

# DAVID M. PETERSON, PE, PC

A PROFESSIONAL ENGINEERING CORPORATION  
SPECIALIZING IN ENVIRONMENTAL SOLUTIONS

7000 BRIDLEWOOD DRIVE  
CONCORD TWP., OH 44077  
EMAIL: [DAVE@DMPETERSONPE.COM](mailto:DAVE@DMPETERSONPE.COM)

January 15, 2024

*Sent via Email*

Mr. Dion Novak HSRL-6J  
Remedial Project Manager  
U.S. Environmental Protection Agency  
Region V  
77 West Jackson Blvd.  
Chicago, IL 60604-3590

**Subject: 4Q2023 Progress Report  
Reilly Superfund Site, 1500 S. Tibbs Ave., Indianapolis, Indiana**

Dear Mr. Novak:

This quarterly progress report is being submitted on behalf of 1500 South Tibbs LLC in accordance with Section IX A of the Administrative Order by Consent in the matter of Reilly Industries, Inc. (Reilly), 1500 South Tibbs Avenue, Indianapolis, Indiana 46242, U.S. EPA Docket No. V-W-'87-C-006, effective date July 6, 1987, as amended. This quarterly progress report also satisfies the requirements of Section XI of the RD/RA Consent Decree, Civil Action No. (lodged August 10, 1993), effective June 10, 1993 and Section XI of the Consent Decree for the Second Operable Unit, Civil Action No. IP93-1045-C, effective September 14, 1994 CD for OU3-4-5 Civil Action No. IP-93-1045-C. This report is being submitted on behalf of 1500 South Tibbs LLC, which is not a party to the referenced Administrative Order by Consent or Consent Decrees. 1500 South Tibbs LLC reserves all rights and defenses, including all applicable statutory and common-law defenses.

This quarterly report summarizes the following work elements:

- Groundwater operation and maintenance (O&M)
- Cover inspections and maintenance
- Sewer testing and repairs

## **1.0 Groundwater O&M**

The groundwater pumping system at two locations (PW-1 and PW-2) has been on-line since October 3, 1994. Two additional wells (PW-3 and PW-4) were added during August 1997. PW-1 and PW-2 were replaced in 2002 and 2003. The system now consists of PW-1S, PW-1D, PW-2S, PW-3, and PW-4. The five-well system was on-line from April 2003 to March 2005. Wells PW-3 and PW-4 were shut down following approval from the EPA. **Figure 1** is a site map depicting the locations of pumping and monitoring wells.

The following table presents the total volume of groundwater pumped and average pumping rates for the operating wells during the quarter for PW-1S, PW-1D, and PW-2S. Pumping wells PW-1S and PW-2S

operated continuously (100% uptime) during the quarter. The pump failed in PW-1D on December 24 and is in the process of being replaced. The uptime for PW-1D was 91% during the quarter.

Pumping Well	October (gallons / average gpm)	November (gallons / average gpm)	December (gallons / average gpm)
PW-1S	69,252 / 1.6	58,138 / 1.3	54,400 / 1.2
PW-1D	697,620 / 15.6	642,648 / 14.9	773,682 / 17.3
PW-2S	149,289 / 3.3	129,752 / 3.0	112,045 / 2.5

The quarterly groundwater monitoring event occurred on December 4, 2023 in accordance with the monitoring plan. **Table 1** presents the measured groundwater levels. Groundwater levels decreased in RI-4S and RI-4D by 0.97 and 1.81 feet, respectively, compared to 3Q2023. **Attachment A** contains well monitoring data.

**Table 2** presents the groundwater analytical results. The remedial goals (RGs) for benzene (B), pyridines (P), and ammonia (A), collectively the compounds of concern (COC), are 0.005 mg/L, 0.035 mg/L for each pyridine, and 30 mg/L, respectively. Levels of COC were measured above the RG in the OU1 shallow aquifer at RI-4S (P). Levels of COC were measured above the RG in the OU1 deep aquifer at PW-1D (B) and RI-4D (B & P). **Attachment B** contains laboratory analytical data.

## 2.0 Cover Inspections and Maintenance

Cover inspections are performed semi-annually and the second half of 2023 was completed on December 4, 2023. **Attachment C** contains cover inspection and maintenance checklist forms and a map of the OU2, OU3 and OU4 Superfund areas.

Results from the second half of 2023 indicated that no anomalies were identified in OU2, OU3, or OU4 with one exception. A section of concrete that is approximately 2 ft by 4 ft was removed to repair a broken water pipe in OU4. The area has been backfilled with aggregate and is pending concrete restoration. A purchase order has been issued to a contractor to install new concrete in accordance with the Remedial Action Work Plan for OU4 and work is anticipated to be completed early next quarter.

No tar derived material (TDM) was found or collected, and no seeps were identified. The following table summarizes the amount of material that has been collected for off-site disposal since 2000. The volumes were initially reported in drums and are currently tracked in pounds, as some of the drums in the past were not full.

Annual Disposal from the South Landfill Area					
Year	TDM (lbs)	Year	TDM (lbs)	Year	TDM (lbs)
2000 / 2001	10 / 8 drums	2008 / 2009	363	2015	20
2002 / 2003	1,348 / 2,475	2010	1,280	2016	60
2004	1,430	2011 / 2012	375	2017	300
2005	1,455	2013	800	2018 - 2023	0
2006 / 2007	600	2014	1,825	<b>Total = 18 drums + 12,331 lbs</b>	

### 3.0 Sewer Testing and Repairs

No sewer testing or repair activities occurred in 4Q2023. However, as plant processes are shut down sewers are being flushed with water and lift stations are being cleaned using a vacuum truck and water. All water utilized for flushing and cleaning is being treated by the on-site wastewater treatment plant. Updates on these activities will be provided in future quarterly status reports.

Please feel free to contact me at (216) 554-0413 or via email at [dave@dmpetersonpe.com](mailto:dave@dmpetersonpe.com) if you have any questions or require additional information.

Sincerely,



David M. Peterson, PE  
President

cc: Josh Zaharoff, USEPA – via Email  
Courtney Townsend, IDEM – via Email  
Brett Fishwild, Jacobs – via Email  
Laura Groom, Rolls Royce – via Email

Mark Thrine, Aurorium – via Email  
Andrea Marrs, Aurorium – via Email

#### Attachments

Table 1 – Groundwater Elevations  
Table 2 – Groundwater Concentrations  
Figure 1 – Site Map  
Attachment A – Well Monitoring Data  
Attachment B – Laboratory Analytical Data  
Attachment C – Cover Inspection and Maintenance Checklist

**Attachment A**

**Well Monitoring Data**

**Attachment B**

**Laboratory Analytical Data**

**Attachment C**

**Cover Inspection and Maintenance Checklist**

**Table 1**

**Vertellus Integrated Pyridines LLC  
4Q2023 Groundwater Elevations**

**OU1 / OU5 SHALLOW AQUIFER WELLS**

Well ID	Op. Unit	Easting	Northing	TOC (ft asl)	DTW (ft)	Elev (ft asl)
RI-4S	OU1	173515	1637705	700.68	19.50	681.18

**OU1 DEEP / OU5 MEDIUM AQUIFER WELLS**

Well ID	Op. Unit	Easting	Northing	TOC (ft asl)	DTW (ft)	Elev (ft asl)
RI-4D	OU1	173515	1637688	700.69	26.85	673.84

**OU5 DEEP AQUIFER WELLS**

Well ID	Op. Unit	Easting	Northing	TOC (ft asl)	DTW (ft)	Elev (ft asl)
---------	----------	---------	----------	--------------	----------	---------------

None measured.

**Notes:**

1. Eastings and Northings in Indiana State Plane coordinates.
2. Well locations are estimated, not surveyed.
3. TOC = Top of Casing, DTW = Depth to Water, Elev = Groundwater Elevation
4. Groundwater levels were measured on December 4, 2023.

Table 2

Vertellus Integrated Pyridines LLC  
4Q2023 Groundwater Concentrations

OU1 / OU5 SHALLOW AQUIFER WELLS

Well Name	Benzene	Ammonia	Pyridine	2-Picoline	3/4-Picoline	2,6-Lutidine	2-Ethyl pyridine	2,4/2,5-Lutidine	2,3-Lutidine	3-Ethyl pyridine	4-Ethyl pyridine	3,5-Lutidine	3,4-Lutidine	2-Methyl-5-ethyl pyridine	2-Methyl-3-ethyl pyridine	3-Ethyl-4-methyl pyridine
PW-2S	<5.0	18.7	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	<9.5	11.8	<9.5	<9.5	<9.5	<9.5
RI-4S	<5.0	8.2	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	70.1	<10.0	<10.0	<10.0	<10.0
PW-1S	<5.0	Note: PW-1S sampled for discharge compliance only.														

OU1 DEEP / OU5 MEDIUM AQUIFER WELLS

Well Name	Benzene	Ammonia	Pyridine	2-Picoline	3/4-Picoline	2,6-Lutidine	2-Ethyl pyridine	2,4/2,5-Lutidine	2,3-Lutidine	3-Ethyl pyridine	4-Ethyl pyridine	3,5-Lutidine	3,4-Lutidine	2-Methyl-5-ethyl pyridine	2-Methyl-3-ethyl pyridine	3-Ethyl-4-methyl pyridine
RI-4D	7	14.3	<10.5	<10.5	<10.5	15.7	<10.5	12.8	<10.5	<10.5	<10.5	231	<10.5	12.8	36.0	<10.5
PW-1D	22.2	Note: PW-1D sampled for discharge compliance only.														

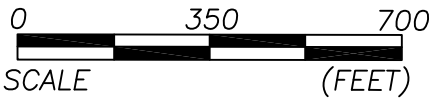
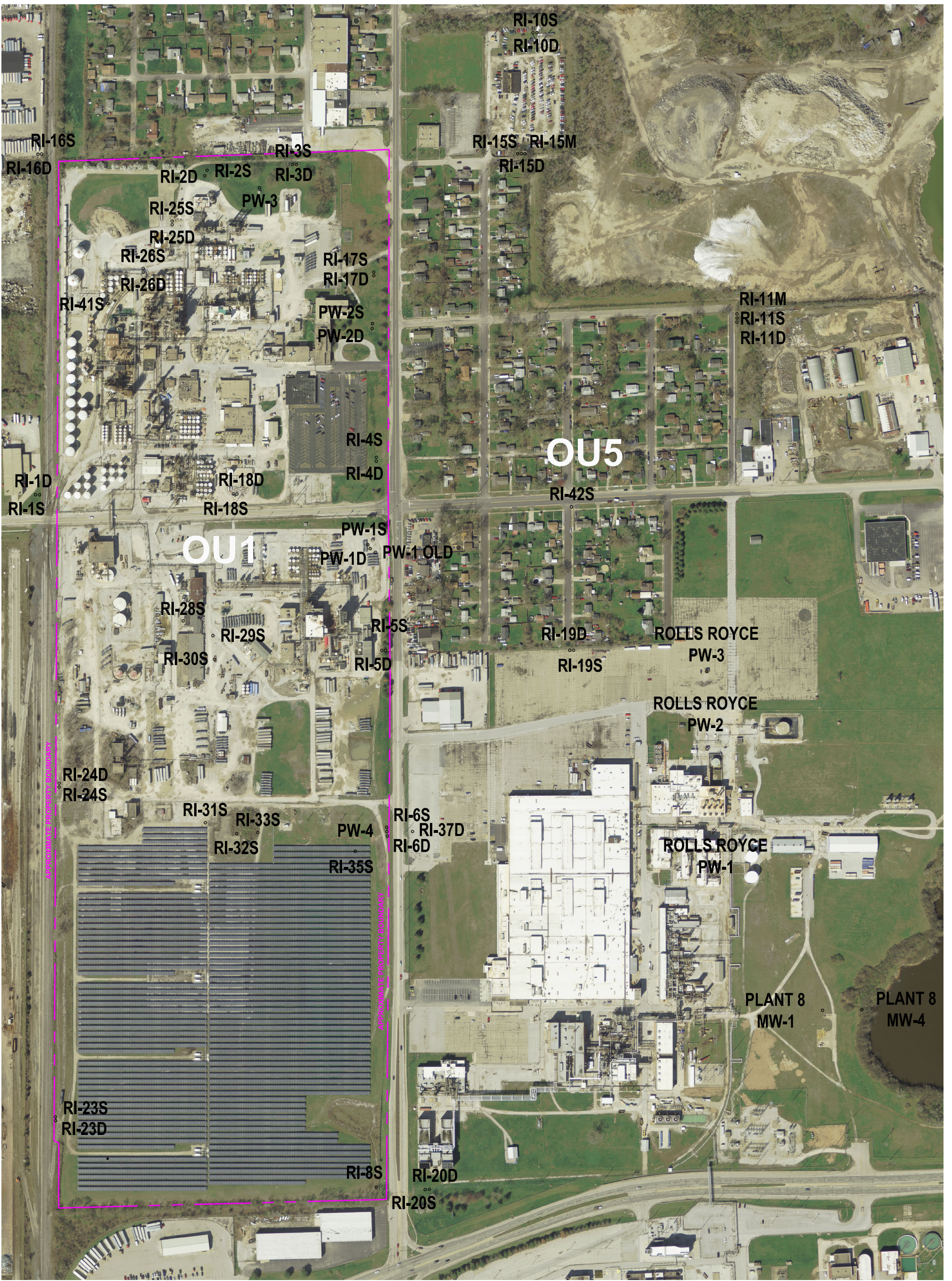
OU5 DEEP AQUIFER WELLS

