

MINE METHANE CAPTURE OFFSET PROJECT DATA REPORT FOR ACTIVE UNDERGROUND MINES

OPR Staff Use Only	Date Report Received:	OPR Tracking Number:	Date Report Reviewed:	OPR Staff Use Only
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PART I. ENTITY SUBMITTING REPORT

Is this report being submitted by the Offset Project Operator (OPO) or by the Authorized Project Designee (APD)?	☒ OPO ☐ APD
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Note: The person completing this form should be an OPO/APD employee.

Report Version Number: 2	Date Report Completed: 5-26-2021	Date Report Submitted: 5-26-2021
Person Completing Report: David Rea	Phone Number: 307-872-6526	Email Address: david.rea@solvay.com

PART II. OFFSET PROJECT INFORMATION

Offset Project Name: Solvay Chemicals, Inc. Waste Mine Methane Project	OPR Project ID#: CAR-1105	ARB Project ID# (if known): CAMM-5178
Mine Methane Capture Activity Type(s):	☐ Ventilation Air Methane	☒ Mine Methane Drainage
Reporting Period Start Date: 1/1/2020	Reporting Period End Date: 12/31/2020	Offset Project Commencement Date: 8/13/2010

PART III. OPO/APD/TC INFORMATION

Part III.A OPO

OPO Name: Solvay Chemicals, Inc.	OPO's CITSS ID#: CA 1 7 4 3		
Mailing Address: 3333 Richmond Avenue	City: Houston	State: TX	Zip: 77098
Physical Address (if different):	City:	State:	Zip:
Contact Person: David Rea	Phone Number: 307-872-6526	Email Address: david.rea@solvay.com	

Part III.B APD (if applicable)

☒ **No APD/Not Applicable**

APD Name:	APD's CITSS ID#: CA _ _ _ _		
Mailing Address:	City:	State:	Zip:
Physical Address (if different):	City:	State:	Zip:
Contact Person:	Phone Number:	Email Address:	

Part III.C.1 Technical Consultant #1 (if applicable)

☒ **No Technical Consultants**

Technical Consultant Name:	Organizational Affiliation, if applicable:		
Phone Number:	Email Address:		
Mailing Address:	City:	State:	Zip:
Physical Address (if different):	City:	State:	Zip:

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Part III.C.2 Technical Consultant #2 (if applicable)		☐ Only One Technical Consultant	
Technical Consultant Name:		Organizational Affiliation, if applicable:	
Phone Number:		Email Address:	
Mailing Address:	City:	State:	Zip:
Physical Address (if different):	City:	State:	Zip:
<i>If the project has more than two technical consultants, either expand this section or report their information on attached paper.</i>			
Part IV. QUESTIONS			
1. Has the offset project met all local, state, and federal regulatory requirements during the Reporting Period for Mine 2, except for any period being excluded pursuant to section 95973(b)(1)? (If "no," an explanation of the non-compliance must be provided.) <i>Indicate any excluded time periods below:</i>			☒ Yes ☐ No
2. Is all the information in the offset project listing still accurate? <i>If "yes," skip to Part V.</i>			☐ Yes ☒ No
a. Does Part II above report an updated Offset Project Commencement Date, Reporting Period Start Date, and/or Reporting Period End Date?			☒ Yes ☐ No
b. Does Part III above report updated OPO/APD Information?			☐ Yes ☒ No
c. Does Part III above report updated Technical Consultant Information?			☒ Yes ☐ No
d. Are there any other updates about Others Involved in Project, aside from the Technical Consultants, to report? <i>(If "yes," provide those updates on separate attached paper.)</i>			☐ Yes ☒ No
e. Are there any updates about the Offset Project Location to report? <i>(If "yes," provide those updates on separate attached paper.)</i>			☐ Yes ☒ No
f. Does Part V below report updated information about Mining Methods Employed?			☐ Yes ☒ No
g. Are there any updates about the Mine Information, aside from Mining Methods Employed and Mineral Production, to report? <i>(If "yes," provide those updates on separate attached paper.)</i>			☐ Yes ☒ No
h. Does any other information in the project listing need to be updated? <i>(If "yes," provide those updates on separate attached paper.)</i>			☐ Yes ☒ No
PART V. MINE INFORMATION			
Mining Method(s) Employed (e.g., longwall or room and pillar) during Reporting Period: Longwall, room and pillar			
Mineral Production during Reporting Period (including both mineral produced and quantity with units of measurement): Trona - 3,819,482 mechanical short tons			
PART VI. REPORTED GHG EMISSION REDUCTION CALCULATIONS			
Part VI.A Calculated Values for Active Underground VAM Activities		☒ Not Applicable	
How many qualifying and non-qualifying destruction devices were used in this reporting period for Active Underground VAM Activities? <i>Note: If there are more than three (3) destruction devices, either expand this section to report information for those destruction devices or submit the required reporting information for those devices on separate, attached paper.</i>		Number Non-Qualifying Devices:	Number Qualifying Devices:
Emission Reductions (ER):			
Part VI.A.1 Baseline Values (for All Destruction Devices)			
Baseline C _{CH4} :		VA _{B,i} :	

