

**SUMMARY NOTES
FROM THE
TRIBAL RISK ASSESSMENT CONFERENCE
LAS VEGAS, NEVADA
DECEMBER 8-10, 1998**

DRAFT -- DO NOT CITE OR QUOTE

TABLE OF CONTENTS
(won't be revised until final version)

Notes - Day 1	1
Carolyn Douglas	1
Larry Reed	1
Discussion	1
Brian Wallace	3
Chad Williams	3
Sophia Serda	3
Discussion	4
Clarence Callahan	4
Jeanette Wolfley	4
Mary Arquette	5
Jeanette Wolfley	5
Russell Jim	6
Gio Nguyen	6
Heather Westra	7
Robert Holden	7
Notes - Day 2	8
Brian Wallace	8
Mary Arquette	8
Ted Garcia	9
John Persell	9
Tiffany Allgood	10
Notes - Day 3	12
Barbara Harper	12
Discussion	13

DRAFT -- DO NOT CITE OR QUOTE

Flip Charts - Day 1	15
Larry Reed	15
Ted Garcia	15
Charlene Dunn	15
Sophia Serda	15
Flip Charts - Day 2	17
Brian Wallace	17
Mary Arquette	17
Ted Garcia & Barbara Sherupski	17
Felicia Wright	18
John Persell	18
Issues Emerging from Roundtable Discussion	18
Flip Charts - Day 3	20
Barbara Harper	20
Action Items	20
Tribal Superfund Programs	23

**TRIBAL RISK ASSESSMENT CONFERENCE
LAS VEGAS, NEVADA
DECEMBER 8-10, 1998**

Day 1

Welcome

Carolyn Douglas (EPA Region 9)

- EPA wants to hear - Tribes are the leaders

Introduction -- Purpose/Objective of the Conference

Larry Reed (Deputy Director, Office of Emergency and Remedial Response)

- Want to learn from Tribes what are the shortcomings of risk assessment in EPA. Working with you, we hope to translate tribal needs into the structure of EPA' program.
- Conference goals include:
 - Provide the opportunity for Tribes to share information on risk assessment with the EPA.
 - Tribes to hear and present cutting edge issues in risk assessment.
 - For EPA to gain a better understanding of Tribes risk assessment needs
 - Create an action plan
- EPA will be guided by its Indian Policy established in 1984. The policy indicates that Tribes should be the primary parties setting standards and making environmental management decisions (i.e., setting risk levels) in Indian Country, and that EPA must factor tribal consultation into its risk decisions.
- Superfund's tribal program goals include:
 - Be consistent with EPA Indian Policy;
 - Build a strong collaborative relationship; and
 - Build Tribal capacity in Superfund.
- EPA uses different tools to address risk at sites. EPA's Hazard Ranking System (HRS) is a mathematical model that "screens sites" based on limited risk data. In comparison, EPA risk assessments are much more complex and varied, and are only conducted at NPL sites. When exploring how best to incorporate tribal concerns, EPA acknowledges that changing risk assessment guidance is much easier than changing regulations (i.e., the HRS regulations). Revising regulations triggers the difficult and time-consuming regulatory process. We must address this issue related to the HRS. In the early '90s, Congress asked us to make revisions to these regulations. We made revisions to allow for greater focus on ecological concerns-- for example, factoring in impacts downstream from sites, soil contamination, etc.-- but in hindsight we see that we needed to factor in more.
- This conference, and other action items in our Indian Program, are part of our "follow-up" to fulfill commitments made at the 1997 OSWER Albuquerque meeting. The

