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TOYOTA
OK for PR.

Julia Frost
Regulatory and Community Liaison Officer
Natural Resources Wales
North Wales
Chester Road
Buckley
Flintshire, CH7 3AJ

Date: 21/07/2016

Permit: EPR/BK6483IU/V003/4/5

Dear Julia,

I'm writing to inform NRW that we will install a new sand core moulding machine at our Deeside facility in August 2016. The new machine uses the same principle as the existing sand core moulding machines and will support production of existing ZR engine model variants. The sand cores are used in the Low Pressure Casting process to form the engine cavities. The production volumes will not increase beyond our permitted capacity and will remain similar to current levels.

Please find attached an environmental impact assessment for the new machine and also a location map.

The new machine will start operation on 22nd August 2016, after the annual 2 week shutdown. I would be grateful if NRW could confirm our approach is acceptable prior to 28th July 2016.

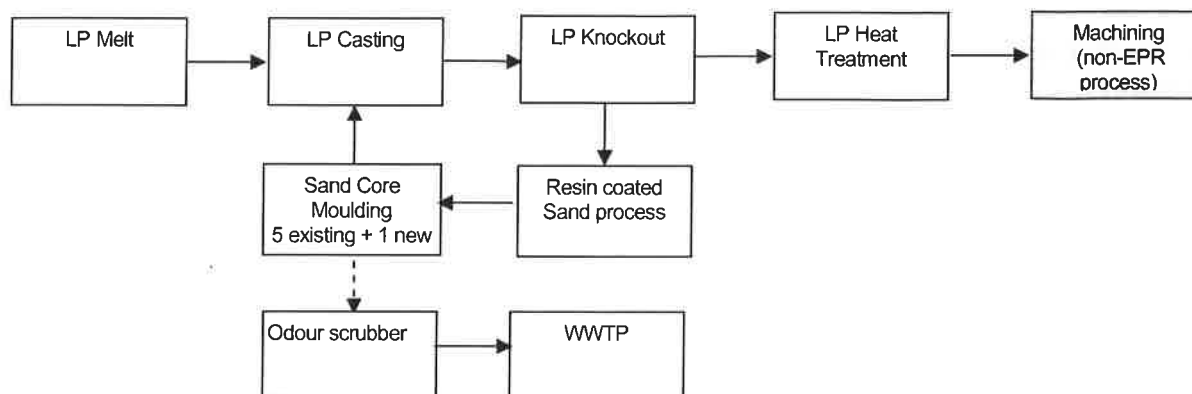
If you have any questions please do not hesitate to contact me.

Yours sincerely,

Keith Martin
Senior Engineer
Facilities and Environment

New Sand Core Moulding Machine August 2016Process flow

The process flow remains unchanged. The new sand core moulding machine will be installed alongside the existing 5 machines. The machine will use recycled sand from the resin coated sand process. Phenolic and VOC fume released from core moulding will be abated by the existing odour scrubber.

Environmental Impact Assessment

Area	Parameter	Impact
Production	Maximum capacity	No change to permit capacity 480,000 engines / yr
	Planned volume	No change to annual production plan
Energy	Installed capacity	Small increase +40.82 kW electrical energy for die heating
	Consumption	No significant increase as volume not increasing
	CCA Performance	No significant impact to the CCA target performance
Materials	Resin coated sand	No increase
	Consumables	Small increase to maintain additional machine
	Fentons reagent for odour scrubber	No increase. Loading on odour scrubber will not increase.
Air Emissions	Particulate	No increase. Loading on odour scrubber will not increase. Odour scrubber will still retain redundant abatement capacity.
	VOC	
	Formaldehyde	
	Phenol	
	Ammonia	
	Odour	
Water Emissions	Spent Fentons Reagent from odour scrubber	No increase. No additional discharge to WWTP.
Waste Emission	Spent resin coated sand	No increase – recycling process will be used.
Noise Emission	External noise	No increase

As the new machine has very little additional environmental impact over the existing installation, TMUK do not propose to conduct any confirmation activity. Air emissions compliance will be confirmed during routine monitoring in September 2016.