

February 8, 1991

Mr. Frank Costello
Nuclear Materials Safety Section B
Division of Radiation Safety and Safeguards
US Nuclear Regulatory Commission, Region I
475 Allendale Rd.
King of Prussia, PA 19406

Dear Frank,

This letter is in response to our phone conversation of February 7. We have carefully considered your recommendation that INS submit a license amendment to take possession of the Borough of Royersford's de-watered sludge into the indefinite future. We offer the following for your consideration:

From INS' prospective, taking possession of the sludge is an impractical, open-ended proposition for the following reasons:

1) Unpredictable Costs: There is no way for INS predict what the costs to dispose of their sludge may be in five to seven years. The existing POTW sludge de-watering area is 70' x 50' x 6.5' = 22,750 cubic feet. Assuming a conservative fee of \$50/cubic foot to bury the material at a low level waste repository, the cost would amount to over one million dollars. Considering skyrocketing low level waste disposal costs, one could only speculate what it will cost in five year's time.

Further, according to the Borough's engineer, the method of drying sludge via special plants (reeds) is relatively new and unproven. There appears to only be a few POTWs using this method and none have been tested to the end of their useful life. Considering the uncertainty and risk associated with such a new technology, it is unwise for INS to commit resources towards an unknown end.

2) Unpredictable Borough Growth/Sludge Generation: There is no protection to INS should the Borough grow appreciably or invite more industry. Moreover, there would be no incentive for the Borough to proceed with expensive volume reduction techniques as all sludge disposal costs would be INS's responsibility.

3) Unknown and Uncontrolled Waste Stream: INS has no control over sludge created by discharges from other users. The Borough waste stream and sludge may contain organic solvents and chemicals from industry and households, and will certainly contain biological waste. Mixed with radioactive materials, the sludge could be classed as a mixed waste which is presently impossible to dispose of. Even without chemical contamination, the material presents a bio-hazard which increases the cost of disposal.

We propose the following approach:

1) Encourage the DER to reevaluate their pending rule of not allowing disposal of any radioactive material to be buried in the soil. The proposed rule is broad and nondescript. We believe that if the law stands as interpreted by personnel at the DER in Norristown, hundreds of licensed radioactive material users and permitted POTWs will be affected state-wide. The list may include hospitals, manufacturers, universities, other laundries, even undertakers who bury patients with pacemakers. Clearly, further definition of the rule is needed.

2) With the adoption of a equitable DER rule, refine our methods of wastewater treatment to meet or exceed that rule. Even though we presently discharge well below maximum permissible concentrations, INS is prepared to invest research and capital to further reduce our effluent. We feel that the only way to prudently protect our assets is to control the effluent at the source, not downstream at the POTW for reasons described above.

At our Royersford facility, we now have a modern wastewater treatment system of coagulation, flocculation, sedimentation, and sand filtration. We are currently investigating a new polymer that the manufacturer claims to be several orders of magnitude more efficient at removing radioactive solids than other available flocculents. We are also preparing to set up a pilot ultrafiltration unit at Royersford. The ultrafilter is expected to lower concentrations by at least an order of magnitude without the aid of the new flocculent.

We are very interested in meeting with representatives of the NRC and DER as you have suggested. We are anxious to work together to formulate a mutually beneficial solution. However, while the idea to take possession of the Borough's waste appears to be a simple fix, it would leave INS in an extremely vulnerable financial position in the future. We are willing to implement reasonable recommendations, but we are convinced that the best way to mitigate accumulation at the POTW is to reduce the effluent concentrations at our point of discharge. We are prepared to invest time and resources if the DER agrees to reconsider their rule, and we hope that we can resolve this issue quickly and to everyone's satisfaction.

Sincerely,



Michael J. Bovino, CHP
Manager, Health Physics and Engineering

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cc: G. Bakevich B. Moser
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