

Revised Plant Waterer

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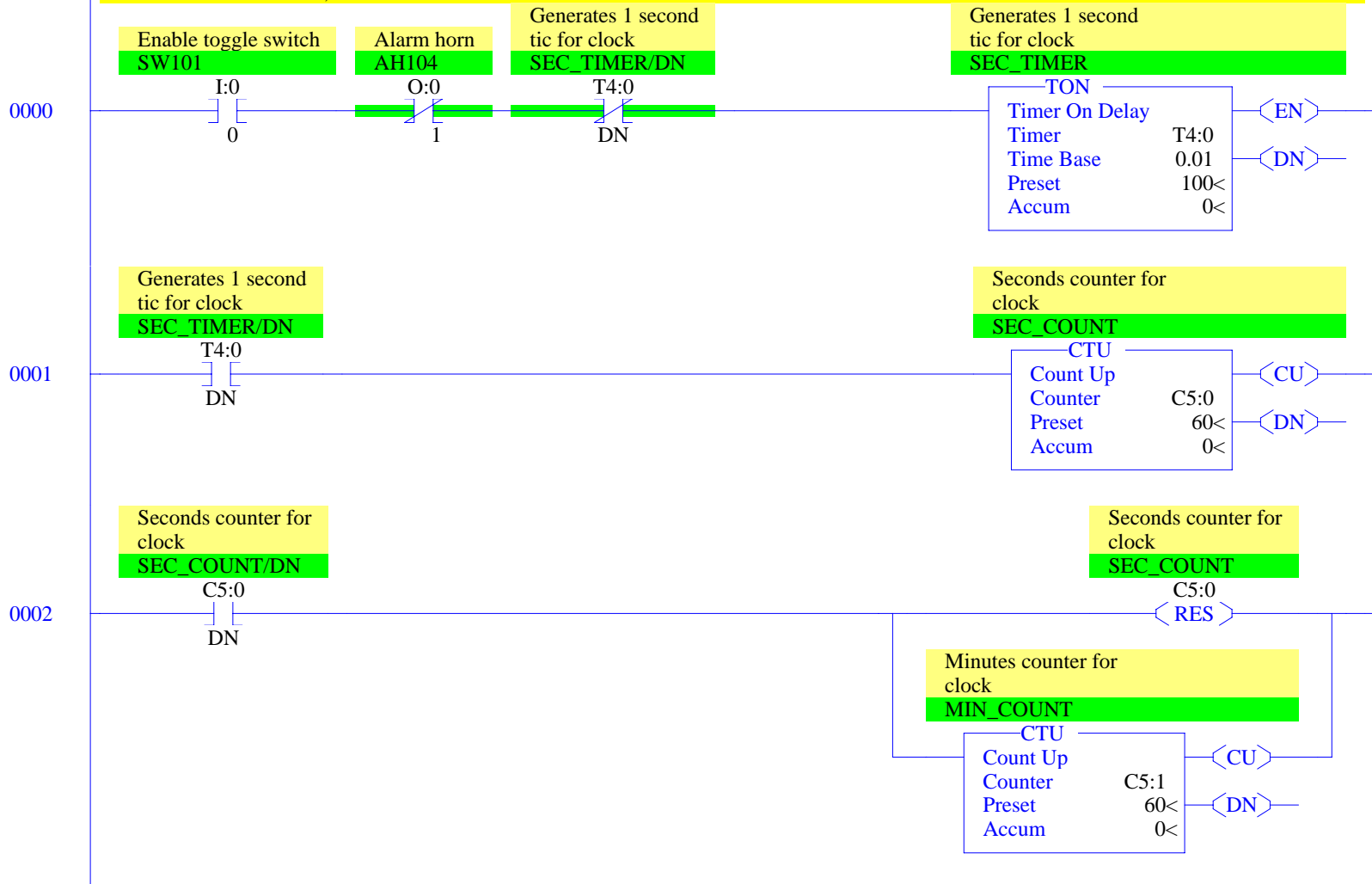
Internal memory from SP5-6 (no additional internal memory required):

