TSM Verification Summary Report

Facility Information

Name of company	Suncor Energy
Name of facility	Syncrude
Address	150 – 6 Ave SW, Calgary AB T2P 3E3
Country of operation	Canada
Products/metals produced on site	Synthetic crude oil
Types of operations included in scope:	
Mining	☒
Milling	☐
Smelting	☐
Hydrometallurgical	☐
Refining	☐
Other (*please explain*)	
Types of infrastructure included in scope:	
Roads	☐
Rails	☐
Ports	☐
Other (*please explain*)	

Verifier and Verification Information

Verification firm	Safety Science Management Consulting Inc.
Confirmation that all verifiers involved in the verification are accredited TSM verifiers	*Yes* Robert Duda is a Verification Service Providers (VSP) certified by the Mining Association of Canada and meets the Terms of Reference for Verification Service Providers established by the Mining Association of Canada.
Date(s) of verification activities (dd/mm/yyyy – dd/mm/yyyy)	05/09/2023 – 14/12/2023, with on-site interviews 15/11/23023 – 16/11/2023
Verification period	2023 with the consideration of 2022 operating data

Summary of the verification methodology	The Verification of Syncrude's 2023 Self-Assessments was completed by Robert Duda of Safety Science Management Consulting Inc. in accordance with MAC's requirements for completing TSM Verifications. Methodology included: document/record review, interviews and site visit/observation.
Summary of the verification activities	The verification activities undertaken include: 1. Preplanning information request that includes request of Syncrude self-assessment. 2. Evidence was collected through interviews with TSM contacts, facility and corporate personnel. Documents and records were reviewed, interviews performed, and a site/observation was performed. 3. The evidence / information collected was assessed against the criteria set out in the performance standards protocols. A sample of community of interest were contacted and a discussion of engagement and dialogue was performed. 4. Verification reports were prepared.
Was a site visit conducted?	Yes

Summary of Findings

Criterion	Rating C, B, A, AA or AAA (unless otherwise indicated)	Examples of Evidence Consulted
Biodiversity Conservation Management		
1. Corporate biodiversity conservation commitment, accountability, and communications	AAA	• Syncrude demonstrated extensive commitment to biodiversity through formal programs that are submitted to regulatory agencies • Syncrude has a formalized standard Operational Integrity Management System 6.5 element Environmental Protection that outlines commitments and is signed and endorsed by senior executives • Demonstrated membership of COSIA and Wood Buffalo Environmental Association; partnerships and engagement activities related to biodiversity and environmental protection with Oil Sands Monitoring program and Alberta Conservation Association • Reporting on biodiversity is extensive through communities of interest, report on sustainability, disclosures and participation in industry associations

		• Internal review is performed through business plans, sustainability reporting review activities, planning activities, project and permitting requirements
2. Biodiversity conservation planning and implementation	AAA	• Syncrude demonstrated biodiversity planning is integrated into business plans, strategies, permitting and regulatory approvals • Communication and engagement on biodiversity was demonstrated as extensive through project consultations, community engagement activities, report on sustainability • Several biodiversity programs were demonstrated including bird contact monitoring program and reporting • Internally, biodiversity is communicated through several awareness training programs including extensive wildlife communication activities • External engagement with stakeholders including regulatory authorities was demonstrated to have driven direction of the biodiversity program
3. Biodiversity conservation reporting	AAA	• Syncrude has a number of reporting mechanisms including sustainability reporting and disclosure programs that include environment and biodiversity • Demonstrated several industry participation activities that include providing information including biodiversity data • Syncrude participates in COSIA mine site reclamation research reporting and provides information and data • Ongoing engagement with communities and stakeholders was demonstrated; supplementary information requests used for feedback and engagement • Biodiversity performance featured in 2023 Report on Sustainability https://sustainability-prd-cdn.suncor.com/-/media/project/ros/shared/documents/reports-on-sustainability/2023-report-on-sustainability-en.pdf?modified=20230921204601
Climate Change		
1. Corporate climate change management	A	• Suncor / Syncrude prepared an externally communicated Climate Report 2023 that outlines commitments and information on climate related activities • Suncor/Syncrude have made extensive commitments related to climate change including reduction in GHG emissions, from both its own operations and from within its value chain, by 2030, and net zero GHG emissions by 2050 • Suncor/Syncrude have defined performance metrics as outlined in the 2023 Climate Report • Commitment to action is demonstrated through the Pathways Alliance, business projects update

