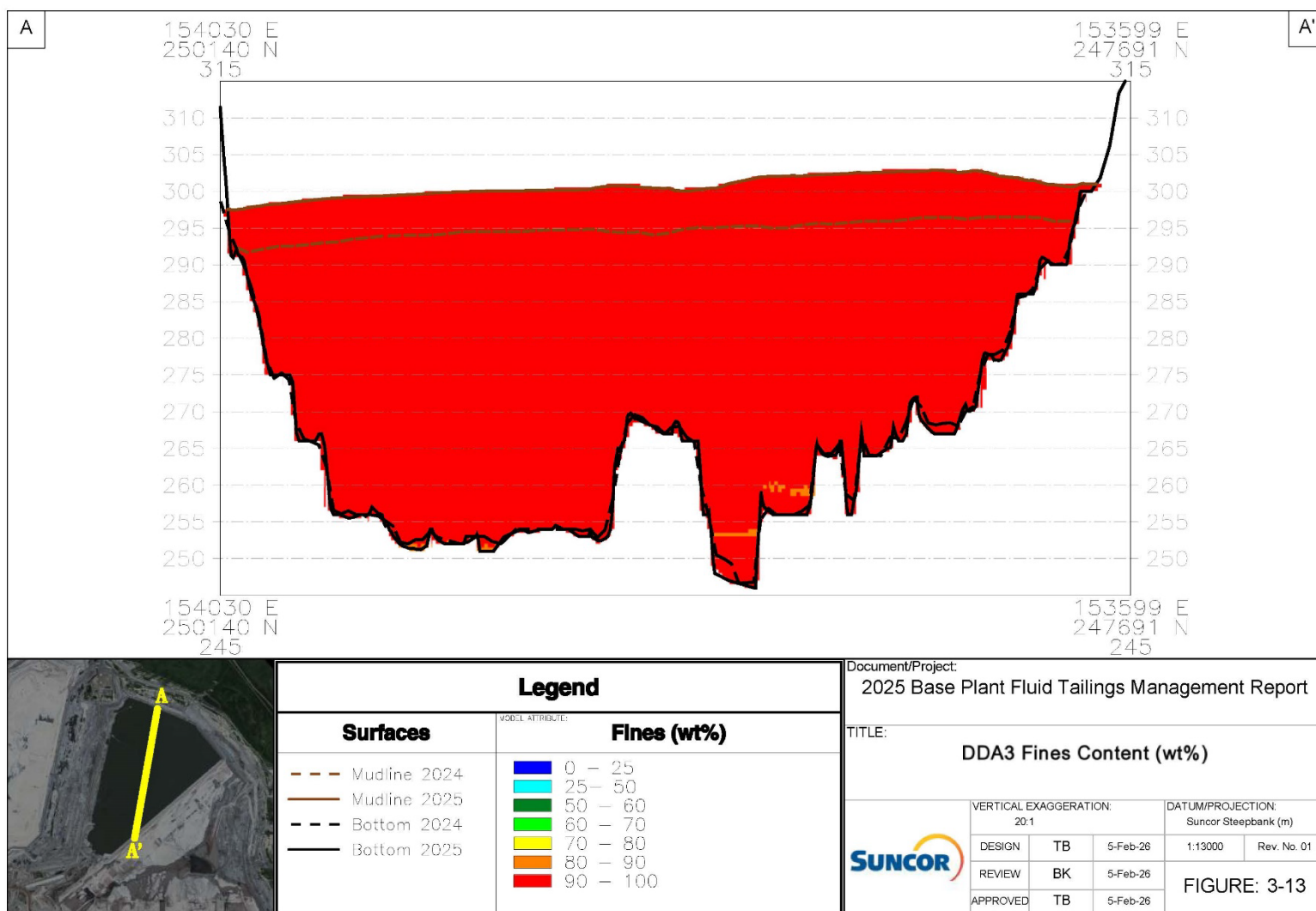


Figure 3-14: DDA3 CWR Content (wt%)

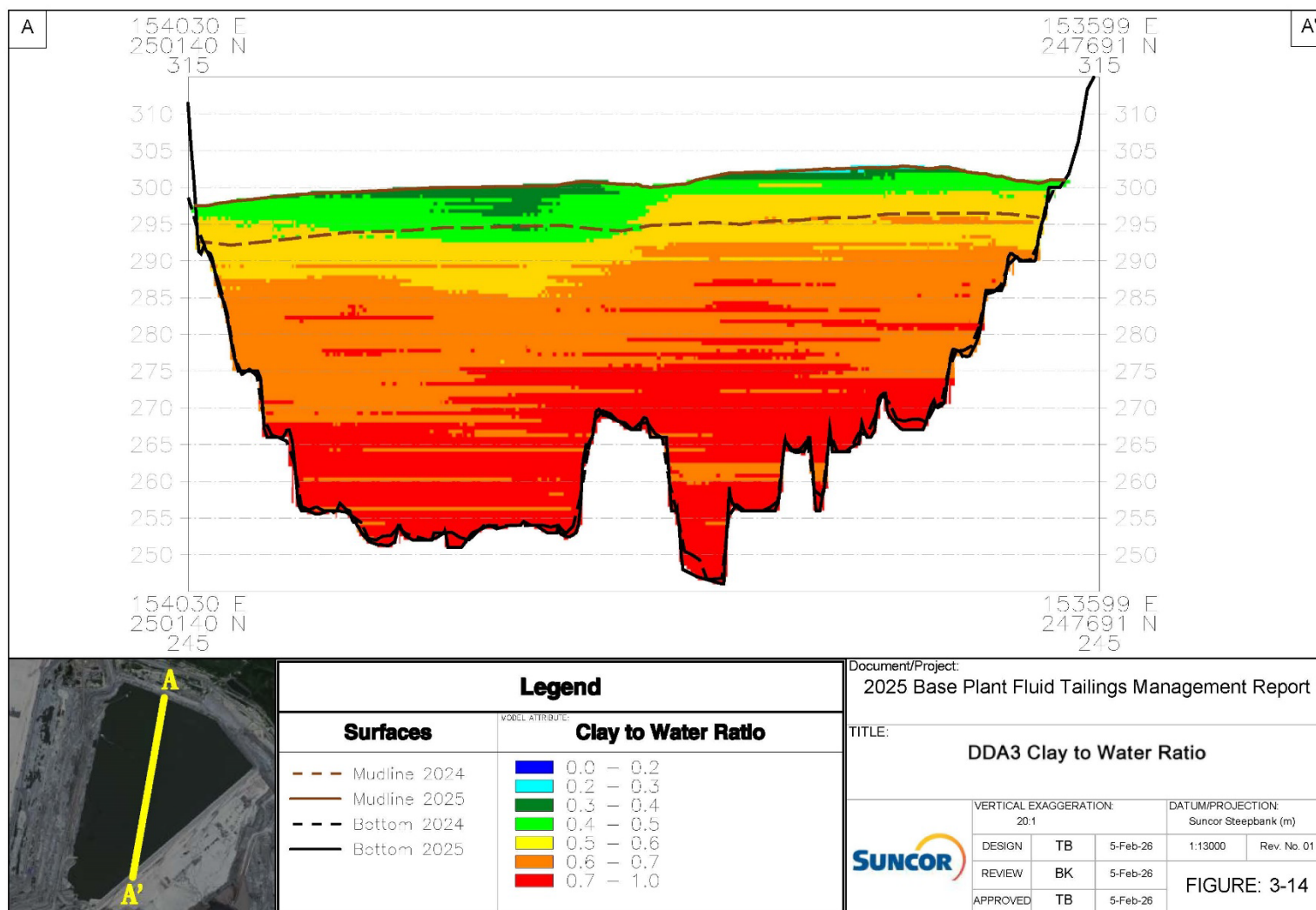


Figure 3-15: Pond 2/3 Solids Content (wt%)

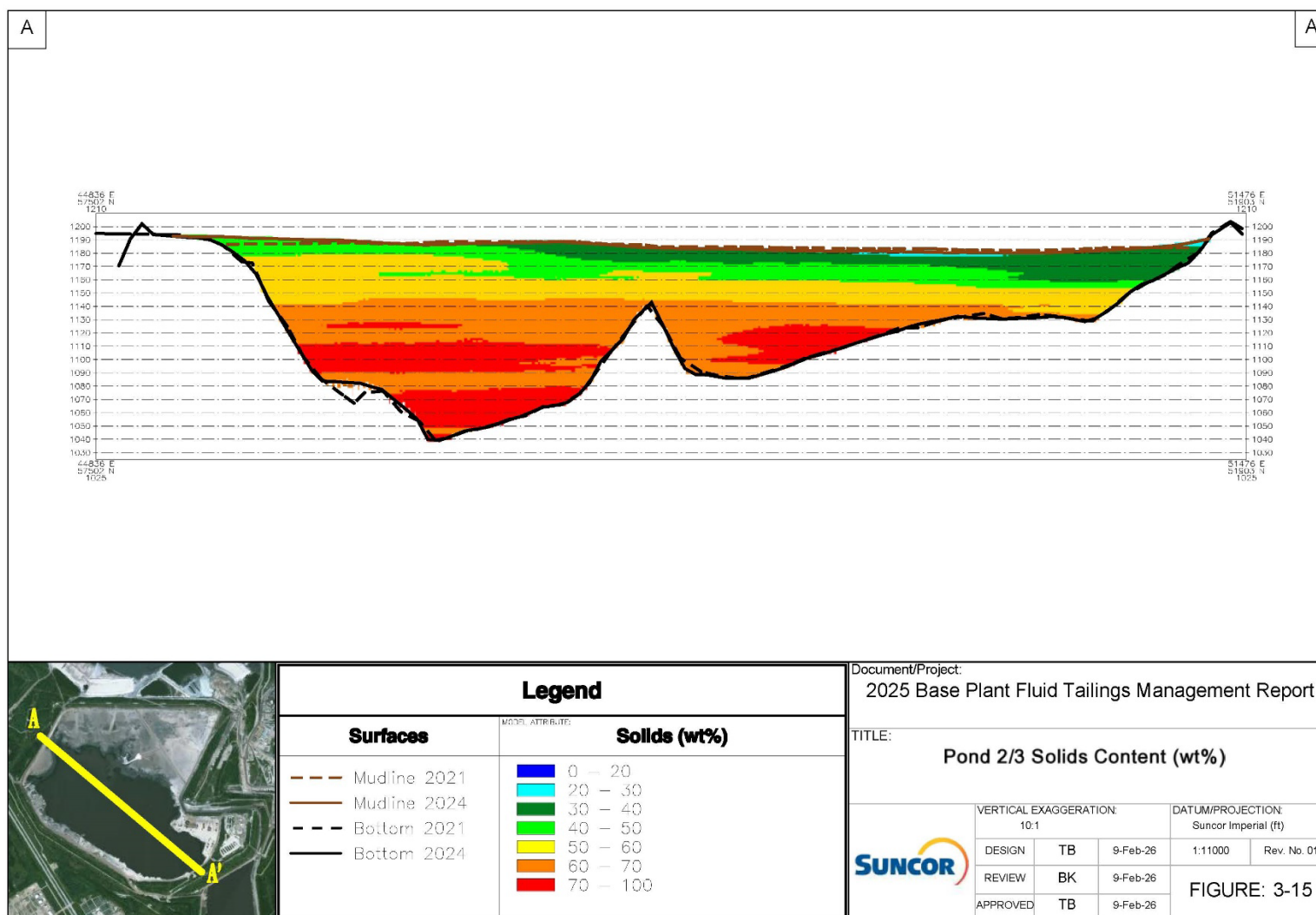


Figure 3-16: Pond 2/3 Fines Content (wt%)

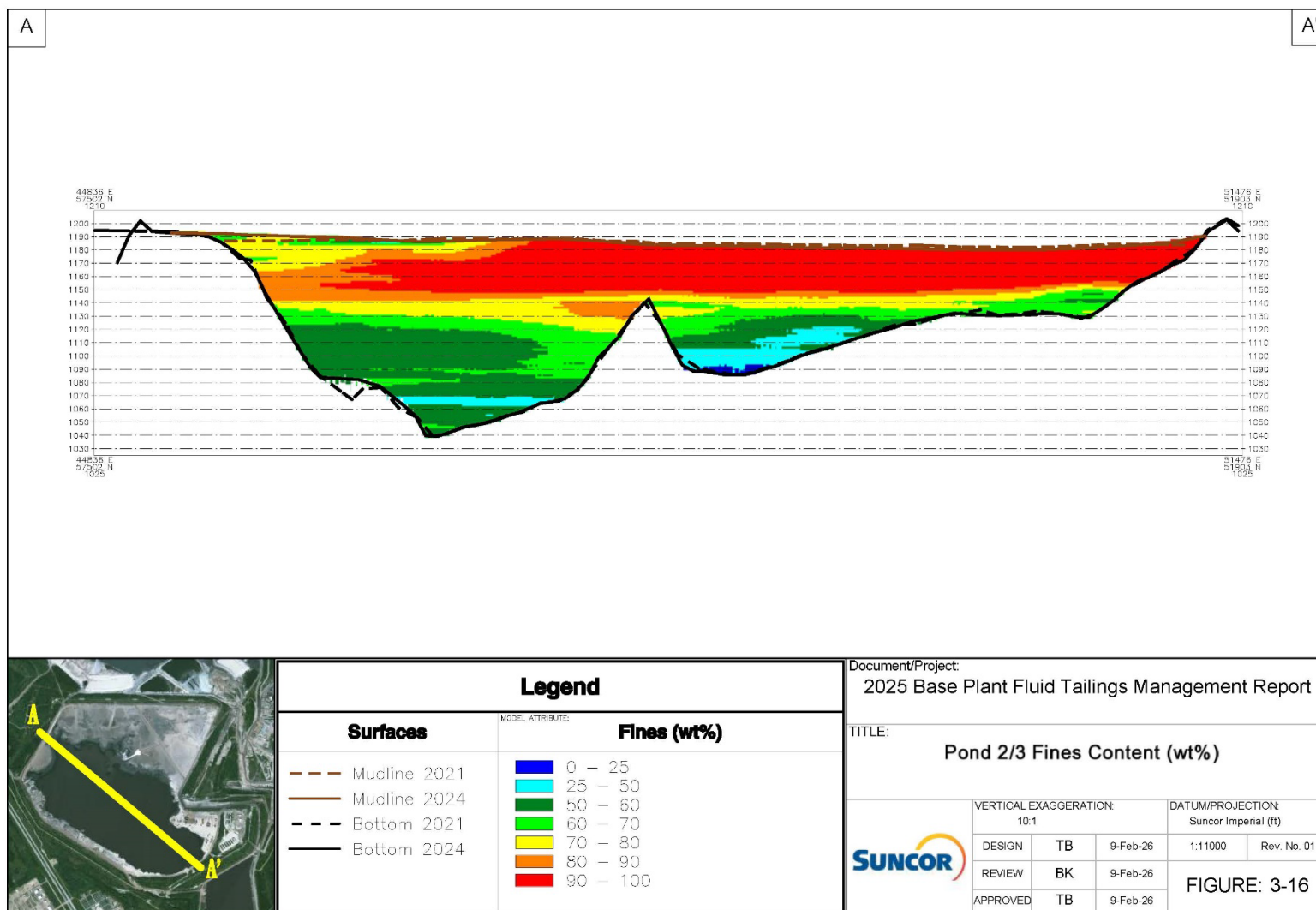


Figure 3-17: Pond 2/3 CWR Content (wt%)

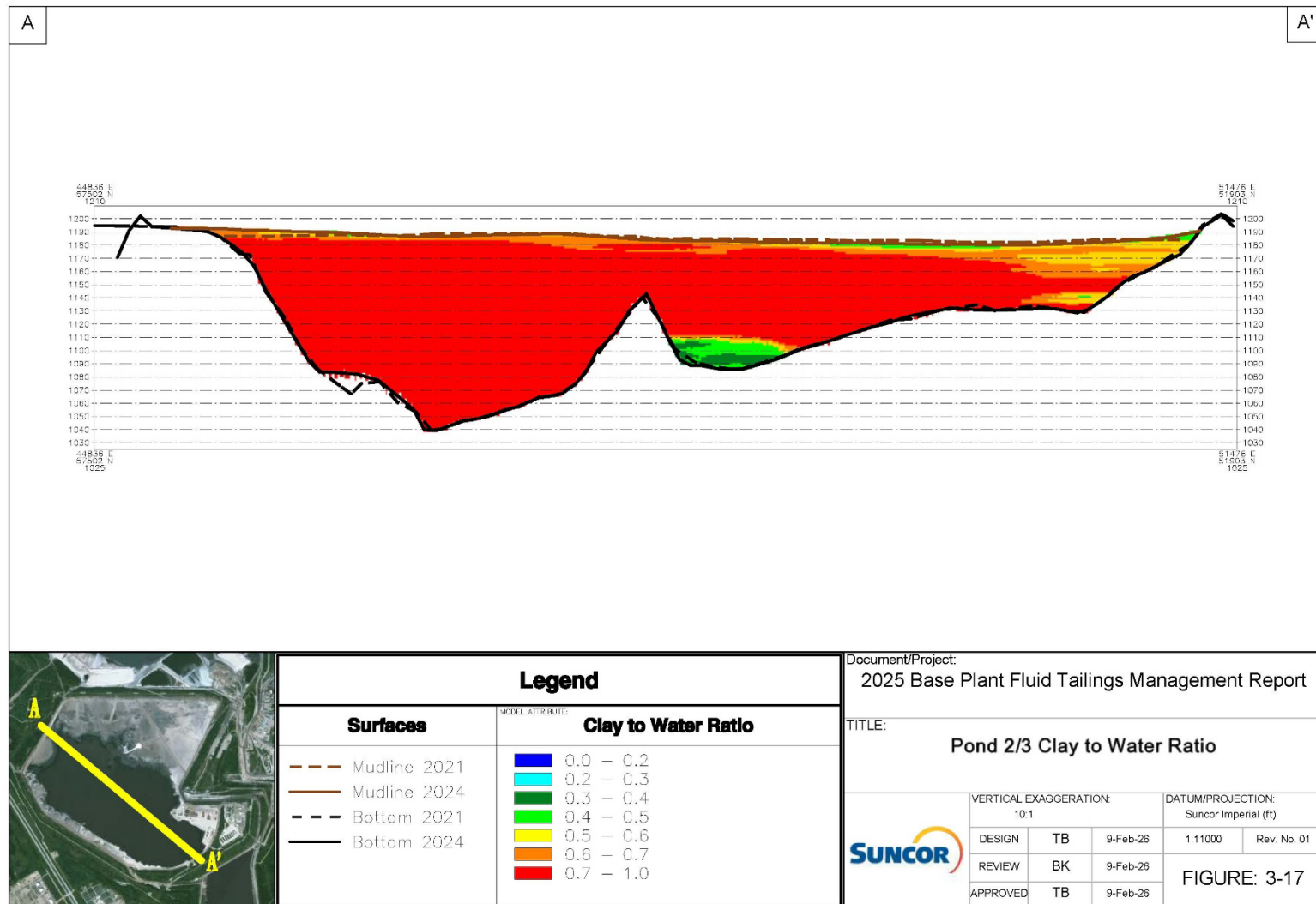


Figure 3-18: Pond 6 Solid Content (wt%)

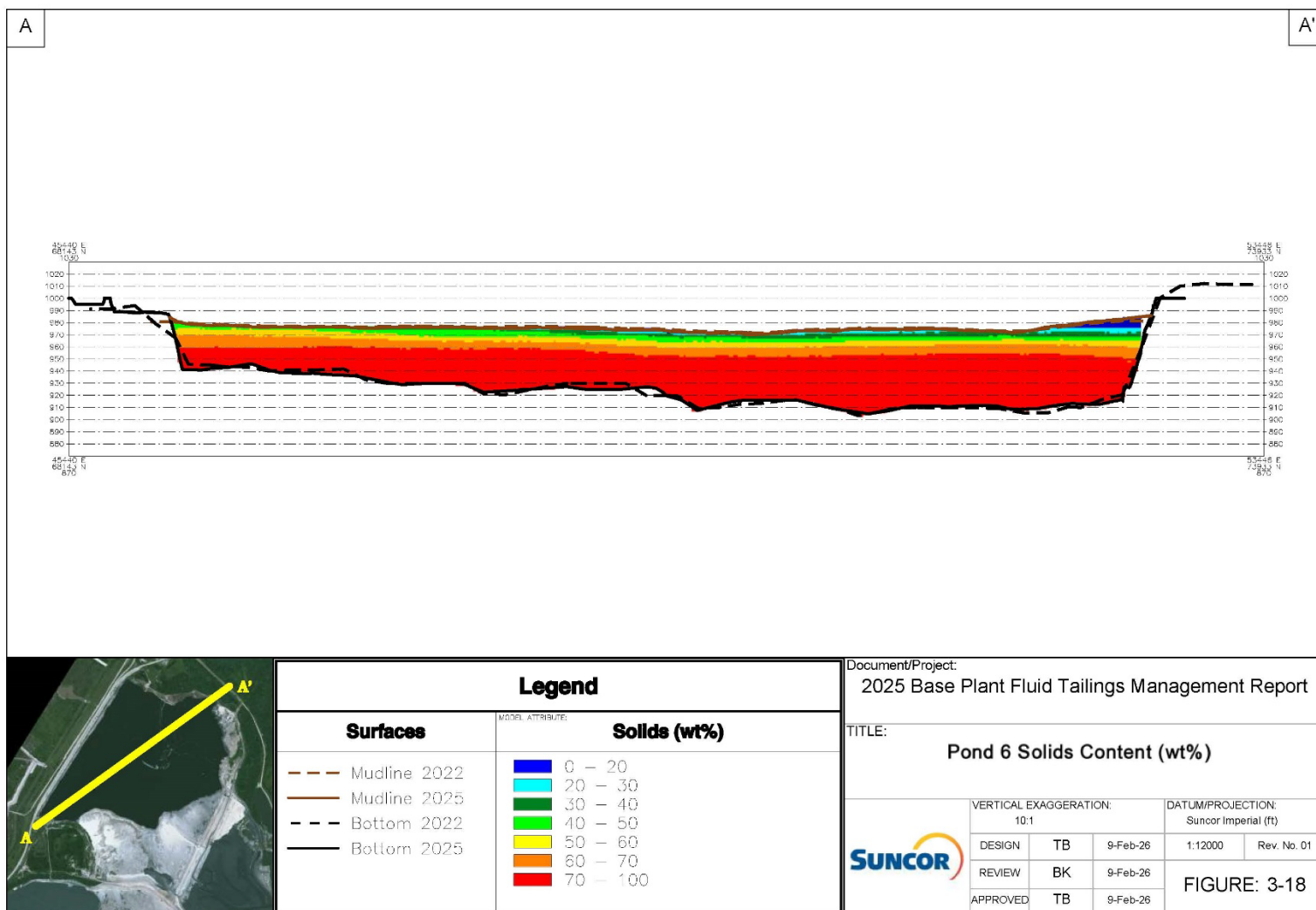


Figure 3-19: Pond 6 Fines Content (wt%)

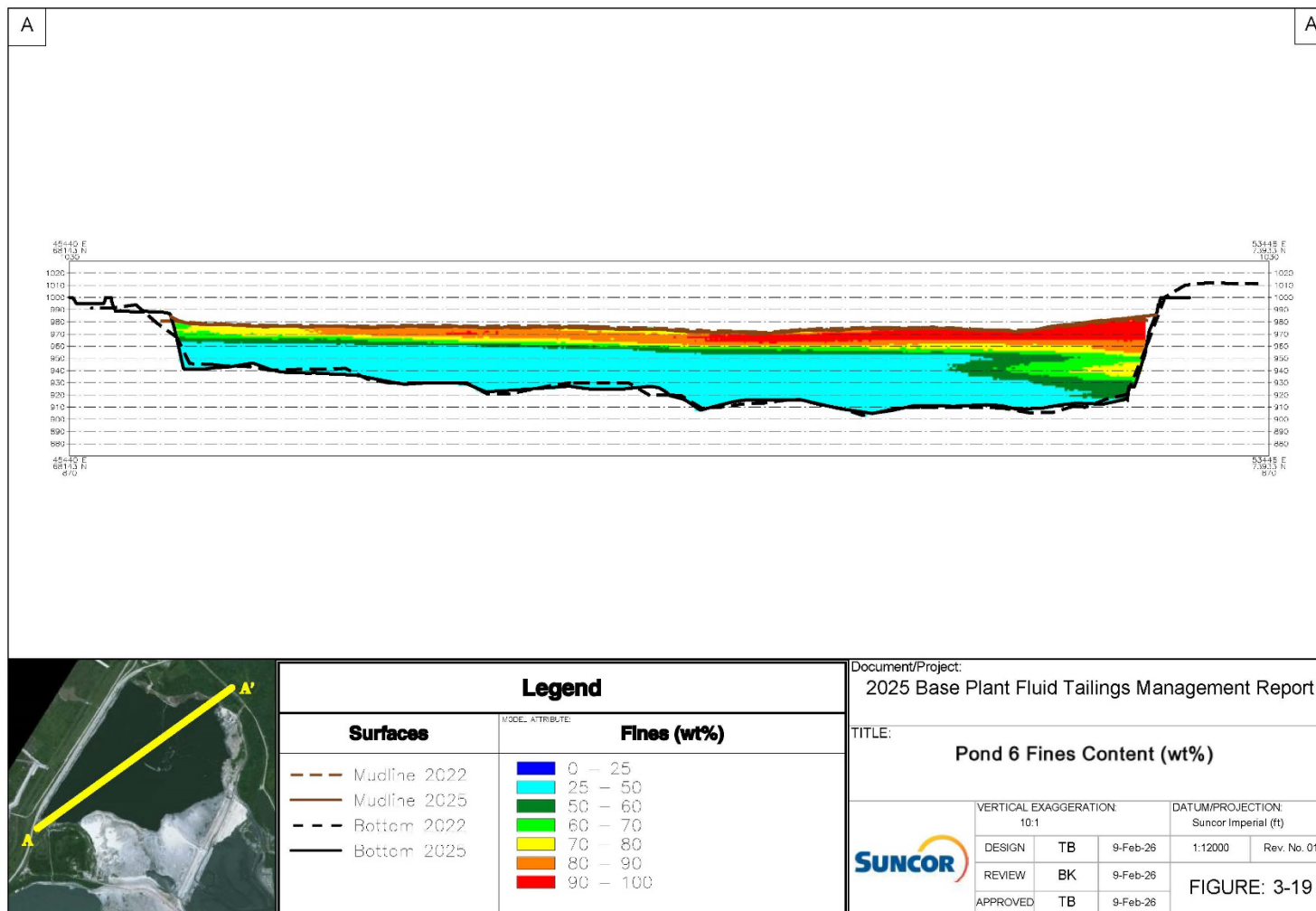


Figure 3-20: Pond 6 CWR Content (wt%)

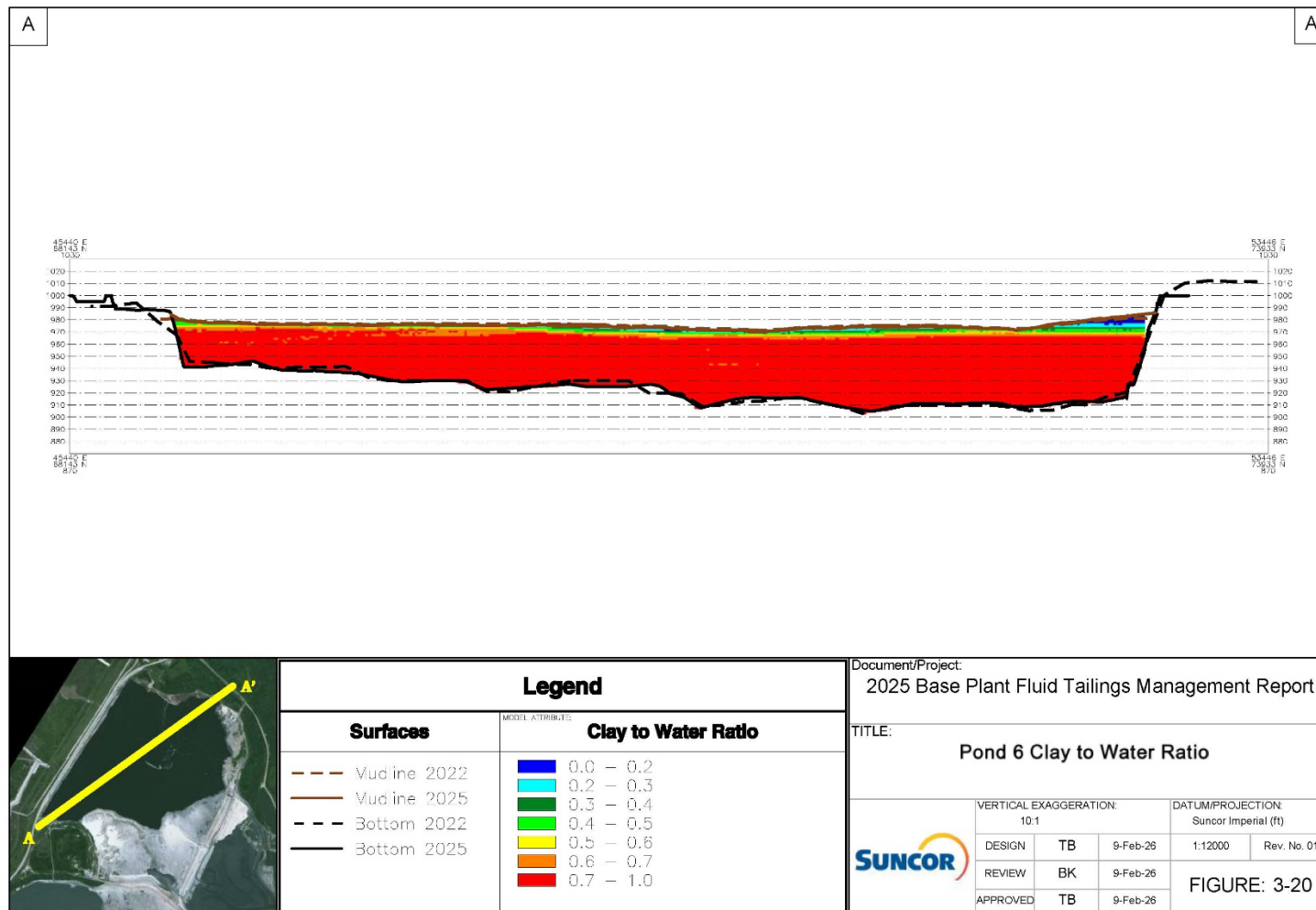


Figure 3-21: Pond 7 Solids Content (wt%)

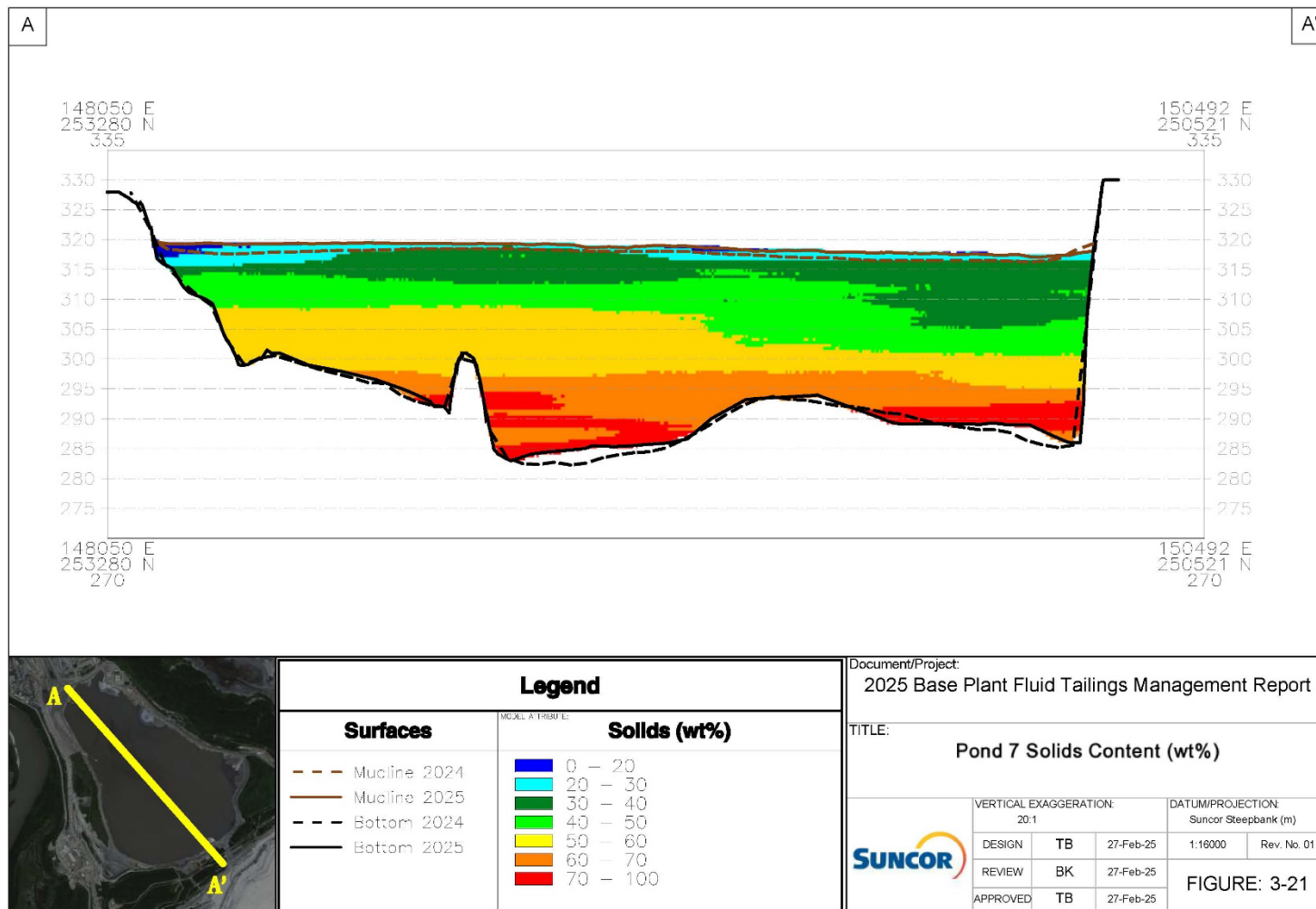


Figure 3-22: Pond 7 Fines Content (wt%)