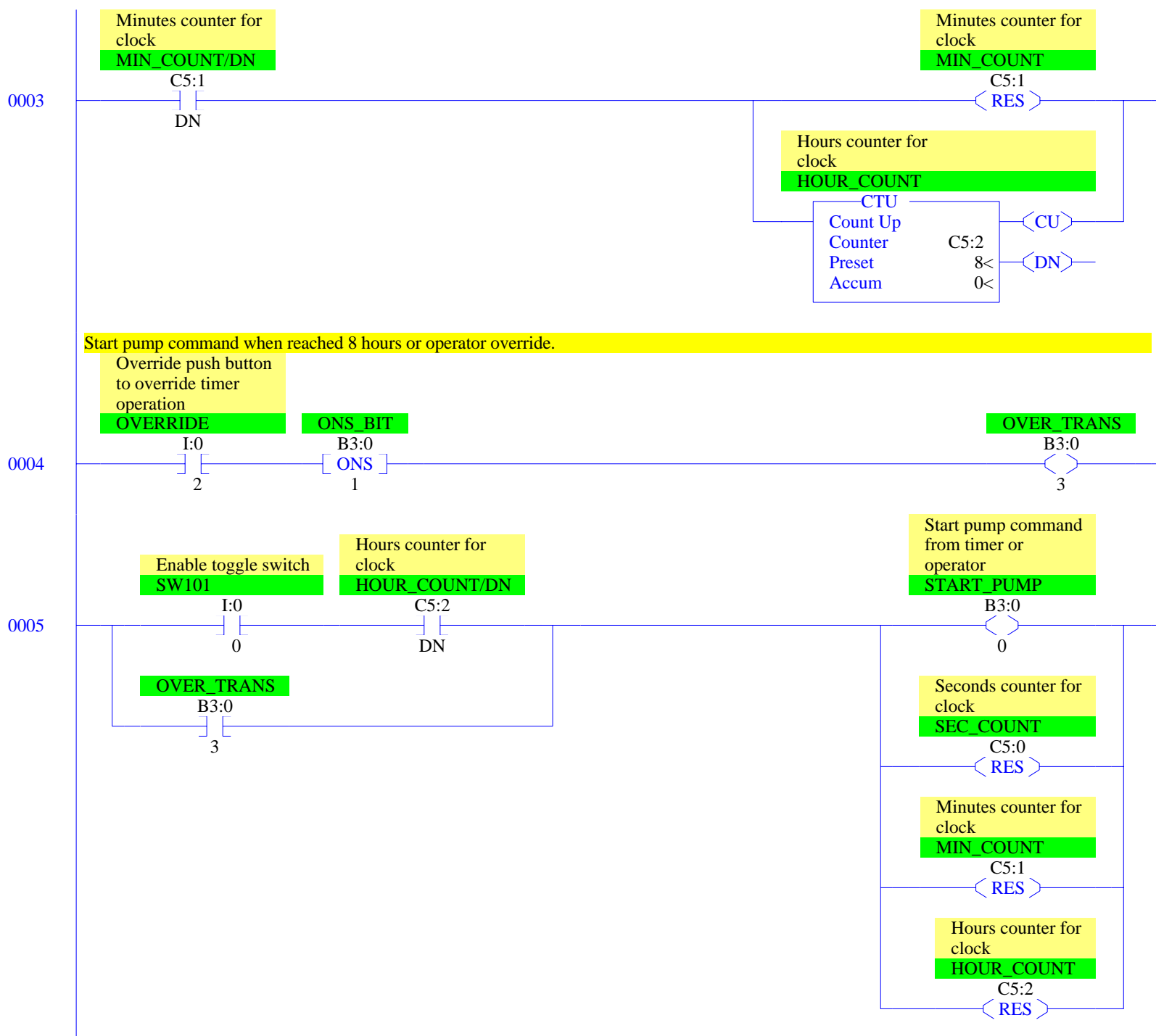
Symbol	Address	
SEC_COUNT	C5:0	Seconds counter for clock
MIN_COUNT	C5:1	Minutes counter for clock
HOUR_COUNT	C5:2	Hours counter for clock
SEC_TIMER	T4:0	Generates 1 second tic for clock
MAX_WTR_TMR	T4:1	Times maximum watering interval
START_PUMP	B3/0	Start pump command from timer or operator
ONS_BIT	B3/1	One-shot storage bit
ONS2_BIT	B3/2	One-shot storage bit

