DECOMMISSIONING PROJECT

D010

P2 BUILDING

PROCESS INFORMATION

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PROJECT NUMBER	***Decommissioning 010***
PROJECT:	*P2 Production Building*
PLANT:	*P2*
DOCUMENT REFERENCE:	*D010/PROCESS/012 Decontamination Summary Report*
DATE:	12th October 2012
BY:	*Jane Mills*

Sign-off:

Name	Position	Signature	Date
Jane Mills	Site Engineering Manager	Jane Mills JANE MILLS	12/10/12
Duncan Marlor	Site Manager		12/10/12.

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1. Summary

The Production Facility in P2 Building has been through a programme of decontamination and decommissioning to ensure that as much preparation as possible has been completed ready for demolition.

The purpose of this report is to detail the status of the equipment on the plant and to identify any potential areas of contamination that remain in the building.

This report does not waive the responsibility of the Principal Contractor to take reasonable precautions during the demolition to ensure that the work-force is not exposed to an unreasonable risk.

2. Introduction

This report details the status of all plant and equipment that have been decontaminated as part of the P2 building decommissioning project. This document along with the E.I.C reports gives the plant status for the purposes of demolition.

Where equipment/pipework has been flushed with water, these lines have been sprayed with yellow paint. If no flushing has been completed (i.e spiral wound pipework) or where obviously visual contamination remains that cannot be removed by flushing, these items have been sprayed with BLUE paint.

These visual indications do not provide a guarantee as to the "Cleanliness" of the equipment, only that the pipework or equipment has been flushed with water or subject to a production clean.

All decontamination has been completed following D010/PROCESS/006 – Decontamination Procedure – P2 Production Building. Any amendments to the decontamination that were completed as a requirement of the physical decontamination process have been hand-written into the Decontamination Procedure document.

3. Plant Status

Table 3.1 Plant Status Summary

Equipment Number	Decontamination Method	Status
P2-18	Solid debris removed by sweeping	Potentially contaminated with Parabens
ACM Mill & associated hoppers	Mill stripped down and cleaned as for product changeover. All filters removed	Potentially contaminated with Parabens
Fluid Bed Driers	Driers stripped down as much as possible and brushed to clean. Ductwork not cleaned	Ductwork will be contaminated with Propyl/Ethyl Paraben. Driers potentially contaminated with Propyl/Ethyl Paraben.
Scrubber	Water areas sterilised with Sodium Hypochlorite and flushed.	Will be contaminated with Propyl/Ethyl Paraben
Demag Unit	Visible powder removed	Potentially contaminated with Parabens

DCE Units • P2-04 • P2-03 • P2-02	Filter elements removed and DCE units cleaned of as much powder as possible.	All DCE units and spiral wound pipework should be considered contaminated with Parabens.

Where testing has been completed, this does **NOT** guarantee that the item is free from contamination, only that it has been tested for certain chemicals that could be present. **NO GUARANTEES ARE GIVEN ON THE CLEANLINESS OF THE EQUIPMENT.**

All utility supplies have been isolated and the plant disconnected.

ANY EQUIPMENT NOT DETAILED IN THIS REPORT SHOULD BE TREATED AS CONTAMINATED AND LIVE.

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PROJECT NUMBER	***Decommissioning 010***
PROJECT:	*P2 Building Decommissioning*
PLANT:	*P2*
DOCUMENT REFERENCE:	*D010/PROCESS/001 Project Scope*
DATE:	11th November 2011
BY:	*Jane Mills*

Project Approvals:

Name	Position	Signature	Date
Jane Mills	Site Engineering Manager	Jane Mills JANE MILLS	11/11/11
Paul Davies	Project Engineer	PR	14/11/2011
John Spence	Project Engineer	JS	21/11/2011
Scott Cinderby	ESHA Manager	S. Cinderby	24.11.11.
Michael Macintosh	Plant Manager	MR Macintosh	24/11/11
Duncan Marlor	Site Manager		28/11/11

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1. Introduction: Business Case

Production in P2 will cease production in 2012 as the material produced is due to be sourced from an external supplier. These facilities are therefore redundant and require decommissioning. The purpose of this project is to ensure that the building P2 is decommissioned in such a way to leave the plant in a known condition.

As Pontypridd site is due to shutdown, it is essential that the condition and status of all plants is known and recorded in order to reduce the potential of accidents or incidents during any future demolition activities. This project will ensure that the plant status is recorded and any isolations/equipment removals are documented.

