

Work Plan Application

Project Information	
Project Title:	OSM Data Quality Program
Lead Applicant, Organization, or Community:	Yemi Ilesanmi (Interim pending hiring of QAQC Coordinator)
Work Plan Identifier Number: If this is an on-going project please fill the identifier number for 24/25 fiscal by adjusting the last four digits: Example: D-1-2425 would become D-1-2425	New
Project Region(s):	Oil Sands Region
Project Start Year: First year funding under the OSM program was received for this project (if applicable)	2024-25
Project End Year: Last year funding under the OSM program is requested Example: 2024	Ongoing
Total 2024/25 Project Budget: From all sources for the 2024/25 fiscal year	\$338,000.00
Requested OSM Program Funding: For the 2024/25 fiscal year	\$338,000.00
Project Type:	Focus Study
Project Theme:	Cross-Cutting
Anticipated Total Duration of Projects (Core and Focused Study (3 years))	-Select One-
Current Year (choose one):	Focused Study Year 1 of 3
	Core Monitoring -Select One-

Contact Information

Lead Applicant/ Principal Investigator: Every work plan application requires one lead applicant. This lead is accountable for the entire work plan and all deliverables.	Yemi Ilesanmi (Interim pending hiring of QAQC Coordinator)
Job Title:	Director, Environmental Science & Field Ops
Organization:	Alberta Environment and Parks
Address:	9888 Jasper Ave, Edmonton, AB, T5J5C6
Phone:	780-229-7273
Email:	yemi.ilesanmi@gov.ab.ca

Project Summary

In the space below, please provide a summary of the proposed project that includes a brief overview of the project drivers and objectives, the proposed approach/methodology, project deliverables, and how the project will deliver to the OSM Program objectives. The summary should be written in plain language and **should not exceed 300 words**.

The 2016 Expert Panel Review assessed the scientific integrity of OSM Program and found that the Program lacked a uniform Quality Assurance approach across its activities and recommended a rigorous approach to the quality assurance including independent auditing to increase confidence in monitoring data. In view of the Panel's recommendation, it is important to establish an OSM Data Quality Program. This need has also been confirmed by the SIKIC Data and Knowledge Integration Working Group, which is in the process of finalizing guidance for a refreshed Data and Knowledge Integration TAC of which this proposed work would be guided by. This anticipatory work plan proposes to document the OSM Program's quality assurance systems that are currently implemented by organizations that conduct environmental monitoring sponsored by the Oil Sands Monitoring Program; evaluating current service providers to ensure that existing regulatory requirements and best practices have been implemented; and developing a plan to address gaps through continuous improvement.

Key deliverables of this work plan include:

- An updated inventory of quality assurance documentation, including but not exclusive to standards and protocols, relevant to monitoring activities sponsored by the Oil Sands Monitoring Program. An OSM Program Technical Report will be completed in which key parameters for each quality assurance document are summarized, including any relevant policy drivers, roles and responsibilities for monitoring and data management activities of the OSM Program and other organizations.
- A technical lab performance study of OSM service providers for quality assurance purpose, which monitors the performance of service providers, ensure best practices been implemented, and data quality objectives of OSM has been properly fulfilled.
- A critical evaluation of quality assurance documentation, based on the two above Deliverables, summarized in a Technical Report.
- A conceptual design for a multi-year Quality Assurance Program Plan, which will be presented in multiple engagement sessions to OSM Program participants from governments, communities, and stakeholder organizations.
- Multiple operational projects to address key needs for continuous improvement of quality assurance processes in the OSM Program

1.0 Merits of the Work Plan

All work plans under the OSM Program must serve the mandate of the program by determining (1) if changes in indicators are occurring in the oil sands region and (2) if the changes are caused by oil sands development activities and (3) the contribution in the context of cumulative effects. In the space below please provide information on the following:

- Describe the key drivers for the project identifying linkages to Adaptive Monitoring framework particularly as it relates to surveillance, confirmation and limits of change (as per OC approved Key Questions).
- Explain the knowledge gap as it relates to the Adaptive Monitoring that is being addressed along with the context and scope of the problem as well as the Source - Pathway - Receptor Conceptual Models .
- Describe how the project meets the mandate of the OSM Program or areas of limited knowledge is the work being designed to answer with consideration for the TAC specific Scope of Work Document (attached) and the Key Questions (attached)?
- Discuss results of previous monitoring/studies/development and what has been achieved to date. Please identify potential linkages to relevant sections of the State of Environment Report.

The Oil Sands Monitoring Program is committed to consistent scientific standards/protocols to ensure repeatable and comparable monitoring results. Significant progress has been made in the past to establish robust and comprehensive monitoring. Numerous Oil Sands Monitoring Program standards, protocols and related quality assurance documents are available online through Environment and Climate Change Canada (ECCC; <https://www.canada.ca/en/environment-climate-change/services/oil-sands-monitoring/documents-reports.html>) and Alberta Environment and Protected Areas (AEPA; (<https://www.alberta.ca/environmental-quality-assurance-standards-and-protocols.aspx>)) websites. While these materials form an essential part of a quality assurance, the Oil Sands Monitoring Program does not currently operate a comprehensive quality assurance program, unlike other large organisations such as the US Environmental Protection Agency (<https://www.epa.gov/quality>), which ensures that environmental decisions are supported by data of known and documented quality.

