



City of South Bend

Public Works

Memorandum

To: BPW
From: Andrea Alexander, Wastewater Utility
Subject: Parsons Environment and Infrastructure
Date: September 17, 2024

Parsons continues to develop biofilter technology to treat methane emissions from abandoned gas well sites as well as closed landfills. They constructed a methane biofilter at Fredrickson Park in May 2024. This biofilter is proving to be successful. Parsons would like to install a similar methane biofilter at the closed biosolids landfill at Organic Resources (OR), again at no cost to the City.

An Agreement with Parsons was developed like that used at Fredrickson Park. A letter describing the biofilter project at OR was shared with IDEM. At this time comments have not been received.

Excellence
Accountability
Innovation
Inclusion
Empowerment

Visit
County-City Building
227 W Jefferson Blvd, Suite 1300 N
South Bend, IN 46601

Phone
311 inside City limits
(574) 233-0311 outside City limits

Email: 311@southbendin.gov

Website: Southbendin.gov

CONSTRUCTION ACCESS AND INSTALLATION AGREEMENT

THIS CONSTRUCTION ACCESS AND INSTALLATION AGREEMENT (“Agreement”) is entered into as of the 24th day of September 2024, by the City of South Bend, Indiana, acting through its Board of Public Works (collectively, the “City”) and Parsons Environment & Infrastructure Group Inc.(“Parsons”).

WHEREAS, the City owns and manages 94 acres of land at 4340 Trade Drive, South Bend, IN 46628, more commonly known as Organic Resource Facility (“OR”);

WHEREAS, OR is subject to a Closure / Post Closure Plan managed collaboratively between the City and Indiana Department of Environmental Management (“IDEM”);

WHEREAS, Parsons is a leading and innovative environmental service company seeking solutions for cleaner communities;

WHEREAS, Parsons desires to install a methane biofiltration system at OR which will serve as a pilot program with the intent to capture a portion of the landfill gases and ultimately convert those gases to water and carbon dioxide;

WHEREAS, Parsons has successfully tested the technology it intends to install at OR with success both in its laboratory and oil, and gas wells throughout Canada;

WHEREAS, both the City and Parsons believe this pilot program aligns with the City’s long term sustainability goals.

NOW, THEREFORE, for and in consideration of other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, it is agreed as follows:

1. City agrees to allow Parsons access to OR for the limited purpose of installing a methane biofiltration system. Parsons shall install in a manner that does not disturb the clay landfill cap. The location of the methane biofiltration system on OR shall be consistent with Exhibit A, attached hereto. Nothing in this Agreement shall permit Parsons to pierce the clay landfill cap or otherwise disturb or dig in any area of OR without the express consent of the City and Indiana Department of Environmental Management. Further, Parsons agrees to comply with the technical guidance provided by IDEM as set forth in Exhibit B throughout the construction, installation and implementation period.
2. Parsons, at its sole expense, shall construct, install, and maintain the methane biofiltration system. Further, Parsons shall provide the City with all data points related to the operation of the methane biofiltration system as well as any other data reasonably requested by the City.

