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COMMENTS RECEIVED DURING PUBLIC COMMENT PERIOD

MAY 24, 1993 THROUGH JULY 9, 1993

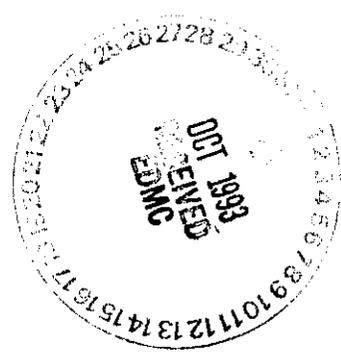
ON

DOE/RL 92-74,

PROPOSED PLAN FOR CLEANUP OF THE 1100 AREA

SUPERFUND SITE AT HANFORD

9313027.1530



June 28, 1993

Dave Einan
U.S. EPA
712 Swift, Suite 5
Richland, WA 99352

Re: Comments on the 1100 Area Superfund Site at Hanford

Dear Mr. Einan:

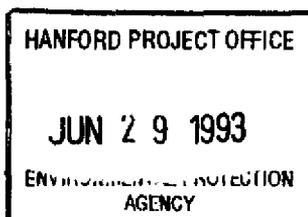
We are concerned about the present plan to bury contaminated waste in some sort of solid state. We do not feel enough is known about whether such a solid mass can be created and if so how stable and what the long-term effects of its burial would be.

Until we have more complete knowledge about the safety of long term storage of any kind and about underground storage in particular (what containers are safe, how long will they last, how will leakage be determined, what might happen to soils and groundwater, what will be the effect on the Columbia River) we believe contaminated waste should be stored above ground in the safest containers now known so that they can be closely monitored and repaired and/or re-encased as needed before water and ground contamination can occur.

Sincerely,



Margaret Condit, President
Kittitas Valley League of Women Voters
P. O. Box 445
Ellensburg, WA 98926



9313027-1531

Lt. Col. Donald E. Evett, USAF, Ret.
3106 South 975 East
Bountiful, Utah 84010

May 26, 1993

U.S. Environmental Protection Agency
712 Swift, Suite 5
Richland, WA 99352
Attn: Mr. Dave Einan

RE: 1100 AREA CLEAN PLAN

Dear Mr. Einan:

I will not be able to attend the public meeting June 30, 1993 to participate in the public discussions. Therefore, I wish to submit my comments in writing for your review.

I highly indorse any action on part of the government or private corporations to begin the clean up process as outlined in the proposed plan.

I have followed the nuclear activities at Hanford since 1943, and I am ever so concerned over the procrastination of the U.S. Government to expedite all clean up programs scheduled for Hanford and Richland. I realize it will cost billions to accomplish such clean up programs and perhaps 30 years, but the longer projects are delayed, the worse the environmental conditions get at this hot spot.

Again, I have made a special interest over the many years to become knowledgeable on the why's and why not's for radioactive material disposal. Foreign countries have been gravely neglectful over the past 40 years on the proper handling and disposal of radioactive materials, some that will be around for 10,000 years. We will not be able to clean up the ocean of all its radioactive waste that the former USSR dumped into the ocean.

I know that water tables in the Hanford area have been contaminated for many years. The Columbia River has been contaminated for years, and so have the fish.

Over the years it has been fact that government officials and those of responsible industries have not had an aggressive attitude towards cleaning up Hanford. Man can waste billions of needed dollars in foreign aid, SDI programs etc., but nothing for clean up programs that are so badly needed. Can you imagine what we are leaving behind for generations to come!

The storage tanks at Hanford must be properly disposed of as planned, especially tank 101. I realize efforts are being made now to drain this tank and process the radioactive contaminates for

HANFORD PROJECT OFFICE

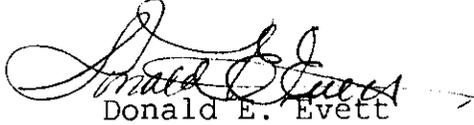
MAY 28 1993

ENVIRONMENTAL PROTECTION

9313027.1532

permanent storage, like 10,000 years! Procrastination is man's worst enemy, and this has been prevalent at the Hanford Site for many years. I have acquired considerable knowledge and historical information on the Hanford site over the past 50 years, and I know that not enough is being done to accelerate the clean up process. The government must spend the money and the tax payers will have to foot the bill. This should not be a part of the balancing of the American budget deficit. It needs to be addressed independently and done by the most expeditiously means.

Sincerely,



Donald E. Evett

9313027-1533

JUNE 9, 1993

DAVE EINAN
US EPA
712 SWIFT, SUITE 5
RICHLAND, WA 99352

DEAR MR EINAN;

I HAVEN'T READ THE "1100 AREA PROPOSED PLAN" HOWEVER I STILL FEEL THAT I SHOULD MAKE MY GENERAL FEELINGS KNOWN.

I'VE HEARD A LOT COMMENTS AND READ A LOT OF ARTICLES REGARDING THE CLEANUP OF HANFORD AND IT SOUNDS LIKE THE ONLY THING THAT EVERYBODY CAN AGREE ON IS THAT WE NEED TO TAKE THING SLOW AND EASY.

I MYSELF WOULD LIKE TO SEE SOME REAL PROGRESS MADE.

I AM A WINDSURFER WHO SAILS THE COLUMBIA IN AND AROUND HOOD RIVER AND I'M CONCERNED ABOUT MY HEALTH. I'M CONCERNED THAT BY YOU PEOPLE DRAGGING YOUR FEET ON THE CLEANUP THAT YOU'RE INCREASING THE CHANCE ME GETTING CANCER.

AND I'M NOT THE ONLY ONE THAT'S CONCERNED. MOST OF THE OTHER WINDSURFERS WHO SAIL "THE GORGE" ARE ALSO VERY CONCERNED ABOUT THE POTENTIAL (OR MAYBE NO LONGER POTENTIAL) DANGER CAUSED BY RADIOACTIVE/TOXIC WASTE LEAKAGE.