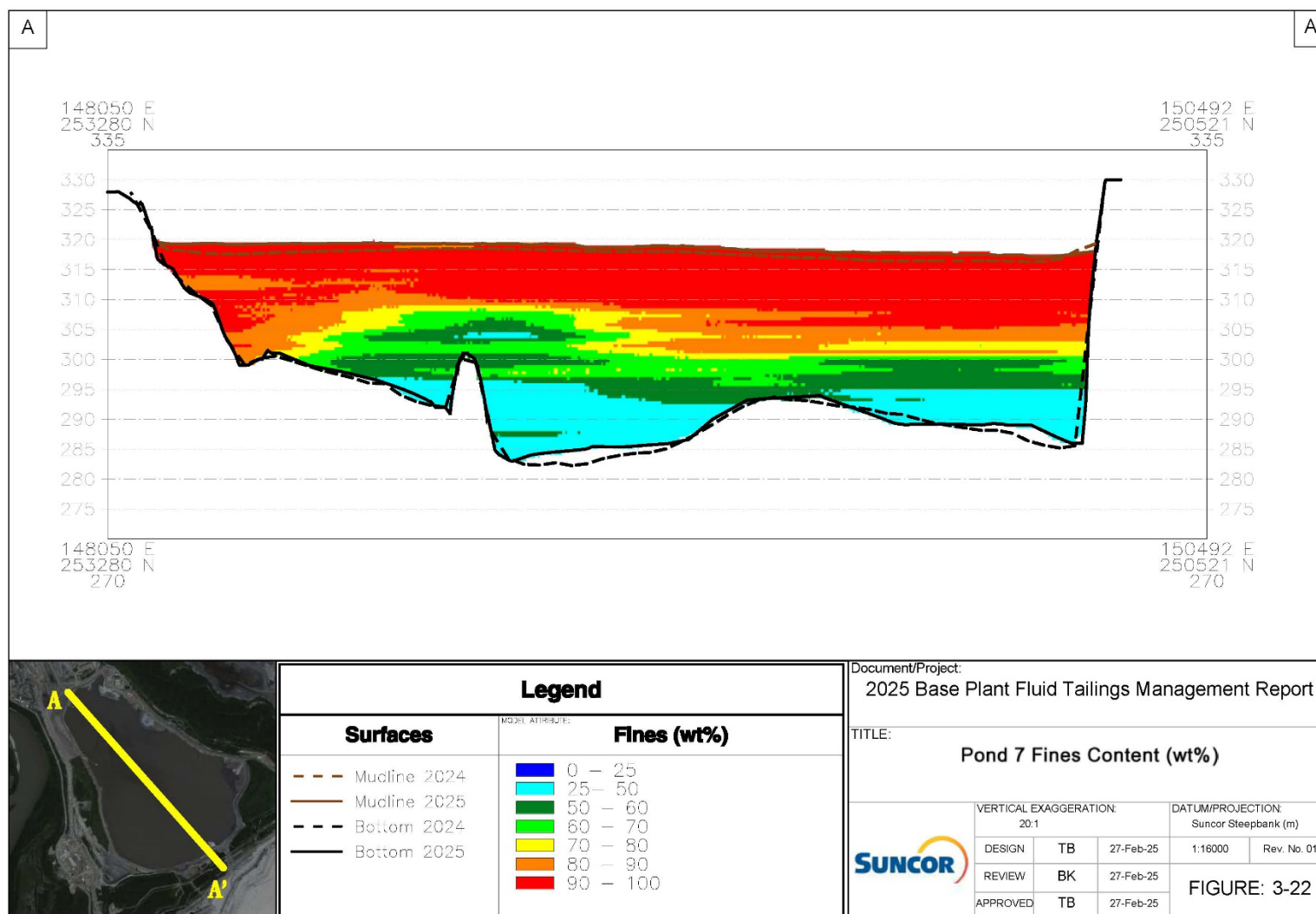


Figure 3-23: Pond 7 CWR Content (wt%)

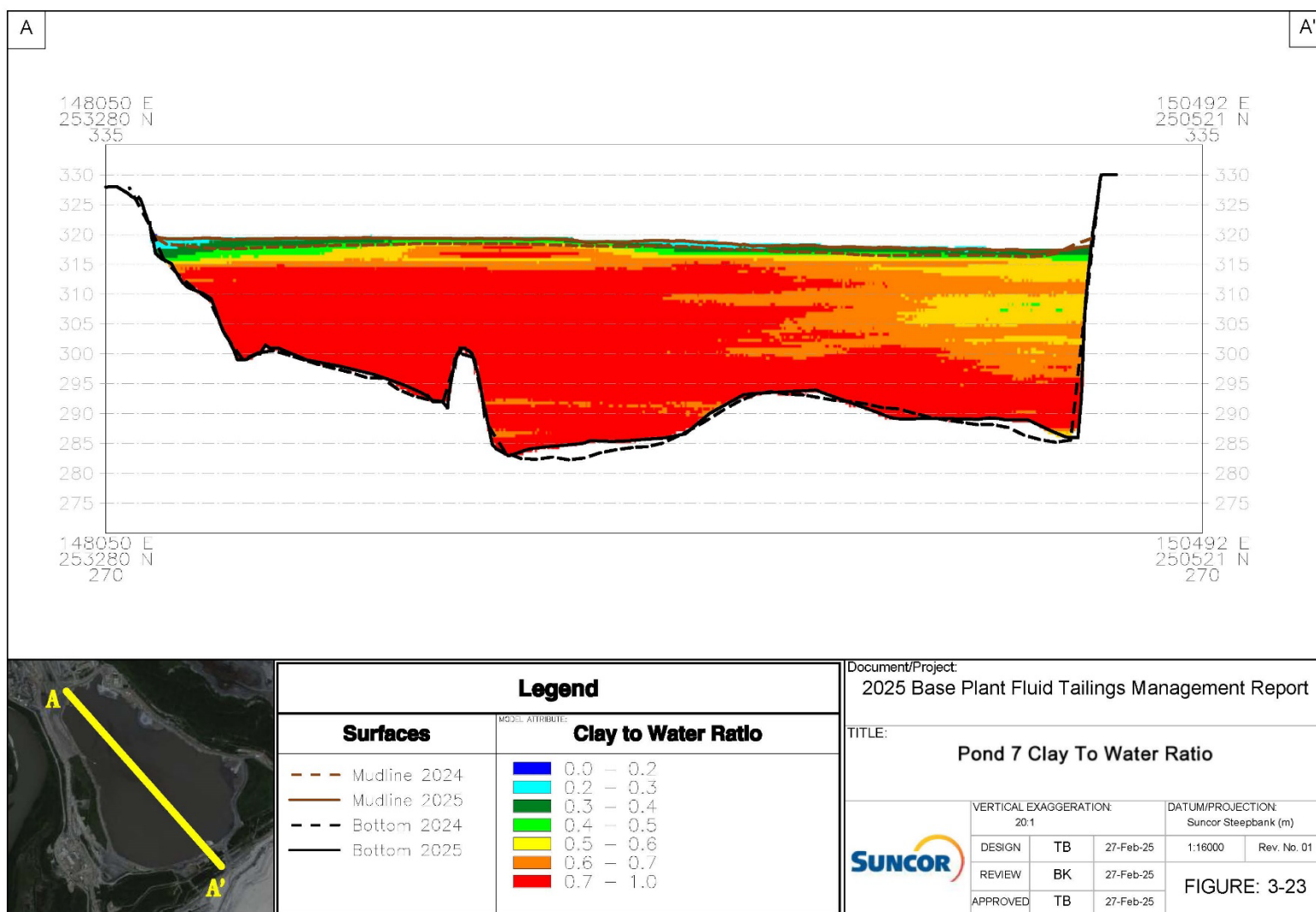


Figure 3-24: SD8 Solids Content (wt%)

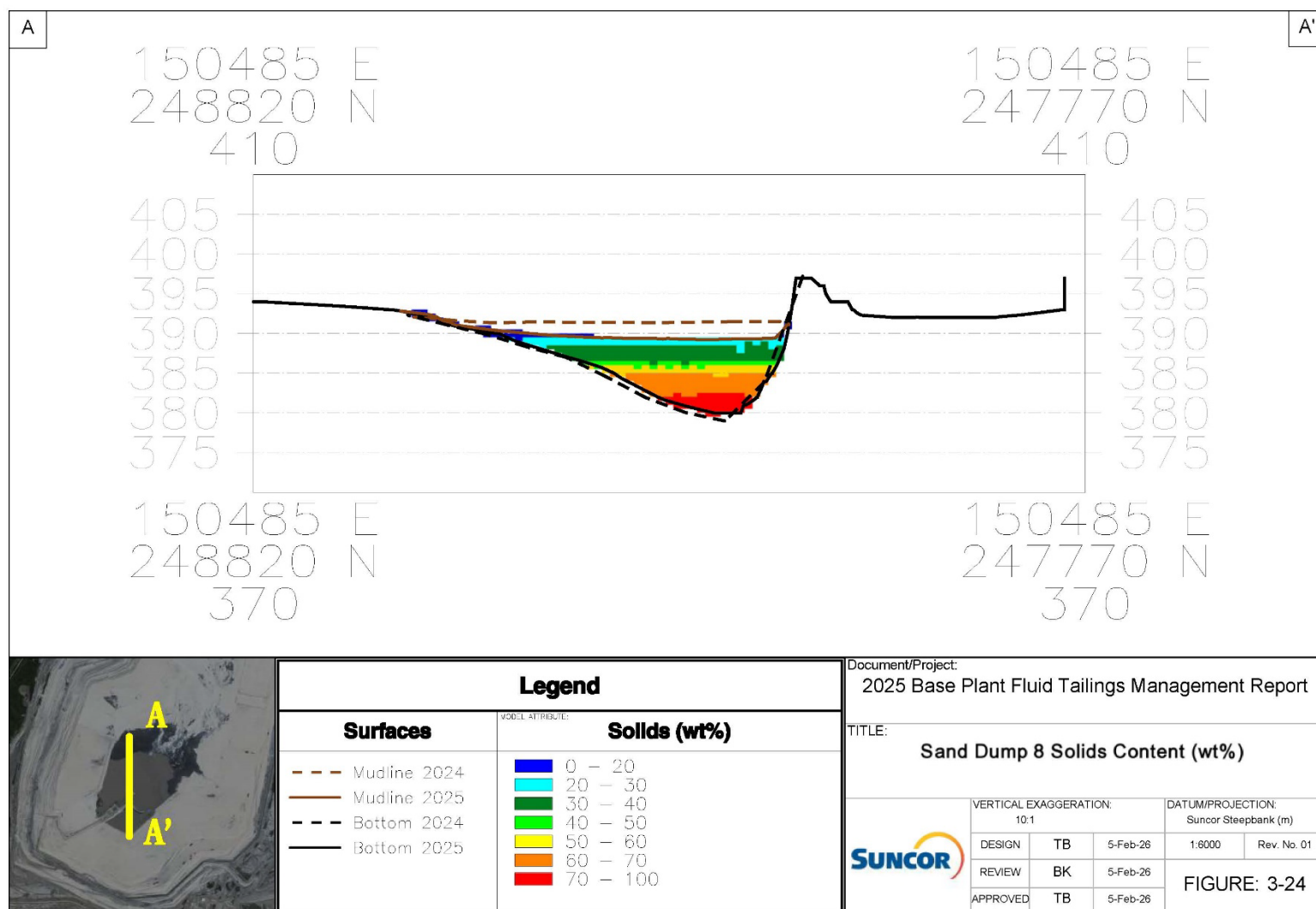


Figure 3-25: SD8 Fines Content (wt%)

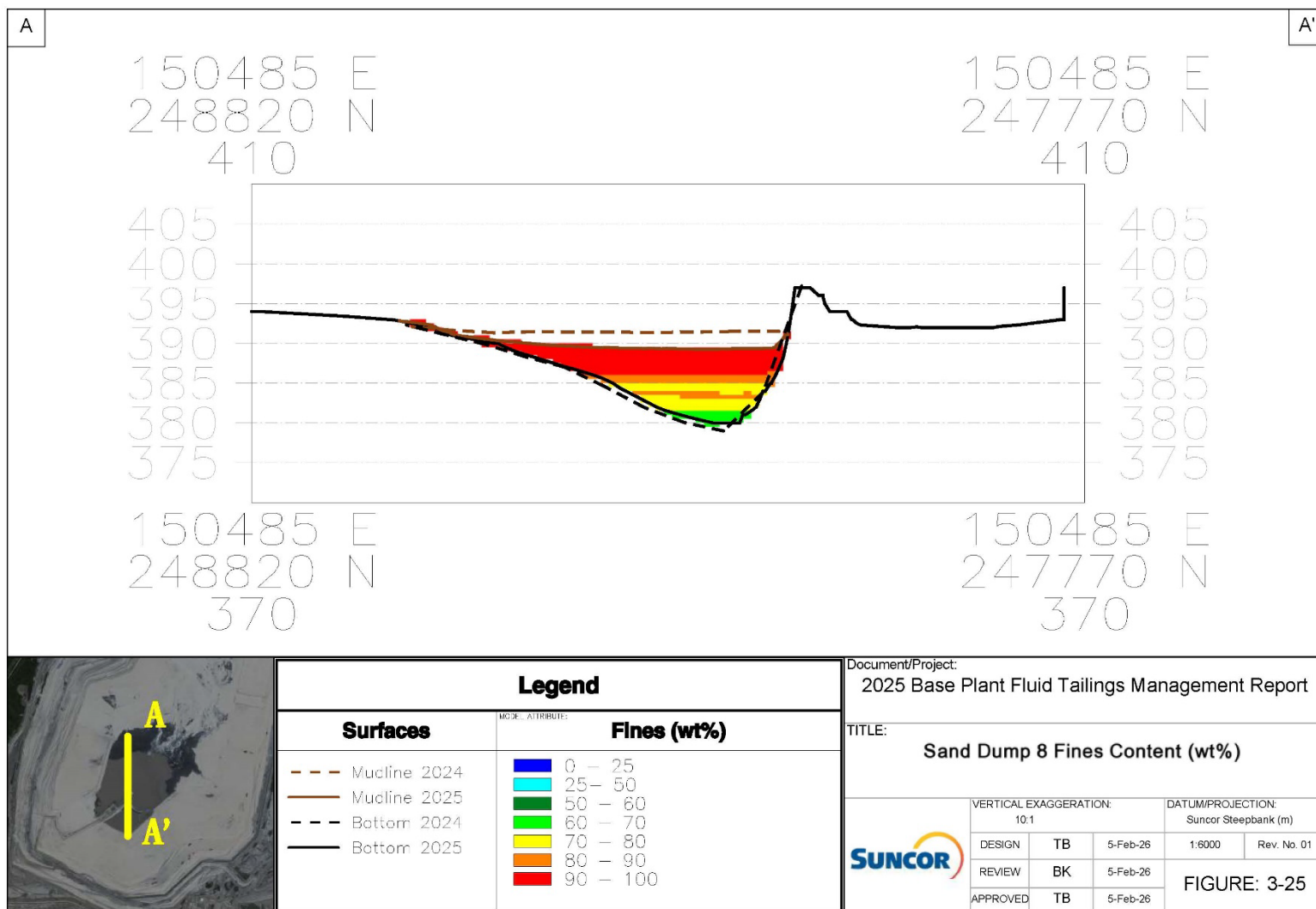


Figure 3-26: SD8 CWR Content (wt%)

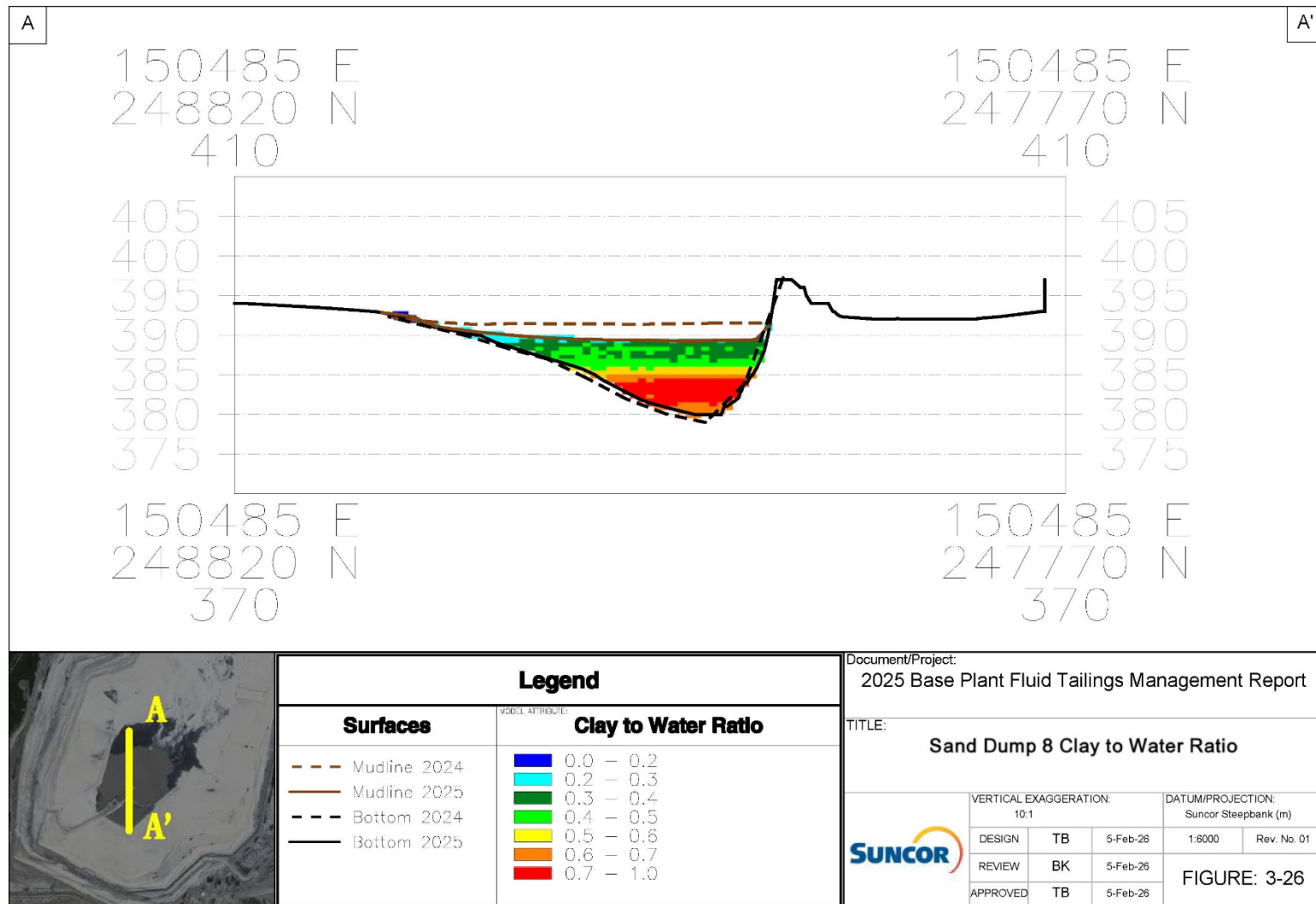


Figure 3-27: SD9 Solids Content (wt%)

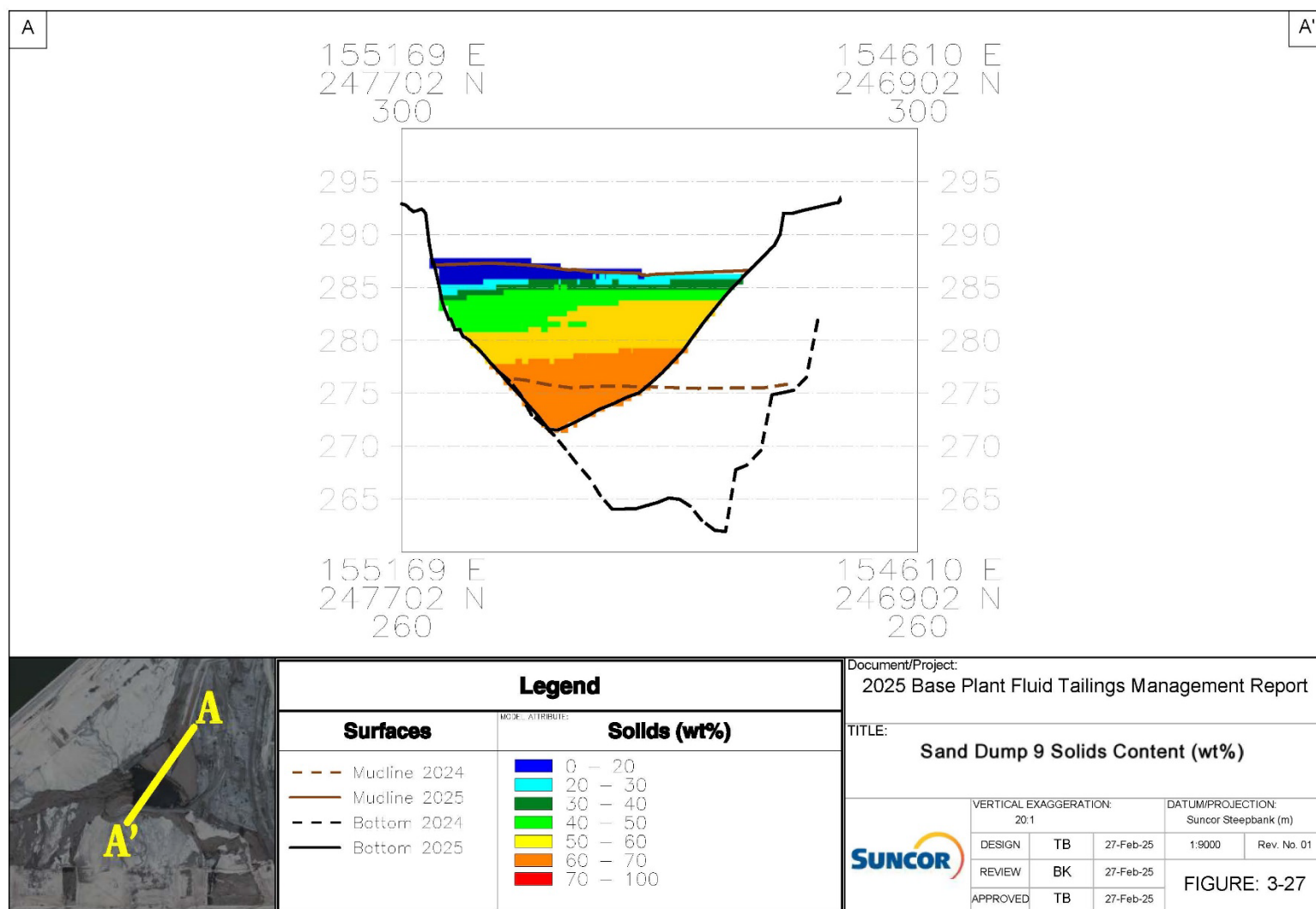


Figure 3-28: SD9 Fines Content (wt%)

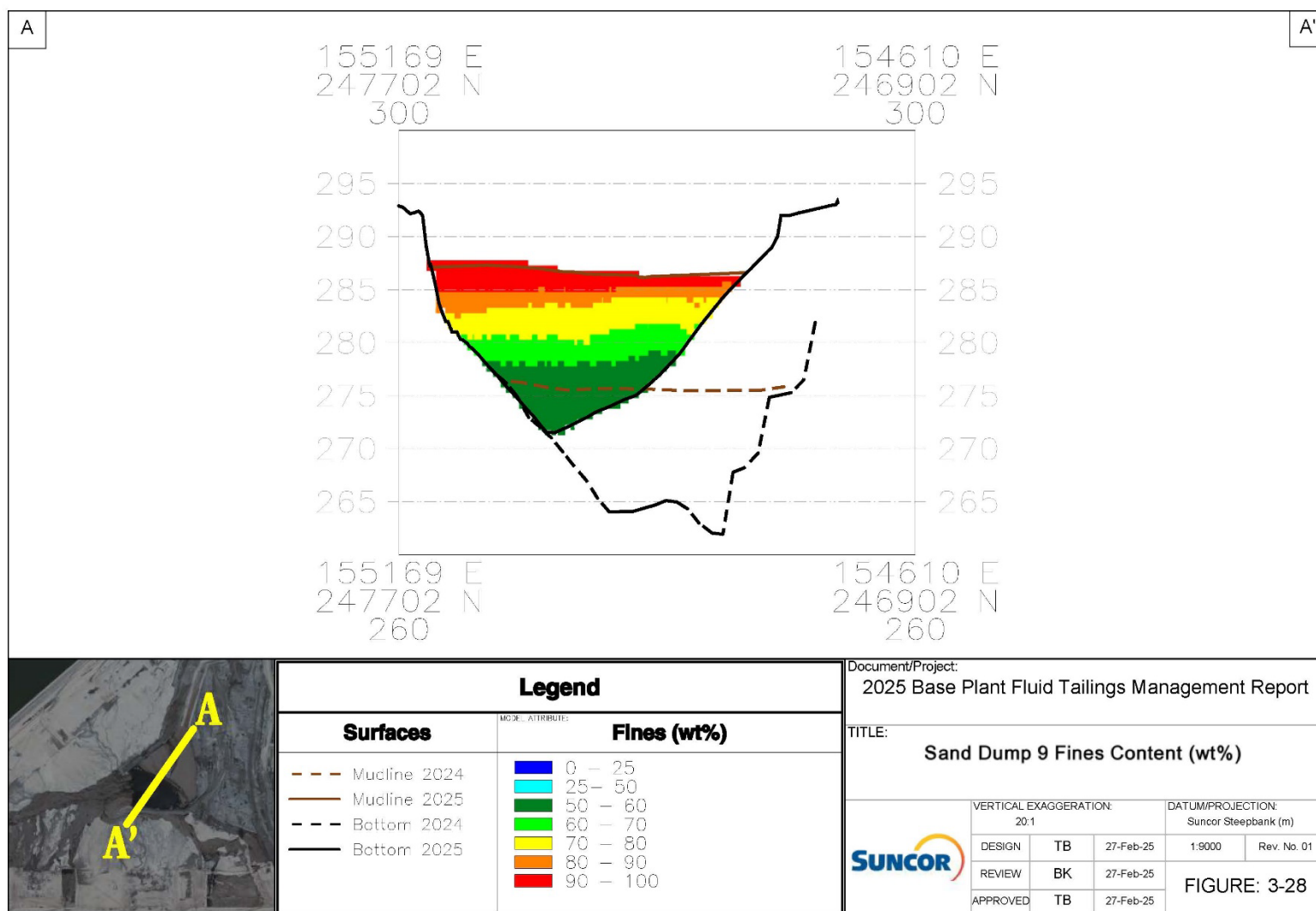


Figure 3-29: SD9 CWR Content (wt%)

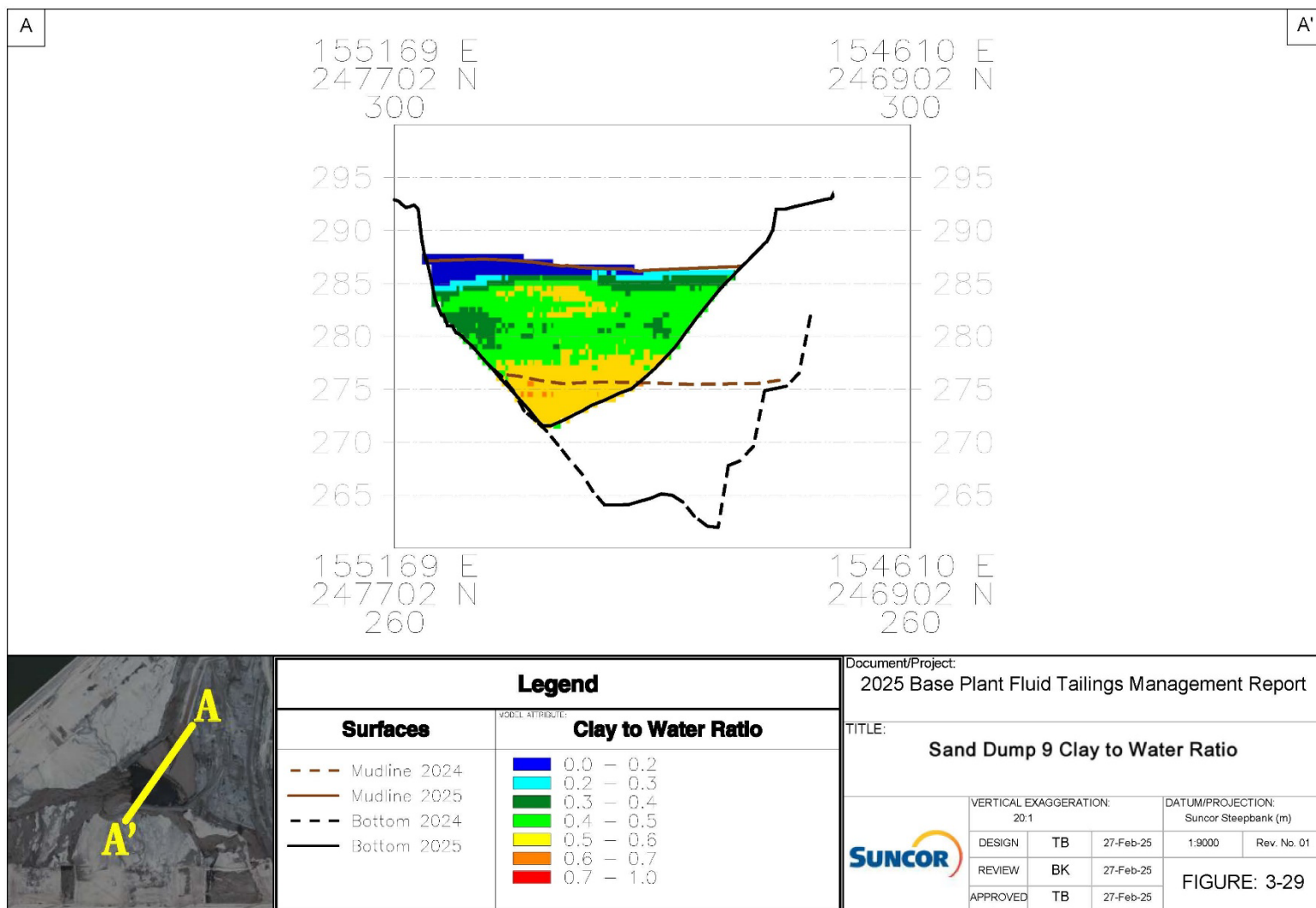


Figure 3-30: STP Solids Content (wt%)