3. The term of this Agreement shall be year to year and shall automatically renew unless the either party provides written notice of its intention to terminate the relationship. Upon termination of this Agreement, Parsons, at its sole expense, shall be responsible for the safe dismantling of the methane biofiltration system and remove all related materials and equipment from OR. Any such dismantling of the methane biofiltration system must abide by all rules imposed on the land by the Indiana Department of Environmental Management.
4. Parsons agrees to make its representatives available in person for a public meeting to answer questions from concerned citizens, community groups and other key City stakeholders. This City shall provide Parsons a minimum of four (4) weeks' notice prior to the scheduling of such public meeting.
5. Parsons agrees and undertakes to indemnify and hold the City, and its respective agents, employees, successors, and assigns, harmless from any liability, loss, costs, damages or expenses, including attorneys' fees, which City may suffer or incur as a result of any third party claims or actions. Parsons' duty to indemnify the City is limited to the extent that the claims or actions are caused by Parsons actions under this Agreement. If any action is brought against City or its respective agents, employees, successors, or assigns, in connection with this Agreement, Parsons agrees to defend such action or proceedings at its own expense and to pay any judgment rendered therein.
6. This Agreement may not be assigned by Parsons without the express written consent of City which such consent may be withheld for any reason. Any violation of this limitation shall terminate this Agreement and forfeit Parsons's rights under this Agreement.
7. This Agreement shall be construed and interpreted according to the laws of the State of Indiana.
8. This Agreement sets forth the entire agreement and understanding between the parties as to the subject matter hereof, and merges and supersedes all prior discussions, agreements, and understanding of any and every nature between them.
9. The person signing on behalf of Parsons represents that he/she has been duly authorized to execute this Agreement on behalf of Parsons.

IN WITNESS WHEREOF, City and Parsons, through their duly authorized representatives, have caused this Agreement to be executed as of the day and year first written above. The parties have read and understand the foregoing terms of this Agreement and do, by their respective signatures hereby agree to its terms.

(Remainder of page intentionally left blank)

Date: _____

PARSONS ENVIRONMENT &
INFRASTRUCTURE GROUP

Its _____

**CITY OF SOUTH BEND, INDIANA
BOARD OF PUBLIC WORKS**



Elizabeth A. Maradik, President



Joseph R. Molnar, Vice President



Gary A. Gilot, Member



Briana Micou, Member



Murray L. Miller, Member

ATTEST:



Theresa M. Heffner, Clerk

Date: September 24, 2024

EXHIBIT A

EXHIBIT B

Guidance from IDEM Technical Staff for Installation

The Office of Land Quality and IDEM Technical staff have reviewed the proposed construction of the biofilter and associated piping for a methane treatment pilot project, as submitted September 25, 2023 (VFC #83536075 [ecm.idem.in.gov]). The following is recommended during and after installation of the methane treatment biofilter:

- (1) The proposed design indicates that the landfill cover will not be disturbed, because the biofilter will be constructed on top of the cover. IDEM reiterates that the landfill's two feet of clay cap AND six inches of topsoil **should not** be excavated or disturbed during installation of the biofilter. All topsoil referenced in project documents needs to be moved on to the landfill without the use of large trucks traversing the cap, due to the potential for cap damage from oversized vehicles.*
- (2) The biofilter design proposes to divert a slipstream of gas to the biofilter, while leaving the existing gas collection lines and gas extraction system intact and active, as originally designed. The biofilter design includes a return line for treated gas to the blower/flare system after passing through the biofilter. IDEM notes that construction of the return line is crucial to prevent a build-up of methane gas.*
- (3) The biofilter needs to be maintained and in good condition during the lifetime of its use. IDEM requires repair of the cover and equipment if disturbed/damaged during the biofilter installation and operation and return of the facility back to the pre-biofilter condition upon completion of the project.*
- (4) Applicable requirements of 329 IAC 10-23-3 need to be followed."*

71-UP-01 Closed Biosolids Landfill - Biofilter Pilot Study

Andrea Alexander <aalexand@southbendin.gov>

Mon 8/26/2024 3:30 PM

To:geologydata@idem.in.gov <geologydata@idem.in.gov>;STEPHANOFF, BRENDA <BSTEPHAN@idem.IN.gov>

Cc:WEAVER, TROY <TWEAVER@idem.IN.gov>;Markert, Elizabeth <EMarkert@idem.IN.gov>;Jason.Price@parsons.com <Jason.Price@parsons.com>;Kim Thompson <kthompso@southbendin.gov>

📎 1 attachments (2 MB)

OR Biosfilter Letter to IDEM.pdf;

Please see attached letter to follow up with our phone call on August 20, 2024, regarding the pilot study of a methane biofilter at the closed Biosolids Landfill. As discussed during the meeting, your quick attention to this matter would be greatly appreciated. Parsons would like to get the biofilter installed before September 30 to align with their fiscal budget.