Well Name	Benzene	Ammonia	Pyridine	2-Picoline	3/4-Picoline	2,6-Lutidine	2-Ethyl pyridine	2,4/2,5-Lutidine	2,3-Lutidine	3-Ethyl pyridine	4-Ethyl pyridine	3,5-Lutidine	3,4-Lutidine	2-Methyl-5-ethyl pyridine	2-Methyl-3-ethyl pyridine	3-Ethyl-4-methyl pyridine
-----------	---------	---------	----------	------------	--------------	--------------	------------------	------------------	--------------	------------------	------------------	--------------	--------------	---------------------------	---------------------------	---------------------------

No wells sampled

- Notes:
- 1. All Results in ug/L except for ammonia which is in mg/L.
  - 2. Bold and shaded text indicate result is above the cleanup objectives (5 ppb for benzene, 30 ppm for ammonia, and 35 ppb for individual pyridines).
  - 3. Samples collected on December 4, 2023.





QUARTERLY REPORT		
REV. DATE:	DRAWING DATE: 2023	ACAD FILE: INDY_PLANT.DWG
SITE MAP		
CLIENT:	REILLY SUPERFUND SITE	PM: DMP
LOCATION:	1500 S. TIBBS AVE. INDIANAPOLIS, INDIANA	DRAWING: 1
DESIGNED: DMP	DETAILED: DMP	PROJECT NO.:



**Attachment A**

**Well Monitoring Data**

# GROUNDWATER SAMPLING AND PURGE RECORD

MONITORING WELL PW-15

FACILITY Aurorium Indianapolis LLC/VIP LLC

DATE 12/ 4 / 2023

PURPOSE OF SAMPLING Quarterly Monitoring

SAMPLER G. Stevenson

WEATHER CONDITIONS - Temp 37 °F Precip Ø Wind W 4

WELL DIAMETER ~10" STICKUP X FLUSHMOUNT         

DEPTH TO WATER 28.66' TOTAL DEPTH NA STANDING WATER NA

WELL WATER VOLUME NA gallons

## WELL VOLUME CALCULATION FOR 2-inch WELL

### PURGE RECORD

Time	Volume of Water	pH	Conductance	Temp.	Comments
1048	0 (Before purge)	NA	NA	NA	
1055	~5 gal/100s	NA	NA	NA	

Dissolve Oxygen (DO) [prior to purging] NA

Oxidation Reduction Potential (ORP) [prior to purging] NA

WELL YIELD 1.3 gpm @ 40 psi

Recharge Rate (if known)         

### SAMPLE RECORD

Time Sampled 1057 Turbidity clear Color clear Odor YES

Laboratory Analytical Parameters          Benzene only         

Laboratory-Supplied Containers (preservative)          3-40ml (HCl)         

SAMPLES DELIVERED TO          Pace Analytical Services, Inc. - Indianapolis, IN

# GROUNDWATER SAMPLING AND PURGE RECORD

MONITORING WELL PW- 1D

FACILITY Aurorium Indianapolis LLC/VIP LLC

DATE 12/ 4 / 2023

PURPOSE OF SAMPLING Quarterly Monitoring

SAMPLER G. Stevenson

WEATHER CONDITIONS - Temp 38 °F Precip Ø Wind NNE @ 4

WELL DIAMETER ~ 12" STICKUP X FLUSHMOUNT           

DEPTH TO WATER 45.83' TOTAL DEPTH NA STANDING WATER NA

WELL WATER VOLUME NA gallons

## WELL VOLUME CALCULATION FOR 2-inch WELL

### PURGE RECORD

Time	Volume of Water	pH	Conductance	Temp.	Comments
<u>1058</u>	<u>0 (Before purge)</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	
<u>1105</u>	<u>~ 5 gal / 10 min</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	

Dissolve Oxygen (DO) [prior to purging] NA

Oxidation Reduction Potential (ORP) [prior to purging] NA

WELL YIELD 22.8 gpm @ 50 psi (High) Low

Recharge Rate (if known)                                   

### SAMPLE RECORD

Time Sampled 1108 Turbidity CLEAR Color CLEAR Odor YES

Laboratory Analytical Parameters                                    Benzene only                                   

Laboratory-Supplied Containers (preservative)                                    3-40ml (HCl)                                   

SAMPLES DELIVERED TO                                    Pace Analytical Services, Inc. - Indianapolis, IN

# GROUNDWATER SAMPLING AND PURGE RECORD

MONITORING WELL PW-2S

FACILITY Aurorium Indianapolis LLC/VIP LLC

DATE 12/ 4 / 2023

PURPOSE OF SAMPLING Quarterly Monitoring

SAMPLER G. Stevenson

WEATHER CONDITIONS - Temp 37 °F Precip 0 Wind NNE @ 4

WELL DIAMETER ~8-inch STICKUP X FLUSHMOUNT       

DEPTH TO WATER 24.08' TOTAL DEPTH NA STANDING WATER NA

WELL WATER VOLUME NA gallons

## WELL VOLUME CALCULATION FOR 2-inch WELL

### PURGE RECORD

Time	Volume of Water	pH	Conductance	Temp.	Comments
1020	0 (Before purge)	NA	NA	NA	
1028	~5 gal/100s	NA	NA	NA	

Dissolve Oxygen (DO) [prior to purging] NA

Oxidation Reduction Potential (ORP) [prior to purging] NA

WELL YIELD 2.7 gpm @ 23 psi

Recharge Rate (if known)       

### SAMPLE RECORD

Time Sampled 1030 Turbidity clear Color clear Odor YES

Laboratory Analytical Parameters VOCs, SVOCs (incl. pyridines), Ammonia

Laboratory-Supplied Containers (preservative) 3-40ml (HCl), 2-100ml (unpres), 1-250ml plastic (H<sub>2</sub>SO<sub>4</sub>)

SAMPLES DELIVERED TO Pace Analytical Services, Inc. - Indianapolis, IN

# GROUNDWATER SAMPLING AND PURGE RECORD

MONITORING WELL RI- 45

FACILITY Aurorium Indianapolis LLC/VIP LLC

DATE 12/ 4 / 2023

PURPOSE OF SAMPLING Quarterly Monitoring

SAMPLER G. Stevenson

WEATHER CONDITIONS - Temp 40 °F Precip Ø Wind NE 3

WELL DIAMETER 2-inch STICKUP            FLUSHMOUNT X

DEPTH TO WATER 19.50' TOTAL DEPTH 27.4' STANDING WATER 7.90'

WELL WATER VOLUME 1.29 gallons

WELL VOLUME CALCULATION FOR 2-inch WELL  
Well Depth (ft) - Depth to Water (ft) X 0.1632 = 1 well volume (gallons)

## PURGE RECORD

Time	Volume of Water Removed (gallons)	pH	$\mu S/cm$ Conductance	Temp. °C	Comments
1215	0 (Before purge)	7.15	1334	19.5	
1223	$\approx 5 \times \text{well vol.} = 6.45 \text{ gal}$	7.09	1244	18.2	

Dissolve Oxygen (DO) [prior to purging] 0.48 mg/L

Oxidation Reduction Potential (ORP) [prior to purging] -38.3

WELL YIELD High Low Recharge Rate (if known)                                   

## SAMPLE RECORD

Time Sampled 1228 Turbidity clear Color clear Odor YES

Laboratory Analytical Parameters VOCs, SVOCs (incl. pyridines), Ammonia

Laboratory-Supplied Containers (preservative) 3-40ml (HCl), 2-100ml (unpres), 1-250ml plastic (H<sub>2</sub>SO<sub>4</sub>)

SAMPLES DELIVERED TO Pace Analytical Services, Inc. - Indianapolis, IN

# GROUNDWATER SAMPLING AND PURGE RECORD

MONITORING WELL RI- 4D

FACILITY Aurorium Indianapolis LLC/VIP LLC DATE 12/ / 2023

PURPOSE OF SAMPLING Quarterly Monitoring SAMPLER G. Stevenson

WEATHER CONDITIONS - Temp 42 °F Precip 0 Wind NE 3

WELL DIAMETER 2-inch STICKUP        FLUSHMOUNT X

DEPTH TO WATER 26.85' TOTAL DEPTH 55.4' STANDING WATER 28.55

WELL WATER VOLUME 4.66 gallons

WELL VOLUME CALCULATION FOR 2-inch WELL  
Well Depth (ft) - Depth to Water (ft) X 0.1632 = 1 well volume (gallons)

## PURGE RECORD

Time	Volume of Water Removed (gallons)	pH	<u>45/cm</u> Conductance	°C Temp.	Comments
<u>1230</u>	<u>0 (Before purge)</u>	<u>7.48</u>	<u>717</u>	<u>18.7</u>	
<u>1320</u>	<u>~4x well vols.: 19 gal</u>	<u>7.48</u>	<u>846</u>	<u>17.5</u>	

Dissolve Oxygen (DO) [prior to purging] 0.38 mg/L

Oxidation Reduction Potential (ORP) [prior to purging] +107.3

WELL YIELD High Low Recharge Rate (if known)       

## SAMPLE RECORD

Time Sampled 1325 Turbidity clean Color clean Odor YES

Laboratory Analytical Parameters VOCs, SVOCs (incl. pyridines), Ammonia

Laboratory-Supplied Containers (preservative) 3-40ml (HCl), 2-100ml (unpres), 1-250ml plastic (H<sub>2</sub>SO<sub>4</sub>)

SAMPLES DELIVERED TO Pace Analytical Services, Inc. - Indianapolis, IN

**Attachment B**

**Laboratory Analytical Data**





December 07, 2023

David Peterson  
Vertellus Integrated Pyridines LLC  
201 N. Illinois Street  
Suite 1500  
Indianapolis, IN 46242

RE: Project: Aurorium/Vertellus 3Q23  
Pace Project No.: 50360862

Dear David Peterson:

Enclosed are the analytical results for sample(s) received by the laboratory on December 04, 2023. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Indianapolis

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Olivia Deck  
olivia.deck@pacelabs.com  
(317)228-3102  
Project Manager

Enclosures

cc: Mark Thrine, Aurorium  
David Wilkes, Aurorium



## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.



