

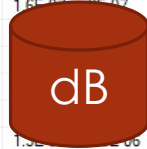
# Operation manual Auto Recording software

P1

## [Helium leak test machine (WGR) ]

### Understand Outline

Date	dayNight	chamber	firstBG	secondBG	firstSG	secondSG	judgeSN	NGSetPoint
2021-07-02	D	1	1.3E-07	1.6E-07	7.4E-06	7.3E-06	46	5.1E-06
2021-07-02	D	2	8.1E-08	9.6E-08	6.1E-06	6E-06	63	4.2E-06
2021-07-01	N	1	1.6E-07	2E-07	7.4E-06	7.3E-06	36	5.1E-06
2021-07-01	N	1	1.6E-07	2E-07	7.4E-06	7.3E-06	36	5.1E-06
2021-07-01	N	2			6.3E-06	6.4E-06	33	4.4E-06
2021-07-01	N	2			6.3E-06	6.4E-06	33	4.4E-06
2021-07-01	D	1			7.2E-06	7.4E-06	29	5E-06
2021-07-01	D	2			6E-06	6.3E-06	26	4.2E-06
2021-06-30	N	2			6E-05	6.3E-05	40	4.2E-05
2021-06-30	N	1	1.5E-06	1.7E-06	7.3E-05	7.5E-05	43	5.1E-05
2021-06-30	N	1	1.5E-06	1.7E-06	7.3E-05	7.5E-05	43	5.1E-05
2021-06-30	N	2	1.3E-06	1.5E-06	6E-05	6.3E-05	40	4.2E-05
2021-06-30	D	1	1.8E-06	1.7E-06	7.7E-05	7.8E-05	43	5.4E-05
2021-06-30	D	2	3.2E-06	4E-06	6.7E-05	6.7E-05	17	4.7E-05
2021-06-29	N	1	1.4E-06	1.5E-06	7.1E-05	7.2E-05	47	5E-05
2021-06-29	N	1	1.4E-06	1.5E-06	7.1E-05	7.2E-05	47	5E-05



Trigger recording time  
8:00 AM and  
20:00PM every day



Make sure software  
running all time.

### Chamber 1

File Home Insert Page Layout Formulas Data Review View Help									
Normal		Page Break		Custom		Gridlines		Headings	
Workbook Views		Preview		Layout		Views		Show	
Zoom		100%		Zoom to Selection		Zoom		New Window	
LS									
A B C D E F G H I									
1	Date			1	2		3		
2	Time			D	N	D	N	D	N
3	1 <sup>st</sup> BG			2.50E-07	1.60E-07	1.30E-07			
4	2 <sup>nd</sup> BG			2.40E-07	2.00E-07	1.60E-07			
5	1 <sup>st</sup> ML			7.20E-06	7.40E-06	7.40E-06			
6	2 <sup>nd</sup> ML			7.40E-06	7.30E-06	7.30E-06			
7	S/N			2.90E+01	3.60E+01	4.60E+01			
8	NG set point			5.00E-06	5.10E-06	5.10E-06			
9	OP. Sign								
10	LL. Sign								
11	TL Sign (1/Week)								

### Chamber 2

File Home Insert Page Layout Formulas Data Review View Help									
Normal		Page Break	Page	Custom	Gridlines	Headings	Zoom	Zoom to Selection	New Window
Workbook Views									
L6									
	A	B	C	D	E	F	G	H	I
1	Date			1	2		3		
2	Time			D	N	D	N	D	N
3	BG/ML	1 <sup>st</sup> BG	2.50E-07	1.60E-07	1.30E-07				
4		2 <sup>nd</sup> BG	2.40E-07	2.00E-07	1.60E-07				
5		1 <sup>st</sup> ML	7.20E-06	7.40E-06	7.40E-06				
6		2 <sup>nd</sup> ML	7.40E-06	7.30E-06	7.30E-06				
7		S/N	2.90E+01	3.60E+01	4.60E+01				
8	NG set point			5.00E-06	5.10E-06	5.10E-06			
9	OP. Sign								
10	LL. Sign								
11	TL Sign (1/Week)								

### Understand Condition

1. Calibration time is 23:00 PM yesterday - 08:00 AM today => Shift = Day (D)
2. Calibration time is 11:00 AM today - 20:00 PM today => Shift = Night (N)
3. Using latest only. One day has 2 times.

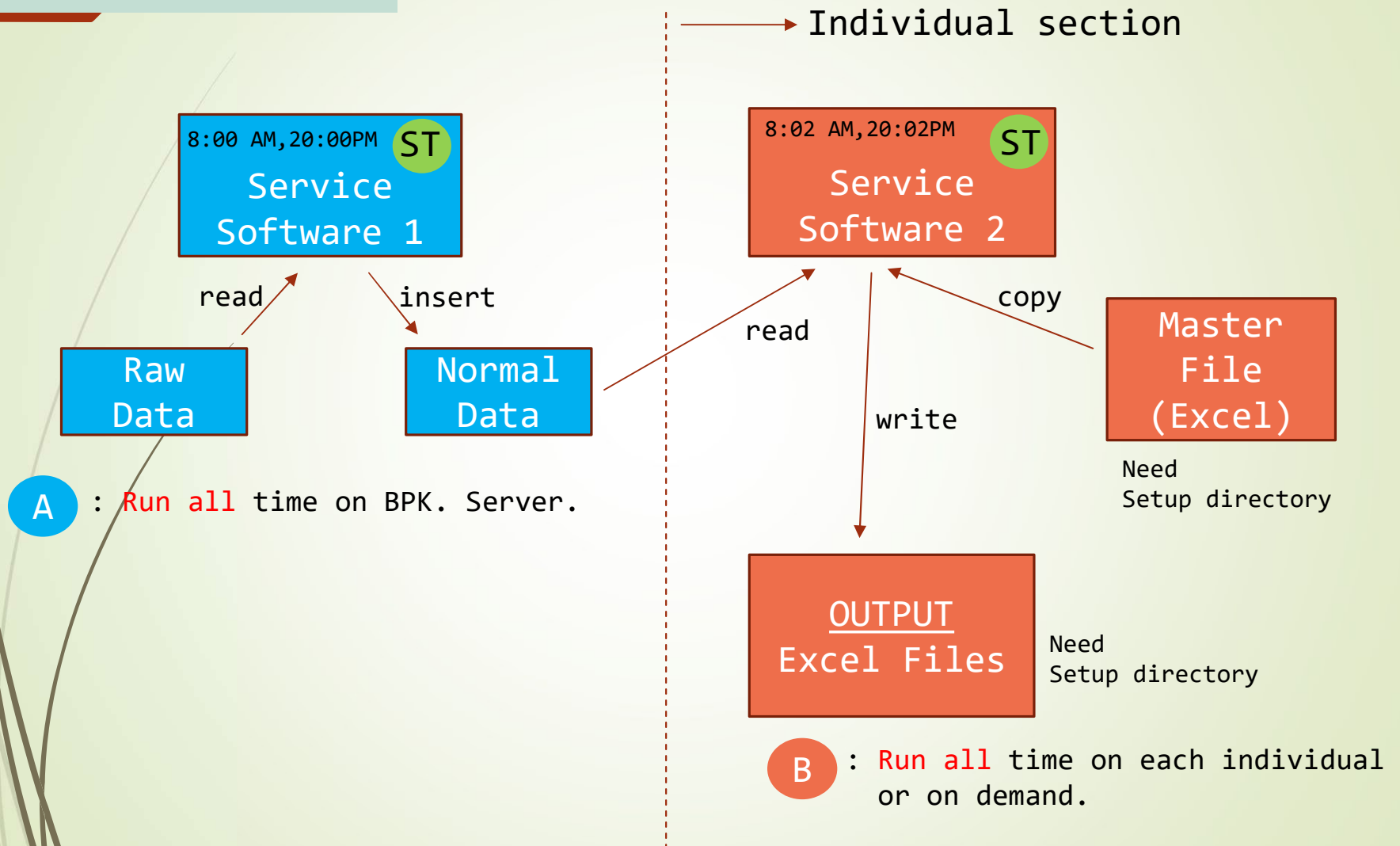
### Feature

1. Transfer data from DB to Excel file which using form designed in c:\radiator\master\Calibratehelium.xlsx (depend on setting)
2. File is created on section-name if system has more one section-code
3. Provide Function re-update on datetime by individual.

# Operation manual Auto Recording software

P2

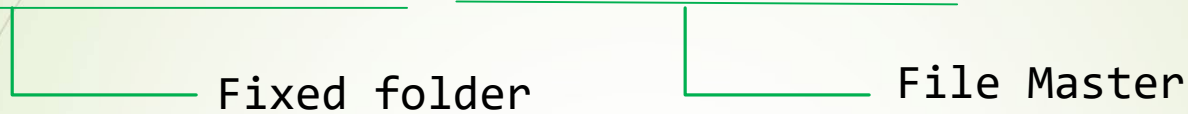
## Understand Flow Chart



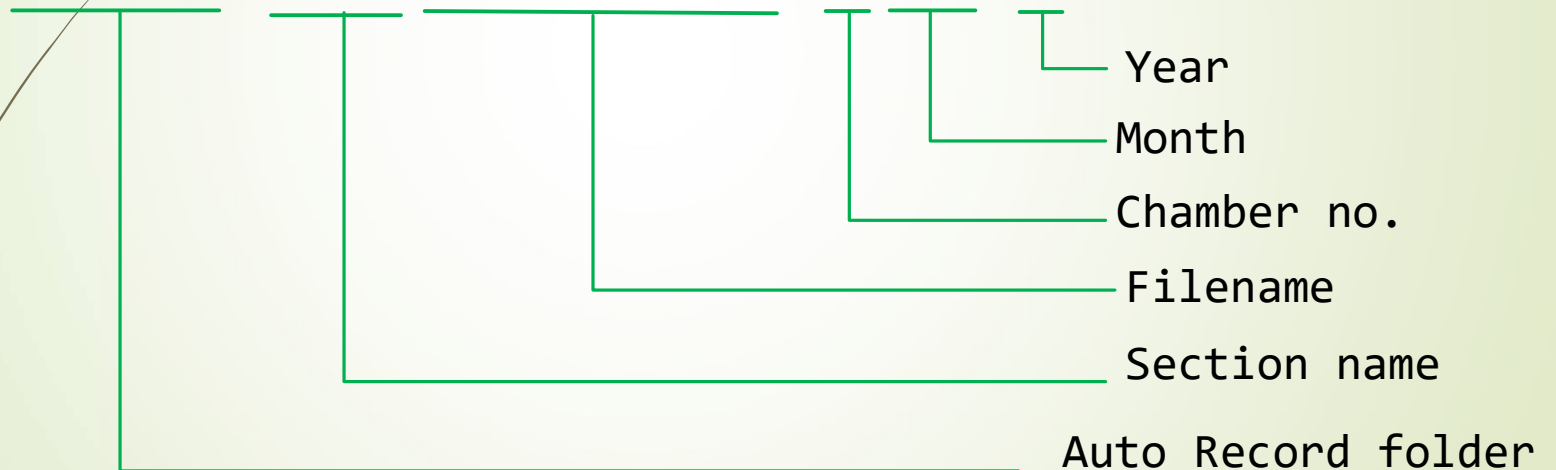
**ST** : Schedule Trigger

## Understand Folder structure

C:\Radiator\master\Calibratehelium.xlsx



C:\Radiator\Assy1\Calibratehelium\_1\_June'21.xlsx



# Operation manual Auto Recording software

P4

## Understand File Master

The screenshot shows an Excel spreadsheet with the following structure:

	A	B	C	D	E	F	G	H	I	J	K	L	BD	BE	BF	BG	BH	BI	BJ	BK	BL	BM
1		Date		1		2		3		4		5	27	28	29	30	31					
2		Time		D	N	D	N	D	N	D	N	D	D	N	D	N	D	N	D	N	D	N
3	BG/ML	1 <sup>st</sup> BG																				
4		2 <sup>nd</sup> BG																				
5		1 <sup>st</sup> ML																				
6		2 <sup>nd</sup> ML																				
7		S/N																				
8		NG set point																				
9		OP. Sign																				
10		LL. Sign																				
11		TL Sign (1/Week)																				
12																						
13																						
14																						
15																						
16																						
17																						
18																						
19																						

Do NOT change sheet name

Auto filling.  
Do NOT touch this area.

Do NOT change sheet name

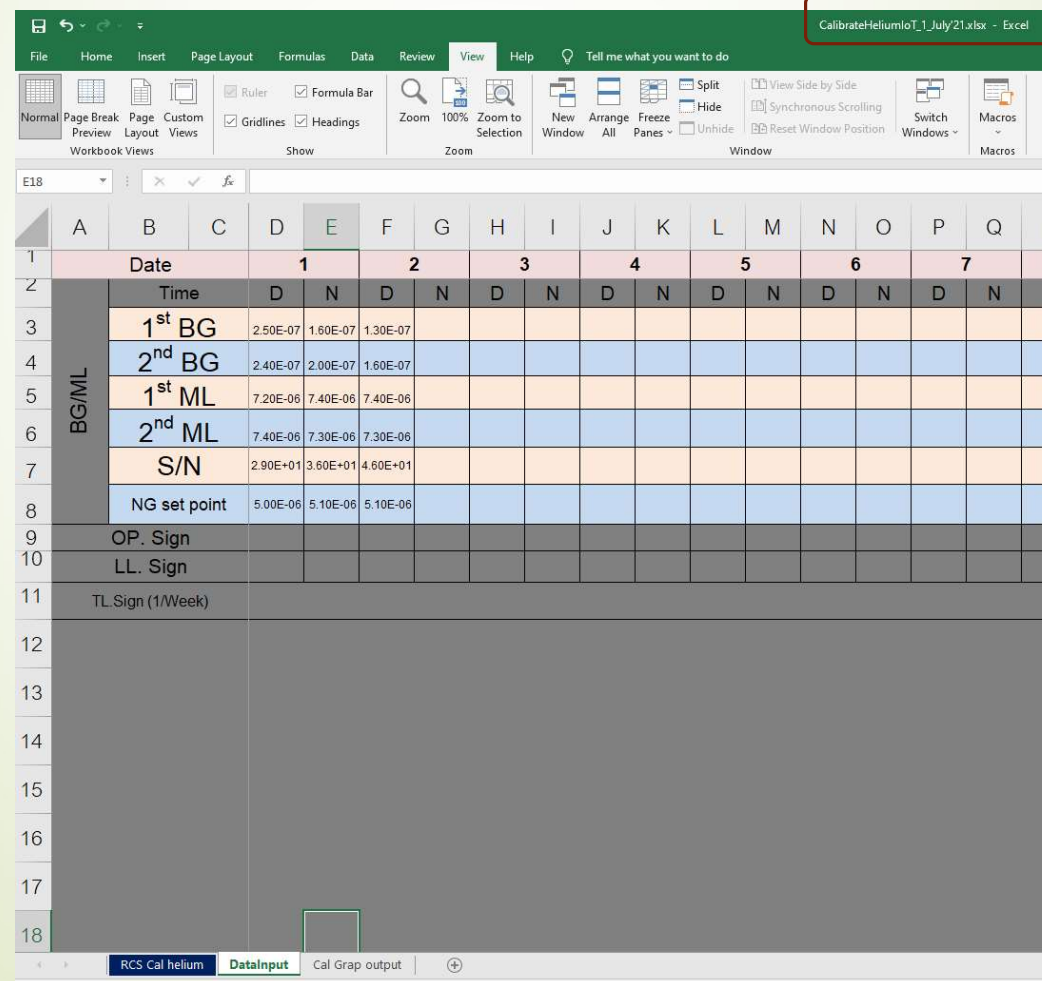
# Operation manual Auto Recording software

P5

## Understand File recorded

Recorded data : data is transferred 2 Chamber  
On Day-shift and Night-shift twice.

File name



CalibrateHeliumIoT\_1\_July21.xlsx - Excel

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
1		Date		1	2	3	4	5	6	7								
2		Time		D	N	D	N	D	N	D	N	D	N	D	N	D	N	D
3		1 <sup>st</sup> BG		2.50E-07	1.60E-07	1.30E-07												
4		2 <sup>nd</sup> BG		2.40E-07	2.00E-07	1.60E-07												
5		1 <sup>st</sup> ML		7.20E-06	7.40E-06	7.40E-06												
6		2 <sup>nd</sup> ML		7.40E-06	7.30E-06	7.30E-06												
7		S/N		2.90E+01	3.60E+01	4.60E+01												
8		NG set point		5.00E-06	5.10E-06	5.10E-06												
9		OP. Sign																
10		LL. Sign																
11		TL. Sign (1/Week)																
12																		
13																		
14																		
15																		
16																		
17																		
18																		

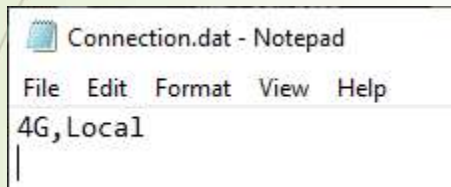
RCS Cal helium    DataInput    Cal Grap output

## Understand Service software

### 1. Run file Service.exe

Program create file C:\KPi\Login\Connection.dat

You should select connection type

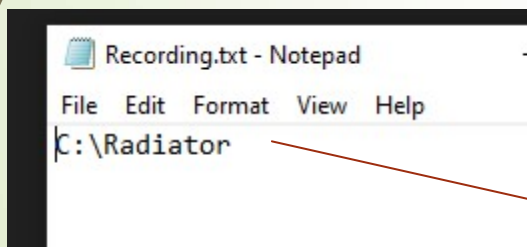


Network 3G/4G/5G :4G,Local

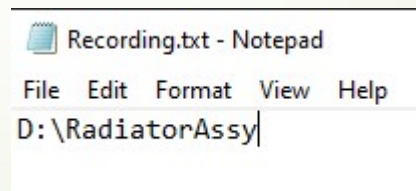
Network Local : Local,4G

And Program create file C:\KPi\AutoRecord\Recording.txt

You make sure subdirectory to keep file. You can change by yourselves.



Such as "D:\RadiatorAssy" instead. And SAVE File.



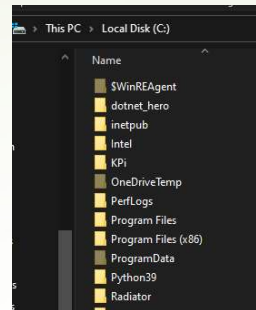
If you edit file, you should restart this program again to create new folder.

# Operation manual Auto Recording software

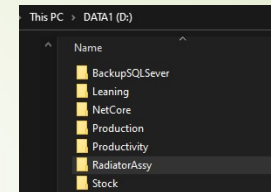
P7

## Understand Service software

In the case:  
Don't edit data

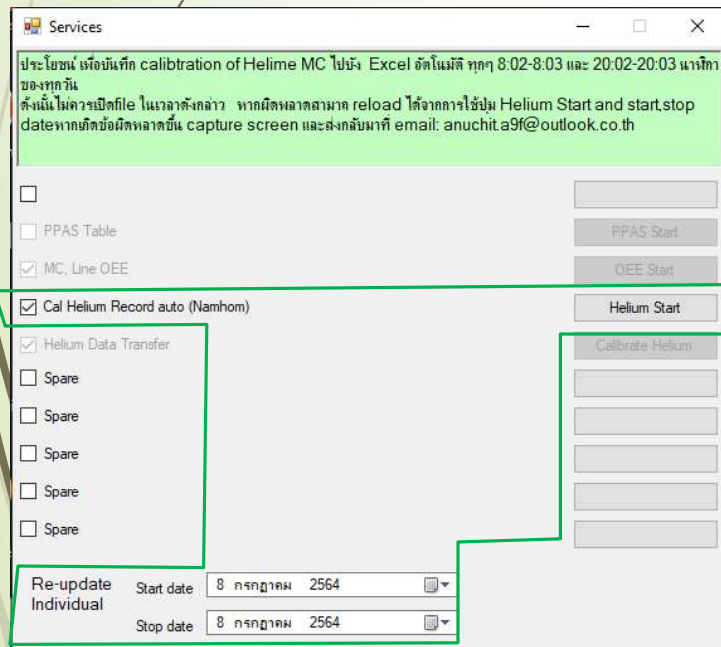


In the case:  
Change to D:\RadiatorAssy



Bring Calibratehelium.xlsx file to place at “Master” folder of “Radiator” folder or “RadiatorAssy” folder.

## 2. Run file Service.exe again. (In the case : RadiatorAssy)



Trial save transfer data by individua.

Step I: select start & stop date

Step II: push Helium start

Step III: Excel file and section-name folder

is created at Radiator directory . It has 2 files.

If these files lost. It created after trigger running.  
But data is NOT full, should update by self.



# Operation manual Auto Recording software

P8

## Understand Service software

### Data in database.

sectionCode	registDate	currentDate Time	dayNight	machineId	chamber	firstBG	secondBG	firstSG	secondSG	judgeSN	safetyFactor	NGSetPoint	calibrationCompleted
4314-00	2021-07-02	2021-07-02 16:31:29.000	D	6SM-0518-R	2	8.1E-08	9.6E-08	6.1E-06	6E-06	63	70	4.2E-06	OK
4314-00	2021-07-02	2021-07-02 16:35:42.000	D	6SM-0518-L	1	1.3E-07	1.6E-07	7.4E-06	7.3E-06	46	70	5.1E-06	OK
4314-00	2021-07-01	2021-07-02 04:35:13.000	N	6SM-0518-R	2	1.9E-07	1.9E-07	6.3E-06	6.4E-06	33	70	4.4E-06	OK
4314-00	2021-07-01	2021-07-02 04:36:18.000	N	6SM-0518-R	2	1.9E-07	1.9E-07	6.3E-06	6.4E-06	33	70	4.4E-06	OK
4314-00	2021-07-01	2021-07-01 16:32:50.000	D	6SM-0518-R	2	2.3E-07	2.3E-07	6E-06	6.3E-06	26	70	4.2E-06	OK
4314-00	2021-07-01	2021-07-02 04:41:11.000	N	6SM-0518-L	1	1.6E-07	2E-07	7.4E-06	7.3E-06	36	70	5.1E-06	OK
4314-00	2021-07-01	2021-07-02 04:42:16.000	N	6SM-0518-L	1	1.6E-07	2E-07	7.4E-06	7.3E-06	36	70	5.1E-06	OK
4314-00	2021-07-01	2021-07-01 16:37:05.000	D	6SM-0518-L	1	2.5E-07	2.4E-07	7.2E-06	7.4E-06	29	70	5E-06	OK
4314-00	2021-06-30	2021-06-30 16:34:58.000	D	6SM-0518-R	2	3.2E-06	4E-06	6.7E-05	6.7E-05	17	70	4.7E-05	OK
4314-00	2021-06-30	2021-06-30 16:39:14.000	D	6SM-0518-L	1	1.8E-06	1.7E-06	7.7E-05	7.8E-05	43	70	5.4E-05	OK
4314-00	2021-06-30	2021-07-01 04:24:46.000	N	6SM-0518-R	2	1.3E-06	1.5E-06	6E-05	6.3E-05	40	70	4.2E-05	OK
4314-00	2021-06-30	2021-07-01 04:29:18.000	N	6SM-0518-L	1	1.5E-06	1.7E-06	7.3E-05	7.5E-05	43	70	5.1E-05	OK
4314-00	2021-06-30	2021-07-01 04:30:17.000	N	6SM-0518-L	1	1.5E-06	1.7E-06	7.3E-05	7.5E-05	43	70	5.1E-05	OK
4314-00	2021-06-30	2021-07-01 04:31:21.000	N	6SM-0518-R	2	1.3E-06	1.5E-06	6E-05	6.3E-05	40	70	4.2E-05	OK
4314-00	2021-06-29	2021-06-30 04:42:36.000	N	6SM-0518-L	1	1.4E-06	1.5E-06	7.1E-05	7.2E-05	47	70	5E-05	OK
4314-00	2021-06-29	2021-06-30 04:44:17.000	N	6SM-0518-L	1	1.4E-06	1.5E-06	7.1E-05	7.2E-05	47	70	5E-05	OK
4314-00	2021-06-29	2021-06-29 11:10:24.000	D	6SM-0518-R	2	1.3E-06	1.8E-06	6.2E-05	6.4E-05	34	70	4.3E-05	OK
4314-00	2021-06-29	2021-06-30 04:35:37.000	N	6SM-0518-L	2	1.6E-06	1.7E-06	6.1E-05	6.1E-05	36	70	4.3E-05	OK
4314-00	2021-06-29	2021-06-30 04:36:35.000	N	6SM-0518-R	2	1.6E-06	1.7E-06	6.1E-05	6.1E-05	36	70	4.3E-05	OK
4314-00	2021-06-29	2021-06-29 11:06:10.000	D	6SM-0518-L	1	2E-06	2.1E-06	7.1E-05	7.5E-05	34	70	5E-05	OK

After data was transferred.



	A	B	C	D	E	F	G	H	I	J	K	L	M
1		Date		1	2	3	4	5					
2		Time		D	N	D	N	D	N	D	N	D	N
3		1 <sup>st</sup> BG		2.50E-07	1.60E-07	1.30E-07							
4		2 <sup>nd</sup> BG		2.40E-07	2.00E-07	1.60E-07							
5		1 <sup>st</sup> ML		7.20E-06	7.40E-06	7.40E-06							
6		2 <sup>nd</sup> ML		7.40E-06	7.30E-06	7.30E-06							
7		S/N		2.90E+01	3.60E+01	4.60E+01							
8		NG set point		5.00E-06	5.10E-06	5.10E-06							
9		OP. Sign											
10		LL. Sign											
11		TL Sign (1/Week)											

END



## Condition

1. Calibration time is 23:00 PM yesterday - 08:00 AM today => Shift = Day (D)
2. Calibration time is 11:00 AM today - 20:00 PM today => Shift = Night (N)

## Appendix

WGR].[dbo].[RD\_HL\_CalibrationTable] (Before)