The 2016 Expert Panel Review (Hopke et al, 2016) recommended that the OSM Program develop and document a uniform quality assurance approach that can be implemented and tracked across all monitoring activities. Progress has been made since then, with the open posting and deployment of relevant standards and quality requirements, and documentation. Relevant Quality Assurance Project Plans (QAPPs) were reviewed and improved through the work planning processes. However, there are still gaps, including a lack of an integrated implementation of quality requirements across sub-themes and programs, integration of legacy and current OSM Program datasets, and an inventory of quality assurance requirements. More work needs to be done to build a fully integrated QA/QC system to support scientific credibility, data completeness, data comparability, data transparency, and accessibility.

This project supports the mandate of the OSM Program by providing the scientific and legal foundation for OSM Program monitoring and science programs to ensure that authoritative environmental monitoring data and related evaluations and reporting are made publicly within regulatory compliance, in a timely, open and transparent manner. The project will also support community-based monitoring to ensure comparability and repeatability by providing SOPs and documentation support and developing strategies for accreditation on community-based monitoring.

The project will maintain the continuous improvement of laboratory protocols. This ensures that accumulated scientific uncertainty through multiple measurements and assessments are reduced or minimized to support responsible stewardship decisions by government, communities, and stakeholders. The project will utilize western science methodologies to document indigenous knowledge to maximize the use of indigenous knowledge in an integrated and consistent way.

Reference:

Hopke, P. (2016). Assessing the scientific integrity of the Canada-Alberta Joint Oil Sands Monitoring (2012-2015), Report of The Expert Panel on Assessing the Scientific Integrity of the Canada-Alberta Joint Oil Sands Monitoring.

2.0 Objectives of the Work Plan

List in point form the objectives of the 2024/25 work plan below

1. Complete an inventory of quality assurance documentation for monitoring activities sponsored by the OSM Program.
2. Complete a technical performance study of OSM lab service providers for quality assurance purpose
3. Critically evaluate quality assurance documentation (Objective 1) and the performance of current lab providers (Objective 2) and complete a technical report summary of data quality status of OSM program.
4. Engagement of a conceptual design of a multi-year Quality Assurance Program Plan for the OSM Program 2024/2025, based on the completed inventory of quality assurance documentation and best practices.
5. Support the implementation and continuous improvement of quality assurance processes in the OSM Program

3.0 Scope

Evaluation of Scope Criteria (Information Box Only- No action required)

Your workplan will be evaluated against the criteria below. A successful workplan would:

- Be in scope of the OSM Program (e.g., regional boundaries, specific to oil sands development, within boundaries of the Oil Sands Environmental Monitoring Program Regulation)
- consider the TAC-specific Scope of Work document and the key questions
- integrate western science with Indigenous Community-Based Monitoring)
- address the Adaptive Monitoring particularly as it relates to surveillance, confirmation and limits of change as per approved Key Questions.
- have an experimental design that addresses the Pressure/Stressor, Pathway/Exposure, Response continuum
- produce data/knowledge aligned with OSM Program requirements and is working with Service Alberta
- uses Standard Operating Procedures/ Best Management Practices/ Standard Methods including for Indigenous Community-Based Monitoring

3.1 Theme

Please select the theme(s) your monitoring work plan relates to:

- Air Groundwater Surface Water Wetlands
- Terrestrial Biology Data Management Analytics & Prediction Cross Cutting

3.2 Core Monitoring, Focused Study or Community Based Monitoring

Please select from the dropdown menu below if the monitoring in the work plan is “core monitoring” and/or a “focused study”. Core monitoring are long term monitoring programs that have been in operation for at least 3 years, have been previously designated by the OSM program as core, and will continue to operate into the future. Focused studies are short term projects 1-2 years that address a specific emerging issue.

Focused Study

Themes

Please select the theme from the options below. Select all that apply.

- Air Groundwater Surface Water Wetland
- Terrestrial Cross-Cutting

3.3.6 Cross-Cutting Across Theme Areas

3.3.6.1 Sub Themes

QA/QC/Standards/Methods

If "Other" was selected from the drop down list above please describe below:

3.3.6.2 Cross-Cutting - Key Questions:

Explain how your cross-cutting biological monitoring program addresses the key questions below.

Is data produced following OSM Program requirements and provided into the OSM Program data management system?

This program will support OSM Program requirements by establishing an integrated standard and quality system. Independent study results related to the laboratory performance and detection limit will be shared and documented in the OSM data management system.

Do methodologies use relevant Standard Operating Procedures/ Best Management Practices/ Standard Methods?

This project will inventory and document the standard and quality requirements. This program will provide publicly accessible standards, protocols, and methods to all parties that are involved in the OSM monitoring activities. The application of SOPs, best practices, and standard methods by OSM monitoring programs will be reviewed with a goal of improving the design, execution, and outcomes of the OSM monitoring activities. The Standards and Quality team members will be directly involved in the development, review, and revision of the SOPs

How does the monitoring identify integration amongst projects, themes or with communities?