- purpose of that meeting was to examine ways to remove impediments to EPA working effectively with Tribes in implementing OSWER environmental programs; based on those commitments, we are providing SF training for tribes; training EPA staff on Tribal issues; and exploring tools to better assess contamination in Indian Country.
- Looking forward to Enhanced Tribal role initiative - enhance capabilities of Tribes through a proposed process, and testing this process with a number of tribal pilots. Pilots give us flexibility to address unique tribal considerations with respect to the Superfund Program. For example, we have two pilots that will address tribal concerns for risk assessment at two different stages of the Superfund Program. Leech Lake Tribe will be looking at exposure factors sensitive to tribal resource issues as part of a risk assessment at an NPL site; the Pueblo Office of Environmental Protection (POEP) will look to factor Tribal cultural impacts into the HRS process and see what recommendations can be made for changes.
 - Superfund is a leader in risk assessment nationwide because we work on a site-specific basis all across the country. Risk Assessment is still a maturing field. Carol Browner, EPA Administrator, released Risk Assessment characterization criteria to test the “reasonable-ness” of the process. Among other things, the criteria are aimed at asking, “Is the assessment clear to all parties?” “Is it consistent?” Superfund is trying to apply that guidance. It is particularly applicable to Tribes.
 - Also considering other Agency-wide themes (i.e., we have expanded our focus on ecological concerns at sites and cumulative risk).
 - Bottomline is that we want to factor in the people most affected by a site. The key goal is to protect human health and the environment at a site. Tribes view these as one and the same.
 - Basic critical groundwork for moving forward: capitalize on previous work, come up with specific projects as next steps, and parties who are willing to participate.

Discussion

- Ted Garcia asked what are EPA’s plans beyond funding the first year of the pilots - do they plan to remain active in funding?
 - Response was that EPA will learn from the pilots and build the successes into the national program.
- Another question - Are pilots limited to one year of funding?
 - Response - No, but they are funded one year at a time, so tribes need to talk to Regions early to build into budgets and one tribal member suggested that tribes needed to take initiative, too, and find other resources.
- An issue for the overall conference was identified as following up on funding.
- Russell Jim identified several problems:
 - The fact that EPA wanted tribes to “buy in” to the purpose of the meeting is ominous
 - EPA appears to operate with no standards--too much flexibility
 - Lower standards for tribes are influenced by having no standards.

- Continue to try to reform Superfund by asking the same questions over and over.
- Hope that this conference isn't a "check-off" for buying in tribal concerns--one meeting will not do it.
- Collaborative means "buying in." Is what we are doing here appropriate?
- Present laws are inadequate for indigenous peoples--we need to change the laws.
- To make changes, EPA is looking at models (e.g., the HRS) that disallow culture. EPA's commitment to incorporate cultural concerns falls short of revising the regulations.
 - Response: EPA has greater ability to incorporate Tribal concerns into guidance, it does not mean regulations cannot be changed, just honest that it will be a long, difficult process with risks as to what concerns get addressed (i.e., changes to benefit tribes must be proposed in the Federal Register and open to public comment nationally).

Conference Perspectives

Stanley Edison (Navajo Nation)

- Importance of tribal risk assessment
- Cultural sites: special landmarks, physical symbols of past and cultural history, central to cultural identity if damaged, need to take responsibility and not pass responsibility on to children
- Superfund HRS does not address cultural issues
- Where to begin? Begin at site screening - because it is a new process, it should be easy to modify and assess cultural sites so they aren't screened out
- If we wait until cleanup, yes, there aren't sufficient resources, but if work on cultural restoration at same time as current site remediation, we can do both remediations
- Concerned with sites that don't make the NPL - How can we address these sites where valuable part of culture is at risk?
- Three points:
 1. Expect that Tribal cultural values will be included and supported when the HRS is revised or when addressing health or environmental effects.
 - . Where matters affect Navajo Nation, the Tribe expects to be included and to take the lead role in selection of biomarkers or indicators that will link cultural knowledge or values to environmental exposures and health effects.
 - . Wish to continue to coordinate with EPA and receive information from other Tribes.
- Wilfred Ashby (Native Village of Noatak) raised several points regarding his village:
 - Non-indigenous people camping, hunting, and canoeing leave trash; animals are digging it up
 - In village, they have dumps that they need to take care of.

- Would like to see if he can get money to do a future risk assessment and work with hunters and campers.
- Maybe pass laws to make people take anything out that they bring in.
- Cultural assimilation by BIA - moved village. Now archaeologists from the Park Service and Universities are digging into old graves, don't want people to rob graves.