## **CERTIFICATIONS**

Project: Aurorium/Vertellus 3Q23

Pace Project No.: 50360862

---

### **Pace Analytical Services Indianapolis**

7726 Moller Road, Indianapolis, IN 46268

Illinois Accreditation #: 200074

Indiana Drinking Water Laboratory #: C-49-06

Kansas/TNI Certification #: E-10177

Kentucky UST Agency Interest #: 80226

Kentucky WW Laboratory ID #: 98019

Michigan Drinking Water Laboratory #9050

Ohio VAP Certified Laboratory #: CL0065

Oklahoma Laboratory #: 9204

Texas Certification #: T104704355

Wisconsin Laboratory #: 999788130

USDA Foreign Soil Permit #: 525-23-13-23119

USDA Compliance Agreement #: IN-SL-22-001

---

## **REPORT OF LABORATORY ANALYSIS**

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.



## SAMPLE SUMMARY

Project: Aurorium/Vertellus 3Q23

Pace Project No.: 50360862

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50360862001	PW-1S	Water	12/04/23 10:57	12/04/23 14:50
50360862002	PW-1D	Water	12/04/23 11:08	12/04/23 14:50

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.



## SAMPLE ANALYTE COUNT

Project: Aurorium/Vertellus 3Q23

Pace Project No.: 50360862

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50360862001	PW-1S	EPA 8260	KLP	7	PASI-I
50360862002	PW-1D	EPA 8260	KLP	7	PASI-I

PASI-I = Pace Analytical Services - Indianapolis

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.



## ANALYTICAL RESULTS

Project: Aurorium/Vertellus 3Q23

Pace Project No.: 50360862

Sample: PW-1S		Lab ID: 50360862001		Collected: 12/04/23 10:57		Received: 12/04/23 14:50		Matrix: Water	
Parameters		Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260/5030 MSV UST		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis							
Benzene	ND	ug/L	5.0	1		12/06/23 17:17	71-43-2		
Toluene	ND	ug/L	5.0	1		12/06/23 17:17	108-88-3		
Ethylbenzene	ND	ug/L	5.0	1		12/06/23 17:17	100-41-4		
Xylene (Total)	ND	ug/L	10.0	1		12/06/23 17:17	1330-20-7		
Surrogates									
Dibromofluoromethane (S)	94	%.	82-128	1		12/06/23 17:17	1868-53-7		
Toluene-d8 (S)	97	%.	73-122	1		12/06/23 17:17	2037-26-5		
4-Bromofluorobenzene (S)	88	%.	79-124	1		12/06/23 17:17	460-00-4		

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.



## ANALYTICAL RESULTS

Project: Aurorium/Vertellus 3Q23

Pace Project No.: 50360862

Sample: PW-1D		Lab ID: 50360862002		Collected: 12/04/23 11:08		Received: 12/04/23 14:50		Matrix: Water	
Parameters		Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260/5030 MSV UST		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis							
Benzene	22.2	ug/L	5.0	1			12/06/23 17:49	71-43-2	
Toluene	ND	ug/L	5.0	1			12/06/23 17:49	108-88-3	
Ethylbenzene	ND	ug/L	5.0	1			12/06/23 17:49	100-41-4	
Xylene (Total)	ND	ug/L	10.0	1			12/06/23 17:49	1330-20-7	
Surrogates									
Dibromofluoromethane (S)	93	%.	82-128	1			12/06/23 17:49	1868-53-7	
Toluene-d8 (S)	98	%.	73-122	1			12/06/23 17:49	2037-26-5	
4-Bromofluorobenzene (S)	87	%.	79-124	1			12/06/23 17:49	460-00-4	

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.



## QUALITY CONTROL DATA

Project: Aurorium/Vertellus 3Q23

Pace Project No.: 50360862

QC Batch: 766538

Analysis Method: EPA 8260

QC Batch Method: EPA 8260

Analysis Description: 8260 MSV UST-WATER

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50360862001, 50360862002

METHOD BLANK: 3512025

Matrix: Water

Associated Lab Samples: 50360862001, 50360862002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	5.0	12/06/23 12:56	
Ethylbenzene	ug/L	ND	5.0	12/06/23 12:56	
Toluene	ug/L	ND	5.0	12/06/23 12:56	
Xylene (Total)	ug/L	ND	10.0	12/06/23 12:56	
4-Bromofluorobenzene (S)	%	87	79-124	12/06/23 12:56	
Dibromofluoromethane (S)	%	93	82-128	12/06/23 12:56	
Toluene-d8 (S)	%	95	73-122	12/06/23 12:56	

LABORATORY CONTROL SAMPLE: 3512026

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	50	52.9	106	74-124	
Ethylbenzene	ug/L	50	54.1	108	74-125	
Toluene	ug/L	50	55.6	111	72-119	
Xylene (Total)	ug/L	150	157	105	73-123	
4-Bromofluorobenzene (S)	%			91	79-124	
Dibromofluoromethane (S)	%			94	82-128	
Toluene-d8 (S)	%			104	73-122	

MATRIX SPIKE SAMPLE: 3512028

Parameter	Units	50360860002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	7.2	50	59.0	104	65-137	
Ethylbenzene	ug/L	ND	50	51.8	104	50-143	
Toluene	ug/L	ND	50	53.9	108	57-137	
Xylene (Total)	ug/L	ND	150	152	101	52-137	
4-Bromofluorobenzene (S)	%				91	79-124	
Dibromofluoromethane (S)	%				93	82-128	
Toluene-d8 (S)	%				105	73-122	

SAMPLE DUPLICATE: 3512027

Parameter	Units	50360860001 Result	Dup Result	RPD	Max RPD	Qualifiers
Benzene	ug/L	ND	ND		20	
Ethylbenzene	ug/L	ND	ND		20	
Toluene	ug/L	ND	ND		20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.

**QUALITY CONTROL DATA**

Project: Aurorium/Vertellus 3Q23

Pace Project No.: 50360862

SAMPLE DUPLICATE: 3512027

Parameter	Units	50360860001 Result	Dup Result	RPD	Max RPD	Qualifiers
Xylene (Total)	ug/L	ND	ND		20	
4-Bromofluorobenzene (S)	%.	87	88			
Dibromofluoromethane (S)	%.	92	93			
Toluene-d8 (S)	%.	97	98			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

**REPORT OF LABORATORY ANALYSIS**

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.





## QUALIFIERS

Project: Aurorium/Vertellus 3Q23

Pace Project No.: 50360862

---

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.



## QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Aurorium/Vertellus 3Q23

Pace Project No.: 50360862

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50360862001	PW-1S	EPA 8260	766538		
50360862002	PW-1D	EPA 8260	766538		

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.





# SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and Initials of person examining contents:

12/4/23 15:15 TH

1. Courier: ☐ FED EX ☐ UPS ☒ CLIENT ☐ PACE ☐ NOW/JETT ☐ OTHER

2. Custody Seal on Cooler/Box Present: ☒ Yes ☐ No

(If yes) Seals Intact: ☒ Yes ☐ No (leave blank if no seals were present)

3. Thermometer: 1 2 3 4 5 6 7 8 A B C D E F G H

4. Cooler Temperature(s): 18/18 (Initial/Corrected) RECORD TEMPS OF ALL COOLERS RECEIVED (use Comments below to add more)

5. Packing Material: ☐ Bubble Wrap ☒ Bubble Bags

☐ None ☐ Other

6. Ice Type: ☒ Wet ☐ Blue ☐ None

7. If temp. is over 6°C or under 0°C, was the PM notified?: ☐ Yes ☐ No  
Cooler temp should be above freezing to 6°C

All discrepancies will be written out in the comments section below.

	Yes	No		Yes	No	N/A
USDA Regulated Soils? (HI, ID, NY, WA, OR, CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		<input checked="" type="checkbox"/>	All containers needing acid/base preservation have been pH CHECKED?: Exceptions: VOA, coliform, LLHg, O&G, RAD CHEM, and any container with a septum cap or preserved with HCl.			<input checked="" type="checkbox"/>
Short Hold Time Analysis (48 hours or less)? Analysis:		<input checked="" type="checkbox"/>	Circle: HNO3 (<2) H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9) Any non-conformance to pH recommendations will be noted on the container count form			<input checked="" type="checkbox"/>
Time 5035A TC placed in Freezer or Short Holds To Lab			Time:	Present	Absent	N/A
Rush TAT Requested (4 days or less):	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Residual Chlorine Check (SVOC 625 Pest/PCB 608)			<input checked="" type="checkbox"/>
Custody Signatures Present?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Residual Chlorine Check (Total/Amenable/Free Cyanide)			<input checked="" type="checkbox"/>
Containers Intact?:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Headspace Wisconsin Sulfide?			<input checked="" type="checkbox"/>
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Headspace in VOA Vials (>6mm): See Container Count form for details	Present	Absent	No VOA Vials Sent
Extra labels on Terracore Vials? (soils only)			Trip Blank Present?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
			Trip Blank Custody Seals?:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

COMMENTS: Received 3 Trip Blanks not on Coc.

## Sample Container Count

\*\* Place a RED dot on containers  
that are out of conformance \*\*

COC Line Item	WGFU	WGKU BG1U	MeOH (only) SBS DI R	DG9H VOA VIAL HS >6mm	VG9U DG9U VG9T	AMBER GLASS							PLASTIC							OTHER			Matrix	Nitric	Sulfuric	Sodium Hydroxide	Sodium Hydroxide ZnAc		
						AG0U	AG1H	AG1U	AG3U	AG3S	AG3SF	AG3B	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H		CG3F	Syringe Kit	Red	Yellow	Green	Black
																										HNO3 Δ2	H2SO4 Δ2	NaOH >10	NaOH/Zn Ac >9
1				3																			3						
2				↓																			↓						
3																													
4																													
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													

## Container Codes

## Glass

DG9H	40mL HCl amber vial	BG1T	glass
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass
DG9S	40mL H2SO4 amber vial	CG3U	250mL Unpres Clear Glass
DG9T	40mL Na Thio amber vial	AG0U	100mL unpres amber glass
DG9U	40mL unpreserved amber vial	AG1H	1L HCl amber glass
VG9H	40mL HCl clear vial	AG1S	1L H2SO4 amber glass
VG9T	40mL Na Thio. clear vial	AG1T	1L Na Thiosulfate amber glass
VG9U	40mL unpreserved clear vial	AG1U	1liter unpres amber glass
I	40mL w/hexane.wipe vial	AG2N	500mL HNO3 amber glass
WGKU	8oz unpreserved clear jar	AG2S	500mL H2SO4 amber glass
WGFU	4oz clear soil jar	AG2U	500mL unpres amber glass
JGFU	4oz unpreserved amber wide	AG3S	250mL H2SO4 amber glass
CG3H	250mL clear glass HCl	AG3SF	250mL H2SO4 amber glass field filtered
CG3F	250mL clear glass HCl, Field Filter	AG3U	250mL unpres amber glass
BG1H	1L HCl clear glass	AG3B	250mL NaOH amber glass
BG1S	1L H2SO4 clear glass		

## Plastic

BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
BP1U	1L unpreserved plastic	<b>Miscellaneous</b>	
BP1Z	1L NaOH, Zn, Ac		
BP2N	500mL HNO3 plastic	Syringe Kit	LL Cr+6 sampling kit
BP2C	500mL NaOH plastic	ZPLC	Ziploc Bag
BP2S	500mL H2SO4 plastic	R	Terracore Kit
BP2U	500mL unpreserved plastic	SP5T	120mL Coliform Sodium Thiosulfate
BP2Z	500mL NaOH, Zn Ac	GN	General Container
BP3B	250mL NaOH plastic	U	Summa Can (air sample)
BP3N	250mL HNO3 plastic	WT	Water
BP3F	250mL HNO3 plastic-field filtered	SL	Solid
BP3U	250mL unpreserved plastic	OL	Oil
BP3S	250mL H2SO4 plastic	NAL	Non-aqueous liquid
BP3Z	250mL NaOH, ZnAc plastic	WP	Wipe
BP3R	250mL Unpres. FF SO4/OH buffer		



December 19, 2023

David Peterson  
Vertellus Integrated Pyridines LLC  
201 N. Illinois Street  
Suite 1500  
Indianapolis, IN 46242

RE: Project: Aurorium/Vertellus 3Q23  
Pace Project No.: 50360861

Dear David Peterson:

Enclosed are the analytical results for sample(s) received by the laboratory on December 04, 2023. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Indianapolis

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Olivia Deck  
olivia.deck@pacelabs.com  
(317)228-3102  
Project Manager

Enclosures

cc: Mark Thrine, Aurorium  
David Wilkes, Aurorium



## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.



