

VOC Sample Collection Chain of Custody Protocol

Purpose

The purpose of this document is to unambiguously define the process for ensuring proper documentation of VOC canister samples triggered as part of air monitoring in the Peace River region. All parties associated with the sample collections and reporting are asked to follow the Chain of Custody Protocol.

This document is intended to be used (and updated accordingly) with the following document:

- Canister Change out Instruction – PRAMP 842 Station
- Canister Change out Instruction – PRAMP 986 Station
- Canister Change out Instruction – PRAMP Reno Station

Canister Inventory Tracking Sheet

Maxxam will maintain and update the “Canister Inventory Tracking Sheet” spreadsheet. The purpose of this sheet is to keep track of which canisters are at site, when they expire, and when they have been triggered and collected. The spreadsheet includes the following:

- Canister ID
- Date Sent from Innotech Alberta Lab (if available)
- Date Evacuated
- Expiry Date (3 months after Date Evacuated)
- Canister Status (Current/Inventory)
- Date Triggered
- Action Required (if the canister is expired or close to expiry and needs to be sent back to Innotech)
- Name and company who performs canister change out

Canister Event Tracking List

Maxxam will maintain and update the “Canister Event Tracking List” spreadsheet. The purpose of this sheet is to keep track of all the canister events. The spreadsheet includes the following:

- Date/Time and Methane or NMHC concentration of a canister event
- Date/Time of canister being changed out
- Name of the person who performs canister change out

Chain of Custody Process

	Notification of Trigger Events	Canister Change-out	Tracking of Canister Events
Maxxam	<p>Include notes in the daily email indicating if a canister has been triggered or not, as well as the date/time, concentration and parameter (either CH₄ or NMHC) for any canister triggered.</p> <p>A canister change-out request is sent out by email to local trailer contacts immediately after daily email is released, indicating (1) if the canister is triggered by Methane or NMHC concentration, and 2) the date/time and concentration for the canister triggered.</p> <p>A follow up email is sent to original email list, and phone call is made to the personnel listed on the Call-Down List if no response within 4 hours.</p> <p>Include PRAMP Technical Program Managers (TPMs) in the email loop.</p> <p>If no response within 24 hours of initial notification, escalate to PRAMP TPM.</p>	<p>Provides technical assistance if required during change-out:</p> <ul style="list-style-type: none"> * Chris Wesson 780-446-2724 * Limin Li 403-483-5295 	<p>Maintain Canister Inventory Tracking sheet for each trailer.</p> <p>Provide the up-to-date Canister Event Tracking Sheet by the end of the month each month to PRAMP TPMs.</p>
PRAMP TPMs	<p>Be contacted by Maxxam if no response from local trailer contacts within 24 hours of initial notification.</p>		
Call Down List Contacts	<p>Expect to receive canister change-out request from Maxxam after daily email is received.</p> <p>Confirm with Maxxam the request is well received and respond when the canister will be changed.</p>	<p>Change out canister according to Canister Change Out Instruction posted in the trailer.</p> <p>Once canister change out is completed, fill in the Chain of Custody Form and send the canister with the Chain of Custody form to Innotech Lab.</p> <p>Inform Maxxam the date/time the canister is changed and the date/time the canister is planned to ship to InnoTech.</p>	
Innotech Alberta Lab			<p>Provide "Proof of Receipt" by email once the canister is received.</p> <p>Conduct analysis based on the Canister Chain of Custody Form.</p> <p>Send analytical results to the group indicating in the Canister Chain of Custody Form.</p> <p>Analytical result to include: 1) Analytical results (PDF and Excel) and 2) a copy of Canister Analytical Request Form.</p>

Canister Trigger – Contact List

	PRAMP 986 Station	PRAMP 842 Station	PRAMP Reno Station
<p>Maxxam –</p> <p>Send out canister change out request following the daily report email</p>	<p>Adewunmi Adekanmbi 403-219-3677 aadekanmbi@maxxam.ca</p> <p>Chris Wesson 780-446-2724 CWesson@maxxam.ca</p> <p>Limin Li 403-219-3679 LLi@maxxam.ca</p>		
<p>Call Down List –</p> <p>Phone call from Maxxam if no response confirms the canister will be changed within 4 hours of initial canister change out request</p>	<p>Jason Parker 780-618-4333 Jason.parker@cnrl.com</p> <p>Robyn Kutz-Semeniuk 780-617-7937 Robyn.KutzSemeniuk@cnrl.com</p> <p>Tye Barrett 780-886-2994; 780-624-6826 Tye.barrett@cnrl.com</p>	<p>Roland Young 780-625-6275 roland.young@obsidianenergy.com</p> <p>Greg Kent 780-618-8904 greg.kent@obsidianenergy.com</p> <p>Tom Bissell 780-617-0131 tom.bissell@obsidianenergy.com</p> <p>Jeremy Whillans jeremy.whillans@obsidianenergy.com</p>	<p>Mike Nielsen 780-617-4704 Mike.Nielsen@baytexenergy.com</p> <p>John Hickley 780-625-2057 john.hickley@baytexenergy.com</p> <p>Reno South Jesse Gauchier John Hickley 780-625-1402</p>
<p>PRAMP TPMs –</p> <p>Be contacted by Maxxam if there is no response from Local Trailer Contacts within 24 hours of initial canister change out request</p>	<p>Mike Bisaga / Lily Lin 780-266-7068 587-225-2248 pramptech@prampairshed.ca</p>		