		• Specific commitments have been demonstrated including 'from 2021 to 2025, we expect to spend approximately 10% of our annual capital budget, on average, on projects aimed at lowering our emissions and advancing low-carbon energy offerings' • Additional commitments include new business opportunities and expanding low-carbon energy through technological advancement and significant collaboration • The verifier noted that Suncor / Syncrude demonstrated a supplier code of conduct and recommended to further develop the climate strategy into the supply chain
2. Facility climate change management	**AA**	• Syncrude has comprehensive energy and GHG management systems to monitor, track and adjust operations for energy use and emissions management • Energy and GHG is stewarded daily, weekly and monthly through GHG stewardship report which is integrated into corporate scorecard and operations stewardship reports • Energy consumption is tracked by commodity and across the sites and is managed in an inventory and GHG tracking tools • Online equipment was demonstrated to monitor and track emissions • Annual external verification completed as part of TIER regulatory requirement • Energy management systems are the subject of internal and external verification including Unit Internal Assessment (UIA) and Hydrocarbon Control Practice (HCP) • Verifications can occur from Alberta Environment as part of QAQC • Dialogue with communities of interest occurs regularly through multiple efforts and approaches, including the Suncor Energy Foundation and its partner engagements, as well as through engagements with nonprofit environmentally-focused organizations • Verifier noted opportunities regarding offsets and COI partnerships to achieve higher performance level
3. Facility performance targets and reporting	**B**	• Syncrude has facility level targets and Corporate GHG targets are incorporated into business planning • Syncrude demonstrated the Suncor Corporate level goal influences the facility level and facilities all contribute to corporate goals • Alberta Government has developed formal quantification methodologies under TIER which are followed by each company and third-party audited each year using ISO 14064-3 • Federal GHGRP (Greenhouse Gas Reporting Program) and provincial TIER, technical guidance for the measurement of GHGs (Standard for Completing Greenhouse Gas Compliance Reports)

		• Climate performance reported through 2023 Climate Report https://sustainability-prd-cdn.suncor.com/-/media/project/ros/shared/documents/climate-reports/2023-climate-report-en.pdf?modified=20230922220133
Crisis Management and Communications Planning - CORPORATE (YES or NO)		
1. Crisis Management and Communications Preparedness	Yes	• Commitment clearly demonstrated for crisis and emergency management • Syncrude adopted the Suncor OEMS Element 12 for Emergency Management • Corporate response plans have been established • Specific responsibilities are defined for corporate information and communications in the event of crisis and emergency situations
2. Review	Yes	• Plans are reviewed annually • Notification systems have been tested extensively through the pandemic and through regular simulations • Demonstrated activation of emergency operations centre and crisis communication processes • Reviews of the plans and testing of systems were demonstrated
3. Training	Yes	• Activation of the Suncor crisis and emergency preparedness and response plans has been demonstrated • Testing of the preparedness and response activities is occurring • Activation of the stages of the emergency response was performed including emergency operations centre, corporate crisis management and integration with external groups within Fort McMurray • Opportunities include continued exercises and drills to further test integration of Corporate Suncor and Syncrude Mildred Lake, Aurora North and Core emergency response plans
Crisis Management and Communications Planning - FACILITY (YES or NO)		
1. Crisis Management and Communications Preparedness	Yes	• Commitment demonstrated for crisis and emergency management • Syncrude adopted the Suncor OEMS Element 12 for Emergency Management • Extensive drills, testing etc. for facilities and tracking of exercises • Crisis and emergency teams established and implemented • Incident command system (ICS) implemented across organization
2. Review	Yes	• Extensive emergency plans are established across the operations for the major functional areas of base plant operations

