TATA

TATA POWER

Good House Keeping (5S) Procedure

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Rev 00	First release	Navendra Singh Head- Safety (T&D) Corp safety	Rajesh Sharma Head- Safety (Generation) Corp safety	Suresh Khetwani Chief - Corporate Safety & Environment
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1. OBJECTIVE:

Objective of this procedure is to explain the meaning, importance and provide guidelines for implementation of Good Housekeeping(5S) at workplaces across organization..

2. SCOPE: This procedure applies to all operating and project sites, offices of Tata Power Group Companies including JVs/Subsidiaries.

3. EXPECTED RESULTS:

3.1 Orderly workplace and free from slip/trip/fall hazards.
3.2 Elimination/reduction in incidents related to unsafe conditions.

4. ACCOUNTABILITY & RESPONSIBILITY:

4.1. **ACCOUNTABILITY**: Concerned Division's Chiefs/Establishment Custodians

4.2. **RESPONSIBILITY**:

Responsibility	Accountability	Consultation	Information
All Tata Power employees/Gemba Owner and contractor's employees.	Division's Chiefs/ Establishment Custodians	Safety R&P SITS, Business Excellence Group(BE), Safety advisors	SBU Heads, Divisions Chiefs, Head - ES&A, Safety R&P Sub Committee, Safety advisors

(1) For reporting of 5S Observations - All Tata Power employees and contractor's workers.
(2) Response to senior management on 5S Review - Concerned Division's Chiefs/ Establishment Custodians.
(3) For formation of 5S team and Gemba Owner – Concerned Division's Chiefs/ Establishment Custodians.
(4) External/Internal Communication - Concerned Division's Chiefs/ Establishment Custodians or as assigned by them.
(5) Taking actions– as assigned by Concerned Division's Chiefs/ Establishment Custodians.

(6)Cross functional internal 5SAudit and frequency- as assigned by Concerned Division's Chiefs/ Establishment Custodians.

(7)Leaders to take Rounds

(8)External Audit for improvement and certifications:

5. Definitions:

Good Housekeeping: Good housekeeping refers to the Maintaining workplaces in a way that leads to :

a) A safe work environment

b) Improvement of motivation in participation of work

c) Enhancement of efficiency of workmen

Contractor Worker: A person employed by a contractor to carry out work under the terms of a contract.

TATA POWER Employee: an individual employed by TATA POWER or a majority-owned subsidiary or joint venture, including person hire on Fixed Duration Assignment (FDA).

Common areas: Areas which is being used by more than one person e.g. Toilet, notice board, drinking water area, displays, electrical fittings, door, entrance floor, walls, windows, common storeroom, lawn, etc.

No man's land : Areas under the Gemba e.g. roof, water tank, drainage, surrounding areas, etc.

Hidden areas : Areas under the Gemba but not directly visible e.g. Below/behind/above, unused rooms, almirah, behind the curtain, behind the Machines, Behind the photographs displayed, above the equipment's etc.

5S: 5S is the name of a workplace organization method that uses a list of five Japanese words: **seiri, seiton, seiso, seiketsu, and shitsuke**.Transliterated into Roman Script, they all start with the letter "S". The list describes how to organize a workspace for efficiency and effectiveness by identifying and storing the items used, maintaining the area and items, and sustaining the new order. The decision-making process usually comes from a dialogue about standardization, which builds understanding among employees of how they should do the work.

Seiri,(Sort-1S): To sort out unnecessary items in the workplace and Apply stratification management to discard them(wanted and unwanted material identified and separations) e.g. Things not belonging to that area to be removed from there. If repairing is required, separate them and get them repaired. If it has to be discarded, decide first whether it has some scrap value, then sell them at the right time. If the item is all right but not useful to you, and you

can't sell them, but can be utilized by someone else, who needs it send it to them? Items which need to be discarded, must be discarded I such a way that what is discarded will not harm society, environment and even animals

Seiton (Set in Order-2S): Everything should have a place and everything should be in its place. Decide the place, mark the place, put label on items. Arrange the items in such a way so that they can be picked up easily for use. During storage, keep in mind the height, weight, size, shape, safety, Ergonomic etc. of the item. Functional storage of items will help in our day to-day use and functioning.

Seiso (Shine -3S): To clean and inspect the workplace thoroughly so that there is no dirt on the floor, Machine, Equipment, offices. When we are doing cleaning, we are also inspecting simultaneously, if something is unnecessary we are discarding those things under **seiri** and if during cleaning we have seen that any item is not kept in its proper place and we put them in its place,

Seiketsu (Standardise-4S): To maintain a high standard of workplace by keeping everything clean and orderly at all times. During implementations of 1-S, 2-S and 3-S, Number of issues might be experienced. For example, n '1-S' it is very easy to discard items, but think why this has become unnecessary, in '2-S' if things are not in proper place we simply put them back in their proper place. Here, we have to think why this has happened. In 3-S, area is dirty we clean it. Here, again we have to think as to why this had become dirty. What is the system of cleaning, can we change the equipment/way of cleaning, can we arrest the source by which the area has become dirty? All these thinking will give some solution through Brain Storming. Try to find out good solutions and standardize them as a part of the system.

