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Deepak Ojha
Counsellor (AE)

PERMANENT MISSION OF INDIA

Kaerntnerring 2

A-1015 Vienna

Tel: +43-1-585 2063 Extn 16 or 26

Fax: +43-1-585 08 05

E-mail: atom.vienna@mea.gov.in

www.indianembassy.at

REF: Draft Safety/15/6/1/6

June 8, 2015

Subject: IAEA Safety Standards on "Decommissioning of Nuclear Power Plants
Research Reactors and other Nuclear Fuel Cycle Facilities (DS452).

Dear Mr. Ljubenov,

This has reference to Agency's note No. J5.05 dated December 18, 2014 regarding Draft Safety Document on "Decommissioning of Nuclear Power Plants, Research Reactors and Other Nuclear Fuel Cycle Facilities (DS-452).

Please find enclosed India's comments on the above IAEA document.

With best regards,

Scanned by ARMS

Yours sincerely,

Deepak Ojha
(Deepak Ojha)

Mr. Vladan Ljubenov
Division of Radiation, Transport and Waste Safety
Department of Nuclear Safety and Security
IAEA, Vienna.

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INFORMATION	
10 JUN 2015	
ORIGINAL TO:	LJUBENOV V.
ENCLOSURES	COMMENTS

Decommissioning of Nuclear Power Plants, Research Reactors and Other Nuclear Fuel Cycle Facilities (DS 452)

COMMENTS BY REVIEWER Reviewer : Country / Organization : INDIA/NPCIL Page of 5 Date: 27th January, 2015.				RESOLUTION			
Com ment No.	Page/ Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification / Rejection
1.	1/1.2/3	While decommissioning is the last stage in the lifetime of a facility Add word 'in' between words 'stage' and 'the'	Correct syntax				
2.	1/1.2/4aspects of decommissioning, such as designing for minimization of radioactive waste especially long lived, decommissioning planning, and.....	w.r.t. decommissioning activity, long lived radwaste is of concern.				
3.	1/1.2/5	Responsible agency for decommissioning, adequate funding and trained staff requirement are other aspects to be considered.	Final decommissioning of a complex facility like NPP may take even 2-3 generations.				
4.	Page No. 1/ 1.4/ last line.	...decommissioning can be terminated and the sites site and remaining structures of the former facilities, if any, will be available for unrestricted or restricted re-use.	The word 'sites' is replaced with 'site' as decommissioning at any time is with respect to a particular site and not sites.				
5.	Page No. 2/ 1.7/ 1 st line.	Adequate planning and implementation of decommissioning actions is are required to ensure the environment.	The word 'is' is replaced with 'are' for grammatical correctness.				
6.	3/1.13/8	Facilities for interim storage of radioactive waste (e.g. NSDF) should be included in the scope.	Existence of on-site interim storage facilities would pose a problem of taking the facility/site out of regulatory control or termination of decommissioning license.				

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COMMENTS BY REVIEWER				RESOLUTION			
Reviewer : Country / Organization : INDIA/NPCIL		Page of 5 Date: 27th January, 2015.					
7.	4/1.16	Any major design change also needs special attention.	Proper records of major design changes/component replacements throughout lifetime of a facility are required to be maintained so as to consider the same during actual decommissioning.				
8.	Page No. 4/ 1.17/ 4 th line.	Thus, these actions are not usually considered part of a decommissioning project.	The word 'usually' is deleted, as management of fresh or spent nuclear fuel, other process materials used during operation, and the radioactive waste generated during the operational phase are not actions of decommissioning.				
9.	4/1.18/5but they should to be given due consideration in all aspects of decommissioning.	Grammatical				
10.	Page No. 7/ 2.3/ last line	Special situations may need to be considered, which may require the use of temporary measures, specialized equipment and the implementation of certain non-routine procedures <i>approved by regulatory authority</i> .	Italics portion is added at the end of the present text as such procedures require the consent of regulatory body.				
11.	8	At multi-unit site, safety of operating/under construction co-existing facilities should be considered from security, radiation protection as well as emergency point of view and to be included under a separate para.	Decommissioning of any facility should not pose any hazard to on-site plants/projects at multi-unit site.				
12.	Page No. 8/2.6/ first line.	ventilation and fire protection systems may need to should be retained for some period during decommissioning.	The optional choice is made recommendatory.				