Part VI.A.2 <u>Baseline</u> Values by Destruction Device					
Device	Type	$C_{CH_4,exhaust,i}$	$C_{CH_4,MG}$	$MG_{SUPP,i}$	Operational Hours
1.	☐ Qualifying ☐ Non-Qualifying				
2.	☐ Qualifying ☐ Non-Qualifying				
3.	☐ Qualifying ☐ Non-Qualifying				
☐ Provide the hourly average flow rates (for both $VA_{flow,i,y}$ and $CA_{flow,i,y}$) as an attachment.					
For $CA_{flow,i,y}$ (in the baseline scenario), was the flow rate monitored, or was the default maximum quantity used?					☐ Monitored ☐ Default
Part VI.A.3 <u>Project</u> Values (for All Destruction Devices)					
Project C_{CH_4} :					
Part VI.A.4 <u>Project</u> Values by Destruction Device					
Device	$VA_{P,i}$	$C_{CH_4,exhaust,i}$	$C_{CH_4,MG}$	$MG_{SUPP,i}$	Operational Hours
1.					
2.					
3.					
☐ Provide the hourly average flow rates (for both $VA_{flow,i,y}$ and $CA_{flow,i,y}$) as an attachment.					
For $CA_{flow,i,y}$ (in the project scenario), was the flow rate monitored, or was the default maximum quantity used?					☐ Monitored ☐ Default
Part VI.A.5 Other Values					
$CONS_{ELEC}$:		$CONS_{HEAT}$:		$CONS_{FF}$:	
CEF_{ELEC} :		CEF_{HEAT} :		CEF_{FF} :	
Part VI.B Calculated Values for Active Underground Mine Methane Drainage Activities ☐ Not Applicable					
How many qualifying and non-qualifying destruction devices were used in this reporting period for Active Underground Mine Methane Drainage Activities? <i>Note: If there are more than two (2) destruction devices, either expand this section to report information for those destruction devices or submit the required reporting information for those devices on separate, attached paper.</i>				Number Non-Qualifying Devices: 0	Number Qualifying Devices: 2
How many methane sources were used in this reporting period for Active Underground Mine Methane Drainage Activities? <i>Note: If there are more than three (3) methane sources associated with any destruction device, either expand this section to report information for those methane sources or submit the required reporting information for those sources on separate, attached paper.</i>				Number Sources: 1	
How many pre-mining surface wells included in the project were mined through during this reporting period? <i>Note: If more than two (2) wells were included and mined through, either expand this section to report information for those wells or submit the required reporting information for those wells on separate, attached paper.</i>				Number Wells: 0	
Emission Reductions (ER): 182,382					
Part VI.B.1 <u>Baseline</u> Values for <u>First</u> Destruction Device					
Is this a qualifying or non-qualifying destruction device?				☒ Qualifying ☐ Non-Qualifying	
Source	Baseline C_{CH_4}	$PSW_{B,i}$	$PIB_{B,i}$	$PGW_{B,i}$	
1.	0%	N/A	N/A	0	

2.				
3.				

Part VI.B.2 Baseline Values for Second Destruction Device
☐ Not Applicable (Only One Destruction Device)

Is this a qualifying or non-qualifying destruction device?

☒ Qualifying
☐ Non-Qualifying

Source	Baseline C _{CH4}	PSW _{B,i}	PIB _{B,i}	PGW _{B,i}
1.	0%	N/A	N/A	0
2.				
3.				