PLEASE PUT TOGETHER A REALISTIC PLAN AND BEGIN IMPLIMENTING IT ASAP.

WE'RE TALKING ABOUT THE HEALTH OF MILLIONS OF PEOPLE HERE.

WE'RE NOT JUST TALKING ABOUT SAILORS BUT ALL THE PEOPLE WHO LIVE, FISH OR SPEND ANY TIME AT ALL ALONG THE COLUMBIA.

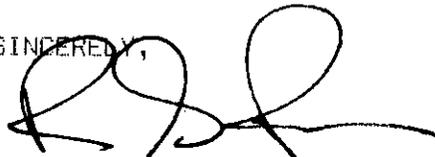
I KNOW THIS SITUATION IS NOT AS EASY TO RESOLVE AS I MAKE IT SOUND BUT ASK YOURSELF THIS QUESTION....."WHAT WOULD I DO AND WHEN WOULD I DO IT IF MY CHILDREN AND FAMILY LIVED IN LYLE, OR THE DALLES, OR HOOD RIVER, OR STEVENSON AND SWAM AND PLAYED IN THE RIVER.....AND DRANK THE WATER?"

IS SUSPECT THAT EVEN THE PEOPLE OF PORTLAND ARE AT RISK .

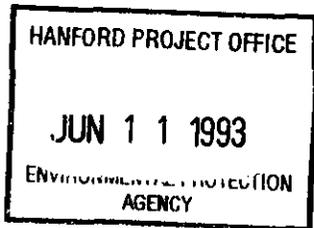
HEY.....WE'RE TALKING ABOUT PEOPLE'S LIVES HERE.....AND THE LONGER WE WAIT THE MORE LIVES YOU PEOPLE PUT IN DANGER.

THANK YOU VERY MUCH FOR YOUR TIME AND ATTENTION.

SINCERELY,



R GREG FERRER



9313027.1534



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 Cobb Building, Suite 208
 Seattle, Washington 98101
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 FAX (206) 382-1148

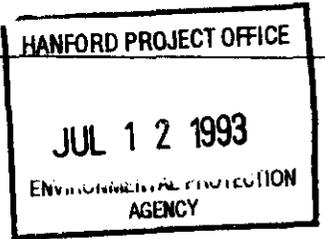
Washington, D.C. Office
 Washington, D.C. Representative:
 Honorable Don Bonker
 c/o Arnold & Porter Consulting
 1155 21st Street NW, Suite 1000
 Washington, D.C. 20036
 (202) 778-1019
 FAX (202) 466-6002

Board of Directors
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 Helen Koppe

Executive Director
 Gerald M. Pollet

HeartOfAmericaNorthwest

"Advancing our region's quality of life."



Comments Applicable To:
200-UP-1 RI/FS Work Plan
200-BP-1 Operable Unit Work Plan
100-BC-2 Operable Unit Work Plan
100 Area Treatability Test Plan
1100 Area Proposed Plan

I. Notices / Request For Comments / Focus Sheets Inadequate:

The mailed and published notices (alternately called request for comments and focus sheets) for public comment on the above plans are not designed to solicit public comment on the work plans. Rather, notices seem designed to discourage public comment by failing to provide any relevant information on which the public may comment.

Each of the notices fail to disclose the following:

- areal extent of contaminant plumes or spread;
- actual concentrations of contaminants and areal extent of plumes in excess of drinking water or other standards;
- details on locations of contaminant plumes or sources;
- maps showing location of plumes or contaminant sources;
- source of contaminants and continuing drivers of contaminant spread, and quantities of contaminants disposed;
- why this particular unit was determined to be of high priority for early study, investigation, interim remedial measures or expedited response actions.
- rate of expansion of plumes, and known exposure pathways;
- proposed timelines for investigation and action.

One gets the impression that these notices were designed to look good for oversight purposes by persons who were not going to be attempting to utilize them to submit an informed comment to the agencies. (I.e., describing 200-BP-1 Work Plan as proposing a "cleanup action", when an isolation cap is proposed with no cleanup action)

An interested citizen (or an informed commentor) can not obtain sufficient information from these notices or request for comments to offer informed comment. This situation is made intolerable by USDOE-Richland's refusal to provide source documents, i.e., the 200 West Aggregate Area Management Study, to interested and concerned citizens, despite statements from USDOE-RL and WHC personnel that informed comments are not possible on the 200-UP-1 Work Plan absent easy access to the Aggregate Area Management Study. Furthermore, as detailed below, these documents are not easily accessible at the "information repositories" listed in the notices.

To encourage comments, published notices (ads) should include maps of the affected areas and an explanation of why the unit is of high priority, along with whether USDOE is proposing more study or an actual clean-up action.

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II. Documents Necessary For Offering Informed Comment on These Clean-Up Plans Are Not Available Or Have Been Specifically Denied:

On April 29, 1993, we and other public interest groups were specifically denied copies of the document described in the 200-UP-1 RI/FS Work Plan as "the primary supporting document for this work plan" (at P. 1-2) by Julie Ericson, USDOE-RL. At that meeting, her staff described the supporting document as absolutely necessary for the submission of intelligent comments on the Work Plan, and said that they felt it was necessary to have the two documents side by side while preparing comments.

It is this same necessity for having lengthy access to the Work Plans and supporting documents that renders meaningless the current system of having the work plans and supporting documents supposedly available at an information repository.

So long as these documents are not available for check out or provided totally free of charge (and Ms. Ericson suggested that we would have to pay for these documents, as does the existing and proposed Community Relations Work Plans), then the public has no meaningful opportunity to comment on them.

Information Repository hours remain limited (there are no non-work hour or lunch time hours for the Richland repository) and prevent even minimal access. Documents are not indexed or shelved in a fashion to enable access at the Seattle Repository. Of course, to review and comment on these large, complex documents requires a large amount of time - preventing the system of having a single document at each information repository from allowing meaningful public review of these documents (since they can not be checked out and if one person is reading a document noone else can).