2021-07-06 D		run	sectionCode	registDate	currentDateTime	dayNight	machineId	chamber	firstBG	secondBG	firstSG	secondSG	judgeSN	safetyFactor	NGSetPoint	calibrationCor
2021-07-05 N				2021-07-05	2021-07-06 00:35:35.000	N	6SM-0518-L	1	2.2E-07	2.7E-07	7E-06	7.1E-06	26	70	4.9E-06	OK
3	4319	4314-00		2021-07-05	2021-07-06 00:29:03.000	N	6SM-0518-L	1	2.2E-07	2.7E-07	7E-06	7.1E-06	26	70	4.9E-06	OK
2021-07-02 N				2021-07-05	2021-07-05 16:41:03.000	D	6SM-0518-L	1	4.1E-07	4.4E-07	9.9E-06	9.9E-06	22	70	6.9E-06	OK
5	4309	4314-00		2021-07-05	2021-07-05 16:40:07.000	D	6SM-0518-L	1	4.1E-07	4.4E-07	9.9E-06	9.9E-06	22	70	6.9E-06	OK
6	4301	4314-00		2021-07-02	2021-07-02 16:35:42.000	D	6SM-0518-L	1	1.3E-07	1.6E-07	7.4E-06	7.3E-06	46	70	5.1E-06	OK
2021-07-02 D				2021-07-01	2021-07-02 04:42:16.000	N	6SM-0518-L	1	1.6E-07	2E-07	7.4E-06	7.3E-06	36	70	5.1E-06	OK
8	4293	4314-00		2021-07-01	2021-07-02 04:41:11.000	N	6SM-0518-L	1	1.6E-07	2E-07	7.4E-06	7.3E-06	36	70	5.1E-06	OK
2021-07-01 N				2021-07-01	2021-07-01 16:37:05.000	D	6SM-0518-L	1	2.5E-07	2.4E-07	7.2E-06	7.4E-06	29	70	5E-06	OK
10	4288	4314-00		2021-06-30	2021-07-01 04:30:17.000	N	6SM-0518-L	1	1.5E-06	1.7E-06	7.3E-05	7.5E-05	43	70	5.1E-05	OK
				2021-06-30	2021-07-01 04:29:18.000	N	6SM-0518-L	1	1.5E-06	1.7E-06	7.3E-05	7.5E-05	43	70	5.1E-05	OK
11	4277	4314-00		2021-06-30	2021-06-30 16:39:14.000	D	6SM-0518-L	1	1.8E-06	1.7E-06	7.7E-05	7.8E-05	43	70	5.4E-05	OK
2021-07-01 D				2021-06-29	2021-06-30 04:44:17.000	N	6SM-0518-L	1	1.4E-06	1.5E-06	7.1E-05	7.2E-05	47	70	5E-05	OK
1				2021-06-29	2021-06-30 04:42:36.000	N	6SM-0518-L	1	1.4E-06	1.5E-06	7.1E-05	7.2E-05	47	70	5E-05	OK

WGR].[dbo].[RD\_HL\_Calibration] (After)

run	sectionCode	registDate	currentDateTime	dayNight	machineId	chamber	firstBG	secondBG	firstSG	secondSG	judgeSN	safetyFactor	NGSetPoint	AckPers
12	4314-00	2021-07-01	2021-07-01 04:30:17.000	D	6SM-0518-L	1	1.5E-06	1.7E-06	7.3E-05	7.5E-05	43	70	5.1E-05	NULL
13	4314-00	2021-07-01	2021-07-01 16:37:05.000	N	6SM-0518-L	1	2.5E-07	2.4E-07	7.2E-06	7.4E-06	29	70	5E-06	NULL
16	4314-00	2021-07-02	2021-07-02 04:42:16.000	D	6SM-0518-L	1	1.6E-07	2E-07	7.4E-06	7.3E-06	36	70	5.1E-06	NULL
17	4314-00	2021-07-02	2021-07-02 16:35:42.000	N	6SM-0518-L	1	1.3E-07	1.6E-07	7.4E-06	7.3E-06	46	70	5.1E-06	NULL
20	4314-00	2021-07-05	2021-07-05 16:41:03.000	N	6SM-0518-L	1	4.1E-07	4.4E-07	9.9E-06	9.9E-06	22	70	6.9E-06	NULL
22	4314-00	2021-07-06	2021-07-06 00:35:35.000	D	6SM-0518-L	1	2.2E-07	2.7E-07	7E-06	7.1E-06	26	70	4.9E-06	NULL