Shitsuke (Sustain-5S): This means whatever system we are having or developed under '4-S' they have to be followed in such a way that, standard practices become a part of routine. It becomes habitual and inculcated in work culture of the organization.

Gemba: It is a smallest unit/area or portion of workplace taken for maintaining and sustaining good housekeeping.

Gemba Owner: Person assigned accountable for specific Gemba. He/She is accountable for maintaining good housekeeping of the assigned Gemba and to achieve 5S.

6 Procedure:

6.1 Formations of Gemba:

Workplace shall be divided into Gemba in such a way that entire area is covered. Area such as Common areas, No man's land, Hidden areas shall be included in adjoining Gemba as appropriate. This shall be approved by Head/Chief of Division/ JV/Subsidiary or establishment custodian of corporate offices. Each Gemba will be assigned to Gemba owner and there will be a team to assist Gemba owner to maintain good housekeeping for the specific Gemba. Size of team may be vary based upon length and width of the Gemba.

6.2 Step for Implementations for Good housekeeping

6.2.1Sort (1S)

The first S focuses on eliminating unnecessary items in the workplace, in this step what is needed, what are the amount needed, and when it is needed

To implement this step, identify the unwanted items and determine their usefulness. One specific Red Tag area was identified for the unwanted materials storage and against action. One Red Tag Register shall be maintained and RED tag to be put on the material.

Specify the type of items and the physical work areas to be evaluated. Set the Red tag criteria like Is it useful? How often is it needed? And how much is needed.

Evaluate Red Tag Items:

Unnecessary Items	**Required Action**
Items having no value and easy to dispose	Throw away Immediately in Red Tag area
Items having some sale value	Look for buyer who offer the best price
Items having no value and their disposal is costly	Work out the least costly and safest way for disposal

Sorting activities using Red-Tag

Space created after sorting activities

6.2.2 Set In Order (2S)

The second S reflects "A place for everything and everything in its place". It emphasizes safety, efficiency and effective storage and consequently improves the appearance of the workplace.

Once the **first S** has been successfully implemented, what is left should be arranged so that there is ease of use and storage as demonstrated in necessary action.

Necessary Items	Required Action
Items frequently used	Must be placed near
Items sometime used	Can be placed further away
Items not used at all but must be kept	Must be stored separately with clear identification

One specific Red Tag area shall be identified for the wanted/necessary materials storage. Red tag material details to be maintained in Red Tag Register and Red tag to be put on the material.

Visible filing system enhances work Discipline and reduces searching time

Keeping everything in its designated Location

Visible arrangement to enhance work discipline

6.2.3 Shine (3S)

The third S is cleanliness it ensures a more comfortable and safer workplace, as well as better visibility, which reduces retrieval time and ensures higher quality work, product or service.

The third S is to thoroughly clean the work area. Daily follow-up cleaning is absolutely necessary to maintain a clutter-free workplace and a desirable environment. SHINE speaks for itself. Everyone enjoys working in a clean environment which raises morale and increases productivity.

To successfully implement the third S as a daily value-adding activity, the following steps must be practiced.

- Show all the cleanliness areas and the names of the people responsible for them.
- Show in greater detail the different areas and the names of those responsible for them, including daily rosters.
- Decide on the tools and materials required and what is to be cleaned in each area. Cleanliness must be practiced daily and must take only a short time to execute. Ensure people do the cleaning efficiently
- Set up cleaning tools and the required materials in such a manner so that they are easily retrieved for use.
- All equipment malfunction or defects must be fixed or reconditioned

Arrange and label neatly

Neatly organised wiring for easy cleaning

Prevention of spillage to maintain floor cleanliness

The continued employment of the 3S will ensure a high standard of workplace organization.

6.2.4 Standardize:

Once the 3S are in place, all Gemba owners should achieve the score of 80% of each step(1-3) as per Checklist (Annexure-5) then the next step is to concentrate on standardizing best practices' plan must include the creation of procedures and simple daily checklists which are to be visibly displayed at every workplace. The checklists must serve as visual signpost to ensure that the daily 3S requirements are carried out habitually as best practices in the work area. Minimum score to qualify each S is 80%.

Well organized for ease of use

Colour coding with numbering for visual control

First-In First-Out (FIFO) instructions

7. Records:

1) 5S audit checklist – one year
2) Red tag register- One year from the date of disposal to materials

8.Training & Communication:

Training of 5S shall be imparted by internal and external trainer base on needs of divisional requirement. Once the training is completed, everyone will have the required basic knowledge, and be responsible for action in progress.