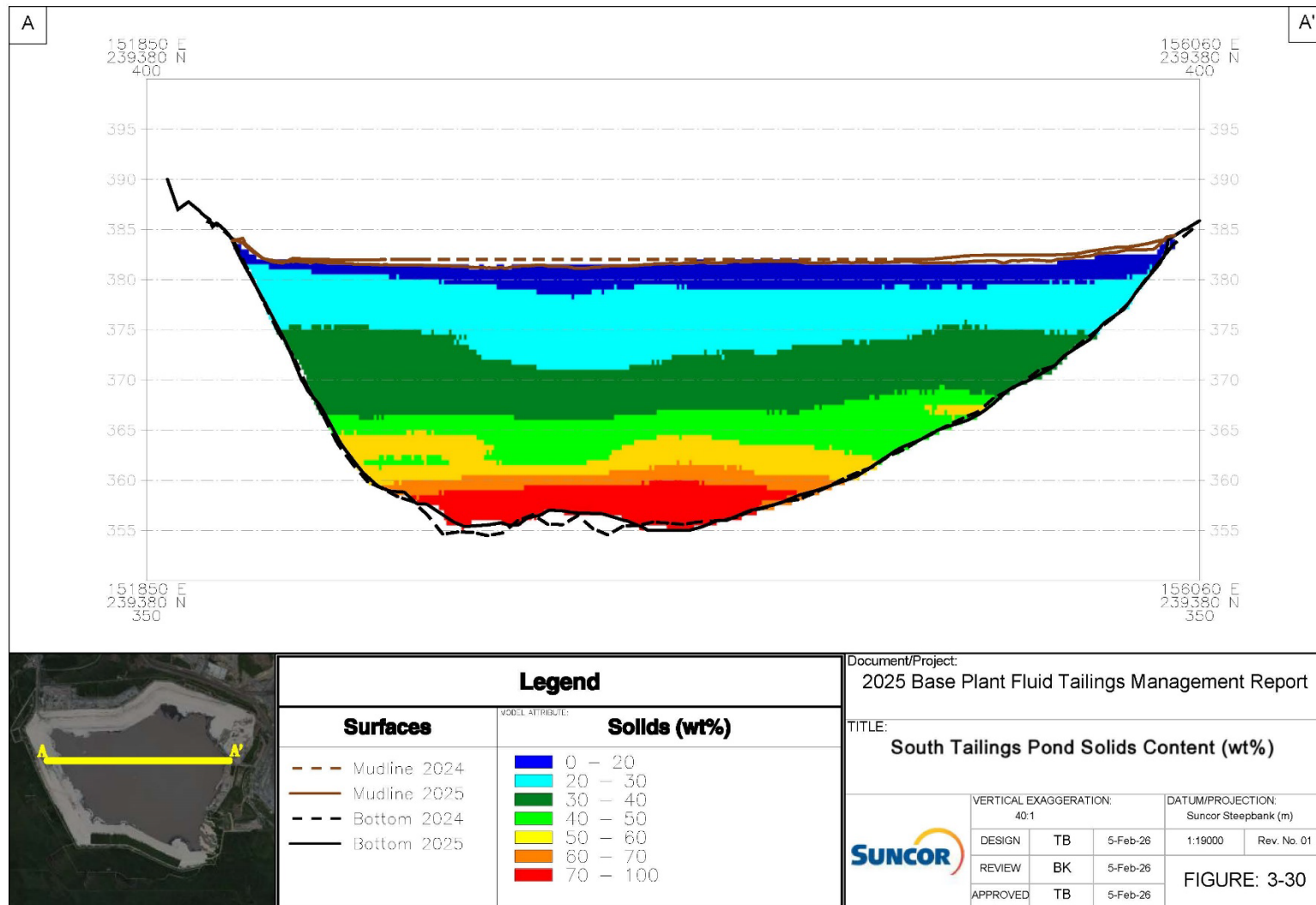


Figure 3-31: STP Fines Content (wt%)

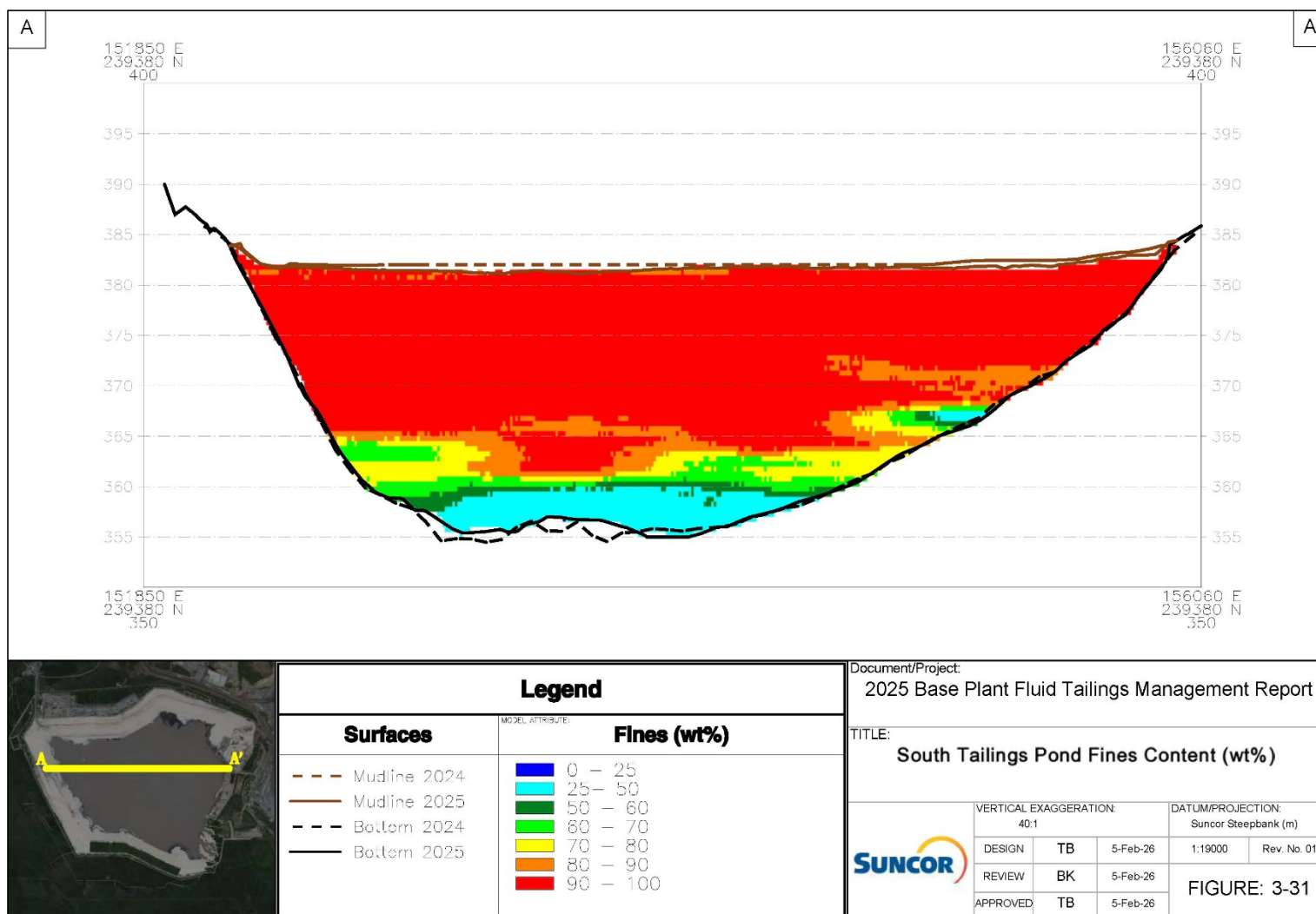


Figure 3-32: STP CWR Content (wt%)

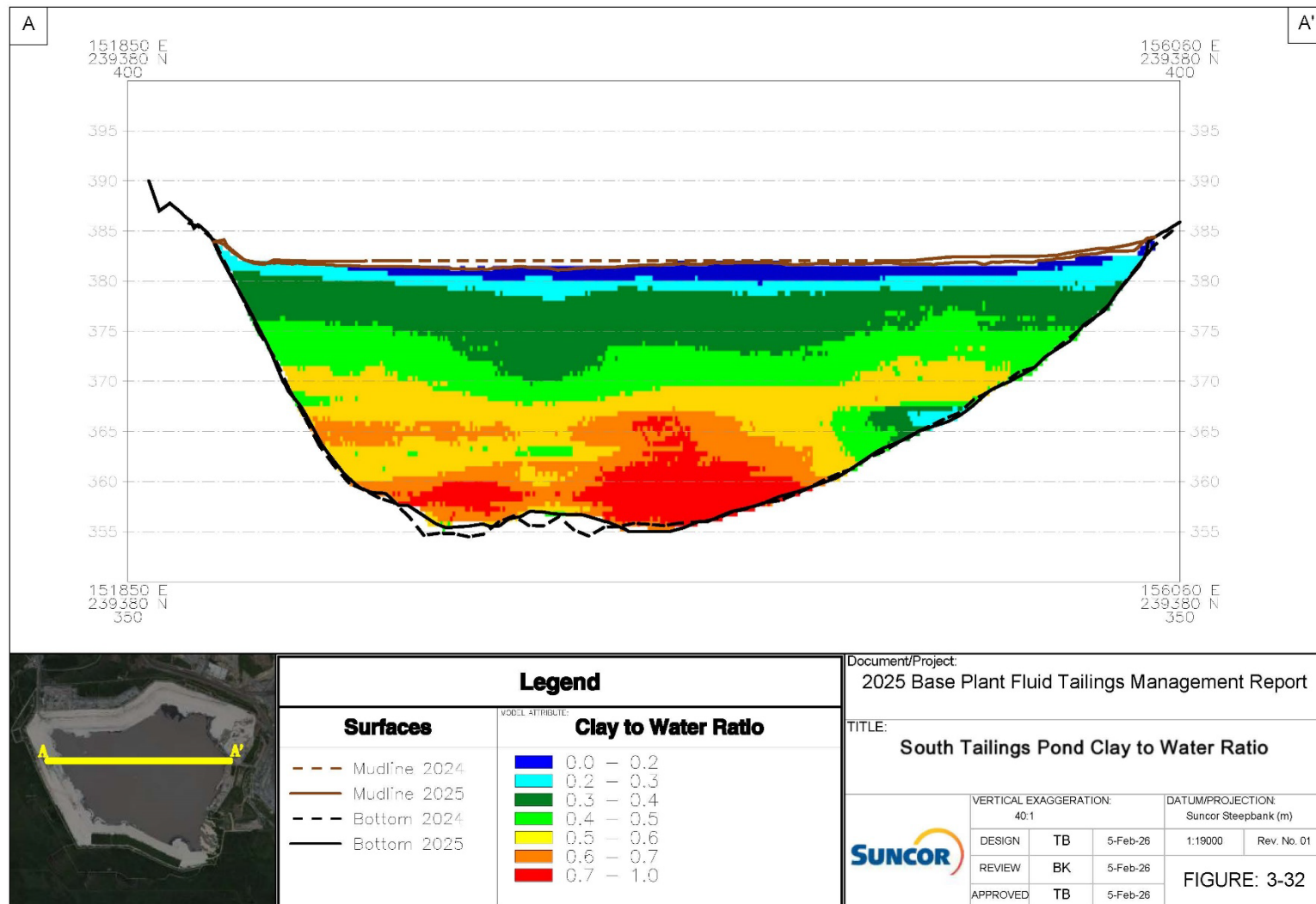


Figure 3-33: MD9S Solids Content (wt%)

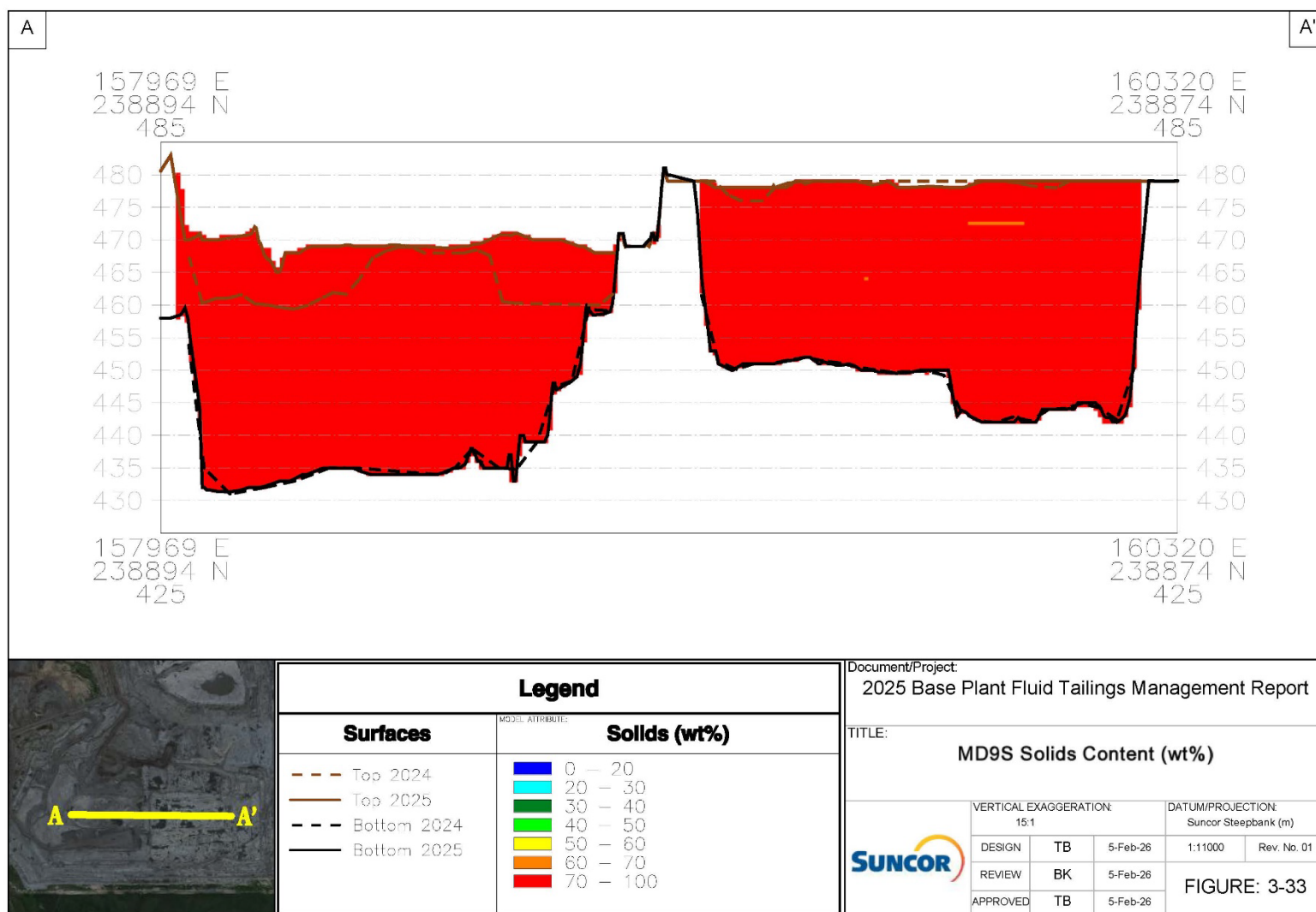


Figure 3-34: MD9S Fines Content (wt%)

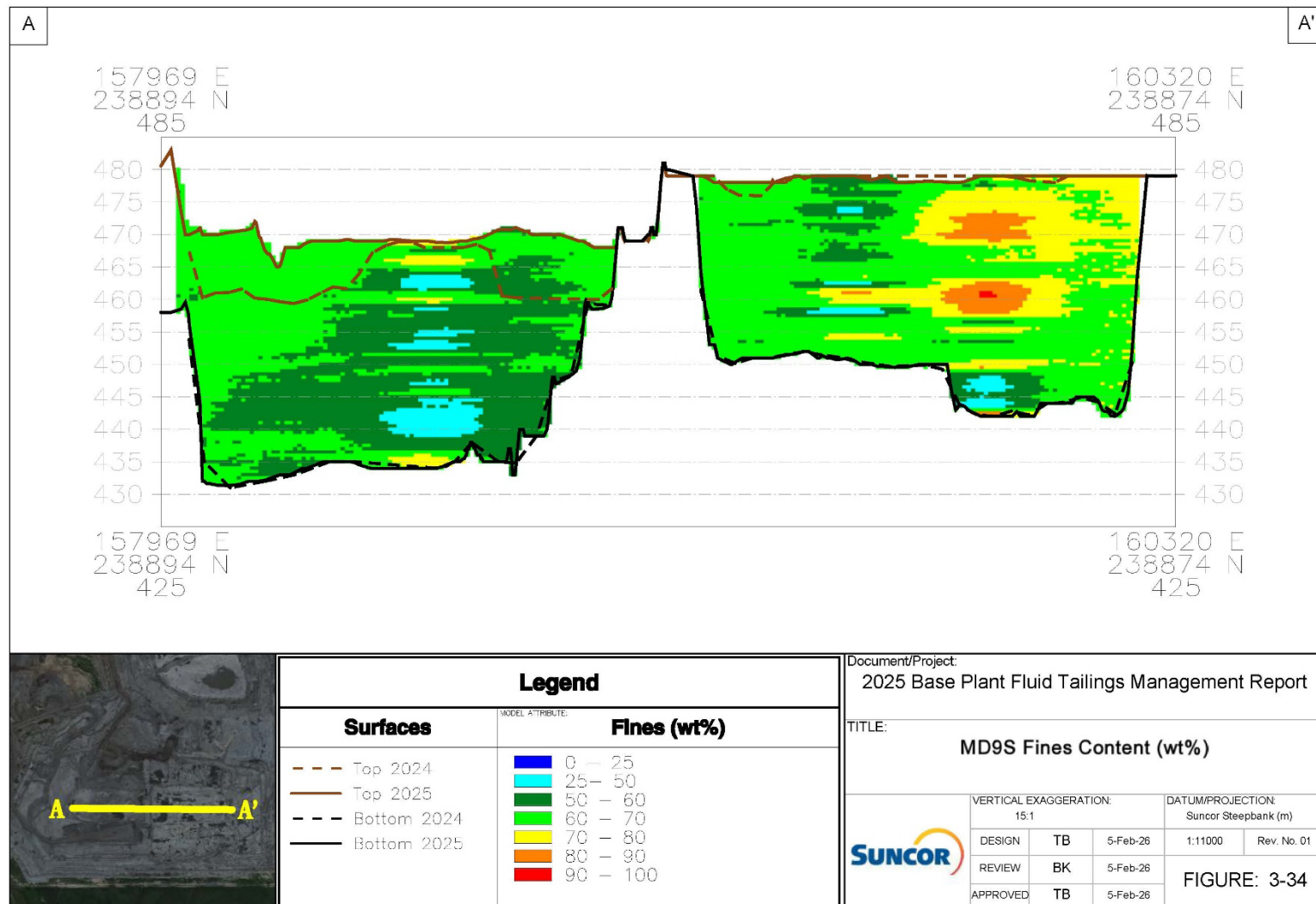
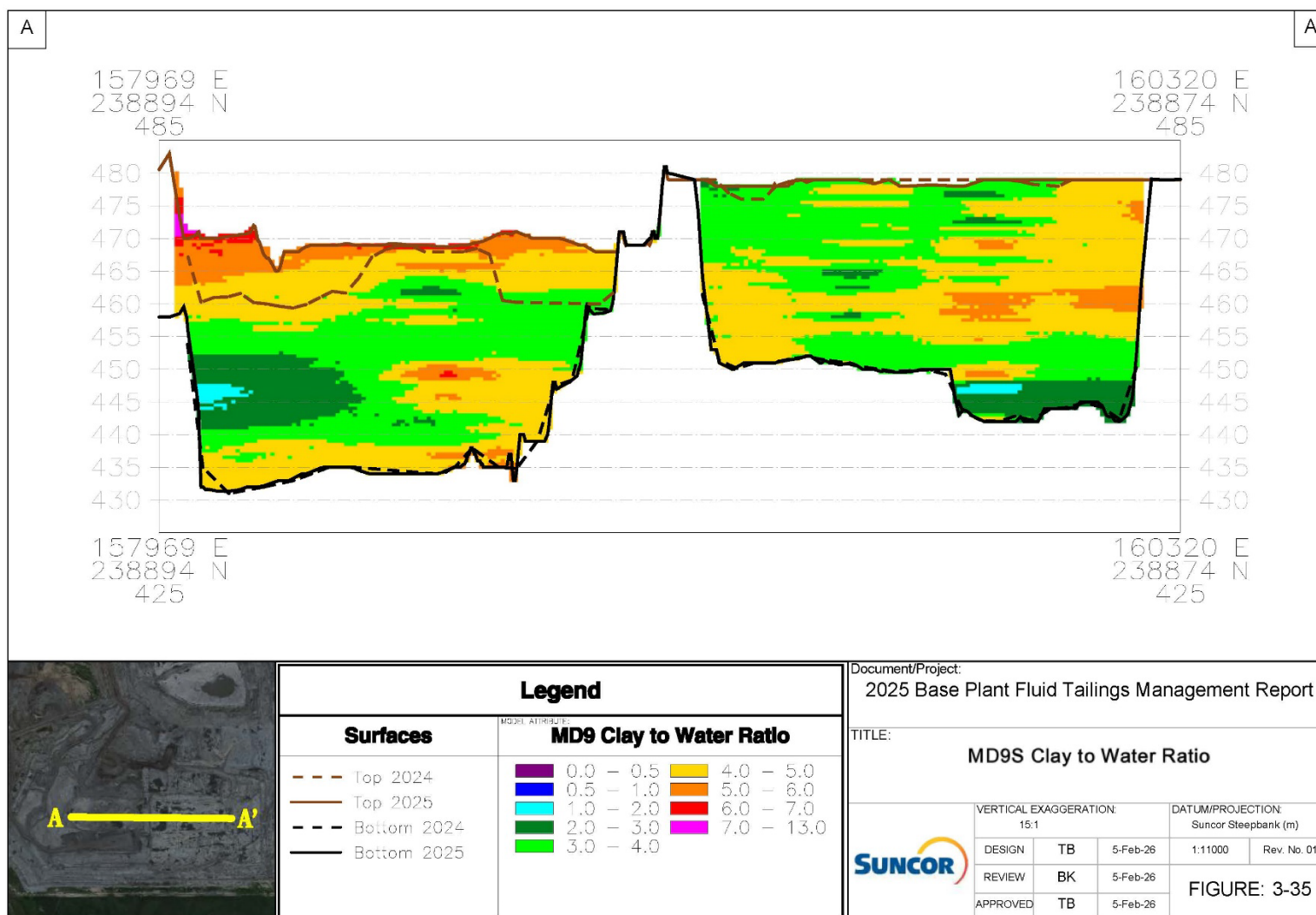


Figure 3-35: MD9S CWR Content (wt%)



3.2.2.3 Deposits Containing Treated and Placed Fluid Tailings

- *for each deposit containing treated and placed fluid tailings,*
 - *the measured data on the chosen indicators and confirm performance against the chosen performance criteria,*
 - *for those fluid tailings deposits that have met RTR status, data to support that it is trending appropriately, and*
 - *confirmation that indicator and performance criteria are still appropriate or justify the need to modify them.*

Refer to [Table 3-28](#) for RTR criteria and fluid tailings volume that met RTR status.

Table 3-28: RTR Criteria

Asset	Measured Material	RTR Criteria	Measured Value
DDA3	Expressed Water	TSS ≤ 500 mg/L	4.4 mg/L
	Treated Tailings	CWR > 0.3	116.2Mm ³ *

*Total volume that meets DDA3 RTR criteria for CWR>0.3

Refer to [Section 4.2.1.5](#) for Pond 5 settlement, strength, and dewatering status.

Suncor confirms that FT treatment criteria is still appropriate for operational and regulatory compliance. Treated tailings performance remains on track to support closure outcomes outlined in the 2022 LMCP (Suncor, 2022d).

3.2.2.4 Deposit Milestone Verification

- *Verification that the tailings deposit is meeting milestones in the Fluid Tailings Management Plan”*

[Table 3-29](#) provides data demonstrating that the tailings deposits are meeting the milestones outlined in the Tailings Management Plans.

Table 3-29: Deposit Milestone Verification

Deposit	FT Management Plan Milestone	Achieved Milestone	Performance Validation
MD9	2015 – commence co-disposal operations	2015 – commence co-disposal operations	See Section 4.1.1
MD9 South	2022** – commence co-disposal operations	2021 – commence co-disposal operations	See Section 4.1.1
DDA3	2018* – commence tailings treatment 0.52 CWR deposit average by 10 years after deposition ends	2018 – commence tailings treatment 0.57 CWR deposit average following 2023 reporting season	See Section 4.1.2
Pond 5	2019* – achieve RTR	2017 – achieve RTR	See Section 4.2.1.5
Pond 6	2036*** – achieve RTR	N/A	
Pond 7	2046*** – achieve RTR	N/A	
Pond 1A	RTR criteria for remnant FT to be submitted 5 years after EOML	N/A	
Pond 2/3	RTR criteria for remnant FT to be submitted 5 years after EOML****	N/A	

Notes:

*Milestone from 2016 Base Plant Application for the Draft Tailings Directive (approved October 2017)

**Milestone from 2022 MD9 South Expansion Amendment Application (submitted February 2022)

***Milestone from 2022 Tailings Management Plan Application (submitted September 2022)

****From 2023 Pond 1A and 2/3 Extended use and Update to Tailings Management (submitted September 2023)

3.3 DEPOSIT PERFORMANCE

3.3.1 Under-Performance Impacting Fluid Tailings Volumes

If the deposit is under-performing so as to impact the fluid tailings volume accumulation, then,

- *describe the contributing causes to under-performance,*
- *describe mitigation and contingency plans from fluid tailings management plan that have been implemented to manage performance,*
- *identify any risks that could result from additional fluid fine tailings placement in a deposit,*
- *confirm that the indicators, measures, and performance criteria are still acceptable in light of new factors introduced by the mitigation and contingency plans, and*
- *describe the impacts that tailings performance is having on the mine plan, water management plan, mine reclamation plan, and life-of-mine closure plan.*

There is no under-performance to report at Base Plant. The treated tailings are on track to support the closure outcomes. Currently, there are no zones of concern that require mitigation.

3.3.1.1 Contributing Causes to Under-Performance

There is no under-performance to report at Base Plant.

3.3.1.2 Mitigation and Contingency Plans to Manage Performance

Base Plant is not currently implementing any mitigations or contingency plans to manage performance.

3.3.1.3 Risks Resulting from Additional Fluid Fine Tailings Placement in a Deposit

. There is no under-performance to report at Base Plant and no associated risks.

3.3.1.4 Confirmation of Indicators, Measures, and Performance Criteria for Mitigation or Contingency Plans

There is no under-performance to report at Base Plant. No mitigation or contingency plans have been implemented to manage performance.

3.3.1.5 Impacts of Tailings Performance on Integrated Planning

There is no under-performance to report at Base Plant; Tailings performance has not impacted the Mine Plan, Water Management Plan, Mine Reclamation Plan (MRP), or LMCP.

3.3.2 Under-Performance of RTR Tailings

For tailings previously identified as RTR that are no longer following the trajectory or meeting performance criteria, confirm that the volume has been added to the fluid tailings volume inventory and describe the actions taken to address under-performance.

Base Plant did not identify under-performance of RTR tailings during this reporting period.

3.4 TECHNOLOGY: CONTINUOUS IMPROVEMENT AND DEVELOPMENT

To assess continuous improvement and innovation, to confirm that fluid tailings treatment technologies are operating as expected, and confirm that operational issues are being managed, the fluid tailings management report must include the following:

- *Description of the treatment technologies' operation over the reporting period, including issues that were encountered and a summary of continuous improvement activities*
- *Confirmation that technology development was implemented as proposed in the approved fluid tailings management plan by summarizing relevant activities in the reporting year. Confirm that technology development will continue to be implemented as stated in the approved fluid tailings management plan.*
- *A technical report, within the constraints of proprietary information, on the progress of any pilots, prototypes, or demonstrations of fluid tailings technologies*
- *An assessment, within the constraints of proprietary information, of performance, successes, challenges, and implications for net environmental effects for all treatment technologies. The assessment may incorporate information references to other required reports, such as the tailings research report and groundwater monitoring report submitted under EPEA*

3.4.1 Treatment Technology Operation

PASS Technology

PASS continued to operate and perform as expected during 2025. Continuous improvement activities included:

- Ongoing enhancement of polymer dosing logic through integration of real-time online instrumentation data, and
- Replacement of polymer injectors to improve treatment performance and reliability.
- The polymer dosing logic continued to improve with online instruments such as flow meter, density meter, NIR clay% analyzer, cFMFT floc size measurement by FBRM etc.
- The High-Density Polyethylene (HDPE) insertion spool for polymer throat injector was replaced by new style of injectors (stainless steel /ceramic with the same geometry as HDPE spool, and carbon steel with different geometry) for better treatment performance and reliability.

3.4.2 Technology Development Implementation

Base Plant continued to progress hybrid hydraulic coke capping technology research on Pond 6.

3.4.3 Progress Reports for any Pilots, Prototypes, or Demonstrations of Fluid Tailings Technologies

3.4.3.1 Hybrid Hydraulic Capping Raining-in Trial

Following a limited 2-week raining-in trial at Pond 6 from September 24th – October 2nd in 2024, a continuation trial was completed in the summer of 2025. Trial operations started on June 13th, 2025, and were completed by October 15th, 2025. De-risking activities for the raining-in technology were completed during this 4-month operation period. These de-risking activities included (i) validation of the expected no planned air quality deterioration, (ii) validation of the process asset design assumptions (iii) validation of the geotechnical design assumptions of the coke capping of the tailings, and (iv) conducting a trial in a manner that is in-keeping with future coke placement (maintaining access to all areas of the pond). During the 2025 trial operation, 231,000 tonnes of coke were placed in the trial area of Pond 6 and sufficient data was collected to evaluate and de-risk the technology deployment.

See the points below for a summary of the activities completed as part of the 2024-2025 Raining-in Trial:

- November 2024 – April 2025: Learnings from the brief 2-week trial operations were documented and operability improvements to the onshore and offshore trial asset were designed and completed
- May – June 2025: Barge was launched to Pond 6 with slurry-pipeline cleared from previous year's pipeline pluggage and reconnected to the barge. Pre-trial pond assessments also completed prior to trial operations which included bathymetry, water quality sampling and instrumentation installation
- June 2025: Trial started up for day-shift only (12 hr daily operations) on June 13th at low coke tonnages (40 tonnes of coke per hour) to validate slurring system and barge operations which were initially operated in manual mode
- July 2025: Transition to sustainable tonnage rates (140 t/hr) and fully automated operation of barge asset and 24 hr operations. Continued learnings on screening size of coke used, pipeline erosion observations and barge operations in different wind conditions
- August - September 2025: Stable coke placement operations with regular bathymetry to monitor coke cap layering, and water quality sampling
- October 2025: Shut down and winterization of the asset on October 15th. Pond Assessment later in month pre-freeze to get final bathymetry, decommissioning of instrumentation and Cone Penetration Testing (CPT) in the trial area to determine coke cap properties

Key learnings over the trial operation period showed (i) no link between H₂S Ground Level Concentration (GLC) measurements and trial operations (ii) a stable coke placement operation with high barge reliability and operational precision (iii) a stable coke cap in-line with pre-trial geotechnical expectations, and (iv) a coke layer which can be incorporated into the Pond 6 closure design and be available for future trialing or assessment.

The key findings of this trial are documented as per Suncor's Technology Innovation Management System (TIMS) technology development process for consideration. Learnings will also be communicated to the AER within 6 months of trial completion as per the trial approval condition.

3.4.4 Performance Assessment of and Implications for Net Environmental Effects for All Treatment Technologies

Current operations continue to minimize environmental effects from treatment technologies in accordance with approved Subobjective 2 under Appendix C of OSCA Approval No. 8535V (AER, 2025) and in compliance with regulatory requirements. Suncor will incorporate adaptive management, as required, if any challenges or changes to net environmental effects are identified.

Further details on environmental monitoring can be found in Section 3.5.

3.5 ENVIRONMENTAL MONITORING RESULTS

3.5.1 Summary of Results from Environmental Performance Monitoring Reports Related to Fluid Tailings Management Activities

To ascertain that environmental benefits and risk trade-offs anticipated by operators for their tailings technology justification continue to be accurate, and to assess operator performance in managing and minimizing environmental effects and implications associated with fluid tailings management activities, the annual management report must provide a summary of the results from environmental performance monitoring reports related to fluid tailings management activities.

Reporting under this directive does not relieve an operator from any requirements to report tailings-related environmental information in the relevant EPEA reports for site-wide environmental performance.

Environmental monitoring is conducted in accordance with approved Subobjective 2 under Appendix C of OSCA Approval No. 8535V (AER, 2025); the Base Plant MSP (Suncor, 2025); and EPEA Approval 94-03-00, as amended (AER, 2025). Groundwater is monitored through the approved Groundwater Monitoring Program (GMP) (Suncor, 2018) and geotechnical monitoring is conducted as required by the Dam and Canal Safety Directive (GOA, 2018).

Monitoring results are reported to AER in accordance with applicable regulatory requirements. A summary of groundwater monitoring results is included below.

In 2025, fluids stored within DDA3 reached a level of 303 meters above sea level (masl). The Wabiskaw Member, the first hydrogeological pathway with which the fluids will interact, is encountered between 315 and 320 masl. The DDA3 fluid elevation is not estimated to reach 315 masl until mid-2028; this will mark the earliest time that the groundwater in the Wabiskaw Member could interact with fluid from DDA3. However, water migration toward Steepbank River would not be expected for some time after that as the head in DDA3 will have to rise above the Wabiskaw Member's potentiometric elevation. In 2022, Suncor established three monitoring wells screened within the Wabiskaw Member and one monitoring well in the overlying Quaternary sequence ([Figure 3-38](#)). Sampling of the monitoring well network at DDA3 started in 2023.