This program integrates projects, themes, and community activities through the process design relevant to the standards and quality requirements. The program identifies standards, quality priorities, QA/QC approaches, tools, desired data quality outcomes, and their inter-linkages. The standards and quality process design is aligned with the practices of reputable environmental agencies that are suitable for the oils sands monitoring programs. This process design recognizes that traditional knowledge and the participation of communities and citizens are important part of a credible, comprehensive, and relevant environmental monitoring system. The stakeholders and practitioners will be engaged through events such as meetings, workshops, community/site visits and on-line publication.

With consideration for adaptive monitoring, where does the proposed monitoring fit on the conceptual model for the theme area relative to the conceptual model for the OSM Program?

OSM and EEM questions require quality assurance data to inform sound decision-making. The integrated Quality Assurance System provides scientific and legal foundation for the conceptual model. The standard and quality program covers multiple theme area, including air, surface water, groundwater, wetlands etc. This program specifically target on the regulatory requirements and scientific issues within the EEM framework, to reduce the monitoring systematic risk caused by duplicate operation procedure, inconsistent practice, and analysis gaps. This program will provide guidance, tools and support to all participants so that comparable standard and quality measures are in place to address the risk of poor data quality.

How will this work advance understanding transition towards adaptive monitoring?

This program will support the decision-making process while monitoring work make transition towards adaptive monitoring. It will strengthen the confidence of monitoring while the monitoring work transit to adaptive monitoring. This program is also an addition to build the adaptive monitoring. To gain confidence of adaptive monitoring, standard and quality condition must be reviewed and determined before any transition.

Is the work plan contributing to Programmatic State of Environment Reporting? If yes, please identify potential linkages to relevant sections of the State of Environment Report.

This program provides supplement information to programmatic State of Environment Reporting regarding OSM data quality for all environment activities. This program also provide guidance on the assessment of data/information quality from other sources for use in OSM environment reporting

4.0 Mitigation

Evaluation of Mitigation Criteria (Information Box Only- No action required)

Your workplan will be evaluated against the criteria below. A successful workplan would potentially inform:

- efficacy of an existing regulation or policy
- an EPEA approval condition
- a regional framework (i.e., LARP)
- an emerging issue

Explain how your monitoring program informs management, policy and regulatory compliance. As relevant consider adaptive monitoring and the approved Key Questions in your response.

One of the objectives for the Joint Canada-Alberta OSM Implementation plan is to provide open, transparent, and quality assured data. National and Alberta environmental policies and regulations have specific requirements on standards and quality. The project will compile an inventory of standards and quality requirements as part of approval conditions. The LARP regional management framework has specific requirements on OSM data to inform government management decision-making. The project will follow emerging issues and facilitate the development of appropriate monitoring methods.

5.0 Indigenous Issues

Evaluation of Indigenous Issues Criteria (Information Box Only- No action required)

Your workplan will be evaluated against the criteria below. A successful workplan would potentially:

- Investigate Indigenous communities key questions and concerns
- Includes culturally relevant receptor(s) and indicator(s)
- Include or be driven by Indigenous communities (participatory or collaborative)
- Develop capacity in Indigenous communities
- Include a Council Resolution or Letter of Support from one or more Indigenous communities
- Describe how ethics protocols and best practices regarding involvement of Indigenous peoples will be adhered to
- Provide information on how Indigenous Knowledge will be collected, interpreted, validated, and used in a way that meets community Indigenous Knowledge protocols

Explain how your monitoring activities are inclusive and respond to Indigenous key questions and concerns and inform the ability to understand impacts on concerns and inform Section 35 Rights

Open, transparent, and quality assured data is needed to address issues and concerns from the Indigenous communities. The proponents of this project have received a copy of the questions and concerns raised by the indigenous communities.

The project will support community-based monitoring to ensure comparability and repeatability by providing SOPs and documentation support and developing strategies for accreditation on community-based monitoring.

The project will also utilize western science methodologies to document indigenous knowledge to maximize the use of indigenous knowledge in an integrated and broader way.

Does this project include an Integrated Community Based Monitoring Component?

No

If YES, please complete the [ICBM Abbreviated Work Plan Forms](#) and submit using the link below

[ICBM WORK PLAN SUBMISSION LINK](#)

5.1 Alignment with Interim Ethical Guidelines for ICBM in the OSM Program

Are there any community specific protocols that will be followed?

This program will support the development of SOPs and documentations related to community specific protocols

Does the work plan involve methods for Indigenous participants to share information or knowledge (e.g. interview, focus group, survey/structured interview), or any other Indigenous participation? If yes, describe how risks and harms will be assessed, and the consent process that will be used.

This program will consult indigenous experts and document the information and knowledge of indigenous participants

Do the activities include any other collecting/sharing, interpreting, or applying Indigenous knowledge? Please describe how these activities will be conducted in alignment with the Interim Ethical Guidelines, and any community-based protocols and/or guidelines that may also apply.

N/A

Indicate how Indigenous communities / Indigenous knowledge holders will be involved to ensure appropriate analysis, interpretation and application of data and knowledge.