## CERTIFICATIONS

Project: Aurorium/Vertellus 3Q23

Pace Project No.: 50360861

---

### **Pace Analytical Services Indianapolis**

7726 Moller Road, Indianapolis, IN 46268

Illinois Accreditation #: 200074

Indiana Drinking Water Laboratory #: C-49-06

Kansas/TNI Certification #: E-10177

Kentucky UST Agency Interest #: 80226

Kentucky WW Laboratory ID #: 98019

Michigan Drinking Water Laboratory #9050

Ohio VAP Certified Laboratory #: CL0065

Oklahoma Laboratory #: 9204

Texas Certification #: T104704355

Washington Dept of Ecology #: C1081

Wisconsin Laboratory #: 999788130

USDA Foreign Soil Permit #: 525-23-13-23119

USDA Compliance Agreement #: IN-SL-22-001

---

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.



## SAMPLE SUMMARY

Project: Aurorium/Vertellus 3Q23

Pace Project No.: 50360861

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50360861001	PW-2S	Water	12/04/23 10:30	12/04/23 14:50

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.





## SAMPLE ANALYTE COUNT

Project: Aurorium/Vertellus 3Q23

Pace Project No.: 50360861

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50360861001	PW-2S	EPA 8270	FIP	20	PASI-I
		EPA 8260	KLP	7	PASI-I
		SM 4500-NH3 G	OAS	1	PASI-I

PASI-I = Pace Analytical Services - Indianapolis

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.



## ANALYTICAL RESULTS

Project: Aurorium/Vertellus 3Q23

Pace Project No.: 50360861

Sample: PW-2S		Lab ID: 50360861001		Collected: 12/04/23 10:30		Received: 12/04/23 14:50		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
8270 SVOC App9 Water		Analytical Method: EPA 8270 Preparation Method: EPA 3510 Pace Analytical Services - Indianapolis							
2,3-Lutidine	ND	ug/L	9.5	1	12/06/23 15:55	12/07/23 13:28	583-61-9	N2	
2,4-Lutidine / 2,5-Lutidine	ND	ug/L	9.5	1	12/06/23 15:55	12/07/23 13:28	108-47-4	N2	
3-Ethyl-4-MethylPyridine	ND	ug/L	9.5	1	12/06/23 15:55	12/07/23 13:28	529-21-5	N2	
2-Ethylpyridine	ND	ug/L	9.5	1	12/06/23 15:55	12/07/23 13:28	100-71-0	N2	
3-Ethylpyridine	ND	ug/L	9.5	1	12/06/23 15:55	12/07/23 13:28	536-78-7	N2	
4-Ethylpyridine	ND	ug/L	9.5	1	12/06/23 15:55	12/07/23 13:28	536-75-4	N2	
2,6-Lutidine	ND	ug/L	9.5	1	12/06/23 15:55	12/07/23 13:28	108-48-5	N2	
3,4-Lutidine	ND	ug/L	9.5	1	12/06/23 15:55	12/07/23 13:28	583-58-4	N2	
3,5-Lutidine	11.8	ug/L	9.5	1	12/06/23 15:55	12/07/23 13:28	591-22-0	N2	
2-Methyl-5-ethyl pyridine	ND	ug/L	9.5	1	12/06/23 15:55	12/07/23 13:28	104-90-5	N2	
2-Methyl-3-ethyl pyridine	ND	ug/L	9.5	1	12/06/23 15:55	12/07/23 13:28	14159-59-2	N2	
2-Picoline	ND	ug/L	9.5	1	12/06/23 15:55	12/07/23 13:28	109-06-8		
3/4-Picoline	ND	ug/L	9.5	1	12/06/23 15:55	12/07/23 13:28		N2	
Pyridine	ND	ug/L	9.5	1	12/06/23 15:55	12/07/23 13:28	110-86-1		
Surrogates									
Nitrobenzene-d5 (S)	69	%.	17-107	1	12/06/23 15:55	12/07/23 13:28	4165-60-0		
2-Fluorobiphenyl (S)	62	%.	11-105	1	12/06/23 15:55	12/07/23 13:28	321-60-8		
p-Terphenyl-d14 (S)	91	%.	36-149	1	12/06/23 15:55	12/07/23 13:28	1718-51-0		
Phenol-d5 (S)	33	%.	10-58	1	12/06/23 15:55	12/07/23 13:28	4165-62-2		
2-Fluorophenol (S)	45	%.	10-71	1	12/06/23 15:55	12/07/23 13:28	367-12-4		
2,4,6-Tribromophenol (S)	95	%.	35-149	1	12/06/23 15:55	12/07/23 13:28	118-79-6		
8260/5030 MSV UST		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis							
Benzene	ND	ug/L	5.0	1		12/06/23 14:34	71-43-2		
Toluene	ND	ug/L	5.0	1		12/06/23 14:34	108-88-3		
Ethylbenzene	ND	ug/L	5.0	1		12/06/23 14:34	100-41-4		
Xylene (Total)	ND	ug/L	10.0	1		12/06/23 14:34	1330-20-7		
Surrogates									
Dibromofluoromethane (S)	94	%.	82-128	1		12/06/23 14:34	1868-53-7		
Toluene-d8 (S)	97	%.	73-122	1		12/06/23 14:34	2037-26-5		
4-Bromofluorobenzene (S)	88	%.	79-124	1		12/06/23 14:34	460-00-4		
4500 Ammonia Water		Analytical Method: SM 4500-NH3 G Pace Analytical Services - Indianapolis							
Nitrogen, Ammonia	18.7	mg/L	5.0	10		12/12/23 20:21	7664-41-7		

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.



## QUALITY CONTROL DATA

Project: Aurorium/Vertellus 3Q23

Pace Project No.: 50360861

QC Batch: 766538

Analysis Method: EPA 8260

QC Batch Method: EPA 8260

Analysis Description: 8260 MSV UST-WATER

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50360861001

METHOD BLANK: 3512025

Matrix: Water

Associated Lab Samples: 50360861001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	5.0	12/06/23 12:56	
Ethylbenzene	ug/L	ND	5.0	12/06/23 12:56	
Toluene	ug/L	ND	5.0	12/06/23 12:56	
Xylene (Total)	ug/L	ND	10.0	12/06/23 12:56	
4-Bromofluorobenzene (S)	%	87	79-124	12/06/23 12:56	
Dibromofluoromethane (S)	%	93	82-128	12/06/23 12:56	
Toluene-d8 (S)	%	95	73-122	12/06/23 12:56	

LABORATORY CONTROL SAMPLE: 3512026

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	50	52.9	106	74-124	
Ethylbenzene	ug/L	50	54.1	108	74-125	
Toluene	ug/L	50	55.6	111	72-119	
Xylene (Total)	ug/L	150	157	105	73-123	
4-Bromofluorobenzene (S)	%			91	79-124	
Dibromofluoromethane (S)	%			94	82-128	
Toluene-d8 (S)	%			104	73-122	

MATRIX SPIKE SAMPLE: 3512028

Parameter	Units	50360860002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	7.2	50	59.0	104	65-137	
Ethylbenzene	ug/L	ND	50	51.8	104	50-143	
Toluene	ug/L	ND	50	53.9	108	57-137	
Xylene (Total)	ug/L	ND	150	152	101	52-137	
4-Bromofluorobenzene (S)	%				91	79-124	
Dibromofluoromethane (S)	%				93	82-128	
Toluene-d8 (S)	%				105	73-122	

SAMPLE DUPLICATE: 3512027

Parameter	Units	50360860001 Result	Dup Result	RPD	Max RPD	Qualifiers
Benzene	ug/L	ND	ND		20	
Ethylbenzene	ug/L	ND	ND		20	
Toluene	ug/L	ND	ND		20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.

**QUALITY CONTROL DATA**

Project: Aurorium/Vertellus 3Q23

Pace Project No.: 50360861

SAMPLE DUPLICATE: 3512027

Parameter	Units	50360860001 Result	Dup Result	RPD	Max RPD	Qualifiers
Xylene (Total)	ug/L	ND	ND		20	
4-Bromofluorobenzene (S)	%.	87	88			
Dibromofluoromethane (S)	%.	92	93			
Toluene-d8 (S)	%.	97	98			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

**REPORT OF LABORATORY ANALYSIS**

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.



## QUALITY CONTROL DATA

Project: Aurorium/Vertellus 3Q23

Pace Project No.: 50360861

QC Batch: 766555

Analysis Method: EPA 8270

QC Batch Method: EPA 3510

Analysis Description: 8270 Water MSSV

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50360861001

METHOD BLANK: 3512128

Matrix: Water

Associated Lab Samples: 50360861001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
2,3-Lutidine	ug/L	ND	10.0	12/07/23 12:23	N2
2,4-Lutidine / 2,5-Lutidine	ug/L	ND	10.0	12/07/23 12:23	N2
2,6-Lutidine	ug/L	ND	10.0	12/07/23 12:23	N2
2-Ethylpyridine	ug/L	ND	10.0	12/07/23 12:23	N2
2-Methyl-3-ethyl pyridine	ug/L	ND	10.0	12/07/23 12:23	N2
2-Methyl-5-ethyl pyridine	ug/L	ND	10.0	12/07/23 12:23	N2
2-Picoline	ug/L	ND	10.0	12/07/23 10:29	
3,4-Lutidine	ug/L	ND	10.0	12/07/23 12:23	N2
3,5-Lutidine	ug/L	ND	10.0	12/07/23 12:23	N2
3-Ethyl-4-MethylPyridine	ug/L	ND	10.0	12/07/23 12:23	N2
3-Ethylpyridine	ug/L	ND	10.0	12/07/23 12:23	N2
3/4-Picoline	ug/L	ND	10.0	12/07/23 12:23	N2
4-Ethylpyridine	ug/L	ND	10.0	12/07/23 12:23	N2
Pyridine	ug/L	ND	10.0	12/07/23 10:29	
2,4,6-Tribromophenol (S)	%	79	35-149	12/07/23 10:29	
2-Fluorobiphenyl (S)	%	48	11-105	12/07/23 10:29	
2-Fluorophenol (S)	%	46	10-71	12/07/23 10:29	
Nitrobenzene-d5 (S)	%	65	17-107	12/07/23 10:29	1d
p-Terphenyl-d14 (S)	%	98	36-149	12/07/23 10:29	
Phenol-d5 (S)	%	32	10-58	12/07/23 10:29	

LABORATORY CONTROL SAMPLE: 3512129

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Pyridine	ug/L	50	17.2	34	10-51	
2,4,6-Tribromophenol (S)	%			78	35-149	
2-Fluorobiphenyl (S)	%			57	11-105	
2-Fluorophenol (S)	%			40	10-71	
Nitrobenzene-d5 (S)	%			59	17-107	
p-Terphenyl-d14 (S)	%			89	36-149	
Phenol-d5 (S)	%			30	10-58	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.