2. Project Summary

This project details the activities and isolations required for decommissioning to ensure that the plant is left in a "known" condition and all services (e.g. power, utilities) are left "cold & dead". In order to leave the production area in a safe condition, it will be necessary to leave power to all the lighting in the building until such time that it is proposed to demolish the building.

Currently there are no items of equipment to be transferred to other Clariant production sites, therefore, all items of equipment are due to remain in the building once decontaminated and decommissioned. It is currently anticipated that this equipment may be either sold or scrapped by the demolition contractor during any demolition activities.

The main items of equipment covered by this decommissioning are:

- P2-18
- ACM-2 Mill
- De-mag unit
- FBD 1/2/3
- P2 Sieve
- P2 Extraction system/scrubber
- P2-03 DCE Unit
- P2-04 DCE Unit
- All ancillary equipment associated these vessels is redundant and requires decommissioning.
- Utility supplies
    - Nitrogen
    - Instrument Air – receiver installed in P2 building is part of the main site instrument air system and will be decommissioned separately.
    - Electricity

The decontamination/decommissioning of any other equipment in P2 building is outside the scope of this project and will be dealt with separately.

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3. Project Scope

3.1 Process/Production

Decontamination of P2 Building in D010/PROCESS/006 – Decontamination Procedure

3.2 Mechanical Scope

Decommissioning of P2 Building identified in D010/MECH/001 – Mechanical Project Summary

3.2 E.I & C Scope

Electrical, Instrumentation and Control decommissioning of P2 Building as identified in D010/E.I&C/001 – E.I.&C Scope Document.

3.3 Other

- Update insurance schedule to remove equipment from inspection schedule – Pressure and Lifting Equipment
- Update SAP to remove, delete/disable preventative maintenance routines.
- Review spares and assess any changes to spares holding.
- Update asset register with plant status.

4. Project Schedule

4.1 Project Schedule

Production ceases in Q2 2012. Process Boil-outs to remove gross contamination to occur after production ceases. Decommissioning activities to start June 2012.

5. Reference Documents

- See D010 - Document Register for details of all project documents.

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CHEMICAL INFORMATION – DECOMMISSIONING PROJECT D010, P2 PRODUCTION BUILDING

Project Number: D010
Project Description: P2 Production Decommissioning
Document Reference: D010/PROCESS/003 – Chemical Information

Products produced:

Production Building	FINISHED PRODUCT HANDLING	Product
P2	P2-18 ACM-Mill	Methyl Paraben
		Propyl Paraben
		Ethyl Paraben

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PROJECT NUMBER	***Decommissioning 010***
PROJECT:	*Decommissioning of P2 Production plants*
PLANT:	*P2*
Document Reference	*D010/PROCESS/006 Decontamination Procedure*
DATE:	19th June 2012
BY:	*Jane Mills*

The purpose of this document is to detail the decontamination procedure to be followed to achieve a "KNOWN" condition in terms of chemical contamination for the various items of equipment associated with the decommissioning project. This procedure will NOT "Clean" the equipment.

Name	Position	Signature	Date
Jane Mills	Site Engineering Manager	Jane Mills JANE MILLS	28/6/12
Paul Davies	Project Engineer		3/8/2012
John Spence	Project Engineer		28/6/12
Scott Cinderby	ESHA Manager	S. Cinderby	29.06.12
Michael Macintosh	Plant Manager	M R MacIntosh	23/7/12.
Duncan Marlor	Site Manager		28/8/12

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HEALTH & SAFETY STATEMENT

Although a Decontamination Risk Assessment has been completed, all activities during the decontamination and decommissioning are required to be completed under a permit to work issued by the Team Leader. This will include all Operator activity for the flushing of pipework as well as all maintenance/contractor activity for connecting/disconnecting pipework and hoses.

1. Reference Documents

The following documents are required for reference when using this decontamination procedure:

- D010-PROCESS-001 Project Scope
- D010-PROCESS-002 P&ID List
- D010-PROCESS-003 Chemical Information
- D010-PROCESS-004 Line List
- D010-PROCESS-005 Decontamination Register
- D010-PROCESS-007 Decontamination Risk Assessment
- QA Testing Guidelines for Materials in Chemical Information List.

P&ID's of the plant as identified in Document D010-PROCESS-002 P&ID List.

2. Equipment/Items Required

The following items of equipment will be required in order to complete the decontamination identified in the procedures. This equipment should be obtained before starting any decontamination work and identified as for "Decommissioning ONLY".

