Ondeo Level 1 – Low Risk Incident Investigation

Incident Title	RBM June effluent sample free chlorine contamination			**Incident Ref**	CEL-RBM-MEC-001		
Location of incident	Rod and Bar Mill			**Incident date & time** (in format dd/mm/yy hh:mm)	26/05/2016 12:30		
Incident Category	**Near Hit (NH)**			**Sub Category**	NH - Env		
Investigation Team Members		**1**	Graham Cunnea	**2**		**3**	

A **Incident Description** What happened	On 26-05-2016, I was working at the Rod and Bar Mill repairing a leaking Sodium Hypochlorite dosing line, the line was leaking from just above the discharge valve on the pump head. To carry out the repair I had to switch the pump off, remove the discharge line from the pump head, drain the discharge line, cut the split part of the line off, re-attach the discharge line to the pump head and re-prime the line, whilst carrying this task out I was wearing chemical resistant gloves which had Sodium Hypochlorite over them due to the nature of the repair being carried out. After completion of the repair i then went to collect the Rod and Bar monthly effluent sample to be sent for analysis, whilst collecting the sample i unknowingly contaminated the sample with Sodium Hypochlorite 15% strength by wearing the same gloves to collect the sample that were worn when repairing the pump, contamination occurred whilst handling the top of the bottle and the bottle lid. On 14-06-2016, I received the Rod and Bar Mill monthly effluent analysis results from our UKAS accredited laboratory, immediately i noticed that the free chlorine result was extremely high (5.95mg/l), i queried this with the lab and they confirmed the result was correct so i immediately carried out an investigation into this as our discharge consent limit for free chlorine is 0.1mg/l.
B **Actual Consequences**	None
C **Potential Consequences**	Free Chlorine discharge breach

D **Timeline**

Date / Time (in format dd/mm/yy hh:mm)	**Event**
26/05/2016 12:15	Carried out a repair on the Rod and Bar Mill Sodium Hypochlorite pump
26/05/2016 12:30	Collected the Rod and Bar Mill monthly effluent discharge samples
26/05/2016 16:45	Delivered the samples to the ALS drop off point in Cardiff
14/06/2016 15:34	Rod and Bar Mill effluent analysis results received via e mail from UKAS accredited laboratory
14/06/2016 16:00	Checked validity of Rod and Bar Mill free chlorine result with the laboratory who confirmed the result was correct
15/06/2016 09:00	Investigation into the cause of the high Rod and Bar Mill free chlorine result.
20/06/2016 15:00	Completion of the investigation

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E	**What changed / was different?**	Prior to collecting the Rod and Bar Mill monthly effluent samples, a repair was carried out on a Sodium Hypochlorite pump.		
F	**Similar events?**	None		
G	**Safety Documentation Review** *(assess the suitability of all associated HSE documentation, e.g. Risk Assessments/Method Statements, COSHH, LOLER, Manual Handling)*	Manual Handling		
H	**Incident Analysis**			
1	Immediate Causes of why incident "**A**" occurred	Contamination of the effluent sample due to wearing gloves with 15% Sodium Hypochlorite on them		
2	Why did "1" occur	The same gloves were worn to repair a Sodium Hypochlorite pump and to collect the sample		
3	Why did "2" occur	I personally repaired the pump and collected the sample, i did not change my gloves to collect the sample.		
4	Why did "3" occur	Attempting to carry out too many tasks at once.		
5	Why did "4" occur			
6	Why did "5" occur			
7	Why did "6" occur			
I	**Root Causes** – based on incident analysis			
RC1	Gloves contaminated with 15% Sodium Hypochlorite were worn whilst collecting the Rod and Bar Mill monthly effluent sample.		Root Cause Type	Control

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RC2		Root Cause Type	
RC3		Root Cause Type	
RC4		Root Cause Type	

J	**Do similar risks exist elsewhere?**

K **Corrective Actions** – based on incident analysis / root causes
Remember to make your actions **SMART** – **S**pecific, **M**easureable, **A**ssigned to someone, **R**ealistic, & **T**ime bound

#	Action	Responsible	Due by	Action tracker ref
1	Write a procedure in the correct method of collecting the Rod and Bar Mill monthly effluent sample to ensure this incident is never repeated.	Graham Cunnea	31/08/2016	ACT16-0925
2				
3				
4				
5				