Part VI.B.3 Project Values for First Destruction Device

Source	Project C _{CH4}	PSW _{P,i}	PIB _{P,i}	PGW _{P,i}
1.	85.0%			545,543,057
2.				
3.				

Part VI.B.4 Project Values for Second Destruction Device
☐ Not Applicable (Only One Destruction Device)

Source	Project C _{CH4}	PSW _{P,i}	PIB _{P,i}	PGW _{P,i}
1.	85.9%			80,139,245
2.				
3.				

Part VI.B.5 Values for Pre-Mining Surface Wells, First Destruction Device

☒ N/A	Baseline C _{CH4,MG} :	Baseline MG _{SUPP,i} :	Project C _{CH4,MG} :	Project MG _{SUPP,i} :
☒ N/A	Identification of 1 st well:			
	PSW _{nqd,i} :	PSW _{e,pre,i} :	PSW _{e,post,i} :	PSW _{p,all,i} :
☒ N/A	Identification of 2 nd well:			
	PSW _{nqd,i} :	PSW _{e,pre,i} :	PSW _{e,post,i} :	PSW _{p,all,i} :

Part VI.B.6 Values for Pre-Mining Surface Wells, Second Destruction Device

☒ N/A	Baseline C _{CH4,MG} :	Baseline MG _{SUPP,i} :	Project C _{CH4,MG} :	Project MG _{SUPP,i} :
☒ N/A	Identification of 1 st well:			
	PSW _{nqd,i} :	PSW _{e,pre,i} :	PSW _{e,post,i} :	PSW _{p,all,i} :
☒ N/A	Identification of 2 nd well:			
	PSW _{nqd,i} :	PSW _{e,pre,i} :	PSW _{e,post,i} :	PSW _{p,all,i} :

Part VI.B.7 Other Values

CONS _{ELEC} :	CONS _{HEAT} :	CONS _{FF} : 59,659,009 scf (natural gas)
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		91 gallons (propane) 265 gallons (distillate #1) 1,363 gallons (distillate #2)
CE _{ELEC} :	CE _{HEAT} :	CE _{FF} : 0.055 kg CO ₂ /scf (natural gas) 5.593 kg CO ₂ /gal (propane) 10.182 kg CO ₂ /gal (distillate #1) 10.206 kg CO ₂ /gal (distillate #2)
☐ N/A	Site-specific Methane Destruction Efficiency for First Device: 99.5%	Description of Process: Ratio of measured off gas CH ₄ concentration and flow (SCF) to fuel gas CH ₄ concentration and flow (SCF) Third Parties Involved: Montrose Air Quality Services
☒ N/A	Site-specific Methane Destruction Efficiency for Second Device:	Description of Process: Third Parties Involved:

Part VII. ATTESTATION AND OPO SIGNATURE

 Initial	I certify under penalty of perjury under the laws of the State of California the GHG reductions and/or GHG removal enhancements for			
	Project Name:		Reporting Period Start Date:	Reporting Period End Date:
	Solvay Chemicals, Inc. Waste Mine Methane Project	from	1/1/2020	to 12/31/2020
are measured in accordance with the Compliance Offset Protocol Mine Methane Capture Projects, April 25, 2014, and all information required to be submitted to ARB is true, accurate, and complete.				
In signing this form, I certify under penalty of perjury of the laws of California that the information contained in this form is true, accurate, and complete. I further certify that I am an Account Representative of the Offset Project Operator (OPO).				
SIGNATURE:		PRINTED NAME:		
		Todd Brichacek		
TITLE:		DATE:		
Senior Vice President - Site Manager		5/26/2021		

Background for Mine Methane Capture Offset Project Data Report for Active Underground Mines

Section 95976(d) of the Cap-and-Trade Regulation specifies reporting requirements for offset projects participating in the Compliance Offset Program. Offset Project Operators (OPO) or Authorized Project Designees (APD) are required to submit an Offset Project Data Report (OPDR) within four months of the end of each (annual) Reporting Period. This form is designed to help OPOs and APDs provide the information required for offset projects using Compliance Offset Protocol Mine Methane Capture Projects, April 25, 2014. This form is submitted to the approved Offset Project Registry that is listing the offset project and should also be provided to the ARB-accredited verification body that will be verifying the Offset Project Data Report.