## QUALITY CONTROL DATA

Project: Aurorium/Vertellus 3Q23

Pace Project No.: 50360861

QC Batch: 767506

Analysis Method: SM 4500-NH3 G

QC Batch Method: SM 4500-NH3 G

Analysis Description: 4500 Ammonia

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50360861001

METHOD BLANK: 3516353

Matrix: Water

Associated Lab Samples: 50360861001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.50	12/12/23 19:11	

LABORATORY CONTROL SAMPLE: 3516354

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	5	5.1	102	90-110	

MATRIX SPIKE &amp; MATRIX SPIKE DUPLICATE: 3516356 3516357

Parameter	Units	50360705001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Ammonia	mg/L	ND	5	5	5.2	5.2	102	102	90-110	0	20	

MATRIX SPIKE SAMPLE: 3516358

Parameter	Units	50360705002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	ND	5	5.1	102	90-110	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.



## QUALIFIERS

Project: Aurorium/Vertellus 3Q23

Pace Project No.: 50360861

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

1d A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.



## QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Aurorium/Vertellus 3Q23

Pace Project No.: 50360861

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50360861001	PW-2S	EPA 3510	766555	EPA 8270	766679
50360861001	PW-2S	EPA 8260	766538		
50360861001	PW-2S	SM 4500-NH3 G	767506		

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.





## CHAIN-OF-CUSTODY / Analyti

The Chain-of-Custody is a LEGAL DOCUMENT

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions

WO#: 50360861



50360861

Of 1

## Section A

## Required Client Information:

Company: Aurorium/Vertellus  
Address: 201 N. Illinois St., Ste. 1800  
Indianapolis, IN 46204  
Email: dave@dmpetersonPE.com  
Phone: 216-554-0413 Fax  
Requested Due Date: STD 10 day TAT

## Section B

## Required Project Information:

Report To: Dave Peterson, PE  
Copy To:  
Purchase Order #: 4400009855  
Project Name: Aurorium/Vertellus 3Q23  
Project #: GS0148d

## Section C

## Invoice Information:

Attention: Accounts Payable  
Company Name: Aurorium/Vertellus  
Address: 201 N. Illinois St., Ste. 1800, Indianapolis, IN 46204  
Pace Quote:  
Pace Project Manager: olivia.deck@pacelabs.com,  
Pace Profile #: 6586-1

Regulatory Agency

State / Location

IN

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID  One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique	MATRIX Drinking Water Water Waste Water Product Soil/Solid Oil Wipe Air Other Tissue	CODE DW WT WW P SL OL WP AR OT TS	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED				SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives										Analyses Test Y/N	Residual Chlorine (Y/N)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
						START		END				Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
						DATE	TIME	DATE	TIME																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
1	PW-2S			WT	G	12/4/23	1030				73	1		3																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									

ADDITIONAL COMMENTS		RELINQUISHED BY / AFFILIATION		DATE	TIME	ACCEPTED BY / AFFILIATION		DATE	TIME	SAMPLE CONDITIONS			
8270-Pyridines only list		Gary H. Stevenson (CENCA)		12/4/23	1450	T.H		12/4/23	1450	1.8	Y	Y	Y

## SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER:

SIGNATURE of SAMPLER:

DATE Signed:

TEMP in C

Received on

Ice

(Y/N)

Custody

Sealed

Cooler

(Y/N)

Samples

Intact

(Y/N)

12 of 14



# SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and Initials of person examining contents:

12/4/23 15:15 TH

1. Courier: ☐ FED EX ☐ UPS ☒ CLIENT ☐ PACE ☐ NOW/JETT ☐ OTHER

2. Custody Seal on Cooler/Box Present: ☒ Yes ☐ No

(If yes) Seals Intact: ☒ Yes ☐ No (leave blank if no seals were present)

3. Thermometer: 1 2 3 4 5 6 7 8 A B C D E F G H

4. Cooler Temperature(s): 18/18  
(Initial/Corrected) RECORD TEMPS OF ALL COOLERS RECEIVED (use Comments below to add more)

5. Packing Material: ☐ Bubble Wrap ☒ Bubble Bags

☐ None ☐ Other

6. Ice Type: ☒ Wet ☐ Blue ☐ None

7. If temp. is over 6°C or under 0°C, was the PM notified?: ☐ Yes ☐ No  
Cooler temp should be above freezing to 6°C

All discrepancies will be written out in the comments section below.

	Yes	No		Yes	No	N/A
USDA Regulated Soils? (HI, ID, NY, WA, OR, CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		<input checked="" type="checkbox"/>	All containers needing acid/base preservation have been pH CHECKED?: Exceptions: VOA, coliform, LLHg, O&G, RAD CHEM, and any container with a septum cap or preserved with HCl.	<input checked="" type="checkbox"/>		
Short Hold Time Analysis (48 hours or less)? Analysis:		<input checked="" type="checkbox"/>	Circle: HNO3 (<2) H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9) Any non-conformance to pH recommendations will be noted on the container count form			
Time 5035A TC placed in Freezer or Short Holds To Lab Time:			Residual Chlorine Check (SVOC 625 Pest/PCB 608)	Present	Absent	N/A
Rush TAT Requested (4 days or less):	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Residual Chlorine Check (Total/Amenable/Free Cyanide)			<input checked="" type="checkbox"/>
Custody Signatures Present?	<input checked="" type="checkbox"/>		Headspace Wisconsin Sulfide?			<input checked="" type="checkbox"/>
Containers Intact?:	<input checked="" type="checkbox"/>		Headspace in VOA Vials (>6mm): See Container Count form for details	Present	Absent	No VOA Vials Sent
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	<input checked="" type="checkbox"/>		Trip Blank Present?			
Extra labels on Terracore Vials? (soils only)			Trip Blank Custody Seals?:			

COMMENTS:

## Sample Container Count

\*\* Place a RED dot on containers  
that are out of conformance \*\*

COC Line Item	WGFL	WGKU BG1U	R	DG9H <u>VG9H</u>	VOA VIAL HS >6mm	VG9U DG9U	VG9T	AMBER GLASS							PLASTIC							OTHER			Matrix	Nitric Red	Sulfuric Yellow	Sodium Hydroxide Green	Sodium Hydroxide ZnAc Black		
								AG0U	AG1H	AG1U	AG3U	AG3S	AG3SF	AG3B	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	<u>BP3S</u>	BP3B	BP3Z	CG3H						CG3F	Syringe Kit

1																												
2																												
3																												
4																												
5																												
6																												
7																												
8																												
9																												
10																												
11																												
12																												

## Container Codes

## Glass

DG9H	40mL HCl amber voa vial	BG1T	glass
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass
DG9S	40mL H2SO4 amber vial	CG3U	250mL Unpres Clear Glass
DG9T	40mL Na Thio amber vial	AG0U	100mL unpres amber glass
DG9U	40mL unpreserved amber vial	AG1H	1L HCl amber glass
VG9H	40mL HCl clear vial	AG1S	1L H2SO4 amber glass
VG9T	40mL Na Thio. clear vial	AG1T	1L Na Thiosulfate amber glass
VG9U	40mL unpreserved clear vial	AG1U	1liter unpres amber glass
I	40mL w/hexane wipe vial	AG2N	500mL HNO3 amber glass
WGKU	8oz unpreserved clear jar	AG2S	500mL H2SO4 amber glass
WGFL	4oz clear soil jar	AG2U	500mL unpres amber glass
JGFU	4oz unpreserved amber wide	AG3S	250mL H2SO4 amber glass
CG3H	250mL clear glass HCl	AG3SF	250mL H2SO4 amb glass field filtered
CG3F	250mL clear glass HCl, Field Filter	AG3U	250mL unpres amber glass
BG1H	1L HCl clear glass	AG3B	250mL NaOH amber glass
BG1S	1L H2SO4 clear glass		

## Plastic

BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
BP1U	1L unpreserved plastic	<b>Miscellaneous</b>	
BP1Z	1L NaOH, Zn, Ac		
BP2N	500mL HNO3 plastic	Syringe Kit	LL Cr+6 sampling kit
BP2C	500mL NaOH plastic	ZPLC	Ziploc Bag
BP2S	500mL H2SO4 plastic	R	Terracore Kit
BP2U	500mL unpreserved plastic	SP5T	120mL Coliform Sodium Thiosulfate
BP2Z	500mL NaOH, Zn Ac	GN	General Container
BP3B	250mL NaOH plastic	U	Summa Can (air sample)
BP3N	250mL HNO3 plastic	WT	Water
BP3F	250mL HNO3 plastic-field filtered	SL	Solid
BP3U	250mL unpreserved plastic	OL	Oil
BP3S	250mL H2SO4 plastic	NAL	Non-aqueous liquid
BP3Z	250mL NaOH, ZnAc plastic	WP	Wipe
BP3R	250mL Unpres. FF SO4/OH buffer		



December 19, 2023

David Peterson  
Vertellus Integrated Pyridines LLC  
201 N. Illinois Street  
Suite 1500  
Indianapolis, IN 46242

RE: Project: Aurorium/Vertellus 3Q23  
Pace Project No.: 50360860

Dear David Peterson:

Enclosed are the analytical results for sample(s) received by the laboratory on December 04, 2023. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Indianapolis

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Olivia Deck  
olivia.deck@pacelabs.com  
(317)228-3102  
Project Manager

Enclosures

cc: Mark Thrine, Aurorium  
David Wilkes, Aurorium



## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.



## CERTIFICATIONS

Project: Aurorium/Vertellus 3Q23

Pace Project No.: 50360860

---

### **Pace Analytical Services Indianapolis**

7726 Moller Road, Indianapolis, IN 46268

Illinois Accreditation #: 200074

Indiana Drinking Water Laboratory #: C-49-06

Kansas/TNI Certification #: E-10177

Kentucky UST Agency Interest #: 80226

Kentucky WW Laboratory ID #: 98019

Michigan Drinking Water Laboratory #9050

Ohio VAP Certified Laboratory #: CL0065

Oklahoma Laboratory #: 9204

Texas Certification #: T104704355

Washington Dept of Ecology #: C1081

Wisconsin Laboratory #: 999788130

USDA Foreign Soil Permit #: 525-23-13-23119

USDA Compliance Agreement #: IN-SL-22-001

---

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.



## SAMPLE SUMMARY

Project: Aurorium/Vertellus 3Q23

Pace Project No.: 50360860

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50360860001	RI-4S	Water	12/04/23 12:28	12/04/23 14:50
50360860002	RI-4D	Water	12/04/23 13:25	12/04/23 14:50

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.



## SAMPLE ANALYTE COUNT

Project: Aurorium/Vertellus 3Q23

Pace Project No.: 50360860

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50360860001	RI-4S	EPA 8270	FIP	20	PASI-I
		EPA 8260	KLP	7	PASI-I
		SM 4500-NH3 G	OAS	1	PASI-I
50360860002	RI-4D	EPA 8270	FIP	20	PASI-I
		EPA 8260	KLP	7	PASI-I
		SM 4500-NH3 G	OAS	1	PASI-I

PASI-I = Pace Analytical Services - Indianapolis

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.



