



Department of Energy

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U. S. Environmental Protection Agency, Region VIII  
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Denver, Colorado 80202-2405

Mr. Gary Baughman  
Hazardous Waste Facilities Unit Leader  
Colorado Department of Health  
4300 Cherry Creek Drive South  
Denver, Colorado 80222-1530

Gentlemen:

Enclosed please find the summary of the information discussed at our recent meeting on the Solar Ponds (SPRP) Remediation Project. As discussed at that meeting and several previous meetings, the ultimate completion of the SPRP has both technical and regulatory challenges. We believe the attached summary reflects the results of our meetings and request your concurrence with the decision approach outlined in the summary. In order to firm up our current plan and out year programming we would appreciate receiving your response by April 27, 1993.

Please feel free to contact me on 966-4538 if you require additional information.

Sincerely,

Frazer R. Lockhart  
SPRP Manager  
Environmental Restoration Division

Enclosure

cc w/Enclosure:  
A. Rampertaap, EM-453  
J. Hartman, AMTER, RFO  
R. Schassburger, ERD, RFO

## SOLAR PONDS OPTIONS

Solar Ponds options have been discussed with EPA and CDH representatives at various meetings over the past several months. Uncertainty over the availability of the planned disposal site in Nevada, coupled with the cost of storing processed sludge, the risk of a change in waste acceptance criteria, and high cost projections for the total program have led us to re-evaluate our current approach for cleaning out and stabilizing the liquids and sludges present in the Solar Pond Complex at the Rocky Flats Plant.

We postulated various alternative waste stream storage, processing, and disposal approaches and analyzed them with respect to technical feasibility, completion dates regarding regulatory drivers, total program cost, and flexibility to determine the most viable approach for accomplishing objectives of the Solar Pond Remediation Program. All approaches had a common objective of eliminating the pond sludge as a potential source of contaminants to the ground underneath the ponds and to adjacent ground water. All approaches also analyzed the full life of the program, rather than just the current budget year.

Based on our analysis, we have concluded that our current approach (cementation of the C pond sludge in FY94, the B pond sludge in FY95, and the currently stored/falling pondcrete and salterete after a disposal site opens) is less prudent in the long-term perspective than several other approaches. The current approach has substantial scheduling and reprocessing risks associated with the availability of the repository, has a high cost for treating a relatively low hazard material, and would preclude pursuit of less costly approaches. We also concluded that removing the sludge from the ponds and temporarily storing it in an untreated form is no quicker at eliminating the pond sludge as a potential source of contaminants than relining ponds for safe storage of pond contents. Removing the sludge and temporarily storing it also has increased risks associated with above ground storage, and merely defers (and increases) the ultimate treatment and disposal costs. Finally, we concluded that consolidating the sludge as much as feasible and temporarily storing it would adequately minimize or eliminate the potential for environmental contamination as soon as other options while preserving the possibility of pursuing potentially more attractive alternatives for final disposition of the wastes.