Example of Canister Event Tracking List

PRAMP 842 Station						
Non-Methane Hydrocarbons Canister Event Record						
Trigger set at 0.3 ppm						
Event			Canister Change Out			Notes
Date	Time	Reading	Date	Time	Performed By	

PRAMP 842 Station						
Methane Canister Event Record						
Trigger set at 5.5 ppm						
Event			Canister Change Out			Notes
Date	Time	Reading	Date	Time	Performed By	

Example of Chain of Custody Form



Highway 16A & 75 Street
PO Bag 4000
Vegreville, AB, T9C 1T4
Environmental Analytical Services
Phone: (780) 632-8403 Fax: (780) 632-8620

**EAS CANISTER
CHAIN OF CUSTODY FORM**

Date Received- Lab Use Only

Affix InnoTech Label Here

Client Contact Details:		RUSH (Surcharge) <input type="checkbox"/>
Contact: <u>Karla Ressor, Michael Bisaga/ Lily Lin</u>	Invoice Instructions:	
Company: <u>PRAMP Airshed</u>	Send to: officemanager@prampairshed.ca, karla@prampairshed.ca,	
PO#: <input type="checkbox"/> 842 Station <input type="checkbox"/> 986 Station <input type="checkbox"/> Reno Station	pramptech@prampairshed.ca Attention: PRAMP Office Manager	
Address: <input type="checkbox"/> 842 (Lat. 56.27406N, Long. 116.98129W)	Any correspondence related to canister analysis, send the information to karla@prampairshed.ca	
<input type="checkbox"/> 986 (Lat. 56.376056N, Long. 116.940704W)	and pramptech@prampairshed.ca	
<input type="checkbox"/> Reno (Lat. 55.86936N, Long. 117.05739W)	InnoTech Contact: <u>Graham Knox</u> Phone: 780-6328403 Cell: 780-6321519	
Telephone: <u>403-8072995, 780-2667068/587-2252248</u>	Email: <u>Graham.Knox@innotechalberta.ca</u>	
Email: <u>karla@prampairshed.ca, pramptech@prampairshed.ca</u>		

Sample ID (PRAMP station yyyyymmdd)	Canister Number	Sample Description	Canister Triggered		Analysis Requested
			Date (yyyy/mm/dd)	Time (24 Hr) (MST)	
PRAMP 842- <u>2018-0301</u> (Sample date: <u>yyyyymmdd</u>)	12345	<input type="checkbox"/> Methane Trigger	2018/03/01	18:35	* AIR C1C4, AIR VOC, AIR RSC
PRAMP 986- (Sample date: <u>yyyyymmdd</u>)		<input checked="" type="checkbox"/> NMHC Trigger			* Unknown to be reported
PRAMP Reno- (Sample date: <u>yyyyymmdd</u>)					* Carbon Isotopic Analysis (if sample is collected from Methane trigger)

Sample Collection:
Collect By **GREG KENT** (Name) of **Obsidian Energy** (Company) on **2018/03/02 @ 09:35** (Date/Time (MST)).

Canister Change out Instructions


January 2019 (Version 3)

Trigger Notification

Operator has been notified that the canister needs to be changed. The notification from Maxxam must include the date and time the canister was triggered at (this is the Date/Time Triggered).

Procedure for Collecting Methane (CH₄) and Non-Methane Hydrocarbons (NMHC) Canister and Its Blank Sample

- 1) Check Canister pressure (if it is close to ZERO that means canister was triggered).
 - a. If the canister still has a negative pressure of -10" Hg or greater, the canister has likely not collected the sample properly and is not representative. The canister should be replaced and sent into InnoTech Alberta Lab with an explanation.
- 2) Shut off canister valve.
- 3) Undo the 9/16" nut directly above the canister's valve
- 4) Cap canister and put in box for shipping.
- 5) Fill out Canister Tag Label (colour in red):