The locations of groundwater monitoring wells used in the 2024 Groundwater Monitoring Program in proximity to the treated tailings deposits (i.e., Pond 5, MD9, DDA3, DDA1 [8A], SD8) are provided in [Figure 3-36](#) through [Figure 3-40](#).

Detailed analysis and interpretation of groundwater quality data collected until the end of 2024 are provided in the 2024 Groundwater Monitoring Report (Suncor, 2025a). Due to Millennium Mine pit advancement into the DDA1 area, the last monitoring well in the area (DDA-14-10-ST) was decommissioned, and DDA1 (East) is no longer be reported on.

A summary of the groundwater quality results from monitoring wells located around each deposit, including the 2025 results (where complete), is provided in [Table 3-30](#). The summary includes statistically significant trends in primary indicator parameters and concentration exceedances of the most appropriate limit (i.e., well-specific control limit, if determined, site-wide background limit for naturally occurring substances, or the reporting detection limit for anthropogenic substances). The summary table does not include the monitoring wells installed

around DDA3 in 2022 and replacement wells DDA2-23-13B-SS, MD9-24-21-SS, MD9-24-22A-SS, and MD9-24-22B-SS installed in 2023/2024 as their baselines and the relevant well specific control limits are still being characterized.

Table 3-30: Groundwater Quality Result Summary for Indicator Parameters

Deposit	Well ID	Increasing Trends	Exceedances of Limit
Pond 5	PD5-06-10B-SS	None	None
	PD5-07-12A-LS	None	None
	PD5-16-12C-SS	None	None
SD8	MLX-11-10A-LS	TDS, Na	TDS, Na, and TAN
	MLX-11-10B-LS	None	None
	MLX-11-11A-LS	None	As
	MLX-11-11B-LS	None	None
	MLX-11-12B-LS	None	TDS, Cl and As
	MLX-11-15-LS	None	Cl
	MLX-11-16-LS	No sample (dry)	No sample (dry)
	SWD-05-02A-LS	No sample (bitumen in well)	No sample (bitumen in well)
	SWD-21-02B-SS	TDS	TDS
	SWD-14-03-LS	None	None
MD9	MD9-10-10-SS	None	None
	MD9-23-11-SS	None	TAN and As
	MD9-15-18A-SS	None	Cl
	MD9-15-18B-SS	None	None
	MD9-20-22A-SS	None	None
	MD9-20-23-SS	None	None
	MD9-21-24-SS	None	As
MD9 South	DDA2-14-03A-SS	None	As
	DDA2-14-03B-SS	None	Na and As
	DDA2-14-06B-SS	None	None
	DDA2-15-07B-ST	None	None
	DDA2-15-08-SS	None	None
	DDA2-15-09A-SS	None	None
	DDA2-15-10-SS	None	TAN
	DDA2-15-12-SS	None	None
DDA1 (8A)	DDA2-15-13A-SS	No sample (artesian)	No sample (artesian)
	P8A-01-03-SS	None	Cl
	P8A-01-04-SS	None	TDS
	P8A-01-05-SS	None	None
	P8A-01-06-SS	None	TDS and Cl
DDA1 (8A)	P8A-03-14-SS	None	TDS and Na
	P8A-03-15B-SS	No sample (dry)	No sample (dry)
	P8A-03-16-SS	None	TDS and Cl

Deposit	Well ID	Increasing Trends	Exceedances of Limit
	P8A-16-32-SS	None	None

Note: None of the monitoring wells specified in Table 3-28 are in Follow-Up status (as defined in Suncor's Groundwater Monitoring Program (Suncor, 2018)). Therefore, groundwater degradation is not indicated at monitoring locations proximal to treated tailings deposits.

Abbreviations: TDS – total dissolved solids, Na – sodium, Cl – chloride, TAN – total dissolved ammonia-as-nitrogen, As - arsenic, NAs -naphthenic acids

Figure 3-36: Groundwater Monitoring Network - Pond 5

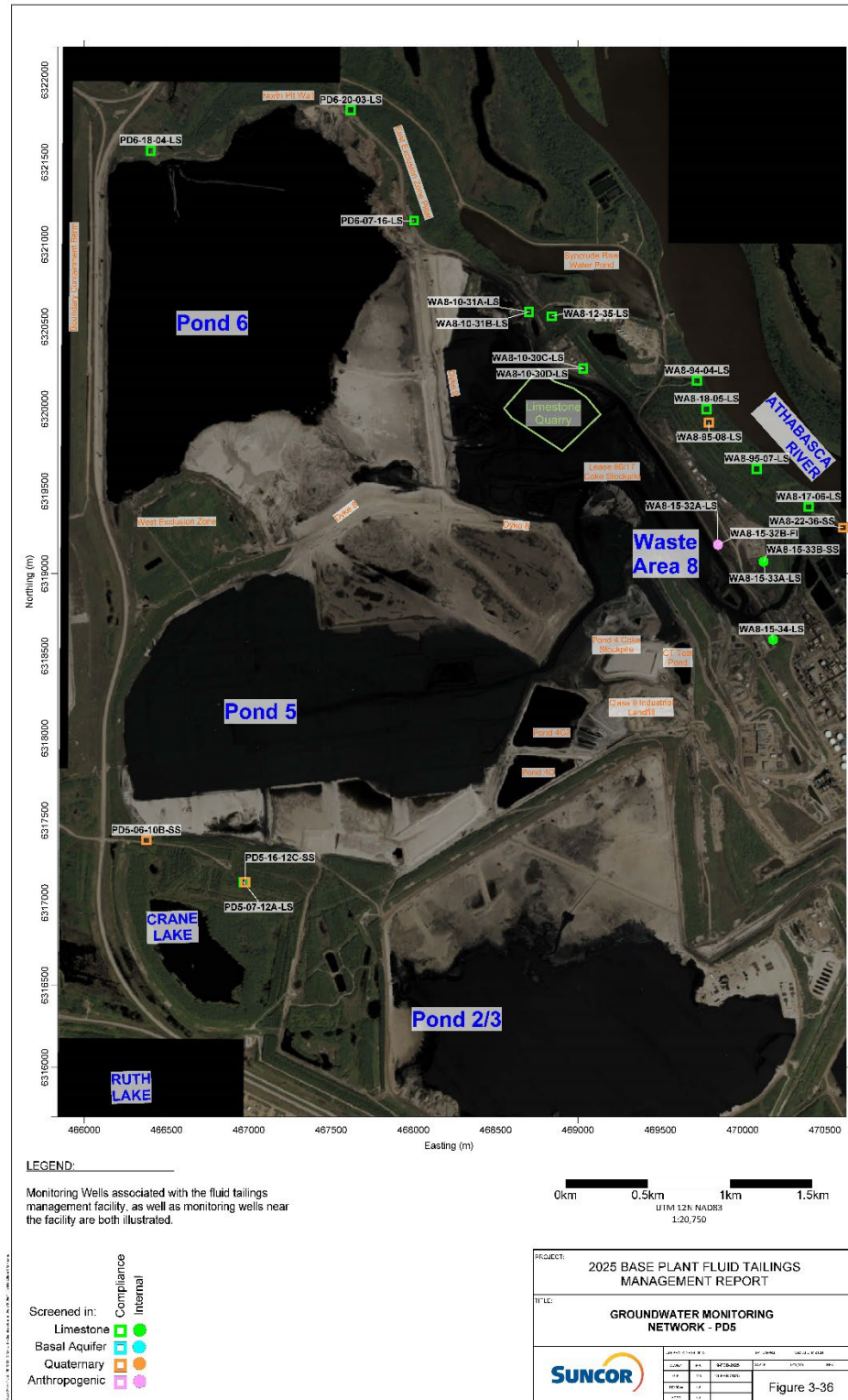


Figure 3-37: Groundwater Monitoring Network - MD9

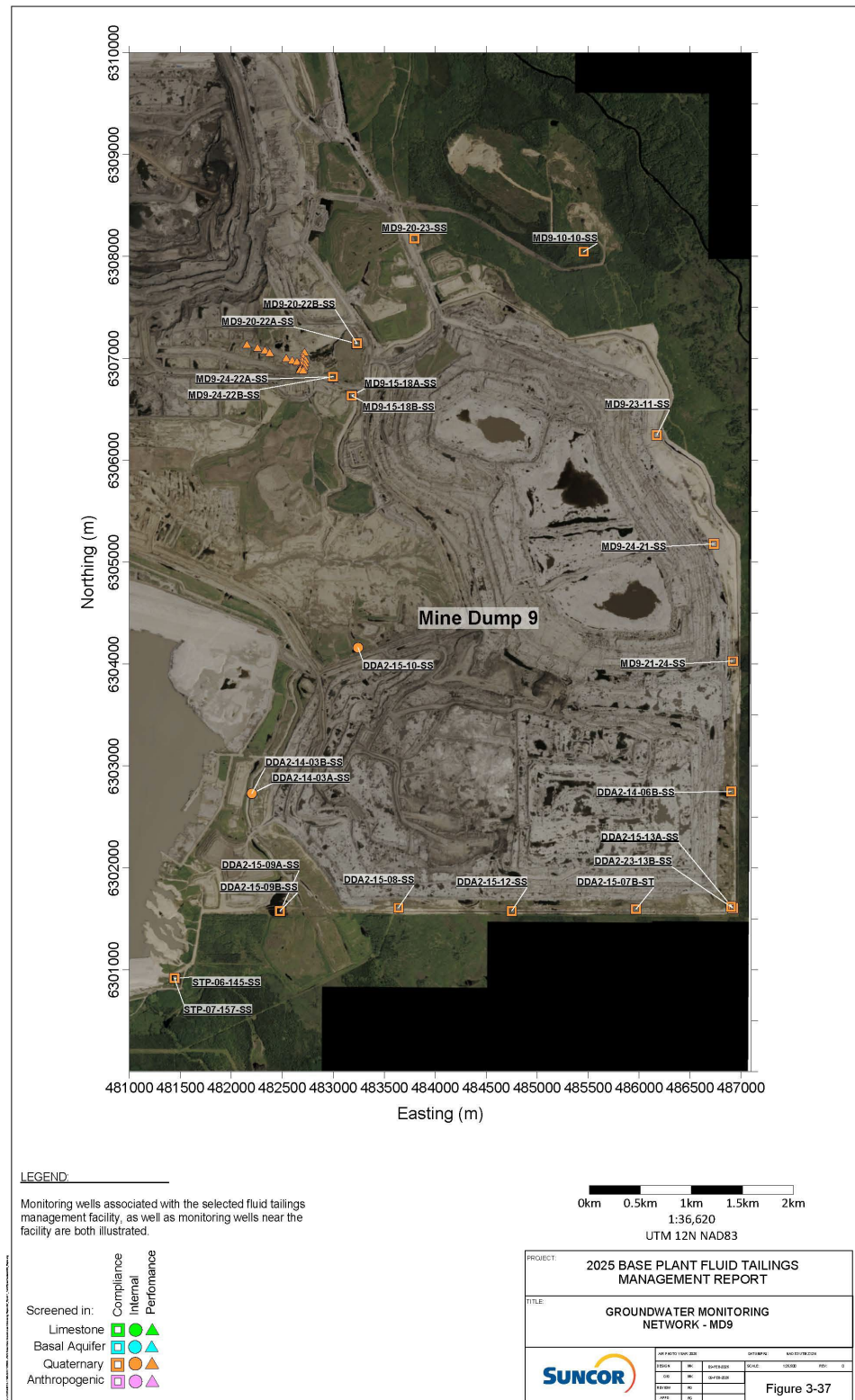


Figure 3-38: Groundwater Monitoring Network - DDA3

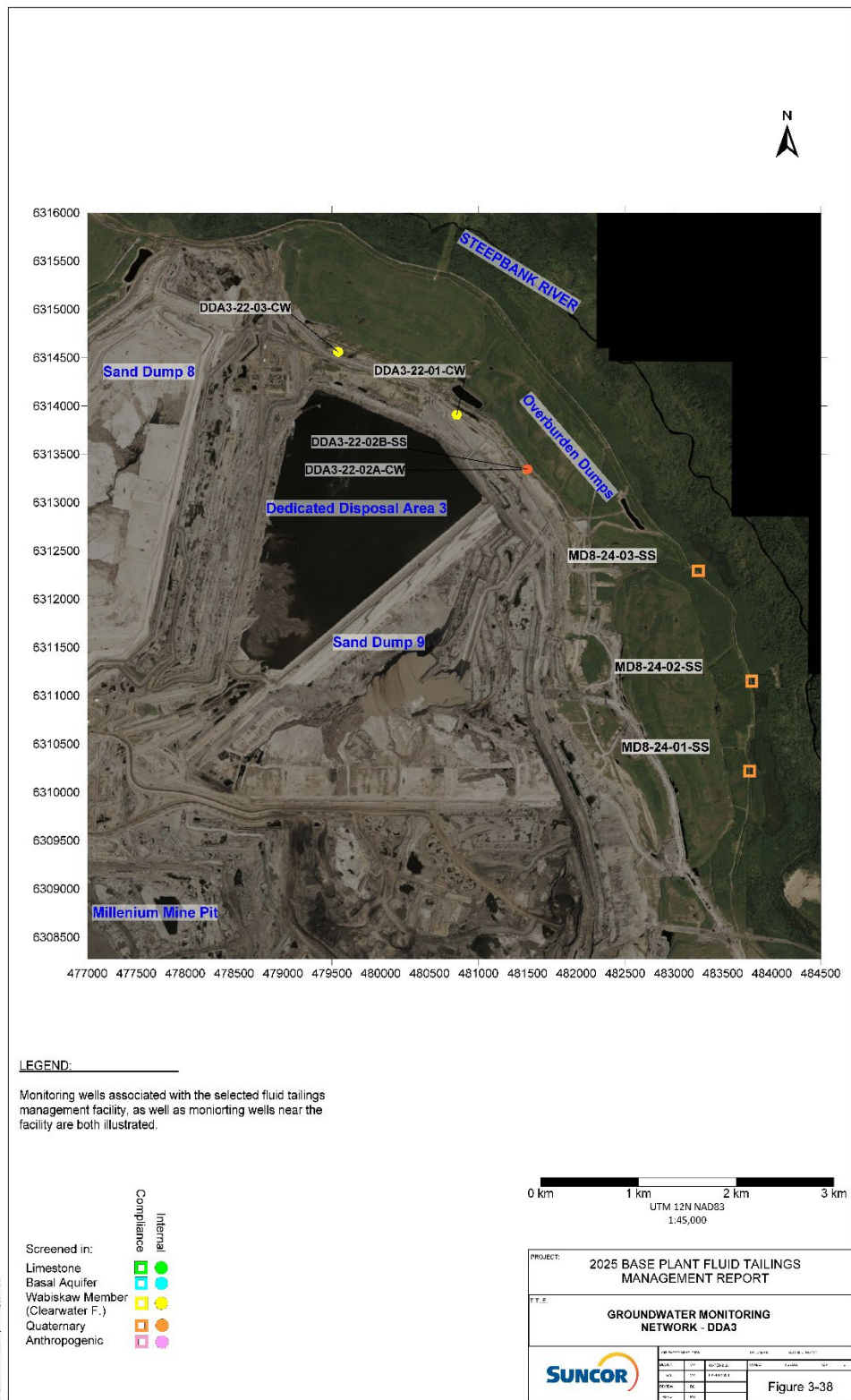


Figure 3-39: Groundwater Monitoring Network – DDA1 (8A)

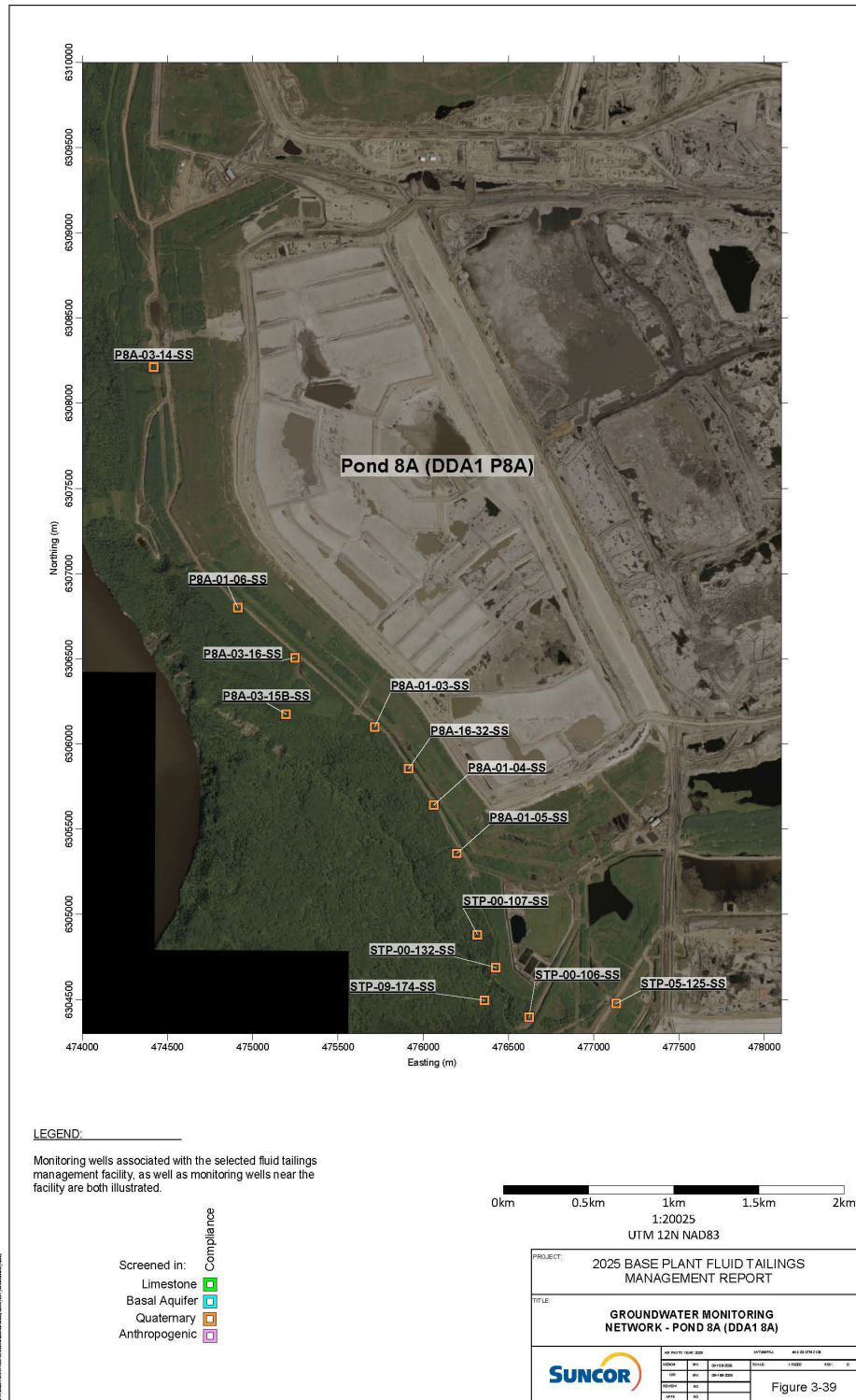
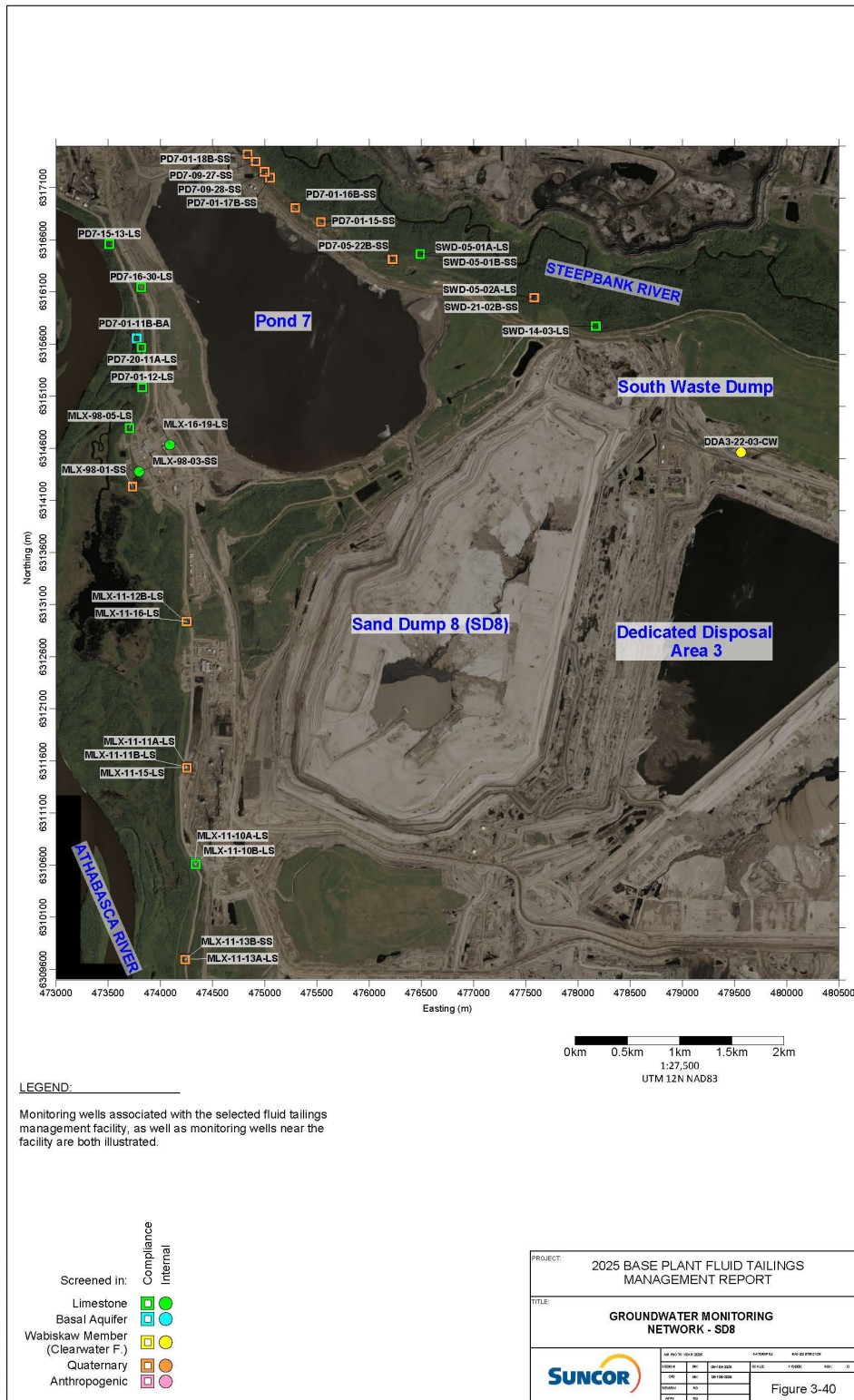


Figure 3-40: Groundwater Monitoring Network – SD8



4. ADDITIONAL REPORTING REQUIREMENTS

This section contains additional information in alignment with the 2025 MSP or requested by the AER in accordance with Section 6.1 of Directive 085. Italicised statements in the following sections are copied directly from the applicable regulatory requirement.

4.1 BASE PLANT DIRECTIVE 085 MEASUREMENT SYSTEM PLAN

4.1.1 MD9 and MD9 South Performance

MD9 contains 77.2 Mm³ of treated tailings from DDA1 co-disposed with overburden. MD9 did not receive any treated tailings during the 2025 reporting period; 2020 was the last year treated tailings were co-disposed in MD9.

MD9 South contains 43.7 Mm³ of treated tailings from DDA1 and rMFT from Pond 8B co-disposed with overburden. During 2025, MD9 South received treated tailings from DDA1 and rMFT from Pond 8B. The overburden to fluid tailings mixing ratio was greater than 1, meeting RTR criteria (see Table 4-1). Co-disposal operations continue to produce a high CWR deposit (see Table 4-2).

Table 4-1: MD9 SOUTH MIXING RATIO

Reporting Period	Overburden (Mm3)	Fluid-Treated Tailings (Mm3)	Total* (Mm3)	Mixing Ratio
2023	7.5	3.3	10.8	2.3
2024	7.6	1.6	9.2	4.9
2025	9.6	2.9	12.6	3.3
Cumulative	24.7	7.8	32.6	3.2

Note: * Total volume does not represent total lifetime placed material. Prior to 2023, Suncor reliably tracked total tonnage and tested CWR of total asset to ensure meeting RTR criteria.

Table 4-2: Volume of Placed Treated Tailings and Associated CWR

CWR	MD9* (Mm ³)	MD9 South (Mm ³)
0.7-0.8	0	0
0.8-0.9	0.1	0
0.9-1.0	0.4	0
1.0+	76.7	43.7
Total Volume ≥ 0.5CWR	77.2	43.7

Note: *MD9 data from 2024

4.1.1.1 MD9 and MD9 South Settlement Monitoring

In accordance with the MD9 Settlement Monitoring Plan included in the MSP (Suncor, 2025), Suncor provides the following performance update.

The overall asset measurement and monitoring plans are divided into two phases:

- **Phase 1:** Co-disposal and monitoring
- **Phase 2:** Settlement monitoring

MD9 South is in Phase 1, due to active co-disposal of material. Topographic survey and isoapachs showing changes in elevation are provided below in accordance with the MSP (Suncor, 2025).

MD9 is no longer receiving co-disposed material and is in Phase 2. Settlement is being monitored solely using aerial survey until the co-disposal cells are trafficable and settlement instrumentation can be installed, as per the MSP (Suncor, 2025).

2025 updates for the MD9 and MD9 South co-disposal facilities are detailed as follows:

- Figure 4-1 provides current topography of MD9, based on an August 2025 satellite photogrammetry survey.
- Figure 4-2 provides an Isopach map of the co-disposed material placed at MD9 since construction started in 2014.
- Figure 4-3 provides an Isopach map over the August 2024 to August 2025 reporting period of the co-disposed material placed at MD9.
- Figure 4-4 provides current topography of MD9 South on and August 2025 satellite photogrammetry survey
- Figure 4-5 provides an isopach map of the co-disposed material placed at MD9 South since the start of placement June 2021 to August 2025.
- Figure 4-6 provides an Isopach map over the August 2024 to August 2025 reporting period of the co-disposed material placed at MD9 South.

Figure 4-1: MD9 Topography (August 2025)



Figure 4-2: MD9 Co-Disposal Isopach Thickness (July 2014 to August 2025)



Figure 4-3: MD9 Co-Disposal Isopach Thickness (August 2024 to August 2025)

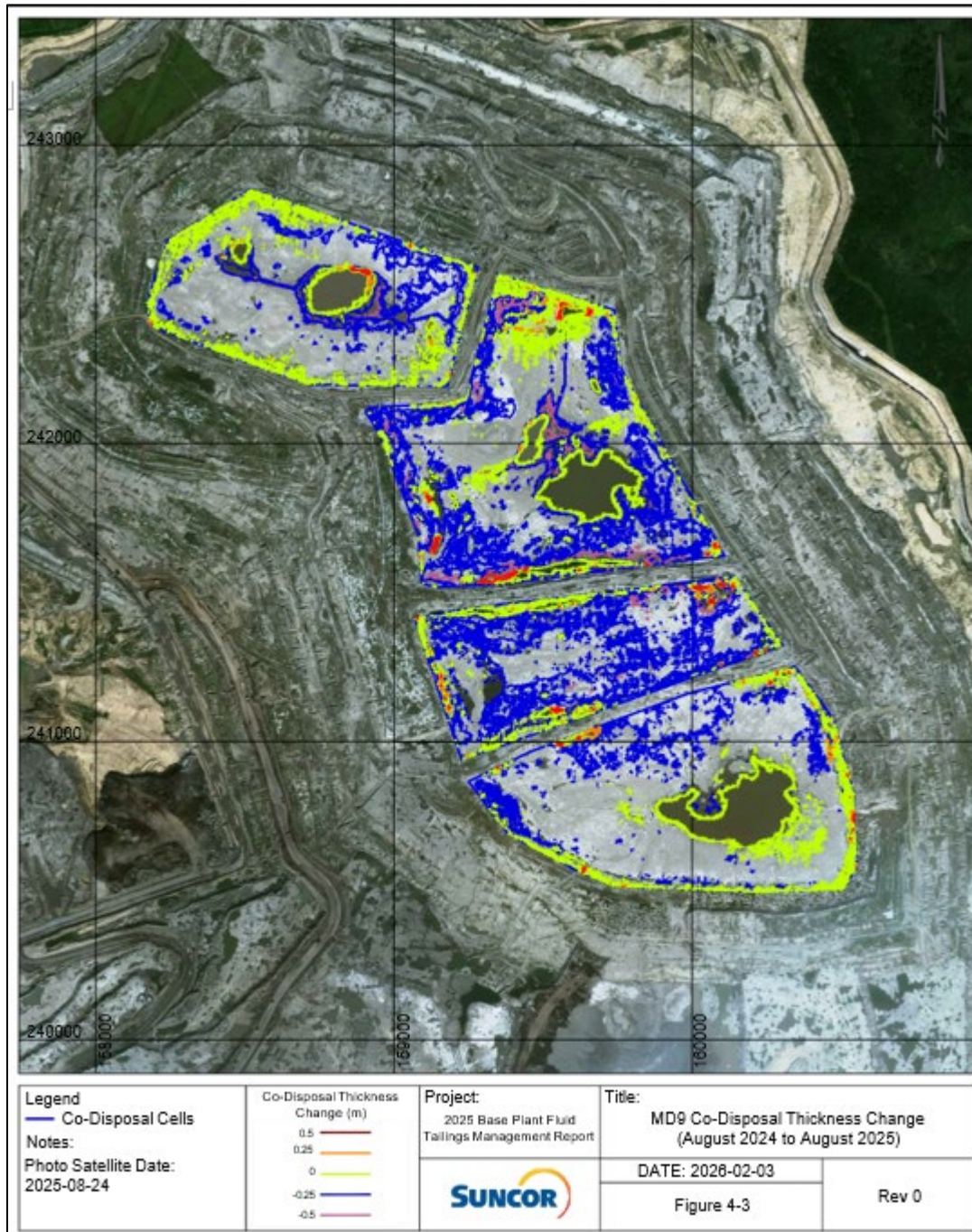


Figure 4-4: MD9 South Topography (August 2025)

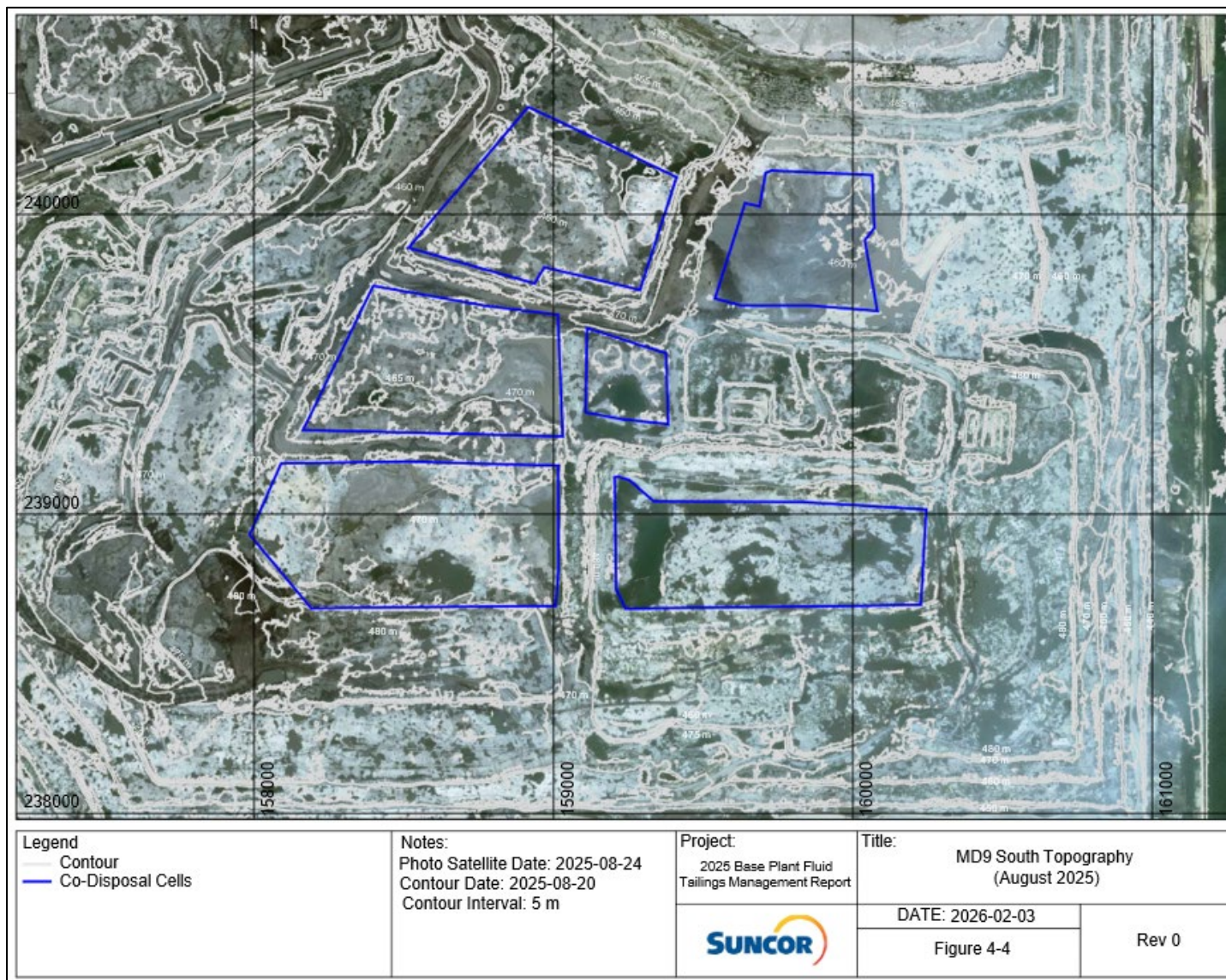


Figure 4-5: MD9 South Co-Disposal Isopach Thickness (June 2021 to August 2025)

