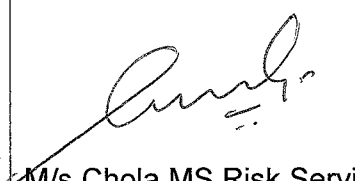
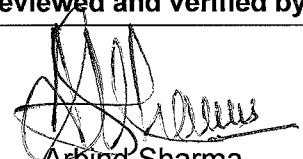
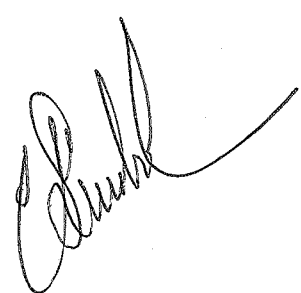
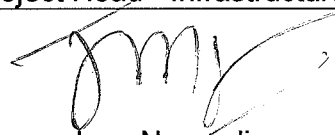



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TECHNICAL STANDARD (TS)

DISMANTLING & DEMOLITION SAFETY

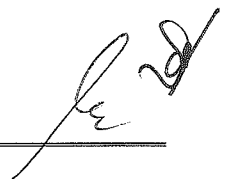
Prepared by	Reviewed and verified by	Authorized by
 M/s Chola MS Risk Services (Bhanodaya-V) 09/02/2023	 Arbind Sharma (Project Head - Infrastructure)	 Santhosh Mundhada (Executive Director)
	 Jose Numpeli (Project Head - Downstream)	
	 22/02/2023 Samar Suri (Project Head - Upstream)	

20/02/23

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Document Change Note

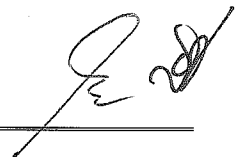
Rev. No	Rev. Date	Comments / Changes
00	20-12-2022	First issue



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1 PURPOSE

This procedure establishes the minimum safety requirements to prevent accidents while carrying out dismantling of structures/ equipment and demolition activities (manual and mechanical).

2 SCOPE

This procedure shall apply to all AMNS project sites and related work areas including contractors to meet –

- Legal and regulatory requirements
- AMNS HSE requirements
- OHSAS 45001 and ISO 14001 standard requirements

3 RESPONSIBILITIES

Project Head

The Project Head is responsible for ensuring that the project is in compliance with the safety requirements stated in this procedure.

It is the responsibility of the Project Head to provide the required resources for dismantling and demolition work.

Site Engineers/ Supervisors

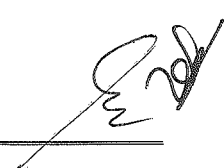
Conduct risk assessment / Job Safety Analysis for Civil work activity covering Formwork, Concrete, and Masonry work.

To ensure that all provisions and requirements for controlling the risks involved in civil work are implemented including validation of the requirement of the permit to work if required in such jobs.

HSE Manager

Provide advice on this standard and conduct inspections to verify compliance.

Verify that this procedure is implemented by all personnel.



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4 DISMANTLING & DEMOLITION SAFETY REQUIREMENTS

4.1. HAZARDS

The hazards associated during dismantling and demolition are:

- Fall of persons / materials
- Falling material rolling from the top edges over personnel
- Excessive dust.
- Improper access/ egress leading to slip/trip/ fall
- Poor communication
- Energy release from Breaking of pipelines/ electrical cables/ Other utility services

4.2. PROCEDURE

- Before starting any dismantling or demolition operations (such as structures, piping, walls, and floors), the possibility of unplanned collapse shall be assessed/surveyed by a Competent Person.
- Stability and safety of the other structures nearby which may be affected by demolition, shall be checked.
- All hazardous substances (like asbestos, lead compounds, and sludge) that should be removed before dismantling / demolition commences, shall be identified.
- Whether demolition of structure requires any permit, shall be determined and obtain if applicable prior to commencing activities.
- Isolate main power supply from the feeder pillar or distribution system which catering the power supply to the buildings/ area to be dismantled / demolished
- Isolate other utility services like water/ Optic fiber cables, whichever required
- Barricade the dangerous zone around and deploy Banks man with proper identity (Red reflector vest) to control the unwanted personnel entry.
- Sign boards such as "DANGER- Keep Away", "DANGER – Dismantling / Demolition Work in progress", "No Unauthorized Entry", "Heavy Equipment Movements" to be placed in prominent locations.
- Carry out inspection of equipment used including trucks for transporting waste material
- All personnel operating equipment shall have valid certificates and licenses
- Ensure that the personnel involved are well informed of the task precisely and the role and responsibilities are explained
- Identify the safe access and vehicle parking location for the third party around in use.
- Surroundings shall be assessed for impact of demolition activities on nearby buildings/ areas
- Dismantled / Demolished materials should be broken into small pieces and loaded on to the truck evenly for safe transportation and to avoid vehicle turnover due to imbalance while transporting materials.