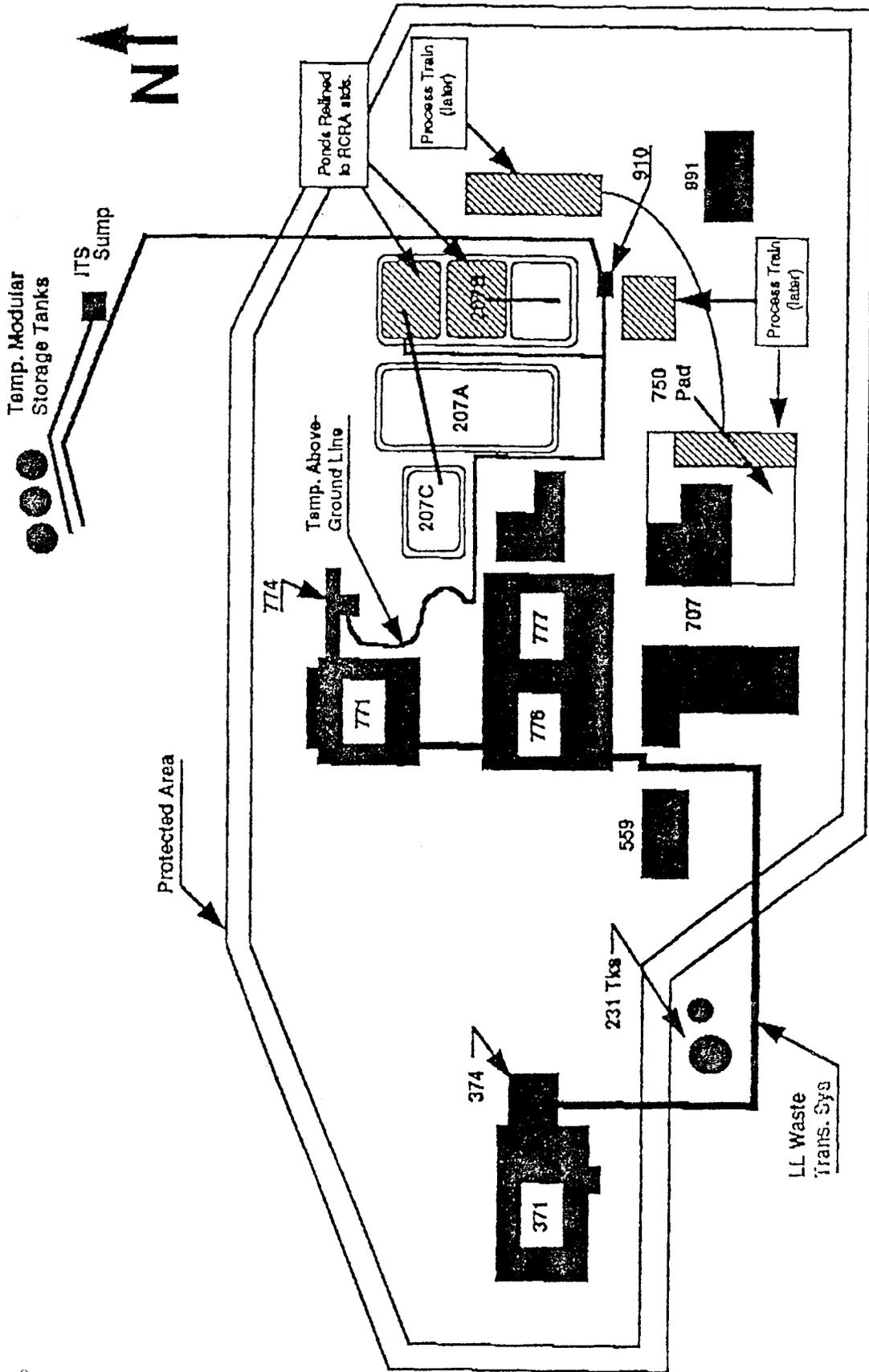
We have, therefore, devised an approach which has the following major features

- Consolidate the contents of B ponds North and B Center into B South -- the pond with the newest and presumably best liner.
- As B North and Center become empty, assess the integrity of their liners and sample the area under them to support the OU 4 IM/TRA Treatability Study.
- Depending on the results of the sampling, re-line B North and B Center (after analysis confirms that these are the most appropriate ponds to use for temporary storage).

- Transfer the original contents of C Pond and the clarifier to B North.
- Transfer the contents of B South to B Center.
- Pursue a treatability study on the existing, stored pondcrete and saltcrete to accelerate the schedule for processing (current plan is cementation) and off-site disposal if a site becomes available sooner than anticipated.
- Pursue development of a new IM/IRA as the permitting vehicle for temporary, near-term sludge handling (for example, by storing the sludges in existing or re-lined ponds or some other less costly variation as indicated by analysis).
- Continue the current actions underway: divert the placement of ITS water from the ponds to the surge tanks; transfer pond water (and ITS water as capacity allows) to Building 910 (when it starts up); and remove excess water from the ponds by pumping it to Building 374 for treatment (and ITS water as capacity allows) (see site plan, attachment 1).

