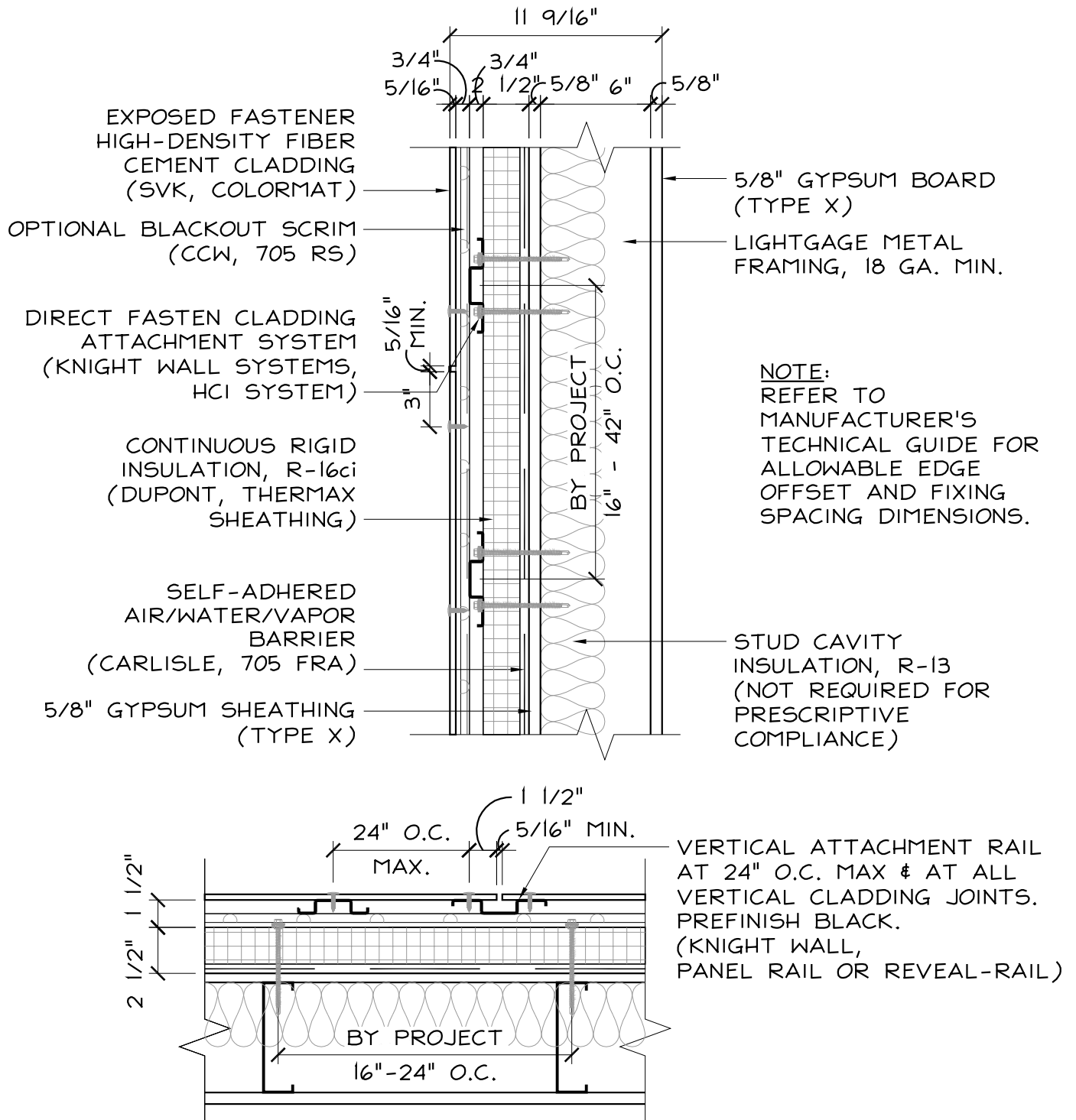




CODE = R-13 + R-10ci | U-0.055

BASE = R-16ci | U-0.054*

OPTIMIZED = R-16ci + R-13 | U-0.042*



FIBER CEMENT CLADDING w/ METAL STUD

SCALE: 1 1/2" = 1'-0"

PACE

BUILDING ENVELOPE REPRESENTATIVES

One Rockdale Street | Braintree, MA 02184
781-541-5060 | www.pacerepresentatives.com

FIBER CEMENT CLADDING SYSTEM w/ THERMALLY
BROKEN RAINSCREEN ATTCHMENT SYSTEM, RIGID
CONTINUOUS INSULATION & METAL STUD BACK-UP
(IECC 2021 - CLIMATE ZONE 5)

Sketch #:

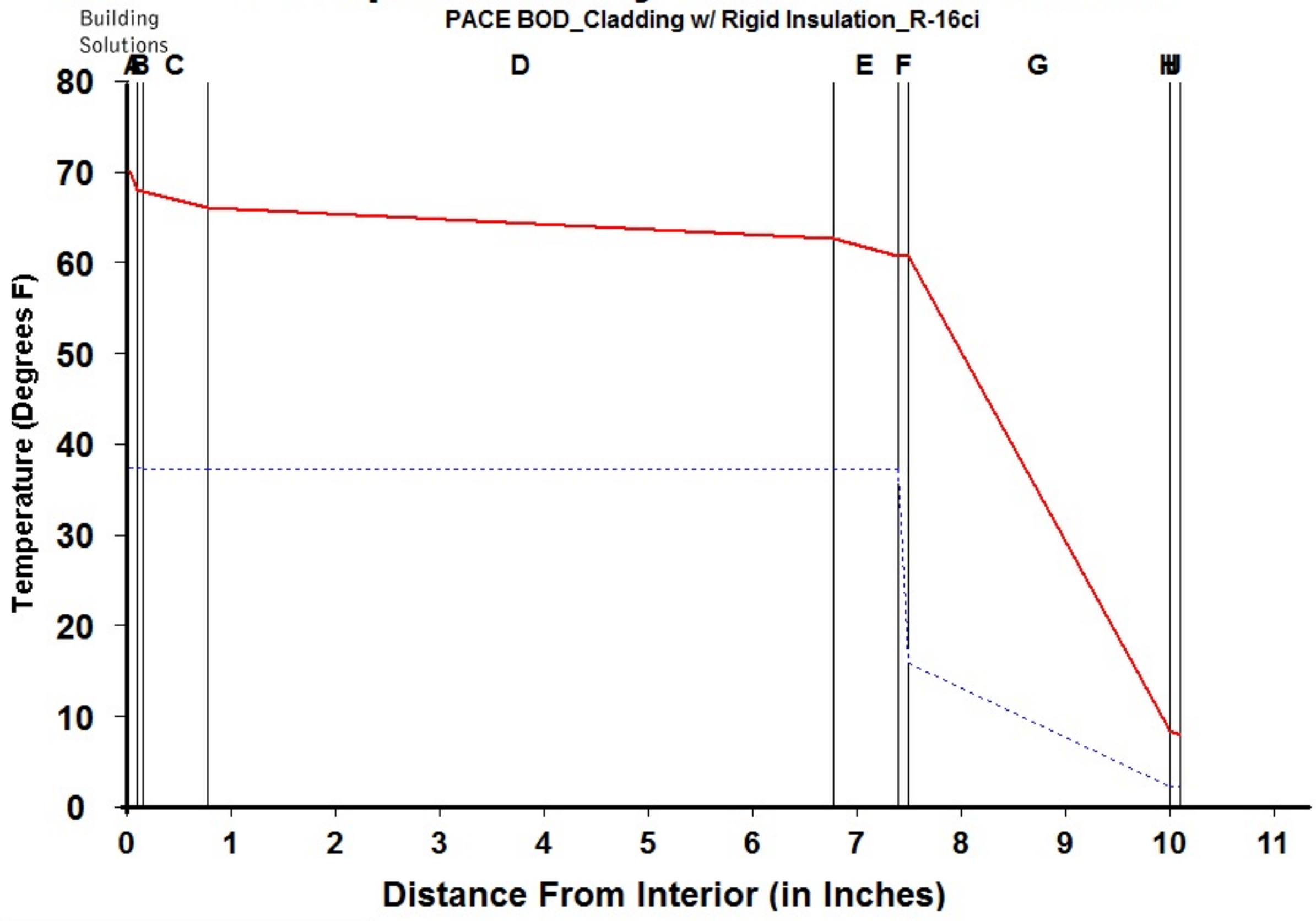
SK-01

Sheet: 1 of 1



Dewpoint Analysis - Dow Chemical

PACE BOD_Cladding w/ Rigid Insulation_R-16ci



Legend	
—	Actual Temperature
- - - -	Dewpoint Temperature

Dewpoint Theory predicts condensation in a system at any point where the actual and dewpoint temperature lines cross.

