

# **DATA PACKAGE**

# **GENERAL CHEMISTRY**

**PROJECT NAME: OVEC - KYGER CREEK** 

ENTACT.

150 Bay Street

Suite 806

Jersey City, NJ - 07302

Phone No: 201-356-9196

ORDER ID: Q2850, Q2851, Q2852

**ATTENTION: Wyatt Steel** 





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# **Cover Page**

**Order ID:** Q2850, Q2851, Q2852

**Project ID:** OVEC - Kyger Creek

Client: ENTACT.

Lab Sample Number	Client Sample Number
Q2850-01	SFAP 1
Q2850-02	NSP 5
Q2851-01	NSP 3
Q2851-02	NSP 1
Q2852-01	NSP 4
Q2852-02	NSP 2

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

Signature :

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

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SOUTH CAROLINA 49 BROWNS COVE ROAD SUITE 6 RIDGELAND, SC 29936 848.316.9950

#### Letter of Transmittal

Date: 9-9-25 Job No.: 889 Lab Log: 25-4437

Attention: Yazmeen

> Alliance Technical Group 284 Sheffield Street Mountainside, NJ 07092

CC: Jordan Hedvat, projectmanagers@chemtech.net

Re: Q2850 – OVEC – Kyger Creek

Sample(s) ID: SFAP 1, NSP 5, NSP 3, NSP 4

Dear Yazmeen,

Please find attached results for the samples referenced above. The following lab testing was performed:

**ASTM D5084** Permeability (recompacted)

Regards,

RSA Geolab, LLC

Remarks: If you have any questions, please call 908-964-0786.

President RSA Geolab, LLC

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SOUTH CAROLINA 49 BROWNS COVE ROAD SUITE 6 RIDGELAND, SC 29936 848.316.9950

#### Letter of Transmittal

Date: 9-9-25 Job No.: 889 Lab Log: 25-4437

Attention: Yazmeen

> Alliance Technical Group 284 Sheffield Street Mountainside, NJ 07092

CC: Jordan Hedvat, projectmanagers@chemtech.net

Q2850 - OVEC - Kyger Creek Re:

Sample(s) ID: NSP 1, NSP 2

Dear Yazmeen,

Please find attached results for the samples referenced above. The following lab testing was performed:

ASTM D5084 Permeability Test PRELIMINARY RESULTS

Regards,

RSA Geolab, LLC

Remarks: If you have any questions, please call 908-964-0786.

President RSA Geolab, LLC

https://www.rsageolab.com/ email: rsa@rsageolab.com

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1012 Greeley Ave N Unit A Union, NJ 07083 908-964-0786

## **SOUTH CAROLINA**

49 Browns Cove Rd Ste 6 Ridgeland, SC 29936 843-816-9950

# PERMEABILITY TEST BY TRIAXIAL CELL WITH BACK PRESSURE

Constant Head Method (ASTM D5084)

Client: Alliance Technical Group Proj. No. 889 Tested by: SP Entered by: NC Project: OVEC - Kyger Creek Date: 9/9/2025 Checked by: KH

Cell 1 Sample: NSP 1 OMC, 95% MDD Panel 4-1 Remarks:

Dimensions of Specimen:

		Weight of Specimen:
Lenath	Diameter	

_	(Inches)		(Inches)	Initial Weight 903	3.6 Grams	
1.	4.159	1.	2.872	1.9	90 Lbs.	
2.	4.161	2.	2.871	Final Weight 949	0.8 Grams	
3.	4.160	3.	2.872	2.0	92 Lbs.	
4.	4.161	4.	2.872	Dry Weight <u>C</u>	).0 Grams	
5.	4.159	5.	2.870	0.0	<u>00</u> Lbs.	

Avg.	<u>4.160</u> In	Ave.	<u>2.871</u> In	Moisture Conten	t:
	<u>10.566</u> CM		<u>7.293</u> CM	Initial	0.00 %
Area	2 <u>6.476</u> In 3		2 41.778 CM	Final	0.00 %
Volume	<u>26.938</u> In	<u>0.016</u> Cft.		Density, Wet Initial	<u>127.79</u> pcf
				6 " 6	0.00

Density, Dry 0.00 pcf Density, Wet Final: 134.32 pcf

Efft. Confining Back Pressure: Pressure

<u>90</u> psi 6.9 psi

Saturation: 96 %

Ox L x Rt Specific Gravity: 2.72 20°C hxAxt (Assumed)