		• Reviews of the plans are performed
3. Training	Yes	• Extensive exercise simulation of the Syncrude crisis and emergency preparedness and response plans was demonstrated through Emergency Simulation Critiques • Activation of the stages of the emergency response have been performed including emergency operations centre, corporate crisis management and integration with external groups within Fort McMurray • Opportunities include continued documented strategic planning of exercises and drills across functional groups including tailings
Indigenous and Community Relationships		
1. Community of Interest (COI) Identification	AAA	• Syncrude integrated its engagement program with Suncor as part of the recent Suncor integration and has maintained formalized stakeholder & Indigenous relations framework whereby communities of interest are identified through ongoing stakeholder engagement, mapping tools and regulatory activities • Syncrude demonstrated multistakeholder engagement through Pathways, Oil Sands Community Alliance, Canada's Oil Sands Innovation Alliance (COSIA), Canadian Association of Petroleum Producers, Wood Buffalo Environmental Association, Fort McKay odour task force, Oil Sands Monitoring program, various industry committees, Regional Municipality of Wood Buffalo (RMWB) on a variety of files e.g., community roadmap • Updates to the identification of COI occurs on a regular basis through all engagement activities
2. Effective COI Engagement and Dialogue	AAA	• Syncrude's formal stakeholder & Indigenous relations framework includes defined engagement processes for participation in COI community events, regulatory required engagement, regular meetings on issues and ad-hoc dialogue • Syncrude demonstrated extensive engagement activities with Indigenous, non-Indigenous and not-for-profit COI • Engagement also occurs through industry relations corporations established by the First Nations and Métis communities and represents a formal engagement process for dialogue and interaction • Syncrude regularly performs materiality review to identify issues of relevance significant to Syncrude and stakeholders and can occur through regular engagement with multi-stakeholder groups • Syncrude provides external reporting on its engagement activities including reporting to regulatory authorities and sustainability report and through ongoing engagement and consultation activities • Interviews with sampling of COI indicated positive feedback on Syncrude engagement and dialogue,

		however, with ongoing Suncor / Syncrude integration and company re-organization, the importance of allocating adequate resources to commitments was communicated by the verifier to Syncrude – this ensures adequate engagement and consultation to meet policy commitment and expectations • Verifier provided additional considerations for Suncor and Syncrude to seek additional opportunities to integrate Syncrude engagement approaches into the overall Suncor engagement and dialogue programs – this opportunity brings the strengths of both programs together
3. Effective Indigenous Engagement and Dialogue	AAA	• Syncrude demonstrated comprehensive formal agreements are in place with a number of local communities that outlines funding for engagement and consultation activities, and equity partnerships have been established to support engagement and capacity building • Engagement also occurs through industry relations corporations established by the First Nations and Métis communities, and represents a formal engagement process for dialogue and interaction • Syncrude regularly performs materiality review to identify issues of relevance significant to Syncrude and stakeholders and can occur through regular engagement with multi-stakeholder groups • Syncrude provides external reporting on its engagement activities including reporting to regulatory authorities and sustainability report • Syncrude demonstrated competency and training requirements for Indigenous and Community Relations personnel and include guidance on engaging with Indigenous communities and requirements for engagement and dialogue; and Indigenous Awareness Training, web-based or instructor-led training, provided to all employees • Syncrude demonstrated a reclamation engagement focus group and a tailings sharing session for communication and dialogue
4. Community Impact and Benefit Management	AAA	• Syncrude demonstrated formal agreements in place with a number of local communities that outline funding for engagement and consultation activities • Demonstrated resources and investments to help build community capacity in areas of skills and education, business development, social initiatives, etc. • Demonstrated support for the long-term sustainability and benefit optimization of First Nations and a Métis community through long term agreements • Syncrude demonstrated support and opportunities for impacted communities to participate in economic activity generated by its operations, including business development and contracting, which provides revenue

