

Appendix I

Decontamination pack

Plant System: Bio Treatment

	Equipment Name	Equipment Number	P&ID for Linework Decommissioning
	No.1 Spill Containment & Recycle Tank	5031-160	W1408751
	No.1 Spill Cont/Recycle Tank Recirc. Pump No.1	5031-161	W1408751
	No.1 Spill Cont/Recycle Tank Recirc. Pump No.2	5031-162	W1408751
	Acids Area Sump	5031-571	W1365948
	Acids Area Sump Pump No.1	5031-598	W1365948
	Acids Area Sump Pump No.2	5031-599	W1365948
	Water And Equalisation Tank	5031-600	W1408752
	No.1 Effluent Transfer Pump	5031-601	W1408752
	No.2 Effluent Transfer Pump	5031-602	W1408752
	No.1 Water And Liquor Equalisation Jet Mix Pump	5031-603	W1408752
	No.2 Water And Liquor Equalisation Jet Mix Pump	5031-604	W1408752
	Effluent Dump Tank	5031-605	W1365942
	Dump Tank Jet Mix & Transfer Pump	5031-606	W1365942
	Crude Building Sump		W1365706
	No.1 Crude Building Sump Pump	5031-935	W1365706
	No.2 Crude Building Sump Pump	5031-936	W1365706
	Salt Loading Sump		W1365899
	No.1 Salt Loading Sump Pump	5031-2255	W1365899
	No.2 Salt Loading Sump Pump	5031-2256	W1365899
	Salt Building Sump		W1408729
	No.1 Salt Building Sump Pump	5031-2394	W1408729
	No.2 Salt Building Sump Pump	5031-2395	W1408729
	Analyser House Sample Pump (Copper Analyser)	5031-4621	W1351279
	NACS/Purge Building Sump		W1351310
	No.1 NACS/Purge Building Sump Pump	5031-4631	W1351310
	No.2 NACS/Purge Building Sump Pump	5031-4641	W1351310
	Ags/Methanol Storage Sump		W1351253
	Ags/Methanol Storage Sump Pump	5031-4670	W1351253
	Tank Farm Sump		W1351274
	Tank Farm Sump No.1 Pump	5031-4811	W1351274
	Tank Farm Sump No.2 Pump	5031-4813	W1351274

BIO TREATMENT ANALYSER SYSTEM SHUT DOWN PLAN SHEET 1

EQUIPMENT	TASK	COMPLETE (SIGN OFF)	DATE
AA2 NACS O/HEADS TOC QT95402	Isolate valves in sample cabinet and remove filter. Then drain down sample system of liquid. Isolate sample supply to analyser from sample cabinet - check if disconnection and blank is needed.		14/09/09
	Flush sample / reagent / standard / lines with water for a few hours (remove reagents and standard solutions)		14/09/09
	Isolate power from analyser using approved isolator (next to analyser) and MCB in DB.		14/09/09
	Purge the analyser reactor / sample / reagent lines / glassware with air to remove all liquids from the analyser		14/09/09
	Remove mercury filled UV lamps and bring back to labs for disposal		14/09/09
AA2 NACS O/HEADS CU QT95403	Isolate sample supply to analyser from sample cabinet.		14/09/09
	Isolate valves in sample cabinet and remove filter. Then drain down sample system of liquid.		14/09/09
	Flush sample / reagent / standard / lines with water using a standard 50ml lab syringe (remove reagents and standard solutions)		14/09/09
	Remove and dry the analyser reaction cup then purge sample / reagent / Standard lines with air to remove all liquids from the analyser. Replace cup.		14/09/09
	Isolate power from analyser using approved isolator (next to analyser) and MCB in DB.		14/09/09
AA2 NACS O/HEADS Cond/ity QT 95404	Isolate sample supply to probe and drain sample line / probe housing.		14/09/09
	Isolate Power Supply to Instrument via house MCB in DB		14/09/09



BIO TREATMENT ANALYSER SYSTEM SHUT DOWN PLAN SHEET 2

EQUIPMENT	TASK	COMPLETE (SIGN OFF)	DATE
HMD EFFLUENT TOC QT95400	Isolate valves in sample cabinet and remove filter. Then drain down sample system of liquid. Isolate sample supply to analyser from sample cabinet - check if disconnection and blank is needed.		02/10/09
	Flush sample / reagent / standard / lines with water for a few hours (remove reagents and standard solutions)		02/10/09
	Isolate power from analyser using approved isolator (next to analyser) and MCB in DB.		02/10/09
	Purge the analyser reactor / sample / reagent lines / glassware with air to remove all liquids from the analyser		02/10/09
	Remove mercury filled UV lamps and bring back to labs for disposal		02/10/09
HMD EFFLUENT AMMONIA QT95403	Isolate sample supply to analyser from sample cabinet.		02/10/09
	Isolate valves in sample cabinet and remove filter. Then drain down sample system of liquid.		02/10/09
	Flush sample / reagent / standard / lines with water using a standard 50ml lab syringe (remove reagents and standard solutions)		02/10/09
	Remove and dry the analyser reaction cup then purge sample / reagent / Standard lines with air to remove all liquids from the analyser. Replace cup.		02/10/09
	Isolate power from analyser using approved isolator (next to analyser) and MCB in DB.		02/10/09