	Trial 1	Trial 2	Trial 3	Trial 4
Q cc	0.10	0.10	0.10	0.10
L cms	10.566	10.566	10.566	10.566
Rt (Temp)	1.000	1.000	1.000	1.000
h cms	254.56	254.56	254.56	254.56
A Sq. cms	41.778	41.778	41.778	41.778
t Sec.	5340	5320	5300	5330
K				
20 cm/sec	1.861E-08	1.868E-08	1.875E-08	1.864E-08

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20 Avg. cm/sec EM\NY-GL\PERMTEST\nsp1

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1.867E-08



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#### **SOUTH CAROLINA**

49 Browns Cove Rd Ste 6 Ridgeland, SC 29936 843-816-9950

# PERMEABILITY TEST BY TRIAXIAL CELL WITH BACK PRESSURE

Constant Head Method (ASTM D5084)

Client: Alliance Technical Group Proj. No. 889 Tested by: SP Entered by: NC Project: OVEC - Kyger Creek Date: 9/9/2025 Checked by: ΚН

2 Cell Sample: NSP 2 OMC, 95% MDD Panel 4-2 Remarks:

Dimensions of Specimen:

Weight of Specimen: Lenath Diameter

	(Inches)	_	(Inches)	Initial Weight 834.5 G	3rams
1.	4.169	1.	2.872	1.838 L	_bs.
2.	4.170	2.	2.872	Final Weight 887.1 G	3rams
3.	4.172	3.	2.870	1.954 L	_bs.
4.	4.169	4.	2.871	Dry Weight <u>0.0</u> G	Grams
5.	4.169	5.	2.872	0.000 L	_bs.

Avg. <u>4.170</u> In Ave. 2.871 In Moisture Content: 10.591 CM 7.293 CM Initial 0.00 % 2 2 Final 0.00 % 41.778 CM Area <u>6.476</u> In 3 Volume <u>27.002</u> In 0.016 Cft. Density, Wet Initial 117.73 pcf

Density, Dry 0.00 pcf 125.15 pcf Density, Wet Final:

Efft. Confining

<u>6.9</u> psi Back Pressure: <u>90</u> psi Pressure

Saturation: 96 %

Specific Gravity: 2.72 20°C hxAxt (Assumed)

	Trial 1	Trial 2	Trial 3	Trial 4
Q cc	0.10	0.10	0.10	0.10
L cms	10.591	10.591	10.591	10.591
Rt (Temp)	1.000	1.000	1.000	1.000
h cms	127.28	127.28	127.28	127.28
A Sq. cms	41.778	41.778	41.778	41.778
A Sq. cms t Sec.	1170	1200	1190	1180
K				
20 cm/sec	1.702E-07	1.660E-07	1.674E-07	1.688E-07

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20 Avg. cm/sec EM\NY-GL\PERMTEST\nsp2

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Ox L x Rt

1.681E-07



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#### SOUTH CAROLINA

49 Browns Cove Rd Ste 6 Ridgeland, SC 29936 843-816-9950

# PERMEABILITY TEST BY TRIAXIAL CELL WITH BACK PRESSURE

Constant Head Method (ASTM D5084)

 Sample:
 NSP 3
 Cell
 5

 Remarks:
 OMC, 95% MDD
 Panel
 5-3

Dimensions of Specimen:

Weight of Specimen:

•	Length (Inches)	_	Diameter (Inches)	Initial Weight 82	<u>26.7</u>	Grams
1.	4.121	1.	2.874	1.3	821	Lbs.
2.	4.123	2.	2.874	Final Weight 85	58.2	Grams
3.	4.124	3.	2.876	1.8	<u>890</u>	Lbs.
4.	4.124	4.	2.875	Dry Weight <u>71</u>	13.2	Grams
5.	4.122	5.	2.876	1.5	571	Lbs.