Conditions:		
	Interior	Exterior
Temperature	70.0	7.7
Humidity	30.0	75.0

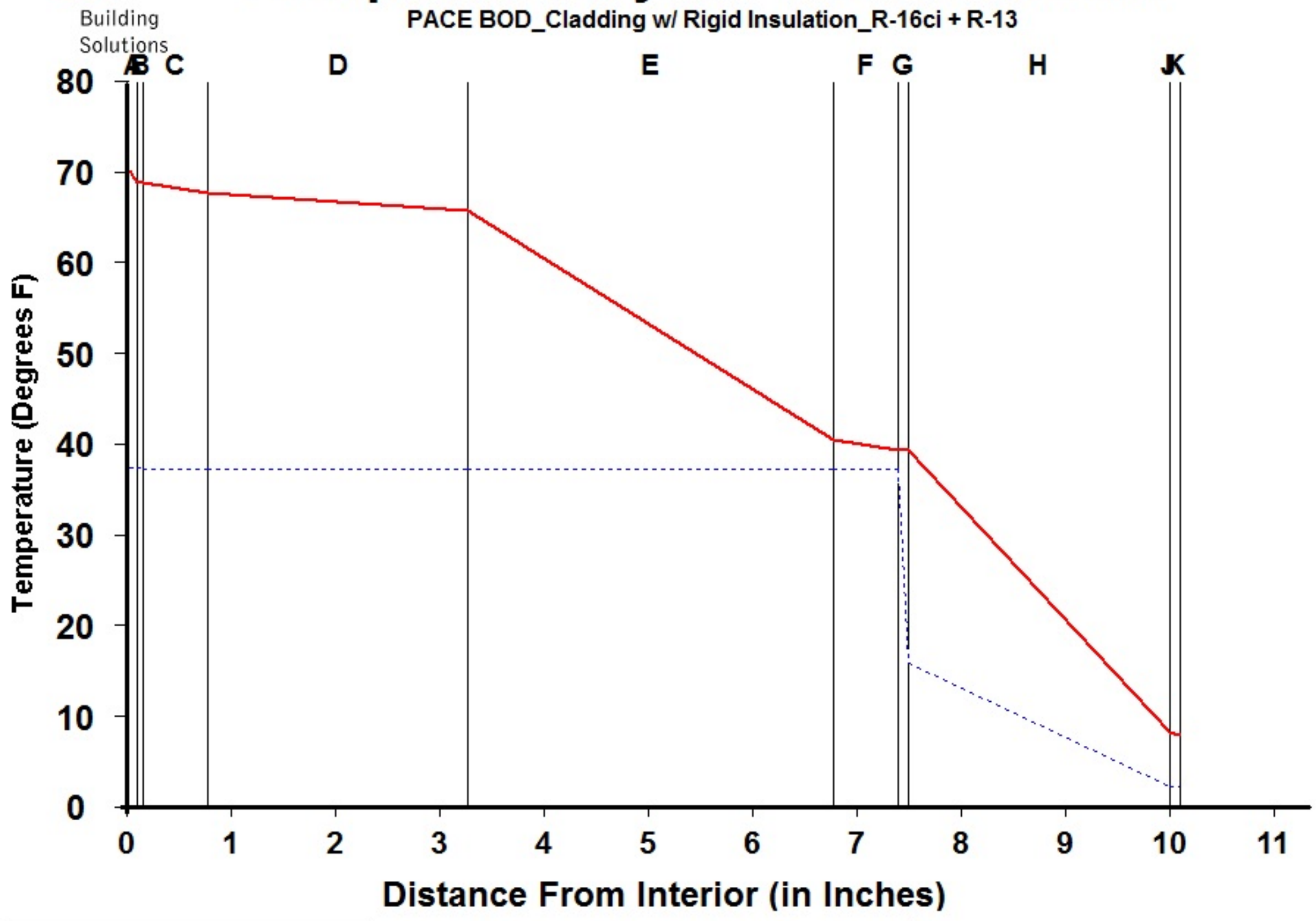
Component Name	Thickness	R-Value	Rep
A Interior Air Film	0.100	0.68	0.001
B Latex Paint 2 Coat	0.050	0.01	0.500
C Gypsum Board	0.625	0.56	0.023
D Wall Air Space NonRefl	6.000	1.05	0.006
E Gypsum Sheathing	0.625	0.56	0.027
F CCW 705FRA	0.100	0.01	100.000
G DuPont Thermax Sheathing	2.500	16.00	30.000
H Wall Air Space NonRefl	0.000	0.00	0.000
I Ventilated Cladding	0.000	0.00	0.000
J Out Air Film Winter	0.100	0.17	0.001
TOTAL	10.100	19.04	130.558

Interface	Temperature Actual	Temperature Dewpnt	Accum (oz/day-sqft)
-A	70.00	37.17	0.000
AB	67.78	37.17	0.000
BC	67.74	37.09	0.000
CD	65.91	37.08	0.000
DE	62.47	37.08	0.000
EF	60.64	37.08	0.000
FG	60.61	15.67	0.000
GH	8.26	2.08	0.000
HI	8.26	2.08	0.000
IJ	8.26	2.08	0.000
JK	7.70	2.08	0.000
KL			
L-			



Dewpoint Analysis - Dow Chemical

PACE BOD_Cladding w/ Rigid Insulation_R-16ci + R-13



Legend

- Actual Temperature
- - - Dewpoint Temperature

Dewpoint Theory predicts condensation in a system at any point where the actual and dewpoint temperature lines cross.

Conditions:

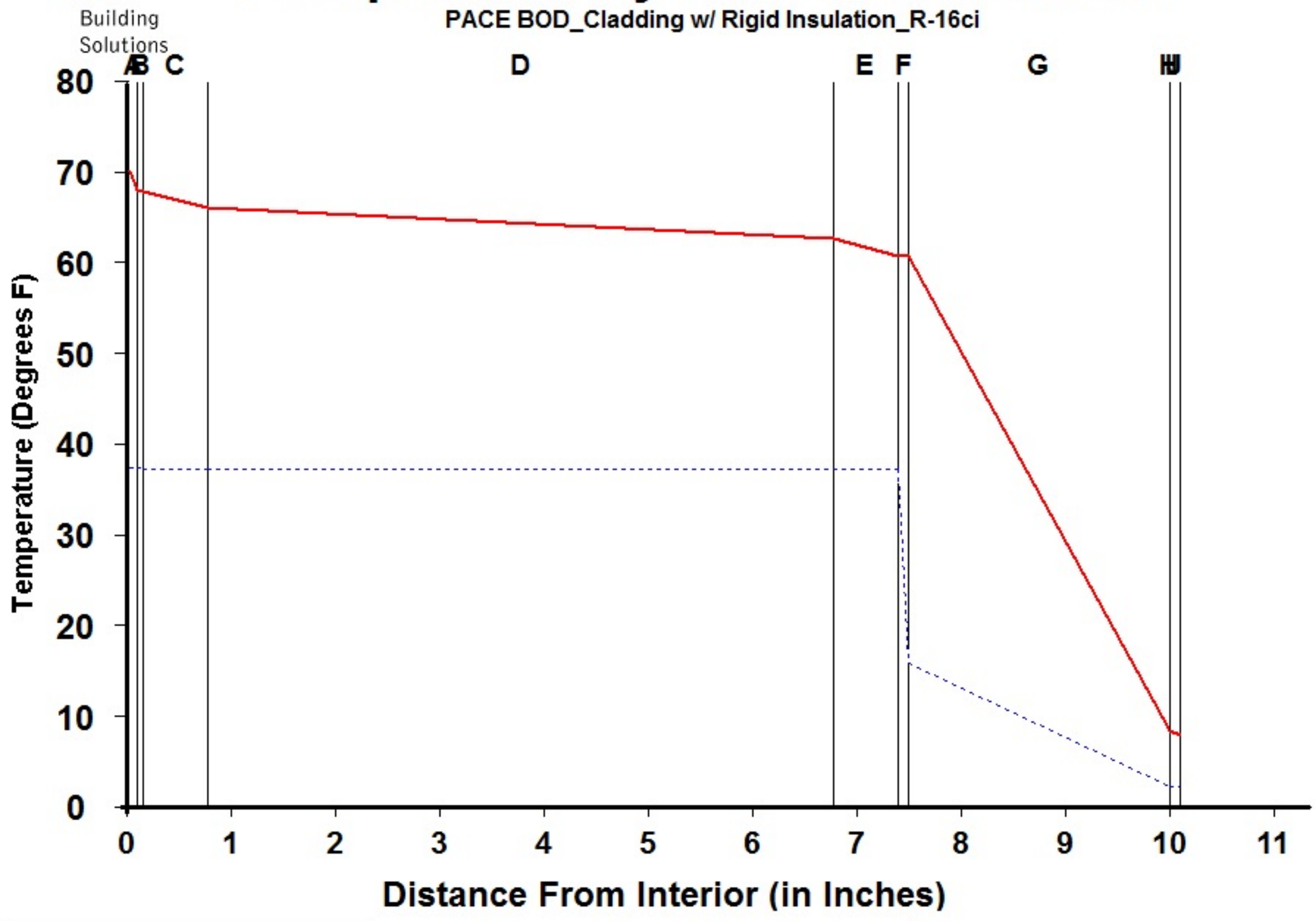
	Interior	Exterior
Temperature	70.0	7.7
Humidity	30.0	75.0

Component Name	Thickness	R-Value	Rep	Interface	Temperature Actual	Temperature Dewpnt	Accum (oz/day-sqft)
A Interior Air Film	0.100	0.68	0.001	-A	70.00	37.17	0.000
B Latex Paint 2 Coat	0.050	0.01	0.500	AB	68.68	37.17	0.000
C Gypsum Board	0.625	0.56	0.023	BC	68.66	37.09	0.000
D Wall Air Space NonRefl	2.500	1.01	0.006	CD	67.57	37.08	0.000
E Batt Insulation	3.500	13.00	0.010	DE	65.60	37.08	0.000
F Gypsum Sheathing	0.625	0.56	0.027	EF	40.29	37.08	0.000
G CCW 705FRA	0.100	0.01	100.000	FG	39.20	37.08	0.000
H DuPont Thermax Sheathing	2.500	16.00	30.000	GH	39.18	15.67	0.000
I Wall Air Space NonRefl	0.000	0.00	0.000	HI	8.03	2.08	0.000
J Ventilated Cladding	0.000	0.00	0.000	IJ	8.03	2.08	0.000
K Out Air Film Winter	0.100	0.17	0.001	JK	8.03	2.08	0.000
L				KL	7.70	2.08	0.000
TOTAL	10.100	32.00	130.568	L-			



Dewpoint Analysis - Dow Chemical

PACE BOD_Cladding w/ Rigid Insulation_R-16ci



Legend	
—	Actual Temperature
- - - -	Dewpoint Temperature

Dewpoint Theory predicts condensation in a system at any point where the actual and dewpoint temperature lines cross.

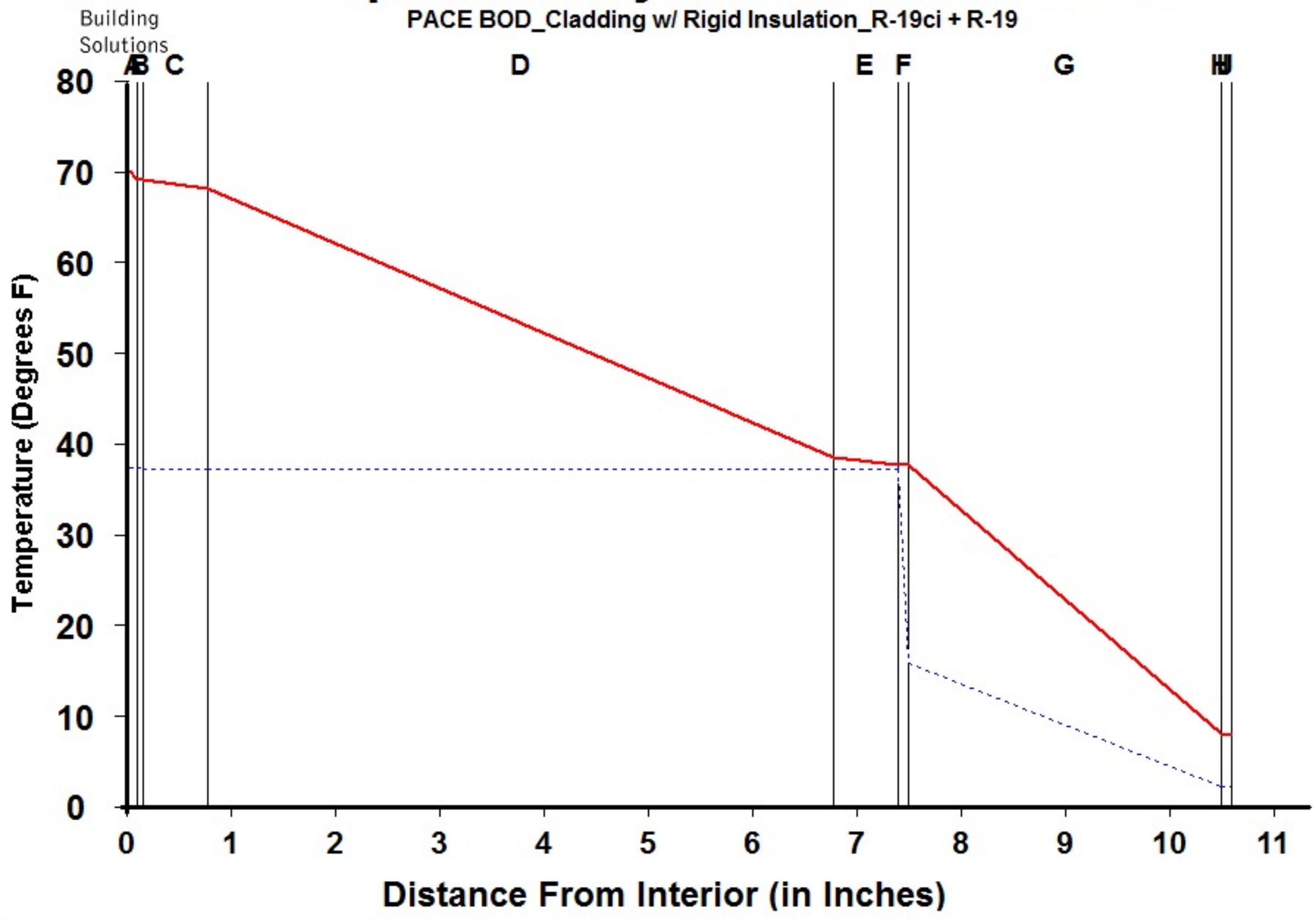
Conditions:		
	Interior	Exterior
Temperature	70.0	7.7
Humidity	30.0	75.0

Component Name	Thickness	R-Value	Rep	Interface	Temperature Actual	Temperature Dewpnt	Accum (oz/day-sqft)
A Interior Air Film	0.100	0.68	0.001	-A	70.00	37.17	0.000
B Latex Paint 2 Coat	0.050	0.01	0.500	AB	67.78	37.17	0.000
C Gypsum Board	0.625	0.56	0.023	BC	67.74	37.09	0.000
D Wall Air Space NonRefl	6.000	1.05	0.006	CD	65.91	37.08	0.000
E Gypsum Sheathing	0.625	0.56	0.027	DE	62.47	37.08	0.000
F CCW 705FRA	0.100	0.01	100.000	EF	60.64	37.08	0.000
G DuPont Thermax Sheathing	2.500	16.00	30.000	FG	60.61	15.67	0.000
H Wall Air Space NonRefl	0.000	0.00	0.000	GH	8.26	2.08	0.000
I Ventilated Cladding	0.000	0.00	0.000	HI	8.26	2.08	0.000
J Out Air Film Winter	0.100	0.17	0.001	IJ	8.26	2.08	0.000
K				JK	7.70	2.08	0.000
L				KL			
TOTAL	10.100	19.04	130.558	L-			



Dewpoint Analysis - Dow Chemical

PACE BOD_Cladding w/ Rigid Insulation_R-19ci + R-19



Legend	
—	Actual Temperature
- - -	Dewpoint Temperature

Dewpoint Theory predicts condensation in a system at any point where the actual and dewpoint temperature lines cross.

Conditions:		
	Interior	Exterior
Temperature	70.0	7.7
Humidity	30.0	75.0

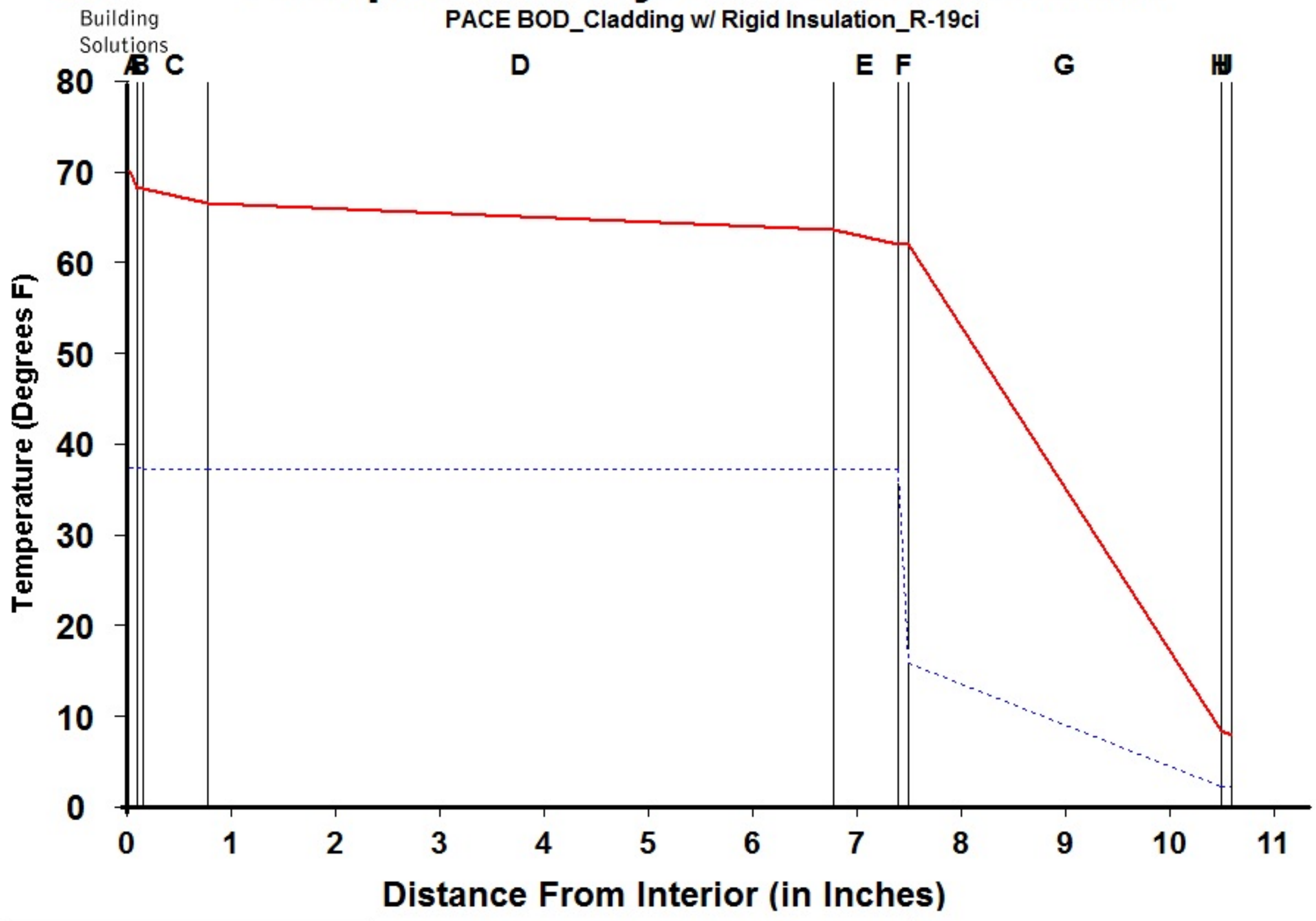
Component Name	Thickness	R-Value	Rep
A Interior Air Film	0.100	0.68	0.001
B Latex Paint 2 Coat	0.050	0.01	0.500
C Gypsum Board	0.625	0.56	0.023
D Batt Insulation	6.000	19.00	0.010
E Gypsum Sheathing	0.625	0.56	0.027
F CCW 705FRA	0.100	0.01	100.000
G DuPont Thermax Sheathing	3.000	19.00	30.000
H Wall Air Space NonRefl	0.000	0.00	0.000
I Ventilated Cladding	0.000	0.00	0.000
J Out Air Film Winter	0.100	0.17	0.001
TOTAL	10.600	39.99	130.562

Interface	Temperature Actual	Temperature Dewpnt	Accum (oz/day-sqft)
-A	70.00	37.17	0.000
AB	68.94	37.17	0.000
BC	68.93	37.09	0.000
CD	68.05	37.08	0.000
DE	38.45	37.08	0.000
EF	37.58	37.08	0.000
FG	37.56	15.67	0.000
GH	7.96	2.08	0.000
HI	7.96	2.08	0.000
IJ	7.96	2.08	0.000
JK	7.70	2.08	0.000
KL			
L-			



Dewpoint Analysis - Dow Chemical

PACE BOD_Cladding w/ Rigid Insulation_R-19ci



Legend

- Actual Temperature
- - - Dewpoint Temperature

Dewpoint Theory predicts condensation in a system at any point where the actual and dewpoint temperature lines cross.

Conditions:

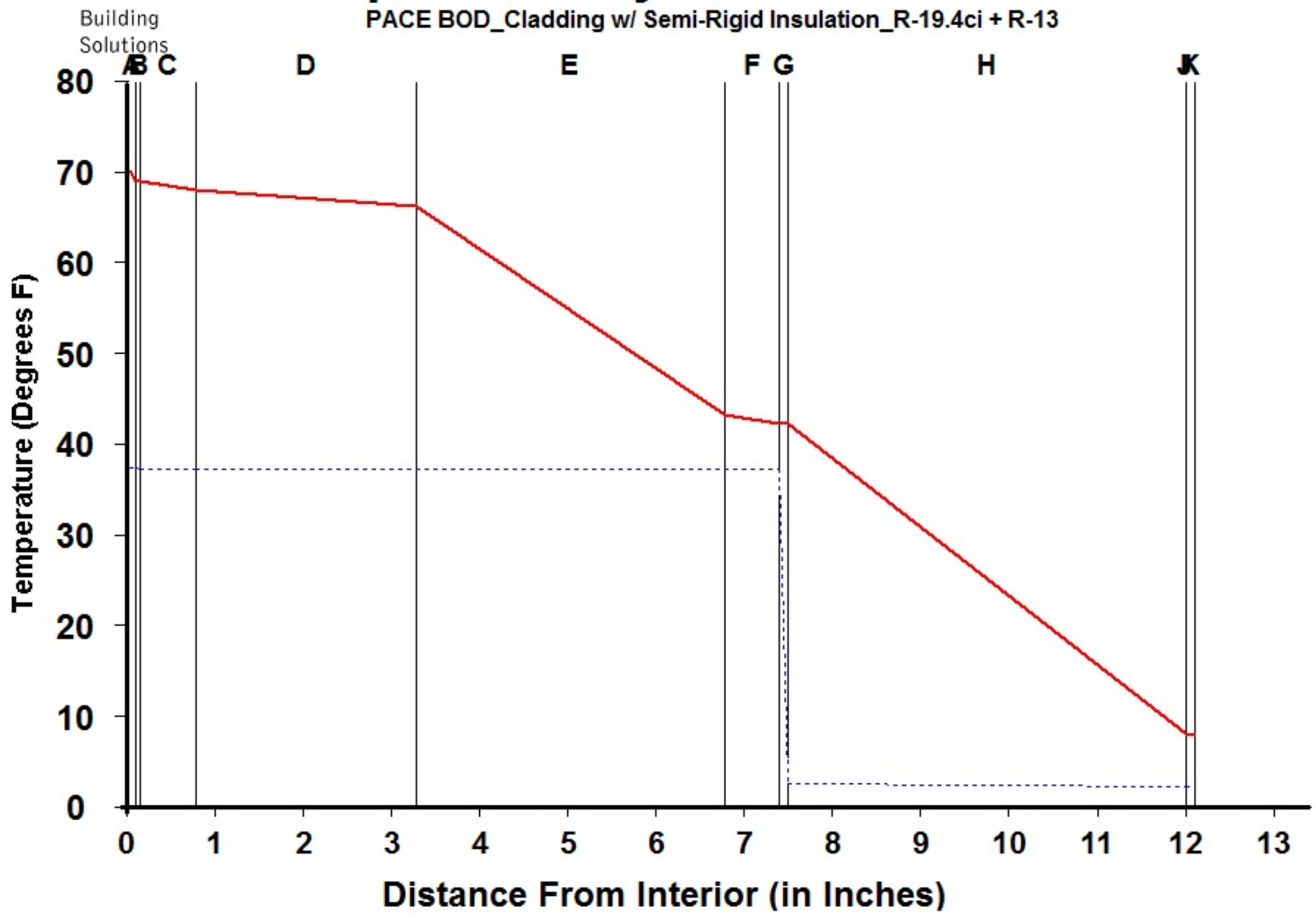
	Interior	Exterior
Temperature	70.0	7.7
Humidity	30.0	75.0

Component Name	Thickness	R-Value	Rep	Interface	Temperature Actual	Temperature Dewpnt	Accum (oz/day-sqft)
A Interior Air Film	0.100	0.68	0.001	-A	70.00	37.17	0.000
B Latex Paint 2 Coat	0.050	0.01	0.500	AB	68.08	37.17	0.000
C Gypsum Board	0.625	0.56	0.023	BC	68.05	37.09	0.000
D Wall Air Space NonRefl	6.000	1.05	0.006	CD	66.47	37.08	0.000
E Gypsum Sheathing	0.625	0.56	0.027	DE	63.50	37.08	0.000
F CCW 705FRA	0.100	0.01	100.000	EF	61.92	37.08	0.000
G DuPont Thermax Sheathing	3.000	19.00	30.000	FG	61.89	15.67	0.000
H Wall Air Space NonRefl	0.000	0.00	0.000	GH	8.18	2.08	0.000
I Ventilated Cladding	0.000	0.00	0.000	HI	8.18	2.08	0.000
J Out Air Film Winter	0.100	0.17	0.001	IJ	8.18	2.08	0.000
K				JK	7.70	2.08	0.000
L				KL			
TOTAL	10.600	22.04	130.558	L-			



Dewpoint Analysis - Dow Chemical

PACE BOD_Cladding w/ Semi-Rigid Insulation_R-19.4ci + R-13



Legend	
—	Actual Temperature
- - - -	Dewpoint Temperature

Dewpoint Theory predicts condensation in a system at any point where the actual and dewpoint temperature lines cross.

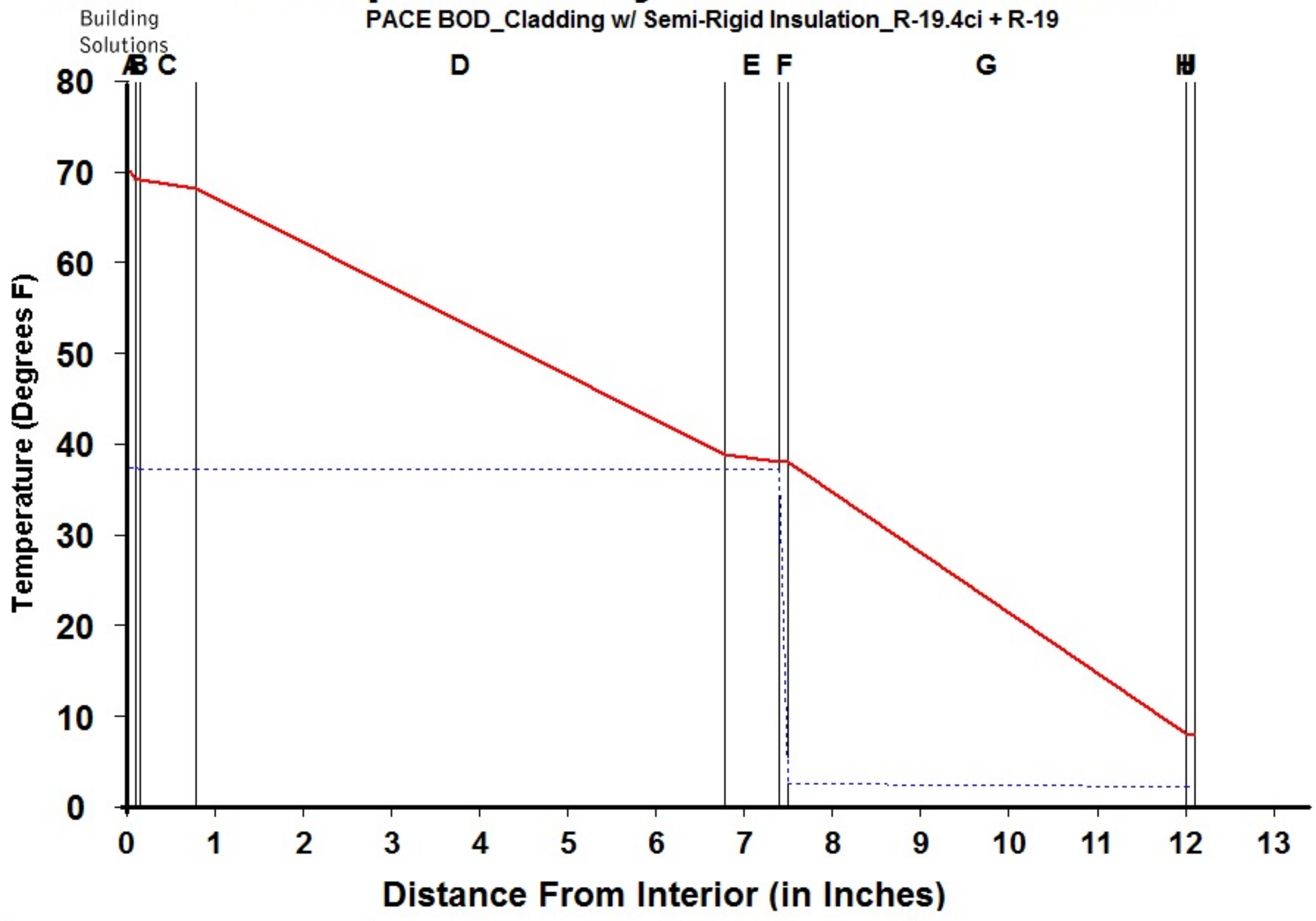
Conditions:		
	Interior	Exterior
Temperature	70.0	7.7
Humidity	30.0	75.0

Component Name	Thickness	R-Value	Rep	Interface	Temperature Actual	Temperature Dewpnt	Accum (oz/day-sqft)
A Interior Air Film	0.100	0.68	0.001	-A	70.00	37.17	0.000
B Latex Paint 2 Coat	0.050	0.01	0.500	AB	68.80	37.17	0.000
C Gypsum Board	0.625	0.56	0.023	BC	68.78	37.06	0.000
D Wall Air Space NonRefl	2.500	1.01	0.006	CD	67.80	37.06	0.000
E Batt Insulation	3.500	13.00	0.010	DE	66.02	37.06	0.000
F Gypsum Sheathing	0.625	0.56	0.027	EF	43.11	37.05	0.000
G CCW 705FRA	0.100	0.01	100.000	FG	42.12	37.05	0.000
H Mineral Wool (semi-rigid)	4.500	19.35	0.450	GH	42.10	2.44	0.000
I Wall Air Space NonRefl	0.000	0.00	0.000	HI	8.00	2.08	0.000
J Ventilated Cladding	0.000	0.00	0.000	IJ	8.00	2.08	0.000
K Out Air Film Winter	0.100	0.17	0.001	JK	8.00	2.08	0.000
L				KL	7.70	2.08	0.000
TOTAL	12.100	35.35	101.018	L-			



Dewpoint Analysis - Dow Chemical

PACE BOD_Cladding w/ Semi-Rigid Insulation_R-19.4ci + R-19



Legend	
—	Actual Temperature
- - - -	Dewpoint Temperature

Dewpoint Theory predicts condensation in a system at any point where the actual and dewpoint temperature lines cross.

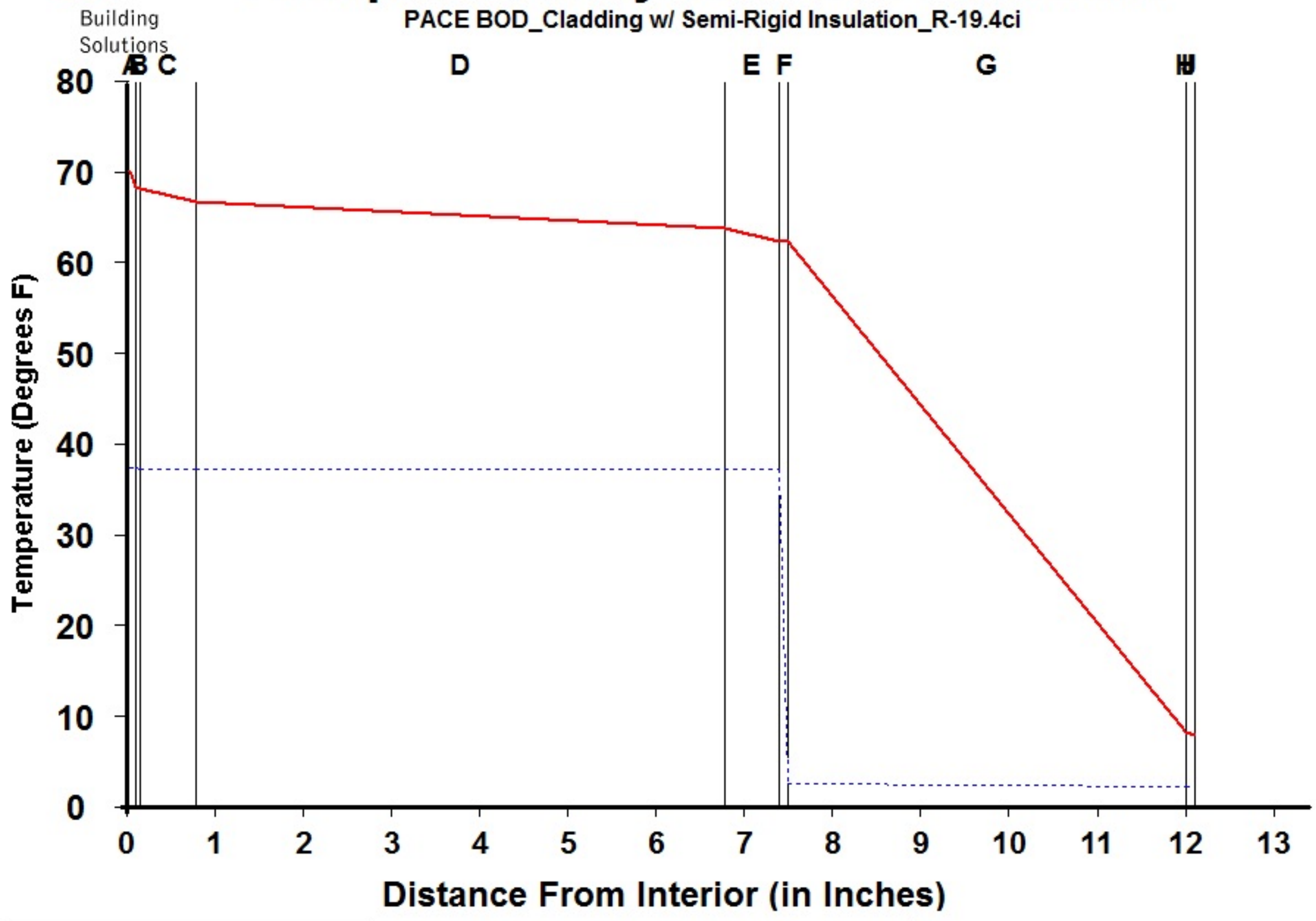
Conditions:		
	Interior	Exterior
Temperature	70.0	7.7
Humidity	30.0	75.0

Component Name	Thickness	R-Value	Rep	Interface	Temperature Actual	Temperature Dewpnt	Accum (oz/day-sqft)
A Interior Air Film	0.100	0.68	0.001	-A	70.00	37.17	0.000
B Latex Paint 2 Coat	0.050	0.01	0.500	AB	68.95	37.17	0.000
C Gypsum Board	0.625	0.56	0.023	BC	68.93	37.06	0.000
D Batt Insulation	6.000	19.00	0.010	CD	68.07	37.06	0.000
E Gypsum Sheathing	0.625	0.56	0.027	DE	38.73	37.06	0.000
F CCW 705FRA	0.100	0.01	100.000	EF	37.86	37.05	0.000
G Mineral Wool (semi-rigid)	4.500	19.35	0.450	FG	37.85	2.44	0.000
H Wall Air Space NonRefl	0.000	0.00	0.000	GH	7.96	2.08	0.000
I Ventilated Cladding	0.000	0.00	0.000	HI	7.96	2.08	0.000
J Out Air Film Winter	0.100	0.17	0.001	IJ	7.96	2.08	0.000
K				JK	7.70	2.08	0.000
L				KL			
TOTAL	12.100	40.34	101.012	L-			



Dewpoint Analysis - Dow Chemical

PACE BOD_Cladding w/ Semi-Rigid Insulation_R-19.4ci



Legend	
—	Actual Temperature
- - - -	Dewpoint Temperature

Dewpoint Theory predicts condensation in a system at any point where the actual and dewpoint temperature lines cross.

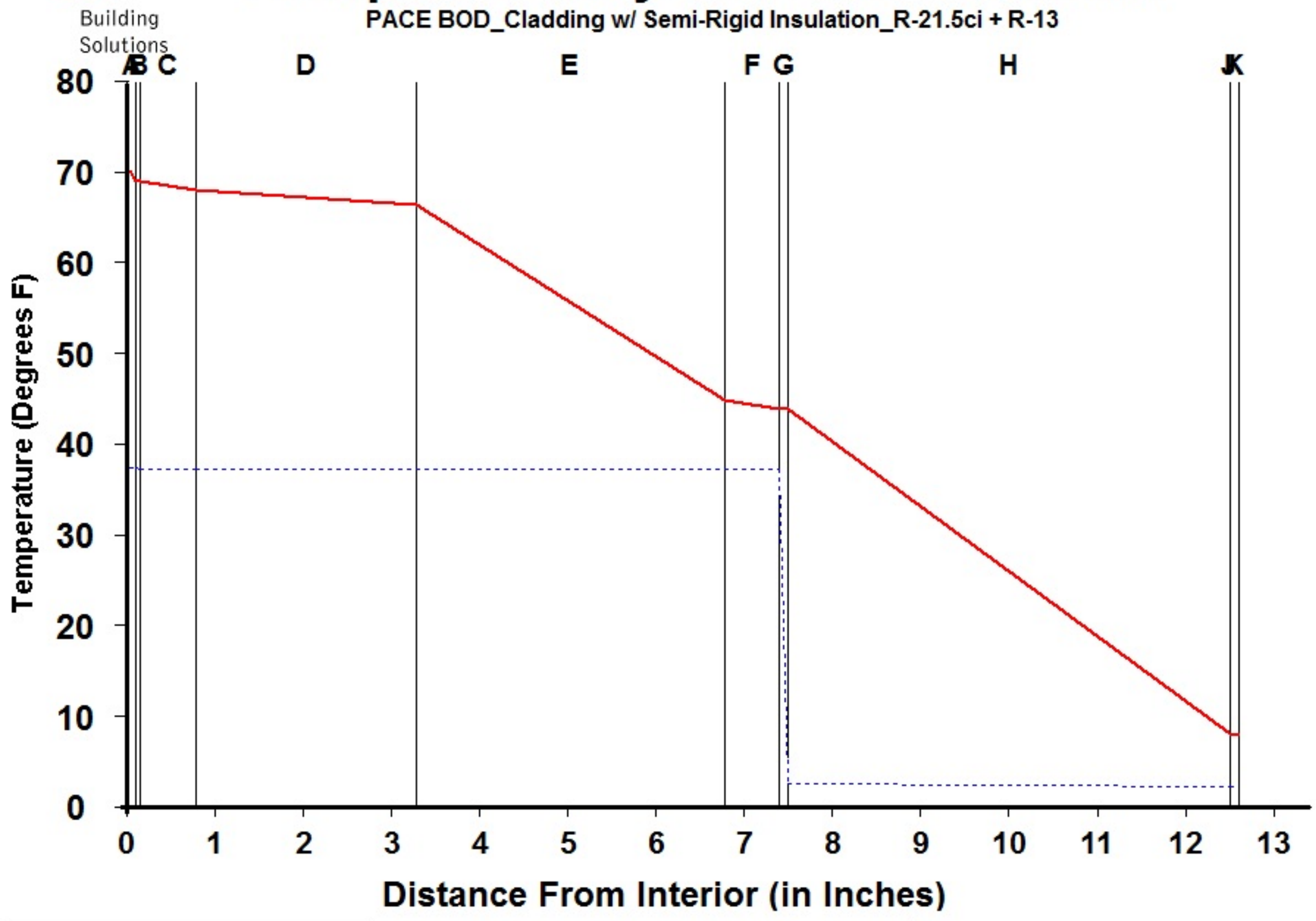
Conditions:		
	Interior	Exterior
Temperature	70.0	7.7
Humidity	30.0	75.0

Component Name	Thickness	R-Value	Rep	Interface	Temperature Actual	Temperature Dewpnt	Accum (oz/day-sqft)
A Interior Air Film	0.100	0.68	0.001	-A	70.00	37.17	0.000
B Latex Paint 2 Coat	0.050	0.01	0.500	AB	68.10	37.17	0.000
C Gypsum Board	0.625	0.56	0.023	BC	68.08	37.06	0.000
D Wall Air Space NonRefl	6.000	1.01	0.006	CD	66.52	37.06	0.000
E Gypsum Sheathing	0.625	0.56	0.027	DE	63.70	37.06	0.000
F CCW 705FRA	0.100	0.01	100.000	EF	62.14	37.05	0.000
G Mineral Wool (semi-rigid)	4.500	19.35	0.450	FG	62.11	2.44	0.000
H Wall Air Space NonRefl	0.000	0.00	0.000	GH	8.17	2.08	0.000
I Ventilated Cladding	0.000	0.00	0.000	HI	8.17	2.08	0.000
J Out Air Film Winter	0.100	0.17	0.001	IJ	8.17	2.08	0.000
K				JK	7.70	2.08	0.000
L				KL			
TOTAL	12.100	22.35	101.008	L-			



Dewpoint Analysis - Dow Chemical

PACE BOD_Cladding w/ Semi-Rigid Insulation_R-21.5ci + R-13



Legend

- Actual Temperature
- - - Dewpoint Temperature

Dewpoint Theory predicts condensation in a system at any point where the actual and dewpoint temperature lines cross.