		streams to First Nation and Métis communities for investment in their communities.
5. COI Response Mechanism	AAA	• Syncrude demonstrated formal grievance mechanism in place that allows them to receive, investigate and respond to complaints from COIs that may arise from direct and/or indirect impacts • Syncrude has an established On Call Protocol that includes published email and toll-free numbers that are accessible to COIs for making inquiries, providing feedback or lodging complaints • Information collected through the email or toll-free number is documented in SIMS (the Stakeholder Information Management System), which is the primary database for documenting engagement with COIs • Syncrude has two-way dialogue in its meeting with COI to provide immediate response to issues and engagement discussions • Other COI response mechanisms include sustainability and disclosure reporting as well as regulatory required reporting
Preventing of Child and Forced Labour (Indicate YES or NO)		
1. Preventing Forced Labour	Yes	• Syncrude facilities under verification operate in highly regulated environment in Alberta, Canada with strong employment and human rights regulations • Syncrude, as an operating entity under Suncor, has well established business conduct code with policy and standards for hiring and use of labour • Syncrude, as an operating entity under Suncor, human rights policy includes a commitment to human risks including due diligence within supply chain of contractors and suppliers and policy requirements
2. Preventing Child Labour	Yes	• Syncrude facilities under verification operate in highly regulated environment in Alberta, Canada with strong employment and human rights regulations • Syncrude, as an operating entity under Suncor, has well established business conduct code with policy and standards for hiring and use of labour • Syncrude verifies through background checks the age of a worker as part of hiring process including the use of government issued identification
Safety and Health		
1. Commitments and Accountability	AAA	• Health and Safety policy established and communicated and ongoing stewardship to performance improvement demonstrated • Robust commitment demonstrated throughout Syncrude organization • Alberta Provincial Certificate of Recognition program Audit performed in 2023 and actions stewarded monthly

		•	Alberta Government Department of Occupational Health & Safety inspections performed and actions assigned for resolution
2. Planning and Implementation	A	•	Safety and health management system implemented through the Syncrude Operational Integrity Management System and future integration with Suncor Operational Excellence Management System
		•	Numerous initiatives being developed and implemented to improve the safety and health program across Syncrude operations
		•	Several types of hazards and risk assessment procedures utilized and various hazard and risk registries at various levels of the organization; recommendations noted by the verifier include review of hazard identification methodology for developing hazard risk registers
		•	Audits performed through Syncrude internal audits and the external Alberta Provincial Certificate of Recognition program
		•	In the last three-year period, internal Syncrude Operational Integrity Management System audits nor an external COR audit included industrial hygiene and recommendations were provided to consider preparing audit scope to evaluate industrial hygiene program for both internal and external audits to achieve Level AA and AAA
3. Training, Behaviour and Culture	AAA	•	Comprehensive training program across Syncrude operations and extensive tracking of training was demonstrated
		•	Interviews consistently demonstrated visible safety communication and interaction throughout Syncrude organization including management, supervision and the workforce
		•	Several programs implemented associated with behaviour and involvement of all personnel in health and safety activities
		•	Audits performed through Syncrude internal audits and the external Alberta Provincial Certificate of Recognition program
4. Monitoring and Reporting	AAA	•	Extensive stewardship including monitoring and reporting on health and safety indicators across Syncrude operations
		•	Stewardship to monitoring and reporting performed regularly with numerous tracking and reporting mechanisms reported to senior management and executives
		•	Recommendations include continued ongoing monitoring of controls effectiveness of health & safety hazards and risks
		•	Audits performed through Syncrude internal audits and the external Alberta Provincial Certificate of Recognition program

