1 of 1

2. To: (Receiving Organization) WASTE TANK SAMPLING ENGINEERING		3. From: (Originating Organization) WASTE TANK SAMPLING ENGINEERING		4. Related EDT No.: N/A							
5. Proj./Prog./Dept./Div.: WASTE TANK SAMPLING		6. Cog. Engr.: E.J. WALDO		7. Purchase Order No.: N/A							
8. Originator Remarks: APPROVAL/RELEASE				9. Equip./Component No.: H-2-818186							
				10. System/Bldg./Facility: 200 GEN							
11. Receiver Remarks:				12. Major Assm. Dwg. No.: N/A							
				13. Permit/Permit Application No.: N/A							
				14. Required Response Date: 12/5/94							
15. DATA TRANSMITTED											
(A) Item No.	(B) Document/Drawing No.	(C) Sheet No.	(D) Rev. No.	(E) Title or Description of Data Transmitted	(F) Approval Designator	(G) Reason for Transmittal	(H) Originator Disposition	(I) Receiver Disposition			
1	WHC-SD-WM-RPT-102	N/A	0	RMCS EXHAUSTER DATA LOGGER CONFIGURATION	N/A	1	1				
16. KEY											
Approval Designator (F)		Reason for Transmittal (G)			Disposition (H) & (I)						
E, S, Q, D or N/A (see WHC-CM-3-5, Sec.12.7)		1. Approval 2. Release 3. Information 4. Review 5. Post-Review 6. Dist. (Receipt Acknow. Required)			1. Approved 2. Approved w/comment 3. Disapproved w/comment 4. Reviewed no/comment 5. Reviewed w/comment 6. Receipt acknowledged						
(G)	(H)	17. SIGNATURE/DISTRIBUTION (See Approval Designator for required signatures)						(G)	(H)		
Reason	Disp.	(J) Name	(K) Signature	(L) Date	(M) MSIN	(J) Name	(K) Signature	(L) Date	(M) MSIN	Reason	Disp.
1	1	Cog.Eng. E.J. WALDO	<i>E.J. Waldo</i>	12/2/94	S7-12	H.J. SCHMIDT			S6-87	3	
1	1	Cog. Mgr. G.J. MISKHO	<i>G.J. Miskho</i>	12/5/94	S7-12	R.D. FRANTZ			S6-87	3	
		QA	<i>For G.J. Miskho</i>								
		Safety									
		Env.									
3	1	J.D. ROBINSON	<i>J.D. Robinson</i>	12/2/94	H5-09						
3		A.P. MOUSEL			S7-12						
18. E.J. WALDO <i>E.J. Waldo</i> 12/2/94 Signature of EDT Date Originator			19. G.J. MISKHO Authorized Representative Date for Receiving Organization			20. G.J. MISKHO <i>G.J. Miskho</i> 12/2/94 Cognizant Manager Date			21. DOE APPROVAL (if required) Ctrl. No. ☐ Approved ☐ Approved w/comments ☐ Disapproved w/comments		

RELEASE AUTHORIZATION

Document Number: WHC-SD-WM-RPT-102, REV.0

Document Title: RMCS EXHAUSTER DATA LOGGER CONFIGURATION

Release Date: December 5, 1994

**This document was reviewed following the
procedures described in WHC-CM-3-4 and is:**

APPROVED FOR PUBLIC RELEASE

WHC Information Release Administration Specialist:

Kara M. Broz

December 5, 1994

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A-6001-400.2 (09/94) WEF256

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SUPPORTING DOCUMENT		1. Total Pages 10
2. Title RMCS EXHAUSTER DATA LOGGER CONFIGURATION	3. Number WHC-SD-WM-RPT-102	4. Rev No. 0
5. Key Words RMCS, EXHAUSTER <i>KMB 12/5/94</i>	6. Author Name: E.J. WALDO <i>E.J. Waldo</i> 12/2/94 Signature Organization/Charge Code 7CF20/N4058	
7. Abstract This report documents the configuration of the Chessell Model 4200 Data Logger used in the Rotary Mode Core Sampling (RMCS) Exhauster		
8. RELEASE STAMP <div>OFFICIAL RELEASE BY WHC DATE DEC 05 1994 <i>Sta. 4</i></div>		

