

## Format for submission of applicant for Categorization of material as By- Products

Sl. No.	Items	Details
<b>A. General Information:</b>		
i.	Name and Address of Unit.	
ii.	Contact details	
iii.	Industrial Sector (Pharma /Pesticide/Textile etc.)	
iv.	Details on Environmental Clearance (attach copy)	
v.	Details on Consent/Authorization (attach copy)	
vi.	Name of Material proposed as by-product.	
vii.	Details of the manufacturing process wherein claimed material is generated along with list of raw materials, chemical reactions and process description (attach process flow chart indicting waste streams along with Mass balance, and Pollution Control System.	
<b>B. Details on Proposal for declaration of Material as By-product:</b>		
<b>1. General Assessment and Characteristics of By-product</b>		
i.	Is the material listed under Schedule I/III/IV/VI or HOWM Rules, 2016	If yes, provides details on Category Schedule of HOWM Rule, 2016
ii.	Is the proposed material declared as 'wastes' or 'by-product' In Environmental Clearance granted to the unit (please specify)	
iii.	Annual quantity of the material proposed as by-product (generation in MT/annum)	
iv.	Detailed composition and characteristic of the material (as per Schedule- II of HOWM Rules, 2016	
v.	Current management practices for the proposed by-product material.	
vi.	MSDS (as per MSIHC Rules) of proposed by product material.	
vii.	Whether any pre-treatment /processing is required prior to end-usage of the proposed by- Product material (i.e. production stage); if yes please provide process details.	
viii.	Details of the process wherein the material (as by-product) is proposed for end-usage (Outline manufacturing process, chemical reactions) (attach flow chart along with mass balance).	
ix.	Is Pre-feasibility study has been carried out for use at production stage of the proposed material ('by-product').If yes, attach copy.	

x.	Is Environmental Impact and Risk Assessment Studies have been carried out for (I) Production stage and (ii) end-usage of the proposed material (as 'by-product'). If yes, attach copy.  Note: The end usage of product manufactured from the proposed material 'as by-product) shall not be permitted for utilization In production of pharma, fertilizer and food products, unless the same is approved by the concerned department such as DoA, DoF, FSSAI, CDSCO, etc.	
xi.	BIS standards or any other quality specifications for the intended end use of the material produced using the proposed by product.	
xii.	Provide justification for categorization of Proposed material by-product.	
<b>2. Findings of Pre-feasibility studies, Environmental Impact and Risk Assessment Studies</b>		
i.	Details of material which the proposed by- product is expected to substitute and its end use process.	
ii.	Composition and characteristics of the product presently in use (prior to supplementing with by- product) please provide standard/ desired concentration levels.  Also, provide concentration level of constituents that are present In the proposed by-product material (as per Schedule of HOWM Rules, 2016 for each of the Constituent examined for proposed by-product material).	
iii.	Acceptability of the proposed by-product's composition compared to product presently in use especially, in terms of products that are being produced in the process where the proposed by to be used.	
iv.	Impact on the existing process where the by-product material is proposed to be used both at Production stage and end-use stage;	
	a. Generation and type of Hazardous Waste.	
	b. Generation and characteristics of the Wastewater.	
	c. Generation and characteristics of the emissions.	
	d. Release of contaminants in work zone.	
v.	Details on the changes required in the existing air/ water consents and authorization, where the proposed by- product is intended to be used.	
vi.	Impact on the adequacy of pollution control measures presently in place especially in the context of their need up gradation in compliance, where the proposed by-product is intended to be.	
vii.	Cost of Upgrading of presently employed Pollution Control	

	Devices	
viii.	Expected impacts on the environment and human health, where the proposed by- product is intended to be used (in line with EIA studies).	
ix.	Analysis of Risks involved in the end use of the material/ product derived by using proposed by-product and identification of the additional requirements in the management plans.	
x.	The overall impact of using the proposed by-product in the process where a fresh product is currently in use in the country in terms of the quality of the products that are being produced and the wastes which get generated	
xi.	The overall environment and human health impact of using the proposed by-product in the process where a fresh product (which would be partially or fully substituted by the proposed by- product) is currently in use and the risks involved in doing so.	
xii.	Present status of the demand and supply of the product (which would be partially or fully substituted by the proposed by product, as the case may be) presently in use.	
xiii.	Impact on the market of the product as a result of the substitution by the proposed by- product.	
xiv.	Scope for the substitution of the product currently in use especially in case the product itself is not the primary product of the industry where it gets produced.	
xv.	Justification on acceptability of finding.	