## ANALYTICAL RESULTS

Project: Aurorium/Vertellus 3Q23

Pace Project No.: 50360860

Sample: RI-4S		Lab ID: 50360860001		Collected: 12/04/23 12:28		Received: 12/04/23 14:50		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
8270 SVOC App9 Water		Analytical Method: EPA 8270 Preparation Method: EPA 3510 Pace Analytical Services - Indianapolis							
2,3-Lutidine	ND	ug/L	10.0	1	12/06/23 15:55	12/07/23 12:55	583-61-9	N2	
2,4-Lutidine / 2,5-Lutidine	ND	ug/L	10.0	1	12/06/23 15:55	12/07/23 12:55	108-47-4	N2	
3-Ethyl-4-MethylPyridine	ND	ug/L	10.0	1	12/06/23 15:55	12/07/23 12:55	529-21-5	N2	
2-Ethylpyridine	ND	ug/L	10.0	1	12/06/23 15:55	12/07/23 12:55	100-71-0	N2	
3-Ethylpyridine	ND	ug/L	10.0	1	12/06/23 15:55	12/07/23 12:55	536-78-7	N2	
4-Ethylpyridine	ND	ug/L	10.0	1	12/06/23 15:55	12/07/23 12:55	536-75-4	N2	
2,6-Lutidine	ND	ug/L	10.0	1	12/06/23 15:55	12/07/23 12:55	108-48-5	N2	
3,4-Lutidine	ND	ug/L	10.0	1	12/06/23 15:55	12/07/23 12:55	583-58-4	N2	
3,5-Lutidine	70.1	ug/L	10.0	1	12/06/23 15:55	12/07/23 12:55	591-22-0	N2	
2-Methyl-5-ethyl pyridine	ND	ug/L	10.0	1	12/06/23 15:55	12/07/23 12:55	104-90-5	N2	
2-Methyl-3-ethyl pyridine	ND	ug/L	10.0	1	12/06/23 15:55	12/07/23 12:55	14159-59-2	N2	
2-Picoline	ND	ug/L	10.0	1	12/06/23 15:55	12/07/23 12:55	109-06-8		
3/4-Picoline	ND	ug/L	10.0	1	12/06/23 15:55	12/07/23 12:55		N2	
Pyridine	ND	ug/L	10.0	1	12/06/23 15:55	12/07/23 12:55	110-86-1		
Surrogates									
Nitrobenzene-d5 (S)	52	%.	17-107	1	12/06/23 15:55	12/07/23 12:55	4165-60-0		
2-Fluorobiphenyl (S)	43	%.	11-105	1	12/06/23 15:55	12/07/23 12:55	321-60-8		
p-Terphenyl-d14 (S)	98	%.	36-149	1	12/06/23 15:55	12/07/23 12:55	1718-51-0		
Phenol-d5 (S)	32	%.	10-58	1	12/06/23 15:55	12/07/23 12:55	4165-62-2		
2-Fluorophenol (S)	43	%.	10-71	1	12/06/23 15:55	12/07/23 12:55	367-12-4		
2,4,6-Tribromophenol (S)	92	%.	35-149	1	12/06/23 15:55	12/07/23 12:55	118-79-6		
8260/5030 MSV UST		Analytical Method: EPA 8260 Pace Analytical Services - Indianapolis							
Benzene	ND	ug/L	5.0	1		12/06/23 20:32	71-43-2		
Toluene	ND	ug/L	5.0	1		12/06/23 20:32	108-88-3		
Ethylbenzene	ND	ug/L	5.0	1		12/06/23 20:32	100-41-4		
Xylene (Total)	ND	ug/L	10.0	1		12/06/23 20:32	1330-20-7		
Surrogates									
Dibromofluoromethane (S)	92	%.	82-128	1		12/06/23 20:32	1868-53-7		
Toluene-d8 (S)	97	%.	73-122	1		12/06/23 20:32	2037-26-5		
4-Bromofluorobenzene (S)	87	%.	79-124	1		12/06/23 20:32	460-00-4		
4500 Ammonia Water		Analytical Method: SM 4500-NH3 G Pace Analytical Services - Indianapolis							
Nitrogen, Ammonia	8.2	mg/L	2.5	5		12/12/23 20:17	7664-41-7		

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.





## ANALYTICAL RESULTS

Project: Aurorium/Vertellus 3Q23

Pace Project No.: 50360860

Sample: RI-4D		Lab ID: 50360860002		Collected: 12/04/23 13:25		Received: 12/04/23 14:50		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
8270 SVOC App9 Water		Analytical Method: EPA 8270 Preparation Method: EPA 3510							
		Pace Analytical Services - Indianapolis							
2,3-Lutidine	ND	ug/L	10.5	1	12/06/23 15:55	12/07/23 13:11	583-61-9	N2	
2,4-Lutidine / 2,5-Lutidine	12.8	ug/L	10.5	1	12/06/23 15:55	12/07/23 13:11	108-47-4	N2	
3-Ethyl-4-MethylPyridine	ND	ug/L	10.5	1	12/06/23 15:55	12/07/23 13:11	529-21-5	N2	
2-Ethylpyridine	ND	ug/L	10.5	1	12/06/23 15:55	12/07/23 13:11	100-71-0	N2	
3-Ethylpyridine	ND	ug/L	10.5	1	12/06/23 15:55	12/07/23 13:11	536-78-7	N2	
4-Ethylpyridine	ND	ug/L	10.5	1	12/06/23 15:55	12/07/23 13:11	536-75-4	N2	
2,6-Lutidine	15.7	ug/L	10.5	1	12/06/23 15:55	12/07/23 13:11	108-48-5	N2	
3,4-Lutidine	ND	ug/L	10.5	1	12/06/23 15:55	12/07/23 13:11	583-58-4	N2	
3,5-Lutidine	231	ug/L	105	10	12/06/23 15:55	12/07/23 14:33	591-22-0	N2	
2-Methyl-5-ethyl pyridine	12.8	ug/L	10.5	1	12/06/23 15:55	12/07/23 13:11	104-90-5	N2	
2-Methyl-3-ethyl pyridine	36.0	ug/L	10.5	1	12/06/23 15:55	12/07/23 13:11	14159-59-2	N2	
2-Picoline	ND	ug/L	10.5	1	12/06/23 15:55	12/07/23 13:11	109-06-8		
3/4-Picoline	ND	ug/L	10.5	1	12/06/23 15:55	12/07/23 13:11		N2	
Pyridine	ND	ug/L	10.5	1	12/06/23 15:55	12/07/23 13:11	110-86-1		
Surrogates									
Nitrobenzene-d5 (S)	70	%.	17-107	1	12/06/23 15:55	12/07/23 13:11	4165-60-0		
2-Fluorobiphenyl (S)	66	%.	11-105	1	12/06/23 15:55	12/07/23 13:11	321-60-8		
p-Terphenyl-d14 (S)	94	%.	36-149	1	12/06/23 15:55	12/07/23 13:11	1718-51-0		
Phenol-d5 (S)	33	%.	10-58	1	12/06/23 15:55	12/07/23 13:11	4165-62-2		
2-Fluorophenol (S)	45	%.	10-71	1	12/06/23 15:55	12/07/23 13:11	367-12-4		
2,4,6-Tribromophenol (S)	95	%.	35-149	1	12/06/23 15:55	12/07/23 13:11	118-79-6		
8260/5030 MSV UST		Analytical Method: EPA 8260							
		Pace Analytical Services - Indianapolis							
Benzene	7.2	ug/L	5.0	1		12/06/23 21:38	71-43-2		
Toluene	ND	ug/L	5.0	1		12/06/23 21:38	108-88-3		
Ethylbenzene	ND	ug/L	5.0	1		12/06/23 21:38	100-41-4		
Xylene (Total)	ND	ug/L	10.0	1		12/06/23 21:38	1330-20-7		
Surrogates									
Dibromofluoromethane (S)	93	%.	82-128	1		12/06/23 21:38	1868-53-7		
Toluene-d8 (S)	98	%.	73-122	1		12/06/23 21:38	2037-26-5		
4-Bromofluorobenzene (S)	87	%.	79-124	1		12/06/23 21:38	460-00-4		
4500 Ammonia Water		Analytical Method: SM 4500-NH3 G							
		Pace Analytical Services - Indianapolis							
Nitrogen, Ammonia	14.3	mg/L	2.5	5		12/12/23 20:19	7664-41-7		

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.



## QUALITY CONTROL DATA

Project: Aurorium/Vertellus 3Q23

Pace Project No.: 50360860

QC Batch: 766538

Analysis Method: EPA 8260

QC Batch Method: EPA 8260

Analysis Description: 8260 MSV UST-WATER

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50360860001, 50360860002

METHOD BLANK: 3512025

Matrix: Water

Associated Lab Samples: 50360860001, 50360860002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	5.0	12/06/23 12:56	
Ethylbenzene	ug/L	ND	5.0	12/06/23 12:56	
Toluene	ug/L	ND	5.0	12/06/23 12:56	
Xylene (Total)	ug/L	ND	10.0	12/06/23 12:56	
4-Bromofluorobenzene (S)	%	87	79-124	12/06/23 12:56	
Dibromofluoromethane (S)	%	93	82-128	12/06/23 12:56	
Toluene-d8 (S)	%	95	73-122	12/06/23 12:56	

LABORATORY CONTROL SAMPLE: 3512026

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	50	52.9	106	74-124	
Ethylbenzene	ug/L	50	54.1	108	74-125	
Toluene	ug/L	50	55.6	111	72-119	
Xylene (Total)	ug/L	150	157	105	73-123	
4-Bromofluorobenzene (S)	%			91	79-124	
Dibromofluoromethane (S)	%			94	82-128	
Toluene-d8 (S)	%			104	73-122	

MATRIX SPIKE SAMPLE: 3512028

Parameter	Units	50360860002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	7.2	50	59.0	104	65-137	
Ethylbenzene	ug/L	ND	50	51.8	104	50-143	
Toluene	ug/L	ND	50	53.9	108	57-137	
Xylene (Total)	ug/L	ND	150	152	101	52-137	
4-Bromofluorobenzene (S)	%				91	79-124	
Dibromofluoromethane (S)	%				93	82-128	
Toluene-d8 (S)	%				105	73-122	

SAMPLE DUPLICATE: 3512027

Parameter	Units	50360860001 Result	Dup Result	RPD	Max RPD	Qualifiers
Benzene	ug/L	ND	ND		20	
Ethylbenzene	ug/L	ND	ND		20	
Toluene	ug/L	ND	ND		20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.

**QUALITY CONTROL DATA**

Project: Aurorium/Vertellus 3Q23

Pace Project No.: 50360860

SAMPLE DUPLICATE: 3512027

Parameter	Units	50360860001 Result	Dup Result	RPD	Max RPD	Qualifiers
Xylene (Total)	ug/L	ND	ND		20	
4-Bromofluorobenzene (S)	%.	87	88			
Dibromofluoromethane (S)	%.	92	93			
Toluene-d8 (S)	%.	97	98			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

**REPORT OF LABORATORY ANALYSIS**

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.



## QUALITY CONTROL DATA

Project: Aurorium/Vertellus 3Q23

Pace Project No.: 50360860

QC Batch: 766555

Analysis Method: EPA 8270

QC Batch Method: EPA 3510

Analysis Description: 8270 Water MSSV

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50360860001, 50360860002

METHOD BLANK: 3512128

Matrix: Water

Associated Lab Samples: 50360860001, 50360860002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
2,3-Lutidine	ug/L	ND	10.0	12/07/23 12:23	N2
2,4-Lutidine / 2,5-Lutidine	ug/L	ND	10.0	12/07/23 12:23	N2
2,6-Lutidine	ug/L	ND	10.0	12/07/23 12:23	N2
2-Ethylpyridine	ug/L	ND	10.0	12/07/23 12:23	N2
2-Methyl-3-ethyl pyridine	ug/L	ND	10.0	12/07/23 12:23	N2
2-Methyl-5-ethyl pyridine	ug/L	ND	10.0	12/07/23 12:23	N2
2-Picoline	ug/L	ND	10.0	12/07/23 10:29	
3,4-Lutidine	ug/L	ND	10.0	12/07/23 12:23	N2
3,5-Lutidine	ug/L	ND	10.0	12/07/23 12:23	N2
3-Ethyl-4-MethylPyridine	ug/L	ND	10.0	12/07/23 12:23	N2
3-Ethylpyridine	ug/L	ND	10.0	12/07/23 12:23	N2
3/4-Picoline	ug/L	ND	10.0	12/07/23 12:23	N2
4-Ethylpyridine	ug/L	ND	10.0	12/07/23 12:23	N2
Pyridine	ug/L	ND	10.0	12/07/23 10:29	
2,4,6-Tribromophenol (S)	%	79	35-149	12/07/23 10:29	
2-Fluorobiphenyl (S)	%	48	11-105	12/07/23 10:29	
2-Fluorophenol (S)	%	46	10-71	12/07/23 10:29	
Nitrobenzene-d5 (S)	%	65	17-107	12/07/23 10:29	1d
p-Terphenyl-d14 (S)	%	98	36-149	12/07/23 10:29	
Phenol-d5 (S)	%	32	10-58	12/07/23 10:29	

LABORATORY CONTROL SAMPLE: 3512129

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Pyridine	ug/L	50	17.2	34	10-51	
2,4,6-Tribromophenol (S)	%			78	35-149	
2-Fluorobiphenyl (S)	%			57	11-105	
2-Fluorophenol (S)	%			40	10-71	
Nitrobenzene-d5 (S)	%			59	17-107	
p-Terphenyl-d14 (S)	%			89	36-149	
Phenol-d5 (S)	%			30	10-58	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.