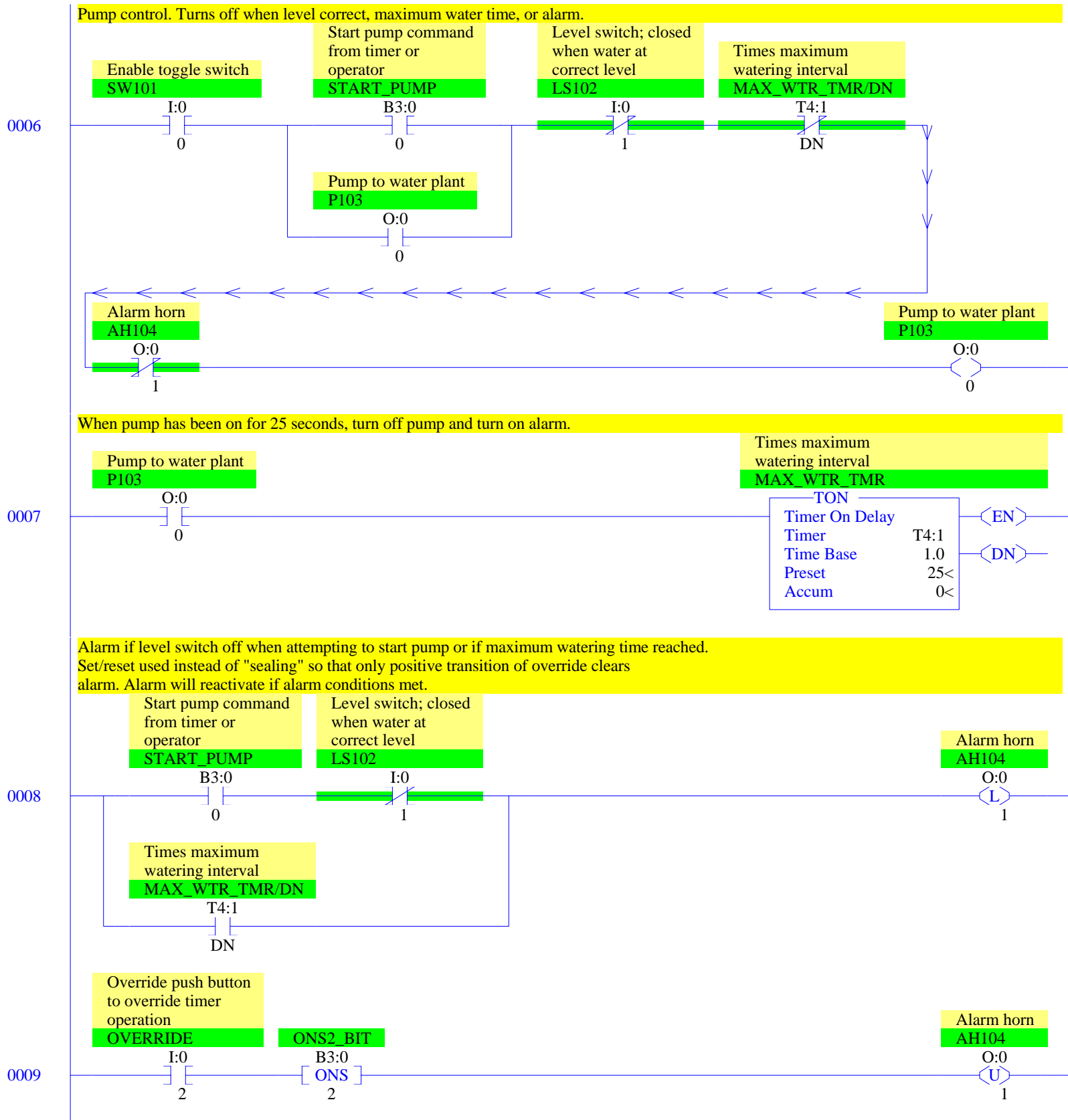
Clock. Generate a tick every second that is counted for seconds.