III. Tri-Party Agreement Milestones for Public Comment on These Work Plans and Documents Have Not Been Met:

Absent meaningful opportunity for public comment, the milestones requiring such comment opportunity have not been met. We urge the EPA and Ecology to specifically reject the above mentioned 200-UP-1 Work Plan and other documents as failing to meet this critical element for the reasons mentioned in parts I and II above. The public comment requirements should be viewed by the regulators as every bit as important as the substantive elements of a Work Plan, and a Work Plan which has not had meaningful public comment should not be accepted as having met the milestone.

For the reasons presented above, we ask that each of the comment periods be extended or re-opened with appropriate meaningful opportunity for comment, as evinced by notice and information designed so that a person reasonably desirous of commenting could do so.

9313027.1536



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"Advancing our region's quality of life."

**Supplementary Comments to
 Hanford 1100 Area Superfund Clean-Up Draft Plan
 and Final RI/FS Report**

I. Undue Reliance on Incineration is Not Publicly Acceptable:

Hanford Clean-Up has been widely touted by USDOE, USEPA and Washington Ecology as an opportunity to demonstrate new and more effective clean-up technologies that will be publicly accepted and usable at Superfund sites across the nation. The proposed plan, however, chooses to rely on incineration and landfilling instead of using new, available technologies to treat and destroy hazardous wastes.

This reliance on landfilling or incineration is inconsistent with Washington's Waste Management Priorities codified in R.C.W. 70.105.150.

This statute has not been properly identified (see general comments) by USDOE, EPA or Ecology as an "ARAR" for the 1100 Area Cleanup Plan or other RI/Fs workplans currently out for public comment.

When there exists a viable alternative which would biologically or chemically treat wastes, it is not appropriate to choose landfilling or incineration on the basis of costs, as has been done in the case of the 1100-EM-1 unit remediation for the Ephemeral Pool Soil Site (EPS Site). For the EPS site, offsite landfill disposal has been selected as the preferred alternative on the basis of cost, disregarding proven technologies to destroy PCBs through chemical (non incineration) means and biological means. In fact, proven technology for the destruction of PCBs involving the use of chemical processes that result in harmless salts as the only byproduct, were not even considered amongst the alternatives for this site. This seems entirely inconsistent with Hanford being an example of utilization of new, innovative cleanup technologies.

For the Discolored Soil Site (DSS Site) within the EM-1 unit, incineration is actually acknowledged to be twice as costly as bioremediation. Yet, despite Washington State Waste Management Priorities and the oft stated goal of utilizing innovative technologies at Hanford, incineration has been selected as the preferred remediation alternative.

The fact that Bioremediation has not yet been proven capable of meeting ARARs should not cause this technology to be discarded if Hanford is going to be a proving ground for new technology. If this technology work, we will have not only proven a new cleanup tool, we will have cleaned up this site at 50% of the estimated cost for incinerating the wastes.

The same issues apply to remediation of the Horn Rapids Landfill. If Hanford is to show environmental leadership, then the goal of the cleanup should be to chemically destroy PCBs to levels well below 50ppm, which has been shown to be feasible in other cleanups in this State. The MOTCA cleanup goal for PCBs, recognized for units EM-2 and EM-3 is just 1 ppm. Leaving 50ppm PCBs in a landfill with no leachate collection and treatment system is, ~~therefore, unacceptable.~~

9313027-1537

HANFORD PROJECT OFFICE
 JUL 12 1993
 ENVIRONMENTAL PROTECTION AGENCY

II. Lack of Consideration of Hanford Future Site Uses Working Group Recommendations and Principles:

The 1100 Area must be considered as likely for residential use "in the foreseeable future", according to the Working Group recommendations. The "foreseeable future" was considered by the group to refer to a time period prior to the year 2018 - when all Hanford Clean-Up actions are supposed to be completed.

The Draft Plan fails to consider the time element and expectations for "unrestricted use" categorization of the Working Group recommendations. Because of this failure, the following elements of the Plan are flawed:

a. Failure to cleanup contaminated groundwater associated with EM-1 and the Horn Rapids Landfill prior to the time when we can expect legitimate public demands for these areas adjacent to the City of Richland to be released in an "Unrestricted" use scenario. In the Plan, restrictions are required until, at least, the year 2020 (and there is good reason to believe that this is overly optimistic) due to the reliance upon a No Action alternative for groundwater remediation, while available technologies would remediate the groundwater at reasonable cost by the year 2012. Therefore, we urge adoption of alternative GW-2B.

b. The Plan fails to follow ARARs for the closure of the Horn Rapids Landfill and is also inconsistent with the Future Site Uses Working Group recommendations for making this area available for unrestricted use, with a reasonable expectation of residential or agricultural usage in this area. The ARAR, WAC 173-340-710(6)(c), "Solid Waste Landfill Closure Requirements", requires the Plan to meet State standards for closing landfills, including leachate collection, treatment and capping. Failure to investigate the possibility of additional contaminants and to remediate PCB contaminated soils to a level significantly below 50ppm, makes the proposed action entirely inconsistent with Treaty obligations and rights, and the recommendations of the Future Site USes Working Group for this area being "unrestricted" before the year 2018 - whether used for agriculture, Tribal rights, or residences. The failure to either remediate the landfill or to cap and install leachate collection/treatment is entirely inconsistent with unrestricted future uses.

III. Washington's Clean-Up Levels are ARARs, but the Plan Fails to Acknowledge Them and Will Not Result in Remediation to Risk Levels Below 1E-6 For Any Carcinogen and 1E-5 for Multiple Carcinogens From a Single Site:

W.A.C. 173-340-700(b) sets a Standard Method for determining clean-up levels, which are not to result in additional lifetime cancer risks exceeding one in one million (1×10^{-6}) as mandated by the Model Toxics Control Act. The cumulative risk from a site must be no greater than one in one hundred thousand.