 Canister ID: 12345 _____ This cleaned canister meets or exceeds TO-15 Method Specifications Proofed by: <u>InnoTech</u> on Jan 1, 2018 _____ Evacuated on: Jan 1, 2018 _____ Canister Expiration: 3 months post evacuation Laboratory Contact Number (780) 632-8403	Sample ID: PRAMP_842-2018-0301 _____	
	Sampled By: GREG KENT _____	
	Starting Vacuum: -30 _____ "Hg	End Vacuum: -2 _____ "Hg

- **Sample ID:** This must match the Sample ID on the Canister Analytical Request Form. This needs to be a unique identifier for the sample, so please follow this naming convention:
 - **PRAMP_842 – YYYYMMDD / PRAMP_986 – YYYYMMDD / PRAMP_Reno – YYYYMMDD**
 The date is the date the canister was triggered (included in the alert from Maxxam); this is usually the day before the canister is collected.
- **Sampled By:** Name of Operator switching out the canister
- **End Pressure:** Please fill this out in psig or "Hg, just note which units. If the canister sampled properly, this should be close to 0.

6) Fill out Canister Analytical Request Form (colour in red):



Highway 16A & 75 Street
 PO Bag 4000
 Vegreville, AB, T9C 1T4
 Environmental Analytical Services
 Phone: (780) 632-8403 Fax: (780) 632-8620

**EAS CANISTER
 CHAIN OF CUSTODY FORM**

Date Received- Lab Use Only


Affix InnoTech Label Here

Client Contact Details:		RUSH (Surcharge) <input type="checkbox"/>	
Contact:	<u>Karla Ressor, Michael Bisaga/ Lily Lin</u>	Invoice Instructions:	
Company:	<u>PRAMP Airshed</u>	Send to: officemanager@prampairshed.ca, karla@prampairshed.ca,	
PO#:	<input checked="" type="checkbox"/> <u>842 Station</u> <input type="checkbox"/> <u>986 Station</u> <input type="checkbox"/> <u>Reno Station</u>	prampotech@prampairshed.ca Attention: PRAMP Office Manager	
Address:	<input checked="" type="checkbox"/> <u>842 (Lat. 56.27406N, Long. 116.98129W)</u>	Any correspondence related to canister analysis, send the information to karla@prampairshed.ca	
	<input type="checkbox"/> <u>986 (Lat. 56.376056N, Long. 116.940704W)</u>	and prampotech@prampairshed.ca	
	<input type="checkbox"/> <u>Reno (Lat. 55.86936N, Long. 117.05739W)</u>	<u>InnoTech Contact: Graham Knox</u> Phone: <u>780-6328403</u> Cell: <u>780-6321519</u>	
Telephone:	<u>403-8072995, 780-2667068/587-2252248</u>	Email: <u>Graham.Knox@innotechalberta.ca</u>	
Email:	<u>karla@prampairshed.ca, prampotech@prampairshed.ca</u>		

Sample ID (PRAMP_station_yyyyymmdd)	Canister Number	Sample Description	Canister Triggered		Analysis Requested
			Date (yyyy/mm/dd)	Time (24 Hr) (MST)	
PRAMP_842- 2018-0301 (Sample date: yyyyymmdd)	12345	<input type="checkbox"/> Methane Trigger	2018/03/01	18:35	* AIR C1C4, AIR VOC, AIR RSC
PRAMP_986- (Sample date: yyyyymmdd)		<input checked="" type="checkbox"/> NMHC Trigger			* Unknown to be reported
PRAMP_Reno- (Sample date: yyyyymmdd)					* Carbon Isotopic Analysis (if sample is collected from Methane trigger)

Sample Collection:
 Collect By **GREG KENT** (Name) of **Obsidian Energy** (Company) on **2018/03/02 @ 09:35** (Date/Time (MST)).

- **PO#:** Select the station the canister is located.
 - **Address:** Select the station the canister is located.
 - **Sample ID:** This has to match the Sample ID on the Canister Label. This needs to be a unique identifier for the sample. Please follow the naming convention below:
 - PRAMP_842 –YYYYMMDD / PRAMP_986 –YYYYMMDD / PRAMP_Reno –YYYYMMDD
 “YYYYMMDD” is the date the canister was triggered; this information can be found on canister change out request email sent by Maxxam.
 - **Canister Number:** The number showing on the canister; this information can be found on the Canister Label.
 - **Sample Description:** **Select if the canister event is triggered by Methane or NMHC concentration;** this information can be found on canister change out request email sent by Maxxam.
 - **Date/Time Triggered:** The date and time (MST) that the canister was triggered; this information can be found on canister change out request email sent by Maxxam.
 - **Collected By:** The name of the Operator switching out the canister.
 - **Company:** The company of the Operator switching out the canister.
 - **Date/ Time Collected:** The date and time (MST) the Operator switched out the canister.
- 7) Place the canister it is just removed with the filled canister tag label and chain of custody form into the cooler.
- 8) Place the canister for Blank sample with canister tag label. If you come to collect the canister for CH4 canister event, put the CH4 Blank canister in the cooler. If you come to collect the canister for NMHC canister event, put the NMHC Blank canister in the cooler. Ensure “Blank” is identified in the Sample ID on the tag label.