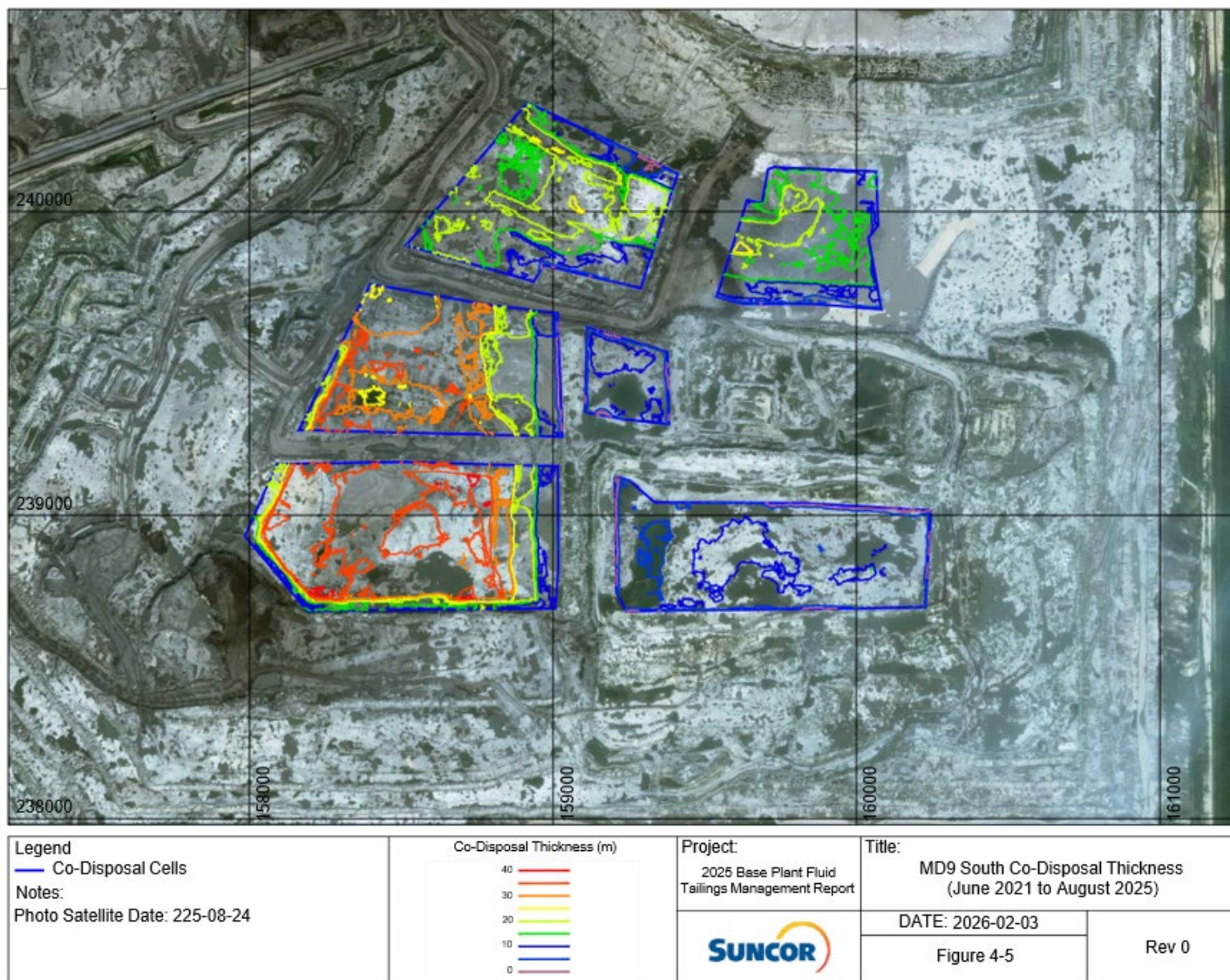
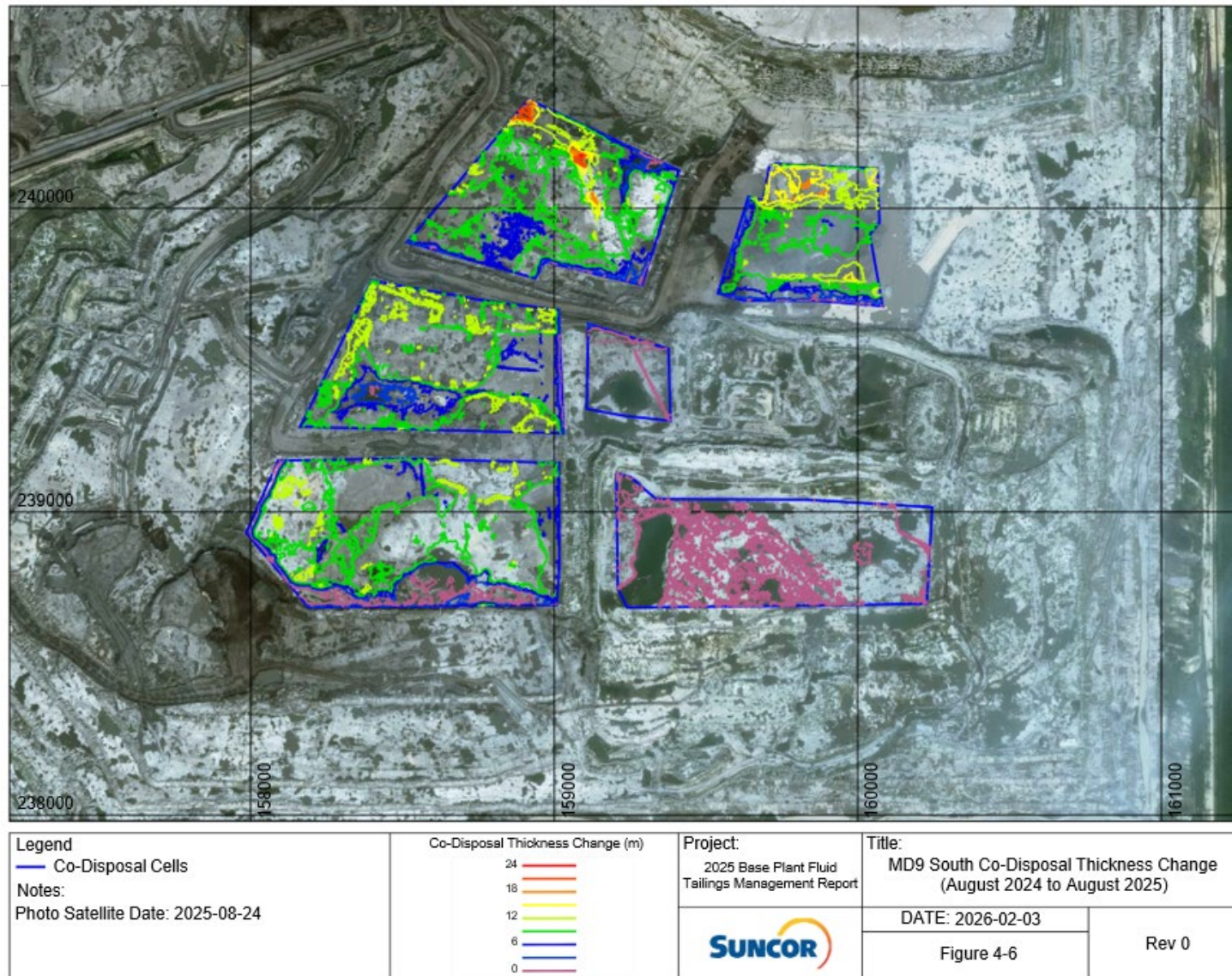


Figure 4-6: MD9 South Co-Disposal Isopach Thickness (August 2024 to August 2025)



4.1.2 DDA3 Reporting

4.1.2.1 Comparison of Annual Average TSS to RTR Criteria

As reported in [Table 3-28](#), the annual average TSS concentration for DDA3 was 4.4 mg/L which is below the ≤ 500 mg/L annual average RTR criteria.

4.1.2.2 Comparison of Deposit CWR to RTR Criteria

Results from deposit sampling and analysis in 2025, indicate that 116.2 Mm³ of treated FT in the DDA3 deposit has achieved CWR above 0.3, as shown in Table 4-3. Volume decreases took place between 0.2-0.6 CWR as material consolidates and strengthens and the largest volume increase took place in the 0.7-0.8 CWR range. [Figure 4-7](#) shows uncertainty distribution of the mean CWR values for DDA3 between the various model realizations.

Figure 4-7: DDA3 (CWR*100) Data

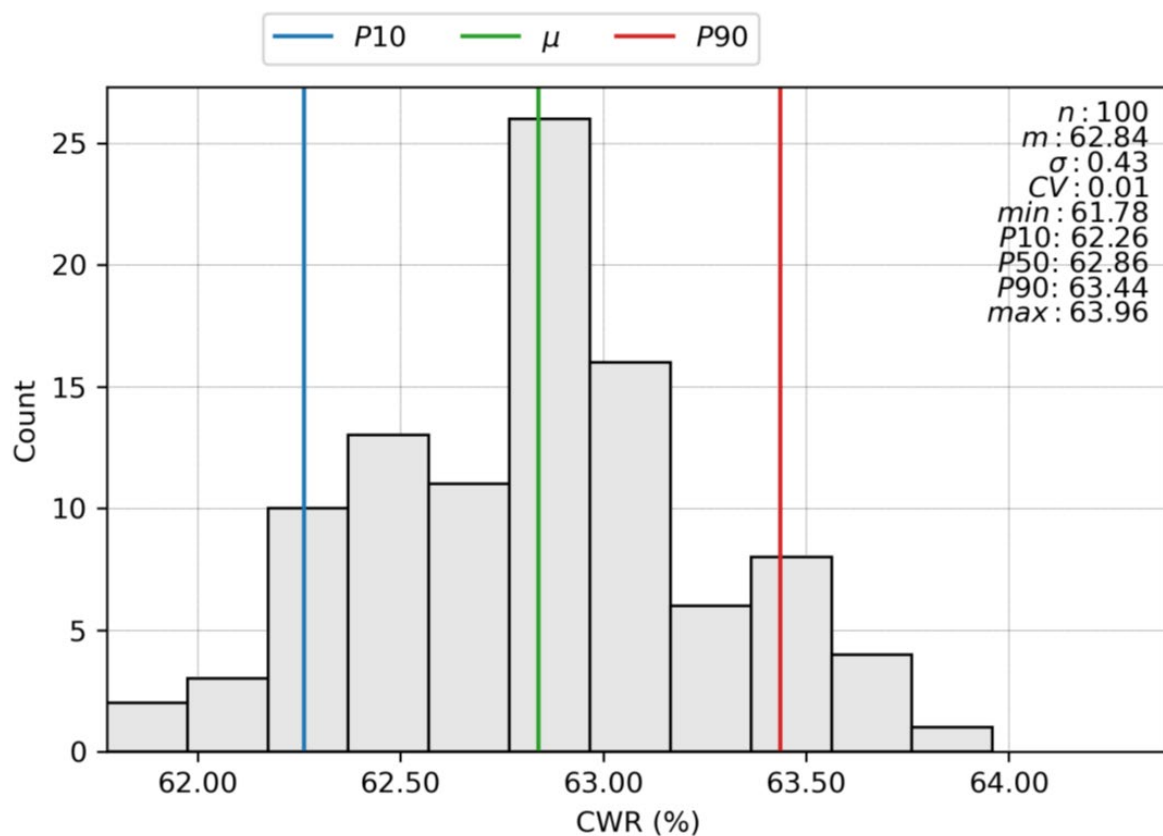


Table 4-3: CWR Ranges and Corresponding Volumes of Treated Tailings

CWR	DDA3 (Mm3)
0-<0.1	0.0
0.1-<0.2	0.1
0.2-<0.3	0.2
0.3-<0.4	2.2
0.4-<0.5	12.9
0.5-<0.6	26.2
0.6-<0.7	47.0
0.7-<0.8	23.6
0.8-<0.9	4.1
0.9-<1.0	0.3
1.0-<+	0.0
RTR Volume	116.2

4.1.3 Measurement of Froth Treatment Tailings (FTT) Placement and Constituents of Potential Concerns (COPC) Identification

4.1.3.1 Gamma Test Results – 2025

a) Introduction

As per the MSP (Suncor, 2025), all tailings assets were tested using a Gamma Cone Penetration Test (GCPT) tool for passive gamma emissions. It was found that FT will typically have a gamma count-per-second (cps) in the range of 30-40 for most fines-dominated deposits.

In cases where gamma levels exceed 60cps, further examination and sampling may be required to determine and confirm the potential presence of minerals originating from constituents of potential concern (COPC). As such, 60cps is used as a threshold to identify areas where further investigation may be required. In the 2019 Base Plant Fluid Tailings Management Report (Suncor, 2020a), Suncor confirmed that GCPT analysis correlates with the findings from the NORMs analysis. During the assessment program, a cps greater than 60 was measured in Ponds 2/3, 5, 6, 7, and DDA3. Light hydrocarbon measurements were conducted in Pond 7 in 2025 to inform future FT treatment operations, and cps greater than 60 was measured. Suncor continues to monitor all assets using GCPT.

Table 4-4: Tailings Facility Gamma Count Per Second Ranges

Pond	Gamma Count Per Second Range	Last Pond Assessment (Year)
Pond 1A	0-58.8	2023
Pond 2/3	0-792.6	2024
Pond 5	0-84.5	2025
Pond 6	0-68.9	2025
Pond 7	0-597.5	2025
STP	0-57.2	2025
DDA3	0-61.5	2025
SD8	0-57.8	2025
SD9	0-47.9	2025

b) 2025 Test Findings

Refer to [Figure 4-8](#) for light hydrocarbon by sample depth for Pond 2/3 from 2024 and Pond 7 from 2025. The data indicates that light hydrocarbon content appears highest near the surface of the assets. Pond 2/3 and Pond 7 appear to have the highest concentrations, where FTT are deposited.

In terms of spatial locations, data from the GCPT tests indicate elevated NORMs in specific zones of Pond 7 minerals. The approximate zones of elevated NORMs resulting from historical discharges and current FTT discharge are provided in [Figure 4-9](#). The zone of elevated NORMs is likely related to legacy discharge locations of fluids transferred from Pond 2/3 and current FTT deposition. Transfers from Pond 2/3 were diluted significantly with other FT, but the traces are detectable in specific areas of the pond.

Figure 4-8: Light Hydrocarbon Content by Pond and Sample Depth

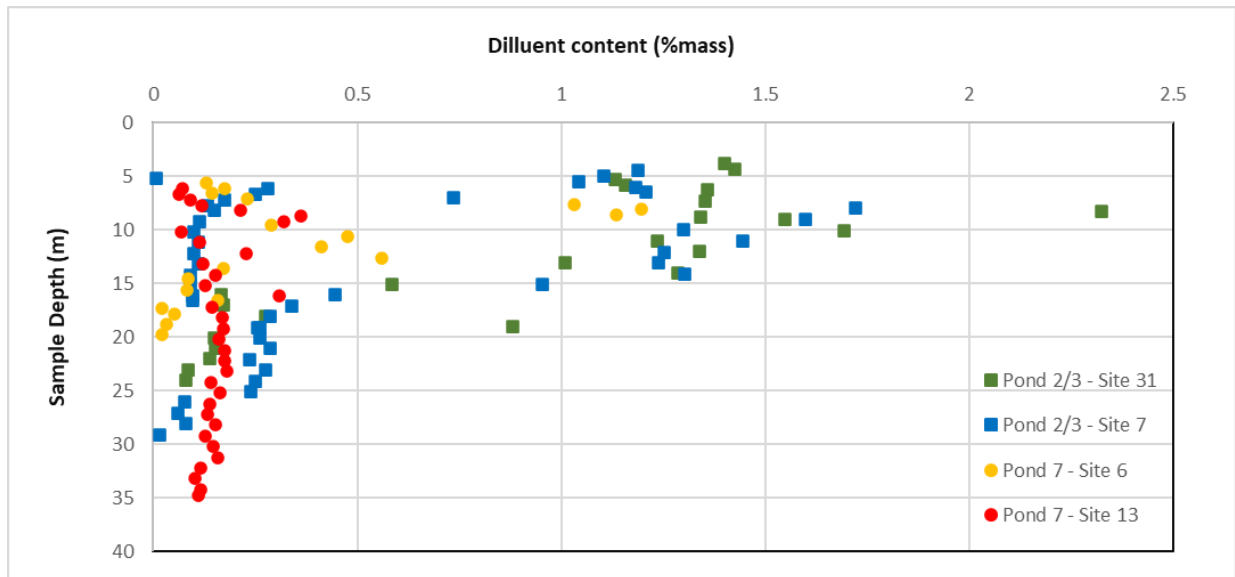
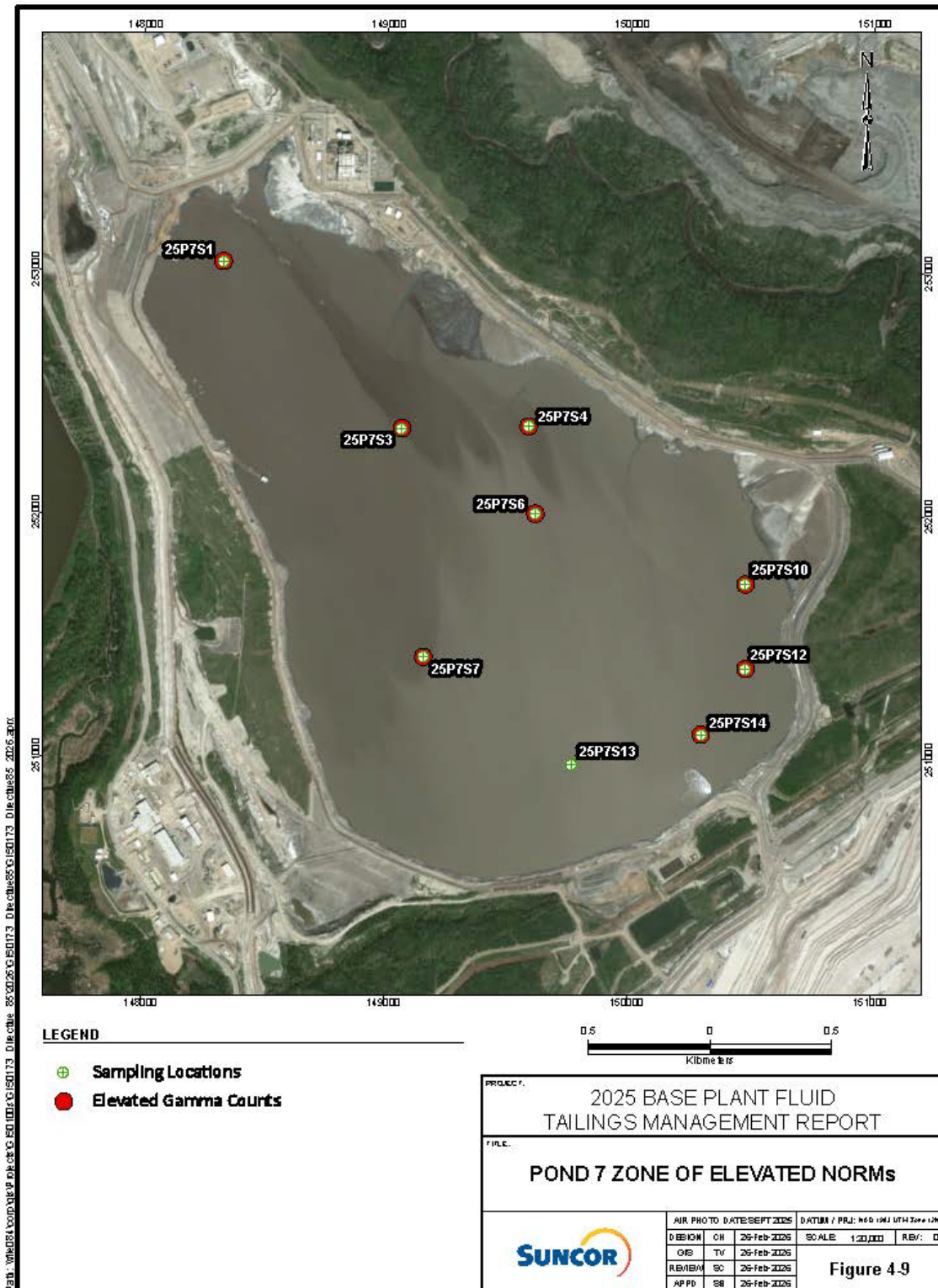


Figure 4-9: Pond 7 Zones of Elevated NORMs

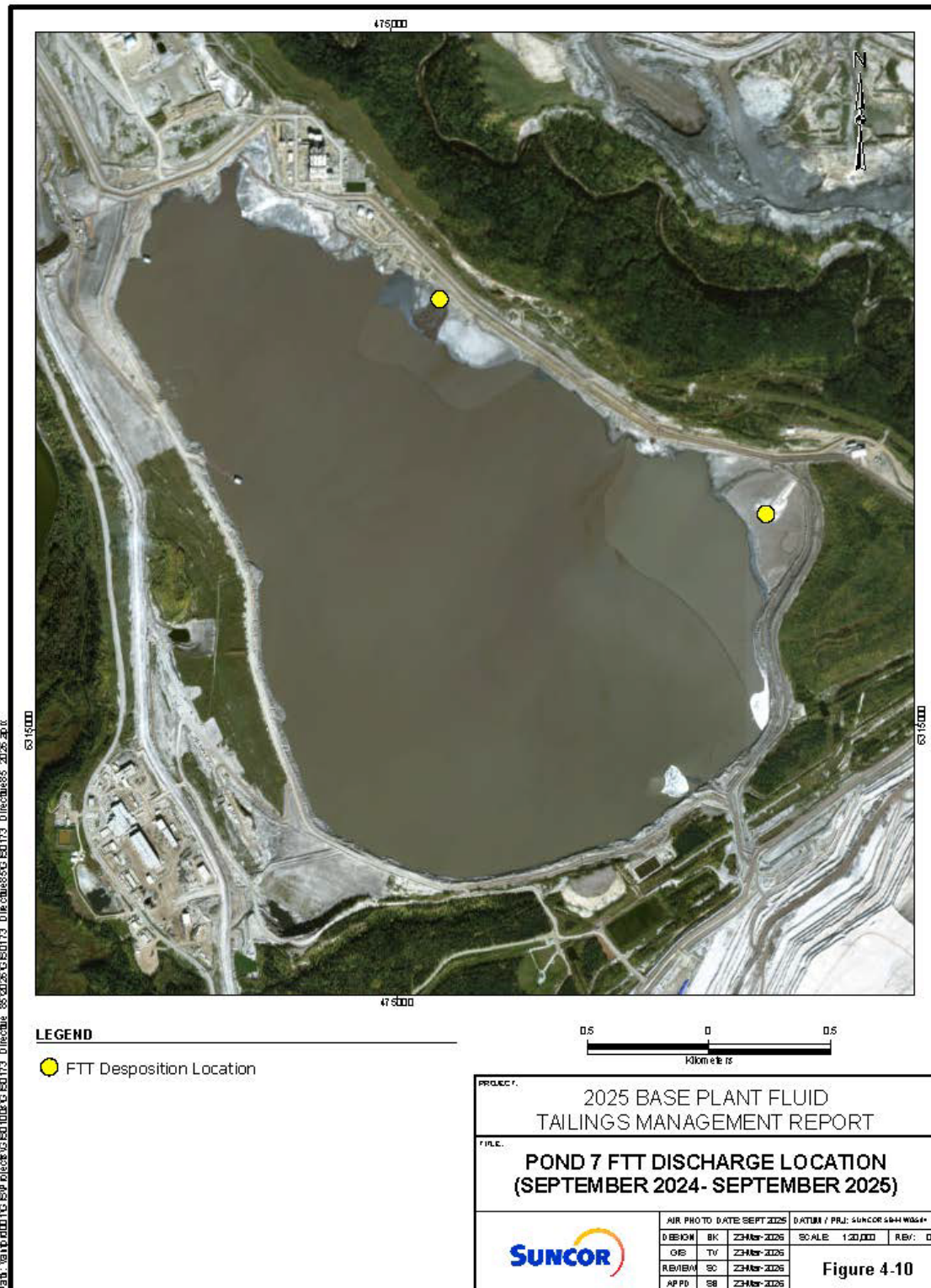


c) 2025 FTT Placement

As outlined in the MSP (Suncor, 2025), the location of FTT lines is provided in [Figure 4-10](#). This figure outlines the FTT discharge locations during the reporting period. Throughout the reporting period, Pond 7 remained the only deposition location for FTT.



Figure 4-10: Pond 7 FTT Discharge Locations (September 2024 to September 2025)



4.2 OSCA APPROVAL NO. 8535V

4.2.1 Condition 45

The Operator shall, in addition to any reporting required by Directive 085, provide in the annual fluid tailings management report:

4.2.1.1 Available Storage Capacity

(a) The available storage capacity of each tailings deposit or pond that contains water or tailings at the end of the reporting period;

Refer to Table 4-5 for storage capacity volumes measured at the end of the October 2025 reporting period. Pond 8A is not included in the table as there is no storage capacity available.

Table 4-5: Available Storage Capacity

Location	Available Storage Capacity (Mm ³)
P1A	13
P2/3	42
P6	44
P7	108
P8B	8
STP	144
SD8	6
SD9	3
DDA3	167

4.2.1.2 Annual Storage Capacity and Volume Requirements

(b) Annual storage capacity and volume requirements for the five years following the end of the reporting period;

Refer to Table 4-6 for the annual fluid storage capacity and volume requirements for the following five years. Pond 8A is not included in the table as there is no storage capacity available, nor required.

Table 4-6: Annual Fluid Storage Capacity and Volume Requirements (5 Years)

Location	2026			2027			2028			2029			2030		
	Avg Precip * (Mm3)	Max Precip** (Mm3)	Storage Capacity (Mm3)	Avg Precip * (Mm3)	Max Precip** (Mm3)	Storage Capacity (Mm3)	Avg Precip * (Mm3)	Max Precip** (Mm3)	Storage Capacity (Mm3)	Avg Precip * (Mm3)	Max Precip* (Mm3)	Storage Capacity (Mm3)	Avg Precip * (Mm3)	Max Precip** (Mm3)	Storage Capacity (Mm3)
P1A	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13
P2/3	41	42	42	41	42	42	41	42	42	41	42	42	41	42	42
P6	42	42	44	42	43	44	41	42	44	40	40	44	39	39	44
P7	95	101	103	99	98	102	96	97	100	94	96	98	91	93	96
P8B*	6	6	6	5	5	5	5	5	5	5	5	5	0	0	0
STP	122	138	144	123	142	144	122	137	144	118	139	144	120	139	144
SD8	5	5	6	3	5	6	4	3	6	3	3	6	4	3	6
SD9	4	4	4	5	5	5	5	5	5	5	5	5	5	5	5
SD10	0	0	0	0	0	0	0	0	0	1	1	1	3	3	3
DDA3	156	165	167	174	207	244	200	224	306	224	255	306	244	278	340
Total	484	516	530	505	559	605	528	567	665	545	598	665	560	615	693

Note:

* Average precipitation volume requirements

** Historical maximum precipitation volume requirements

4.2.1.3 Assessment of PASS Technology

- (c) *An assessment of PASS technology operation for the reporting period, including*
 - (i) *The number of days the technology was not operating as intended;”*
 - (ii) *A description of why the technology was not operating as intended; and*
 - (iii) *The variation of properties of the treated tailings and the released water;*
 - (iv) *the characterization of water recovered from treated tailings and runoff from ready to reclaim tailings required by Directive 085, including bitumen, hydrocarbons, and ultrafines;*
 - (v) *An evaluation of whether or not the treatment performance met the objectives stated in Application No. 1890348; and*
 - (vi) *An assessment of consolidation, based on sampling and drilling data, of treated tailings within DDA3*
 - (vii) *Any other information the AER may require*

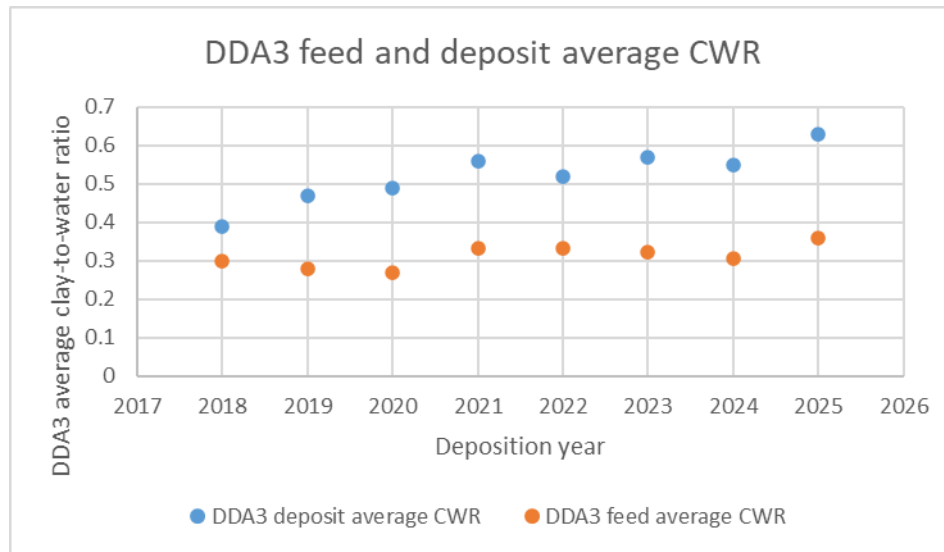
PASS technology operated as intended throughout the 2025 operating season, results of measurements are shown in the following tables:

- Table 3-4: Conventional Parameters
- Table 3-18: Volume and Composition of Fluid Tailings in Each Deposit
- Figure 3-12: DDA3 Solids (wt%)
- Figure 3-13: DDA3 Fines (wt%)
- Figure 3-14: DDA3 CWR Content (wt%)
- Figure 4-7: DDA3 (CWR*100) Data
- Figure 4-11: DDA3 Feed and Deposit Average CWR

The treatment performance for PASS technology and DDA3 meets the objectives stated in the Millennium Operating Amendment (MOA) OSCA Application No. 1857270 and EPEA Application No. 075-94) (Suncor, 2016a), the Suncor Base Plant Application for the Draft Tailings Directive (TD) (OSCA Application Nos. 1857274 and 1890348)(Suncor, 2016b and 2016c), and the Request for Modification of DDA3 RTR Criteria (Application No. 1933093) (Suncor, 2021a). The treated tailings in DDA3 are on track to support the closure outcome of a healthy aquatic ecosystem and there are no zones of concern that require mitigation.

Further information on the performance of DD3 including deposit CWR is included in [Section 4.1.2.2](#) and [Figure 3-11](#). [Figure 4-11](#) presents a comparison of the annual average CWR in the DDA3 deposit relative to the feed material (STP FT).

Figure 4-11: DDA3 Feed and Deposit Average CWR



4.2.1.4 MD9 Research and Technology Improvement Results

(d) A summary of research results and technology improvements supporting reduced Mine Dump 9 (MD9) reclamation timelines;

Additional MD9 co-disposal deposit characterization was conducted in 2025 to further inform the scope of the MD9 capping trials. Two leading capping concepts are being assessed in 2026 for application on the MD9 Plateau, and small-scale field capping trials are currently underway. Performance data from these trials will support evaluation of cap integrity, trafficability, execution strategy and long-term geotechnical behaviour. The results will inform the overall MD9 capping strategy and support the design development of the final closure landform.

4.2.1.5 Pond 5 Settlement, Strength, and Dewatering

(e) Report on Pond 5 settlement, strength and dewatering;

In accordance with the Pond 5 Monitoring Plan included in the MSP (Suncor, 2025), Suncor is providing the following performance update related to the Pond 5 Semi-Anchored Floating Experimental (SAFE) coke cap. WSP E&I Canada Limited (WSP) was retained by Suncor to provide the engineering assessment of the cover's performance. Key information from WSP's assessment is provided in this section.