BIO TREATMENT ANALYSER SYSTEM SHUT DOWN PLAN SHEET 3

EQUIPMENT	TASK	COMPLETE (SIGN OFF)	DATE
EXPORT TO NWL TOC QT95406	Isolate valves in sample cabinet and remove filter. Then drain down sample system of liquid. Isolate sample supply to analyser from sample cabinet - check if disconnection and blank is needed.		9/10/09
	Flush sample / reagent / standard / lines with water for a few hours (remove reagents and standard solutions)		9/10/09
	Isolate power from analyser using approved isolator (next to analyser) and MCB in DB.		9/10/09
	Purge the analyser reactor / sample / reagent lines / glassware with air to remove all liquids from the analyser		9/10/09
	Remove mercury filled UV lamps and bring back to labs for disposal		9/10/09
EXPORT TO NWL CU QT95407	Isolate sample supply to analyser from sample cabinet - check if disconnection and blank is needed.		9/10/09
	Isolate valves in sample cabinet and remove filter. Then drain down sample system of liquid.		9/10/09
	Flush sample / reagent / standard / lines with water using a standard 50ml lab syringe (remove reagents and standard solutions)		9/10/09
	Remove and dry the analyser reaction cup then purge sample / reagent / Standard lines with air to remove all liquids from the analyser. Replace cup.		9/10/09
	Isolate power from analyser using approved isolator (next to analyser) and MCB in DB.		9/10/09
EXPORT TO NWL pH QT 95405	Isolate sample supply to probe and drain sample line / probe housing.		9/10/09
	Isolate Power Supply to Instrument via MCB in DB.		9/10/09
EXPORT TO NWL AUTOSAMPLER	Isolate sample supply to autosampler pump via an isolation valve within the sample cabinet.		9/10/09
	Flush out sample line with water using a lab syringe then compressed air.		9/10/09
	Isolate Power Supply to Instrument via MCB in DB.		9/10/09
UTILITIES	Isolate water supply to analyser house at nearest available isolation valve.		9/10/09
	Drain down the DI water tank.		8/10/09
	Isolate instrument air to analyser house if able		9/10/09
	Isolate the electricity supply to entire analyser house at RCD/main isolator		9/10/09

AA1 & 2 REFINED EFF ANALYSER SYSTEM SHUT DOWN PLAN

EQUIPMENT	TASK	COMPLETE (SIGN OFF)	DATE
FPA 800 Copper XT95480	Isolate sample inlet to overflow pot		02/10/09
	Drain down sample line and remove dirty filter from sample pot		02/10/09
	Isolate power to sample peristaltic pump by removing 3 pin plug from wall socket. Open drain valve on sample de-bubbler/u-tube to drain off.		02/10/09
	Remove and dry the analyser reaction cup then purge sample / reagent / Standard lines with air to remove all liquids from the analyser. Replace cup.		02/10/09
	Isolate power from analyser by removing 3 pin plug from wall socket.		02/10/09
PPM Protoc TOC XT95479	Flush sample / reagent / standard lines with water for a couple of hours (remove reagent and standard)		02/10/09
	Isolate power from analyser by removing 3 pin plug from wall socket.		02/10/09
	Purge the analyser reactor / sample / reagent lines / glassware with air to remove all liquids from the analyser		02/10/09
	Remove mercury filled UV lamps and bring back to labs for disposal		02/10/09
Yokogawa Cond/ity XT41653	Isolate sample supply to probe and drain sample line / probe housing.		02/10/09
	Isolate Power Supply to Instrument via house RCD.		02/10/09
UTILITIES	Isolate and lock off Instrument air supply to analyser house – determine if line disconnection and blanking is required		02/10/09
	Isolate power to all equipment within the analyser house using the main power breakers - determine if able to lock off supply or if securing isolation enclosure is satisfactory		02/10/09
	Isolate water supply to analyser house.		02/10/09