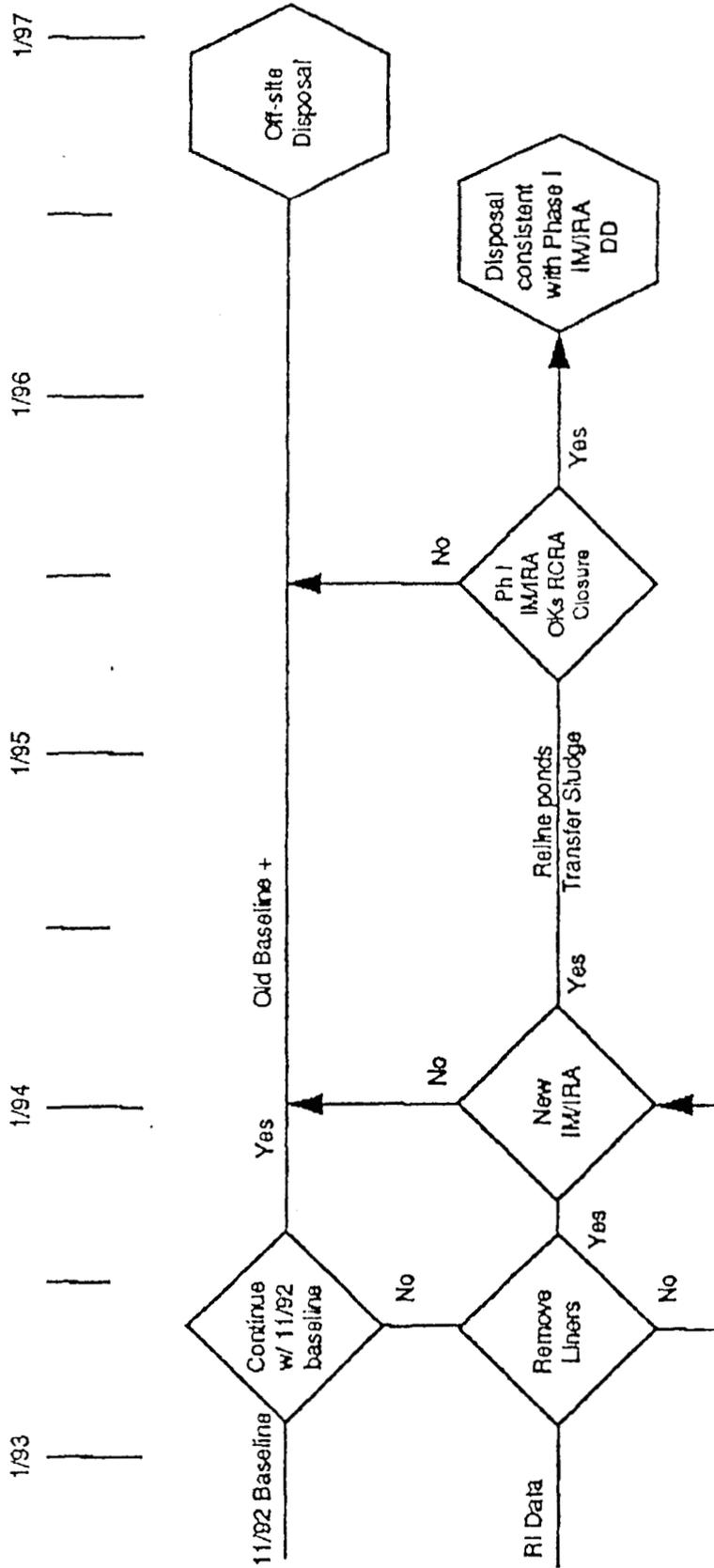
Attachment 2 depicts the decision logic of our path forward. We expect to request approval to implement a new IM/IRA towards the end of this year. This time frame affords us an opportunity to collect and analyze data from underneath and around the ponds in order to form the basis for a decision on whether the existing pond liners and underlying soils must be remediated and on re-lining of the ponds. Therefore, we are seeking your early and active participation in the decision making process. We realize the high level of interest in the Solar Ponds Remediation Program and appreciate the time you and your staff are devoting to frequent meetings and discussions with us to develop a prudent plan for the total program.

# SCHEMATIC OF REVISED PLAN



Attachment #2  
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# SIMPLIFIED DECISION TREE FOR PATH FORWARD



Attachment 333  
 12/21/97  
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