Consultation and documentations will be involved to ensure appropriate knowledge share

How are Indigenous communities involved in identifying or confirming the appropriateness of approach, methods, and/or indicators?

This program will consult indigenous experts and document the information and knowledge of indigenous participants

How does this work plan directly benefit Indigenous communities? How does it support building capacity in Indigenous communities?

Well-documented SOPs and practices will ensure the credibility of community monitoring and help monitoring activities to be more efficient and well-organized

How is the information from this work plan going to be reported back to Indigenous communities in a way that is accessible, transparent and easy to understand?

Briefing meeting, workshops, and presentation will be planned to report the outcomes of the program

6.0 Measuring Change

Evaluation of Measuring Change Criteria (Information Box Only- No action required)

Your workplan will be evaluated against the criteria below. A successful workplan would potentially:

- assess changes in environmental conditions compared to baseline (e.g., validation of EIA predictions)
- report uncertainty in estimates and monitoring is of sufficient power to detect change due to oil sands development on reasonable temporal or spatial scales
- include indicators along the spectrum of response (e.g., individual, population, community)
- focus on areas of highest risk (where change is detected, where change is greater than expected, where change is expected to expand collection of baseline).
- measure change along a stressor gradient or a stressor/reference comparison

Explain how your monitoring identifies environmental changes and how can be assessed against a baseline condition. As relevant, consider adaptive monitoring, the TAC specific Scope of Work document and the Key Questions in your response.

Guidance on quality assurance and uncertainties are provided to practitioners to assess changes and environmental risks.

7.0 Accounting for Scale

Evaluation of Accounting for Scale Criteria (Information Box Only- No action required)

Your workplan will be evaluated against the criteria below. A successful workplan would potentially be:

- appropriate to the key question and indicator of interest
- relevant to sub-regional and regional questions
- relevant to organism, population and/or community levels of biological organization
- where modelled results are validated with monitored data
- where monitoring informs on environmental processes that occur at a regional scale. e.g. Characterizing individual sources to gain a regional estimate of acid deposition and understand signal from individual contributing sources.

Explain how your monitoring tracks regional and sub-regional state of the environment, including cumulative effects. As relevant, consider adaptive monitoring, the TAC specific Scope of Work document and the Key Questions in your response.

Consistent and integrated quality assurance program will be implemented across all OSM monitoring activities.

8.0 Transparency

Evaluation of Transparency Criteria (Information Box Only- No action required)

Your workplan will be evaluated against the criteria below. A successful workplan would potentially include:

- a plan for dissemination of monitoring data, including appropriate timing, format, and aligns with OSM program data management plan
- demonstrated transparency in past performance
- identified an annual progress report as a deliverable
- reporting of monitoring results occurs at timing and format that is appropriate for recipient audience.

Explain how your monitoring generates data and reporting that is accessible, credible and useful. As relevant, consider adaptive monitoring, the TAC specific Scope of Work document and the Key Questions in your response.

All relevant information, SOPs, QA/QC requirements will be posted on the selected websites. This program will also ensure that monitoring results from other OSM projects are published and presented in an open and transparent manner.

9.0 Efficiency

Evaluation of Efficiency Criteria (Information Box Only- No action required)

Your workplan will be evaluated against the criteria below. A successful workplan would include:

- appropriately addressed a risk-informed allocation of resources
- identified the role and justification for each staff member on the proposed work plan
- identified in-kind and leveraged resources (e.g., resources and approaches are appropriately shared with other OSM projects where possible)
- established partnerships (value-added) and demonstrated examples of coordinated efficiencies (e.g., field, analytical)
- identified co-location of monitoring effort
- demonstrated monitoring activities and information collected are not duplicative
- considered sampling/measurement/methods compatibility to other data sources (e.g., AER)

Explain how your monitoring is integrated with other OSM projects and incorporates community-based participation and/or engagement in proposed monitoring activities. As relevant, consider adaptive monitoring, the TAC specific Scope of Work document and the Key Questions in your response.

This program improves the efficiency of other OSM projects by providing clarity to technical requirements and will empower community-based participation. The standards and quality issues in other OSM monitoring programs are reviewed and identified through collaboration with OSM scientists and partners. Priorities are established to address the issues and weaknesses based on a risk management approach with a goal of enhance values of OSM data and information to our clients, stakeholders and the general public.

10.0 Work Plan Approach/Methods

List the Key Project Phases and Provide Bullets for Each Major Task under Each Project Phase

1. Quality assurance documentation inventory
 - Complete an inventory of quality assurance documentation for monitoring activities sponsored by the OSM Program
2. Lab Performance Study
 - Complete a critical performance review on current lab service providers to ensure best practice has been implanted to ensure data quality of OSM program
3. Critical evaluation of data quality
 - Critically evaluate quality assurance documentation (Objective 1) and perform independent review of OSM lab service providers (Objective 2) against a suite of formal evaluation criteria drawn from existing regulatory requirements and best practices.
4. Quality Assurance Program Plan
 - Complete a conceptual design of multi-year Quality Assurance Program Plan (QAPP) for the OSM Program to lay the foundation of a multi-year QAPP development for 2024/2025
5. Implementation and continuous improvement
 - Support the implementation and continuous improvement of quality assurance processes in the OSM Program

Describe how changes in environmental Condition will be assessed

Proper quality assurance requirements will be provided to support the sound interpretation of data.