		• Safety and health performance disclosed in 2023 Report on Sustainability https://sustainability-prd-cdn.suncor.com/-/media/project/ros/shared/documents/reports-on-sustainability/2023-report-on-sustainability-en.pdf?modified=20230921204601
5. Performance	AA	• Syncrude stewards safety and health performance information including weekly and monthly reporting; performance was demonstrated as meeting internal targets in 2022 and year to date in 2023 but fell short in 2020 and 2021 • Syncrude had fatalities in 2020 and 2021 and there is recognition across Syncrude operations that ongoing attention is required to ensure performance is maintained fatality-free • Suncor is implementing changes to its Operational Excellence Management System and interviews indicated anticipated implementation at Syncrude in 2024 and going forward • Audits performed through Syncrude internal audits and the external Alberta Provincial Certificate of Recognition program • Suncor / Syncrude ongoing improvements in its Operational Excellence Management System includes activities to address performance improvement – verifier noted importance of stewardship to improvements plans
Tailings Management		
1. Tailings management policy and commitment	AAA	• Strong commitment demonstrated throughout organization at all levels sampled • Strong recognition of the importance of tailings management associated with regulatory requirements, communities of interest, industry and internal operations, safety and sustainability • Tailings policy established and communicated internally and externally • Commitment to tailings management clearly demonstrated at all organizational levels • External audit performed in 2023 which included an evaluation of effectiveness
2. Tailings management system and emergency preparedness	AAA	• Robust and comprehensive tailings facility management system for complex and sophisticated tailings operations • Comprehensive engineering and technical tailings management system • Established and implemented tailings related emergency preparedness and response plans • Tailings emergency response exercise with external communities and stakeholders performed in Fall of 2023 • Opportunities to improve tailings management system as part of Suncor Operational Excellence

		Management System revisions and overall improvement strategy
		• Opportunities identified to advance assurance activities as part of regionalization with Suncor
		• External audit performed in 2023 which included an evaluation of effectiveness
3. Assigned accountability and responsibility for tailings management	AAA	• Updates to Accountable Executive Officer assignment as part of Suncor transition to operating company of Syncrude
		• Strong / robust sense of accountability / responsibility was observed through 'ownership' of processes
		• Comprehensive defined accountabilities and responsibilities and understood as designed at all levels of organization sampled
		• Assigned accountability for tailings management including engineer of record etc.
		• Organizational changes to personnel in 2023 being reflected in the tailings management system documentation including organizational charts
		• External audit performed in 2023 which included an evaluation of effectiveness
4. Annual tailings management review	AAA	• Formal tailings management review performed annually
		• Independent review including geotechnical review board implemented
		• Reporting on tailings performance communicated through organization
		• Continuous improvement embedded in key performance indicators and stewardship activities
		• External audit performed in 2023 which included an evaluation of effectiveness
5. Operation, maintenance, and surveillance	AAA	• OMS Manuals established and implemented for tailings facilities including related ponds
		• Updates to OMS Manuals communicated to regulatory agency
		• Regionalization efforts ongoing with Suncor as operating company to align OMS manuals
		• Comprehensive surveillance and monitoring process including third-party review, evaluation and recommendations
		• External audit performed in 2023 which included an evaluation of effectiveness
Water Stewardship		
1. Water Governance	A	• Syncrude is committed to water stewardship which is demonstrated through public reporting, internal committees, COI consultation committee and the tailings lease development steering committee
		• Syncrude has an established working group and demonstrated commitment through several external reporting mechanisms including sustainability report and industry water sharing information

		• Water related risks are identified as part of the company risk management practices
		• Considerations include performing internal or external audits and assessments of the water management program
2. Operational Water Management	A	• Syncrude has a number of water management activities including mining approvals, regulatory reviews and industry collaboration
		• Regulatory requirements including renewal approvals based on historical and forward-looking technical information
		• Syncrude has a number of water management activities including the consideration of Lower Athabasca Regional Plan (LARP) Surface Water Quantity and Quality Management Frameworks and the Athabasca Watershed Council (AWC) which is a multi-stakeholder not-for-profit organization which uses consensus decision-making and adaptive management to achieve the Water for Life goals in the Athabasca watershed in Alberta
		• Considerations include performing internal or external audits of operational water management activities
3. Watershed-scale Planning	AAA	• Syncrude aligns with watershed planning contained in land use plans in the region, including the Lower Athabasca Regional Plan which includes several water related frameworks that set watershed level goals and thresholds
		• Syncrude works closely with regulators on water management including permitting requirements
		• These plans include surface water quantity and quality frameworks
		• Syncrude is a member of the Canadian Oil Sands Innovation Alliance (COSIA), and COSIA has set in situ and mining specific priorities relating to improving the use and management of all water resources
		• Syncrude participates with COSIA in research and environmental studies which are shared with the scientific community and disclosed on the COSIA website
4. Water Reporting and Performance	AAA	• Suncor / Syncrude Water Management Program is designed to identify, develop, prioritize and execute initiatives/projects that reduce tailings free water inventory at all its mine sites guided by its key principles
		• A Surface Water Quality and Quantity Management Framework sets out objectives for water reporting
		• As members of COSIA, Suncor is aligned with their mining water priorities and reporting, and water performance is reported through Suncor's Report on Sustainability
		• Considerations include additional audits and assessments of the overall operational water management activities