## QUALITY CONTROL DATA

Project: Aurorium/Vertellus 3Q23

Pace Project No.: 50360860

QC Batch: 767506

Analysis Method: SM 4500-NH3 G

QC Batch Method: SM 4500-NH3 G

Analysis Description: 4500 Ammonia

Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50360860001, 50360860002

METHOD BLANK: 3516353

Matrix: Water

Associated Lab Samples: 50360860001, 50360860002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.50	12/12/23 19:11	

LABORATORY CONTROL SAMPLE: 3516354

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	5	5.1	102	90-110	

MATRIX SPIKE &amp; MATRIX SPIKE DUPLICATE: 3516356 3516357

Parameter	Units	50360705001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Ammonia	mg/L	ND	5	5	5.2	5.2	102	102	90-110	0	20	

MATRIX SPIKE SAMPLE: 3516358

Parameter	Units	50360705002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	ND	5	5.1	102	90-110	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.



## QUALIFIERS

Project: Aurorium/Vertellus 3Q23

Pace Project No.: 50360860

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

1d A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

N2 The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.



## QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Aurorium/Vertellus 3Q23

Pace Project No.: 50360860

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50360860001	RI-4S	EPA 3510	766555	EPA 8270	766679
50360860002	RI-4D	EPA 3510	766555	EPA 8270	766679
50360860001	RI-4S	EPA 8260	766538		
50360860002	RI-4D	EPA 8260	766538		
50360860001	RI-4S	SM 4500-NH3 G	767506		
50360860002	RI-4D	SM 4500-NH3 G	767506		

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.



## CHAIN-OF-CUSTODY

The Chain-of-Custody is a

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace

WO# : 50360860



50360860

rately.

standard-terms.pdf.

Page : 1 Of 1

## Section A

## Required Client Information:

Company: Aurorium/Vertellus  
Address: 201 N. Illinois St., Ste. 1800  
Indianapolis, IN 46204  
Email: dave@dmpetersonPE.com  
Phone: 216-554-0413 Fax  
Requested Due Date: STD 10 day TAT

## Section B

## Required Project Information:

Report To: Dave Peterson, PE  
Copy To:  
Purchase Order #: 4400009855  
Project Name: Aurorium/Vertellus 3Q23  
Project #: GS0148d

## Section C

## Invoice In

Attention:  
Company:  
Address: 201 N. Illinois St., Ste. 1800, Indianapolis, IN 46204  
Pace Quote:  
Pace Project Manager: olivia.deck@pacelabs.com,  
Pace Profile #: 6586-1

Regulatory Agency

State / Location

IN

ITEM #	SAMPLE ID One Character per box. (A-Z, 0-9 / , -) Sample ids must be unique	MATRIX Drinking Water Water Waste Water Product Soil/Solid Oil Wipe Air Other Tissue	CODE DW WT WW P SL OL WP AR OT TS	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED				SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives										Analyses Test Y/N	Requested Analysis Filtered (Y/N)										Residual Chlorine (Y/N)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
						START		END				Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Ammonia	BTEX by 8260		SVOC by 8270																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
8270-Pyridines only list	Cheng, H. / CENCOR	12/4/23	1450	T.H	12/4/23	1450	128	Y	Y	Y

## SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER:

SIGNATURE of SAMPLER:

DATE Signed:

TEMP in C

Received on

Ice

(Y/N)

Custody

Sealed

Cooler

(Y/N)

Pages

Sample

Intake

(Y/N)

Page 13 of 15





# SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and Initials of person examining contents:

12/4/23 15:15 TH

1. Courier: ☐ FED EX ☐ UPS ☒ CLIENT ☐ PACE ☐ NOW/JETT ☐ OTHER2. Custody Seal on Cooler/Box Present: ☒ Yes ☐ No(If yes) Seals Intact: ☒ Yes ☐ No (leave blank if no seals were present)

3. Thermometer: 1 2 3 4 5 6 7 8 A B C D E F G H

4. Cooler Temperature(s): 18/18

(Initial/Corrected) RECORD TEMPS OF ALL COOLERS RECEIVED (use Comments below to add more)

5. Packing Material:

☐ Bubble Wrap☒ Bubble Bags☐ None☐ Other

6. Ice Type:

☒ Wet☐ Blue☐ None7. If temp. is over 6°C or under 0°C, was the PM notified?: ☐ Yes ☐ No

Cooler temp should be above freezing to 6°C

All discrepancies will be written out in the comments section below.

	Yes	No		Yes	No	N/A
USDA Regulated Soils? (HI, ID, NY, WA, OR, CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		<input checked="" type="checkbox"/>	All containers needing acid/base preservation have been pH CHECKED?: Exceptions: VOA, coliform, LLHg, O&G, RAD CHEM, and any container with a septum cap or preserved with HCl.	<input checked="" type="checkbox"/>		
Short Hold Time Analysis (48 hours or less)? Analysis:		<input checked="" type="checkbox"/>	Circle: HNO3 (<2) H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9) Any non-conformance to pH recommendations will be noted on the container count form	<input checked="" type="checkbox"/>		
Time 5035A TC placed in Freezer or Short Holds To Lab			Time:	Present	Absent	N/A
Rush TAT Requested (4 days or less):	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Residual Chlorine Check (SVOC 625 Pest/PCB 608)			<input checked="" type="checkbox"/>
Custody Signatures Present?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Residual Chlorine Check (Total/Amenable/Free Cyanide)			<input checked="" type="checkbox"/>
Containers Intact?:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Headspace Wisconsin Sulfide?	Present	Absent	No VOA Vials Sent
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Headspace in VOA Vials (>6mm): See Container Count form for details		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Extra labels on Terracore Vials? (soils only)			Trip Blank Present?		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
			Trip Blank Custody Seals?:		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

COMMENTS:

## Sample Container Count

\*\* Place a RED dot on containers  
that are out of conformance \*\*

COC Line Item	WGFI	WGKU BG1U	MeOH (only) SBS DI R	DG9H VOA VIAL HS >6mm	VG9U DG9U VG9T	AMBER GLASS								PLASTIC								OTHER			Matrix																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
						AG0U	AG1H	AG1U	AG3U	AG3S	AG3SF	AG3B	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	CG3F	Syringe Kit		HNO3	H2SO4	NaOH >10	NaOH/Zn Ac >9																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
1																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		

## Container Codes

## Glass

DG9H	40mL HCl amber voa vial	BG1T	glass
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass
DG9S	40mL H2SO4 amber vial	CG3U	250mL Unpres Clear Glass
DG9T	40mL Na Thio amber vial	AG0U	100mL unpres amber glass
DG9U	40mL unpreserved amber vial	AG1H	1L HCl amber glass
VG9H	40mL HCl clear vial	AG1S	1L H2SO4 amber glass
VG9T	40mL Na Thio. clear vial	AG1T	1L Na Thiosulfate amber glass
VG9U	40mL unpreserved clear vial	AG1U	1liter unpres amber glass
I	40mL w/hexane wipe vial	AG2N	500mL HNO3 amber glass
WGKU	8oz unpreserved clear jar	AG2S	500mL H2SO4 amber glass
WGFL	4oz clear soil jar	AG2U	500mL unpres amber glass
JGFU	4oz unpreserved amber wide	AG3S	250mL H2SO4 amber glass
CG3H	250mL clear glass HCl	AG3SF	250mL H2SO4 amber glass field filtered
CG3F	250mL clear glass HCl, Field Filter	AG3U	250mL unpres amber glass
BG1H	1L HCl clear glass	AG3B	250mL NaOH amber glass
BG1S	1L H2SO4 clear glass		

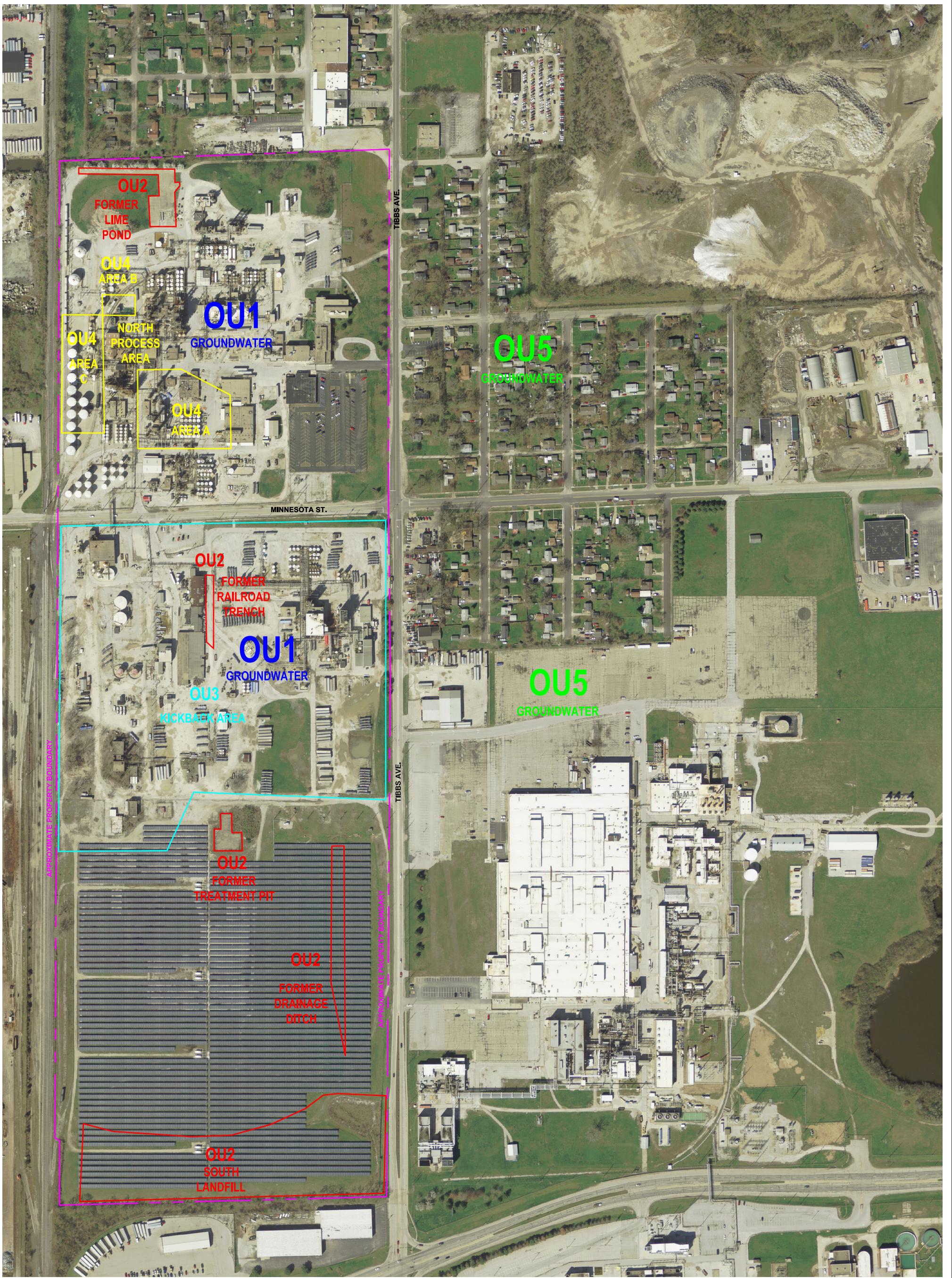
## Plastic

BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
BP1U	1L unpreserved plastic	<b>Miscellaneous</b>	
BP1Z	1L NaOH, Zn, Ac		
BP2N	500mL HNO3 plastic	Syringe Kit	LL Cr+6 sampling kit
BP2C	500mL NaOH plastic	ZPLC	Ziploc Bag
BP2S	500mL H2SO4 plastic	R	Terracore Kit
BP2U	500mL unpreserved plastic	SP5T	120mL Coliform Sodium Thiosulfate
BP2Z	500mL NaOH, Zn Ac	GN	General Container
BP3B	250mL NaOH plastic	U	Summa Can (air sample)
BP3N	250mL HNO3 plastic	WT	Water
BP3F	250mL HNO3 plastic-field filtered	SL	Solid
BP3U	250mL unpreserved plastic	OL	Oil
BP3S	250mL H2SO4 plastic	NAL	Non-aqueous liquid
BP3Z	250mL NaOH, ZnAc plastic	WP	Wipe
BP3R	250mL Unpres. FF SO4/OH buffer		

