

2018-19 Work Plan Template

All fields with an * are mandatory

Project Description Summary			Co-Chair Decision (March 8, 2018)
Date *	Project/Work Plan Identifier (if applicable)	Program Type and Strategic Alignment *	<p>* Decision Pool A: Workplan approved but at a reduced funding level. * Approved at \$329,000</p> <p>* Deliverables for this level of funding are to be clarified and an amended workplan submitted before March 23, 2018 to the Oil Sands Monitoring Secretariat.</p> <p>* This project was identified as a good example of community engagement, and as best practices that could be shared more broadly within OSM</p> <p>* Adaptive monitoring for this project must consider results of the network optimization exercise.</p> <p>*Funding expectations: as a minimum an annual progress report is required by February 28, 2019. All publications or products resulting from this work requires acknowledgement of funding from the Oil Sands Monitoring Program and are to be provided to the Oil Sands Monitoring Secretariat for tracking and any programmatic communications purposes. Work funded through the Oil Sands Program will be available for public dissemination.</p>
21/12/2017	A-CM-1-1819	OSM - Focus Study	
Program Category *	Status *	Dept. ID	
Air/Atmosphere/Climate	Existing Project	1104 - 03418	
Project Leadership / Contact information			
Project Title *	Key Words (max 10) *		
Strengthen Community Reporting of Odours - Ambient Air Odour Study	Odours, Air Quality, Community Odour Study, Oil Sands Odours		
Surname *	Given Name *	Title *	
Myrick	Bob	Director, Airshed Sciences	
Organization *	Department	Division	
Alberta Provincial	Alberta Environment and Parks	Environmental Monitoring and Science	
Branch *	Section/Unit (if applicable)	Phone *	
Science	Airshed Sciences	7802297290	
Email *	Mailing Address	City	
Bob.Myrick@gov.ab.ca	9888 Jasper Avenue	Edmonton	
Postal Code	EMSD Executive Owner (if Applicable)		
T5J 5C6	Bill Donahue		
Project Information			
Project Objective(s) (Bullet Form) *	<p>The primary monitoring objectives of the ambient air odour study are to:</p> <p>(1) Provide a greater understanding of the nature of community odours and link these to specific ambient air quality parameters; and</p> <p>(2) Provide air quality data that can be used to characterize odour events in the community of Fort McKay.</p>		
Plain Language Overview (100 words) *	<p>Odours are a persistent concern for members of all communities within the airshed, and WBEA stakeholders are interested in how odours relate to the current parameters measured at the ambient air monitoring stations in the network. Odours are addressed in the Athabasca oil sands region through the Community Odour Monitoring Program (COMP), and testing of monitoring methods that will address Recommendations 14 and 15 of the report called Recurrent Human Health Complaints Technical Information Synthesis – Fort McKay Area (Alberta Energy Regulator and Alberta Health, 2016). The COMP program consists of a mobile application available for both Android and iOS devices, that allows members of all communities of the RMWB to submit information about the odours they experience throughout the region. Recommendations 14 and 15 from the AER/AH report of the focus more specifically on air pollutants that are causing potential odours in the community of Fort McKay.</p>		
Project Duration *	Project Original Start Date *	Estimated Completion Date *	
Multi-Year	1/4/2017	31/03/2022	
Specify Objectives This Project Will Address in 2018/2019. *	<p>Specific objectives to be addressed in 2018-19 include:</p> <ul style="list-style-type: none"> - Continued collection of odour monitoring information using the COMP application and analysis of data collected in 2017-18 - Design a monitoring program that will improve consistency of ambient air monitoring between oil sands emission sources and the community and also include parameters that are on the focal parameter list in the AER/AH report (Recommendations 14 and 15) 		
Specify Objectives This Project Will Address Beyond 2018/19 (if multi-year). *	<p>Specific objectives beyond 2018-19 are:</p> <ul style="list-style-type: none"> - Understand the relationship between odour information (collected using the COMP application) and ambient concentrations of specific air quality parameters that can be related to odour - Implementation of monitoring program for parameters that are on the focal parameter list - Implementation of monitoring that will improve consistency of monitoring between the oil sands sources and the community 		
List Key Questions/Hypotheses Related to Each Objective Stated Above. *	<p>Perceived odour events in the oil sands region can be related to ambient pollutant concentrations and meteorological conditions to identify potential odour sources.</p>		
Main Assumptions, Constraints, Dependencies. *	<ul style="list-style-type: none"> - Contracts with airshed organizations can be executed by April 1, 2018 - WBEA will have the expertise, resources and ability to deliver the monitoring program in 2018-19 		

Partner Categories (select all that apply) * A partner is an individual, group, agency, community etc. that is an active participant in the project and in achieving the project deliverables.	Knowledge System *	Location (select all that apply) *
<input type="checkbox"/> Federal Government <input type="checkbox"/> Another AEP Division <input type="checkbox"/> Another GoA Department <input type="checkbox"/> University/Academic Institution <input type="checkbox"/> Solely delivered by GoA <input type="checkbox"/> Citizen Science <input type="checkbox"/> Indigenous Community or Organization <input type="checkbox"/> ENGO <input checked="" type="checkbox"/> Other	Classical Science	<input type="checkbox"/> Office or Laboratory <input type="checkbox"/> Sub-regional <input type="checkbox"/> Transboundary (provincial/territorial) <input type="checkbox"/> Lower Peace Region <input type="checkbox"/> Upper Peace Region <input type="checkbox"/> North Saskatchewan Region <input type="checkbox"/> Red Deer Region <input checked="" type="checkbox"/> Lower Athabasca Region <input type="checkbox"/> Upper Athabasca Region
AEP ONLY: Strategic Alignment to EMSD Outcomes		
AEP ONLY: Strategic Alignment to EMSD Science Plan, select 1-2 areas that apply (if Applicable)		
Human Relationship with the Environment Choose one		
AEP ONLY: Strategic Alignment to AEP Departmental Outcomes		
AEP ONLY: Environmental and Ecosystem Health and Integrity	AEP ONLY: Sustainable Economic Diversity	AEP ONLY: Social Well-Being
Air/Climate Change	Choose one	Yes
AEP ONLY: Protected Public Health and Safety from Environmental		
Yes		
AEP ONLY: IMAG/IMSC Information Needs, Please Specify Which Need(s) is Being Addressed. File location M:\EMSD\Common\Portfolio Mgmt System Shared Docs	Info Need 10 (Airshed and Watershed Support): Data collected by this program will address a key local issue identified by WBEA and stakeholders in the Athabasca oil sands region.	
AEP ONLY: How This Project Will Address Each Strategic Theme Selected Above.	Social Well Being and Protected Public Health and Safety from Environmental: The data collected by this program will help better understand the odour issue in the Athabasca oil sands region and specifically in Fort McKay. Many community members relate odour to human health and may perceive that their health is being impacted when odours are occurring.	
Project Methodology		
List the Key Project Phases and Provide Bullets for Each Major Task Under Each Project Phase. *	Phase 1 - Continue operation of the COMP in the oil sands region Phase 2 - Continuous measurement of speciated VOCs that can be correlated to odour events Phase 3 - Design a monitoring program to address Recommendations 14 and 15 from AER/AH report	
Describe How Changes in Environmental Condition Will Be Assessed. *	Environmental change will be assessed two ways: (i) the presence/absence of odours using the COMP, and (ii) the differences in quantity and speciation of VOCs/RSCs between odour and non-odour periods as determined using the COMP. Methodologies tested in this study can be used to assess environmental change if applied in long-term monitoring programs.	
Are There Benchmarks (e.g., objectives, tiers, triggers, limits, reference conditions, thresholds, etc.) Being Used to Assess Changes in Environmental Condition? If So, Please Describe, If Not, State "NONE". *	Odour thresholds for specific VOC and sulphur compounds. Note that there is wide variation in odour thresholds for specific compounds available in the literature. Benchmarks from the AER/AH report for parameters on the Air Quality Focal Parameter List can be used.	
Provide a Brief Description of the Methods By Project Phase. *	Community Odour Monitoring Program (COMP): The COMP program consists of a mobile application available for both Android and iOS devices, that allows members of all communities of the RMWB to submit information about the odours they experience throughout the region. The COMP will continue to be implemented and expand as more community members become aware and are comfortable with using the COMP mobile application. Data from the program will be reviewed against ambient air quality data collected in the oil sands region to better understand the relationship between odours and ambient air quality. Evaluation of methods for measuring RSCs and VOCs: VOCs are known to be a contributor to odour events. A continuous VOC analyzer will provide speciated, real-time measurements that can be correlated to odour events. This analyzer will be tested in Fort McKay. Design of a monitoring program that will address Recommendations 14 and 15 from AER/AH report: A subcommittee co-chaired by AEP and AER will be formed to determine the technical requirements for ambient monitoring to address Recommendations 14 and 15 (see additional details in line 100) from the AER/AH report. This subcommittee will develop monitoring objectives/questions based on the recommendations and then determine the appropriate ambient monitoring to address these monitoring objectives/questions.	