CRUDE TF SUMP ANALYSER SYSTEM SHUT DOWN PLAN

EQUIPMENT	TASK	COMPLETE (SIGN OFF)	DATE
TYTRONIC SENTINEL CU XT44290	Isolate main sample supply valve (may require permission/help from operations)		05/10/09
	Isolate valves in sample cabinet and remove filter. Then drain down sample system of liquid.		05/10/09
	Flush sample / reagent / standard / lines with water using a standard 50ml lab syringe (remove reagents and standard solutions)		05/10/09
	Remove and dry the analyser reaction cup then purge sample / reagent / Standard lines with air to remove all liquids from the analyser. Replace cup.		05/10/09
	Isolate power from analyser by switching off at MCB in DB.		05/10/09
PPM PROTOC 300 XT41643	Isolate sample supply sample cabinet.		05/10/09
	Open filter enclosure in sample cabinet to drain down sample line – leave open clean/remove filter if required		05/10/09
	Flush sample / reagent / standard lines with water for a couple of hours (remove reagent and standard)		05/10/09
	Isolate power from analyser by switching off at MCB in DB.		05/10/09
	Purge the analyser reactor / sample / reagent lines / glassware with air to remove all liquids from the analyser		05/10/09
	Remove mercury filled UV lamps and bring back to labs for disposal		05/10/09
YOKOGAWA CONDUCTIVITY XT41653	Isolate sample supply to probe and drain sample line / probe housing.		05/10/09
	Isolate power from analyser by switching off at MCB in DB.		05/10/09
DIONEX DX 800 LC	Isolate all sample valves and drain down sample system via drain line in sample cabinet		05/10/09
	Remove reagents and standards - also remove 1/8" lines from underside of analyser		05/10/09
	Isolate power from analyser by switching off at MCB in DB.		05/10/09
UTILITIES	Isolate water supply to analyser house at nearest available isolation valve.		05/10/09
	Drain down the DI water tank.		05/10/09
	Isolate instrument air to analyser house.		05/10/09
	Isolate the electricity supply to entire analyser house at RCD/main isolator.		05/10/09

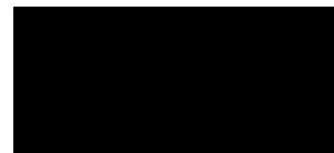
CRUDE BUILDING SUMP ANALYSER SYSTEM SHUT DOWN PLAN

EQUIPMENT	TASK	COMPLETE (SIGN OFF)	DATE
TYTRONIC SENTINEL CU XT44290	Isolate sample supply valve (may require permission/help from operations)		30/09/09
	Isolate valves in sample cabinet and remove filter. Then drain down sample system of liquid.		30/09/09
	Flush sample / reagent / standard / lines with water using a standard 50ml lab syringe (remove reagents and standard solutions)		30/09/09
	Remove and dry the analyser reaction cup then purge sample / reagent / Standard lines with air to remove all liquids from the analyser. Replace cup.		30/09/09
	Isolate power from analyser by switching off at MCB in DB.		30/09/09
UTILITIES	Isolate water supply to analyser house at nearest available isolation valve.		30/09/09
	Drain down the DI water tank.		30/09/09
	Isolate the electricity supply to entire analyser house at RCD/main isolator.		30/09/09



NACS/PURGE BUILDING SUMP ANALYSER SYSTEM SHUT DOWN PLAN

EQUIPMENT	TASK	COMPLETE (SIGN OFF)	DATE
TYTRONIC SENTINEL CU XT41639	Isolate power to sample supply pump (may require permission/help from operations)		30/09/09
	Isolate valves in sample cabinet and remove filter. Then drain down sample system of liquid.		30/09/09
	Flush sample / reagent / standard / lines with water using a standard 50ml lab syringe (remove reagents and standard solutions)		30/09/09
	Remove and dry the analyser reaction cup then purge sample / reagent / Standard lines with air to remove all liquids from the analyser. Replace cup.		30/09/09
	Isolate power from analyser by switching off at MCB in DB.		30/09/09
UTILITIES	Isolate water supply to analyser house at nearest available isolation valve.		30/09/09
	Drain down the DI water tank.		30/09/09
	Isolate the electricity supply to entire analyser house at RCD/main isolator.		30/09/09



AA2 AT-PLANT COPPER ANALYSER SHUT DOWN PLAN

EQUIPMENT	TASK	COMPLETE (SIGN OFF)	DATE
TYTRONIC SENTINEL CU (NO TAG)	Flush sample / reagent / standard / lines with water using a standard 50ml lab syringe (remove reagents, waste solution under analyser and standard solutions)		7/10/09
	Remove and dry the analyser reaction cup then purge sample / reagent / Standard lines with air to remove all liquids from the analyser. Replace cup.		7/10/09
	Isolate power from analyser by unplugging 3 pin plug from wall socket.		7/10/09