Where to Submit Information Contained in This Form

Please complete the information on the form using your computer. Then either add an electronic signature to the form or print, sign, and scan the form. The completed and signed information and all supporting documentation should be submitted to the appropriate Offset Project Registry.

This form is also available from the ARB website at:

<http://www.arb.ca.gov/cc/capandtrade/offsets/forms/forms.htm>

Detailed Instructions for Mine Methane Capture Offset Project Data Report for Active Underground Mines

This form is protected with restricted editing to facilitate completing the form. If the reporting OPO or APD wishes to unprotect the form, the password is "form".

Part I. Entity Submitting Report:

- Indicate whether the Offset Project Operator (OPO) or Authorized Project Designee (APD) is submitting the Offset Project Data Report (OPDR).
- Regulatory amendment in section 95976(d)(10) requires that each version of the OPDR specifies the version number and the date submitted. Moreover, the protocol requires that each OPDR include the date of completion. Please include the OPDR version number, the date of OPDR completion, and the date of OPDR submission to the Offset Project Registry.
- The person submitting the information should indicate the date the form is completed.
- List the name, phone, and email address of the person submitting the information. This person should be an employee of the OPO or APD. The person submitting the information need not be the contact person listed for the OPO or APD in Part III and also need not be the OPO's CITSS account representative signing the OPDR in Part VII.

Part II. Offset Project Information:

- Provide the name for the offset project and its Offset Project Registry ID number, as provided by the Offset Project Registry listing the project. Also include the ARB project ID number, if known.
- (For active underground mines, specify whether the project type includes either or both of the ventilation air methane and mine methane drainage types. Check the appropriate box(es).)
- Indicate the Offset Project Commencement Date and the start and end date of the Reporting Period covered in this Offset Project Data Report.

Part III. OPO/APD/TC Information:

- Enter contact information for the Offset Project Operator (OPO) and Authorized Project Designee (APD) for the offset project. Every project will have an OPO. If a project does not have an APD, please mark the box indicating the project does not have an APD and leave the remaining fields blank.
- For both the OPO and, if applicable, the APD, enter the entity's name, its CITSS ID number, its mailing address, its physical address (if different than mailing address), and the name, phone number, and e-mail address of a contact person for the entity. The CITSS ID is six characters in length, with two letters followed by four numbers (e.g., "CA1234"). **DO NOT PROVIDE THE OPO's or APD's CONFIDENTIAL CITSS ACCOUNT NUMBER**, which begins with the CITSS ID number followed by a hyphen and more numbers.
- Provide the same information for any technical consultants to the OPO or APD for this project. Provide the entity's name, its mailing address, its physical address (if different than mailing address), and the name, phone number, and e-mail address of a contact person for the entity.

- If there are no technical consultants or just one technical consultant, the appropriate check boxes may be marked to indicate that required information is not being omitted. If there are more than two technical consultants, either expand this section of the OPDR or provide the required information on separate, attached paper.

Part IV. Questions:

- This part includes two questions required in Compliance Offset Protocol Mine Methane Projects, April 25, 2014.
- First, the OPO or APD must respond whether the offset project has met all local, state, and federal regulatory requirements during the Reporting Period. Local regulatory requirements include those by any air quality, water quality, zoning, or other agency with jurisdiction over any aspect of the offset project. (For abandoned underground mine methane recovery activities, the OPO or APD must respond about regulatory requirements separately for each mine involved in the project.)
- Regulatory amendments in section 95973(b)(1), effective October 1, 2017, allow an OPO or APD to effectively exclude a time period during which a project is out of regulatory compliance and receive ARB or registry offset credits for the remainder of the reporting period. If an OPO or APD is excluding some dates, the OPO or APD should provide the excluded dates.
- Second, the OPO or APD must answer whether information submitted in the offset project listing remains accurate. If the listing information remains accurate, skip to Part V. For information which is no longer accurate, answer questions 2a through 2h to indicate which portions of the listing information is being updated in this report.

Part V. Mine Information:

- Specify the mining method(s) (e.g., longwall, room and pillar, or open-pit) employed during reporting period. (For abandoned underground mine methane recovery activities, specify the mining method(s) employed for each mine while it was active.)
- Report the Mineral Production during the Reporting Period. Include both the mineral(s) produced and the amount produced of each mineral (specifying the units).