When 60 seconds counted, increment minutes.

When 60 minutes counted, increment hours.







***** Added for SP7-4 *****

Calculate remaining time and then copy it to the 4 output bits.

0010

Hours to the next
watering interval
REMAIN_TIME

SUB

Subtract
Source A

N7:0

0<

Source B

C5:2.ACC

0<

Dest

N7:1

0<

Hours to the next
watering interval
REMAIN_TIME/0

N7:1

0

Bit 0 of time to
next watering
REMAIN0

O:0

2

Hours to the next
watering interval
REMAIN_TIME/1

N7:1

1

Bit 1 of time to
next watering
REMAIN1

O:0

3

Hours to the next
watering interval
REMAIN_TIME/2

N7:1

2

Bit 2 of time to
next watering
REMAIN2

O:0

4

Hours to the next
watering interval
REMAIN_TIME/3

N7:1

3

Bit 3 of time to
next watering
REMAIN3

O:0

5

<END>

0011

RSLogix 500 Cross Reference Report - Sorted by Address

O:0/0	- {P103} Pump to water plant OTE - File #2 - 6 XIC - File #2 - 6, 7
O:0/1	- {AH104} Alarm horn OTL - File #2 - 8 OTU - File #2 - 9 XIO - File #2 - 0, 6
O:0/2	- {REMAIN0} Bit 0 of time to next watering OTE - File #2 - 10
O:0/3	- {REMAIN1} Bit 1 of time to next watering OTE - File #2 - 10
O:0/4	- {REMAIN2} Bit 2 of time to next watering OTE - File #2 - 10
O:0/5	- {REMAIN3} Bit 3 of time to next watering OTE - File #2 - 10
I:0/0	- {SW101} Enable toggle switch XIC - File #2 - 0, 5, 6
I:0/1	- {LS102} Level switch; closed when water at correct level XIO - File #2 - 6, 8
I:0/2	- {OVERRIDE} Override push button to override timer operation XIC - File #2 - 4, 9
B3/0	- {START_PUMP} Start pump command from timer or operator OTE - File #2 - 5 XIC - File #2 - 6, 8
B3/1	- {ONS_BIT} ONS - File #2 - 4
B3/2	- {ONS2_BIT} ONS - File #2 - 9
B3/3	- {OVER_TRANS} OTE - File #2 - 4 XIC - File #2 - 5
T4:0	- {SEC_TIMER} Generates 1 second tic for clock TON - File #2 - 0
T4:0/DN	- XIC - File #2 - 1 XIO - File #2 - 0
T4:1	- {MAX_WTR_TMR} Times maximum watering interval TON - File #2 - 7
T4:1/DN	- XIC - File #2 - 8 XIO - File #2 - 6
C5:0	- {SEC_COUNT} Seconds counter for clock CTU - File #2 - 1 RES - File #2 - 2, 5
C5:0/DN	- XIC - File #2 - 2
C5:1	- {MIN_COUNT} Minutes counter for clock CTU - File #2 - 2 RES - File #2 - 3, 5
C5:1/DN	- XIC - File #2 - 3
C5:2	- {HOUR_COUNT} Hours counter for clock CTU - File #2 - 3 RES - File #2 - 5
C5:2/DN	- XIC - File #2 - 5
C5:2.ACC	- SUB - File #2 - 10
N7:0	- {WAT_INTERVAL} Desired watering interval, in hours SUB - File #2 - 10
N7:1	- {REMAIN_TIME} Hours to the next watering interval SUB - File #2 - 10
N7:1/0	- XIC - File #2 - 10
N7:1/1	- XIC - File #2 - 10
N7:1/2	- XIC - File #2 - 10
N7:1/3	- XIC - File #2 - 10