Conditions:

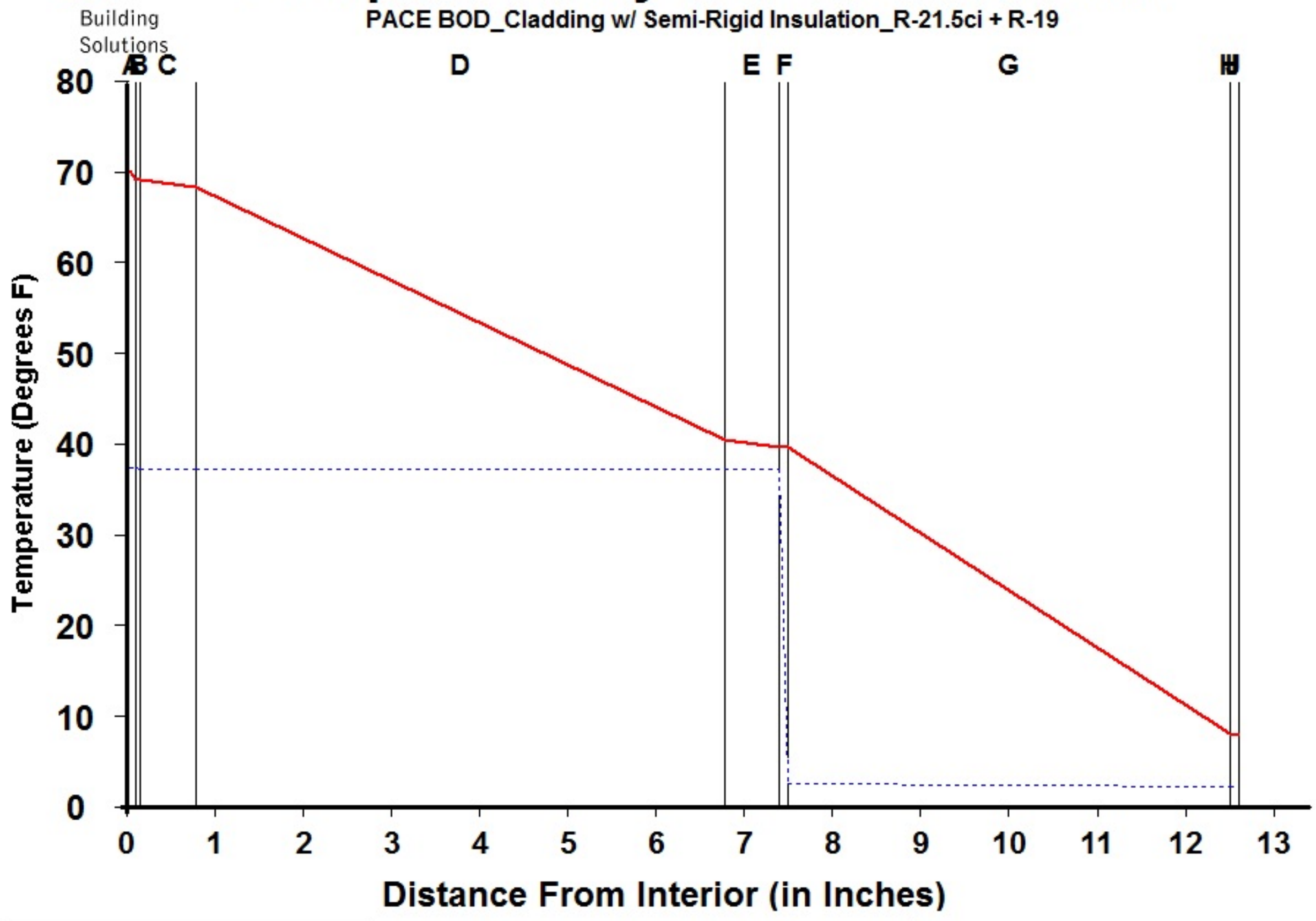
	Interior	Exterior
Temperature	70.0	7.7
Humidity	30.0	75.0

Component Name	Thickness	R-Value	Rep	Interface	Temperature Actual	Temperature Dewpnt	Accum (oz/day-sqft)
A Interior Air Film	0.100	0.68	0.001	-A	70.00	37.17	0.000
B Latex Paint 2 Coat	0.050	0.01	0.500	AB	68.87	37.17	0.000
C Gypsum Board	0.625	0.56	0.023	BC	68.85	37.06	0.000
D Wall Air Space NonRefl	2.500	1.01	0.006	CD	67.92	37.06	0.000
E Batt Insulation	3.500	13.00	0.010	DE	66.25	37.06	0.000
F Gypsum Sheathing	0.625	0.56	0.027	EF	44.65	37.05	0.000
G CCW 705FRA	0.100	0.01	100.000	FG	43.72	37.05	0.000
H Mineral Wool (semi-rigid)	5.000	21.50	0.450	GH	43.70	2.44	0.000
I Wall Air Space NonRefl	0.000	0.00	0.000	HI	7.98	2.08	0.000
J Ventilated Cladding	0.000	0.00	0.000	IJ	7.98	2.08	0.000
K Out Air Film Winter	0.100	0.17	0.001	JK	7.98	2.08	0.000
L				KL	7.70	2.08	0.000
TOTAL	12.600	37.50	101.018	L-			



Dewpoint Analysis - Dow Chemical

PACE BOD_Cladding w/ Semi-Rigid Insulation_R-21.5ci + R-19



Legend	
—	Actual Temperature
- - - -	Dewpoint Temperature

Dewpoint Theory predicts condensation in a system at any point where the actual and dewpoint temperature lines cross.

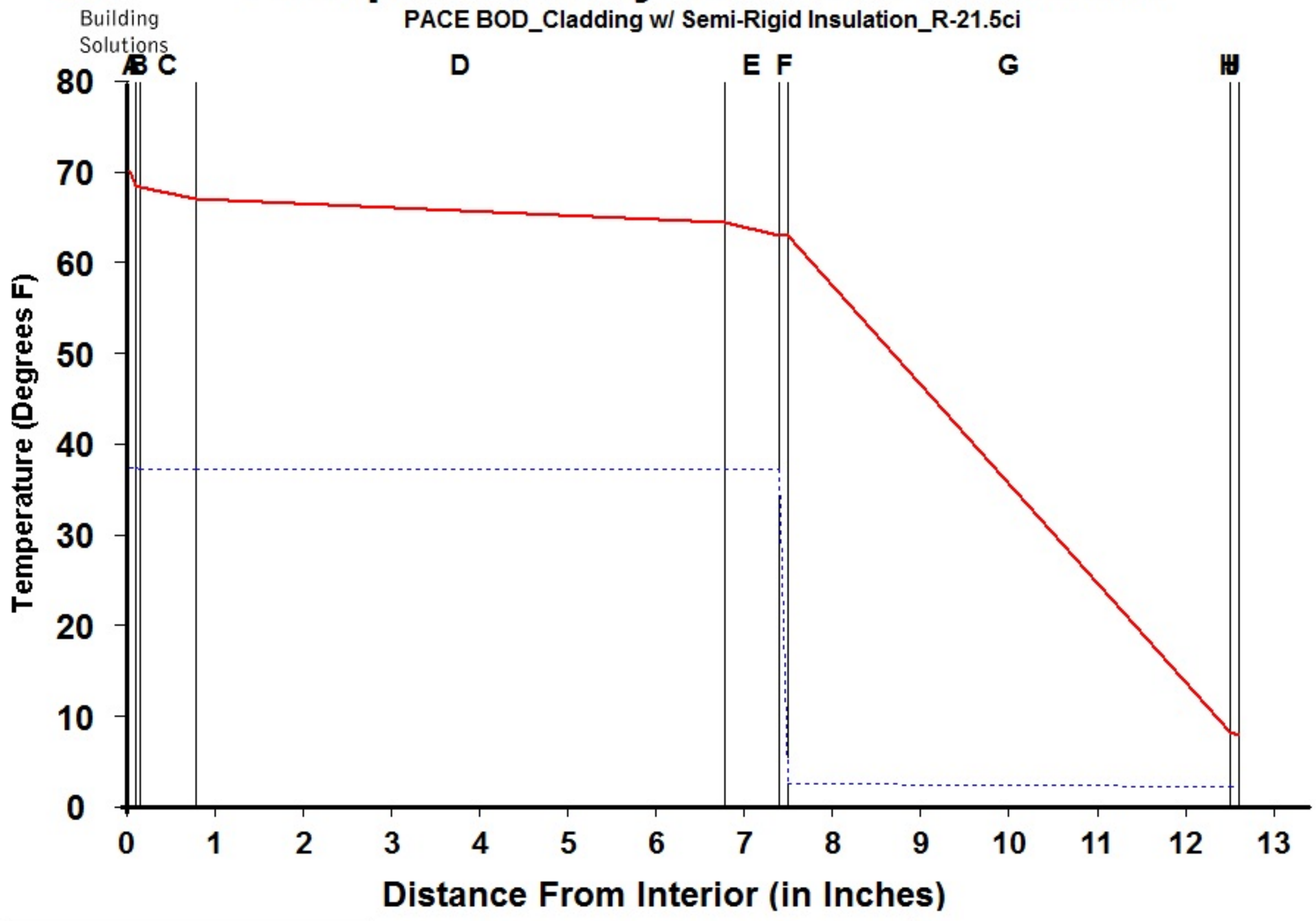
Conditions:		
	Interior	Exterior
Temperature	70.0	7.7
Humidity	30.0	75.0