List the Key Indicators Measured. *	Key indicators include reduced sulphur compounds (e.g. thiophenes, mercaptans, COS, CS ₂ , H ₂ S, TRS) and volatile organic compounds that can cause odours at low concentrations Focal Parameter List from AER/AH report: acetaldehyde, carbon disulphide, carbonyl sulphide, methanol, naphthalene, ozone, sulphur dioxide, nitrogen dioxide, hydrogen sulphide (frequently greater than odour thresholds and short-term and long-term thresholds), total reduced sulphur, benzene, mixed (m,p) xylenes and toluene
Describe Sample Handling Procedures, If Not Applicable, State N/A. *	Sample handling procedures are provided in standard operating procedure documents located at http://www.wbea.org/resources/quality-assurance/standard-operating-procedures . SOPs and sampling handling procedures for the COMP, adsorbent tubes the continuous VOC analyzer are in development by WBEA.
List SOPs that Will Be Used, If Not Applicable, State N/A.*	Sample handling procedures are provided in standard operating procedure documents located at http://www.wbea.org/resources/quality-assurance/standard-operating-procedures . SOPs and sampling handling procedures for the COMP, adsorbent tubes the continuous VOC analyzer are in development by WBEA.
Describe the QA/QC Plan, If Not Applicable, State N/A. *	Quality assurance and quality control needs to be conducted in accordance with the Air Monitoring Directive and SOPs for data QA/QC developed by AEP and each airshed. Specific quality assurance plans are available from AEP and each airshed.
Describe How Indigenous Communities are Involved in the Project Design, Data Collection, and Analysis (Knowledge Co-creation) and How is their Consent Sought. If Not Applicable, State N/A.*	Fort McKay First Nation and Fort McKay Metis are involved through participation on the Fort McKay Air Quality and Odour and Advisory Committee. Indigenous communities are also involved through inclusion in WBEA.
Components Delivered by Others	
List by Project or Project Phase Each Component That Will Be Delivered by An External Party (including analytical laboratories) and Name the Party. State None if Not Required. *	Phase 1 and Phase 2 of this project will be delivered by the Wood Buffalo Environmental Association (WBEA). Phase 3 will be led by AEP and the AER.
Will These Components be Delivered Under Grant or Contract or Both? Please Describe and Name the Associate Work Plan/Grant/Contract for These Services if Not Included Within This Work Plan. *	Phase 1 and Phase 2 of this project plan is delivered by WBEA through a contract with AEP.
Monitoring Site Locations and Coordinates (for all sites, please add them to the Monitoring Site Location tab - a separate excel sheet)	
Attach Map of Locations. Distinguish Indicators by Station if Necessary. Distinguish Sampling Frequency by Station if Necessary.	The study includes all communities in the Athabasca oil sands region from Fort Chipewyan to Conklin. Odours can be reported from any geographical location in the region. The planned location for the continuous VOC analyzer is the Waskôw ohci Pimâtisiwin station also shown on the map provided with project plan A-LTM-S-1-1819.
Project Schedule	
FOR OIL SANDS MONITORING PROJECTS ONLY: A coordinated field monitoring schedule for the OSM Program is required. Please complete the attached document named "OSM Program Field Monitoring Schedule" in addition to this work plan. Fill as much as you can recognizing that scheduling changes will occur and the scheduling document will be updated regularly. Please note the scheduling document will be shared with stakeholders.	These are provided with project plan A-LTM-S-1-1819. See Fort McKay-Bertha Ganter (AMS1), Mannix (AMS) and Waskôw ohci Pimâtisiwin sites.
FOR OIL SANDS MONITORING PROJECTS ONLY: Have You Coordinated With Other Project Leads On Field Logistics? If So, Please Specify. *	Monitoring field logistics are coordinated by WBEA.
Other	
Additional Details.	Recommendations #14 and #15 from the AER/AH report are as follows: "Recommendation #14 - Establish an integrated, consistent approach to air quality monitoring from source (industry emissions), to fenceline (Mildred Lake [AMS02], Mannix [AMS05], and Lower Camp [AMS11]) to ambient monitoring stations (AMS 01 and Oski-ôtin). Changes to monitoring should initially consider contaminants on the Air Quality Focal Parameter List (Section 6.6.4). Polycyclic aromatic hydrocarbons should also be considered in future monitoring plans. Lead: EP and the AER, supported by Environment Canada."

Will Capacity Building and Training be a Component of the Project and If So, Explain How. If Not, State N/A.*	N/A
---------------------------------------------------------------------------------------------------------------	-----

Environmental Impact and Considerations.	N/A
------------------------------------------	-----

Data Management and Digital Assets

Will Data be Produced as a Result Of This Project? *	Type of Quantitative Data Variables	Frequency Of Collection
Yes	Discrete	Monthly

Data Collection Period: Start Date - End Date	Timeline For Upload Period: Start Date - End Date
4/1/2017 to 3/31/2022	10/1/2017 to 9/31/2022

Is There a Data Sharing Agreement? (Yes or No).	No
-------------------------------------------------	----

Will the Data Include Traditional Knowledge as Defined by and Provided by an Indigenous Representative, Community or Organization (Yes / No).	No
-----------------------------------------------------------------------------------------------------------------------------------------------	----

Platform/Location of Data Storage.	Wood Buffalo Environmental Association
------------------------------------	----------------------------------------

Project Deliverables

Proposed 2018-19 Deliverable Type (for each deliverable outline document, presentation, meeting, etc.)

<input type="checkbox"/> Peer-reviewed Journal Publication	<input type="checkbox"/> Peer-reviewed Conference Proceeding	<input type="checkbox"/> Non-peer reviewed Conference Proceeding
------------------------------------------------------------	--------------------------------------------------------------	------------------------------------------------------------------

Q1 - Deliverable, Comments	Q1 - Deliverable, Comments	Q1 - Deliverable, Comments

Q2 - Deliverable, Comments	Q2 - Deliverable, Comments	Q2 - Deliverable, Comments

Q3 - Deliverable, Comments	Q3 - Deliverable, Comments	Q3 - Deliverable, Comments

Q4 - Deliverable, Comments	Q4 - Deliverable, Comments	Q4 - Deliverable, Comments

<input checked="" type="checkbox"/> Technical Report	<input type="checkbox"/> Book Chapter	<input type="checkbox"/> Public Dissemination Document
------------------------------------------------------	---------------------------------------	--------------------------------------------------------

Q1 - Deliverable, Comments	Q1 - Deliverable, Comments	Q1 - Deliverable, Comments

Q2 - Deliverable, Comments	Q2 - Deliverable, Comments	Q2 - Deliverable, Comments

Q3 - Deliverable, Comments	Q3 - Deliverable, Comments	Q3 - Deliverable, Comments
Q4 - Deliverable, Comments	Q4 - Deliverable, Comments	Q4 - Deliverable, Comments
Integration of 2017-18 Odour Data for the Wood Buffalo Environmental Association (WBEA) Odour Monitoring Program A monitoring plan to address recommendations 14 and 15 from the AER/AH report		
<input type="checkbox"/> Conference Presentation(s)	<input type="checkbox"/> Stakeholder Presentation	<input type="checkbox"/> Key Engagement/Participation Meeting *
Q1 - Deliverable, Comments	Q1 - Deliverable, Comments	Q1 - Deliverable, Comments
Choose one	Choose one	Name of Meeting, Year, Location, Dates, Participant Groups and Number of Participants.
Q2 - Deliverable, Comments	Q2 - Deliverable, Comments	Q2 - Deliverable, Comments
Choose one	Choose one	Name of Meeting, Year, Location, Dates, Participant Groups and Number of Participants.
Q3 - Deliverable, Comments	Q3 - Deliverable, Comments	Q3 - Deliverable, Comments
Choose one	Choose one	Name of Meeting, Year, Location, Dates, Participant Groups and Number of Participants.
Q4 - Deliverable, Comments	Q4 - Deliverable, Comments	Q4 - Deliverable, Comments
Choose one	Choose one	Name of Meeting, Year, Location, Dates, Participant Groups and Number of Participants.
<input type="checkbox"/> EMSD Strategic & Operational Publication	<input type="checkbox"/> Other Documents	
Q1 - Deliverable, Comments	Q1 - Deliverable, Comments	
Q2 - Deliverable, Comments	Q2 - Deliverable, Comments	
Q3 - Deliverable, Comments	Q3 - Deliverable, Comments	
Q4 - Deliverable, Comments	Q4 - Deliverable, Comments	