The proposed Plan fails to meet these risk reduction levels.

For the DSS and Groundwater units, post remediation risks are twice those allowed under Washington law. For EPS, the risk is three times what is permitted under Washington law. Further, the risk estimation failed to include the additional risk from Horn Rapids Landfill leachate (claiming : " No exposure and therefore no risk ") despite the failure to require leachate collection and an appropriate cap on the landfill. Thus, the total risk far exceeds that

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permissible under WAC 173-340-700. This is inexcusable for this Plan, since additional active and effective remediation measures are rejected in the proposed plan on the basis of adding costs.

We must also point out that residential use must be planned for in this area "in the foreseeable future" - which also requires EPA and Ecology to revise this Plan to require additional active remediation of the landfill and groundwater.

This is the first Superfund cleanup plan proposed for Hanford. Thus, it is imperative that this Plan be consistent with Washington State law and the expectations of the public of Washington State regarding appropriate levels of protection from cancer risks from Hanford.

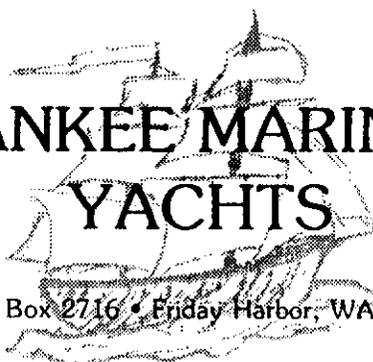
IV. The Horn Rapids Landfill and Groundwater Contamination:

Contaminants of concern have been identified in wells downgradient from the Horn Rapids Landfill. For a significant period, USDOE failed to report monitoring results from these wells. There is evidence that the Horn Rapids Landfill is the source of groundwater contamination.

It is not appropriate to state that the groundwater contamination presents no risks because it is not being currently used. The Hanford Future Site Uses Working Group principles suggest that cleanup in this area allow unrestricted use and that such use will involve unrestricted use of groundwater in the foreseeable future, although groundwater restrictions are reasonable in the interim.

The Technetium 99 contamination should be viewed as an indicator of the potential migration of other radioactive contaminants, as it has been viewed at other locations onsite. Tc99 levels are a concern. We request further data be provided on the Tc99 levels, migration rates, pathways and potential sources. If the source of this plume is, indeed, another nonUSDOE facility, please identify that facility, please identify the status of investigation and explain why this facility is not part of the CERCLA or RCRA closures at Hanford given the crosscontamination identified.

9313027.1539



YANKEE MARINER
YACHTS

P.O. Box 2716 • Friday Harbor, WA 98250

HANFORD PROJECT OFFICE

MAY 25 1993

ENVIRONMENTAL PROTECTION
AGENCY

(206) 378-7158

Mr. Dave Civan
U.S. E.P.A.
712 Sweet Suite 5
Richland Wa. 99352

5-24-93

Dear Mr. Civan,

I realize that nuclear waste is the big problem for Atomic Reactor Power Plants and other uses for Atomic Energy. What do we do with the waste material? Store it in places like Richland?

I like to think that I have an excellent idea about doing away with nuclear waste.

There are many underground explosion sights, in Nevada, Amchitka etc. that will of course be radioactive for thousands of years. I think that we should and I'm sure we could find a way to store the waste underground there. I think that this would be the ideal place to put it.

I proposed this to President Bush when he took office but all I received was a newsletter from D.O.E.

I'm a retired Federal Employee who worked for D.O.D. operating both steam and diesel plants for the U.S.A.F. I have no reactor experience but know power production.

If this is not practical, or would be impossible, would you please explain why?

Donald W Hayes
P.O. Box 2716
Friday Harbor, Wa
98250

0451 2708133
9313027.1540

303 W. 9th Street
Port Angeles, Wash.
June 15, 1993

Mr. Dave Einan
U. S. EPA
712 Swift, Suite 5
Richland, Washington 99352

Mr. Einan:

I am a firm believer that all nuclear facilities, including submarines and everything else nuclear the world over, should be terminated immediately, until such time, if and when, an absolute safe disposal site and ways are found for those highly radio-active wastes.

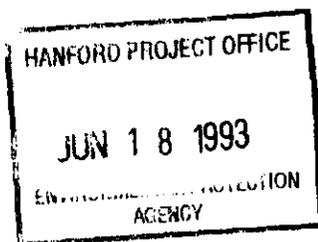
All the DOE has to show for the \$48 million of taxpayer dollars is a forty (40) yard long hole in Nevada which took twelve (12) years to dig. Now they are informing the taxpayers it has to be abandoned, it isn't suitable. At this point I'd like to ask the nuclear scientists do they have any idea what they are doing or not doing??

If, when and until an absolute safe way, with no assumptions or speculations is found, then and only then should the nuclear industry go forward. What have foreign countries been doing with their wastes?? They haven't solved the problem either. They dump it into the oceans of the world. Maybe, just maybe the world is being plagued with unexplainable illnesses because of all this indiscriminate dumping into the waters.

The \$250,000 per year new boss at WPPSS says that he plans within two (2) years to increase power at Plant 2 by nearly 50% and cut costs of that power by 40%. What if it doesn't work out as planned?? We will be paying him for nothing. But if his assumptions are correct, more and more radio-active wastes will be added to that stockpile and nowhere to dispose of the stuff. This reminds me of an old adage, "putting the cart before the horse". Nuclear energy has been on the scene for many, many years and they are still searching for an absolute safe way to dispose of those highly radio-active wastes.

Respectfully yours,

L. F. Latvala



Gordon J. Rogers
1106 Road 36
Pasco, WA 99301

Telephone (509) 547-7403

July 6, 1993

Mr. Dave Einar
U.S. Environmental Protection Agency
712 Swift, Suite 5
Richland, WA 99352

Dear Mr. Einar

I wish to submit the following comments on the Proposed Plan for Cleanup of the 1100 Area Superfund Site at Hanford. My comments are offered as a private citizen and taxpayer and not on behalf of any organization or business.

I believe that the cost of the cleanup for this site is excessive considering the trivial levels of hazardous materials found during screening sampling. The cleanup standards imposed by the EPA and the WA Model Toxics Control Act are certainly safe; but they are based on unrealistic assumptions and on unsound scientific data on the health and environmental hazards of these contaminants.

I believe also that the high cost of cleanup of such sites to pristine condition is not justified by any assessment of realistic health and environmental benefits of such an expensive effort. The cleanup of the major Hanford sites will only be made less likely if we waste money on these peripheral sites where the hazards are really trivial.

Having made these points, I do recognize that you are legally required to comply with existing laws and regulations in proposing actions. I have made and will continue to make appeals to our elected officials at the state and federal levels to re-assess the cleanup standards, and to base actions on a risk based prioritization of sites. I would certainly recommend that you do whatever you can to attempt to influence your organization to adopt the sorts of changes in the EPA rules and regulations to reduce the enormously complex and expensive manner in which Superfund is carrying out its assigned mission. The current attempt to achieve a near zero risk society without consideration of the cost to the taxpayers is simply not acceptable; and I don't believe the public can be hoodwinked into paying for it when there are so many other higher priority needs that pose real risks to health and safety today.

So much for the soapbox lecture. With regard to the alternatives for the individual sites, I offer the following comments:

EM-1 SITE

- **Discolored Soil Site, Ephemeral Pool and Horn Rapids Landfill.** Defer any cleanup action to a later time when an actual transfer to another owner than the USDOE is near at hand. There is a negligible health and environment risk now and if more realistic cleanup standards are adopted before disposal of the site by USDOE, a significant money saving will be realized.

HANFORD PROJECT OFFICE

JUL 8 1993

ENVIRONMENTAL PROTECTION

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• **Groundwater.** Use the existing wells to monitor the TCE plume, and do not install new wells along Geo. Wash. Way pending future monitoring results. Continue the restriction on use of the groundwater for drinking.

EM-2, EM-3 and IU-1 SITES

• **Soil and Debris.** As for EM-1, defer any actual field cleanup to later when there is a near term transfer of ownership at hand. In any case, it really seems dumb to drum up and ship contaminated soil and debris out of state when there will be so much radioactive contaminated soil and debris buried on-site. This is another administrative problem area that raises costs without any valid reason. As for groundwater, just restrict any use if it is found to be contaminated. Hopefully, research will find some cost effective cleanup techniques.

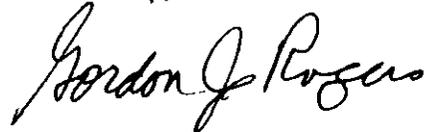
GENERAL-ALL SITES

I am aware of the Future Site Uses Working Group recommendations and their desire for unrestricted use of these sites. Realistically, the EM-1, EM-2 and EM-3 sites will no doubt continue for several decades with uses the same as or similar to their current uses and zoning; I feel that the delayed cleanup actions I suggest pose no problem at all with the use of these sites. The IU-1 Site will hopefully continue as an ecological research site; and I feel that any transfer of ownership to private parties for commercial, industrial or residential use is extremely unlikely. Again, there is really no urgency at all in carrying out the actual cleanup activities.

In closing, the 1100 Area Superfund Site is a superb example of the way that Congress and the EPA have created a monster that is spending billions without achieving much real improvement in public health and environmental protection. It would be interesting to have the total cost accumulated to date on just the investigation of the 1100-EM sites. Congressional action to get this thing back on track is desperately needed.

Anyway, thank you for the opportunity to comment on this Plan; and I hope you can find something useful in my remarks. I have to add that USDOE, EPA and Ecology deserve an "Attaboy" for what has been done in reducing the time and paperwork to prepare a proposed plan for the Expedited Response Actions and for this 1100 Area site.

Sincerely,



9313027.1543

SIEMENS

July 7, 1993

U.S. Environmental Protection Agency
Attn: Mr. Dave Einan
712 Swift Boulevard, Suite 5
Richland, Washington 99352

**RE: Comments on U.S. Department of Energy (USDOE) Draft Remedial Investigation/
Feasibility Study (RI/FS) for the 1100-EM-1 Operable Unit (April 1, 1993)**

Dear Dave:

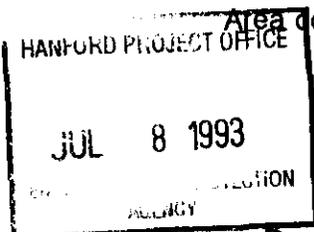
Siemens Power Corporation (SPC) appreciates the opportunity to comment on the above-referenced report prepared by the U.S. Army Corps of Engineers (USACE). Previous versions of this report were also reviewed and commented on by SPC in writing and through the 1100 Area Unit Manager's Meetings. SPC's comments express several general concerns but do not attempt to critique the report line by line. SPC's most important concern is the failure of the RI/FS to adequately address the uncertainties regarding the sources of TCE at the Horn Rapids Landfill. Please note that a lack of comment of any specific aspect of the draft RI/FS report does not imply concurrence with the contents of the report. Following are SPC's comments.

(1) SPC Coordination With USDOE

The Executive Summary could be read to imply that the RI for the entire 1100-EM-1 Operable Unit was coordinated and negotiated with SPC. A more accurate characterization is that SPC's well construction and water-quality sampling program were designed to be consistent (to the extent feasible) with that conducted by USDOE at the Horn Rapids Landfill (HRL). Additionally, SPC and USDOE coordinated scheduling of water-quality sampling and water-level measurement activities at the HRL and SPC facility and shared results with each other.

(2) Overstatement of Trichloroethylene (TCE) Concentration

The Executive Summary indicates that the highest TCE concentration in groundwater in the 1100 Area was 110 parts per million (ppm). This is erroneous; the highest 1100 Area concentration was 110 parts per billion (ppb), not ppm.