- Ted Garcia elaborated on several points:
 - Inherent in CERCLA is a grave inequity - an allowance that gives states the right to list a site regardless of the HRS. Tribes are not give this right.
 - We should look to these and other inherent inequities that exist.
 - If you can't change the law, acknowledge that it is inequitable and allow tribes to continue to identify priority sites.
 - We have been assessed to death. When are we going to remediate?
 - Address sites without regard to where.
 - Want Charlene Dunn to provide information on funding available.
 - Regarding Brownfields, it is unfair that tribes should be competing with municipalities.

- Charlene Dunn discussed the Revolving Loan Fund (RLF)
 - Tribes must have a Brownfields pilot to be eligible for the RLF; Congress restored EPA's authority to do this in FY99.
 - Tribes can compete for loan funds to redevelop Brownfields sites at a small loan rate. RLF is the only funding source providing cleanup funds for Brownfields sites. All 7 tribal Brownfields pilots are eligible for the RLF.
 - The 1998 Brownfields conference included a separate meeting with Tribes to provide information and help tribes develop Brownfields proposals that best meet the Brownfield criteria. The Brownfield redevelopment initiative has a tribal set-aside to avoid competing with municipalities and states.
 - There was also interest in EPA's SITE Program. Carolyn Douglas will contact the Office of Research and Development which oversees this program on how/whether tribes can apply.

Brian Wallace (Chairman, Washoe Tribe of Nevada and California)

- Lake Tahoe is a sacred environment; it sustains the Washoe people.
- 1887 - President Cleveland quickly concluded that Washoe wouldn't need a reservation (through illness, etc.) because they would be extinct.
- They are here for all those preceding.
- Have only been working in this area for the past few years. Their main problem is acid mine drainage from the Leviathan Mine. It is a big environmental issue. There is a lot we don't know.

- Central point is that the answers to solve these problems are already in us. We must have the understanding of what we want and who we are as a people when we evaluate the impacts caused by the mining. These impacts are now unavoidable--they are in our homes and our backyards.
- Environmental regulations are not the answer, they are only tools that can help us. We need to understand and consider culture if we are to get to the right cleanup solution.
- We must find help from one another to influence the process.
- Social diversity is akin to biodiversity--it may be the key to our survival.
- This conference is one of the stops on the way home, we need to be here for each other.
- The thing that fortifies the Washoe is that they are all a people who have not melted away-- they must have men to match the mountains and women to remember the dreams.

Chad Williams (Chairman, Walker River Paiute Tribe)

- His Tribe is located between the Top Gun Military Range (bombing range) and the Hawthorn Ammunition factory (contamination and transportation issues), also a lot of mining activity above watershed. Unexploded ordinance has been found ten miles into the reservation.
- Concerned about things being washed down into their communities.
- Tribe has strong view on protecting culture and traditions.
- There is a conflict of politics versus traditional views, we need ties to tribal elders and federal agencies (EPA) to meet expectation for tribally appropriate policies and protocols.
- Asked for participants to go back home and talk to their people and establish relationships.
- We need to build on the good that many of you have done.
- We look forward to developing protocol to incorporate cultural values into the risk assessment process.

Overview of EPA Superfund Risk Assessment and Human Health Assessment

Sophia Serda (Toxicologist, EPA Region 9)

- Reviewed the basic components of risk assessment: 1. data collection and evaluation (where are the chemicals?) 2. exposure assessment (how do we come into contact with the chemicals?) 3. toxicity assessment (how hazardous is the exposure?); and 4. risk characterization (estimate the hazard into a number).
- There is a need to push for new reforms-- to ensure stakeholder involvement so that the assessment addresses local community lifestyles.
- Spoke about Alameda, CA, site where community was not asked about lifestyle during risk assessment process.
- She explained how members of the community were using groundwater wells to water plants in their back yards, but because the wells were not accounted for in formal city plans, they were not figured into the risk assessment process.

- As a result, the standards developed for the local land use did not reflect what was really happening in the community.

Discussion

- Phyllis asked if perhaps there be a fifth step in the risk assessment process that is cultural assessment? Cultural assessment used even to the point of returning the land to the way it was before-- for example, if the birds return, we can use their feathers in ceremonies again.
- How do you address cultural feelings that tribes have?
- How should we best incorporate community and tribal concerns in risk assessment process? Community needs to be involved from the beginning.