RMCS EXHAUSTER DATA LOGGER CONFIGURATION

STANDARD CHANNEL CONFIGURATION												
CH #	RANGE SETTINGS					ALARM SETTINGS						
	IDENT	I/P TYPE	INPUT RANGE	OPEN/CLOSED	SCALE RANGE	VALUE FORMAT	AL #	ENABLE	TYPE	SET POINT	HYST-ERESIS	DWELL (SEC)
1	STACK FLOW RATE	V	0 - 5	N/A	0 - 391 SCFM	XXXXX.	1	UNLATCHED	DEV OUT	200 +/- 50	0	0
2	STACK TEMPERATURE	V	0 - 5	N/A	0 - 150 F	XXXXX.		NONE				
3	ALPHA SAMP FLOW RATE	V	0 - 5	N/A	0 - 3 SCFM	XXX.XX		NONE				
4	RECRD SAMP FLOW RATE	V	0 - 5	N/A	0 - 3 SCFM	XXX.XX		NONE				
5	BETA SAMP FLOW RATE	V	0 - 5	N/A	0 - 3 SCFM	XXX.XX		NONE				
6	SAMPLE TEMPERATURE	V	0 - 5	N/A	0 - 150 F	XXXXX.		NONE				
7	PUMP STATIC PRESSURE	V	0 - 5	N/A	0 - (136) " WC	XXXXX.		NONE				
8	TOC CONCENTRATION	V	0 - 5	N/A	0 - 4000 PPM variable	XXXXX.	1	LATCHED	ABS HI	var	0	5
							2	LATCHED	ABS HI	var	0	5
							3	TRIGGER	ABS LO	var	0	5
							4	LATCHED	ABS HI	var	0	5
9	AMMONIA MTR CONC ALM	DIG	N/A	ALARMED/NORMAL	N/A	N/A	1	LATCHED	ABS HI	ALARMED	0	5
							2	TRIGGER	ABS LO	NORMAL	0	5
10	ALPHA MTR RAD ALARM	DIG	N/A	ALARMED/NORMAL	N/A	N/A	1	LATCHED	DIG	ALARMED	N/A	5
							2	TRIGGER	DIG	NORMAL	N/A	5

RMCS EXHAUSTER DATA LOGGER CONFIGURATION

STANDARD CHANNEL CONFIGURATION												
CH #	RANGE SETTINGS						ALARM SETTINGS					
	IDENT	I/P TYPE	INPUT RANGE	OPEN/ CLOSED	SCALE RANGE	VALUE FORMAT	AL #	ENABLE	TYPE	SET POINT	HYST- ERESIS	DMELL (SEC)
11	ALPHA MTR DET FAIL	DIG	N/A	FAILED/ NORMAL	N/A	N/A	1	LATCHED	DIG	FAILED	N/A	5
							2	TRIGGER	DIG	NORMAL	N/A	5
12	BETA MTR RAD ALARM	DIG	N/A	ALARMED/ NORMAL	N/A	N/A	1	LATCHED	DIG	ALARMED	N/A	5
							2	TRIGGER	DIG	NORMAL	N/A	5
13	BETA MTR DET FAIL	DIG	N/A	FAILED/ NORMAL	N/A	N/A	1	LATCHED	DIG	FAILED	N/A	5
							2	TRIGGER	DIG	NORMAL	N/A	5
14	STACK FAN (ON-OFF)	DIG	N/A	OFF/ ON	N/A	N/A	1	TRIGGER	DIG	OFF	N/A	0
							2	TRIGGER	DIG	ON	N/A	0
15	PUMP P1 (ON-OFF)	DIG	N/A	OFF/ ON	N/A	N/A	1	TRIGGER	DIG	OFF	N/A	0
							2	TRIGGER	DIG	ON	N/A	0
16	NOT USED											
17	NOT USED											
18	PUMP P2 (ON-OFF)	DIG	N/A	OFF/ ON	N/A	N/A	1	TRIGGER	DIG	OFF	N/A	0
							2	TRIGGER	DIG	ON	N/A	0
19	PUMP FAIL	DIG	N/A	NORMAL/ FAILED	N/A	N/A	1	LATCHED	DIG	FAILED	N/A	10
20	NOT USED											
21	HEATER ELEMENT FAIL	DIG	N/A	FAILED/ NORMAL	N/A	N/A	1	LATCHED	DIG	FAILED	N/A	5
							2	TRIGGER	DIG	NORMAL	N/A	5