Kind regards,
Andrea



Andrea Alexander
Director of Environmental Compliance

City of South Bend
Department of Public Works
Division of Wastewater

aalexand@southbendin.gov Wastewater Treatment Plant
574-235-5813 3113 Riverside Drive
Southbendin.gov South Bend, IN 46628



CITY OF SOUTH BEND

DEPARTMENT OF PUBLIC WORKS

August 26, 2024

Via Email to: geologydata@idem.in.gov

Ms. Brenda Stephanoff
Solid Waste Section Chief
Indiana Department of Environmental Management
100 North Senate Avenue
Indianapolis, IN 46204

RE: Organic Resources Center Closed Biosolids Landfill – South Bend, Indiana

Ms. Stephanoff,

The City of South Bend, Indiana in conjunction with Parsons is planning to construct a methane biofilter at the former landfill in South Bend known as Organic Resources Center Closed Biosolids Landfill (ORC). The purpose of the activity is to demonstrate this emerging technology at pilot scale.

This technology utilizes microbial degradation of methane gas to reduce greenhouse gas emissions. Parsons has proven the technology's efficacy in a laboratory setting, at the Fredrickson Park Landfill in South Bend, and at oil and gas wells in Alberta Canada. Parsons wishes to construct another methane biofilter pilot test at a landfill setting under a Midwest state climate.

Parsons will construct the biofilter such that a portion of the landfill gases vented by powered vent LGV-1 is piped to the biofilter constructed on top of the clay cap. The design distributes the gas through the filter media where methanotrophs metabolize the methane converting it to water and carbon dioxide. Attached to this letter are three figures that provide additional details on the location and general specifications of the biofilter.

We have worked with Parsons to ensure that the protective elements currently in place at the landfill continue to protect human health and the environment. Parsons has demonstrated that the biofilter design, construction and operation will not impact the protective elements currently in place at the ORC Closed Biosolids Landfill. First, the clay cap in place over the extent of the landfill will not be impacted as the biofilter will be constructed on top of or just outside of the cap and will not be penetrated. Secondly, the efficacy of the solar powered vent LGV-1 will not be impacted and will continue to operate as designed. Parsons will utilize a solar powered pump to pull gas from the LGV-1 gas vent exhaust into the biofilter. This avoids the potential for reducing flow at LGV-1 which could occur if the LGV-1 gas vent

EXCELLENCE | ACCOUNTABILITY | INNOVATION | INCLUSION | EMPOWERMENT

1316 County-City Building | 227 W. Jefferson Blvd. | South Bend, Indiana 46601 | p 574.235.9251 | f 574.235.9171 | www.southbendin.gov

CITY OF SOUTH BEND | DEPARTMENT OF PUBLIC WORKS

was diverted directly to the biofilter. Figure 3 shows the proposed vent connection. Lastly, the biofilter will be positioned on the opposite (west) side of the drainage ditch located adjacent to vent LGV-1. This will ensure easy access for construction that will not impact nor impede drainage.

This project aligns with The City of South Bend's sustainability goals, and we are excited to facilitate the evaluation of this technology. Please feel free to reach out to us with any questions or concerns you may have regarding this project.

Sincerely,



Andrea Alexander
Director of Environmental Compliance
City of South Bend

Cc:

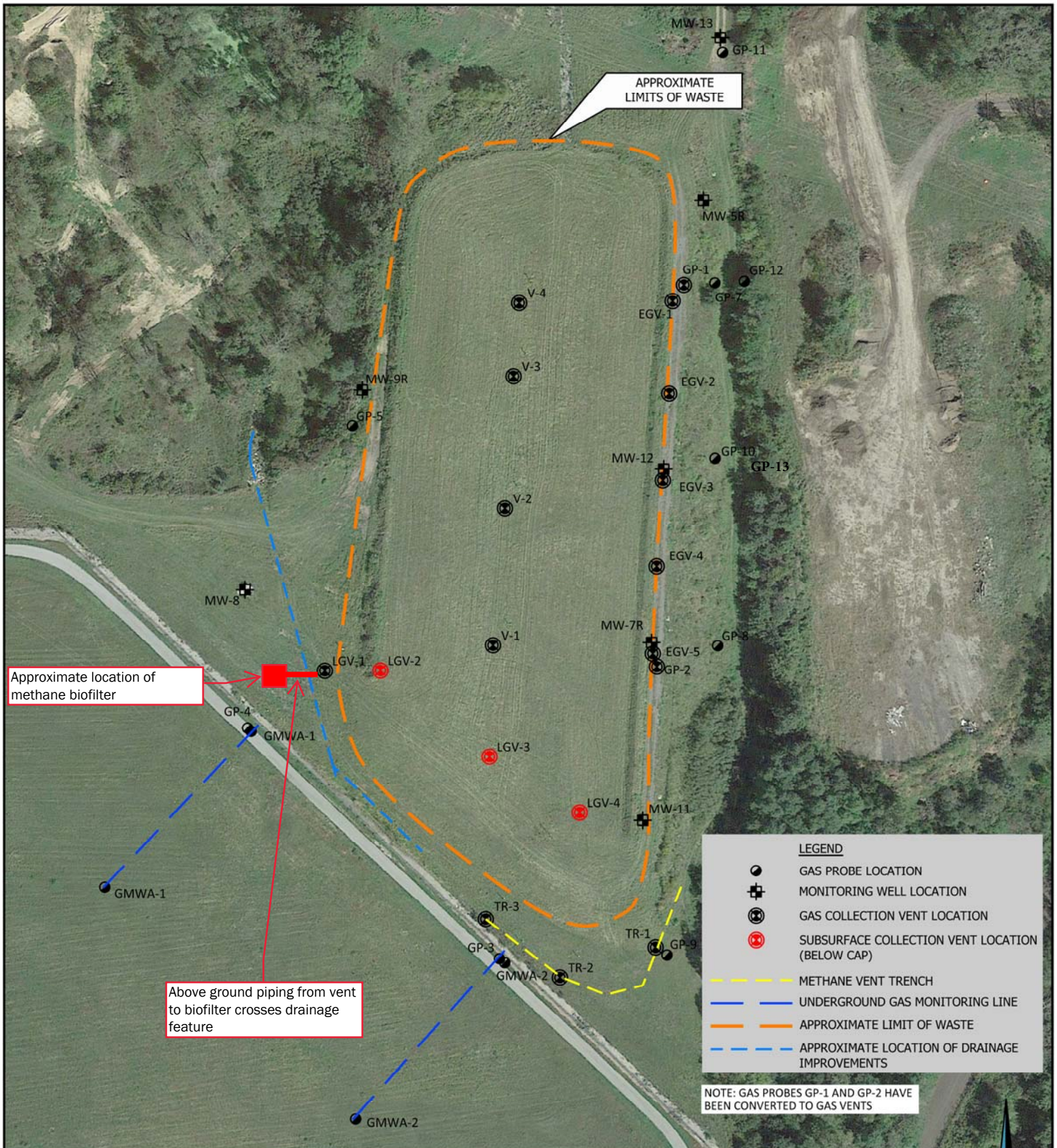
Mr. Troy Weaver – IDEM
Ms. Beth Markert - IDEM
Mr. Jason Price - Parsons

Attachments:

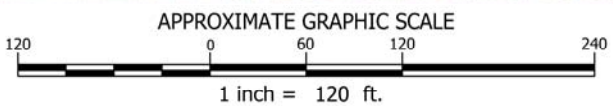
Figure 1. Fredrickson Park Methane Biofilter Overview Map

Figure 2. General biofilter design schematic.