Initial Communication to be done through Corporate Communication/Chief – Safety by Email and subsequently shall be made available at safety portal at Sangam.

9. VERIFICATION:

Verification of implementation shall be done during THSMS audit, 5S audit, field visit and site inspections. Audit/Inspection may be done using hardcopies if 5S audit checklist or through Mobility App/Platform. Frequency 5S Audits may be decided by 5S Audit Committee based upon maturity/requirement of divisions/sites.

10. Exceptions: Any other Exception to this procedure shall only be done as per Document Control Procedure (TPSMS/GSP/DC/014).

11. REFERENCES

I. Tata Power Safety Management System Manual
II. IS-9457 Safety colours and safety signs

12. Review:

12.1 Review of this procedure shall be done as and when but not later than once in every three (03) years. Typical Factors like Changes in legislation, Review of Incident Reports, Inspection & Audit findings, Feedback from users, Recommendations in Incident investigation reports may be inputs for the review and revision of the procedure.

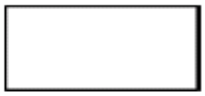
12.2 In case release of revised procedure gets delay due to obtaining feedback or any other reasons, safety advisory may be issued immediately to take precautions for the proposed changes in the procedure and revised procedure should be released subsequently.

13. Annexure:

Annexure-1 : Signages and their use
Annexure-2 : 5S Display Board (Sample)
Annexure-3 : 5S RED TAG FOR TAGGING
Annexure-4 : 5S RED TAG REGISTER FORMAT
Annexure-5: 5S Audit Checklist

Annexure-1

Signages and their Use

Geometric shape	Meaning	Safety colour	Contrast colour	Graphical symbol colour	Example of use
Circle with diagonal bar	Prohibition	Red	White[a]	Black	— No smoking — No unauthorized vehicles — Do not drink
Circle	Mandatory action	Blue	White[a]	White	— Wear eye protection — Wear personal protective equipment — Switch off before beginning work
Equilateral triangle	Warning	Yellow	Black	Black	— Danger hot surface — Danger acid — Danger high voltage
Square Rectangle	Safe condition Means of escape Safety equipment	Green	White[a]	White	— First aid room — Fire exit — Fire assembly point
Square Rectangle	Fire safety	Red	White[a]	White	— Fire alarm call point — Fire fighting equipment — Fire extinguisher
Square  Rectangle	Supplementary information	White or the colour of the safety sign	Black or the contrast colour of the relevant safety sign	Symbol colour of the relevant safety sign	As appropriate to reflect message given by graphical symbol

[a] The contrast colour white includes the contrast colour for phosphorescent material under daylight conditions with properties as defined in Table 4.