Avg.	<u>4.123</u> In	Ave. <u>2.875</u> In	Moisture Conte	nt:
	<u>10.472</u> CM	<u>7.303</u> CM	Initial	<u>15.92</u> %
Area	2 <u>6.492</u> In	<u>41.883</u> CM	2 Final	20.33 %
Volume	3 <u>26.764</u> In	<u>0.015</u> Cft.	Density, Wet Initial	<u>117.67</u> pcf
			Density, Dry	101.51 pcf

Density, Wet Final: 122.15 pcf Density, Dry 101.51 pcf

Efft. Confining

Back Pressure: 90 psi Pressure 6.9 psi

Saturation: 96 %

Specific Gravity:  $\begin{array}{ccc} K & \underline{O} \times L \times Rt \\ 20^{\circ}C & h \times A \times t \end{array}$ 

(Assumed)

	Trial 1	Trial 2	Trial 3	Trial 4
				0.40
Q cc	0.10	0.10	0.10	0.10
L cms	10.472	10.472	10.472	10.472
Rt (Temp)	1.000	1.000	1.000	1.000
h cms	127.28	127.28	127.28	127.28
A Sq. cms	41.883	41.883	41.883	41.883
A Sq. cms t Sec.	2925	2940	2930	2920
K				
20 cm/sec	6.716E-08	6.682E-08	6.704E-08	6.727E-08

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20 Avg. cm/sec

6.707E-08

 ${\sf EM} \verb| NY-GL \verb| PERMTEST \verb| nsp3 \\$ 

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## SOUTH CAROLINA

49 Browns Cove Rd Ste 6 Ridgeland, SC 29936 843-816-9950

# PERMEABILITY TEST BY TRIAXIAL CELL WITH BACK PRESSURE

Constant Head Method (ASTM D5084)

 Client:
 Alliance Technical Group
 Proj. No.
 889
 Tested by:
 SP

 Entered by:
 NC

 Project:
 OV EC - Kyger Creek
 Date:
 9/9/2025
 Checked by:
 KH

 Sample:
 NSP 4
 Cell
 14

 Remarks:
 OMC, 95% MDD
 Panel
 5-1

Dimensions of Specimen:

льог эрссинат.		
		Weight of Specimen:
Lonath	Diameter	

	nches)		(Inches)	Initial Weight	<u>853.6</u>	Grams
1.	4.091	1.	2.874		<u>1.880</u>	Lbs.
2.	4.092	2.	2.873	Final Weight	871.2	Grams
3.	4.089	3.	2.872		<u>1.919</u>	Lbs.
4.	4.090	4.	2.873	Dry Weight	708.9	Grams
5.	4.091	5.	2.873		1.561	Lbs.

Avg.	<u>4.091</u> In		Ave.	2.873	In		Moisture Content:		
	<u>10.390</u> CM	I		7.297	CM		Initial	20.41	%
Area	<u>6.483</u> In	2		41.824	2 CM		Final	22.90	%
Volume	<u>26.518</u> In	3	<u>0.015</u> Cft.			Density, Wet	Initial	122.63	pcf
Density, Wet Fina	al:	<u>125.16</u> pcf				Density, Dry		<u>101.84</u>	pcf

Back Pressure: <u>90</u> psi Efft. Confining
Pressure <u>6.9</u> psi

Saturation: 96 %

Specific Gravity:  $\begin{array}{ccc} K & \underline{O} \times L \times Rt \\ 20^{\circ}C & h \times A \times t \end{array}$ 

(Assumed)

	Trial 1	Trial 2	Trial 3	Trial 4
Q cc	0.10	0.10	0.10	0.10
L cms	10.390	10.390	10.390	10.390
Rt (Temp)	1.000	1.000	1.000	1.000
h cms	127.28	127.28	127.28	127.28
A Sq. cms	41.824	41.824	41.824	41.824
A Sq. cms t Sec.	2970	2800	2980	2990
K				
20 cm/sec	6.572E-08	6.971E-08	6.550E-08	6.528E-08

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EM\NY-GL\PERMTEST\nsp4 20 Avg.

20 Avg. cm/sec 6.655E-08

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## **SOUTH CAROLINA**

49 Browns Cove Rd Ste 6 Ridgeland, SC 29936 843-816-9950

# PERMEABILITY TEST BY TRIAXIAL CELL WITH BACK PRESSURE

Constant Head Method (ASTM D5084)

Client:	Alliance Technical Group	Proj. No.	889	Tested by:	SP
				Entered by:	NC
Project:	OVEC - Kyger Creek	Date:	9/9/2025	Checked by:	KH

NSP5 Cell 16 Sample: OMC, 95% MDD Panel 5-2 Remarks:

Dimensions of Specimen:

sions of specimen.		
		Weight of Specimen:
Lonath	Diamotor	

Length (Inches)		Diameter (Inches)	Initial Weigh 88	9.6 Grams
4.139	1.	2.874	1.9	9 <u>60</u> Lbs.
4.141	2.	2.873	Final Weight 95	<u>6.4</u> Grams
4.140	3.	2.875	2.1	1 <u>06</u> Lbs.
4.141	4.	2.873	Dry Weight <u>80</u>	<u>0.6</u> Grams
4.139	5.	2.873	1.7	7 <u>63</u> Lbs.
	(Inches) 4.139 4.141 4.140 4.141	4.139     1.       4.141     2.       4.140     3.       4.141     4.	(Inches)     (Inches)       4.139     1.     2.874       4.141     2.     2.873       4.140     3.     2.875       4.141     4.     2.873	(Inches)         (Inches)         Initial Weight         88           4.139         1.         2.874         1.9           4.141         2.         2.873         Final Weight         95           4.140         3.         2.875         2.1           4.141         4.         2.873         Dry Weight         80

Avg.	<u>4.140</u> In		Ave.	2.874	In		Moisture Content:		
	<u>10.516</u> CM			7.299	CM		Initial	<u>11.13</u>	%
Area	<u>6.485</u> In	2		41.842	2 CM		Final	19.46	%
Volume	<u>26.850</u> In	3	<u>0.016</u> Cft.			Density, Wet	Initial	<u>126.22</u>	pcf
Density, Wet Fina	al:	<u>135.69</u> pcf				Density, Dry		113.59	pcf

Efft. Confining Back Pressure: <u>90</u> psi Pressure 6.9 psi

Saturation: 96

Ox L x Rt Specific Gravity: 2.72 20°C hxAxt

(Assumed)

	Trial 1	Trial 2	Trial 3	Trial 4
Q cc	0.10	0.10	0.10	0.10
L cms	10.516	10.516	10.516	10.516
Rt (Temp)	1.000	1.000	1.000	1.000
h cms	127.28	127.28	127.28	127.28
A Sq. cms	41.842	41.842	41.842	41.842
A Sq. cms t Sec.	2805	2810	2810	2795
K				
20 cm/sec	7.039E-08	7.027E-08	7.027E-08	7.064E-08

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20 Avg. cm/sec

7.039E-08

EM\NY-GL\PERMTEST\nsp5

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## **SOUTH CAROLINA**

49 Browns Cove Rd Ste 6 Ridgeland, SC 29936 843-816-9950

# PERMEABILITY TEST BY TRIAXIAL CELL WITH BACK PRESSURE

Constant Head Method (ASTM D5084)

Client: Alliance Technical Group Proj. No. 889 Tested by: SP Entered by: NC Project: OVEC - Kyger Creek Date: 9/9/2025 Checked by: KH

SFAP1 Cell 14 Sample: OMC, 95% MDD Panel 4-2 Remarks:

Dimensions of Specimen:

arona or apocimion.		
		Weight of Specimen:
Lonath	Diameter	

	(Inches)		(Inches)	Initial Weight <u>676.4</u> G	irams
1.	4.062	1.	2.873	<u>1.490</u> LI	bs.
2.	4.060	2.	2.875	Final Weight 709.4 G	irams
3.	4.061	3.	2.872	<u>1.563</u> LI	bs.
4.	4.063	4.	2.874	Dry Weight 491.7 G	irams
5.	4.064	5.	2.871	1.083 LI	bs.

Avg.	<u>4.062</u> In	Ave.	<u>2.873</u> In		Moisture Content:	
	<u>10.317</u> CM		<u>7.297</u> CM		Initial	<u>37.54</u> %
Area	2 <u>6.483</u> In 3		2 41.824 CM		Final	44.27 %
Volume	<u>26.333</u> In	<u>0.015</u> Cft.		Density, Wet	Initial	97.85 pcf
				Density, Dry		71.14 pcf

Density, Dry Density, Wet Final: 102.63 pcf

Efft. Confining Back Pressure: Pressure <u>90</u> psi 6.9 psi

Saturation: 96 %

Ox L x Rt Specific Gravity: 2.72 20°C hxAxt

(Assumed)

	Trial 1	Trial 2	Trial 3	Trial 4
				0.40
Q cc	0.10	0.10	0.10	0.10
L cms	10.317	10.317	10.317	10.317
Rt (Temp)	1.000	1.000	1.000	1.000
h cms	127.28	127.28	127.28	127.28
A Sq. cms	41.824	41.824	41.824	41.824
t Sec.	50	40	35	40
K				
20 cm/sec	3.876E-06	4.845E-06	5.538E-06	4.845E-06

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20 Avg. cm/sec 4.776E-06

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