RMCS EXHAUSTER DATA LOGGER CONFIGURATION

STANDARD CHANNEL CONFIGURATION												
CH #	RANGE SETTINGS					ALARM SETTINGS						
	IDENT	I/P TYPE	INPUT RANGE	OPEN/CLOSED	SCALE RANGE	VALUE FORMAT	AL #	ENABLE	TYPE	SET POINT	HYST-ERESIS	DWELL (SEC)
22	HEATER OVERTEMP ALM	DIG	N/A	ALARMED/ NORMAL	N/A	N/A	1	LATCHED	DIG	ALARMED	N/A	5
23	HEPA INLET HUMIDITY	mA	4 - 20 250 OHM SHUNT	N/A	5 - 95 %	XXXX.	2	TRIGGER	DIG	NORMAL	N/A	5
							1	LATCHED	ABS HI	70	0	5
24	HEPA INLET TEMPERATURE	mA	4 - 20 250 OHM SHUNT	N/A	32 - 212 F	XXXX.	2	LATCHED	ABS HI	80	0	5
							1	LATCHED	ABS HI	180	0	5
25	AUTO SHTDN LOW FLOW	DIG	N/A	ALARMED/ NORMAL	N/A	N/A	1	LATCHED	DIG	ALARMED	N/A	0
26	AUTO SHTDN HIGH FLOW	DIG	N/A	ALARMED/ NORMAL	N/A	N/A	1	LATCHED	DIG	ALARMED	N/A	0
27	AUTO SHTDN LO TKN PR	DIG	N/A	ALARMED/ NORMAL	N/A	N/A	1	LATCHED	DIG	ALARMED	N/A	0
28	AUTO SHTDN PR-FLT DP	DIG	N/A	ALARMED/ NORMAL	N/A	N/A	1	LATCHED	DIG	ALARMED	N/A	0
29	AUTO SHTDN HEPA DP	DIG	N/A	ALARMED/ NORMAL	N/A	N/A	1	LATCHED	DIG	ALARMED	N/A	0
30	NOT USED											

RMCS EXHAUSTER DATA LOGGER CONFIGURATION

DERIVED CHANNEL CONFIGURATION										
CH #	FUNCTION AND RANGE SETTINGS				ALARM SETTINGS					
	IDENT	FUNCTION	SCALE RANGE	VALUE FORMAT	AL #	ENABLE	TYPE	SET POINT	HYSTER -ESIS	DWELL (SEC)
D1	CONSTANT 100	100	N/A	XXXXX.		NONE				
D2	CONSTANT 133.3	133.3	N/A	XXX.XX		NONE				
D3	Ch1 / Ch3	01 / 03	N/A	XXX.XX		NONE				
D4	D3 - D2	D03 - D02	N/A	XXX.XX		NONE				
D5	D4 / D2	D04 / D02	N/A	XXX.XX		NONE				
D6	D5 * D1	D05 * D01	-50 TO 50 %	XXX.XX		NONE				
D7	ALPHA SAMP FLOW VAR	AVG(D06) 1 MIN.	-50 TO 50 %	XXX.XX	1	LATCHED	DEV OUT	0 +/- 10	0	0
					2	TRIGGER	DEV IN	0 +/- 10	0	0
D8	Ch1 / Ch4	01 / 04	N/A	XXX.XX		NONE				
D9	D8 - D2	D08 - D02	N/A	XXX.XX		NONE				
D10	D9 / D2	D09 / D02	N/A	XXX.XX		NONE				
D11	D10 * D1	D10 * D01	-50 TO 50 %	XXX.XX		NONE				
D12	RECORD SAMP FLOW VAR	AVG(D11) 1 MIN.	-50 TO 50 %	XXX.XX	1	LATCHED	DEV OUT	0 +/- 10	0	0
					2	TRIGGER	DEV IN	0 +/- 10	0	0
D13	Ch1 / Ch5	01 / 05	N/A	XXX.XX		NONE				
D14	D13 - D2	D13 - D02	N/A	XXX.XX		NONE				
D15	D14 / D2	D14 / D02	N/A	XXX.XX		NONE				
D16	D15 * D1	D15 * D01	-50 TO 50 %	XXX.XX		NONE				

RMCS EXHAUSTER DATA LOGGER CONFIGURATION

DERIVED CHANNEL CONFIGURATION										
CH #	FUNCTION AND RANGE SETTINGS				ALARM SETTINGS					
	IDENT	FUNCTION	SCALE RANGE	VALUE FORMAT	AL #	ENABLE	TYPE	SET POINT	HYSTER -ESIS	DWELL (SEC)
D17	BETA SAMP FLOW VAR	AVG(D16) 1 MIN	-50 TO 50 %	XXX.XX	1	LATCHED	DEV OUT	0 +/- 10	0	0
					2	TRIGGER	DEV IN	0 +/- 10	0	0
TOTALISED CHANNEL CONFIGURATION										
#	IDENT	FUNCTION	PRE-SET							
T1	TOTAL STACK VOLUME	TOT(01)	0							
T2	TOTAL ALPHA SAMP VOL	TOT(03)	0							
T3	TOTAL RECRD SAMP VOL	TOT(04)	0							
T5	TOTAL BETA SAMP VOL	TOT(05)	0							

RMCS EXHAUSTER DATA LOGGER CONFIGURATION

MESSAGE CONFIGURATION			
MESSAGE #	MESSAGE TEXT		
1	<TIME> <DATE> <.NO> <.DE> <-PV> <.UN>		
2	<TIME> <DATE> DATA LOGGER SYSTEM ERROR		
LOG CONFIGURATION			
LOG #	AUTO PRINT INTERVAL	GROUP TITLE	GROUP CONTENTS AND FORMAT
1	2 HOURS	EXHAUSTER STATUS	08 VOC CONCENTRATION 10 ALPHA MTR RAD ALARM 12 BETA MTR RAD ALARM 30 01 STACK FLOW RATE D12 RECORD SAMP FLOW VAR 19 PUMP FAIL 21 HEATER ELEMENT FAIL 30 14 STACK FAN (ON-OFF) 15 PUMP P1 (ON-OFF) 02 STACK TEMPERATURE 24 HEPA INLET TEMP 04 RECORD SAMP FLOW RATE T1 TOTAL STACK VOLUME T3 TOTAL RECD SAMP VOL 09 AMMONIA CONCENTRAT 11 ALPHA MTR DET FAIL 13 BETA MTR DET FAIL 30 D7 ALPHA SAMP FLOW VAR D17 BETA SAMP FLOW VAR 23 HEPA INLET HUMIDITY 22 HEATER-OVERTEMP ALM 30 07 PUMP STATIC PRESSURE 18 PUMP P2 (ON-OFF) 06 SAMPLE TEMPERATURE 03 ALPHA SAMP FLOW RATE 05 BETA SAMP FLO RATE T2 TOTAL ALPHA SAMP VOL T4 TOTAL BETA SAMP VOL

