

ROUTING AND TRANSMITTAL SLIP

Date **7/13/79**

TO: (Name, office symbol, room number, building, Agency/Post)	Initials	Date
1. <i>J. Collins</i> <i>File</i>		
2. <i>Eff Tech Specs</i>		
3.		
4.		
5.		

Action	File	Note and Return
Approval	For Clearance	<input checked="" type="checkbox"/> Per Conversation
As Requested	For Correction	Prepare Reply
Circulate	For Your Information	See Me
Comment	Investigate	Signature
Coordination	Justify	

REMARKS

Resolve comments with Gordon Lodde TMI/HP.

Reviewed 7/13

- ① The purpose of this memo was to make a choice on the lab (and lab method) that could provide the maximum sensitivity (lowest LLD) in the analysis of environmental samples of river water and effluent. Based on the present T.S., the 0.1 MPC is acceptable, but greater sensitivity for some nuclides is possible by the labs.
- ② I recommended that TMI consider the enclosed list of LLD in the future, since they will be included in the new technical specifications. *(over)*

DO NOT use this form as a RECORD of approvals, concurrences, disposals, clearances, and similar actions

FROM: (Name, org. symbol, Agency/Post)	Room No.—Bldg.
	Phone No.

J. B. Benfi

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P PDR

NATIONAL FORM 41 (Rev. 7-76)
Revised by GSA
(41 CFR 101-11.206)

Current LLD's for liquid effluent samples

Ref: NUREG-0472 "Radiological Effluent Technical Specifications for PWR's", July 1979. NRC. [See Table 4.11-1]

Nuclide	LLD: $\mu\text{Ci}/\text{ml}$
Mn-54	5×10^{-7}
Fe-59	"
Co-58	"
Co-60	"
Zn-65	"
Mo-99	"
Cs-134	"
Cs-137	"
Cs-141	"
Ce-144	"
I-131	1×10^{-6}
Dissolved Gas (Gamma) — (Kr, Xe, Ar, N ₂ , etc)	1×10^{-5}
P-32 (Beta)	1×10^{-6}
Sr-89	5×10^{-8}
Sr-90	5×10^{-8}
Fe-55	1×10^{-6}
H-3	1×10^{-5}

APPENDIX 1

July 9, 1979

MDA's IN LIQUIDS AT 4.66 SIGMA

Unit 1 GeLi 3.5 liter sample size	Unit 2 GeLi (1 liter sample size)	EG&G		SAI Detector NES-5 (sample size 500 ml)	SAI Detector NES-10 (sample size 500 ml)	B & W
		Detector PG-1 (sample size 500 ml)	Detector ND-3 (sample size 500 ml)			
2.97E-8	1.29E-7	2.6E-7	3.3E-7	3.0 E-7	2.7 E-7	Not used for Effluent
3.17E-8	1.09E-7	3E-7	8E-7	2.0 E-7	1.8 E-7	
2.98E-8	6.72E-8	3.5E-7	5E-7	2.2 E-7	2.0 E-7	Analysis
5.45E-8	1.45E-7	5E-7	1.5E-6	4.9 E-7	4.4 E-7	
8.61E-8 } }	2.77E-7 } }	7E-7	2.5E-6	3.0 E-7	2.7 E-7	
		4E-7	9E-7	3.0 E-7	2.7 E-7	
8.91E-7	2.68E-6	2E-6	1.2E-6	***	***	
6.55E-8	2.83E-7	1.6E-6	1.4E-6	***	***	
***	***	1.4E-6	2E-6	***	***	
1.31E-8	1.29E-7	5E-7	3E-6	5.7 E-7	5.2 E-7	
4.12E-8	9.26E-8	3E-7	9E-7	3.0 E-7	2.7 E-7	
4.45E-8	9.89E-8	5E-7	1.2E-6	5.6 E-7	5.0E-7	

Background Counting Times

RMC 2500 seconds
 UNIT 1 1200 seconds
 UNIT 2 2000 seconds
 EGG 1000 seconds
 SAI 1000 seconds