		• Water performance disclosed in:
		    ○ 2023 Report on Sustainability https://sustainability-prd-cdn.suncor.com/-/media/project/ros/shared/documents/reports-on-sustainability/2023-report-on-sustainability-en.pdf?modified=20230921204601
		    ○ CDP Water https://sustainability-prd-cdn.suncor.com/-/media/project/ros/shared/documents/cdp-responses/2023-suncor-cdp-water-security-questionnaire-en.pdf?modified=20231011155535

Statement of Verification	
The external verification was conducted in accordance with the *Terms of Reference for Verifiers* and, accordingly, consisted primarily of interviews, data analysis, and examination (on a sample basis) of other evidence relevant to management's assertion of conformance to the requirements of the TSM performance indicators.	☒ The external verification was conducted in accordance with the *TSM Verifier Terms of Reference*.
The scores indicated in this report are verified as being accurate based on the evidence reviewed during the external verification of this facility.	☒ The scores in this report are considered accurate based on this verification.
Limitations	There are no limitations identified as part of the verification activities.
Additional comments	Syncrude demonstrated a comprehensive and robust program against the MAC TSM requirements. Commitment to high performance was clearly demonstrated through all indicators, COI feedback and Syncrude interviewee professionalism, transparency and contributions.
Has an additional assurance statement been provided by the verifier?	No
Name of lead verifier	Safety Science Management Consulting Inc.
Date of statement of verification	December 14, 2023
Signature of lead verifier	

Appendix 1 – TSM Responsible Sourcing Alignment Supplement

Use where applicable for verifications that incorporate other relevant standards

Check relevant boxes	Name of Standard
	International Council on Mining and Metals Mining Principles
	World Gold Council Responsible Gold Mining Principles
	Copper Mark
	Responsible Minerals Initiative Risk Readiness Assessment
	Responsible Jewelry Council
	ResponsibleSteel
	Initiative for Responsible Mining Assurance

Summary of Findings

Criterion	Rating *YES/NO*	Comments
Corporate Governance and Ethical Conduct		
1. Legal Compliance		
2. Code of Conduct		
3. Combating Bribery and Corruption		
4. Political Contributions		
5. Transparency of Taxes, Ownership and Transfer Pricing		
6. Accountabilities and Reporting		
7. Engagement with Corporate Communities of Interest		
Integration of Sustainable Development into Corporate Strategy and Decision Making		
8. Corporate Sustainable Development Strategy		
9. Supply Chain		
Respect for Human Rights and Labour Rights		
10. UN Guiding Principles on Business and Human Rights		
11. Conflict-Affected and High-Risk Area Due Diligence		

12. Resettlement		
13. Security and Human Rights		
14. Labour Rights		
15. Compensation for Work Related Injury, Illness & Fatality		
16. Employee Remuneration		
17. Diversity and Women in Mining		
Environmental Stewardship		
18. Environmental Risk Management		
19. Closure		
20. Pollution Prevention and Waste Management		
21. Noise and Vibration		
22. Emissions to Air		
23. Spills and Leakage		
24. Hazardous Substances		
25. Land Use and Deforestation		
26. Circular Economy		
Economic Development, Cultural Heritage and Artisanal and Small-Scale Mining		
27. Local Procurement		
28. Cultural Heritage		
29. Artisanal and Small-Scale Mining		

Appendix 2 – Finnish Mining Association TSM Mine Closure Protocol

Use when the facility is seeking ResponsibleSteel recognition

Criterion	Rating *C, B, A, AA or AAA*	Comments
Mine Closure		
1. Mine Closure Policy and Operational Guidelines		
2. Mine Closure Planning and Management System		