

B

A

! "#"\$%&



$N \ e^b$

A



$E - ca - A - a - e$



- ("U%(\$7#: "Q(8&#(; #*A7*+%" ; (\$+7A"" +\$(*
* A(*(<"@?*' %\$<(8&#(#"*@?%" ; (&7+(+&(FGY>(*/7<' %

- ("U%(\$7#: "Q(=*\$(*##* ; "A(% (1234C12(+?#&7; ?(+?"(\GST(R*#""#(\$"#: %\$(&88%@")|

>?"(\GST(R*#""#(\$"#: %\$(&88%@") @&//"+A(+?%\$A*+*0%" @/7A%" ; (+?"(#". & \$"\$(&8(3 [(EFG(<*X&#(\$+7A"" +\$|) >?"(\$7#: "Q(% @/7A"A(+?"(] 7"\$+%"' \$\$7@?(*\$(*' 7*/(\$*/#Q0(. /*' \$(*8+"#(; #*A7*+%"' 0(@7##"'+(" <. /&Q<"" +(\$+*+7\$0%" +#" \$?% ("U. "#%" @"(H"8&#(; #*A7*+%"' 0(*' A(/"\$\$& '\$(/'*#' "A(*+(+?"(. #&; #* <|(

E*%" +%" (+?"(*' * /Q+%"\$(*' A(" + "#. #%"' (\$Q\$+<\$(@&7#\$"\$

EFG(12Z2(MF' +#&(+&(S7\$%" \$\$(-' * /Q+%"

! "#\$%&' () *+",(-. #%"(1234(((((

3[((((((((

E * J "(%(. &\$%H/"d8"*\$%H/"/(+(&H+*% (L 7#(8*@7/+Q(<"<H#\$(%<. /"<"/<'' + "A(+?%\$(@ "#+8%@*+"\$(M"!; I(R-9E0(` "+=&#Je0(" +@IN(\$7; ; "\$+%%' (%' +&(+?"%"#(@&7#\$"\$!(*8;"#(@&<. /"+%; ; (+?"#""/":*' +(@&7#\$"\$!(

! "#\$%&' () *+",(-. #%/0(1234(((((

3B((((((((

- (. &\$\$%H/"#" H#* A% ; (&8(+?"(. #& #* < (8#& < (FGY>(+&(+?"(< &"(= %A"/QC7\$"A(. #& #* < (+%#/"((

>?"(EFG; #&7. (A"@"A" A(+&(@?* ; "(+?"(. #& #* < (+%#/"(*' A(@&7#\$". #%"U(8#& < (FGY>(+&(EFG(ME*' *; "<"" +(F' 8&#< * +%&' (GQ\$+" < \$NI(

F' (G. #%" ; (123W0(*(' "=(A". *#+< "" +(MG7.. /Q(R?*%" (Y(E*' *; "< "" +(F' 8&#< * +%&' (GQ\$+" < \$N(/*7' @?"AI(>?"(' "=(. #& #* < (+%#/"(*' A(@&7#\$". #%"U(?*: "(H"" ("88" @% "(\$%" @"(123WI(

(
(
(
(
(
()

! "#\$%&' () *+",(-. #%"(1234(
(
(
(
(

(
(
(
(
(

3D(((((((

-@+%"' (9/*' (8&#(L' ; &%' ; (-\$\$"\$\$<'" +(S*\$"A(&' (R7##'" +(G"/8(G+7AQ(V% A%" ; \$(
(

~~-@+%"'(9/*'@&#(T:@&#(K/*#%"';(6/*+"A(V% A%"';\$(~~

9#&H/"<(FA"" +%%"A(	- @+&' (+&(S(">*J'" (
>"(. #&; #* <(' ""A\$(&(7. A*+"(+?"(":@A"" @"(&&(/" *#% ; (*\$\$ \$\$< " +(*' A(#": %\$/(*\$\$\$ \$\$< " +(\$+#+*+" ; %%\$! (	>"(EFG; #&7. (=%%//(< ""+%" (G. #%" ; (1213(+&(H%" ; (+?"(A%\$@7\$\$%&' (&&(/" *#% ; (&7+@& <"\$(*' A(*\$\$ \$\$< " +!(
>"(. #&; #* <(' ""A\$(&(7. A*+"(+?"(@&7#\$"(&&#%" ; \$(&&(H"(@& '\$%"+" +=%?". ""#(\$@?&&/\$! (	>"(EFG; #&7. (?*A(*A%\$@7\$\$%&' (*H&7+(*AA%&%&' */"/@+%" (" @&7#\$"%" (V*//((1212|(>"(; #&7. (=%%//(< ""+%" (G. #%" ; (1213(+&(A%\$@7\$\$ (87#?="#@=?%" (8*@7/Q(< <H"#\$(\$7#: "Q(+?"(@&7#\$" (&&#%" ; \$(% (. ""#(\$@?&&/\$! (