Efforts to provide a trafficable pond surface to support reclamation activities resulted in the construction of the engineered cover and installation of vertical strip drains (VSDs) to expedite consolidation and strength gain in the underlying tailings deposit. Subsequent coke lifts on top of the SAFE cap are designed to further increase consolidation near the surface of the deposit.

Settlement at Pond 5 was measured by surveying settlement plate markers. The 2025 survey results showed settlement trends similar to previous years. Settlement values averaged across

each cell varied between 0.2 to 1.2 feet (Ft), consistent with previous reports. Refer to [Figure 4-12](#) for a comparison of the surfaces generated from the settlement plate marker surveys in 2024 and 2025. A differential volume was calculated corresponding to the settlement observed during that 12-month period. The differential volume was assumed to be analogous to the volume of water expressed from the tailings. The surface water removed by the pumping system was calculated to be the difference between the volume pumped from the sumps and the expressed water from the tailings. A summary of the expressed water from the underlying tailings, removed surface water, and pumping volumes is provided in [Table 4-7](#).

Strength testing on Pond 5 is completed biannually. In 2025, both ball cone penetration testing (BCPT) and sampling were completed in the pond assessment field program. [Figure 4-13](#) shows the average peak undrained shear strengths measured in the soft tailings and [Figure 4-14](#) shows a cross-section of Pond 5 with the locations of selected BCPTs and measured peak undrained shear strengths. Consistent with past trends and the ongoing consolidation of the soft tailings, in general the data continues to show incremental strength gain with time.

Table 4-7: Expressed Water Volumes

Water Removal Breakdown	Approximate Volume (m3)
Pumped From Sumps*	921,000
Expressed From Tailings**	200,000
Surface Water	721,000

Notes:

* Volume pumped from sumps within the Pond 5 Engineered Coke Cover between October 1, 2024 and September 30, 2025.

**Based on settlement plate marker survey data collected between June 2024 and June 2025.

Figure 4-12: Isopach June 2024 & June 2025 (Based on Top of SPMs)

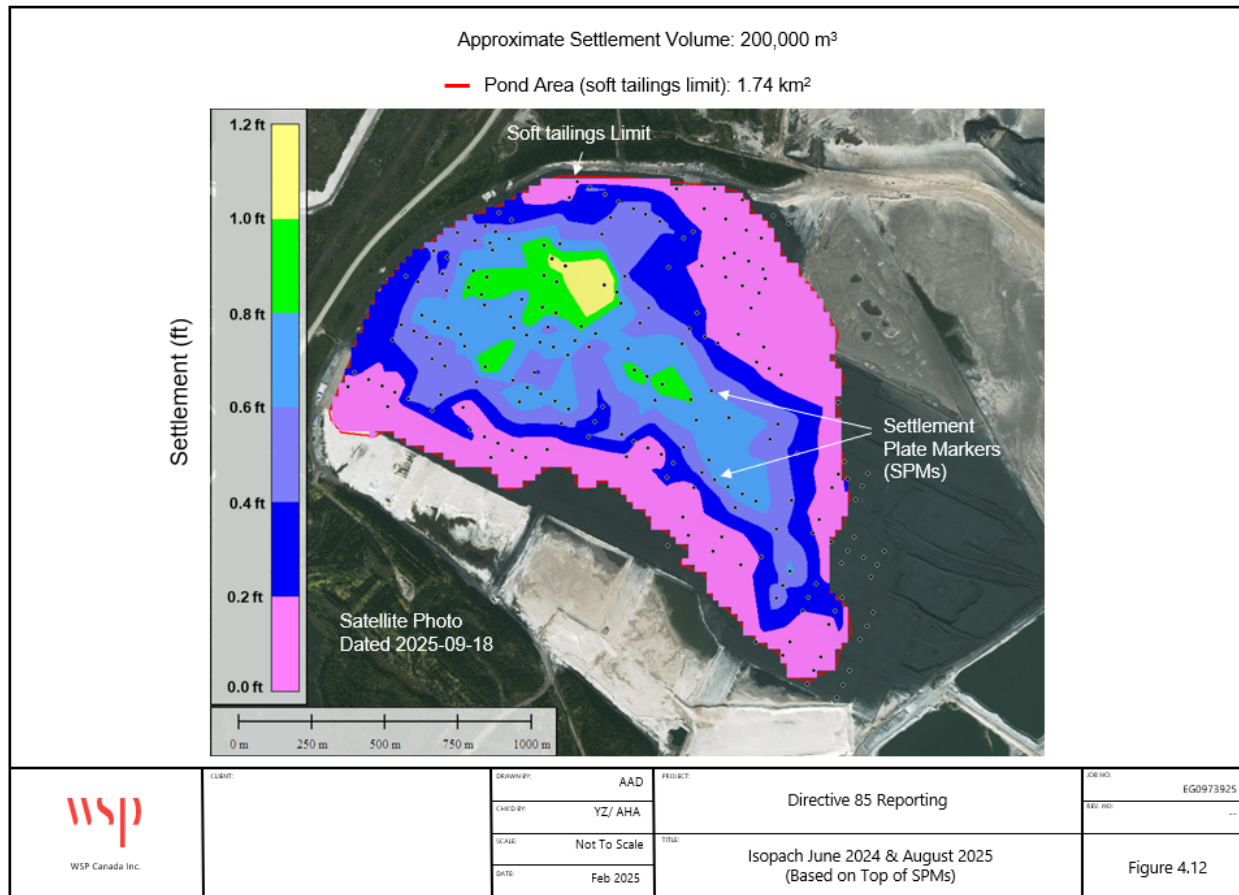


Figure 4-13: Selected Average Peak Undrained Shear Strengths

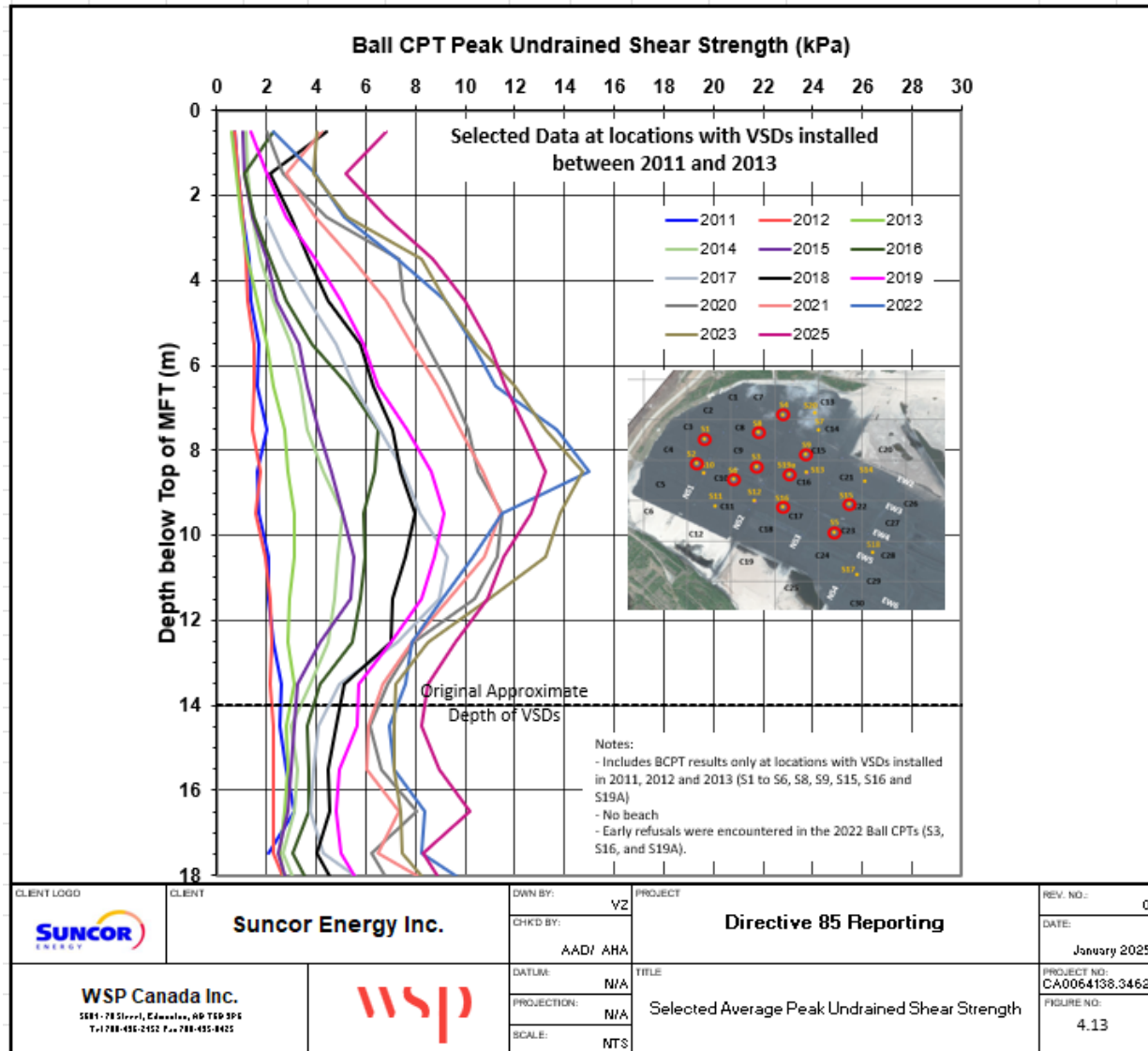
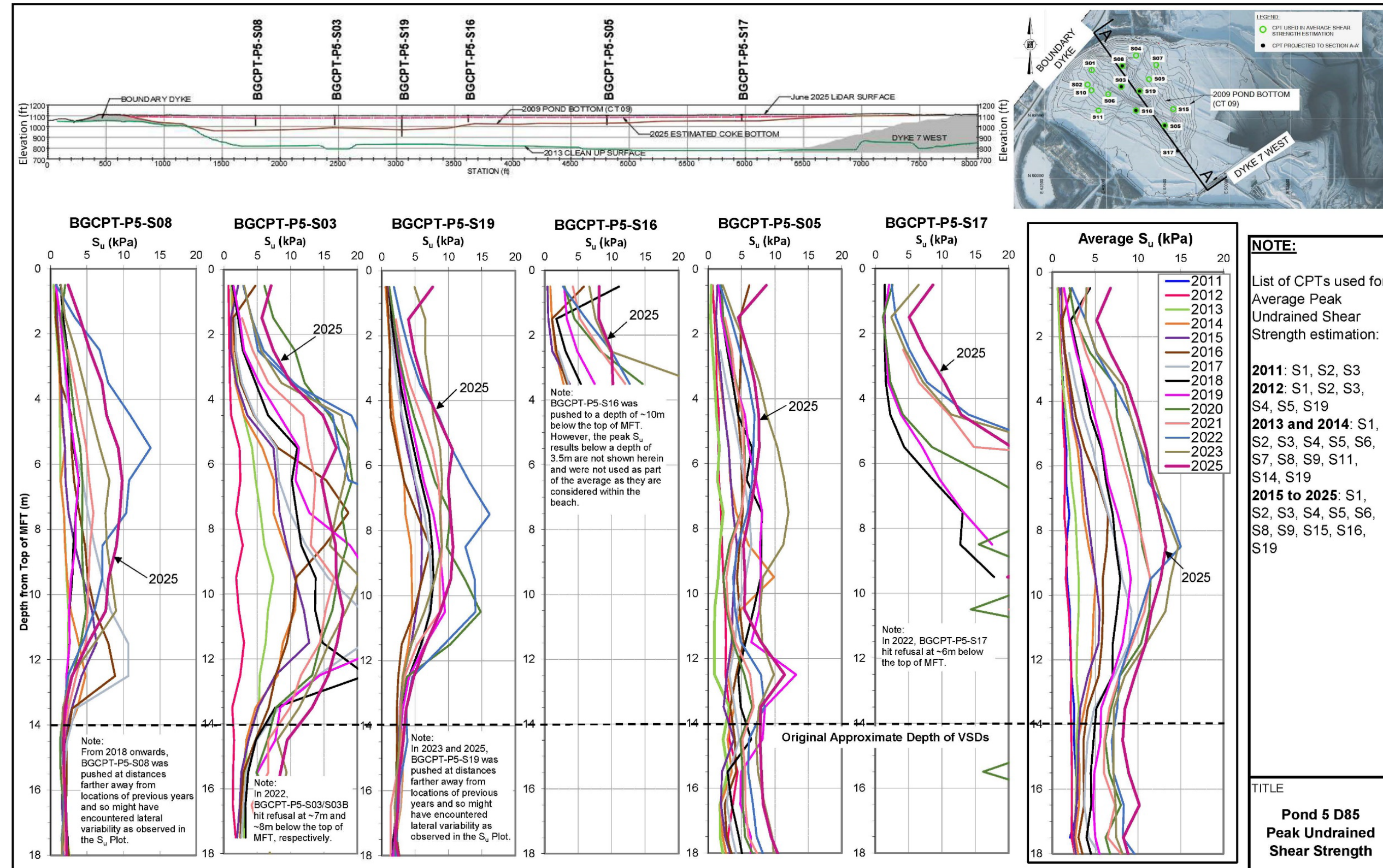




Figure 4-14: Pond 5 Cross-Section Showing Measured Undrained Shear Strengths



4.2.1.6 Rate of Pond 5 Settlement: Support of Proposed Commencement of Reclamation

(f) Confirm the rate of Pond 5 settlement will support proposed commencement of reclamation prior to May 1, 2024 and will support the achievement of targeted final landforms, unless otherwise specified in writing by the AER.

In compliance with Condition 7.2.8 of EPEA Approval 94-03-00, as amended (AER, 2025), Base Plant commenced reclamation activities at Pond 5 in April 2024. Further details on the reclamation activities were reported in the Base Plant 2024 Reclamation Progress Tracking Report, as per Conditions 7.4.18 and 7.4.19 of the EPEA Approval. Reclamation is planned to progress as outlined in the Base Plant 2022 LMCP (Suncor, 2022d) and achieve the targeted final landforms.

4.2.1.7 Surface water quality parameters and testing

(g) Surface water quality parameters characterized and reported at environmentally relevant detection limits

(h) Results of surface water quality testing as per the approved Measurement System Plan

Details of surface water quality parameters and testing are provided in Section 3.1.7.

4.2.1.8 Froth Treatment Tailings (FTT) deposit activities and cross sections.

(i) a description of the activities undertaken in the reporting period for each froth tailings deposit including material placement, handling and removal.

(j) for each facility with froth tailings deposit, a cross section with

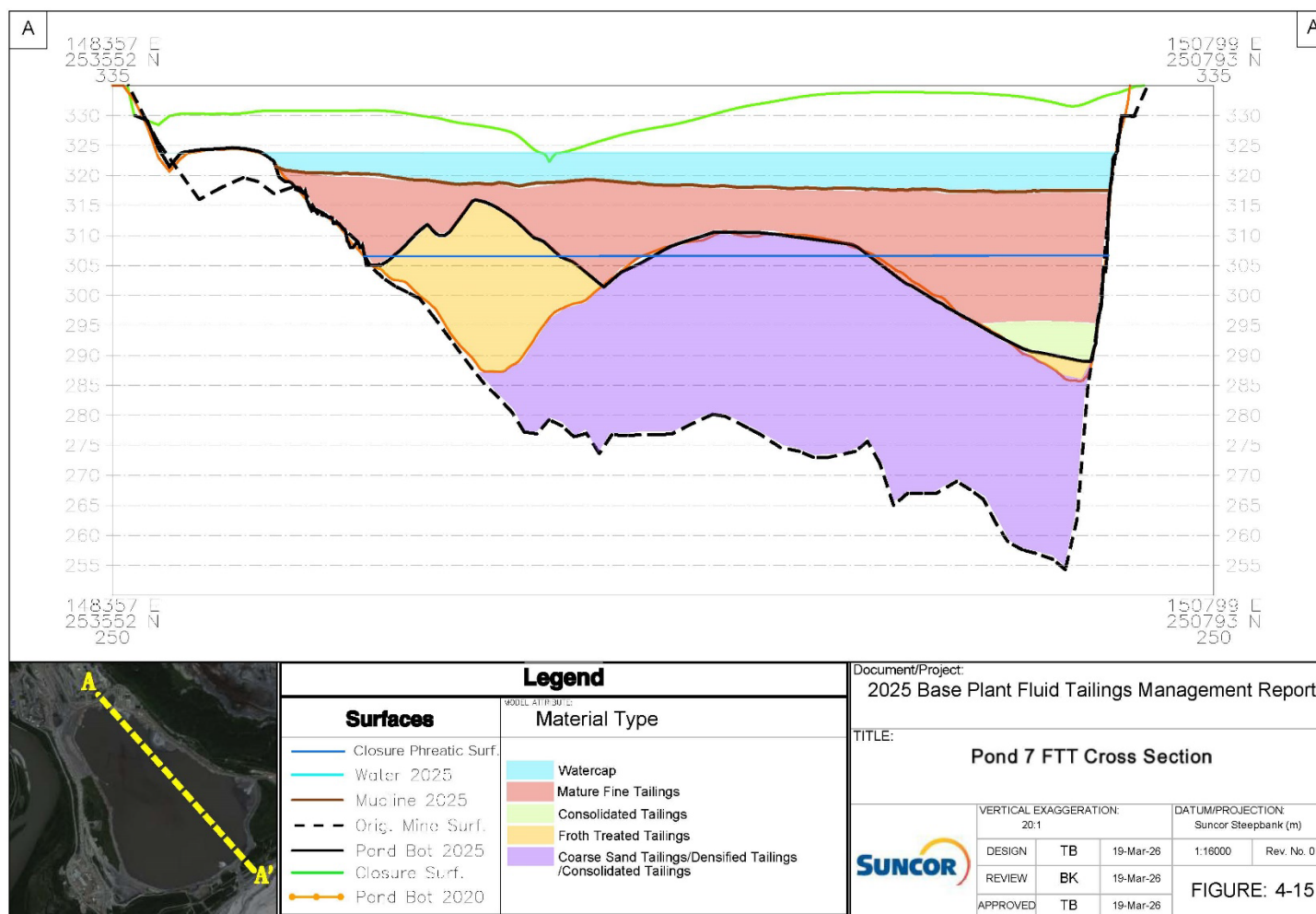
(i) original ground, current topography, and final closure profile;

(ii) each material and tailings type differentiated; and

(iii) the phreatic surface (current and estimated at closure);

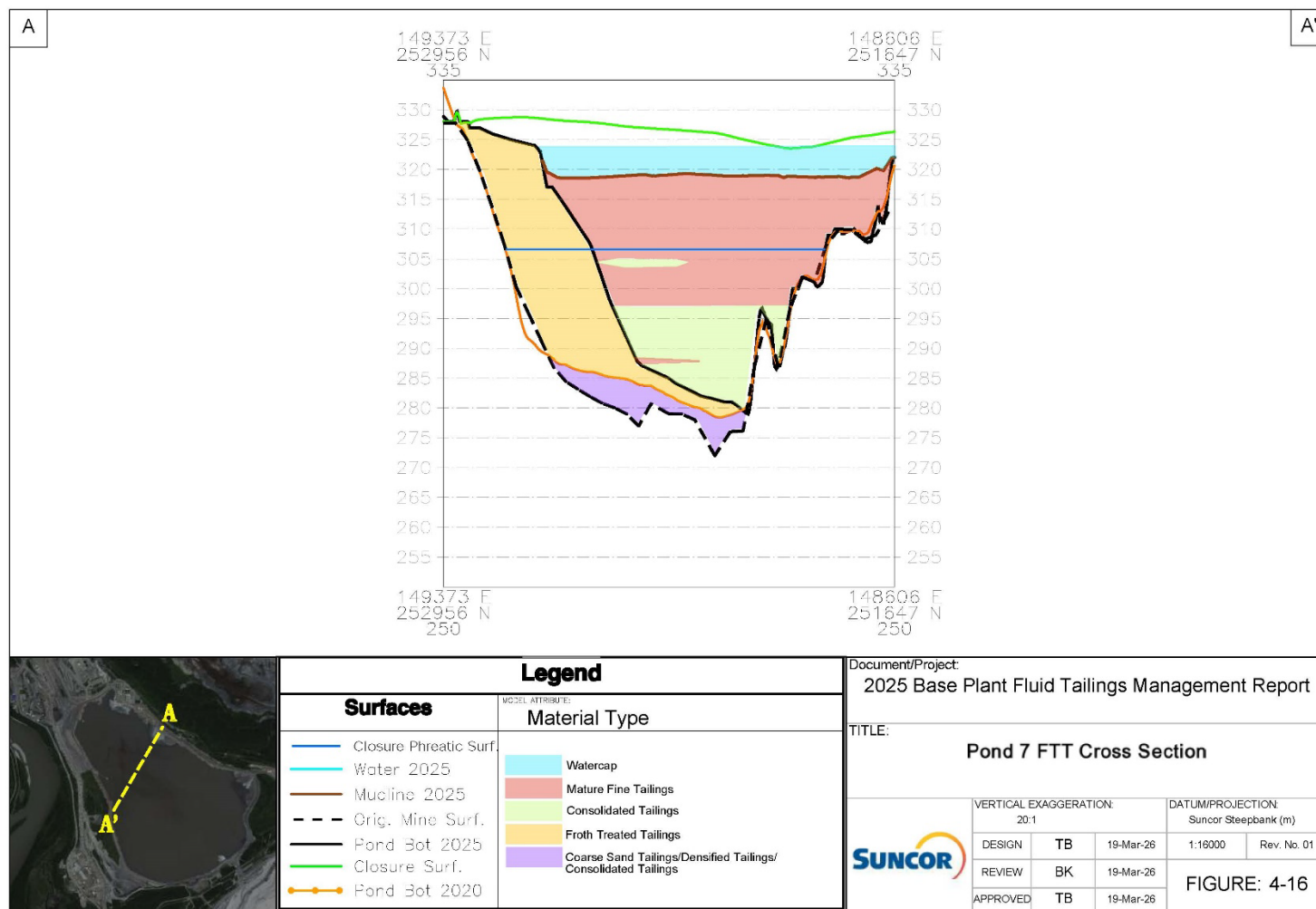
FTT were placed in Pond 7 during the 2025 reporting period. No other facility received FTT. See [Figure 4-10](#) for deposition locations. No additional handling or removal of FTT occurred.

Figure 4-15: Pond 7 FTT Cross Section



*Note: Surfaces – “Surf.” is Surface in all abbreviations

Figure 4-16: Pond 7 FTT Cross Section



**Note: Surfaces – “Surf.” is Surface in all abbreviations*

4.2.1.9 Hydrogeochemical assessment testing results.

(k) results from hydrogeochemical assessment testing conducted in the reporting period for each froth tailings deposit including

(i) porewater quality analysis

(ii) static testing (acid-base accounting) for the froth tailings deposit; and

(iii) kinematic modelling and testing results for the froth treatment deposit

Suncor conducted a regional program to characterize froth treatment tailings (FTT) and assess potential biogeochemical risks. Samples collected from Suncor Energy Inc.'s (Suncor's) Base Plant as part of these programs were submitted for geochemical testing (i.e., mineralogy, static testing, and short-term leach testing) and was completed in 2022. Additional select samples collected as part of this program were submitted for Humidity Cell Tests (HCTs) to provide an indication of the potential for acid rock drainage (ARD) to onset in both "clean" (i.e., bitumen removed by Dean Stark Analysis [DSA]) and raw (i.e., bitumen retained) samples. A subset of the HCTs commissioned during previous programs have continued to leach as part of the HCT extension program. At the time of last reporting (August 2025), select HCTs continue to leach (Pond 2/3 2 m and 3 m samples) while others have been discontinued. Samples from Pond 1A and Pond 7 samples were discontinued. HCT extension program was completed in 2025 and there were no changes in results from those presented in 2025 which was that kinetic testing indicated that there is limited potential for ARD onset in fluid tailings samples even under the most extreme leaching scenarios with only 3 sample events in one test achieving a pH of 5.6. Trace metals were highest during the initial leachate flushes and tended to decrease to detection limits with subsequent flushes. The primary focus on geochemical weathering mechanism will be completed through the Pond 2/3 research program.

Suncor is characterizing the geochemistry of tailings deposits to inform final closure landform design. With this objective in mind, Suncor completed an extensive geochemical sampling program in Pond 2/3 and has completed a range of analyses on the collected samples.

The design objectives for the Pond 2/3 sampling program were to:

- Identify Pond 2/3 tailings deposit reclamation risks for terrestrial reclamation; and
- Improve spatial coverage of geochemical data including beach above water (BAW).

Sampling targeted the upper tailings of the BAW to a depth of approximately 50 ft (~ 1190 to ~ 1140 ft elevation). In select locations (approximately 1 in 5), drilling and sampling proceeded to 160 ft or the maximum practical extent. Locations were selected in a grid-like pattern to cover lateral and vertical spatial extent of the BAW and northern edges of the BBW. Mikisew-ConTec was contracted to carry out drilling and sampling, under guidance from Suncor personnel. Drilling was carried out using amphibious drilling equipment while sampling was carried out using either sonic or fluid sampling techniques, depending on the material properties. Additionally, Gamma Cone Penetration tests (CGPTu) and Full-Flow Gamma Cone Penetration tests (BGCPTu) were carried out at each location.

A total of 49 locations were drilled, with 44 of those locations sampled for geochemical characterization. Of the 44 locations relevant to this scope, 36 were drilled to a depth of approximately 50 to 60 ft, while 8 were drilled to a depth of over 100 ft. Tailings samples at

each location were taken at 3 ft intervals. A total of 539 samples were collected (434 in BAW and 105 in the BBW). [Figure 4-17](#) provides an overview of sampling locations.

A comprehensive analytical testing program was developed to characterize the geochemical parameters as follows:

- Parameters related to metal leaching and acid rock drainage (ML/ARD) – acid-base accounting
- (ABA), mineralogy;
- Parameters related to Naturally Occurring Radioactive Materials (NORMs); and
- Parameters related to bitumen content and bitumen migration.

[Table 4-8](#) provides an overview of the analytical plan showing proposed sample counts for each analysis.

The analytical testing program is progressing with a compilation of results of the basic physical and chemical expected in Q4 2026. The specialized mineralogy and geochemical kinetic testing program will be ongoing in 2026, 2027 and 2028 with humidity cell and column test expected to last 100 to 200 weeks.

Figure 4-17: Conetec BGCPTu, GCPTu and sample investigation locations



Table 4-8: Proposed analytical testing plan sample counts

Analysis	BAW	BBW	Total
pH	287	80	367
Dean Stark Analysis	287	80	367
MBI and Sieve-44um	287	80	367
Particle Size Distribution-wet sieve	266	72	367
Particle Size Distribution-LD	29	8	37
Moisture content	287	0	287
BTEX+F1 Hydrocarbons	287	80	367
F2 to F4 hydrocarbons	287	80	367
Porewater - basic suite	33	8	41
Porewater + hydrocarbons speciation	32	0	32
SWCC + Ksat	32	0	32
PSD and Atterberg Limts	32	0	32
NORMS	72	13	85
ABA Static testing	285	19	304
ARD - Humidity Cell Test	0	0	24
TIMA + microprobe	42	3	45
XRD	38	33	71
Oxygen consumption	50	8	58

4.2.1.10 Updated Risk Assessment for Acid Rock Drainage (ARD) Potential

(I) an updated risk assessment for acid rock drainage potential from all facilities containing froth tailings, including froth tailings research/learnings as it applies to operational activities (ex. depositional strategy)

Suncor is continuing to assess the geochemical risk potential of the Pond 2/3 tailings facility with ongoing lab work, and will update the regulator upon the conclusion of that work.

4.2.1.11 Tailings Pond CSV files

(m) “For each of the tailings ponds, a CSV file in NAD 83 coordinates of surveyed data (X,Y and Elevation) respectively for:

- (i) Mudline (top of fluid tailings);*
- (ii) Hard bottom (refusal depth);*
- (iii) Base of feed (final pit bottom) or original ground; and*
- (iv) Water elevation at the time of pond sampling”*

The CSV files for the tailings ponds have been provided with this report.

4.2.2 Condition 57

The Operator shall report in the annual fluid tailings management report engagement efforts undertaken in the reporting period.

Refer to [Section 4.2.3.1](#) for details on engagement efforts.

4.2.3 Condition 58

The report in clause 57 shall include the following:

- (a) How the stakeholders and Indigenous communities were identified for engagement;*
- (b) A list of stakeholders and Indigenous communities identified in (a);*
- (c) Objectives for engagement, including gathering input and feedback on the development of tailings management submissions from stakeholders and Indigenous communities identified in (a);*
- (d) The type of engagement activity that was undertaken and the tailings specific information that was provided to each stakeholder and Indigenous community identified in (a);*
- (e) The specific frequency and duration of the engagement with each stakeholder and Indigenous community identified in (a);*
- (f) What specific feedback was provided by each stakeholder and Indigenous community identified in (a);*
- (g) What specific feedback on the report was provided by each stakeholder and Indigenous community identified in (a);*
- (h) How the feedback and learnings from previous engagement will be incorporated into future engagement and into tailings management;*
- (i) How the Operator addressed any outstanding concerns arising from engagement; and*
- (j) Outcomes from the annual forum.*

Refer to [Section 4.2.3.1](#) for details on engagement efforts.

4.2.3.1 Engagement on Tailings Management

Suncor engages with Indigenous communities and stakeholders on a project-specific basis and on daily operations. A focus is placed on Indigenous communities in proximity to projects including their land users and knowledge holders. Base Plant's operations are within the traditional territories of a number of Indigenous communities; Suncor has identified and regularly consults with five First Nations and three off-settlement Métis communities regarding Base Plant operations.

Communities invited to engage in 2025 were:

- Athabasca Chipewyan First Nation
- Fort McKay First Nation
- Fort McMurray No. 468 First Nation
- Mikisew Cree First Nation
- Chipewyan Prairie First Nation
- McMurray Métis
- Fort Chipewyan Métis Nation
- Fort McKay Métis Nation

In 2025, Suncor focused on in-person engagement with community members on tailings management as well as on reclamation tours related to tailings. Engagement on tailings management included information sharing, highlighting the previous year's Tailings Management Report (TMR), understanding stakeholder concerns, and providing opportunities for feedback and input. In the 2025 Tailings Forum, plain language summaries of the TMRs were provided to each participant and questions were answered by relevant subject matter experts. Examples of how stakeholder feedback has been incorporated into Suncor's mine, tailings, reclamation, and closure plans include:

- Placing treated FT below grade and creating a stable closure landscape
- Reclaiming primarily as a terrestrial landscape
- Reclaiming land permanently as early as practicable
- Treating tailings to minimize the area disturbed and to speed up reclamation.

In 2025, Suncor engaged on the approach to tailings management (Appendix D: Suncor Sharing on Tailings), primarily through:

- Suncor's Annual Tailings Forum (includes Syncrude operations)
- Regular meetings with Indigenous community members and their government representatives, including:
 - Detailed discussions about tailings, reclamation, and water; and
 - Technical tailings performance discussions, if requested.

a) 2025 Suncor Annual Tailings Forum

To meet the requirements of holding an annual forum on tailings management (Condition 58 of OSCA Commercial Scheme Approval No. 8535V (AER, 2025)), Suncor engaged with community representatives and members on Base Plant tailings management at its Annual Tailings Forum, September 3 and 4, 2025. The objectives of the forum, held in person in Wood Buffalo, were to share information on Fort Hills, Base Plant, Mildred Lake, and Aurora North tailings operations, monitoring, results and plans, and to provide an opportunity for Suncor and Syncrude staff to gather feedback and input from Indigenous community members and Indigenous government representatives.

Previous tailings forums have focused on a presentation format, in part due to safety concerns during the COVID-19 pandemic, and for ease of participation during the multi-operator tailings forum. Feedback received from previous forums has been that there should be less time spent in presentations and more time on the land; therefore, in 2025, Suncor presented an overview of the mining, extraction and tailings treatment processes, and updates on Base Plant tailings management. This included speaking to the TMR plain language summaries. The focus of these two days, however, was largely on planned tours at Suncor Base Plant and Syncrude Mildred Lake Mine.

Unfortunately, due to severe smoke conditions, the Lake Miwasin tour was canceled, and the Tailings Forum was relocated indoors for Day 1. Technical staff and field personnel spoke to large posters, providing updates and details on the Lake Miwasin program. Day 2 included a tour of Base Mine Lake (BML) at Mildred Lake Mine. During the tours and presentations, Indigenous community members and their government representatives could ask questions to the larger group or one on one with Suncor's technical staff. Suncor personnel, including staff

from mine planning, technology development, tailings operations, geosciences, regulatory, and community relations, were available to share information and listen to feedback.

Additional details on the 2025 Suncor Annual Tailings Forum are provided in [Appendix D: Suncor Sharing on Tailings](#), which includes the agenda, handout materials, attendee information and feedback summary.