ROD AND BAR MILL DISCHARGE TO DOCK SAMPLE LOG

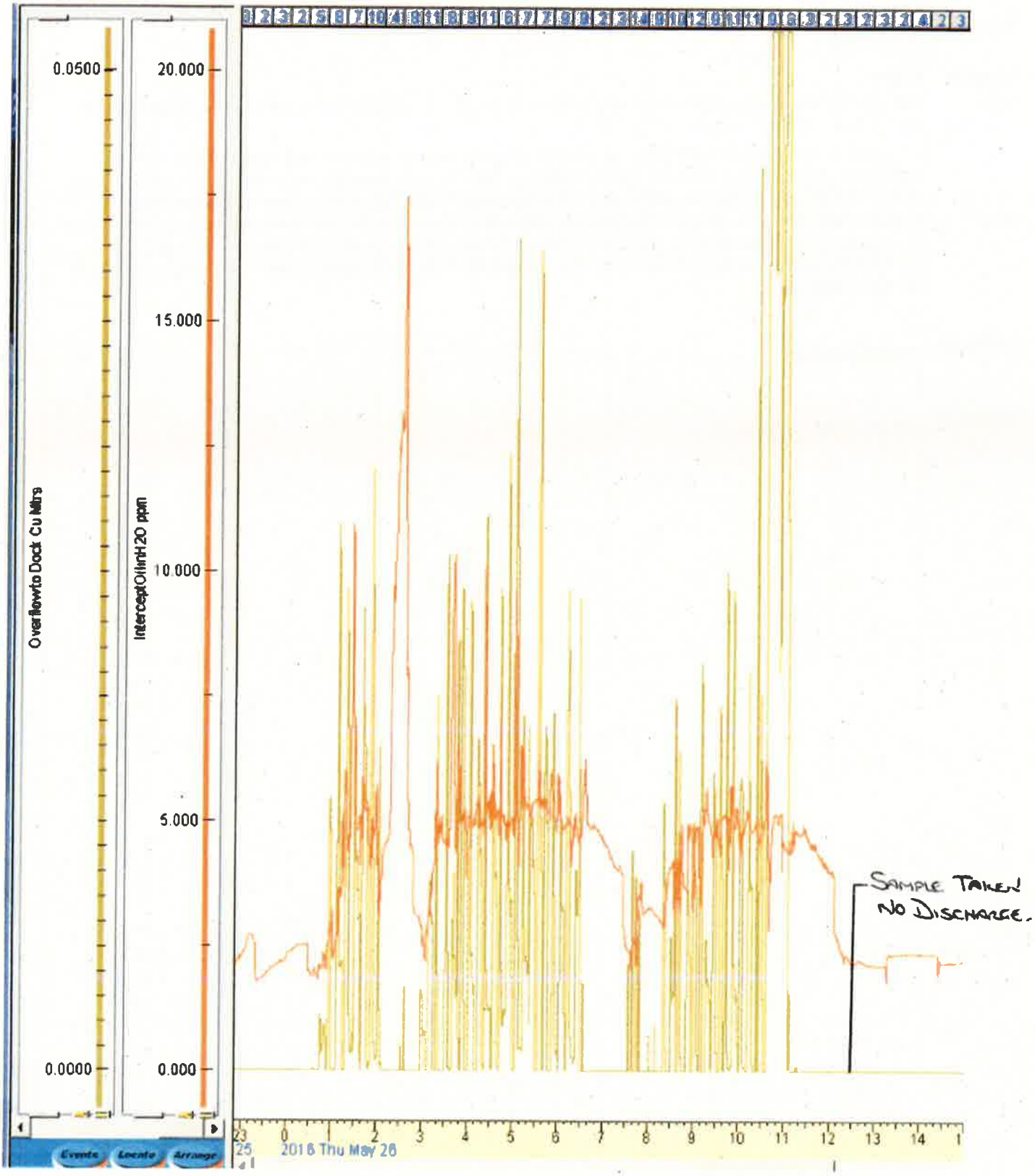
MAXIMUM LIMTS FOR DISCHARGE : PH = 6.5 – 9.5, CHLORINE = 0.1mg/l, OIL = 5.0mg/l

DO NOT DISCHARGE TO DOCK IF THESE LIMITS ARE EXCEEDED, INFORM SUEZ TEAM LEADER AND CELSA SHIFT MANAGER.

DATE	TIME	PH	CHLORINE	OIL	SIGN
4-5-16	0809	7.1	0.00	1.5	PB
5-5-16	07.37	7.2	0.00	1.2	PB
9-5-16	10.30	7.2	0.02	1.1	RC
10.5.16	11.50	7.2	0.02	1.4	RC
11.5.16	10.00	7.4	0.04	2.0	RC
17.5.16	16.49	7.2	0.02	4.5	RC
26-5-16	08:00	7.4	0.01	2.0	RC
2.6.16	10.30	7.2	0.01	1.7	SH
13.6.16	9.05	7.3	0.1	20	RC
15.6.16	8.37	7.2	0.01	2.1	PB
16-6-16	14.40	7.0	0.01	1.5	RC
19/6/16	8.45	7.0	0.1	2.9	SA

Cunnea, Graham

From: Steve Thomas <STHOMAST@celsauk.com>
Sent: 20 June 2016 15:10
To: Cunnea, Graham
Subject: Discharge to Dock



Cunnea, Graham

From: Graham.CUNNEA@ondeo-is.com
Sent: 20 June 2016 15:00
To: Cunnea, Graham
Subject: Action Assigned - ACT16-0925

Action Ref : ACT16-0925

Category : Quality

Action Required : Write a robust procedure for collecting the Rod and Bar Mill monthly effluent samples so that any sort of cross contamination is avoided in future.

Notes : On 14/06/2016 an out of spec result on Free Chlorine (5.95) was returned from the UKAS accredited laboratory, the discharge consent limit is 0.1mg/l, when this was investigated, it was found that this level of free chlorine wasn't discharged to dock from the Rod and Bar Mill, in fact, the water sample was contaminated with 15% Sodium Hypochlorite, this was because the sampler wore the same gloves when he collected the sample that he wore when he carried out a repair of the Rod and Bar Mill Sodium Hypochlorite pump, Sodium Hypochlorite was transferred from the samplers gloves onto the lip and lid of the sample bottle.

Raised By : Graham Cunnea

Created By : Graham CUNNEA 20/06/2016