Figure 3. Vent connection diagram.



TOPOGRAPHIC SURVEY PROVIDED BY JONES, PETRIE, RAFINSKI, LOCATED IN SOUTH BEND, INDIANA. DATE OF SURVEY NOVEMBER 2016.
 SOURCE: LOCATIONS OF HISTORIC PROBES, VENTS, WELLS AND TRENCHES ADAPTED FROM MAP BY KERAMIDA, DATED JUNE 2016.
 SOURCE: IMAGE ADAPTED FROM GOOGLE EARTH IMAGERY DATED SEPTEMBER 2015.
 COPYRIGHT © 2016 WEAVER CONSULTANTS GROUP. ALL RIGHTS RESERVED.



PREPARED FOR:
 CITY OF SOUTH BEND

APPROXIMATE GAS PROBE LOCATION MAP
 ORGANIC RESOURCE CENTER
 CLOSED BIOSOLIDS LANDFILL - LAGOON #4
 SOUTH BEND, IN

REUSE OF DOCUMENTS
 THIS DOCUMENT, AND THE DESIGNS INCORPORATED HEREIN, AS AN INSTRUMENT OF PROFESSIONAL SERVICE, IS THE PROPERTY OF WEAVER CONSULTANTS GROUP, AND IS NOT TO BE USED IN WHOLE OR IN PART, WITHOUT THE WRITTEN AUTHORIZATION OF WEAVER CONSULTANTS GROUP.