Participants at the 2025 Tailings Forum included representation from the following communities:

- Athabasca Chipewyan First Nation
- Fort McKay First Nation
- Fort McMurray 468 First Nation
- McMurray Métis
- Mikisew Cree First Nation

Fort Chipewyan Métis Nation, Chipewyan Prairie Dene First Nation and Fort McKay Métis Nation were unable to or declined to participate in the session.

4.2.3.2 Feedback and Outcomes

While tailings management updates were provided during the Tailings Forum, the Indigenous communities were especially interested in hearing updates on Suncor's progressive reclamation activities and Lake Miwasin project updates. The BML tour was a highlight for Indigenous community participants, who asked many questions including about the presence wildlife, including birds and insects. Indigenous government representatives focused on both the tours, the Lake Miwasin update, and the TMR discussions, seeking clarity on more technical details, such as updates on Lake Miwasin water quality and bitumen mat removal activities in BML.

At the conclusion of the Tailings Forum, a sharing circle was held for participants to give direct feedback on the session and Suncor's tailings management and reclamation. General feedback from the Tailings Forum was that the focus on land-based tours, including the use of microphones for discussions in the field, was appreciated by the Indigenous communities, and led to many observations of different wildlife and a view into the positive change on the landscape. Almost every participant mentioned their wildlife observations, in some manner. There was a desire to continue to engage in a similar way, to continue to share tailings management progress and to spend time on the land. Indigenous government representatives shared a desire to also spend more time discussing technical details related to tailings management.

Based on the feedback and subjects favoured for discussion by each the Indigenous government representatives and the community members, future engagement on tailings management, including tailings reclamation, may focus on land-based tours for community members with a Tailings Forum component, to engage on more technical matters with Indigenous government representatives and staff.

4.3 EPEA APPROVAL 94-03-00, AS AMENDED

4.3.1 Condition 5.4.13

The approval holder shall include tailings research updates in the annual tailings performance report for the research plans as required by section 5.4 to the Director on or before April 30 of every year, unless otherwise authorized by the Director.

4.3.2 Condition 5.4.14

The tailings research updates shall include the following information, at a minimum:

- (a) a summary of the research programs and research plans conducted to date, that includes the following:*
 - (i) an analysis of the monitoring and research results including successes and failures;*
 - (ii) how corrective measures were identified and implemented for research monitoring and data collection;*
- (b) an interpretation of the research conclusions, including:*
 - (i) a description of the progress towards completing outstanding research objectives, or developing models;*
 - (ii) identification of any emerging issues affecting the ability to achieve research objectives in accordance with the schedule and timelines for resolving the emerging issues;*
 - (iii) identification of any new uncertainties and timelines for resolving the new uncertainties;*
 - (iv) a description and assessment of potential impacts to research objectives and timelines from emerging issues and uncertainties*
 - (v) identification of any resolved uncertainties and new learnings, and*
 - (vi) how the data or techniques trialed will be used in future operations and reclamation;*
- (c) any proposed changes to the research design, methodologies or milestones for existing projects;*
- (d) any proposed changes to the research design, methodologies or milestones for subsequent or related research projects; and*
- (e) any other information requested in writing by the director.*

4.3.2.1 Tailings Research Updates

Pursuant to Conditions 5.4.6, 5.4.7, 5.4.8, and 5.2.4 of EPEA Approval 94-03-00, as amended (AER, 2025), Suncor has implemented and submitted the following research plans/ reports:

- Wetland and Shallow Lake Viability Research Plan for Pond 5, Pond 6, and Pond 7 (Suncor, 2018a)
- Suncor Demonstration Pit Lake Research and Monitoring Plan (Suncor, 2017)
- DDA3 Terrestrial Research and Implementation Plan (Suncor, 2018b)
- DDA3 Aquatic Research and Implementation Plan (Suncor, 2018c)
- DDA3 Terrestrial Research and Implementation Plan Interim Report to AER on September 30, 2020 (Suncor, 2020b)

- Pit Lake Research and Development Report was submitted on April 30, 2024 (Suncor, 2024b)

The following sections summarize research activities conducted through 2025 and planned work for 2026.

4.3.2.1.1 General Research Updates

The research plans are designed to address key uncertainties related to the development and the long-term performance of aquatic and terrestrial closure landforms. The primary areas of focus include:

- Technology and treatment validation
- Environmental risks
- Closure and reclamation outcomes

These plans integrate regional research conducted through Canada's Oil Sands Innovation Alliance (COSIA) Suncor-led research initiatives, and monitoring programs implemented under Directive 085 (AER, 2022), including the MSP. Collectively, this integrated research and monitoring framework informs tailings management decisions and supports closure and reclamation planning.

Updates on research advancing terrestrial closure, aquatic closure, and pit lake development are provided below.

a) Constructed Wetland Treatment System Pilot Project

Construction of the Constructed Wetland Treatment System (CWTS) was completed in late 2019. Since then, Suncor has focused on establishing cattails within the treatment cells at the required density to initiate water treatment trials. Current plans include treating DDA3 water in Cell D and process affected water (PAW) in Cells A, B, and C.

Cattail establishment has been affected by several challenges, including workforce limitations due to the COVID-19 pandemic, a fungal infection in the nursery, and seedling mortality following transplanting. Additional details are provided in the approved Suncor Research and Monitoring Plan for the Constructed Wetland Treatment System (Suncor, 2019). Cell D achieved the required plant density in 2024, and treatment of DDA3 water commenced in 2025. The trial is planned to continue in 2026.

Three growing seasons after transplanting, Cell B is demonstrating strong productivity. In contrast, Cells A and C remain at approximately 50% of the target plant density, with only marginal increases in productivity since 2023. Notwithstanding current plant density, water treatment trials in Cells A, B, and C are planned to commence in 2026 and continue for two years. Initiating trials at this stage will provide valuable performance data under operational conditions and support adaptive management of vegetation establishment and treatment efficiency.

b) Pit Lakes

Suncor's Pit Lakes Program is built upon decades of research on pit lakes and leverages ongoing regional initiatives and Suncor's own research programs. The Pit Lakes Program incorporates field demonstrations of pit lakes technology with different lake contents and

design, and at various scales (ranging from aquatic mesocosms to pilot and commercial-scale pit lake facilities). These core pit lakes research programs include:

- Syncrude's Base Mine Lake Monitoring and Research Program

Syncrude Canada Ltd. (Syncrude) Base Mine Lake (BML), the first full-scale demonstration Pit Lake in the oil sands region.

Placement of untreated FT into the mined-out pit began in 1995 and was completed in late 2012. The tailings facility was commissioned as BML on December 31, 2012. The objective of the BML Monitoring and Research Plan (MRP) is "to determine, by information collected through monitoring and research, whether or not water-capped fine tailings will be a viable tailings management, remediation and reclamation option at the Mildred Lake Plant Site" (Syncrude, 2025). The outcomes from the Base Mine Lake Monitoring and Research Plan (BML MRP) will be useful for other pit lakes that may contain other tailings materials, including treated tailings. At the same time, the BML MRP establishes a baseline of biophysical data to assess the state of the lake at certification, including water quality and other lake processes. The BML Monitoring Program is designed to track trends, seasonally and annually in the lake, and measures these trends against key performance metrics. The BML Research Program focuses on key scientific questions designed to illustrate the mechanisms and processes that govern the current state of BML, and explain changes detected by the BML MRP.

The BML monitoring and research summary reports are publicly available via the University of Alberta ERA library, including:

- 2025 Pit Lake Monitoring and Research Report:
<https://ualberta.scholaris.ca/items/c8088b76-7afe-4cd0-97c6-2aebc0804f7c>
 - Suncor Lake Miwasin Project
- Lake Miwasin is a scaled down pilot representation of Suncor's commercial scale pit lake at DDA3, the future Upper Pit Lake (UPL), which uses the PASS process - an inline tailings treatment process consisting of coagulant addition followed by a flocculant addition. The goal of the Lake Miwasin pilot study is to monitor and evaluate if the PASS process, when combined with the watershed design for the pilot pit lake, will accelerate the reclamation of a Dedicated Disposal Area (DDA) to a self-sustaining boreal lake ecosystem. Specific objectives of the Lake Miwasin Research and Monitoring Plan (Suncor, 2017) are to test assumptions and address critical gaps in the pit lake design.

The Lake Miwasin project completed Phases 1 and 2 operations by the end of 2018 and is currently in Phase 3. Research and monitoring activities are planned to take place over a 15-year period (2018-2033) to meet the project's goal and objectives. The first 5-year Lake Miwasin research and monitoring program began in 2019 and the second 5-year research and monitoring program was initiated in 2024. Progress updates on the operation and performance of Lake Miwasin were presented to the AER on October 24, 2025.

c) Hybrid Hydraulic Coke Capping

The initial closure and reclamation plan for Pond 6 included replication of the Pond 5 Semi-Anchored Floating Experimental (SAFE) Coke Cap approach. However, regional air quality data indicated that strict application of the Pond 5 approach could result in unacceptable air quality impacts to nearby communities. In response, a technology development initiative was undertaken to evaluate alternative coke placement methods. This work determined that a hydraulically placed coke cap could achieve the functional performance as the Pond 5 SAFE cap while eliminating potential air quality impacts.

An initial hydraulic coke beaching trial was completed in October 2021 to assess placement feasibility and air quality performance. The trial demonstrated technical viability and effective air quality mitigation, but also identified the need for a “raining-in” placement method to distribute coke to areas farther from the shoreline. Additional detail is provided in the Pond 6 Hydraulic Coke Capping Trial Regulatory Summary Report (Suncor, 2021b).

Coke raining-in trials were conducted in 2024 and 2025 to evaluate this placement method and to validate air quality mitigation and geotechnical design assumptions. Data collected during these trials were sufficient to evaluate and de-risk deployment of the technology as part of the Pond 6 closure project. Further information regarding Pond 6 Hydraulic Coke Capping Trial progress in 2025 is provided in Section 3.4.3.

d) Suncor Programs Under Directive 085

Updates on existing Suncor programs related to these research plans and Directive 085 requirements are provided in the pertinent sections of this report.

5. APPENDICES

Appendix A: Concordance Table: 2025 Base Plant Fluid Tailings Management Report

AER Section	DIRECTIVE 085 REQUIREMENTS		Suncor Section
6		FLUID TAILINGS MANAGEMENT REPORTING	
6.2	Include a project site summary of all annual fluid tailings volumes, as per the accounting table in appendix 3.		<u>3.1.1</u>
		FLUID TAILINGS VOLUME REPORTING REQUIREMENTS	<u>3.1</u>
	Show in a figure the approved new and legacy profiles with the actual fluid tailings volume and the three thresholds (profile deviation, total volume, and total volume limit).		<u>3.1.2</u>
	Describe if and how activities have deviated from the fluid tailings management plan and any modifications made to improve performance.		<u>3.1.3</u>
	Identify the management level (as described in the TMF) that the operation's performance falls within.		<u>3.1.4</u>
	If the operation is deemed level 2 or higher, describe the circumstances that led to the increased fluid accumulation and any actions that are being taken to improve fluid tailings management performance.		<u>3.1.5</u>
	Provide a site-wide water balance or provide the reference to another AER report and location where this information can be obtained.		<u>3.1.6</u>
	Provide a water volume (in tabular form) or provide the reference to another AER report and location where this information can be obtained. The table must include, for each treated tailings deposit and fluid tailings pond,		<u>3.1.7</u>
	- total volume of water at the beginning of the reporting period - total volume of water at the end of the reporting period		<u>3.1.7.1</u>
	- characterization of the quality of water		<u>3.1.7.2</u>
	- the volume and quality of water recovered from fluid tailings and runoff from RTR tailings		<u>3.1.7.3</u>
	Provide information about fines that were not captured, which form fluid tailings, including		<u>3.1.8</u>
	- quantity of fines in the ore processed during the reporting period		<u>3.1.8.1</u>
	- quantity of fines in fluid tailings		<u>3.1.8.2</u>
	Estimate the change in fluid tailings volume inventory as a result of settling and consolidation and provide an explanation if inconsistent with the predictions.		<u>3.1.9</u>
	Provide a status map of the current locations and sizes of all fluid tailings ponds and treated deposits for the project.		<u>3.1.10</u>
	Provide tables indicating the volume and composition of each deposit containing fluid tailings (including the volume of fluid tailings, of treated and placed fluid tailings meeting RTR status, and of water)		<u>3.1.11</u>
	Provide tonnage of ore processed and average composition (bitumen, water, solids) or provide the reference to another AER report and location where this information can be obtained.		<u>3.1.12</u>

AER Section	DIRECTIVE 085 REQUIREMENTS	Suncor Section
	For each fluid tailings treatment technology,	<u>3.1.13</u>
	- provide volume of fluid tailings treated and where they were placed	<u>3.1.13.1</u>
	- provide chemical and physical properties of the treated fluid tailings and the water recovered from treatment	<u>3.1.13.2</u>
	- if the technology is not performing as predicted, provide mitigation measures to rectify performance (address any impacts on the deposit performance).	<u>3.1.13.3</u>
	MONITORING REPORTING DATA REQUIREMENTS	<u>3.2</u>
	For each monitoring dataset required in the annual fluid tailings management report,	<u>3.2.1</u>
	identify any uncertainties	<u>3.2.1.1</u>
	explain the dataset adequacy.	<u>3.2.1.2</u>
	For each treated tailings deposit and fluid tailings ponds and their surrounding environment provide monitoring results, including the following:	<u>3.2.2</u>
	a map and tabular data showing the survey locations of tailings deposits	<u>3.2.2.1</u>
	representative cross-sections to illustrate the variation of tailings characteristics;	<u>3.2.2.2</u>
	for each deposit containing treated and placed fluid tailings,	<u>3.2.2.3</u>
	- the measured data on the chosen indicators and confirm performance against the chosen performance criteria;	<u>a)</u>
	- for those fluid tailings deposits that have met RTR status, data to support that it is trending appropriately	<u>b)</u>
	- confirmation that indicator and performance criteria are still appropriate or justify the need to modify them	<u>c)</u>
	Verification that the tailings deposit is meeting the milestones in the fluid tailings management plan	<u>3.2.2.4</u>
	DEPOSIT PERFORMANCE	<u>3.3</u>
	If the deposit is under-performing so as to impact the fluid tailings volume accumulation, then	<u>3.3.1</u>
	describe the contributing causes to under-performance;	<u>3.3.1.1</u>
	describe mitigation and contingency plans from the fluid tailings management plan that have implemented to manage performance	<u>3.3.1.2</u>
	identify any risks that could result from additional fluid fine tailings placement in a deposit	<u>3.3.1.3</u>
	confirm that the indicators, measures, and performance criteria are still acceptable in light of new factors introduced by the mitigation and contingency plans	<u>3.3.1.4</u>
	describe the impacts that tailings performance is having on the mine plan, water management plan, mine reclamation plan, and life-of-mine closure plan.	<u>3.3.1.5</u>

AER Section	DIRECTIVE 085 REQUIREMENTS	Suncor Section
	For tailings previously identified as RTR that are no longer following the trajectory or meeting performance criteria, confirm that the volume has been added to the fluid tailings volume inventory and describe the actions taken to address under-performance.	<u>3.3.2</u>
	TECHNOLOGY: CONTINUOUS IMPROVEMENT AND DEVELOPMENT	<u>3.4</u>
	To assess continuous improvement and innovation, to confirm that fluid tailings treatment technologies are operating as expected, and confirm that operational issues are being managed, the fluid tailings management report must include the following:	
	Description of the treatment technologies' operation over the reporting period, including issues that were encountered and a summary of continuous improvement activities	<u>3.4.1</u>
	- Confirmation that technology development was implemented as proposed in the approved fluid tailings management plan by summarizing relevant activities in the reporting year. - Confirm that technology development will continue to be implemented as stated in the approved fluid tailings management plan.	<u>3.4.2</u>
	A technical report, within the constraints of proprietary information, on the progress of any pilots, prototypes, or demonstrations of fluid tailings technologies	<u>3.4.3</u>
	An assessment, within the constraints of proprietary information, of performance, successes, challenges, and implications for net environmental effects for all treatment technologies. The assessment may incorporate information references to other required reports, such as the tailings research report and groundwater monitoring report submitted under EPEA	<u>3.4.4</u>
	ENVIRONMENTAL MONITORING RESULTS	<u>3.5</u>
	To ascertain that environmental benefits and risk trade-offs anticipated by operators for their tailings technology justification continue to be accurate, and to assess operator performance in managing and minimizing environmental effects and implications associated with fluid tailings management activities, the annual management report must provide a summary of the results from environmental performance monitoring reports related to fluid tailings management activities.	<u>3.5.1</u>
	Reporting under this directive does not relieve an operator from any requirements to report tailings-related environmental information in the relevant EPEA reports for site-wide environmental performance.	
	Consolidation of multiple reporting requirements to the AER will be considered in future editions of this directive.	
6.3	ADDITIONAL REPORTING REQUIREMENTS	<u>4.</u>
	Base Plant Operations Directive 085 Measurement System Plan	<u>4.1</u>
	- MD9 and MD9 South Performance	<u>4.1.1</u>
	- DDA3 Reporting (Section 6.2.2)	<u>4.1.2</u>
	- Measurement of Froth Treatment Tailings (FTT) Placement and Constituents of Potential Concerns (COPC) Identification (Section 6.8.1)	<u>4.1.3</u>
	OSCA Commercial Scheme Approval No. 8535U	<u>4.2</u>
	- Condition 45	<u>4.2.1</u>
	- Condition 57	<u>4.2.2</u>
	- Condition 58	<u>4.2.3</u>
	EPEA APPROVAL NO. 94-03-03, as amended (Section 5.4)	<u>4.3</u>
	- Condition 5.4.1	<u>4.3.1</u>

AER Section		DIRECTIVE 085 REQUIREMENTS	Suncor Section
		- Condition 5.4.2	<u>4.3.2</u>

Appendix B: Abbreviations & Acronyms

Acronym/Term/ Chemical Element	Definition
2022 TMP	2022 Tailings Management Plan
ADW	Accelerated Dewatering
AER	Alberta Energy Regulator
Base Plant	Suncor Energy Inc.'s Base Plant Oil Sands Processing Plant and Mine
GBCPT	Ball Gamma Cone Penetration Test
BML MRP	Base Mine Lake Monitoring and Research Plan
COPC	Constituents Of Potential Concern
COSIA	Canada's Oil Sands Innovation Alliance
cps	count-per-second
CWR	Clay-to-Water Ratio
CWTS	Constructed Wetland Treatment System
DDA	Dedicated Disposal Area
DDA1	Dedicated Disposal Area 1
DDA3	Dedicated Disposal Area 3
Directive 085	Directive 085 - Fluid Tailings Management for Oil Sands Mining Projects (AER 2017)
EOML	End of Mine Life
EPEA	Environmental Protection and Enhancement Act
HDPE	High-Density Polyethylene
FBRM	Focused Beam Reflectance Measurement
Ft	feet
FT	Fluid Tailings
FTT	Froth Treatment Tailings
GCPT	Gamma Cone Penetration Test
Lake Miwasin	Formerly Demonstration Pit Lake (DPL)
m	meter
Masl	meters above sea level
MD9	Mine Dump 9
MD9 South	Mine Dump 9 South
Meq/L	Milliequivalent/litre
mg/L	milligrams/litre
Mm ³	Million cubic metres
MRP	Monitoring Research Plan
MSP	Base Plant Operations Directive 085 Measurement System Plan (Suncor, 2025)
Mt	Million tonnes
NORM	Naturally Occurring Radioactive Material
OSCA	Oil Sands Conservation Act
PASS	Permanent Aquatic Storage Structure
QA/QC	Quality Assurance/Quality Control
RFR	Ready for Reclamation
rMFT	Remnant Mature Fine Tailings

Acronym/Term/ Chemical Element	Definition
RTR	Ready to Reclaim
SAFE	Semi-Anchored Floating Experimental
SD8	Sand Dump 8
SD9	Sand Dump 9
STP	South Tailings Pond
Suncor	Suncor Energy Inc.
TD	Tailings Directive
TDS	Total Dissolved Solids
TFT	Thin Fine Tailings
TMF	Tailings Management Framework
TSS	Total Suspended Solids
UPL	Upper Pit Lake
ug/L	Micrograms/litre
uS/cm	Micro siemens/centimeter
WSP	WSP E&I Canada Limited
Wt. %	Weight Percent

Appendix C: References

- AER. (2022). *Directive 085 - Fluid Tailings Management for Oil Sands Mining Projects*. Calgary: Alberta Energy Regulator.
- AER. (2025). *Environmental Protection and Enhancement Act, R.S.A. 2000, c.E-12, as amended, Approval No. 94-03-08*. Calgary: Alberta Energy Regulator.
- AER. (2025). *OSCA Approval No. 8535V*. Calgary: Alberta Energy Regulator.
- COSIA. (2015a). *GUIDELINES FOR TAILINGS DEPOSIT SAMPLING AND MEASURING TOOLS*. CANADIAN OILSANDS INNOVATION ALLIANCE (COSIA).
- COSIA. (2015b). *Guidelines for Determining Oil Sands Fluid Tailings Volumes*. Canada's Oil Sands Innovation Alliance (COSIA).
- COSIA. (2025). *2024 COSIA Land EPA - Mine & In Situ Research Report*. Canadian Oil Sands Innovation Alliance (COSIA).
- GOA. (2015). *Lower Athabasca Region - Tailings Management Framework for the Mineable Athabasca Oil Sands*. Calgary: Government of Alberta (GOA).
- GOA. (2018). *Dam and Canal Safety Directive*. Calgary: Government of Alberta (GOA).
- Suncor. (2016a). *Millennium Operational Amendment (MOA) Application. Application No. 1857270*. Calgary: Suncor Energy Inc.
- Suncor. (2016b). *Base Plant Application for the Draft Tailings Directive. Application No, 1857274*. Calgary: Suncor Energy Inc.
- Suncor. (2016c). *Base Plant Application for the Millenium Operational Amendment (MOA) and Draft Tailings Directive Application Project Update. Application No, 1890348*. Calgary: Suncor Energy Inc.
- Suncor. (2017). *Suncor Demonstration Pit Lake Research and Monitoring Plan*. Calgary: Suncor Energy Inc.
- Suncor. (2018). *Appendix G - Groundwater Monitoring Program (Revision 2)*. Calgary: Suncor Energy Inc.
- Suncor. (2018). *Appendix G - Groundwater Monitoring Program (Revision 2)*. In: *EPEA Approval No. 94-02-00 Renewal Application*. Calgary, AB.
- Suncor. (2018a). *Wetland and Shallow Lake Viability Research Plan for Pond 5, Pond 6, and Pond 7*. Calgary: Suncor Energy Inc.
- Suncor. (2018b). *DDA3 Terrestrial Research and Implementation Plan*. Calgary: Suncor Energy Inc.

Suncor. (2018c). *DDA3 Aquatic Research and Implementation Plan*. Calgary: Suncor Energy Inc.

Suncor. (2019). *Demonstration Constructed Wetland Treatment System, Research and Monitoring Plan*. Calgary: Suncor Energy Inc.

Suncor. (2020a). *2019 Base Plant Fluid Tailings Management Report*. Calgary: Suncor.

Suncor. (2020b). *DDA3 Terrestrial Research and Implementation Plan Interim Report*. Calgary: Suncor Energy Inc.

Suncor. (2021a). *REQUEST FOR MODIFICATION OF DDA3 RTR CRITERIA*. Calgary: Suncor Energy Inc.

Suncor. (2021b). *Pond 6 Hydraulic Coke Capping Trail Regulatory Summary Report*. Calgary: Suncor Energy Inc.

Suncor. (2022b). *2022 Tailings Management Plan Amendment Application for Base Plant*. Calgary: Suncor Energy Inc.

Suncor. (2022c). *Base Plant Mine Reclamation Plan for 2023 to 2025*. Calgary: Suncor Energy Inc.

Suncor. (2022d). *Base Plant 2022 Life of Mine Closure Plan. Submitted to AER as Appendix 1A to the 2022 Tailings Management Plan Amendment Application September 28, 2022*. Suncor.

Suncor. (2023). *Pond 1A and 2/3 Extended Use and Update to Tailings Management*. Calgary: Suncor Energy Inc.

Suncor. (2023a). *Base Plant and Fort Hills - 2022 Wetland Research Plan Annual Report*. Calgary: Suncor Energy Inc.

Suncor. (2023b). *2022 Groundwater Monitoring Summary Report*. Calgary: Suncor Energy Inc.

Suncor. (2024a). *Oil Sands Conservation Act Approval No. 8535S, as amended. Pond 1A and 2/3 Extended Use and Update to Tailings Management Plan*. Calgary: Suncor Energy Inc.

Suncor. (2024b). *Pit Lake Research and Development Report*. Calgary: Suncor Energy Inc.

Suncor. (2025). *Base Plant Operations Directive 085 Measurement System Plan*. Calgary: Suncor Energy Inc.

Suncor. (2025a). *Groundwater Monitoring Summary Report*. Calgary: Suncor Energy Inc.

Suncor. (2025b). *Operating Criteria Report*. Calgary: Suncor Energy Inc.

Synchrude. (2025). *2025 Pit Lake Monitoring and Research Report (Base Mine Lake Demonstration Summary: 2012-2024)*. Fort McMurray, AB.: Synchrude Canada Ltd.

Appendix D: Suncor Sharing on Tailings

2025 Annual Tailings Forum

DAY 1 – BASE PLANT TOUR

Date and location: September 3, 2025; Clearwater Suites Hotel Conference Room, Fort McMurray

Event type: Presentations (field tours cancelled due to smoke)

Content: Overview of mining, extraction and tailings treatment processes, and 2024 updates related to tailings management, closure and reclamation activities at Base Plant and Fort Hills mines

Objective: Share information on Fort Hills and Base Plant tailings operations, monitoring, results and plans, and to provide an opportunity for Suncor staff to gather feedback and input from Indigenous community members and Indigenous government representatives. An opportunity to foster greater trust and understanding between participants.

ATTENDEES:

Indigenous community member and/ or Indigenous government representation from Athabasca Chipewyan First Nation, Fort McKay First Nation, Fort McMurray 468 First Nation, McMurray Métis and Mikisew Cree First Nation.

AGENDA*:

Time	Item
11:30	Community members and Indigenous & Community Relations meet at <i>Clearwater Suite Hotel</i> , Fort McMurray
11:30 – 12:00	Load bus at <i>Clearwater Suite Hotel</i> and Travel to Suncor Base Plant
12:00 – 12:15	Security Check-in, Transfer to Site Shuttle and Travel to Lake Miwasin
12:15 – 12:30	Shuttle to Lake Miwasin
12:30 – 13:00	Arrival at Lake Miwasin Refreshments and Health Break Opening Prayer Introductions and Welcome - Why we're here, overview of agenda, housekeeping General Mine and Tailings Overview - Tailings Management Reports Distribute PPE
13:00 – 14:30	Lake Miwasin Information Session and Walking Tours
14:30 – 14:45	Load Site Shuttle and Travel to Base Plant Security, Transfer to Bus
14:45 – 15:15	Bus back to <i>Clearwater Suite Hotel</i> , Fort McMurray

**Note – Lake Miwasin tour and site visit cancelled due to smoke. Information session was held at Clearwater Suite Hotel instead.*

DAY 2 – SYNCRUDE MILDRED LAKE TOUR

Date and location: September 4, 2025, Syncrude Mildred Lake Building 41B

Event type: Presentations and field tours

Content: Overview of East-in-Pit Valley and Base Mine Lake Demonstration reclamation activities and development history

Objective: Provide 2024 updates related to tailings management, closure and reclamation activities at Mildred Lake and Aurora North mines, provide overview and site visit of Base Mine Lake demonstration, and to provide an opportunity for Suncor staff to gather feedback and input from Indigenous community members and Indigenous government representatives. An opportunity to foster greater trust and understanding between participants.

ATTENDEES:

Indigenous community member and/ or Indigenous government representation from Athabasca Chipewyan First Nation, Fort McKay First Nation, Fort McMurray 468 First Nation, McMurray Métis and Mikisew Cree First Nation.

AGENDA:

Time	Item
08:30	Community members and Indigenous & Community Relations meet at <i>Clearwater Suite Hotel</i> , Fort McMurray
08:30 – 09:00	Load bus at <i>Clearwater Suite Hotel</i> and Travel to Syncrude Mildred Lake Building 41B
09:00 – 09:30	Arrival at 41B Security Check-in Refreshments and Health Break PPE Distribution Brief Overview of the Day
09:30 – 09:45	Transfer to Site Shuttle and travel to Base Mine Lake
09:45 – 11:30	Arrival at Base Mine Lake Base Mine Lake Info Session and Walking Tours
11:30 – 11:45	Shuttle back to 41B
11:45 – 12:30	Arrival at 41B, Facilities Break, Lunch
12:30 – 13:45	Summary, Sharing Circle, and Closing Remarks • Summary of the 2 days • Sharing Circle with participants, reflections • Closing remarks by leadership Closing Prayer
13:45 – 14:15	Load Bus and Travel Back to <i>Clearwater Suite Hotel</i>
14:15	Arrive at <i>Clearwater Suite Hotel</i> , conclude event

MEETING SUMMARY:

The 2025 Suncor-Syncrude Annual Tailings Sharing Session (the “tailings forum”) was held September 3 and 4, 2025, in Fort McMurray. The first day involved presentations and open dialogue at

the Clearwater Suites Hotel (the scheduled Lake Miwasin tour was cancelled due to regional smoke), while the second day included a visit to Mildred Lake and Base Mine Lake.

On Day 1, Suncor presented the tailings life cycle and management, and treatment technologies. Questions centered on containment integrity, groundwater protection, and regulatory design thresholds. Participants referenced the recent seepage incident at another operator and asked how Suncor ensures such events cannot occur on its sites; Suncor described reinforced monitoring, daily inspections, and increased AER scrutiny. Discussion also included coke capping techniques being trialed at Base Plant's Ponds 5 and 6 and community concerns regarding dust, air quality, and long-term stability. Suncor committed to sharing additional details on the Pond 6 pilot in the 2026 tailings forum, seeking to include water-quality and geotechnical experts.

Participants voiced opposition to water-capped tailings, expressing strong preferences for terrestrial reclamation. Some participants asked about newer tailings treatment options, reiterating that AER's approval process still requires submission of alternative technologies; Suncor confirmed that current Suncor operations rely primarily on PASS treatment.

Suncor presented posters on the Lake Miwasin Research and Monitoring Program, including noting that groundwater monitoring wells show no seepage from the clay-sealed basin. Community members questioned hydrology, littoral-zone design, and wetland efficiency. Discussions also explored the lake's ecological recovery – presence of frogs, plankton communities, and snowmelt contributions to water chemistry.

Broader dialogue blended technical subjects with traditional perspectives on the "land's memory," climate change, vanishing medicines, and challenges in reclaiming cultural land value. Many participants wished for faster reclamation timelines and suggested chemically accelerating tailings settling to enable earlier land use, acknowledging possible trade-offs with cost and emissions. Several Indigenous communities requested a written update on how community-led technical review recommendations had been incorporated into Lake Miwasin program planning, recalling specific Suncor commitments around Aboriginal Performance Metrics and community-based monitoring for the Lake Miwasin program. McMurray Metis requested that the response be detailed and laid out on a commitment-by-commitment basis verses a generalized response. Suncor agreed to provide this follow-up in writing. Suncor also committed to sharing its responses to questions and actions from the 2025 tailings forum with all the forum participants.

Day 2 began with an overview of Syncrude's Composite Tailings process and closure planning. Participants sought clarification on materials balance, terminology, and status of Base Mine Lake. Syncrude confirmed no new tailings have entered that lake since 2012 and committed to improving report table labelling to better distinguish measured from projected volumes.

Presentations were followed by a tour of Base Mine Lake. Participants walked reclamation trails from

upland forest areas to the lakeshore, observing vegetation health and wildlife, and being able to see live samples of various insects living in the lake. Elders and land users noted visible progress – trees, mushrooms, nesting birds, and animal tracks – describing it as encouraging evidence of regrowth. Technical staff explained soil stockpiling and re-use methods, natural colonization of insects, and spontaneous seeding by native species. Questions at Base Mine Lake focused on aquatic ecosystem indicators, insect health, water chemistry, potential releases of process-affected water, and ongoing bitumen mat issues. Syncrude described incremental improvements in water quality and detailed mitigation of gas bubble sheens caused by microbial breakdown of residual bitumen. Community members asked whether complete removal of bitumen was achievable; Syncrude responded that “zero” is not technically feasible due to physical limitations, though continuous removal at areas where the bitumen mats exist is underway. Participants expressed continued concern about bird safety and were assured that deterrents will be discontinued once risks diminish. There was also discussion about tailings settling timelines the difference between Lake Miwasin’s PASS approach and Base Mine Lake treatment. Finally, some discussion centered around water quality changes as a result of dilution versus other treatment processes.