Overview of Ecological Risk Assessment

Clarence Callahan (EPA Region 9)

- There are opportunities to build in cultural concerns into EPA's current risk assessment process. It is best to incorporate these concerns throughout the process.
- EPA and Tribes can work together to identify these opportunities and incorporate the concerns.
- EPA's Region 9 Ecological Risk Assessment is separate from human health assessment. Process defined through: Standards, Participants and Practice
- Ecological risk assessment principles are discussed in two Ecological Risk Assessment Guidance documents-- Risk Assessment Forum guidelines for EcoRisk and the Risk Assessment Guidance for Superfund (RAGS) which is the guidance document of choice for Superfund sites. Both of these are available from the Superfund Office.
- Basic EcoRisk principles:
 - Phase 1 - Data/Problem Formulation (*need knowledge of cultural impacts here)
 - Phase 2 - Predictive phase (*try to be more inclusive)
 - Phase 3 - Validation--actually collect data
 - Phase 4 - Feasibility study - address problems through remedial options.
- Biological Technical Assistance Groups (BTAGs) are advisory groups that advise, coordinate and oversee the risk assessments at sites. They meet to discuss technical information about sites. They do not advise on policy. BTAGs do not do the work, do not sample or write workplans.
- BTAGs meet on a monthly basis to exchange general information and have discuss site-specific issues. Hold two types of meetings - a monthly meeting on a particular topic and individual site meetings.
- BTAGs:
 - Are possible opportunity for tribal involvement.
 - Communicate with as many people as possible
 - Are established in all regions
- National group is Ecological Risk Assessment Forum (ERAF)
 - Discussed EPA Superfund relationship with NRD trustees--EPA works to cover the concerns of trustees.

- We are all at equal levels.
- We need to develop the mentality of a trustee.

Discussion

- How much time do you spend in each phase of the risk assessment? It can be significant; and it varies between human health versus ecological risk assessment.
- How much money is spent on assessment vs. cleanup?
Response:
 - In a typical \$8 - 10 million cleanup - 10% of that is assessment
 - Average time spent on site characterization at NPL sites is about 5 years.
- Russell Jim pointed out the Federal Facility Compliance Act--it recognizes treaties as law.
 - EPA must build treaty compliance into its structure too.
- Who is going to help NRDA process address cultural values? We are not involving NRDA at this point--EPA should be coordinating cultural values and risk assessment into NRDA. We are leaving out a big chunk of the considerations--cultural ideas are the same. The health of the Indian people depends on the health of the ecosystem.
- The Snyder Act provides definition and identity of "Trustees" and EPA's role in this.
- Scientific critique then cultural critique
- Chuck Gielser - editor with Tribal people of book re: Tribal cultural impacts

Critical Appraisal of Risk Analysis for Native Bioresources

Mary Arquette (St. Regis Mohawk Tribe)

- Urged participants to use language carefully. We should refer to these types of issues as "cultural impacts," not "cultural values." We are talking about assessment that can be measured. Impacts are measured; values come at the end of the risk assessment process. We can look at it in terms of injuries to natural resources that damage tribal cultural practices.
- We can also term it as injuries to cultural services that sustain the tribe.
- Tribes do not like to simply be considered stakeholders. Tribes work at a level equivalent to the federal government - nation to nation. If you refer to them as stakeholders, you are putting them at the level of a community group. Tribes expect to be treated as sovereign nations.
- Risk assessment methodology - one must understand the limitations of models, the conservative use of data. We should ask, "Is this method right for the Tribe?"
- Proposed that we can see effects on tribal people without "proving" exposure - based on denied access to resources and resulting changed behaviors that have lead to disease. Involuntary opportunity costs. For example, tribal members unable to include traditional foods in their diet and resulting increase in diabetes. Cultural impacts have profoundly changed our way of life, we have moved away from traditional ways that kept our people healthy.