**Weaver
 Consultants
 Group**
 GRANGER, INDIANA
 (574) 271-3447 www.wcgrp.com

DRAWN BY: JCN
REVIEWED BY: AEM
DATE: 7/27/2017
FILE: 0058-300-DWG
CAD: SBB000007.dwg
FIGURE 1

Figure 2 - Proposed Biofilter General Design

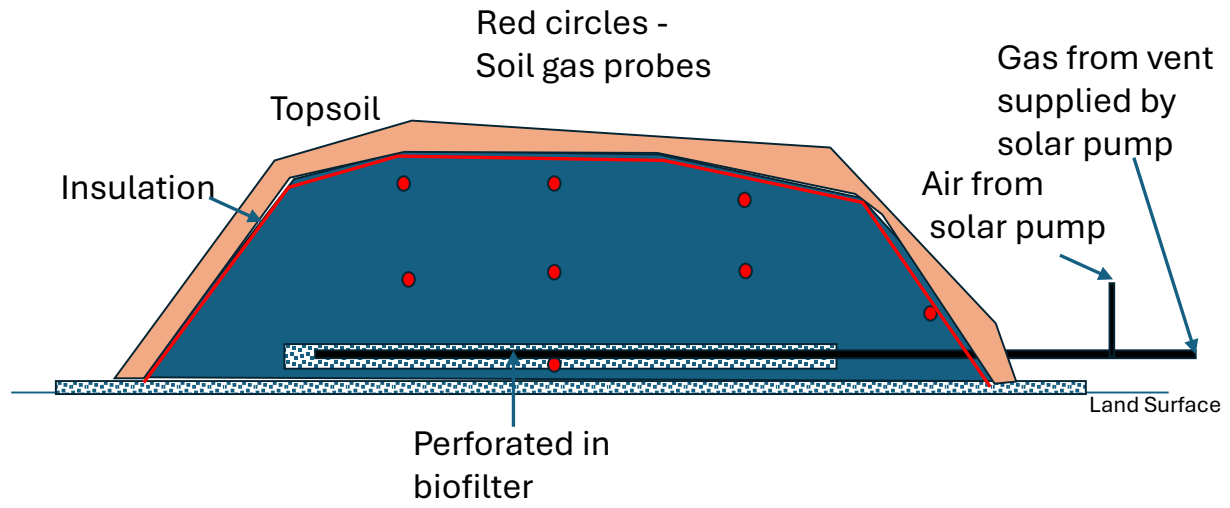
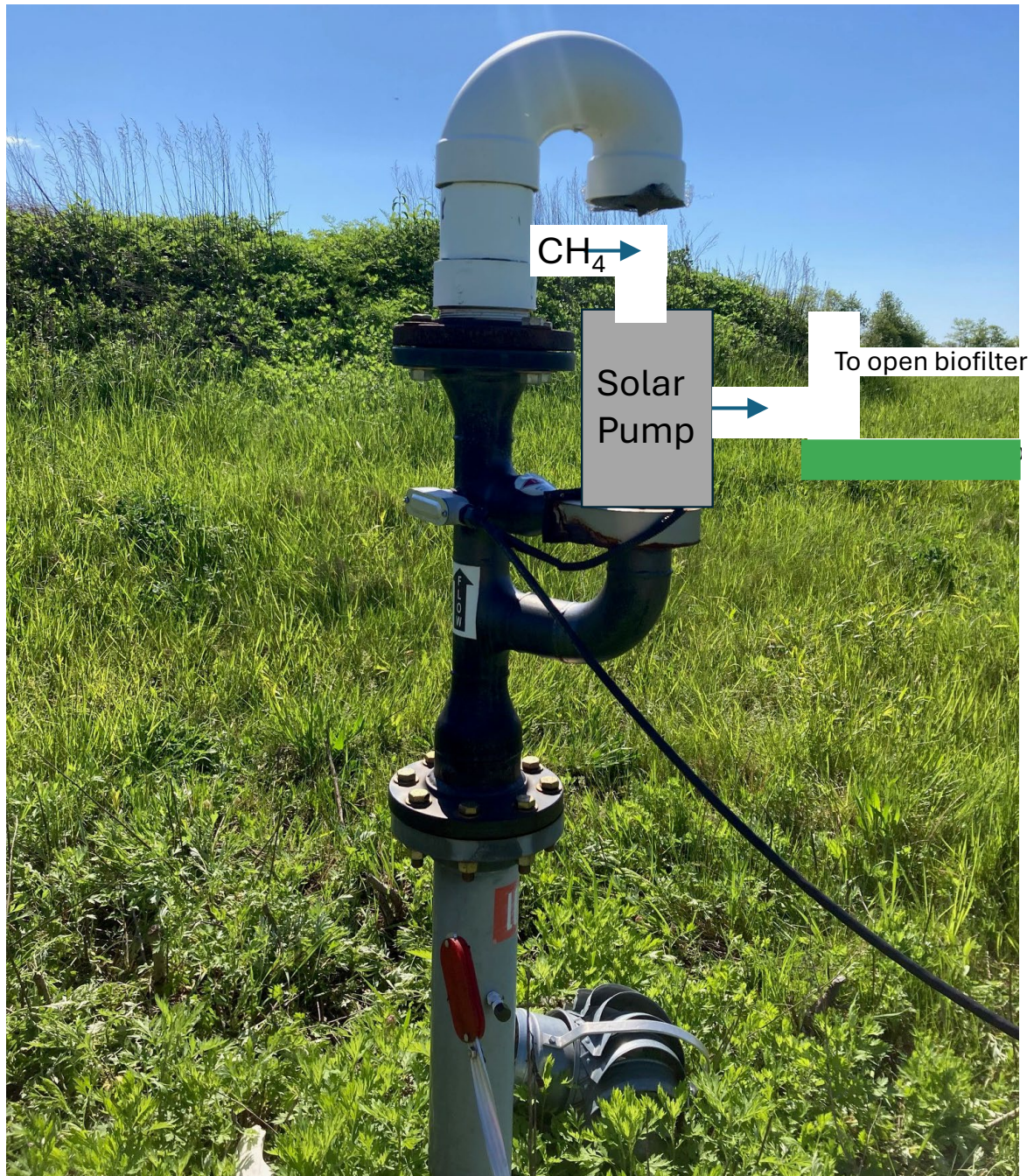