Siemens Power Corporation

Nuclear Division - Engineering and Manufacturing Facility

2101 Horn Rapids Road, PO Box 130 Richland, WA 99352 0130 Tel. (509) 375 8100 Fax: (509) 375 8402

9313027.1544

July 7, 1993

(3) SPC Pumping Test

The summary of the SPC pumping test contains some errors. Please see SPC comments transmitted on February 2, 1993 for recommended changes.

(4) Historic Water-Quality Data

The text in Appendix F does not adequately characterize the uncertainty regarding the historic water-quality data. Please see the February 2, 1993 SPC comment letter for recommended changes.

(5) TCE Sources and Release Dates

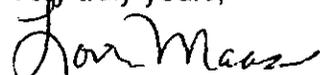
Throughout the text, references are made to SPC's property as a possible source of the TCE-contaminated groundwater plume underlying the HRL. However the text does not adequately characterize the uncertainty regarding the sources of TCE at the HRL and dates during which TCE may have been released. Although TCE was used during Hypalon™ repair and relining efforts at SPC, there are no known or documented spills or releases of TCE in any quantity on SPC property, and in particular in quantities whereby groundwater may have been adversely impacted. In addition, no evidence of TCE contamination was discovered by SPC in its soils investigation efforts. The RI/FS must be clear that the discussion of TCE sources is based on hypothetical environmental releases from past TCE usage. As such, a relatively high level of uncertainty exists. Please see comments transmitted by SPC on February 2, 1993 for further discussion.

(6) Nitrate Contamination in the 300 Area

The text (page 4-47) suggests that the nitrate plume from the HRL extends into the 300 Area. Later, the same paragraph indicates that it is not unlikely that the nitrate in the 300 Area may have come from a different source west or northwest of the 300 Area. Our understanding, based upon previous discussions with the U.S. Environmental Protection Agency (USEPA), Washington State Department of Ecology (Ecology), and U.S. Geological Survey, is that because of multiple potential source areas and a complex groundwater flow system in the 300 Area, the source of nitrate in groundwater cannot be determined at this time.

Please call if you have questions regarding these comments.

Very truly yours,



L. J. Maas, Manager
Regulatory Compliance

9313027.1545



Confederated Tribes and Bands
of the Yakima Indian Nation

Established by the
Treaty of June 9, 1855

June 15, 1993

Mr. Dave Einan
U.S. Environmental Protection Agency
712 Swift Boulevard Suite #5
Richland, WA 99352

RE: LFI/FFS; PROPOSED PLAN FOR THE 1100-EM-1; 1100-EM-2;
1100-EM-3; and 1100-IU-1 UNITS AREA; YAKAMA
INDIAN NATION COMMENTS ON:

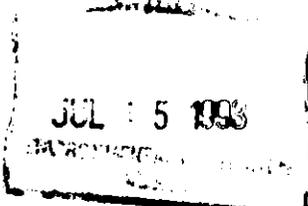
Dear Mr. Einan:

Thank you for the opportunity to respond to the Remedial Investigation/Feasibility Study (RI/FS) on the 1100 area. Please accept this letter as comments and recommendations to the proposed 1100-EM-1, 1100-EM-2, 1100-EM-3, and 1100-IU-I (hereinafter the 1100 area) Operable Units Supplemental Plan that was submitted to the Environmental Protection Agency (EPA) Region 10, on April 1, 1993.

The Confederated Tribes and Bands of the Yakama Nation (YIN) retain rights on the Hanford Reservation pursuant to the "Ceded Lands" language of the Treaty of 1855. Rights that include the gathering of plants and roots for food and medicine, fishing and erecting temporary facilities for the curing of the same, pasturing of livestock, and hunting by members of the YIN.¹ With these rights and interests in mind, we wish to comment on the proposed plan.

The RI/FS was to consider the 1100-EM-1 Operable Unit only. Now the 1100-EM-2; 1100-EM-3; and 1100-IU-1 Operable Units were thrown in the 1100 area matrix. The RI/FS and the LFI/FFS should clearly indicate that these are two separate Field Studies. One complies with CERCLA, and the Clean Water Act; while the other (LFI/FFS) is merely a scoping or proposed plan process to assist in an RI/FS. The LFI/FFS does not satisfy the legal requirements of Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) as referred to in the National Oil And Hazardous Materials Contingency Plan, (NCP). 45 CFR 300 et. seq.

¹Under various federal and state laws, the Tribe also has an interest in the cultural and religious sites in and around the Hanford area. In addition to these interests, is the inherent rights to access to these areas.



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We note that the addendum or LFI/FFS included the Rattlesnake Mountain (1100-IU-1). The initial RI/FS did not include nor did it mention Rattlesnake Mountain. The LFI/FFS did not explain why this was included--clearly this area is on the Arid Lands Ecology--nor does it state whether this is on the National priorities list. This did not allow the Trustees to comment on that area prior to the RI/FS going public. We recommend that the trustees be given the initial opportunity to comment with regards to the 1100-IU-1, (Rattlesnake Mountain area); 1100-EM-2; 1100-EM-3 Operable Units before going public.

We view the LFI/FFS process as an innovative technique to circumvent the procedural hoops that the lead agency must hurdle in order to legally comply with the requirements of CERCLA. It is not clear nor is it mentioned in the RI/FS or the addendum (LFI/FFS) why an LFI/FFS was prepared on the 1100-EM-2; 1100-EM-3; 1100-IU-1 Operable Units.

We recommend, in preparing an RI/FS, that it should also include the cumulative contamination from the surrounding areas of the 1100 area (except 1100-IU-1). see page 3. *infra*.

The 1100 area has been placed on the National Priorities list due to the concern for the proximity of the Richland drinking wells to the contamination. The report mentioned nitrates, trichloroethene (TCE), and some radiation in the groundwater. The report should indicate whether the 1100 area continues to be on the National Priorities list now that the concerns over contamination near the drinking water are dispelled. The emphasis was on health and safety concerns. However the report does not indicate whether the contamination continues to be an environmental risk to the fauna or flora.