- You can use risk assessment and cost/benefit analysis to say whatever you want.
- Methodological problems:
 - Objectivity of party conducting risk assessment
 - Slow process to change risk assessment process-- introduce new ideas, publish in literature, and then acceptance by federal agency.
 - There is a lack of good data: imprecise information, gaps, human vs. animal data, multiple exposures, and cumulative and delayed effects.
 - Value Judgments--a lot in the science of ranking things is difficult for native people.
 - The way communities make decisions may vary-- "Safety" may not be the single goal
 - Inter-generational concerns
 - There is a continuum in how we could look at things in the absence of data. The two extremes being the precautionary approach, "I don't know, so there must be infinite risk" versus "No conclusive evidence, so there must be no risk." The fundamental question is how you phrase it at the beginning of the process.
- Link to natural resource damages restoration is real. How do you measure the worth of a tribe's culture?
- Despite everything, risk assessment is narrowly focused, and a crude tool. There are problems with assumptions that go into the assessment:
 - Assume we can objectively measure risk and cost
 - Must prioritize decision based on money-- this concept is insulting to tribes
 - Assumes some risk is acceptable
 - Assumes public decision-making is not reliable
- Tribal elders understand the beauty of integrating community health, cultural health, ecological health and human health when looking at the problem. Addressing these items piecemeal breaks everything apart. It is not meaningful if you don't look at the whole picture.
- Tribal standards are based on "re-establishing relationships" among the people, the land and culture.
- Fundamental question is how much risk is acceptable?
- How do we prevent problem?
- How do we do the least amount of damage?

Jeanette Wolfley (Shoshone-Bannock Tribes)

- Any risk assessment decision has an impact on tribal homelands and tribal people.
- Tribes were guaranteed a separate homeland and lifestyle through the treaty-making era. Tribes are still fighting for separate existence from the dominant society-- using their treaty rights to retain the land. This separatism is probably the reason for tribes retaining what they have today. Tribes currently occupy only 3% of land from 500 years ago. Although there are over 556 Federally-recognized Tribes, there are only about 310 Tribal reservation homelands. At least half of the tribal people in the United States live on or

- adjacent to these tribal homelands.
- Tribal homelands are central to tribal culture. They are the lynchpin to Tribal existence and autonomy as sovereign nations. Homelands are critical to Tribe survival into the next century.
 - Significance of tribal land tenure: forms geographic limits of jurisdiction, forms basis of economy, irreplaceable forum for cultural vitality based on religious practices and cultural traditions (e.g., creation stories). The process of risk assessment on tribal homelands is therefore critical to ensure the permanency and stability of such lands and resources.
 - Risk assessments need to consider off-reservation impacts in addition to on-reservation impacts. Tribal treaty rights to gather, hunt and fish traditional foods and medicines are quickly becoming “paper rights” because of off-reservation development, construction, and mining that has degraded the environment. Even where wildlife remains available for “Native take” there are mounting health risks associated with contamination of these resources.
 - Tribal traditional knowledge has not been recognized by traditional risk assessment methods to protect and preserve ecosystems and tribal communities. Tribes teach a system of values that respects all living things, and recognizes our interconnectedness with the physical environment.
 - Tribal knowledge can do much to influence risk assessment. Each tribe has its own decision process, therefore a generic tribal risk assessment process will not work.
 - Tribes need to be participants in the process.
 - Conventional risk assessment is purely scientific-- it has no soul or culture. Tribal communities are very aware of what is going on at the site. Traditional knowledge, based on millennia of observations and experience, needs to be a part, and can help in ecological risk characterization. Traditional knowledge includes values, histories, stories, ethics and culture of indigenous ways of life which has existed for generations.
 - Can provide traditional knowledge of plants and animals, and species interdependence.
 - Can give history of animal habitats and movements.
 - Tribes are taught to consider risk affects over a very long time frame (generations), as opposed to a conventional risk study that considers several months or years.
 - Western science is compartmentalized, which makes it difficult to do an assessment.
 - Proposing another step - that would capture the impacts on tribal culture and assess culturally related endpoints.
 - Any ecological change or federal action on ecology will have cultural impacts, such as impacts on creation stories, songs, prayers, language, gatherers, sacred landscape, societies, families, ceremonies, practices, spiritual/medicinal persons and cultural integrity. These are all cultural factors not considered by conventional risk assessment methodology and management.
 - Federal agencies have a unique opportunity to design ecological risk assessment approaches which can fully value tribal homelands and resources and support the

- existence of tribal lifestyles in this country.
- Incorporation of tribal traditional knowledge and wisdom will benefit land stewardship.