- Process Decommissioning Locks
- IBC for clean water
- Waste IBC's for collecting effluent.
- Air diaphragm pump for direct transfer of water into process vessels.
- Hose and lance assembly for connection to air diaphragm pump to empty IBC.
- Hose connection for transfer into process vessels
- Air line for connection of diaphragm pump
- A pallet truck or Fork Lift truck will be required for moving IBC's.

3. Control Overrides Required

This plant is operated in manual so no overrides are required.

4. Procedures for Decontamination

Precautions identified in the Decontamination Risk Assessment (D010-PROCESS-D007) must be followed when completing the decontamination identified. For all line breaks or temporary pipework, a permit to work must be obtained.

4.1 P2-18

- This vessel has not been used for a considerable period of time. Inspect vessel for debris.
- Solid residues to be brushed out as much as possible then vessel washed..
- A boil-out cannot be completed.

Process Decommissioning of P2-18 completed	
Signature: J. Mills Name: J. Mills	Date: 15/8/12

4.2 P2 ACM Mill

- Mill to be stripped down for product changeover as per standard production/maintenance procedures.
- All pipework to be cleaned as part of this product changeover, this will also include the mill and mill hopper.
- Bag filters to be disposed of as solid waste.
- All connecting pipework to be removed for cleaning.
- Volkmann transfer unit to be disassembled ready for cleaning, candles from this to be disposed of as solid waste.
- Compressed air line to mill unit to be isolated and disconnected.
- Scales and transfer rollers to be cleaned.

Process Decommissioning of P2 ACM Mill completed	
Signature: J. Mills Name: J. Mills	Date: 15/8/12

4.3 P2 FBD (x 3).

- Isolate steam to FBD's in order to enable cleaning.
- Remove carts from FBD, ~~remove filter from cart and clean cart.~~
- Open up side panels on FBD to clean unit.
- Remove filter bags from unit.
- All traces of solid residue to be removed as much as possible from drier.
- Extraction ductwork to be inspected for degree of solid residue contamination.
- If significant solid residue then as much solid material to be removed as possible.
- Ductwork to be labelled as contaminated.

Process Decommissioning of P2 FBD (x3) Complete	
Signature: J. Mills Name: J. MILLS	Date: 18/7/12

4.4 P2 Scrubber

- Remove both doors on rear of scrubber ductwork for cleaning.
- Remove discharge hood to allow better access to scrubber body.
- Run-out water from sump to waste – valves on pump discharge can be arranged to complete this.
- Refill with water and add 20litres of Sodium Hypochlorite and recirculated around through water spray nozzles to sterilise as stagnant water previously.
- Run this water out to waste.
- Remove lid on sump.
- Jet wash sump to remove solid residues.
- Refill sump with water and add 20litres of Sodium Hypochlorite to ensure decontaminated.
- Empty sump to waste.
- All ductwork to be labelled as contaminated.

Process Decommissioning of P2 Scrubber complete	
Signature: J. Mills Name: J. MILLS	Date: 18/7/12

4.5 De-mag unit

- Remove dropping tube and magnets from hopper
- Brush out solid residues from hopper
- Jet wash if required to remove residual material.

Process Decommissioning of ~~P2 Scrubber~~ DEMAG complete	
Signature: J. Mills Name: J. MILLS	Date: 21/8/12

4.6 P2 DCE Units.

There are 3 DCE units associated with P2 building. These will all need to be separately stripped down, although the ductwork in each case will remain potentially contaminated.

4.6.1 P2-04 Demag DCE Unit (located outside P2 building)

- Remove door on side of box unit.
- Filters to be removed and disposed of as solid waste.
- Empty bin and vacuum to remove as much solid residue as possible from box unit.

4.6.2 P2-03 DCE Unit – Hoods/sieve P2 (located outside P2 building)

- Remove door on side of box unit.
- Filters to be removed and disposed of as solid waste.
- Empty bin and vacuum to remove as much solid residue as possible from box unit.

4.6.3 P2-02 DCE Unit (Located inside P2 building)

- Remove door on side of box unit.
- Filters to be removed and disposed of as solid waste.
- Empty bin and vacuum to remove as much solid residue as possible from box unit.

All ductwork to these DCE units and the DCE units themselves to be labelled as potentially contaminated.

Process Decommissioning of DCE Units P2-02, P2-03, P2-04 completed. All units and associated ductwork remain potentially contaminated with solid residue.	
Signature: J. Mills Name: J. MILLS	Date: 18/7/12

4.7 Sieve Unit

- Strip down unit for cleaning to remove all residues.
- Clean unit.

Process Decontamination of sieve unit completed	
Signature: J. Mills Name: J. Mills	Date: 18/7/12

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