The tailings forum closed with a sharing circle for participants to share their reflections. Some participants said the tour “filled [them] with hope,” witnessing how vegetation and wildlife were returning. Participants also noted reclamation “will never be exactly the same” yet acknowledged visible improvement and commitment from environmental staff. Elders emphasized intergenerational teaching and inclusion of youth in future sessions. Participants appreciated the in-person format, accessibility improvements from previous years, and the open conversations, and asked that future forums continue hands-on, land-based visits with dedicated time at Lake Miwasin. Many participants including trappers and traditional land users raised concerns around the environmental, cultural, and spiritual losses experienced through industrial development, and whether they would be able to use these areas in the future, and when. Industry representatives were thanked for engaging directly and answering questions, with several participants emphasizing the importance of transparency about how community feedback is recorded and responded to.

FORUM OUTCOMES AND FUTURE ENGAGEMENTS:

The 2025 tailings forum maintained strong Indigenous participation and open dialogue. Compared with 2024, additional technical detail was provided, with greater focus on groundwater protection, monitoring methods, and innovations such as coke capping and bitumen-mat removal. Participants continued to express frustration with the slow pace of closure but recognized tangible progress at Base Mine Lake and Lake Miwasin.

Feedback reaffirmed that future forums should emphasize reclamation and closure outcomes rather than production or operations data. Suncor and Syncrude committed to continuing annual,

in-person, field-based sessions. Suncor committed to include a Lake Miwasin tour and additional Pond 6 coke capping information in a future tailings forum. Based on feedback from Indigenous participants, Suncor/Syncrude will seek to be clearer in Tailings Management Report tables in future years that “Projected Measured Volumes” at Base Mine Lake means total volumes.

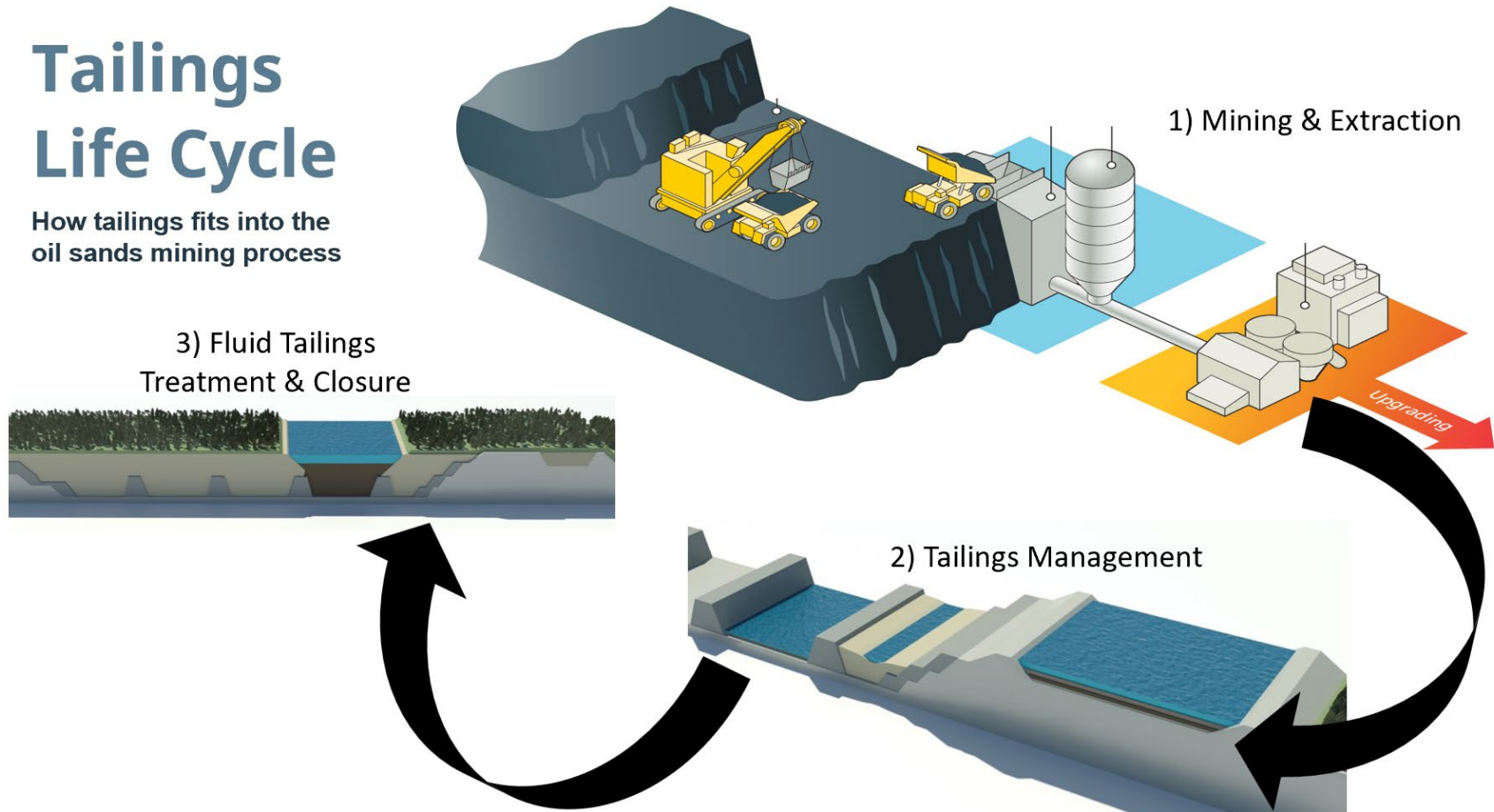
PRESENTATION MATERIAL AND HANDOUTS:

2024 D085 Tailings Operations Summary



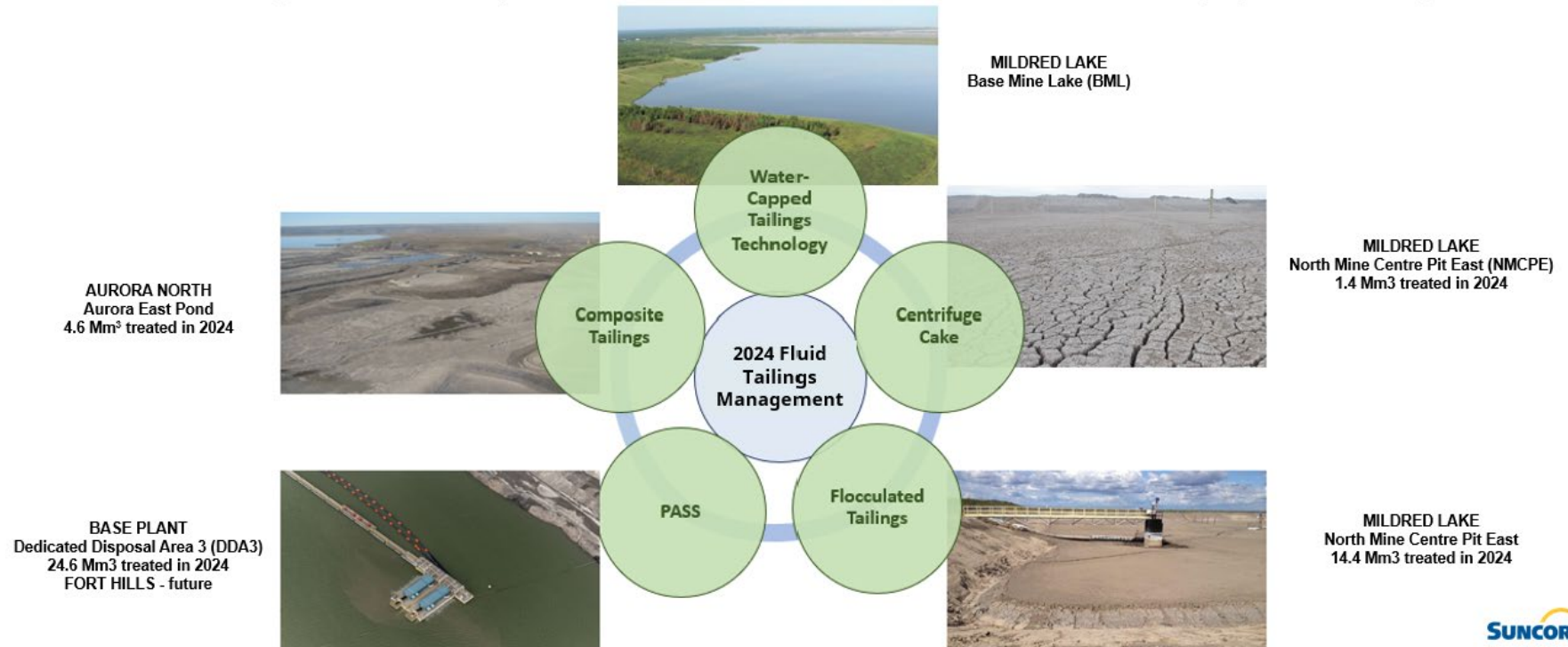
Tailings Life Cycle

How tailings fits into the oil sands mining process



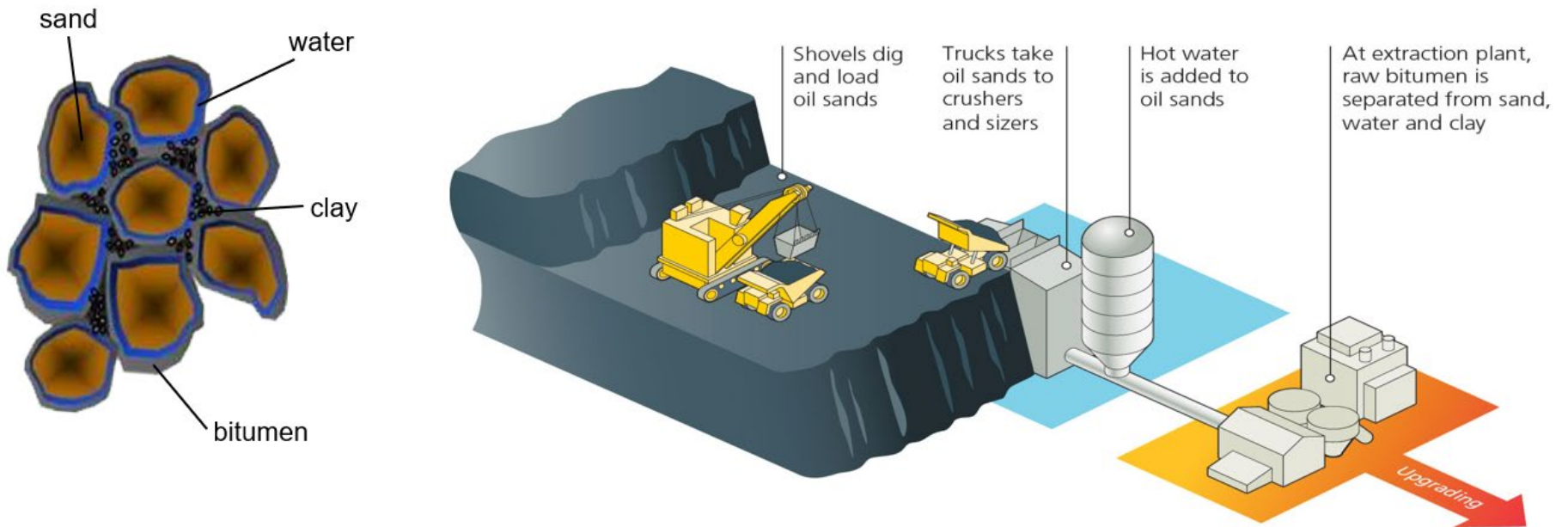
Fluid Tailings Management

- Fluid tailings management is based on decades of research and learnings from field deployment.
- A suite of technologies to meet site specific conditions and closure outcomes is available for deployment, including:

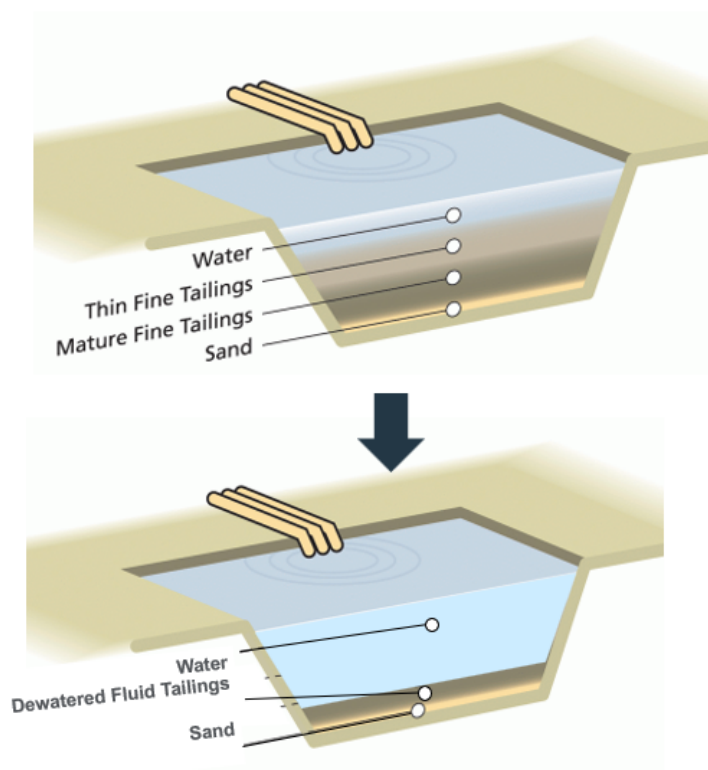


Mining & Extraction

- **Oil sands:** A naturally occurring mixture of sand, clay or other minerals, water and bitumen.
- **Tailings:** material remaining after bitumen is recovered in extraction – mixture of water, clay, sand and residual hydrocarbons



Tailings Facilities



- Tailings facilities are used to store water that will be recycled back into our operations.
- The majority of tailings settle quickly and much of that sandy material is used for construction/backfilling the mine and is relatively easy to reclaim.
- Fluid tailings are the most challenging part of tailings management. They represent less than 10% of the mineral from the oil sands.
- There are various processes that can be used to convert these fluid tailings into a material that can be reclaimed.

Suncor Base Plant

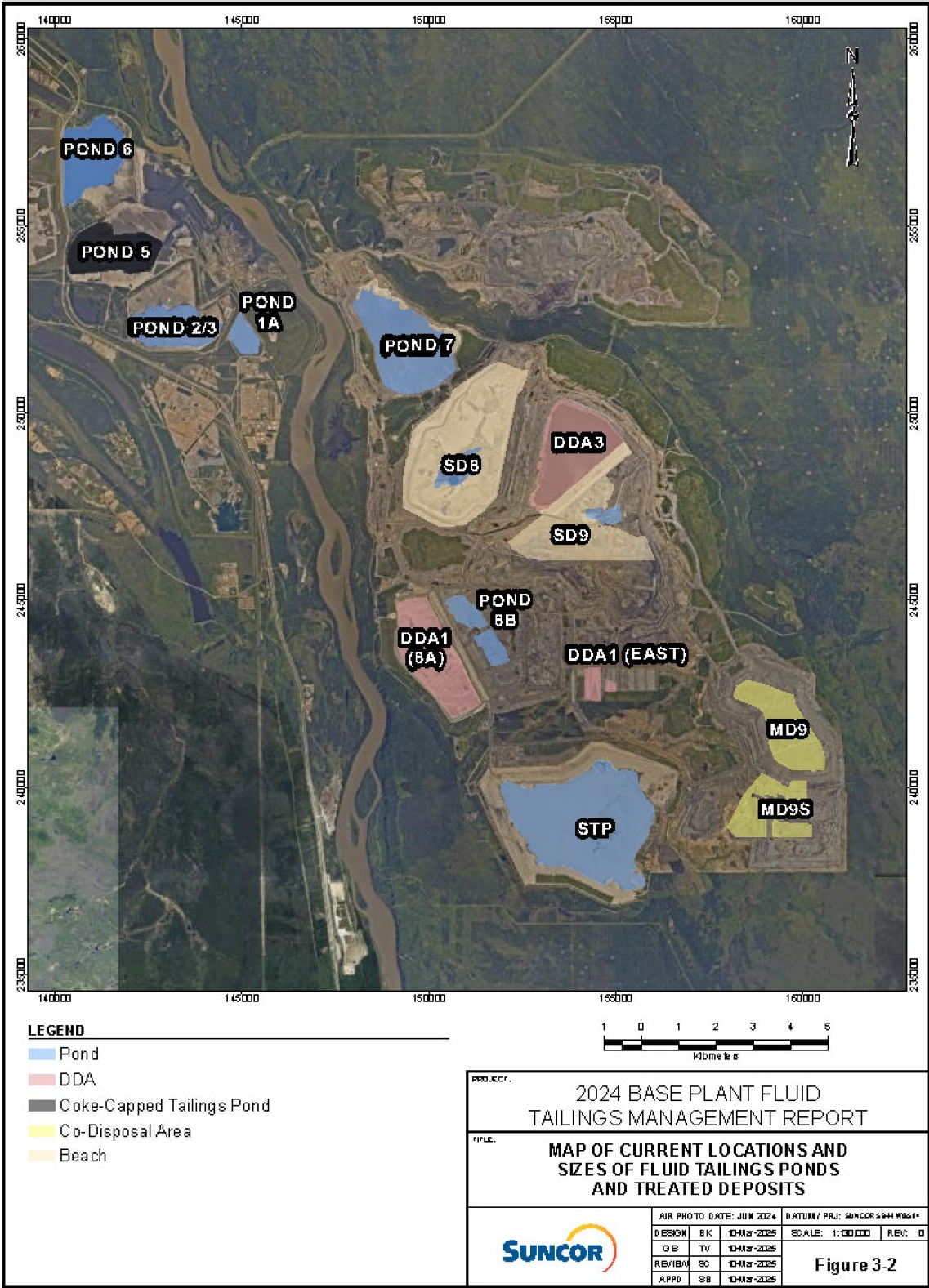


Table 3-18: Volume and Composition of Fluid Tailings in Each Deposit

Assets	FT Volume End of 2024 (Mm3)	Water (Wt. %)*	Mineral (Wt. %)	Bitumen (Wt. %)
Pond 1A	10.4	56.9	38.6	4.5
Pond 2/3****	36.9	34.5	59.3	6.3
Pond 6*****	32.4	31.5	65.8	2.7
Pond 7	79.2	44.0	52.9	3.1
Pond 8B*****	10.6	57.0	41.1	1.8
STP	104.8	62.6	35.8	1.7
SD8	1.8	59.7	36.4	3.9
SD9	0.8	48.0	49.4	2.6
DDA3	0.7	76.0	22.1	1.9
Total	277.7	-	-	-
RTR FT				
Pond 5**	30.4	22.8	74.7	2.5
DDA3	93.0	59.3	38.4	2.2
MD9***	0.5	29.3	69.2	1.6
MD9S	0.0	12.8	86.0	1.2
Total	123.7	-	-	-

Notes:

* Weight Percent

** Pond 5 data from 2019 RTR status, continued settlement monitoring, assessment no longer required.

*** MD9 data from 2024. MD9 is no longer receiving treated tailings and does not require an assessment.

**** Pond 2/3 data from 2021. Assessment cycle is every 2-3 years. See section 3.1.3.

***** Pond 6 data from 2022. Assessment cycle is every 2-3 years.

***** Pond 8b composition data from 2022. Assessment is no longer completed due to access limitations. FT volume from 2024.

Figure 5-1: Table 3-18 from the 2024 Suncor Base Plant Tailings Management Report. Note: RTR FT is treated tailings.

In 2024 Base Plant treated 24.6 Mm3 of fluid tailings (FT) with the Permanent Aquatic Storage Structure (PASS) process. The PASS process utilizes the addition of coagulant and flocculant to expedite the dewatering process and consolidation of the fluid tailings. Once treated the through the PASS system the treated tailings are deposited into DDA3 where it will be capped with water as part of the closure landscape.

In 2024 Base Plant began a hydraulic coke capping trial at Pond 6 to de-risk the raining in technology including validation of the expected no planned air quality deterioration and the geotechnical design assumptions related to coke capping of the tailings in Pond 6. Further work is still required and will be continued in 2025.

Syncrude Mildred Lake

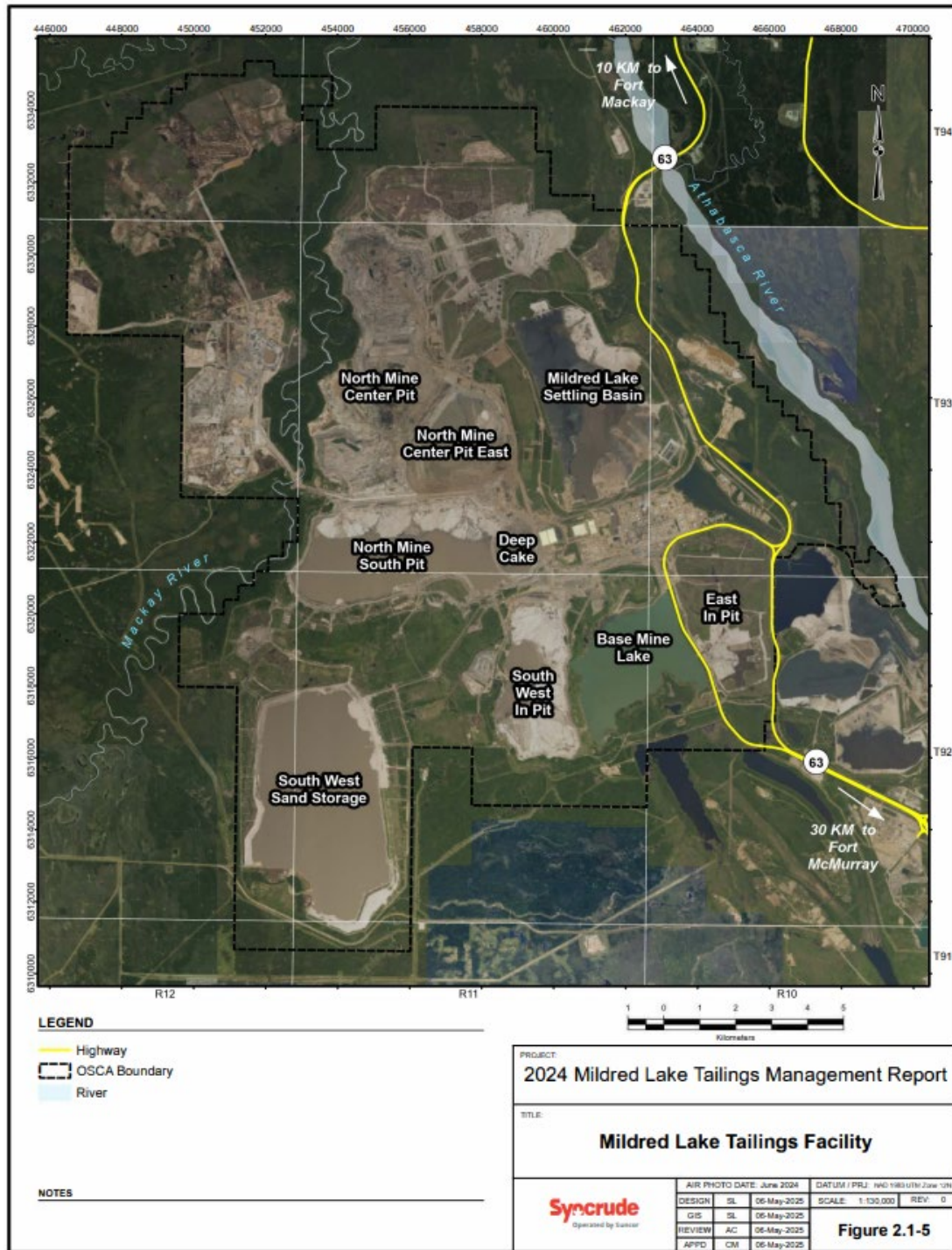


Table 2.1-13: Volume and Composition of Fluid Tailings by Deposit

Facility	Measured FT Volume ¹ (Mm ³)	FT Mineral (Wt. %)	Projected Year-End FT Volume ² (Mm ³)	RTR Volume ³ (Mm ³)	RTR Mineral (Wt. %)
MLSB	110.1	58.4	109.9	N/A	-
SWSS	149.1	38.8	149.1	N/A	-
BML (WIP)	166.7	-	166.8	N/A	-
SWIP	18.2	43.2	12.7	0.8	69.3
NMSP	92.1	39.1	93.0	11.8	71.6
NMSPE Deep Cake	37.0	54.7	37.9	36.8	54.8
NMCP-E	23.0	38.2	33.0	5.2	55.6
Total	596.2		602.5	54.6	

1. Volumes as measured, including RTR volume
2. Estimated year-end FT volume including RTR volume
3. Measured 2024 volumes based on RTR criteria of 65% solids by weight for CT and RTR criteria of 50% solids by weight for cake

Figure 5-2: Table 2.1-13 from the Syncrude Mildred Lake Tailings Management Report.

In addition to internal research and development projects, Syncrude participates in activities that support regional research initiatives through the Canada's Oil Sands Innovation Alliance (COSIA) and Pathways Alliance (Pathways).

Syncrude is committed to responsible oil sands development, which includes continuous improvement of our environmental performance, meeting or exceeding regulatory requirements and progressively reclaiming the land disturbed by our operations to meet mine closure objectives. In order to ensure the land can be returned to a stable, safe condition that can support biologically self-sustaining communities of plants and animals, Syncrude has a dedicated research and development department with a significant focus on tailings deposition, deposit management, reclamation and closure.

Composite tailings (CT), centrifuge cake, and flocculated tailings (Floc-T) are the currently approved fluid tailings (FT) treatment technologies in commercial-scale operation at Mildred Lake. In 2024, 1.4 Mm³ of fluid tailings were treated through the centrifuge cake plant, creating 1.2 Mm³ of deposit in NMSPE and NMCP-E and 14.4 Mm³ of fluid tailings through the floc-T plant, creating 6.4 Mm³ of deposit in NMCP-E. In addition, Syncrude has incorporated co-deposition of different tailings materials into its plan. Tailings co-deposition is a strategy which involves the deposition of more than one tailing product into a single containment structure, without separation by divider dykes.

Mildred Lake is operating at management level 1, as per the Tailings Management Framework for the Mineable Athabasca Oil Sands (TMF) (Alberta Government, 2015) and is in line with the approved FT profile. There are no circumstances to report for volume above the approved profile for 2024.

Table 2.1–15: Volumes of Treated Fluid Tailings

FT Feed to Centrifuge Plant	Mm ³	1.4
Cake Volume (NMSPE/NMCPE)	Mm ³	1.2
FT Feed to Floc-T Plant	Mm ³	14.4
Floc-T (Volume NMCPE)	Mm ³	6.4

An annual tailings deposit measurement program was completed in 2024. The measured volume of fluid tailings at Mildred Lake was 596.2 Mm³, including 54.6 Mm³ of Ready to Reclaim (RTR) tailings. The Mildred Lake site is operating within the parameters of Management Level 1 which is described in the Tailings Management Framework (TMF) as representing conditions wherein projects are operating in line with approved FT volume profiles. The measured 2024 FT inventories are below the approved new and legacy fluid tailings profiles.

Syncrude Aurora North



Table 2.1-14: Volume and Composition of Fluid Tailings by Deposit

Facility	Measured FT Volume ¹ (Mm ³)	FT Mineral (Wt. %)	Projected Year-End FT Volume ² (Mm ³)	RTR Volume ³ (Mm ³)	RTR Mineral (Wt. %)
ASB	80.0	53.2	82.1	N/A	-
AEP	59.4	43.1	63.6	2.8	39.7
ACPN	15.6	22.4	16.2	N/A	-
Total	155.0		161.9	2.8	

1. Volumes as measured, including RTR volume
2. Estimated year-end FT volume including RTR volume
3. Measured 2024 volumes based on RTR criteria of 65% solids by weight for CT and RTR criteria of 50% solids by weight for cake

Figure 5-3: Table 2.1-14 from the 2024 Syncrude Aurora North Tailings Management Report.

Note: RTR FT is treated tailings.

Composite tailings (CT) is the currently approved FT treatment technology in commercial-scale operation at Aurora North. In 2024, 4.6 Mm³ of FT were treated through the CT plant, producing 17.3 Mm³ of CT beach deposited in Aurora East Pit (AEP). An annual tailings deposit measurement program was completed in 2024. The measured volume of FT at Aurora North was 155.0 Mm³, including 2.8 Mm³ of Ready to Reclaim (RTR) FT. The Aurora North site is operating within the parameters of Management Level 1. (The measured 2024 FT is below the approved new FT profile. The measured 2024 FT inventories are below the approved legacy tailings profile.

Suncor Fort Hills

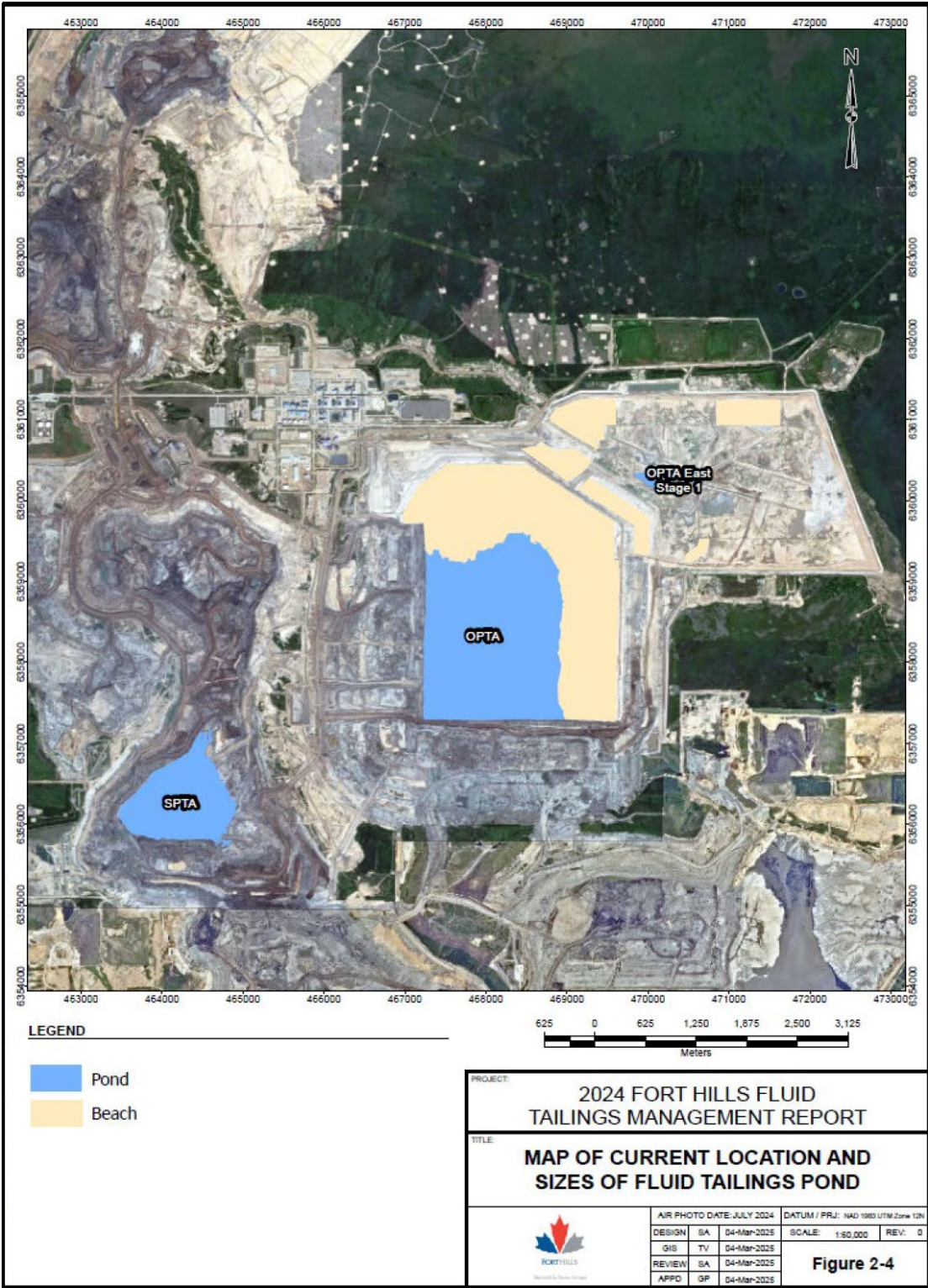


Table 2-11: Volume and Composition of Fluid Tailings in Each Deposit

Assets	FT Volume (End of July 2024)	Water	Mineral	Bitumen
	(Mm ³)	(Wt. %)	(Wt. %)	(Wt. %)
OPTA	74.6	57.3	41.1	1.6
OES1*	0.0	0.0	0.0	0.0
SPTA*	7.7	57.3	41.1	1.6

*Estimated as there was no measurement due to low water cap in the ponds

Fort Hills started operations in 2018. It has currently three operational tailings ponds, OPTA, OPTA East and South Pit Tailings Area. Total Fluid Tailings in year 2024 was 82 Mm³. The Fort Hills site is operating within the parameters of Management Level 1 which is described in the Tailings Management Framework (TMF) as representing conditions wherein projects are operating in line with approved profile FT volume growth. The measured 2024 FT is below the approved new FT profile.

Fort Hills has not yet started Fluid Tailings treatment which is planned to start in 2026 utilizing PASS technology.