



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

FEB 18 1983

MEMORANDUM FOR:

H. Denton	J. Carter
D. Eisenhut	R. Purple
DL Assistant Directors	T. Speis
R. Vollmer	R. Mattson
H. Thompson	J. Snizek
T. Ippolito	C. J. Heltemes, AEOD
OR Branch Chiefs I-5	

THRU:

Robert A. Clark, Chief *Robert A. Clark*
Operating Reactors Branch #3, DL

FROM:

~~REDACTED~~
Operating Reactors Branch #3, DL

SUBJECT:

DAILY HIGHLIGHT

Trojan

The USGS and FEMA (Region X) have transmitted a draft report to FEMA Headquarters assessing the potential hazard to the towns of Kelso and Longview, Washington from a breach of the Spirit Lake natural dam on Mount St. Helens. According to the report, the volume of mud and debris associated with this event could exceed-- by a factor of three - that which occurred on May 18, 1980 following the explosive eruption of Mount St. Helens. The postulated event would result in a wall of mud/water 40 feet high at Kelso - Longview, about 7 miles north of the Trojan facility. The report does not address possible impacts beyond the Kelso - Longview area.

The 1980 flood resulted in substantial shoaling of the Columbia River at Trojan, which is 5 miles upstream from the point where the Cowlitz River enters the Columbia River. However, more than adequate depth was maintained at the Trojan intake structure.

The Trojan siren system covers much of the area exposed to the flood hazard; however 21 additional sirens have been installed to cover the Cowlitz and Toutle River valleys to the north and west of Kelso - Longview.

Sixteen instruments and gauges have been installed to monitor the dam and provide warning of a break. Seven hours evacuation time is available from the onset of a break. The eruption and resulting mudflow of February 7 resulted in no substantial rise in lake level.

The Army Corps of Engineers has installed a pumping system to lower the lake level. This system is currently abandoned due to a volcano alert, but should be remanned in a week (the pumps are located in the "red zone"). When not pumping, the lake rises 0.1 feet per day, and is currently 13' below critical level (the level at which ash becomes the wall of the dam).

8508150233 850715
PDR FOIA
BELL85-353
PDR

clu

2/23/83

ROUTING AND TRANSMITTAL SLIP

Date 2/23

TO: (Name, office symbol, room number, building, Agency/Post)	Initials	Date
1. J. Knight		
2. R. Vallance		
3.		
4.		
5.		

Action	File	Note and Return
Approval	For Clearance	Per Conversation
As Requested	For Correction	Prepare Reply
Circulate	For Your Information	See Me
Comment	Investigate	Signature
Coordination	Justify	

REMARKS

For Signature 7/12/83
 We plan to take a limited look. We will maintain our contact with USGS / State as we have for last 2 1/2 years
 R.E. Jackson

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.

5041-102

OPTIONAL FORM 41 (Rev. 7-76)
 Prescribed by GSA
 FPMR (41 CFR) 101-11.206

C/12

Routing Slip

Priority 1

TRANSMITTAL OF DIVISION OF LICENSING WORK REQUEST

SPECIAL HANDLING - PROCESS WITHOUT DELAY

TAC#-Plant Name-Title 49636 - TROJAN - MT. ST. HELENS - SPIRIT LAKE DAM

Description of review requested:

1. Review draft USGS/FEMA report on possible hazards posed by failure of Spirit Lake dam. (to be provided by PM about 2-22-83).
 2. Review may involve site visit and further review depending on "Quick Look" at USGS safety assessment of 1. above.
 Requested target date report by ~ March 1, 1983.
 Basis for request date:

SEQUENCE	NAME	DATE
1. Originator	<u>C. Trammell</u>	<u>CWT 2/17</u>
2. OR Branch Chief	<u>R.A. Clark</u>	<u>Rae 2/17/83.</u>
3. OR A/D	<u>G. Laines</u>	<u>Rae/for 2/17/83.</u>
<input type="checkbox"/> This action is requested to be added to the review branch's current commitments <input type="checkbox"/> This action is requested to be completed in lieu of TAC# _____ for _____ (Plant Name)		
4. Review Branch Chief	<u>(GSB) R. Jackson</u>	<u>Robert E. Jackson</u>
5. A/D	<u>JP Knight</u>	<u>JP Knight</u>
6. Division Director	<u>R. Vollmer</u>	<u>R. Vollmer</u>
<input checked="" type="checkbox"/> This action is accepted for completion with a target date of <u>approx. 4/1/83</u> <input type="checkbox"/> This action is accepted for completion with a target date of _____ in lieu of completing TAC# _____ in this fiscal year		
<input checked="" type="checkbox"/> 7. Return to Review Branch Chief for assignment of reviewer and retention of work package <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div> <u>Harold Lifene</u> (Reviewer's Name) </div> <div> <u>HEL</u> (RAMS Initials) </div> </div>		
<input checked="" type="checkbox"/> 8. Return routing slip to originator		

FROM C TrammellMAIL STOP 428PHONE 27329

2/23/83

FCMA X

2

Asked where copy of report is.
talked w/ Bill Brown. FCMA X

Donovan away Brown doesn't know
will send 6 copy if can.
to day. (2/23).

c/13

Bill Brown Spiral Lake 2/24/83

Corps will have alternative
studies done by NOV 1983
(the final fix will not
take place by this summer)

feasible alternatives defined by
(known by July) NOV 1. NOT A FIX.

Dept of Agri. property (US
Forest. Svc.) who's to do
it? What to be
done? How funded.

Brown guesses they'll be
flipping thru this year.

20 pumps. 180 cfs 4000 gal/day
fuel.

50' ash (non structural)
10-15' good (freeboard)

→ dit

new lake 400-600' higher than
old.

pumps supposed to be
able to handle spring
melt. (but not volcanic
melt)

(twice the melt would put
water at the non-structural
pile) twice is not unusual.

when pumping, lake does drop
slightly (normally) then rain,
they lose ground.

45,000 people in flood hazard
area, incl. Kelo-Langwin.

Contractor required to walk
the dam everyday (seepage
etc.)

several miles of I-5 would
be destroyed.

Toutle R. bridge would be
buried 55' of mud.

would take $\approx 1'/\text{day}$

12' storm

120 day to reach
non structural.

probably not be purged for

2 more yrs. unless
a crisis is defined.

(may not be fixed in this
administration)