Proposed Deliverables After 2018/2019 for the project funds received in 2018/2019

<input type="checkbox"/> Peer-reviewed Journal Publication	<input type="checkbox"/> Peer-reviewed Conference Proceeding	<input type="checkbox"/> Non-peer reviewed Conference Proceeding
Q1 - Deliverable, Comments	Q1 - Deliverable, Comments	Q1 - Deliverable, Comments
Q2 - Deliverable, Comments	Q2 - Deliverable, Comments	Q2 - Deliverable, Comments
Q3 - Deliverable, Comments	Q3 - Deliverable, Comments	Q3 - Deliverable, Comments
Q4 - Deliverable, Comments	Q4 - Deliverable, Comments	Q4 - Deliverable, Comments
<input checked="" type="checkbox"/> Technical Report	<input type="checkbox"/> Book Chapter	<input type="checkbox"/> Public Dissemination Document
Q1 - Deliverable, Comments An evaluation of the adsorbent tube RSC monitoring method An evaluation of the continuous VOC monitoring method	Q1 - Deliverable, Comments	Q1 - Deliverable, Comments
Q2 - Deliverable, Comments	Q2 - Deliverable, Comments	Q2 - Deliverable, Comments
Q3 - Deliverable, Comments	Q3 - Deliverable, Comments	Q3 - Deliverable, Comments
Q4 - Deliverable, Comments Integration of 2018-19 Odour Data for the Wood Buffalo Environmental Association (WBEA) Odour Monitoring Program	Q4 - Deliverable, Comments	Q4 - Deliverable, Comments
<input type="checkbox"/> Conference Presentation(s)	<input type="checkbox"/> Stakeholder Presentation	<input type="checkbox"/> Key Engagement/Participation Meeting *
Q1 - Deliverable, Comments Choose one	Q1 - Deliverable, Comments Choose one	Q1 - Deliverable, Comments Name of Meeting, Year, Location, Dates, Participant Groups and Number of Participants.
Q2 - Deliverable, Comments Choose one	Q2 - Deliverable, Comments Choose one	Q2 - Deliverable, Comments Name of Meeting, Year, Location, Dates, Participant Groups and Number of Participants.
Q3 - Deliverable, Comments Choose one	Q3 - Deliverable, Comments Choose one	Q3 - Deliverable, Comments Name of Meeting, Year, Location, Dates, Participant Groups and Number of Participants.

Q4 - Deliverable, Comments	Q4 - Deliverable, Comments	Q4 - Deliverable, Comments
Choose one	Choose one	Name of Meeting, Year, Location, Dates, Participant Groups and Number of Participants.
<input type="checkbox"/> EMSD Strategic & Operational Publication	<input type="checkbox"/> Other Documents	
Q1 - Deliverable, Comments	Q1 - Deliverable, Comments	
Q2 - Deliverable, Comments	Q2 - Deliverable, Comments	
Q3 - Deliverable, Comments	Q3 - Deliverable, Comments	
Q4 - Deliverable, Comments	Q4 - Deliverable, Comments	
All Completed Products		if a
multi-year project, specify all completed products to date (consistent format for the fields below). Add rows as required.		
Journal Paper		
Required Format: Author (follow APA citation format), Year, Title, Journal, Volume, Page Numbers, Open or Closed and Document Location		
Example: Jacoby, W. G. (1994). Public Attitudes Toward Government Spending. American Journal of Political Science, 38(2), 336-361.		
Fearon, J. D., & Laitin, D. D. (2003). Ethnicity, Insurgency, and Civil War. American Political Science Review, 97(01), 75. doi: 10.1017/S0003055403000534		
1)		
2)		
3)		
4)		
5)		
Technical Report		
Required Format: Author, Year, Title, Publisher Location, Name of Publisher, Publisher, Document Location		
Example: Author, F.M. (Publication Year). Title of Report (Report No. XXX). Publisher City, State: Publisher		
1) Wood Buffalo Environmental Association. Community Odour Monitoring Program. http://www.wbea.org/odours/community-odour-monitoring-project		
2) A full list of WBEA technical reports is available in an Excel spreadsheet or at http://www.wbea.org/resources/reports-and-publications .		
3)		
4)		
5)		
Book Chapter		
Required Format: Author, Year, Title of Paper, Editors, Title of Book, Page Numbers, Location of Publisher, Name of Publisher, Document Location		
Example: Hemingway, E. (1999). The Killers. In J. Updike & K. Kenison (Eds.), The Best American Short Stories of the Century (pp.78-80). Boston, MA: Houghton Mifflin		
1)		
2)		
3)		
4)		
5)		
Conference Proceeding		