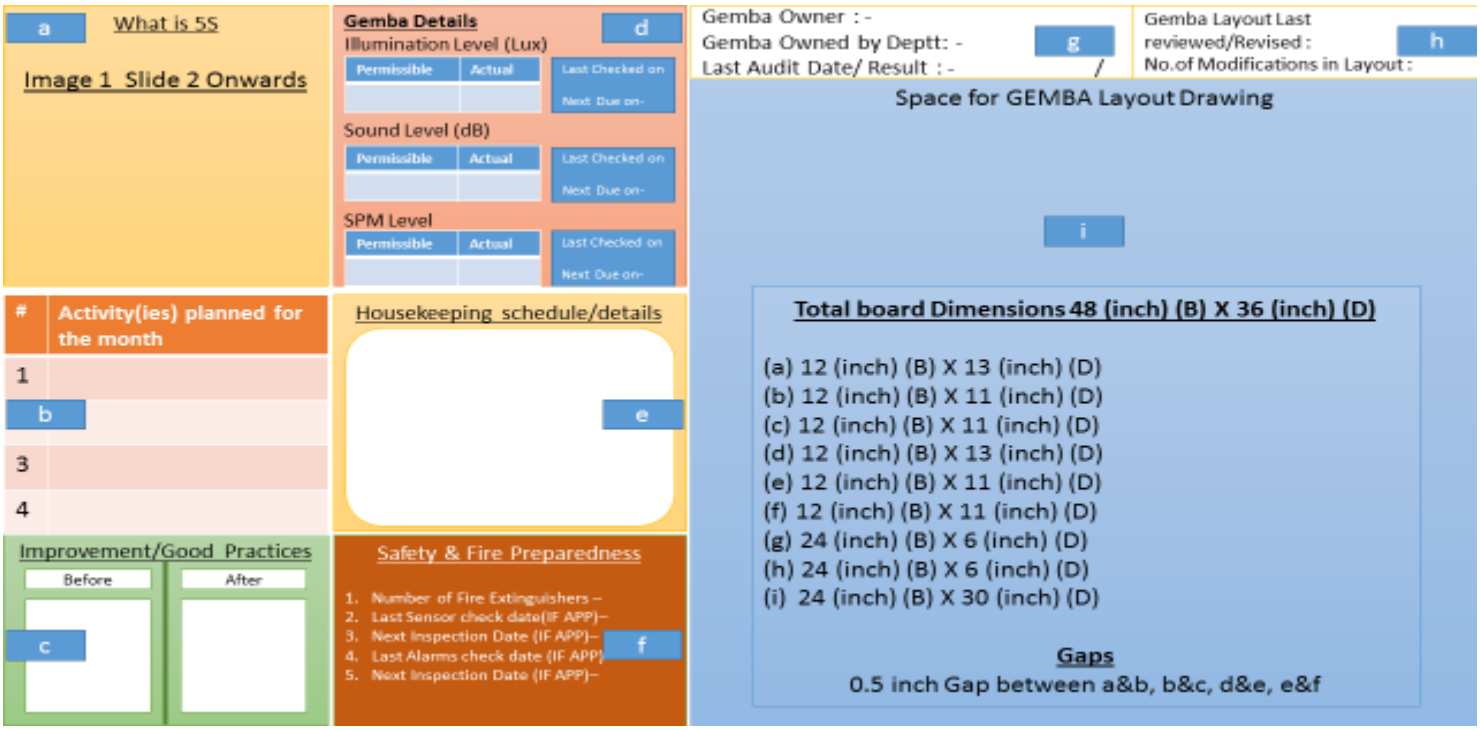
Type of Signage	Indications	**Geometric shape**	**Safety colour**	**Background**	**Border**	**Example**
Prohibition Signs	Prohibition You must not or, Do not do or, Stop	A circle	Red, covering at least 35% of the area of the sign excluding any border	Colour white	Colour white, recommended width at least 0.025 of the sign height.	
Mandatory Signs	You must do or. Carry out the action given by the sign	A circle	Blue	Safety colour (blue), covering at least 50% of the area of the sign excluding any border.	Colour white, recommended width at least 0.025 of the sign height.	
Warning (Hazard) Signs	Caution or; Risk of danger or; Hazard ahead	An equilateral triangle with radiused outer corners	Yellow	Safety colour (yellow), covering at least 50% of the area of the sign excluding any border.	Colour white, recommended width at least 0.025 of the sign height.	
Safe Condition Signs	Emergency escape; First aid; Safety equipment	A rectangle (square or oblong)	Green	Safety colour (green), covering at least 50% of the area of the sign excluding any border.	Colour white, recommended width at least 0.025 of the sign height.	
Fire Equipment Signs	Fire point; Fire alarm; Fire extinguishers Firefighting equipment.	A rectangle (square or oblong)	Red	Safety colour (red), covering at least 50% of the area of the sign excluding any border	Colour white, recommended width at least 0.025 of the sign height	

Supplementary Signs						
Multiple Signs as a Means of Communicating Complex Safety Messages Composite Signs	multiple signs are combination signscontaining two or more safety signs and/or associated supplementary signs on the same rectangular carrier.	A rectangle (square or oblong)				

Annexure-2

TPSMS/GSP/GHK/020/FORM/01

5S Display Board (Sample)



(Note: Dimensions of board are only recommended but not mandatory and may vary based upon site conditions but must contain abovementioned information. Sites may also go for digital board if feasible.)

Annexure-3

TPSMS/GSP/GHK/020/FORM/02

5S RED TAG FOR TAGGING

5S RED TAG	Action To Taken
Date:	
Tagged By:	☐ Trash/Scrap
Item Descriptions:	☐ Hold
Department:	☐ Move To
Item Type:	☐ Other
☐ Raw Material ☐ Tools ☐ Instrument	Contact No:……..
☐ Machine Parts ☐ Finished Good ☐ Files	Date:……
☐ Others	Tag No:……..(As per Register)
Others:……	
Reason Tagged	Gemba Owner Signature:
☐ No Longer Use ☐ Unknown Owner	
☐ Does Not Work ☐ Others	Remarks If any……
Other:……	……

Annexure-4

TPSMS/GSP/GHK/020/FORM/03

5S RED TAG REGISTER FORMAT

(can be in hard/soft/digital form)

Location:					**Zone:**					
Department:					**Gemba Owner:**					
S.No	**Type of Material**	**Tag No & Date**	**Item Description**	**Item Type**	**Approx. Value**	**Action To Taken**	**Actioned By**	**Action completions date**	**Value recover(if any)**	**Remarks**
1	**Wanted/ Unwanted**	**34. 10.10.2017**	**Turbine bearing**	**Machine Parts**	**100000000**	**Move to Store**	**R.Kumar**	**15.10.2017**	**500000**	**Material few parts re used by other division**

Annexure-5

TPSMS/GSP/GHK/020/FORM/04

1S(Short) -Audit Checklist

SN	Category	SEIRI - SORTING - CHECKPOINTS	Level 1	MM*	Level 2	MM	Level 3	MM*	Level 4 - Best	MM*	Observation	Actual Score
1	Segregation	Wanted/unwanted items are identified.	Almost nothing.	0	Few items are identified but no list made.	5	Most of the unwanted items are identified & list of unwanted items prepared.	8	All items are segregated & list of unwanted items prepared.	10		
2	Red-Tag	Unwanted items are identified with red-tags duly filled.	Almost nothing is identified with Red Tags.	0	Few items are identified with Red Tags.	2	All items are identified with Red Tags but Reg Tags not duly filled.	4	All items are identified with Red Tags duly filled.	5		
3		Red tag area is identified & demarkated.	Area not identified.	0	Area Identified but not demarked.	2	Area is identified and demarked.	4	Area is identified, demarked and location indicator available.	5		
4		Red Tag area Responsibility and disposal schedule is available.	Responsibility for Red Tag not fixed.	0			Responsibility for Red Tag fixed but disposal schedule not made.	4	Responsibility for Red Tag fixed & disposal schedule made.	5		
5		Disposal of unwanted material (including hazardous/non-hazardous waste) as per the schedule/plan.	No disposal.	0	Few items are disposed.	2	Most items are disposed.	4	All unwanted items disposed as per schedule.No item kept in red tag area beyond schedule.	5		
6		The red tag register is being maintained with details like date of shifting of material to red tag area,quantity of the material, date of	Red Tag register not/poorly maintained .	0	Few Information maintained in Red Tag Register.(Hard/Soft)	2	Most of the Informations maintained in Red Tag Register.(Hard/Soft)	4	All Information maintained in Red Tag Register properly.(Hard/Soft)	5		
7	Unwanted items	There are no unwanted/obsolete documents/informations on the display boards/Notice Boards/Signages.(if available.)	None of the display boards/Notice Boards/Signages updated.	0	Some of them are maintained and updated.	2	Most of them are maintained and updated.	4	All Boards are maintained & updated.No unwanted/obsolete information found.	5		
8		List of unwanted items(Red Tag Register) timely updated & shared with concerned departments.	Neither timely updated nor Shared.	0	timely updated but not Shared.	2	timely updated & shared with few concerned departments.	4	timely updated & shared with all concerned departments.	5		
9		There are no unwanted items found in the shop/office/store areas. All obsolete, broken, excess or unneccessary items/equipments/materials which are not usable/required are either	Many Unwanted items are present.	0	-	2	A few Unwanted items are present.	4	Zero Unwanted item found in areas, all repaired/moved to Red Tag Area.	5		
MM*	**Maximum Marks**								**Maximum Marks**	**50**	**Actual Marks Obtained**	0
									Total 1S score in percentage ={(Actual Marks Obtained /Maximum Marks)* 100}	0		

Annexure-5(Contd..)

TPSMS/GSP/GHK/020/FORM/01

2S (Set)Audit Checklist

Sr. No	Category	SET IN ORDER	Level 1	MM*	Level 2	MM*	Level 3	MM*	Level 4 - Best	MM*	Observation	Actual Score
1	Layout	Layout of the area	Totally cluttered.	0	Most places cluttered.	2	Very Few places cluttered.	4	Well organised/ Neat & tidy.	5		
2		The floor-plan layout with location indicator is displayed at a prominent place and is readable. The floor-plan layout to indicate at least : a) Nearest safe assembly area. b) Locations of fire hydrant point,extinguishers, nearest first aid boxes.	Floor Plan/Layout not available or not readable.	0	Floor Plan/Layout available but not updated.	2	Floor Plan/Layout available, updated but not complete.	4	Floor Plan/Layout available, updated & complete.	5		
3		There are no deviations between the floor plan and actual	Both Floor Plan and Actual are different.	0	There are some differenced in Actual and	2	There are very few differenced in Actual and Floor Plan	4	No difference betwwen the floor plan and actual	5		
4	Signboards	Location indicator and sign Board are available for various items (as applicable), such as - 1. Furniture, Racks, Cupboards, Dustbins, etc 2. **Loto**, Log book, Registers, etc 3. PPEs required, Machines, Equipment & Parts, 4. Material handling equipment like Fork Lift,EOT,Hoist etc 6. Tools 7. Display boards 8. Cleaning equipment 11. Marker, Duster, remote etc for the	Available for no item	0	Available for few items	2	Available for many items	4	Available for all items	5		
5	Labelling	All switches are identified (labelled) with reference to the electrical fittings.	no/few switches are	0		2	Many switches are identified	4	All are identified	5		
6		Critical machines/equipment/furnitures have been identified with Indentification	No Critial Items identified.	0	Few are identified	2	Many are identified	4	All are identified	5		
7	Marking	The markings on the walkways, equipments, work area, tools and	Not visible	0	Some are visible	2	Mostly Visible	4	All are visible	5		
8		The Piple line identification colour code (IS 2379), direction of fluid flow and description of the pipe are marked (as	Not Applicable	0	Not marked on any pipe/few pipes	0	marked on few pipes	4	Marked on most of the pipes	5		
9	Material/ Document storage	The Materials/Documents/Files are stored in identified location and List displayed.	No items stored in identified location.	0	Few items are stored or placed in Identified location and	2	Many items are stored or placed in Identified location and easily retrivable	4	All items are stored or placed in Identified location, list displayed & easily retrivable	5		
10		The cupboards,drawers and lockers are neatly organized and easy to retrieve (If	Not applicable	0	Few are neatly organised	2	Many are neatly organised	4	All are neatly organised	5		
11		All legal/ statutory /regulatory /licenses/approvals/clearances/ approved drawings and employees records/documents, etc. are stored	Not applicable	0	None are stored separately in secured	0	Some are stored separately in secured manner.	2	All are stored separately in secured manner and digitalized	5		

MM*	Maximu		Maximum Marks	55	Actual Marks Obta	0
		Total 2S score in percentage ={(Actual Marks Obtained /Maximum Marks)* 100}		0		

Annexure-5(Contd..)

TPSMS/GSP/GHK/020/FORM/01

3S(Shine) Audit Check List

Sr.	Category	SEISO - CLEANLINESS	Level 1	MM*	Level 2	MM*	Level 3	MM	Level 4 - Best	MM*	Observation	Acutal
1	Housekeeping	Rest rooms, lockers, doors, windows,staircases,shutters, Floors,walls,machines,equipments, tables, chairs, office cabins, dustbins,workdesks, toilets are clean and cleaning schedule is in place and implemented.	Cleanliness is not maintained/ No cleaning schedule is in place	0	Few places are clean, cleaning schedule / checklist is in place and updated.	2	Most of the places are clean, cleaning schedule / checklist is in place and updated.	4	All places are clean and cleaning schedule/ checklist is in place and	5		
2	Floors/ Aisleways	Floors are even and free of sharp edges/protrusions etc which may cause slip, trip and fall.	Floors are uneven and protrusions are observed in	0	Floors are even but protrusions are observed in floor	2			Even floor and no protrusions	5		
3	Machines, Equipments, Tools & Materials	The machines, equipment, pipes, toolings, furniture, displays, material handling equipment,hand rails etc. are clean and free from dirt and rust.	No item is clean	0	Some items are clean	2	Most of the items are clean	4	All items are clean	5		
4		Equipment,Machine, pipes, joints, ceilings etc are free from leakages	Many leakages	0	Few leakages	2			No leakage	5		
5		The materials under storage are free of dirt/dust, leakage and contaminants	None is free from dirt/dust, leakage and contaminants	0	Few items are free from dirt/dust, leakage and	2	Most items are free from dirt/dust, leakage and contaminants	4	No dirt/dust, leakage and contaminants	5		
6		The storage area (e.g. storage for the lube oil drums) is clean and free from dirt, dust, oil spills, etc	Area is not clean and free from dirt, dust, oil spills, etc	0	Some areas are clean and free from dirt, dust, oil spills, etc	2	Most of the areas are clean and free from dirt, dust, oil spills,	4	All area is clean and free from dirt, dust, oil spills, etc	5		
7	Rodent Control	Provision for rodent control is in place and schedule is complied to (applicable to area where rodent is a risk).	Not Applicable	0	No provision for rodent control	0	Provision for rodent control is in place	4	Provision for rodent control and schedule	5		
8		The information or content on the display board/notice board/emergency contact are clearly visible.	Few displays are clearly visible.	0			All displays are clearly visible.	4	All displays are clearly visible.	5		

MM	Maximum Marks	Maximum Marks	40	tual Marks Obtain	0
	Total 3S score in percentage ={(Actual Marks Obtained /Maximum Marks)* 100}		0		

Annexure-5(Contd..)