**Attachment C**

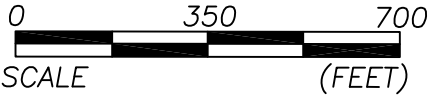
**Cover Inspection and Maintenance Checklist**





OPERABLE UNITS (1–5)

- OU1 — ON-SITE GROUNDWATER
- OU2 — CERCLA AREAS
- OU3 — KICKBACK AREA
- OU4 — NORTH PROCESS AREAS
- OU5 — OFF-SITE GROUNDWATER



SEMI-ANNUAL COVER INSPECTIONS AND MAINTENANCE

REV. DATE:	DRAWING DATE: DEC. 2019	ACAD FILE: INDY_PLANT.DWG
MAP APPROXIMATING THE OPERABLE UNITS		
CLIENT:	REILLY SUPERFUND SITE	PM: DMP
LOCATION:	1500 S. TIBBS AVE. INDIANAPOLIS, INDIANA	DRAWING: 1
DESIGNED: DMP	DETAILED: DMP	PROJECT NO.:



# SUPERFUND SEMI-ANNUAL COVER INSPECTION AND MAINTANANCE CHECKLIST

Aurorium/VIP LLC  
1500 S. Tibbs Avenue  
Indianapolis, IN 46241

## INSPECTION AREA: (Highlight One)

OU2 Former Lime Pond	OU2 Former Railroad Trench	OU2 Former Treatment Pit
OU2 Former Drainage Ditch	OU2 Former South Landfill	
OU3 Kickback Areas		
OU4 Tank 69 Area	OU4 Tank 260 Area	OU4 Base Stills Area

INSPECTOR: G. Stevenson DATE: 12/4/23

## COVER PERIMETER INSPECTION

Observed Anomaly  
(Describe Corrective Measure)

Position  
(Use and attach map if necessary)

1. None; Tree limb fallen on north end of pad
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_
7. \_\_\_\_\_

Comments:

## COVER SURFACE INSPECTION

Observed Anomaly  
(Describe Corrective Measure)

Position  
(Use and attach map if necessary)

1. None, caulk seams appear satisfactory. Noted weeds growing from a couple caulk joints
2. at northeast corner & southwest area of pad
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_
7. \_\_\_\_\_

Comments:

# SUPERFUND SEMI-ANNUAL COVER INSPECTION AND MAINTANANCE CHECKLIST

Aurorium/VIP LLC  
1500 S. Tibbs Avenue  
Indianapolis, IN 46241

## INSPECTION AREA: (Highlight One)

OU2 Former Lime Pond	OU2 Former Railroad Trench	OU2 Former Treatment Pit
OU2 Former Drainage Ditch	OU2 Former South Landfill	
OU3 Kickback Areas		
OU4 Tank 69 Area	OU4 Tank 260 Area	OU4 Base Stills Area

INSPECTOR: G. Stevenson DATE: 12/4/23

## COVER PERIMETER INSPECTION

Observed Anomaly  
(Describe Corrective Measure)

Position  
(Use and attach map if necessary)

1. None
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_
7. \_\_\_\_\_

Comments:

## COVER SURFACE INSPECTION

Observed Anomaly  
(Describe Corrective Measure)

Position  
(Use and attach map if necessary)

1. None, gravel cover graded
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_
7. \_\_\_\_\_

Comments:

# SUPERFUND SEMI-ANNUAL COVER INSPECTION AND MAINTANANCE CHECKLIST

Aurorium/VIP LLC  
1500 S. Tibbs Avenue  
Indianapolis, IN 46241

## INSPECTION AREA: (Highlight One)

OU2 Former Lime Pond	OU2 Former Railroad Trench	OU2 Former Treatment Pit
OU2 Former Drainage Ditch	OU2 Former South Landfill	
OU3 Kickback Areas		
OU4 Tank 69 Area	OU4 Tank 260 Area	OU4 Base Stills Area

INSPECTOR: G. Stevenson DATE: 12/4/23

## COVER PERIMETER INSPECTION

Observed Anomaly  
(Describe Corrective Measure)

Position  
(Use and attach map if necessary)

1. None, Trees lining pad growing in fence line
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_

Comments:

## COVER SURFACE INSPECTION

Observed Anomaly  
(Describe Corrective Measure)

Position  
(Use and attach map if necessary)

1. None, caulk seams appear satisfactory
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_
7. \_\_\_\_\_

Comments:

# SUPERFUND SEMI-ANNUAL COVER INSPECTION AND MAINTANANCE CHECKLIST

Aurorium/VIP LLC  
1500 S. Tibbs Avenue  
Indianapolis, IN 46241

## INSPECTION AREA: (Highlight One)

OU2 Former Lime Pond	OU2 Former Railroad Trench	OU2 Former Treatment Pit
<b>OU2 Former Drainage Ditch</b>	OU2 Former South Landfill	
OU3 Kickback Areas		
OU4 Tank 69 Area	OU4 Tank 260 Area	OU4 Base Stills Area

INSPECTOR: G. Stevenson DATE: 12/4/23

## COVER PERIMETER INSPECTION

Observed Anomaly  
(Describe Corrective Measure)

Position  
(Use and attach map if necessary)

1. None
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_
7. \_\_\_\_\_

Comments:

## COVER SURFACE INSPECTION

Observed Anomaly  
(Describe Corrective Measure)

Position  
(Use and attach map if necessary)

1. None
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_
7. \_\_\_\_\_

Comments:



# SUPERFUND SEMI-ANNUAL COVER INSPECTION AND MAINTANANCE CHECKLIST

Aurorium/VIP LLC  
1500 S. Tibbs Avenue  
Indianapolis, IN 46241

## INSPECTION AREA: (Highlight One)

OU2 Former Lime Pond	OU2 Former Railroad Trench	OU2 Former Treatment Pit
OU2 Former Drainage Ditch	OU2 Former South Landfill	
OU3 Kickback Areas		
OU4 Tank 69 Area	OU4 Tank 260 Area	OU4 Base Stills Area

INSPECTOR: G. Stevenson DATE: 12/4/23

## COVER PERIMETER INSPECTION

Observed Anomaly  
(Describe Corrective Measure)

Position  
(Use and attach map if necessary)

1. None
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_
7. \_\_\_\_\_

Comments:

## COVER SURFACE INSPECTION

Observed Anomaly  
(Describe Corrective Measure)

Position  
(Use and attach map if necessary)

1. None
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_

Comments:

# SUPERFUND SEMI-ANNUAL COVER INSPECTION AND MAINTANANCE CHECKLIST

Aurorium/VIP LLC  
1500 S. Tibbs Avenue  
Indianapolis, IN 46241

## INSPECTION AREA: (Highlight One)

OU2 Former Lime Pond	OU2 Former Railroad Trench	OU2 Former Treatment Pit
OU2 Former Drainage Ditch	OU2 Former South Landfill	
OU3 Kickback Areas		
OU4 Tank 69 Area	OU4 Tank 260 Area	OU4 Base Stills Area

INSPECTOR: G. Stevenson DATE: 12/4/23

## COVER PERIMETER INSPECTION

Observed Anomaly  
(Describe Corrective Measure)

Position  
(Use and attach map if necessary)

1. None
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_
7. \_\_\_\_\_

Comments:

## COVER SURFACE INSPECTION

Observed Anomaly  
(Describe Corrective Measure)

Position  
(Use and attach map if necessary)

1. None, Gravel cover graded. Some water puddling on surface
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_

Comments:

# SUPERFUND SEMI-ANNUAL COVER INSPECTION AND MAINTANANCE CHECKLIST

Aurorium/VIP LLC  
1500 S. Tibbs Avenue  
Indianapolis, IN 46241

## INSPECTION AREA: (Highlight One)

OU2 Former Lime Pond	OU2 Former Railroad Trench	OU2 Former Treatment Pit
OU2 Former Drainage Ditch	OU2 Former South Landfill	
OU3 Kickback Areas		
OU4 Tank 69 Area	OU4 Tank 260 Area	OU4 Base Stills Area

INSPECTOR: G. Stevenson DATE: 12/4/23

## COVER PERIMETER INSPECTION

Observed Anomaly  
(Describe Corrective Measure)

Position  
(Use and attach map if necessary)

1. None
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_
7. \_\_\_\_\_

Comments:

## COVER SURFACE INSPECTION

Observed Anomaly  
(Describe Corrective Measure)

Position  
(Use and attach map if necessary)

1. Concrete cut to east of Tank 62, excavation filled w/ stone, no concrete cap replaced\*\*
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_

Comments:

\*\* Check concrete surface repairs during 1<sup>st</sup> Half 2024 inspection

# SUPERFUND SEMI-ANNUAL COVER INSPECTION AND MAINTANANCE CHECKLIST

Aurorium/VIP LLC  
1500 S. Tibbs Avenue  
Indianapolis, IN 46241

## INSPECTION AREA: (Highlight One)

OU2 Former Lime Pond	OU2 Former Railroad Trench	OU2 Former Treatment Pit
OU2 Former Drainage Ditch	OU2 Former South Landfill	
OU3 Kickback Areas		
OU4 Tank 69 Area	OU4 Tank 260 Area	OU4 Base Stills Area

INSPECTOR: G. Stevenson DATE: 12/4/23

## COVER PERIMETER INSPECTION

Observed Anomaly  
(Describe Corrective Measure)

Position  
(Use and attach map if necessary)

1. None
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.

Comments:

## COVER SURFACE INSPECTION

Observed Anomaly  
(Describe Corrective Measure)

Position  
(Use and attach map if necessary)

1. None
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.

Comments:

# SUPERFUND SEMI-ANNUAL COVER INSPECTION AND MAINTANANCE CHECKLIST

Aurorium/VIP LLC  
1500 S. Tibbs Avenue  
Indianapolis, IN 46241

## INSPECTION AREA: (Highlight One)

OU2 Former Line Pond	OU2 Former Railroad Trench	OU2 Former Treatment Pit
OU2 Former Drainage Ditch	OU2 Former South Landfill	
OU3 Kickback Areas		
OU4 Tank 69 Area	OU4 Tank 260 Area	OU4 Base Stills Area

INSPECTOR: G. Stevenson DATE: 12/4/23

## COVER PERIMETER INSPECTION

Observed Anomaly  
(Describe Corrective Measure)

Position  
(Use and attach map if necessary)

1. None
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_
7. \_\_\_\_\_

Comments:

## COVER SURFACE INSPECTION

Observed Anomaly  
(Describe Corrective Measure)

Position  
(Use and attach map if necessary)

1. None
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_
7. \_\_\_\_\_

Comments: