

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



Cover Page

Order ID : Q2850, Q2851, Q2852

Project ID : OVEC - Kyger Creek

Client : ENTACT.

Lab Sample Number

Q2850-01
Q2850-02
Q2851-01
Q2851-02
Q2852-01
Q2852-02

Client Sample Number

SFAP 1
NSP 5
NSP 3
NSP 1
NSP 4
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 :

APPROVED

By Nimisha Pandya, QA/QC Supervisor at 6:08 pm, Sep 09, 2025



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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.

Signed: _____

Dr. Raza S. Ahmed
President RSA Geolab, LLC

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email: rsa@rsageolab.com

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Date: 9-9-25

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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: **NSP 1, NSP 2**

Dear Yazmeen,

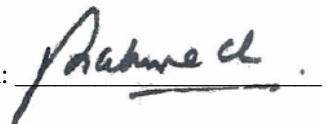
Please find attached results for the samples referenced above. The following lab testing was performed:

- ASTM D5084 Permeability Test PRELIMINARY RESULTS

Regards,
RSA Geolab, LLC

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

Signed: _____


Dr. Raza S. Ahmed
President RSA Geolab, LLC

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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

Project: OVEC - Kyger Creek

Date: 9/9/2025

Entered by: NC

Checked by: KH

Sample: NSP1

Cell 1

Remarks: OMC, 95% MDD

Panel 4-1

Dimensions of Specimen :

	Length (Inches)		Diameter (Inches)
1.	4.159	1.	2.872
2.	4.161	2.	2.871
3.	4.160	3.	2.872
4.	4.161	4.	2.872
5.	4.159	5.	2.870

Weight of Specimen:

Initial Weight	<u>903.6</u> Grams
	<u>1.990</u> Lbs.
Final Weight	<u>949.8</u> Grams
	<u>2.092</u> Lbs.
Dry Weight	<u>0.0</u> Grams
	<u>0.000</u> Lbs.

Avg. 4.160 In
10.566 CM

Ave. 2.871 In
7.293 CM

Moisture Content:

Initial 0.00 %
Final 0.00 %

Area 6.476 In²
41.778 CM²

Volume 26.938 In³ 0.016 Cft.

Density, Wet Initial 127.79 pcf

Density, Dry 0.00 pcf

Density, Wet Final: 134.32 pcf

Back Pressure: 90 psi

Eff. Confining Pressure 6.9 psi

Saturation: 96 %

Specific Gravity: 2.72
(Assumed)

K $\frac{Q \times L \times Rt}{h \times A \times t}$
20°C

	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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email: rsa@rsageolab.com

K
20 Avg. cm/sec

1.867E-08

EM\NY-GL\PERMTEST\nsp1



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PERMEABILITY TEST BY TRIAXIAL CELL WITH BACK PRESSURE
Constant Head Method (ASTM D5084)

Client: Alliance Technical Group

Proj. No. 889

Tested by: SP

Project: OVEC - Kyger Creek

Date: 9/9/2025

Entered by: NC

Checked by: KH

Sample: NSP 2

Remarks: OMC, 95% MDD

Cell 2

Panel 4-2

Dimensions of Specimen :

	Length (Inches)		Diameter (Inches)
1.	4.169	1.	2.872
2.	4.170	2.	2.872
3.	4.172	3.	2.870
4.	4.169	4.	2.871
5.	4.169	5.	2.872

Weight of Specimen:

Initial Weight	<u>834.5</u> Grams
	<u>1.838</u> Lbs.
Final Weight	<u>887.1</u> Grams
	<u>1.954</u> Lbs.
Dry Weight	<u>0.0</u> Grams
	<u>0.000</u> Lbs.

Avg. 4.170 In
10.591 CM

Ave. 2.871 In
7.293 CM

Moisture Content:

Initial 0.00 %
Final 0.00 %

Area 6.476 In²
41.778 CM²

Volume 27.002 In³ 0.016 Cft.

Density, Wet Initial 117.73 pcf

Density, Dry 0.00 pcf

Density, Wet Final: 125.15 pcf

Back Pressure: 90 psi

Eff. Confining Pressure 6.9 psi

Saturation: 96 %

Specific Gravity: 2.72
(Assumed)

K $\frac{Q \times L \times Rt}{h \times A \times t}$
20°C

	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
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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K
20 Avg. cm/sec

1.681E-07



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PERMEABILITY TEST BY TRIAXIAL CELL WITH BACK PRESSURE
Constant Head Method (ASTM D5084)

Client: Alliance Technical Group

Proj. No. 889

Tested by: SP

Project: OVEC - Kyger Creek

Date: 9/9/2025

Entered by: NC

Checked by: KH

Sample: NSP3

Cell 5

Remarks: OMC, 95% MDD

Panel 5-3

Dimensions of Specimen :

	Length (Inches)		Diameter (Inches)
1.	4.121	1.	2.874
2.	4.123	2.	2.874
3.	4.124	3.	2.876
4.	4.124	4.	2.875
5.	4.122	5.	2.876

Weight of Specimen:

Initial Weight	<u>826.7</u> Grams
	<u>1.821</u> Lbs.
Final Weight	<u>858.2</u> Grams
	<u>1.890</u> Lbs.
Dry Weight	<u>713.2</u> Grams
	<u>1.571</u> Lbs.

Avg. 4.123 In
10.472 CM

Ave. 2.875 In
7.303 CM

Moisture Content:

Initial 15.92 %
Final 20.33 %

Area 6.492 In²
41.883 CM²

Volume 26.764 In³ 0.015 Cft.