Component Name	Thickness	R-Value	Rep	Interface	Temperature Actual	Temperature Dewpnt	Accum (oz/day-sqft)
A Interior Air Film	0.100	0.68	0.001	-A	70.00	37.17	0.000
B Latex Paint 2 Coat	0.050	0.01	0.500	AB	69.00	37.17	0.000
C Gypsum Board	0.625	0.56	0.023	BC	68.99	37.06	0.000
D Batt Insulation	6.000	19.00	0.010	CD	68.17	37.06	0.000
E Gypsum Sheathing	0.625	0.56	0.027	DE	40.31	37.06	0.000
F CCW 705FRA	0.100	0.01	100.000	EF	39.49	37.05	0.000
G Mineral Wool (semi-rigid)	5.000	21.50	0.450	FG	39.47	2.44	0.000
H Wall Air Space NonRefl	0.000	0.00	0.000	GH	7.95	2.08	0.000
I Ventilated Cladding	0.000	0.00	0.000	HI	7.95	2.08	0.000
J Out Air Film Winter	0.100	0.17	0.001	IJ	7.95	2.08	0.000
K				JK	7.70	2.08	0.000
L				KL			
TOTAL	12.600	42.49	101.012	L-			



Dewpoint Analysis - Dow Chemical

PACE BOD_Cladding w/ Semi-Rigid Insulation_R-21.5ci



Legend	
—	Actual Temperature
- - - -	Dewpoint Temperature

Dewpoint Theory predicts condensation in a system at any point where the actual and dewpoint temperature lines cross.

Conditions:		
	Interior	Exterior
Temperature	70.0	7.7
Humidity	30.0	75.0

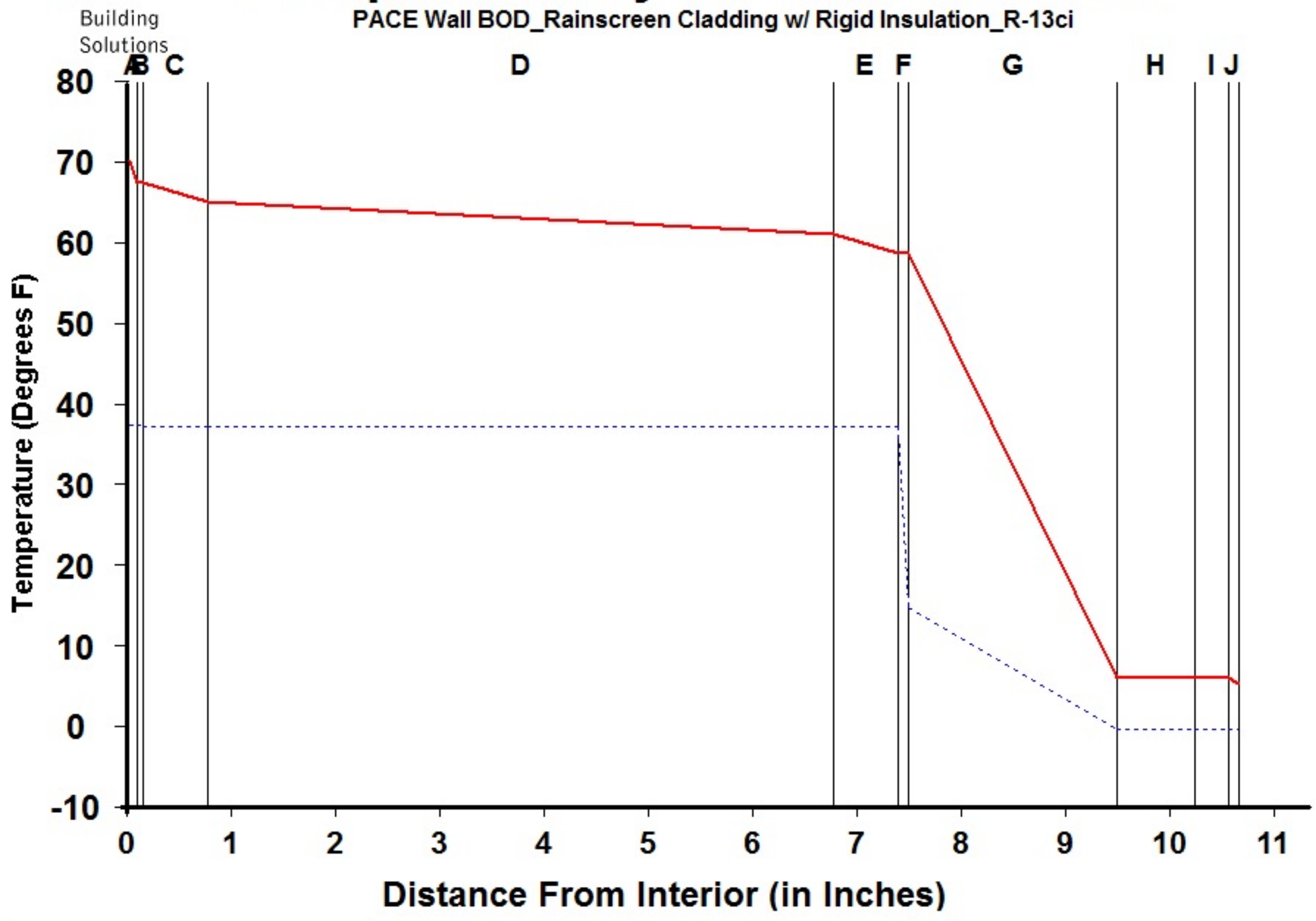
Component Name	Thickness	R-Value	Rep
A Interior Air Film	0.100	0.68	0.001
B Latex Paint 2 Coat	0.050	0.01	0.500
C Gypsum Board	0.625	0.56	0.023
D Wall Air Space NonRefl	6.000	1.01	0.006
E Gypsum Sheathing	0.625	0.56	0.027
F CCW 705FRA	0.100	0.01	100.000
G Mineral Wool (semi-rigid)	5.000	21.50	0.450
H Wall Air Space NonRefl	0.000	0.00	0.000
I Ventilated Cladding	0.000	0.00	0.000
J Out Air Film Winter	0.100	0.17	0.001
TOTAL	12.600	24.50	101.008

Interface	Temperature Actual	Temperature Dewpnt	Accum (oz/day-sqft)
-A	70.00	37.17	0.000
AB	68.27	37.17	0.000
BC	68.25	37.06	0.000
CD	66.82	37.06	0.000
DE	64.25	37.06	0.000
EF	62.83	37.05	0.000
FG	62.80	2.44	0.000
GH	8.13	2.08	0.000
HI	8.13	2.08	0.000
IJ	8.13	2.08	0.000
JK	7.70	2.08	0.000
KL			
L-			



Dewpoint Analysis - Dow Chemical

PACE Wall BOD_Rainscreen Cladding w/ Rigid Insulation_R-13ci



Legend

- Actual Temperature
- - - - Dewpoint Temperature

Dewpoint Theory predicts condensation in a system at any point where the actual and dewpoint temperature lines cross.

Conditions:

	Interior	Exterior
Temperature	70.0	5.1
Humidity	30.0	75.0

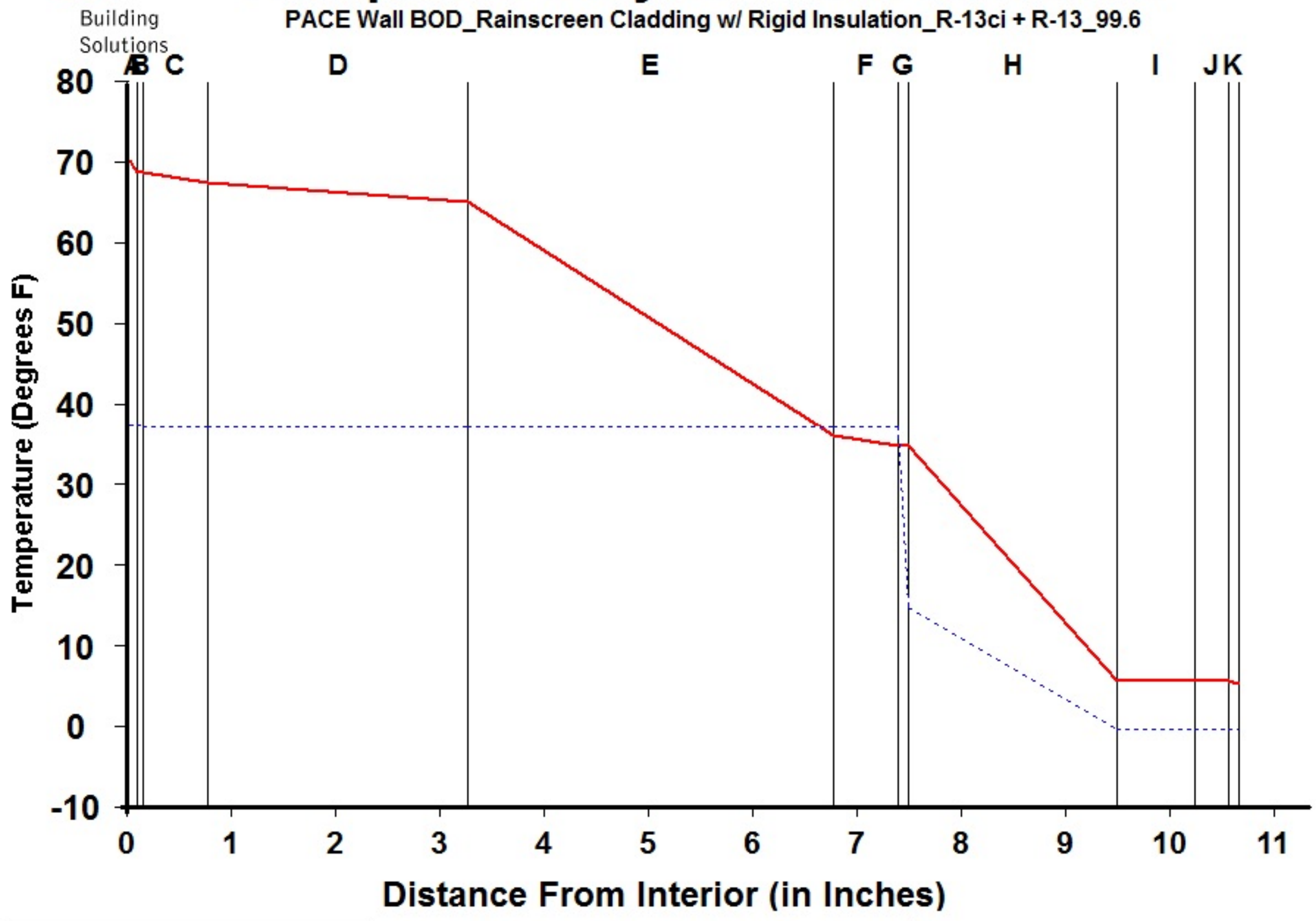
Component Name	Thickness	R-Value	Rep	Interface	Temperature Actual	Temperature Dewpnt	Accum (oz/day-sqft)
A Interior Air Film	0.100	0.68	0.001	-A	70.00	37.17	0.000
B Latex Paint 2 Coat	0.050	0.01	0.500	AB	67.24	37.17	0.000
C Gypsum Board	0.625	0.56	0.023	BC	67.20	37.08	0.000
D Wall Air Space NonRefl	6.000	1.01	0.006	CD	64.93	37.08	0.000
E Gypsum Sheathing	0.625	0.56	0.027	DE	60.83	37.08	0.000
F CCW 705 FRA	0.100	0.01	100.000	EF	58.56	37.07	0.000
G DuPont Thermax Sheathing	2.000	13.00	30.000	FG	58.52	14.65	0.000
H Wall Air Space NonRefl	0.750	0.00	0.000	GH	5.79	-0.47	0.000
I Rainscreen Cladding	0.313	0.00	0.000	HI	5.79	-0.47	0.000
J Out Air Film Winter	0.100	0.17	0.001	IJ	5.79	-0.47	0.000
				JK	5.10	-0.47	0.000
				KL			
				L-			
TOTAL	10.663	16.00	130.558				