 Canister ID: 12345 _____ This cleaned canister meets or exceeds TO-15 Method Specifications Proofed by: <u>InnoTech</u> on Jan 1, 2018 _____ Evacuated on: Jan 1, 2018 _____ Canister Expiration: 3 months post evacuation <small>Laboratory Contact Number (780) 632-8403</small>	Sample ID: PRAMP_842-BLANK _____	
	Sampled By: GREG KENT _____	
	Starting Vacuum: -30 _____ “Hg”	End Vacuum: _____ “Hg”

- 9) Close, tap and ship the cooler to InnoTech Lab within 14 days after the canister collection.
- InnoTech Alberta, Environmental Analytical Services
 Highway 16A & 75 Street
 PO Bag 4000
 Vegreville, AB, T9C 1T4
 780-632-8403

Note: When a canister is triggered, the canister must be shipped to the Lab for analysis within 14 days so it does not pass the canister sample hold time. The sample hold time is 21 days.

10) Fill out the Trailer Log-Book according to example below:

Date/Contact	Event	Journal Entry
Mar 2, 2018 – Greg Kent (587)-222-3333	CH4 or NMHC canister event	Removed Canister ID: H3281 @ 17:08 @ -3psi Sample ID: PRAMP_842-20180301 Removed Canister ID: H3215 @17:08 Sample ID: PRAMP_842-BLANK Installed Canister ID: H2800 @ 9:40 @ -29 psi Install Canister ID: H2836 @9:40 for Blank


11) Provide the date and time when the canisters replacement is completed to Maxxam.

- Adewunmi Adekanmbi, 403-219-3677, aadekanmbi@maxxam.ca
- Limin Li, 403-219-3679, LLi@maxxam.ca
- Chris Wesson, 780-446-2724, CWesson@maxxam.ca

Technical Contact: For problems/issues with the air monitoring trailer that require immediate assistance, please Chris Wesson at (780) 446-2724.

Procedure for installing Methane (CH4) and Non-Methane Hydrocarbons (NMHC) Canister and Its Blank Sample

- 1) Open a cooler. (There should be two canisters in a cooler).
- 2) Read and ensure new canisters are not expired. **Canisters are considered “expired” after 3 months of the evacuation date (showing on the canister label.)**

 Canister ID: 12345 _____ This cleaned canister meets or exceeds TO-15 Method Specifications	Sample ID: PRAMP_842-2018-0301 _____	
	Sampled By: GREG KENT _____	
Proofed by: <u>InnoTech</u> on Jan 1, 2018 _____ Evacuated on: Jan 1, 2018 _____ Canister Expiration: 3 months post evacuation	Starting Vacuum: -30 _____ "Hg	End Vacuum: _____ "Hg
Laboratory Contact Number (780) 632-8403		

- 3) Take one canister out and place it where it is designated for canister event.
- 4) Remove the cap from the new canister and place the flow-regulator and tubing on top of the canister's valve. Tighten the 9/16" nut to ensure an air-tight seal.
- 5) Open the canister valve.
- 6) Press the black reset button for at least 2 seconds.
- 7) Take the other canister out from the cooler and place it where it is designated for the Blank sample spot.
- 8) No further action is required for the Blank canister.

Technical Contact: For problems/issues with the air monitoring trailer that require immediate assistance, please Chris Wesson at (780) 446-2724.

Procedure for Handling Expired Canister

- 1) If there are expired canisters in the trailer, package up the canisters and send back to InnoTech with a Canister Chain of Custody Form. In the comment section, indicate “unused canister; past expiration date”.

InnoTech Alberta, Environmental Analytical Services
Highway 16A & 75 Street
PO Bag 4000
Vegreville, AB, T9C 1T4
780-632-8403

- 2) Fill out the Trailer Log-Book according to example below:

Date/Contact	Event	Journal Entry
Mar 2, 2018 – Greg Kent (587)-222-3333	Expired canister	Removed Canister ID: H3281 @ 17:08 @ -30psi Sample ID: PRAMP_842-20180301 Removed Canister ID: H3215 @17:08 Sample ID: PRAMP_842-BLANK Installed Canister ID: H2800 @ 9:40 @ -29 psi Install Canister ID: H2836 @9:40 for Blank

Technical Contact: For problems/issues with the air monitoring trailer that require immediate assistance, please Chris Wesson at (780) 446-2724.