Required Format: Author, Year, Title of Paper, Editors, Title of Proceedings, Name of Conference, Location of Conference, Publisher, Location, Name of Example: Author of Paper, A., & Author of Paper, B. (Year, Month date). Title of Paper. In A. Editor, B. Editor, & C. Editor. Title of Published Proceedings. Paper Presented at Title of Conference: Subtitle of Conference, Location (inclusive page numbers). Place of Publication: Publisher.)

- 1)
- 2)
- 3)
- 4)
- 5)

Public Dissemination Document

Required Format: Author, Year, Title, Journal / Report, Volume, Publisher, Page Number, Number of Pages, Document Location

- 1)
- 2)
- 3)
- 4)
- 5)

AEP ONLY: EMSD Strategic and Operational Publication

Required Format: Author, Year, Title, Publisher Location, Name of Publisher, Publisher, Document Location

- 1)
- 2)
- 3)
- 4)
- 5)

Other Documents

Detailed Information of Other Documents

- 1)
- 2)
- 3)
- 4)
- 5)

Conference Presentation

Required Format: Presenter, Date, Location, Title, Platform or Poster, Conference Name

- 1)
- 2)
- 3)
- 4)
- 5)

Stakeholder Presentation

Required Format: Presenter, Date, Location, Title, Platform or Poster, Name of Meeting

- 1)
- 2)
- 3)
- 4)
- 5)

Key Engagement/Participation Meeting

Required Format: Meeting Host, Date, Location

- 1)
- 2)
- 3)
- 4)
- 5)

Human Resources / Staffing Plan (roles and responsibilities)

Name & Role	Organization	Responsibilities
Sanjay Prasad	Wood Buffalo Environmental Association	WBEA Project Leadership
Bob Myrick	AEP	AEP Project Leadership
Zheng Yang	AEP	Science support

Capital		
Total budget request for the year		\$174,000
Total budget approved		
Budget Request for the Entire Project	0	\$851,000

Project Approval(s)

Proposal Submitted by		
Surname	Given Name	Organization
Myrick	Bob	AEP
Signature	Date	
	12-Feb-18	

Proposal for OSM Reviewed by		
Signature	Date	
X Bob Myrick Director, Airshed Sciences		

AEP Administrator/Coordinator - Review	Signature	Date
	X for Bill Donahue Executive Director, Science	

ECCC Administrator/Coordinator - Review	Signature	Date

OSM Project Approved by

AEP Co-Lead for OSM	Signature	Date

ECCC Co-Lead for OSM	Signature	Date

AEP ONLY: Proposal for EMSD Reviewed by

EMSD Director	Signature	Date

AEP ONLY: EMSD Project Approved by

EMSD Executive Director	Signature	Date

EMSD Chief Scientist	Signature	Date

OSM / EMSD Project Has Not Been Approved

Project Status	Date Notified	Date Required
The project is conditionally approved. The following conditions are required before approval is granted.		

List the Condition(s)	

Condition(s) Addressed / Approval Granted
Choose one

OSM / EMSD Approval Post Removal of Condition(s)

Name & Title	Signature	Date

Item	Description	Total Cost
CORE Subtotal		\$305,000
1. Community Odour Monitoring Program		\$100,000
Mobile Application	Changes, updates, platform fees, etc.	\$30,000
Professional Fees	Community outreach, advertising, etc.	\$70,000
2. RSC Tube Sampling*		\$35,200
Laboratory Fees	Thiophene Sampling <i>*Balance of funds could be used for purchase of GC analyzer</i>	\$35,200
	Additional Tube Method Development	\$0
3. Odour Monitoring Program Committee		\$10,000
Stakeholder Engagement	Honorariums	\$10,000
4. Continuous VOC Analyzer		\$159,800
Capital Cost	Volatile Organic Compound Gas Chromatography	\$150,000
Reference Standards, Span, & Support Gases	Calibration Gas	\$8,000
	Support Gas	\$1,800