RMCS EXHAUSTER DATA LOGGER CONFIGURATION

JOB ACTION CONFIGURATION						
FUNCTION	JOB			SOURCE		
	TYPE	ACTION	TRIGGER	TYPE	#	DESCRIPTION
ACTIVATE EXTERNAL COMMON ALARM LIGHT	RELAY	DRIVE RELAY 1 OF CARD 7	WHILE ACTIVE	EVENT	1	UNACKNOWLEDGED ALARM FROM EXHAUSTER STATUS GROUP
				EVENT	2	DATA LOGGER SYSTEM ERROR
SEND MESSAGE TO CHART	MESSAGE	1 TO CHART	ON GOING ACTIVE	ALARM	8 ₁	HIGH TOC ALARM - 25% OF LIMIT
					8 ₂	HIGH TOC ALARM - 50% OF LIMIT
					8 ₃	TOC LEVEL BACK BELOW 50% LIMIT
					8 ₄	HIGH TOC ALARM - 10% OF LFL
					9 ₁	HIGH AMMONIA CONCENTRATION
					9 ₂	NORMAL AMMONIA CONCENTRATION
					10 ₁	HIGH ALPHA MONITOR RADIATION
					10 ₂	NORMAL ALPHA MONITOR RADIATION
					11 ₁	ALPHA MONITOR DETECTOR FAILURE
					11 ₂	ALPHA MONITOR DETECTOR NORMAL
					12 ₁	HIGH BETA MONITOR RADIATION
					12 ₂	NORMAL BETA MONITOR RADIATION
					13 ₁	BETA MONITOR DETECTOR FAILURE
					13 ₂	BETA MONITOR DETECTOR NORMAL
					14 ₁	STACK FAN OFF
					14 ₂	STACK FAN ON
					15 ₁	PUMP P1 OFF

RMCS EXHAUSTER DATA LOGGER CONFIGURATION

JOB ACTION CONFIGURATION					
FUNCTION	JOB			SOURCE	
	TYPE	ACTION	TRIGGER	TYPE	# DESCRIPTION
SEND MESSAGE TO CHART (CONTINUED)	MESSAGE	1 TO CHART	ON GOING ACTIVE	ALARM	15 ₂ PUMP P1 ON
					18 ₁ PUMP P2 OFF
					18 ₂ PUMP P2 ON
					19 ₁ PUMP FAIL
					21 ₁ FAILED HEATER ELEMENT
					21 ₂ NORMAL HEATER ELEMENT
					22 ₁ HEATER OVERTEMPERATURE ALARM
					22 ₂ HEATER TEMPERATURE NORMAL
					23 ₁ 70% HEPA INLET HUMIDITY
					23 ₂ 80% HEPA INLET HUMIDITY
					24 ₁ 180 F HEPA INLET HUMIDITY
					24 ₂ 195 F HEPA INLET HUMIDITY
					25 ₁ AUTO SHUTDOWN HIGH STACK FLOW
					26 ₁ AUTO SHUTDOWN LOW STACK FLOW
					27 ₁ AUTO SHUTDOWN LOW TANK PRESSURE
					28 ₁ AUTO SHUTDOWN HIGH PRE-FILT DP
					29 ₁ AUTO SHUTDOWN HIGH HEPA DP
					D7 ₁ HIGH ALPHA SAMPLE FLOW VARIANCE
					D7 ₂ NORMAL ALPHA SAMPLE FLOW VAR.

RMCS EXHAUSTER DATA LOGGER CONFIGURATION

JOB ACTION CONFIGURATION						
FUNCTION	JOB			SOURCE		
	TYPE	ACTION	TRIGGER	TYPE	#	DESCRIPTION
SEND MESSAGE TO CHART (CONTINUED)	MESSAGE	1 TO CHART	ON GOING ACTIVE	ALARM	D12 ₁	HIGH RECORD SAMPLE FLOW VAR.
					D12 ₂	NORMAL RECORD SAMPLE FLOW VAR.
					D17 ₁	HIGH BETA SAMPLE FLOW VARIANCE
					D17 ₂	NORMAL BETA SAMPLE FLOW VAR.
PRINT FINAL STATUS LOG UPON SHUTDOWN	MESSAGE	2 TO CHART	ON GOING ACTIVE	EVENT	2	DATA LOGGER SYSTEM ERROR
	LOG	1 TO CHART	ON GOING ACTIVE	ALARM	14 ₁	STACK FAN OFF
RESET VOLUME TOTALISERS UPON STARTUP	PRESET	TOTALISERS GROUP T1-T4	ON GOING ACTIVE	ALARM	14 ₂	STACK FAN ON

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