Part VI. Reported GHG Emission Reduction Calculations:

- This part includes two sections, the first for ventilation air methane (VAM) and the second for mine methane drainage. If project activities include both types, complete both sections. If project activities include only one type (as specified in Part II), you may check the "not applicable" box at the start of that section to indicate that information is purposely not provided. Provide only the the information in the other section.

Part VI.A Calculated Values for Active Underground VAM Activities:

- Specify the number of both qualifying and non-qualifying destruction devices used in this reporting period for VAM activities. If there are more than three destruction devices, required reporting information for the additional destruction devices should be provided by either expanding the section or by providing the information on separate, attached paper.
- Provide the total emission reductions in metric tons CO₂e.
- Within the first two subsections of this part, provide the required *baseline* parameters. Within the next two sections, provide the required *project* parameters. For descriptions of each variable, please see the Compliance Offset Protocol Mine Methane Capture Projects, April 25, 2014, including subchapter 7.2 (beginning on page 129) for reporting requirements. Please report the volume of mine gas in standard cubic feet (scf).
- For "operational hours," this is the hours during which the destruction device was operational during reporting period (y), reported separately for each destruction device in the baseline and project scenarios.
- The hourly average flow rates (for both $VA_{flow,i,y}$ and $CA_{flow,i,y}$) should be provided as an attachment.
- Within the fifth and final subsection of this part, provide the other required reporting information.

Part VI.B Calculated Values for Active Underground Mine Methane Drainage Activities:

- Specify the number of both qualifying and non-qualifying destruction devices used in this reporting period for mine methane drainage activities. If there are more than two destruction devices, required reporting information for the additional destruction devices should be provided by either expanding the section or by providing the information on separate, attached paper.
- Similarly, specify the number of methane sources used in this reporting period and the number of pre-mining surface wells included in the project that were mined through during the reporting period. If there are more than three sources and/or more than two wells, required reporting information for the additional sources and/or wells should be provided by either expanding the section or by providing the information on separate, attached paper.

- Provide the total emission reductions in metric tons CO₂e.
- Within the first two subsections of this part, provide the required *baseline* parameters. Within the next two subsections, provide the required *project* parameters. For descriptions of each variable, please see the Compliance Offset Protocol Mine Methane Capture Projects, April 25, 2014, including subchapter 7.2 (beginning on page 129) for reporting requirements.
- For the volume of mine gas calculations (including PSW, PIB, and PGW) and the terms for pre-mining surface wells (including PSW_{ngd}, PSE_{e_{pre}}, PSE_{e_{post}}, and PSW), it may be appropriate to report values for only some calculations. As appropriate, fields for the other terms may be left blank.
- If there is only one destruction device for mine methane drainage activities, you may check the "not applicable" boxes for the second destruction device indicating these subparts of the MMC OPDR form are being purposely left blank.
- Within the fifth and sixth subsections of this part, provide any required values for pre-mining surface wells. If there are no pre-mining surface wells, the "N/A" boxes in these subsections may be checked to indicate are being purposely left blank.
- Identify each pre-mining surface well with its associated calculated values.
- Within the seventh and final subsection of this part, provide the other required reporting information.
- If site-specific methane destruction deficiency is use for any destruction device, provide the destruction efficiency, a description of the process of establishing the methane destruction efficiency, and the identity of any third parties involved. If a site-specific methane destruction deficiency is not used, the "N/A" box may be checked to indicate are being purposely left blank.

Part VII. Attestation and OPO Signature:

- Section 95975(d)(5) of the Cap-and-Trade Regulation requires an attestation for Offset Project Data Reports. The person signing the form should initial each attestation (no typed or printed initials).
- The attestation requires the applicant to provide some information to complete the statement. The project name should match the name entered in Part II. The dates covering the project Reporting Period must also be provided. Please note that the dates provided in the attestation should be the same dates provided in Part II.
- Amendments adopted in April 2014 to section 95976(d)(6) require the attestation "be provided to an Offset Project Registry with the Offset Project Data Report if the offset project is listed with an Offset Project Registry."
- The individual signing the document must be registered in CITSS as the OPO's Primary Account Representative or Alternate Account Representative. The individual signing the document may be an APD employee and/or representative; but to sign the document, the individual must be an Account Representative on the OPO's CITSS account.
- Please provide the individual's signature, printed name, corporate title, and date signed.