NOTICE: This calculation is based on the theory of Water Vapor Migration presented in the ASHRAE 1993 Fundamentals Handbook. Actual performance may vary depending upon air infiltration, workmanship, and building materials. Since the information is provided without charge, The Dow Chemical Company assumes **no obligation or liability** for its use.



Dewpoint Analysis - Dow Chemical

PACE Wall BOD_Rainscreen Cladding w/ Rigid Insulation_R-13ci + R-13_99.6



Legend	
—	Actual Temperature
- - - -	Dewpoint Temperature

Dewpoint Theory predicts condensation in a system at any point where the actual and dewpoint temperature lines cross.

Conditions:		
	Interior	Exterior
Temperature	70.0	5.1
Humidity	30.0	75.0

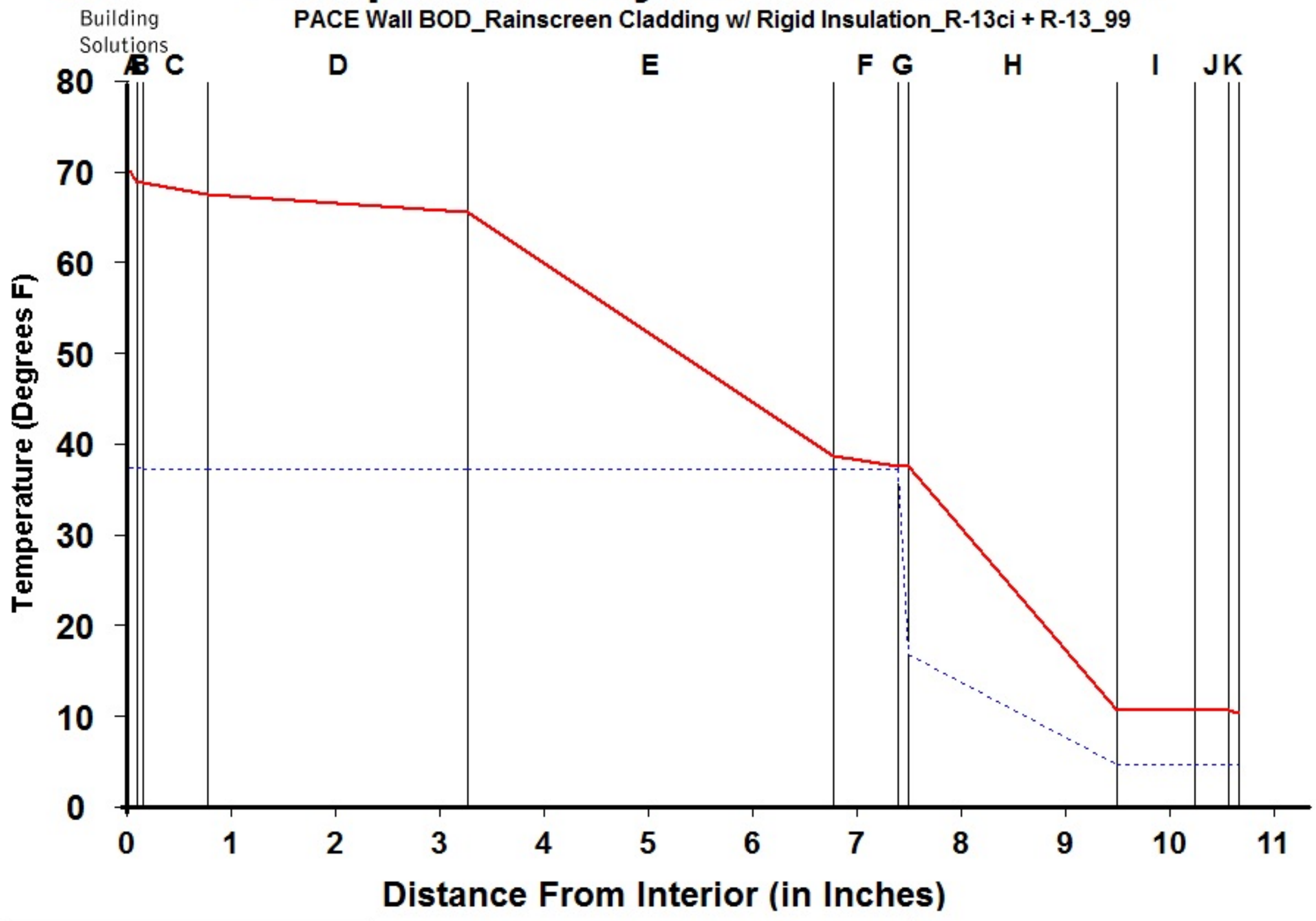
Component Name	Thickness	R-Value	Rep	Interface	Temperature Actual	Temperature Dewpnt	Accum (oz/day-sqft)
A Interior Air Film	0.100	0.68	0.001	-A	70.00	37.17	0.000
B Latex Paint 2 Coat	0.050	0.01	0.500	AB	68.48	37.17	0.000
C Gypsum Board	0.625	0.56	0.023	BC	68.46	37.08	0.000
D Wall Air Space NonRefl	2.500	1.01	0.006	CD	67.20	37.08	0.000
E Stud Cavity Insulation	3.500	13.00	0.040	DE	64.94	37.08	0.000
F Gypsum Sheathing	0.625	0.56	0.027	EF	35.85	37.07	* 0.001
G CCW 705 FRA	0.100	0.01	100.000	FG	34.60	37.07	* 0.002
H DuPont Thermax Sheathing	2.000	13.00	30.000	GH	34.57	14.65	0.000
I Wall Air Space NonRefl	0.750	0.00	0.000	HI	5.48	-0.47	0.000
J Rainscreen Cladding	0.313	0.00	0.000	IJ	5.48	-0.47	0.000
K Out Air Film Winter	0.100	0.17	0.001	JK	5.48	-0.47	0.000
L				KL	5.10	-0.47	0.000
TOTAL	10.663	29.00	130.598	L-			

NOTICE: This calculation is based on the theory of Water Vapor Migration presented in the ASHRAE 1993 Fundamentals Handbook. Actual performance may vary depending upon air infiltration, workmanship, and building materials. Since the information is provided without charge, The Dow Chemical Company assumes **no obligation or liability** for its use.



Dewpoint Analysis - Dow Chemical

PACE Wall BOD_Rainscreen Cladding w/ Rigid Insulation_R-13ci + R-13_99



Legend	
—	Actual Temperature
- - - -	Dewpoint Temperature

Dewpoint Theory predicts condensation in a system at any point where the actual and dewpoint temperature lines cross.

Conditions:		
	Interior	Exterior
Temperature	70.0	10.2
Humidity	30.0	75.0

Component Name	Thickness	R-Value	Rep	Interface	Temperature Actual	Temperature Dewpnt	Accum (oz/day-sqft)
A Interior Air Film	0.100	0.68	0.001	-A	70.00	37.17	0.000
B Latex Paint 2 Coat	0.050	0.01	0.500	AB	68.60	37.17	0.000
C Gypsum Board	0.625	0.56	0.023	BC	68.58	37.09	0.000
D Wall Air Space NonRefl	2.500	1.01	0.006	CD	67.42	37.08	0.000
E Stud Cavity Insulation	3.500	13.00	0.040	DE	65.34	37.08	0.000
F Gypsum Sheathing	0.625	0.56	0.027	EF	38.53	37.08	0.000
G CCW 705 FRA	0.100	0.01	100.000	FG	37.38	37.07	0.000
H DuPont Thermax Sheathing	2.000	13.00	30.000	GH	37.36	16.70	0.000
I Wall Air Space NonRefl	0.750	0.00	0.000	HI	10.55	4.52	0.000
J Rainscreen Cladding	0.313	0.00	0.000	IJ	10.55	4.52	0.000
K Out Air Film Winter	0.100	0.17	0.001	JK	10.55	4.52	0.000
L				KL	10.20	4.52	0.000
TOTAL	10.663	29.00	130.598	L-			