

Meeting Summary with Maryland Radiation Health Program staff on Inspection of Neutron Products, Inc.

During the September 22, 1993 meeting held between OSP, Region I, and the MD. Radiation Health Program (RHP) Administrator and staff, agreement was reached to conduct a joint MD/NRC inspection at NPI. The state identified general areas which NRC assistance was needed to effect NPI improvements. Among these were evaluation of waste storage and disposal, methods to minimize continuous controlled and uncontrolled releases of Co-60, analysis of ALARA practices, and characterization of off-site contamination.

A general scope of inspection activities was identified. The team will concentrate on effluent pathway analysis from Co-60 operations (airborne- groundwater- soil- surface runoff- waste stream - sanitary sewer) and assess NPI radiation control practices relative to public health and safety. Supplementing this effort will be an aerial survey of on-site and off-site areas for radioactive contamination (coordinated through NMSS) and environmental site measurements (utilizing NRC Region I mobile van). An inspection plan will be developed in a September 28, 1993 meeting between state RHP and NRC staff. It is expected that NRC's Region III review of the AMS facility will be closely used as a guide for the NPI inspection.

A complaint filed by the Maryland Attorney General against NPI resulted in a recent court summary judgement on 17 of 24 counts, with a January 3, 1994 trial scheduled for six of the remaining counts. Technical conclusions from this inspection could be used to support the state's case prior to trial.

The RHP Administrator has designated a cognizant Maryland RHP inspector to serve as team leader. Senior NRC headquarters and regional specialists with the expertise necessary to implement the inspection plan will be assigned as team members. Selection of NRC personnel is under review by the Deputy Director, OSP and will be identified during the week of September 27, 1993, following communications with NRC staff offices. NRC inspection conduct and findings will be coordinated through OSP; a report will be prepared and included as an attachment to the 1993 Maryland Agreement State program review report.

A/S

NPT - Summary

Engineering changes

- ✓ New amendment 33 identifies criteria which State wants NPD to comply - basis?
- Since 88, improvements noted: consultant

LLW generation

- ✓ releasing uncontrolled / unmonitored RAM to envt.

RELEASES

1. Air - method of preventing releases thru duct system adequate from hot cell
now releases well below MPC 10^{-10} / 10^{-11} $\mu\text{Ci/cc}$ weekly samples

2. Personnel - ^{TPHNS} workers ~~rate~~ - 90 mR/hr

in private homes \rightarrow req. to clean to bkgd.

now: new license proposed annual home surveys (all personnel)
portal monitors installed ⁸⁹ - MDE notified @ 5000 dpm

• Tools / Equipment - surveys performed prior to facility departure
no real problems w/ workers

3. Sanitary Sewer - in own ~~water~~ tank

concs. - w/ in trucks $\approx 10^{-3}$ $\mu\text{Ci/cc}$ $<$ MPC for Co-60

" " cars

- ✓ Goes to designated sewer / or let - no downstream monitor, no sampling + discharge point

- ✓ One holding tank - mostly mop water

surface

4. Runoff - ~~at~~ Limited Access Area (LAA) extends into courtyard

5. Overflow runoff from dry pond to railroad

Dry pond cleaning in progress
water into culvert is ^{not} measurable

License monitoring

survey msmts @ 1 m

scintillation @ surface

6. Airborne From ? areas

✓ 5 μCi - 50 μCi found in residential properties

NPI - one km area surveys of home properties ~ few months

Some State conformity measurements

* \rightarrow From ^{water} runoff; downstream near pond area always elevated. \rightarrow indicates continuous exposure

TLD program - every 100 ft on fence perimeter State - monthly exchange

✓ fence-offsite doses average 500 mrem/year

NPI 1/4 "

residence - highest was 20-30 mrem/year

7. Personnel Exposure

88-89 up to 3 Rem/quarter; some overexposures \rightarrow general area

90-91 - vacuum system implemented + dose \downarrow ~ 50%

8. Personnel - all are involved in business end

9. Training Program

informal \rightarrow for new hires

✓ doses to new workers in Rem range.

License renewal completed April '91 + ALG opinion was to not issue.

Rory Manley

P. 57 basis for STO mRem

75 " " 20 µB above bkgd

9495 dry pond controls (unrestricted areas)

98 waste storage facility

100 prevention of uncontrolled release thru runoff

103 waste disposal

* 124 release of RAM in unknown quantities

source of release + pathway to envt.

release potential not evaluated.

129 Air sampling capability

136 filtration system

138 Respiratory program

162 acceptable limits for controlled release

170 Items for attention-to-detail program

214 Inventory control of RAM

222 DU license app denied by State, granted by NRC

227 doses from courtyard → survey of neighbors' property

239 Necessary daily checks inc. weld-leaks

251 TD program

from Remediff - pool water quality

Motion for Summary Judgment

Eval/Develop/D

1. Overall schedule + plan describing work scope, tasks + mod safety goals
2. Cobalt melting process vs. source fabrication not req. melting
3. Potential for accidental releases / off-site impact from melt operations