Density, Wet Initial 117.67 pcf

Density, Dry 101.51 pcf

Density, Wet Final: 122.15 pcf

Back Pressure: 90 psi

Eff. Confining Pressure 6.9 psi

Saturation: 96 %

Specific Gravity: 2.72
(Assumed)

K $\frac{Q \times L \times Rt}{h \times A \times t}$
20°C

	Trial 1	Trial 2	Trial 3	Trial 4
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
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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EM\NY-GL\PERMTEST\sp3

K
20 Avg. cm/sec

6.707E-08



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PERMEABILITY TEST BY TRIAXIAL CELL WITH BACK PRESSURE

Constant Head Method (ASTM D5084)

Client: Alliance Technical Group

Proj. No. 889

Tested by: SP

Project: OVEC - Kyger Creek

Date: 9/9/2025

Entered by: NC

Checked by: KH

Sample: NSP4

Cell 14

Remarks: OMC, 95% MDD

Panel 5-1

Dimensions of Specimen :

	Length (Inches)		Diameter (Inches)
1.	4.091	1.	2.874
2.	4.092	2.	2.873
3.	4.089	3.	2.872
4.	4.090	4.	2.873
5.	4.091	5.	2.873

Weight of Specimen:

Initial Weight	<u>853.6</u> Grams
	<u>1.880</u> Lbs.
Final Weight	<u>871.2</u> Grams
	<u>1.919</u> Lbs.
Dry Weight	<u>708.9</u> Grams
	<u>1.561</u> Lbs.

Avg. 4.091 In
10.390 CM

Ave. 2.873 In
7.297 CM

Moisture Content:

Initial 20.41 %

Final 22.90 %

Area 6.483 In²
41.824 CM²

Volume 26.518 In³ 0.015 Cft.

Density, Wet Initial 122.63 pcf

Density, Dry 101.84 pcf

Density, Wet Final: 125.16 pcf

Back Pressure: 90 psi

Eff. Confining Pressure 6.9 psi

Saturation: 96 %

Specific Gravity: 2.72
(Assumed)

K $\frac{Q \times L \times Rt}{h \times A \times t}$
20°C

	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
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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K
20 Avg. cm/sec

6.655E-08



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PERMEABILITY TEST BY TRIAXIAL CELL WITH BACK PRESSURE

Constant Head Method (ASTM D5084)

Client: Alliance Technical Group

Proj. No. 889

Tested by: SP

Project: OVEC - Kyger Creek

Date: 9/9/2025

Entered by: NC

Checked by: KH

Sample: NSP5

Cell 16

Remarks: OMC, 95% MDD

Panel 5-2

Dimensions of Specimen :

	Length (Inches)		Diameter (Inches)
1.	4.139	1.	2.874
2.	4.141	2.	2.873
3.	4.140	3.	2.875
4.	4.141	4.	2.873
5.	4.139	5.	2.873

Weight of Specimen:

Initial Weight	<u>889.6</u> Grams
	<u>1.960</u> Lbs.
Final Weight	<u>956.4</u> Grams
	<u>2.106</u> Lbs.
Dry Weight	<u>800.6</u> Grams
	<u>1.763</u> Lbs.

Avg. 4.140 In
10.516 CM

Ave. 2.874 In
7.299 CM

Moisture Content:

Initial 11.13 %

Final 19.46 %

Area 6.485 In²
41.842 CM²

Volume 26.850 In³ 0.016 Cft.

Density, Wet Initial 126.22 pcf

Density, Dry 113.59 pcf

Density, Wet Final: 135.69 pcf

Back Pressure: 90 psi

Eff. Confining Pressure 6.9 psi

Saturation: 96 %

Specific Gravity: 2.72
(Assumed)

K $\frac{Q \times L \times Rt}{h \times A \times t}$
20°C

	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
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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EM\NY-GL\PERMTEST\sp5

K
20 Avg. cm/sec

7.039E-08



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PERMEABILITY TEST BY TRIAXIAL CELL WITH BACK PRESSURE
Constant Head Method (ASTM D5084)

Client: Alliance Technical Group

Proj. No. 889

Tested by: SP

Project: OVEC - Kyger Creek

Date: 9/9/2025

Entered by: NC

Checked by: KH

Sample: SFAP 1

Cell 14

Remarks: OMC, 95% MDD

Panel 4-2

Dimensions of Specimen :

	Length (Inches)		Diameter (Inches)
1.	4.062	1.	2.873
2.	4.060	2.	2.875
3.	4.061	3.	2.872
4.	4.063	4.	2.874
5.	4.064	5.	2.871

Weight of Specimen:

Initial Weight	<u>676.4</u> Grams
	<u>1.490</u> Lbs.
Final Weight	<u>709.4</u> Grams
	<u>1.563</u> Lbs.
Dry Weight	<u>491.7</u> Grams
	<u>1.083</u> Lbs.

Avg. 4.062 In
10.317 CM

Ave. 2.873 In
7.297 CM

Moisture Content:

Initial 37.54 %
Final 44.27 %

Area 6.483 In²
41.824 CM²

41.824 CM²

Volume 26.333 In³ 0.015 Cft.

Density, Wet Initial 97.85 pcf

Density, Dry 71.14 pcf

Density, Wet Final: 102.63 pcf

Back Pressure: 90 psi

Eff. Confining Pressure 6.9 psi

Saturation: 96 %

Specific Gravity: 2.72
(Assumed)

K $\frac{Q \times L \times Rt}{h \times A \times t}$
20°C

	Trial 1	Trial 2	Trial 3	Trial 4
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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EM\NY-GL\PERMTEST\sfp1

K
20 Avg. cm/sec

4.776E-06



ENTACT

Q2850, Q2851, Q2852

NO. 1 OF 1

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