Are there Benchmarks Being Used to Assess Changes in Environmental Condition? If So, Please Describe, If Not, State "NONE"

Data Quality Objectives (DQOs) will documented and implemented according to the requirements of policy and monitoring objectives.

(e.g., objectives, tiers, triggers, limits, reference conditions, thresholds, etc.)

Provide a Brief Description of the Western Science or Community-Based Monitoring Indigenous Community-Based Monitoring Methods by Project Phase

1. Quality assurance documentation inventory

An inventory of quality assurance documentation will be completed, based on all monitoring activities sponsored by the OSM Program since its inception, according to the tiered framework of Adaptive Management:

- a. Surveillance monitoring of ambient air; atmospheric deposition, surface water quality, aquatic biota, groundwater, terrestrial biological, wetlands, and community based monitoring.
- b. Confirmation and focused studies initiated based on surveillance monitoring or other evidence.
- c. Research-oriented investigations of cause.
- d. Method development projects that involve data collection, sample analysis, and data management.

Inventory parameters for each documented quality assurance process will include:

- a. Applicable policy;
- b. Owner/approver of the applicable policy;
- c. Roles and responsibilities of parties involved in monitoring and data management activities;
- d. Organizational context, relationships between OSM Program quality assurance processes and other quality assurance processes operated by the organization.

This objective will be completed by an external service provider under contract to Alberta Environment and Parks.

2. Inventory of regulatory requirements and best practice

An inventory of existing regulatory requirements and best practices for quality assurance will be completed, drawing from Provincial, National, and International standards and guidance documents. The structure of the inventory will be organized along the following considerations:

- a. Industrial approvals have environmental monitoring requirements with associated standards and quality requirements.
- b. Oil Sands companies participate in OSM as part of regional environmental monitoring programs to support cumulative effects management.
- c. Government and stakeholders must acquire data of sufficient quantity and quality to:
 - Report on the condition of the environment.
 - Assess the achievement of management targets and compliance of regulatory requirements.
 - Further the scientific understanding of complex causal relationships to inform management decisions.

While the outcomes of this objective will be used as inputs to Objective 3, this inventory of quality assurance requirements and expectations will provide immediate clarity of requirements and expectations across all OSM monitoring activities and assure alignment among OSM and non-OSM data quality requirements (e.g., OSM will complement existing regulatory requirements, not replace them). It will also reinforce the inclusion of quality assurance consideration and documentation as an inherent part of monitoring design and implementation.

This objective will be completed by an external service provider under contract to AEPA, with oversight provided by AEPA staff in the Oil Sands Monitoring Branch, in consultation with industry and AER.

3. Critical evaluation of quality assurance

Quality assurance documentation (Objective 1) will be critically evaluated against a suite of formal evaluation criteria drawn from existing regulatory requirements and best practices (Objective 2). A Technical Report will be released that identifies gaps, duplication, and opportunities for integration and alignment of standards and quality requirements. The report will also include recommended options to address gaps and duplication in an open and transparent manner.

This objective will be completed by an external service provider under contract to AEPA, with oversight provided by AEPA staff in the Oil Sands Monitoring Branch.

4. Quality Assurance Program Plan

Drawing from the first three objectives of this Project (inventory of existing quality assurance documentation, inventory of requirements and guidelines, critical evaluation), supplemented by broader engagement of relevant actors in government, communities, and stakeholders, a conceptual design for a multi-year Quality Assurance Program Plan will be completed. The conceptual design will establish preliminary expectations and timelines for data acquisition projects to meet the minimum quality assurance requirements and improve quality assurance practices for the OSM Program. This includes community-based monitoring for which training materials may be required.

To support the adoption of this plan, and the implementation of acceptable quality assurance processes and documentation, the Quality Assurance Program Plan will include case studies that illustrate the quality assurance challenges addressed by OSM Program participants responsible for monitoring activities, and highlight successes and lessons learned from OSM Program monitoring activities that have informed management decisions for governments, stakeholders, and local communities.

5. Implementation and continuous improvement

The project will support the implementation and continuous improvement of quality assurance processes

in the OSM Program, focusing on Standard Operating Procedures and Quality Assurance Project Plans. Scientists, service providers, monitoring organizations, and communities will be engaged to ensure that standards and quality requirements are considered in RFP and contracting processes.

Over 160 SOPs are in the current inventory through efforts of the last 5 years; two air SOPs were recently consolidated by working with airsheds in the oil sands region to provide technical clarity for air quality monitoring in the region; However, there are increasing needs for consistent air SOPs across monitoring organizations. Some new SOPs in surface water, groundwater, and wetlands need to be developed to adapt to the monitoring activities

Drawing from the inventory of existing quality assurance documentation, selected SOPs and QAPPs will be developed and revised in collaboration with the parties responsible for monitoring and data management activities.

Continuous improvement activities will focus three components, focusing on gaps between laboratory analysis and post-data assessment of water quality data required to evaluate water quality parameters against established baselines and assess the effectiveness of existing regulatory and non-regulatory mechanisms to protect the health of people and the environment. The two components are:

a. Inter-lab comparisons

Commercial laboratories with accreditation are contracted to perform analysis within the scope of the Laboratory Data Quality Assurance Policy. However, the need arises occasionally to use unaccredited labs or variables that are not yet accredited. As well, even accreditation does not guarantee that a lab will produce valid data, and for both of these reasons, inter-lab comparison studies were conducted using certified reference material to identify analytical service deficiencies. A study of naphthenic acid sample holding time addressed the issues of the storage of field-collected samples. To ensure the continuous improvement of laboratory analysis, the ongoing study needs to continue and closely monitor any change in laboratory performance

b. Inter-lab detection limits

A passive sampler validation study was initiated in 2019 to assess the performance of passive monitoring service providers in Alberta and will be submitted for peer-review. In the meantime, it has been noted that the definition of reporting detection limit (RDL) across labs are different. In Alberta, analytical laboratories use a variety of terms and methods for detection limits. Thus, it cannot be assumed that values near the detection limit from one lab would be the same as those from another lab. Especially for baseline monitoring, the impact of DL is particularly significant for low-level environmental change indicators. It is important to acquire independent information regarding the detection limit of key environmental indicators.

These activities address specific data quality concerns related to lab analysis and provide evidence-based information for decision-makers, ultimately to ensure continuous improvements of long-term monitoring.

List the Key Indicators Measured, If Not Applicable, State N/A

Internationally agreed scientific approaches and methods. Data Quality Objectives (DQOs) as required under environmental legislations, regulations and policies.

11.0 Knowledge Translation

In the space below, please provide the following:

- Describe the plan for knowledge transfer and distribution of learnings from the project. This could include workshops, publications, best practice documentation, marketing plan, etc.
- Demonstrate that the knowledge transfer plan is appropriate for the intended end-users.

All knowledge and information gained through this project will be openly shared with stakeholders and the public.

12.0 External Partners

List by project or project phase each component that will be delivered by an external party (including analytical laboratories) and name the party. Describe and name the associate work plan/grant/contract for these services. * state none if not required

Monitoring and research organization, analytical laboratories, service providers, consultants, other GoA agencies.

*To ensure complete work plan proposal submission, all grants and contracts listed in this section should also be captured in Grants & Contracts.

13.0 Data Sharing and Data Management

For 2024-25 the following approach will be taken by the OSM Program related to data sharing.

For all work plans of a **western science** nature funded under the OSM Program, data sharing is a condition of funding and must align with the principle of **“Open by Default”**. In this case, all data is to be shared with the OSM Program as directed by the OSM Program Data Management work plan.

For all work plans involving **Indigenous Knowledge** as defined below and funded under the OSM Program, data sharing is a condition of funding and the Indigenous Knowledge components of the work plan must align with the principle of **“Protected by Default”**. In this case, all data as defined as Indigenous Knowledge, are to be retained by the Indigenous community to which the Indigenous Knowledge is held.

Indigenous Knowledge is defined as:

“The knowledge held by First Nations, Inuit and Métis peoples, the Aboriginal peoples of Canada. Traditional knowledge is specific to place, usually transmitted orally, and rooted in the experience of multiple generations. It is determined by an Aboriginal community's land, environment, region, culture and language. Traditional knowledge is usually described by Aboriginal peoples as holistic, involving body, mind, feelings and spirit. Knowledge may be expressed in symbols, arts, ceremonial and everyday practices, narratives and, especially, in relationships. The word tradition is not necessarily synonymous with old. Traditional knowledge is held collectively by all members of a community, although some members may have particular responsibility for its transmission. It includes preserved knowledge created by, and received from, past generations and innovations and new knowledge transmitted to subsequent generations. In international or scholarly discourse, the terms traditional knowledge and Indigenous knowledge are sometimes used interchangeably.”

This definition was taken from the Canadian Government's Tri-council Policy Statement for Ethical Research involving Humans (Chapter 9, pg. 113) and is an interim definition specific to the Oil Sands Monitoring Program.

13.1 Has there, or will there be, a Data Sharing agreement established through this Project? *

No

13.2 Type of Quantitative Data Variables:

Both

13.3 Frequency of Collection:

Other

13.4 Estimated Data Collection Start Date:

Apr 1, 2024

13.5 Estimated Data Collection End Date:

Mar 31, 2027

13.6 Estimated Timeline For Upload Start Date:

Mar 31, 2027

13.7 Estimated Timeline For Upload End Date:

Dec 31, 2027

13.8 Will the data include traditional knowledge as defined by and provided by an Indigenous representative, Community or Organization?

No

Table 13.9 Please describe below the Location of Data and Data Type:

Add a Data Source by clicking on the add row on the bottom right side of table

Name of Dataset	Location of Dataset (E.g.:Path, Website, Database, etc.)	Data File Formats (E.g.: csv, txt, API, accdb, xlsx, etc.)	Security Classification
Lab Performance Study	Published technical reports	csv	Open by Default

14.0 2024/25 Deliverables

Add an additional deliverable by clicking on the add row on the bottom right side of table

Type of Deliverable	Delivery Date	Description
OSM Program Annual Progress Report (required)	Q4	OSM Annual Quality Progress Report
Technical Report	Q4	Critical Review of Lab Performance Study
Technical Report	Q4	Inventory of Quality Assurance Documentation

15.0 Project Team & Partners

In the space below please provide information on the following:

- Describe key members of the project team, including roles, responsibilities and expertise relevant to the proposed project.
- Describe the competency of this team to complete the project.
- Identify any personnel or expertise gaps for successful completion of the project relative to the OSM Program mandate and discuss how these gaps will be addressed.
- Describe the project management approach and the management structure.

OSM Quality Assurance Coordinator, Project Lead (TBD): will coordinate the multiple components of the program, monitor project progress, deliver the SOP consolidation, and independent lab performance review. Hiring for this role is in currently progress.

16.0 Project Human Resources & Financing

Section 16.1 Human Resource Estimates

Building off of the competencies listed in the previous section, please complete the table below. Add additional rows as necessary. This table must include **ALL staff involved** in the project, their role and the % of that staff's time allocated to this work plan. The AEPA calculated amount is based on an estimate of \$120,000/year for FTEs. This number cannot be changed. The OSM program recognizes that this is an estimate.

Table 16.1.1 AEPA

Add an additional AEPA Staff member by clicking on the add row below the table. The total FTE (Full Time Equivalent) is Auto Summed (in Table 16.2.1) and converted to a dollar amount.

Name (Last, First)	Role	%Time Allocated to Project
Quality Assurance Coordinator	Project Lead	100

Table 16.1.2 ECCC

Add an additional ECCC Staff member by clicking on the add row below the table. The total FTE (Full Time Equivalent) is Auto Summed (in Table 16.2.2) and converted to a dollar amount.

Name (Last, First)	Role	%Time Allocated to Project

The tables below are the financial tables for Alberta Environment & Protected Areas (AEPA) and Environment & Climate Change Canada. All work plans under the OSM Program require either a government lead or a government coordinator.

Section 16.2 Financing

The OSM Program recognizes that many of these submissions are a result of joint effort and monitoring initiatives. A detailed "PROJECT FINANCE BREAKDOWN" must be provided using the Project Finance Breakdown Template provided, accessible [here](#). Please note that completion of this Project Finance Breakdown Template is mandatory and must be submitted along with each workplan.

PROJECT FINANCE BREAKDOWN TEMPLATE

Table 16.2.1 Funding Requested BY ALBERTA ENVIRONMENT & PROTECTED AREAS

Organization - Alberta Environment & Protected Areas ONLY	Total % time allocated to project for AEPA staff	Total Funding Requested from OSM
Salaries and Benefits (Calculated from Table 16.1.1 above)	100	\$120,000.00
Operations and Maintenance		
Consumable materials and supplies		\$25,000.00
Conferences and meetings travel		\$6,000.00
Project-related travel		\$10,000.00
Engagement		
Reporting		\$2,000.00
Overhead		
Total All Grants (Calculated from Table 16.4 below)		\$0.00
Total All Contracts (Calculated from Table 16.5 below)		\$175,000.00
Sub-Total (Calculated)		\$338,000.00
Capital*		\$0.00
AEPA TOTAL (Calculated)		\$338,000.00

* The Government of Alberta Financial Policies (*Policy # A600*) requires that all **capital asset** purchases comply with governmental and departmental legislation, policies, procedures, directives and guidelines. **Capital assets** (*Financial Policy # A100*, Government of Alberta, January 2014) are tangible assets that: have economic life greater than one year; are acquired, constructed, or developed for use on a continuing basis; are not held for sale in ordinary course of operations; are recorded and tracked centrally; have a cost greater than \$5,000.

Some **examples of capital asset equipment include**: laboratory equipment, appliances, boats, motors, field equipment, ATV's/snowmobiles, stationary equipment (pier/sign/weather), fire/safety equipment, pumps/tanks, heavy equipment, irrigation systems, furniture, trailers, vehicles, etc. (*Financial Policy # A100*, Government of Alberta, January 2014).

Table 16.2.2 Funding Requested BY ENVIRONMENT & CLIMATE CHANGE CANADA

Organization - Environment & Climate Change Canada ONLY	Total % time allocated to project for ECCC staff	Total Funding Requested from OSM
Salaries and Benefits FTE (Please manually provide the number in the space below)		
Operations and Maintenance		
Consumable materials and supplies		
Conferences and meetings travel		
Project-related travel		
Engagement		
Reporting		
Overhead		
ECCC TOTAL (Calculated)		\$0.00

* ECCC cannot request capital under the OSM program. Any capital requirements to support long-term monitoring under the OSM program should be procured by Alberta and captured in that budget table.

Table 16.3

Complete ONE table per Grant recipient.

Add a Recipient by clicking on add table below the table. The total of all Grants is Auto Summed in Table 16.2.1

GRANT RECIPIENT - ONLY: Name	
GRANT RECIPIENT - ONLY: Organization	
Category	
Salaries and Benefits FTE	Total Funding Requested from OSM
Operations and Maintenance	
Consumable materials and supplies	
Conferences and meetings travel	
Project-related travel	
Engagement	
Reporting	
Overhead	
GRANT TOTAL (Calculated)	\$0.00

Table 16.4

Complete ONE table per Contract recipient.