TPSMS/GSP/GHK/020/FORM/01

4S(Standardize) checklist

Sr. No	Category	Standardization	Level 1	MM*	Level 2	MM*	Level 3	MM*	Level 4 - Best	MM*	Observation	Actual Score
1	SOP	Is there a documented procedure/guidelines for sorting? If yes, does it contain identification of red-tag targets,	No procedure	0	Procedure is incomplete	2	Procedure available and complete.	4	Procedure available,complete and implemented.	5		
2		Is there a documented procedure/guidelines for 2S (set	No procedure	0	Procedure is incomplete	2	Procedure available and complete.	4	Procedure available,complete and	5		
3		Is there a documented procedure/guidelines for 3S	No procedure	0	Procedure is incomplete	2	Procedure available and complete.	4	Procedure available,complete and	5		
5	Standards	The contents of display boards are appropriate and up-to-date with identified process owners as per standards.	Obsolete / inappropriate documents displayed	0	Displays are appropriate, up-to-date with identified process owners but standard not	2	Displays are appropriate, up-to-date with identified process owners but not as per standard	4	Displays are appropriate, up-to-date with identified process owners as per standard	5		
6		Colour coding standards is available and implemented.(As	Not available	0	Available but not displayed	2	Available and displayed but not	4	Available and displayed & complied.	5		
7		Standards are available and complied for signages (boards,displays, identifications, etc) and the signages conform to	Standards not available	0	Standards available and few signages conform to standards	5	Standards available and many signages conform to standards	8	Standards available and all signages conform to standards	10		
8		The checklist for daily/ weely 5 min, 5S is available &	Checklist not	0	Checklist available but not implemented.	2			Checklist is available and fully implemented.	5		

MM*	**Maximum Marks**		**Maximum Marks**	**40**	**Actual Marks Obtained**	
Total 4S score in percentage ={(Actual Marks Obtained /Maximum Marks)* 100}						

Annexure-5(Contd..)

TPSMS/GSP/GHK/020/FORM/01

5S(Sustain) Audit Checklist

Sr. No	Category	SHITSUKE - SUSTAIN	Level 1	MM*	Level 2	MM*	Level 3	MM*	Level 4 - Best	MM*	Observation	Actual Score
1	Audit	5S audit plan made and carried out as per plan	Audit Plan not available.	0	Plan available but Audit not done as per plan	5	Audit Plan available & Complied > 80%	8	Audit Plan available & Complied 100%	10		
2		Last Audit Scores and Action Items status are made available at the time of audit.	Not Available.	0					Made Available.	5		
3	Continuous Improvements	Monthly Review of 5S Action Plan takes place and actions are taken on the suggested improvements during the internal / external audits.	No reviews.	0	Review are taking place and actions taken for few action items.	5	Review are taking place and actions taken for most of the action items.	8	Review and actions are taking place, for all action items.	10		
4	Learning & Sharing	Evidence of learning / Sharing and replication of 5S improvements of the section from / to other areas/locations/divisions	No learning & sharing observed	0	Learning & Sharing done but no evidence	5			Learning & Sharing done & evident maintained	10		
5	Ownership	People are aware about 5S and their responsibilities.	Not aware	0	Few are aware	5	Many are aware	8	All are aware	10		
6		5S Responsibility matrix is available.	Not Available.	0					Available	5		
7	Promotions	Posters and slogans, Rewards & Recognition related to 5S are displayed .	Not displayed	0					Displayed	5		
8	Training & Sensitisation	Annual 5S Training Plan covering all employees & stakeholder is available.	No Plan	0			Plan available but not covered all the employees & stake holders.	8	Plan available covering all the employees & stake holders.	10		
9		Employees & Stakeholders are trained for 5S as per Plan.	Training plan is not complied.	0	Training plan is partially complied.	5			Training plan is 100% complied.	10		
MM*	**Maximum Marks**								**Maximum Marks**	**75**	**Actual Marks Obtained**	**0**
Total 5S score in percentage ={(Actual Marks Obtained /Maximum Marks)* 100}										**0**		

Annexure-5(Contd..)