EPA is the lead agency for this RI/FS, the consideration of the implementation of new technology and the trained personnel for that new technology must be part of the RI/FS process. We note that the report will not consider new technology in the remediation process. This is contrary to expressed direction to EPA under 45 CFR 300.400(a)(E).

There was little to no mention in the report about what the natural landscape was before DOE development. The report should state and list the current vegetation in the area where applicable. Further, some of the areas designated for remediation and "capping" should include the design and types of vegetation that will be used in that process. Sandburg's bluegrass (*Poa sandburgii*) and Indian Rice Grass (*Oryzopsis hymenoides*) are excellent grasses for cover as they are native to the area and have short roots favorable for capping. Further, Sandburg's bluegrass has the ability to compete with cheat grass.

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For 50+ years, the YIN has been deprived of use and access to the Hanford reservation, the report should include Natural Resource Damage Assessments on the 1100 area to determine what usage and access has been lost or restricted.

Another question that continued to be raised during the review process of this RI/FS was a shortage of investigative teams to check the contents of the barrels and other anomalies that are out on the 1100 area. More teams should be sent to check the contents of those barrels, and to also locate other barrels and debris that may be of environmental and health concern.

The data indicated a concentration of nitrate is migrating toward the Columbia River without any explanation of where it originated from. This also holds true for the TCE plume. More monitored wells should be used and placed in key and representative positions to locate these sources of contamination.

The RI/FS should state how this report complies with NEPA, CERCLA, CEQ and the Tri-Party Agreement. Or why it doesn't need to comply. We believe that under the 1992 Amendments to 10 CFR 1058, this area would not qualify for a "Categorical Exclusion" (CX) based upon the cumulative affect of contaminants in and around the area. The RI/FS used the 1991 10 CFR to determine CX which has been amended by the 1992 version.

A cultural and archeological study or survey should be conducted on the 1100 area. Not all of the 1100 area is developed or disturbed. If such a survey has been completed, the results should be attached to the report. A preliminary survey conducted by the YIN leads us to believe that on one of the high rises on the 1100 area there was a pathway to an ancient fishing village.

We believe that the risk management or risk minimization in the report should state why the parameters of achievable standards were used in the report and where those standards came from and why those particular standards were used. Using somebody else's standard of clean-up should be independently reviewed. As an example, the report uses 10⁻⁶ as the upper bound life time risk for cancer. This standard should be reconsidered, especially when there are multiple contaminants. see 45 CFR 400.300(e)(2)(i)(A)(2).

Here are additional detailed comments on the LFI/FFS:

1. The work plan states that existing waste information, detailed visual inspections, and interviews with site personnel were used for determining what will be remediated. The work plan should rely instead on more monitoring, data collecting, and field investigations.
2. Although technetium-99 (Tc-99) was found to be of insufficient quantities to warrant further investigation at the 1100-EM-1 area as mentioned in the proposed plan, we feel because of the long

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half-life and the potential for long term risks to human health and the ecosystem, the work plan should continue to monitor this substance. In addition to technetium, iodine-129 should also be monitored. Usually, where there is technetium, there is iodine-129.

3. Under CERCLA and the Clean Water Act, Trustees are to be included in the remediation process. However, the YIN has been forced to review work plans at the four repositories, one in Richland, WA. This has not happened in the 1100 work plan but other plans. In order for Trustees to have meaningful comments, they should be presented a copy of the reports without having to use a repository.

4. The data used in the report shows the average annual precipitation at Hanford as 6.3 inches (15.9cm). The winter of 1992-1993 broke all records for precipitation at Hanford, this must have affected the groundwater plumes and the water tables in and around Hanford.

5. We note only Monitored Well 3 and Monitored Well 8 were used for monitoring groundwater contamination. More monitored wells should be used. Especially since MW8A is on the western side of the Horn Rapids Landfill (HRL) where there is soil and groundwater contamination.

6. Although the data state that it was not possible for the HRL plumes to contaminate the Richland Well fields, there were no data on the degreaser and antifreeze pit that is just west and adjacent to the Richland Well field and flowing toward the Columbia River.

7. The sample results from surface and subsurface testing for the 1100-3 area listed 16 compounds. However, there are other compounds listed. Please list or explain the discrepancy with the butanone, hexanone, methylene chloride, toluene, bis(2-ethylhexyl)phthalate, beryllium, potassium, and acetone.

8. The report mentions the anti-freeze tank under the 1171 building. The tank was removed for suspected tank leakage. There was no explanation which lead to the suspicion that the tank was leaking. Also, information used to determine that there was no leaking of the tank should be mentioned in the RI/FS.

9. The RI/FS mentions the Discolored Soil Site. It states that the origin or content of the site is unknown. The report should have data on what has contaminated the soil.

10. The Ephemeral Pool includes PCB's. A concern of this area is that the plume from this site runs right through the Richland well to the Columbia River if the data are correct on the direction of groundwater migration. We note also that the parking lot run-off is located in this pool which would indicate that the pool is "flushed" with water each time there is precipitation.

11. "Medical debris" was found during the excavation of a trench in the Horn Rapids Landfill (HRL). No tests were run on the contents of the debris that was found. The only explanation was that no medical laboratory was willing or capable of accepting the materials and that offsite laboratories were unwilling to accept it as there was no certification that it was radiation free. It seems nobody wants to know what is in this debris.

12. White Crystalline Powder and Stained Soil was also found in the HRL. Again this appears to be a guess without scientific conclusion. Another sample with no chain of custody problems should be conducted.

13. The groundwater investigations in the 1100 area revealed that the "plume" contained contaminants including but not limited to: methylene chloride; acetone, chloroform, toluene, C-12, hydrocarbon, and dethylphthalate; and those contaminants that were detected below the MCL's are: chromium, copper, lead, silver, trichloroethane, tetrachlorethene, radium, gross alpha, chloride, and sulfate. Please state in more detail the gross beta and trichloroethane as it shows it to be above the MCL's.