Add a Recipient by clicking on add row below the table.. This section is only to be completed should the applicant intend to contract components or stages of the project out to external organizations. The total of all Contracts is Auto Summed in Table 16.2.1

CONTRACT RECIPIENT - ONLY: Name	Various Commercial Laboratory Contracts
CONTRACT RECIPIENT - ONLY: Organization	
Category	Total Funding Requested from OSM
Salaries and Benefits	
Operations and Maintenance	
Consumable materials and supplies	\$100,000.00
Conferences and meetings travel	
Project-related travel	
Engagement	
Reporting	
Overhead	
CONTRACT TOTAL (Calculated)	\$100,000.00
CONTRACT RECIPIENT - ONLY: Name	TBD (RFP for SOP inventory and Quality Management System)
CONTRACT RECIPIENT - ONLY: Organization	
Category	Determined through RFP
Category	Total Funding Requested from OSM
Salaries and Benefits	
Operations and Maintenance	
Consumable materials and supplies	\$75,000.00
Conferences and meetings travel	
Project-related travel	
Engagement	
Reporting	
Overhead	

CONTRACT TOTAL (Calculated)	\$75,000.00
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Table 16.5 GRAND TOTAL Project Funding Requested from OSM Program

The table below is auto calculated, please do not try to manually manipulate these contents.

Category	Total Funding Requested from OSM
Salaries and Benefits Sums totals for salaries and benefits from AEPA and ECCC ONLY	\$120,000.00
Operations and Maintenance	
Consumable materials and supplies Sums totals for AEPA and ECCC ONLY	\$25,000.00
Conferences and meetings travel Sums totals for AEPA and ECCC ONLY	\$6,000.00
Project-related travel Sums totals for AEPA and ECCC ONLY	\$10,000.00
Engagement Sums totals for AEPA and ECCC ONLY	\$0.00
Reporting Sums totals for AEPA and ECCC ONLY	\$2,000.00
Overhead Sums totals for AEPA and ECCC ONLY	\$0.00
Total All Grants (from table 16.2.1 above) Sums totals for AEPA Tables ONLY	\$0.00
Total All Contracts (from table 16.2.1 above) Sums totals for AEPA Tables ONLY	\$175,000.00
SUB-TOTAL (Calculated)	\$338,000.00
Capital* Sums total for AEPA	\$0.00
GRAND PROJECT TOTAL	\$338,000.00

Some **examples of capital asset equipment include:** laboratory equipment, appliances, boats, motors, field equipment, ATV's/snowmobiles, stationary equipment (pier/sign/weather), fire/safety equipment, pumps/tanks, heavy equipment, irrigation systems, furniture, trailers, vehicles, etc. (*Financial Policy # A100, Government of Alberta, January 2014*).

17.0 FINANCIAL MANAGEMENT

The OSM Program reserves the right to reallocate project funding during the current fiscal year on the basis of project performance and financial overspend or underspend.

Please check this box to acknowledge you have read and understand

In the space below please describe the following:

- Discuss how potential cost overruns and cost underruns will be managed.
- If this is a continuing project from last year, identify if this project was overspent or underspent in the previous year and explain why.
- Describe what risks and/or barriers may affect this project.

The cost estimates for the inter-lab comparison and passive sampler blanks are based on the regular price per sample quoted by the labs. There is a small risk for increased cost due to sample re-runs. Proper project design and regular communication with the labs will reduce the risk. Another \$2000 of overhead is also applied while budgeting is conducted

18.0 Alternate Sources of Project Financing - In-Kind Contributions

Table 18.1 In-Kind Contributions

Add an In Kind Contribution by clicking on the table and then clicking on the add row on the bottom right side of table.

Description	Source	Equivalent Amount (\$CAD)
	TOTAL	\$0.00

19.0 Consent & Declaration of Completion

Should your application be successful, The OSM Program reserves the right to publish this work plan application. Please check the box below to acknowledge you have read and understand:

I acknowledge and understand.

Lead Applicant Name

Yemi Ilesanmi (Interim pending hiring of QAQC Coordinator - hiring in progress)

Title/Organization

Quality Assurance Coordinator/AEPA

Signature

Yemi.Ilesanmi  Digitally signed by Yemi.Ilesanmi
Date: 2023.11.03 13:43:24 -0600

Government Lead / Government Coordinator Name (if different from lead applicant)

Title/Organization

Signature

Please save your form and refer to the instructions page for submission link.

Governance Review & Decision Process

this phase follows submission and triggers the Governance Review

TAC Review (Date):

ICBMAC Review (Date):

SIKIC Review (Date):

OC Review (Date):

Final Recommendations:

Decision Pool:

Notes:

Post Decision: Submission Work Plan Revisions Follow-up Process

This phase will only be implemented if the final recommendation requires revisions and follow-up from governance

ICBMAC Review (Date):

SIKIC Review (Date):

OC Review (Date):

Comments:

Decision Pool:

Notes & Additional Actions for Successful Work Plan Implementation:

Signature