Figure 3 - Vent connection



No. 7627-25

REGISTRATION

\$125.00

ST. JOSEPH COUNTY AND CITY OF SOUTH BEND, INDIANA

February 6, 2024

WHEREAS, **PARSONS ENVIRONMENT & INFRASTRUCTURE GROUP INC** having this day paid to the Building Department the sum of One Hundred Twenty Five Dollars and Zero Cents is hereby REGISTERED to operate in the unincorporated areas of ST. JOSEPH COUNTY and the CITY OF SOUTH BEND, as a

Industrial Piping Contractor

THIS REGISTRATION EXPIRES: **January 24, 2025**



_____, Building Commissioner

Randy James

1422 S. TRYON ST
SUITE 800
CHARLOTTE, NC 28203
(704)558-4067

THIS REGISTRATION IS NOT TRANSFERABLE

**BOARD OF PUBLIC WORKS
AGENDA ITEM REVIEW REQUEST FORM**

Date	<u>September 17, 2024</u>	Department	<u>Wastewater</u>
Name	<u>Andrea Alexander</u>	Phone Extension	<u>5813</u>
BPW Date	<u>September 24, 2024</u>		

Review and Approval Required Prior to Submittal to Board

Diversity Compliance and Inclusion Officer	<input type="checkbox"/>	Officer Name	_____
BPW Attorney	<input checked="" type="checkbox"/>	Attorney Name	<u>Michael Schmidt</u>
Dept. Attorney	<input type="checkbox"/>	Attorney Name	_____
Purchasing	<input type="checkbox"/>		_____

Check the Appropriate Item Type – Required for All Submissions

<input type="checkbox"/> Professional Services Agreement	<input checked="" type="checkbox"/> Contract	<input type="checkbox"/> Proposal
<input type="checkbox"/> Open Market Contract	<input type="checkbox"/> Amendment/Addendum	<input type="checkbox"/> Special Purchase, QPA
<input type="checkbox"/> Bid Opening	<input type="checkbox"/> Bid Award	<input type="checkbox"/> Req. to Advertise <input type="checkbox"/> Title Sheet
<input type="checkbox"/> Quote Opening	<input type="checkbox"/> Quote Award	<input type="checkbox"/> Reject Bids/Quotes
<input type="checkbox"/> Proposal Opening	<input type="checkbox"/> C/O & PCA No. _____	<input type="checkbox"/> PCA
<input type="checkbox"/> Chg. Order, No. _____	<input type="checkbox"/> Traffic Control	<input type="checkbox"/> Resolution
<input type="checkbox"/> Other: _____		<input type="checkbox"/> Ease./Encroach

Required Information

Company or Vendor Name	<u>Parsons Environment & Infrastructure Group</u>		
New Vendor	<input type="checkbox"/> Yes <input type="checkbox"/> If Yes, Approved by Purchasing		
	<input checked="" type="checkbox"/> No		
MBE/WBE Contractor	<input type="checkbox"/> MBE	Completed E-Verify Form Attached	<input type="checkbox"/> Yes
	<input type="checkbox"/> WBE		<input type="checkbox"/> No
Project Name	_____		
Project Number	_____		
Funding Source	_____		
Account No.	_____		
Amount	_____		
Terms of Contract	_____		
Purpose/Description	<p>Perform pilot study at Organic Resources closed biosolids landfill to continue developing methane biofilter technology. This technology reduces greenhouse gas emissions by treating methane gas from the landfill. This project is at no cost to the City of South Bend.</p>		

For Change Orders Only

Amount of	<input type="checkbox"/>	Increase	\$ _____
	<input type="checkbox"/>	Decrease	(\$ _____)
Previous Amount			\$ _____
		Increase	_____ %
Current Percent of Change:		Decrease	(_____ %)
New Amount			\$ _____
Total Percent of Change:		Increase	_____ %