TPSMS/GSP/GHK/020/FORM/01

Safety Audit Checklist

Sl No.	Audit Point
1	All emergency exits are clear of materials and are easily accessible. The way to the fire extinguishers, first aid box, ladders and fire hoses is clear of material & is easily accessible
2	Hydrant system (including deluge and emulsifier) - pressure at design value, no leakages, hose and couplings are not defective. Test Reports are available for the system
3	Fire Extinguishers - tested every six months, hose of FE does not have cracks, Pressure in FE in the green zone
4	Fire Detection System- testing records are available and healthiness of all devices are demonstrated
5	Stretcher is clean and readily usable condition (Applicable on Gembas with 24 hours manning e.g. control rooms, Main/Material Gate Security Posts, Fire Station, Occupational Health Center, Shift Maintenance Rooms)
6	First Aid Box is maintained - The list of contents of the first aid box is displayed on the box and contents are within expiry dates. Last verification and frequency of Inspection is displayed.
7	Medical Grade Oxygen cylinder maintained with right pressure (Applicable to Occupational Health Centre and Ambulances.)
8	Aisles, walkways, stairs are clear of material / equipment. Free access to tools /equipment machines etc.).
9	Drains are covered with grating/ chequered plates. There is no broken cover of drain. The drains are free of choke
10	Stairs, landings, ladders and maintenance pits have handrails. There are no broken parts in steps, landing, handrails.
11	No loose electrical wires on panels or machines and equipment in the working areas
12	Earthing is provided where necessary
13	The junction / connection boxes are properly closed locked/ fastened with all screws
14	All electrical / control panels are properly closed.
15	All the cables are routed with proper clamps on cable trays without any mechanical stress
16	There are no spillages on the floor and the floor is not slippery
17	The equipment guards / lids are in place
18	The hot/cold lines and electrical cables are suitably insulated
19	Rubber mats of appropriate insulation levels are in place near electrical / control panels. Alternately if insulation paints are provided on floor ,it must be free from scratches/damages.
20	Cans containing hazardous chemicals are stored in trays to prevent spreading of leaked / spilled chemicals
21	A separate seating arrangement is available for the senior citizens, handicapped citizens, etc
22	There are no deviations between the floor plan and actual
23	Locations for materials/equipment like fire extinguishers, first-aid boxes, stretcher, breathing apparatus , etc. are clearly marked and visible
24	Fire extinguishers, fire alarm switch (manual call point), fire hoses, emergency exits. First aid box , Eye-wash and shower - location indicators and sign boards exist
25	Names of First -Aiders and FE operators near the floor plan layout or near First Aid Box and notice board
26	People are aware about 'On site Emergency Plan"/"Disaster Management Plan".
27	Unsafe conditions are identified and reported in Tata Power Safety System , recified and closed .
28	The floor spaces (aisle ways/ gangways/Walkways, door openings and similar areas appropriate to particular Gemba etc.) are clearly marked
29	The parking spaces for vehicles and material handling equipment are identified and vehicles are in ready-to-go position
30	The containers for Hazardous and Non Hazardous wastes are properly marked and stored in respective locations

31	Rotating parts of equipment are marked with directional indicators and properly guarded.
32	The unsafe /restricted areas etc. are to be identified with warnings and clear demarcation There are ways and means to prevent un-authorised access to restricted areas.
33	Safe operating instructions are available for the equipments in hard or soft copy and should be easy to retrieved when required.
34	All hoses, cabling & wires are in good condition
35	Cylinders are stored upright with valve outlet seals and valve protection caps in place.
36	Cylinders are secured with chain when in storage, transit, or use.
37	Full and empty cylinders are segregated and stored at different places
38	Drinking water areas are kept clean and water quality is confirming to BIS / WHO standard. Last preventive maintenance date and next due date of Water purifier are displayed .
39	All Electrical fitting are in working condition . Illumination is checked and ensured that it is confirming to IS 6665-1972 by EMD.
40	The Stickers / Numbers / Tags are provided as per norms e.g. metal tagging on valves, cables, etc.
41	Safe Working Limits / Loads are standardised and marked on all critical equipment like Pressure and temperature gauges and also on the material handling equipment (forklifts/chain pulley blocks/Hoists/Pallet trucks etc.).
42	Hazchem - Identification labels of Hazardous Chemicals on containers and storage locations
43	Material/Chemical safety data sheets are displayed at site in local language /English /Hindi
44	Marking for identifying gas (labelling) /Colour Code of Cylinder
45	Dust levels esp. coal dust are within specified regulatory norms and this information is recorded.
46	Dust suppression systems are in good working condition
47	Engineering jobs are carried out with proper work permits and there is adherence to the LOTO system.
48	Test certificates are available and status is identified on equipment, tools and tackles (like D shackle, slings, chain pulley blocks, hoists, cranes etc.)
49	PPE and safety standards being understood and adhered to by all employees in the area.
50	Flash back arrestors are installed on cylinder and torch sides when cylinders are in use .
51	Cylinders are stored in areas designated for that purpose which is dry, cool, well-ventilated protected from the weather and away from combustible materials.
52	Electrical insulation suits (Arc Flash Suit) are available in high voltage switch-gear rooms
53	FIFO inventory system is used for chemical containers .
54	The trends of perfromance (Safety, Quality, Morale)) indicators are captured ? e.g. Safety Action Items Closed, Observation Reported, Star of the Month, Safety Meastro to be displayed)
55	All the machines/ equipment are maintained in proper working condition with adherence to the maintenence schedule and checksheet. The maintenance schedule and the checksheets are available in hard / soft form in SAP and should be easy to retrieve when required. (e.g.furniture, material handling equipment, production equipment, lifts, AC, fans, etc).
56	Calibration status of instruments is displayed and up-to-date
57	Electrical insulation suits (Arc Flash Suit) are available in high voltage switch-gear rooms
58	FIFO inventory system is used for chemical containers .
59	Meeting rules are identified and displayed
60	Injury on work cases, no. of accidents, accident frequency rate, accident severity rate show declining trend.
61	Shadow boards are available for tools and the tools are in the right place.(As Applicable.)