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COMMENTS BY REVIEWER				RESOLUTION			
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13.	Page No. 8/ 2.7/ last line	Records and data of the nature and nature of the data and extent of such existing safety provisions should be considered.	The sentence is re-written for clarity.				
14.	Page No. 8/2.8/ 7th line	Specific provisions should be implemented by the licensee, depending of on the final end state	For grammatical correctness				
15.	Page No.9/ 2.11/ 4th bullet,2nd line	Stage in the lifetime of the facility (siting, design, construction, commissioning, operation, shutdown of and decommissioning),	Appropriate in the context				
16.	10/2.12	Radioactive waste estimation as well as required funding arrangements should be included.	For effective decommissioning plan, these are also essential.				
17.	10/2.14	Augmentation of waste treatment facility to be included.	Considering over-sized components, generation of secondary radwaste and huge quantity of waste generation during dcecommissioning activities.				
18.	10/2.14	Waste storage and transport of treated/conditioned waste to be included.	Planning for huge quantity of decommissioned waste storage/transport is required.				
19.	Page No. 17/ 3.23/2 nd line	In preparing for decommissioning, the licensee may perform activities such as removal of spent fuel, operational and historical —waste stored on-site during operation.	No such waste as 'historical waste' is termed.				
20.	Page No.22//4.21 /2 nd line	There should be a mechanism to verify that a procedure has been approved (e.g. by means of signatures) and that it is current the latest (e.g. through a list of the latest revision dates).	Appropriate in the context				

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COMMENTS BY REVIEWER				RESOLUTION			
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Country / Organization : INDIA/NPCIL		Date: 27th January, 2015.					
21.	Page No. 30/ 5.36/last but line	This documentation and expertise could decrease the potential for events such as industrial accidents or undue exposures and may help to reduce problems associated with loss of corporate memory.	'corporate memory' needs elaboration.				
22.	Page No. 31/5.40/2 nd & 3 rd line	An example might be the change in environmental conditions such as the raising of water levels making deferred dismantling unfeasible.	'raising of water level making dismantling unfeasible' needs to be clarified.				
23.	Page No. 31/ 5.41 (b)	Types, categories and amount of waste (e.g., including historical and remaining operational waste);	No such waste as 'historical waste' is termed.				
24.	Page No. 37/FIG.1	FDP	Full form of 'FDP' should be given				
25.	Page No. 41/ 7.14/7 th bullet	Releases and leaks that could have potentially affected surface water, groundwater, soil and sediment; and	Comma is added after groundwater for proper punctuation .				
26.	Page No. 46/ 7.39/1-3 lines Phase 1 :	A decommissioning project based on a deferred dismantling strategy could be considered as a multi-phase project, Removal of radioactive waste and dangerous substances used and produced during the operating life of the facility	Grammatical correctness The word 'dangerous' is not appropriate in the context.				

Country	1980	1985	1990	1995	2000
Japan	15.0	16.5	18.0	19.0	20.0
Germany	12.0	13.0	14.0	14.5	15.0
Italy	10.0	11.0	12.0	12.5	13.0
France	8.0	8.5	9.0	9.5	10.0
Canada	7.0	7.5	8.0	8.5	9.0
Sweden	6.0	6.5	7.0	7.5	8.0
U.S.	5.0	5.5	6.0	6.5	7.0

COMMENTS BY REVIEWER				RESOLUTION			
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27.	Page No.51/8.6/1 st & 2 nd line	At the end of the preparatory phase for safe enclosure, the regulatory body should perform inspection to verify that the facility is in the state as planned and approved, i.e. that it is ready for the passive safe enclosure phase.	Comma is added after enclosure. The word 'that it is' is redundant.				
28.	Page No. 53/ 8.16/(1 st bullet)	Evaluation of the existing structures of the facility for stability and structural capability;	The word 'and' is added for grammatical correctness.				
29.	Page No.54/ 8.19/(2 nd line)	Discharge of radioactive effluents requires authorization from the regulatory body.	The word 'radioactive' is added for clarity.				
30.	Page No. 54/ 8.20/ 6 th & 7 th lines	Make a separate para for lines 6 & 7 'Guidance for developing and implementing an environmental monitoring programme can be found in the IAEA Safety Standards Series publications [32]'. [32]'	Because they fall under environmental monitoring programme.				
31.	Page No. 60/ 9.9/1 st line	The regulatory body should verify or validate that the site meets the end state criteria [6].	More appropriate to the context.				
32.	Page No. 61/ 9.18/last line	A decommissioning plan for the waste storage or spent fuel storage facility that remains on the site is required to be prepared.	Grammatical correctness				

Note: The bold text with red font in yellow background is the proposed new text.