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- Transportation of dismantled / demolished materials shall be covered by tarpaulin to prevent materials fallout on the road.
- All personnel involved in manual demolition / dismantling shall be trained and under continuous supervision.
- Carry out specific risk assessment and precautions to be taken while demolishing old establishments containing Asbestos.
- Access roads, paths are to be closed off and only used in connection with the work.
- Dust generation shall be kept to minimum by wetting.
- Materials are not to be allowed to accumulate on overhead structures.
- Demolition equipment shall meet appropriate crane and heavy equipment safety requirements.
- Trash and debris will be removed daily so as to minimize fire hazards and maximize safe access to, and egress from, the work area.
- Where personnel are required to enter structures that are subject to collapse due to on-going demolition work, work areas must have adequate shoring in place to prevent untimely collapse. Structures will be inspected daily by a Competent Person, and inspections will be documented and filed.

4.3. HAZARDOUS MATERIAL

- Asbestos or other toxic insulation materials, glass, and other hazardous materials must be removed, or otherwise ensured to be safe, before the start of general structural demolition.
- Identification of the materials and the proper abatement/ removal processes will be implemented. Hazardous substances, process materials, and services include the following:
- Residual feedstock, process materials, and products in pipelines, piping and equipment, and storage vessels and drains
 - Catalyst materials in process vessels
 - Residual chemical stocks in treatment systems
 - Surface deposits such as lead in tankage, pyrophoric iron, and vanadium in fired heaters and boilers
 - Insulation materials, particularly asbestos
 - Electrical, water, steam, compressed air, and any other services unnecessary for any remaining activities
 - Interconnecting piping such as flare or blow down systems
 - All sources of ionizing radiation

Disposal of materials will be in accordance Waste Management Plan (Refer: AMNS-Project-SOP-HSEM-11).



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5 CHECKING, CORRECTIVE AND PREVENTIVE ACTION

Periodic inspections shall be carried out to assess the hazards as the work progresses. Any deviations shall be reported to Project Head & Corrective and preventive action shall be taken.

Waste generated from the demolition activities shall be disposed as per applicable regulations.

6 TRAINING AND COMMUNICATION REQUIREMENTS

All personnel who are involved in dismantling / demolition activity should be given training on the hazard & safety Precautions to engaging them on work site.

7 MANAGEMENT OF RECORDS

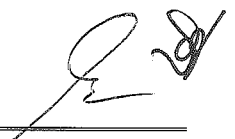
S. No.	Record Name	Maintained by	Retention period
01	Certificates/ licenses/ permits	HSE department	Until completion of project

8 REFERENCE DOCUMENTS

AMNS/Project/SS/HSEM/10	Permit to Work
AMNS/Project/TS/HSEM/04	Working at height
AMNS/Project/TS/HSEM/07	Hand Tools & Portable power tools Safety
AMNS/Project/SS/HSEM/15	Environment Management

9 ANNEXURES

- AMNS/Project/TS/HSEM/21/F01 - Demolition Work Checklist
- AMNS/Project/TS/HSEM/21/F02 - Demolition Work Clearance Form



AM/NS INDIA	DISMANTLING & DEMOLITION WORK CHECKLIST	AMNS/Project/TS/HSEM/ 21/F01
		Rev : 00
		Date: 20 Dec 2022
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Project Name:		Name of Site Area	
Date		Job Location	
Name of Contractor		Name of Job Supervisor	

SR. No	Description	Yes / No / NA	Remarks
1	Emergency contact number displayed?		
2	First aider available at demolition site?		
3	Warning signs available to prevent unauthorized entry?		
4	Firefighting equipment available and persons trained in its use?		
5	Demolition warning signs is in place?		
6	Safe access to site clearly marked?		
7	Competent supervision on site?		
8	Asbestos and other harmful substances been removed?		
9	Tanks, vessels and pipe work degassed and rendered safe?		
10	Electricity and other service not required cut off?		
11	Debris dropping zone clearly signed and barricaded?		
12	Debris cleared from floors to prevent overloading?		
13	Earthmoving equipment and demolition machinery operated by competent persons?		
15	Earthmoving equipment and demolition machinery provided with overhead protection where appropriate?		
16	Underground & buried services identified and isolated. Service provider's certificates/ clearance obtained.		

	INSPECTED BY (ENGINEER)	INSPECTED BY (HSE)
NAME		
SIGNATURE		
DATE		



DISMANTLING & DEMOLITION WORK
CLEARANCE FORM

AMNS/Project/TS/HSEM/ 21/F02

Rev : 00

Date: 20 Dec 2022

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Form No.:			
APPLICANT NAME			
DEPARTMENT			
PLANT		DATE	
AREA			
<u>Job Description: -</u>			
<u>Remarks: -</u>			
Reference drawings / documents			
<u>Endorsements / Approvals</u>			
Department	Name	Phone Number	Signature
Design – CDE			
Executor- Civil			
Executor- Mechanical			
Project Lead			
CMD Head			
CMS Head			
SMP-1 Head			
MRSS Head			
Utility			
Fire Team			
IT- Team			
Environment			
Safety			