14. More data should be used to dispel nickel as a contaminant of concern?

15. Chromium was detected at a single location within the 1100-2 Paint and Solvent Pit and at the 1100-3 antifreeze and degreaser pit. Although this compound was listed as a Compound of Potential Concern (COPC), the compound should be considered a priority of clean up. The other compounds although listed as non-carcinogen or not enough to be considered COPC, should be a priority of clean up.

16. At 1100-6 or the Discolored Soil Site, the RI/FS indicates that subsurface testing was not performed due to "field observations". Tests should be run when Chlordane, heptachlor and Bis (ethylhexyl) phthalate (BEHP) was detected at the site. Also, present are DDT, zinc, hexanone, and trichloroethane.

17. At the Ephemeral Pool, no data on Heptachlor was given as to the position of the contamination. Then during phase II of the investigation no heptachlor was detected. Data should be included to indicate why the Heptachlor disappeared from the site. And although chlordane was detected all over the site, no subsurface sampling was conducted at the site. PCB was also detected in large quantities at the site.

18. It is mentioned in the report that the MCL for TCE and Nitrate will be determined by EPA and Washington State Department of Ecology. The report does not indicate whether there has been a Superfund Memorandum of Agreement (SMOA) between the EPA and the Washington State Department of Ecology. Nor does the report state whether the areas to be considered (TBC) involved the interested Indian Tribes. According to the National Oil and Hazardous Substances Contingency Plan, Indian Tribes are to be considered states if they qualify under the guidelines. see 45 CFR 300.525(e). The YIN qualifies as a state under those guidelines.² The criteria

²Those guidelines read in full as follows:

45 CFR 300.515(b):

To be afforded substantially the same treatment as states under section 104 of CERCLA, the governing body of the Indian tribe must:

i) Be federally recognized; and,

for that determination, especially since alternate points of compliance will be discussed should be expressed the report and the YIN included in those discussions between the EPA and Washington State Department of Ecology.

19. The work plan shows the level of TCE concentration from 1987 to 1992. More information on the level of attenuation changes should be included. And, also where the TCE is going.

20. The report shows the only place that nitrate and TCE are present is in the groundwater. However the report does not indicate that there are traces of TCE or nitrate in the soil.

21. The report states that the chromium present out at the HRL is trivalent chromium. Please explain how long it takes to transform hexavalent to trivalent chromium and whether that influences your report.

22. Page 5-4 of the report states that the assessment of contamination used was the "Industrial scenario risk assessment" based upon the 95-percent Upper confidence limit (UCL). There was no mention whether this was based upon HSBRAM. We recommend that the HSBRAM not be used as it falls short of cultural and ecological concerns. The Baseline residential scenario assessment (BRSRA) should be used.

23. The 1E-06 contaminant risks indicate that only Chromium was considered a health risk. All health and environmental risks should be considered.

24. The report states that only terrestrial organisms were considered as groundwater contamination will not likely reach the river. This statement does not consider the plumes upriver. In other words, the cumulative effect. Further, only endangered or threatened species would be considered. The RI/FS should also include sensitive and monitored rare species. Both mortality and morbidity should be monitored for the species.

25. The report mentions that bis(2-ethylhexyl)phthalate or BEHP is immobile due to strong soil sorption, low water solubility, and low vapor pressure, yet biodegradation is rapid with a half-life of 2 to 3 weeks. It cannot be both unless BEHP continues to be dumped into the ground.

26. The report states that polychlorinated biphenyls (PCBS), potential for bioaccumulation is high. However, this depends upon whether the chlorinated biphenyls are lower or higher chlorinated species. Also it is mentioned that PCB's are highly immobile in the groundwater system due to rapid and strong soil sorption. Yet

-
- ii) Have a tribal governing body that is currently performing governmental functions to promote the health, safety, and welfare of the affected population or to protect the environment within a defined geographic area; and
 - iii) Have jurisdiction over a site at which Fund-financed response, including pre-remedial activities is contemplated.

within the same paragraph, PCB to the groundwater is not expected. Please clarify this discrepancy.

27. Arsenic is found in the earth's crust in the form of arsenic-bearing minerals. There are no data on its potential for groundwater contamination. Please give the level of contamination.

28. It is stated that Monitored well 15 is most representative of the Operable Unit Vadose Zone. Please provide data that was used to determine this well as being most representative.

29. It is mentioned that the extent of the nitrate plume could not be completely defined and therefore, only a limited transport analysis can be performed. The nitrate plume should be completely analyzed before the report can be considered a final report.

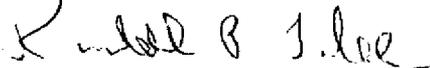
30. The Advective transport, mentioned in the report, does not give any data on the TCE plume except that there are no details defining the exact relationship of hydraulic conductivity, host materials, and aquifer pressure. Further, there are no details on the dispersion, degradation, and volatilization effects on an aquifer wide scale.

31. The report lists the Remedial Action objectives (RAO), however we note that archeological and cultural concerns are not included on this list. These should be listed.

32. The report mentions the relinquishing of the 1100 area for commercial and industrial use. The report should indicate that this would be in line with the City of Richland, WA plans to annex this area. It is recommended that a covenant to the land be included to assure that the cultural and environmental concerns, if any, would be preserved and protected.

33. Although the RI/FS indicated that the plumes were attenuating at a rapid rate, it stopped short of saying that the plumes will not reach the river at a low level of contamination. Please include in the remediation plan how this will be remediated.

Sincerely,



Randall P. Tulee, Policy Analyst
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cc: C. Sanchey, TC/YIN
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Paul Pak, USDOE
Jim Bauer, USDOE/RL
Paul Grimm, USDOE
Jill Lytle, USDOE

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