(
 (
 -@+%&' (9/*' (8&#(G+*880(-A<%' %\$+#+%&' ()(&#(S7A; "+*#Q(V%" A%" ; \$()
 (
)

9#&H/"<(FA"" +%%" A(	-@+%%' (+&(S">*J'" (
>"(. #&; #* <(' ""\$A\$(*AA%&%' */(87//C+%	6" @&<<"" A(+?*+(*87//C+%

1

```
! "#$%&' () *+",(- . #%/0(1234(
```


! "#\$%&' () *+" ,(-. #%"(1234(

(

- . . " " A%U(S,((

6

0#1. 2"/'31. &&4\$""#1%4- 51'/4#&6'

7+\$"89%:. \$1"0#1. 2"/'*&+;524'

(

` * < "(	6*' J(	>''' 7#"(G+*+7\$(	C%??"\$+( )";#""(	f**#\$(&&(-#"**\$(&&(
G@&++(g>"##Qh(-//'''(	-AX7' @+(	' d*(	EG(	3[(	EFG(
E * #&' (a''' \$'''(	-AX7' @+(	' d*(	EG(	((((3B(	EFG(
a*\$&' (_ &&. (	-AX7' @+(	' d*(	EG(	W(	EFG(
R?#%\$+&. ?" #(C"Q=&&A(	-AX7' @+(	' d*(	EG(	1(	EFG(
S*#H*#*(^ %J/*\$&' (	-AX7' @+(	' d*(	TA)(	34(	EFG(
f&' ;(i ?*' ;(	-\$\$_&@%*+"(	>''' 7#"A(	9?)()	W(	R&<. 7+"#(
	9#&8\$\$&#(				G@''' @"(

1

1

11

! "#\$%&' () *+" ,(-. #%/0(1234(

1

1

6

(

1

1
1

1

13

1

1

1

! "#\$%&' () *+",(-. #%"(1234(

(

(

(

(

(

(

(

11((((((

(

(

(

(

(

(

(

1 -1	1 -1	1 -20
: MC: 6M976%	3M743M989%	3M877MC32%
11: M6C9%	312MC12%	312M22%
%	%	%
%	%	%
31M926%	36M768%	6M134%
: M67: M4: 3%	3M889M377%	1M22: M614%

—

! "#\$%&' () *+","(-. #%%(1234((((

A	E	C	B			
M L	M M D M	E L I	E L C	F L L	I F M	A / / /
L Be able c ec , a a e, a d e da a e b e dec a	M MI	M	M	M	M	M
L Be ca abe f de e a d e e f a e	M MI	M	M	M	M	C F
L Be ade a e a a e e de a a d a	M C	M	M	M	M	F

D A

M	L	M	E	L	C	M	/	/	/
		M				I			
		M							
		D			E				
		M			L				
f	e	be	e						
ec	e	a	a	d					
e	e	a	e						
e	a	a	'						
b	a	ce	e						

D A

M	L	M	E	L	G	E				
		M			F	L				
		M			L		I			
		D	I				F			
a d/	e d a	M	A	M	M	M	M			
a c a	e a d									
de f fac	a	A	E	E						
f e ce c a	e.	D								
		I								

D A

D A

A

Dr. Randall Boyle

C

B
/‘0.1+“(

C

C

! " # \$ % & ' () * + , * - % # . , *

D A

Dr. Jeffrey Clements

C	B	C	C			! "#\$%& ()*+, *-%#. , *		
	/'0. 1+"(
B	C		D	A		2#'(+3. , *		
	4%"(, . 5**6*7)830"5"98							
B	C	D	C		A			
			4%"(, . 5**6*: , 6"(#+. &+ , *7(+1. 38. , ; *' 3%(+&8					
C	A B		E		D	: , &' (, . &+ , . 5*4%"(, . 5**6*<"3+"5"98. , ; *		
	<"3+. 5*7"5+8							
C	A	B		C	D	A	B	4%"(, . 5**6*&O' * <"%&O' (, *

D A

Dr. Seokwoo Song

E"(&03"#+, 9 D C
:, 6"("#. &+", *='1'5"\$#", &

B

D A

B A

E E

D A