Russell Jim (Yakama Nation)

- Discussed risk issues associated with the Hanford site. The future of this site is the biggest threat to the Yakama Nation.
- Tribe is located across the river from Hanford where 54 million gallons of contaminated waste is stored in tanks. Future threat is release of this waste. 1% already released with 99% to go.
- DOE does not want to do an assessment of the site - they refuse to assess how site will affect future generations.
- When providing information to DOE, Tribes have a confidentiality issue to protect sacred foods/medicines.
- Tribe views all resources as cultural resources.
- Our fear is that the gene change could affect future generations (e.g., immune deficiencies).
- Under current system, decisions are made early, but tribal members can't be involved at that point. Instead, they have to participate down the line with the public, when a change in decisions costs more. Tribes need to be involved at the site assessment stage.

Gio Nguyen (IRAC)

- Applied "game theory" to the issue of incorporating cultural considerations into risk. Took technical and institutional and introduced the cultural.
- At individual level, talk about five components of health, so must be careful to address health at the right level.
 - Cultural - is a system of knowledge of social heredity reflecting social relationship and government of that society
 - Personal Health
 - Community, the land and resources
 - System of symbolically encoded and conceptual phenomena
 - Actions, behavior patterns and control mechanisms
- Cultural factors should be an equal player.

Ecological Risk Co-Management of Native Resources Constrained by the Indigenous Cultural Value Systems

Heather Westra (Prairie Island Indian Community)

Introduction

- A contaminant does not have to be present in the environment in order to cause lasting or irreversible impacts to the cultural integrity of a tribe. A physical disturbance in the environment can also cause devastating and irreversible impacts.
- Lock and Dam assessment project initiated in 1995

- Evaluation and determination of nature and extent of impacts to the tribe as a result of the construction and operation of Lock and Dam No. 3 (on the Mississippi River)
- Initially research concentrated on only readily quantifiable impacts (i.e., number of lost acres, lost resources, such as wetlands or archaeological resources)
- Approach changed as a result of Intertribal Risk Assessment Committee involvement and we took the assessment one step further to answer the question "what are the consequences of this disturbance? or "how did these physical changes to the environment impact the tribes culture?"

Phased and integrated approach to documenting and assessing impacts

- Lock and Dam project was initiated by the Army Corps of Engineers (ACOE) in the 1930's--pre-National Environmental Policy Act--no consultation with the tribe and no documentation or consideration of adverse impacts. The dam was completed in 1938; part of the multi-lock and dam system on the Mississippi River
- Phase I involved an inventory of environmental, cultural and economic conditions prior to construction
 - Quantification of tribe's land base
 - Wetlands
 - Fishery resources
 - Natural vegetation
 - Wildlife
 - Archeological resources
- Phase II involved an analysis of identified changes to the environment, culture, and economic conditions which resulted from the installation and operation of the dam
 - Integration of data, technology and tribal history
 - ACOE Maps, notes and aerial photographs
 - Maps of burial mounds
 - Archival research/literature review
- On-going tribal programs--wetlands inventory, water quality, treaty research, plant inventory
 - Information from other federal agencies
 - Use of GIS technology to document and map impacts
 - Interviews with tribal elders--key to understanding and assessing impacts
- Phase III involved the development of a mitigation plan, the most difficult aspect of the project--restoring lost resources and irreversible impacts to the tribe's culture
- Phase IV will implement the mitigation plan, which will include a Mitigation Advisory Committee, comprised of tribal elders.

Documented Impacts

- Tribal lands became permanently flooded and lost (with no compensation for loss)

- Sturgeon Lake (adjacent to the reservation) became larger and deeper
- Hydrologic and water quality impacts
- Elders reported increased turbidity
- Elders reported less fish were available, supported by technical data
- Fish are too contaminated to consume safely (result of sedimentation)
- Aquatic habitat impacts
- Lost habitat
- Alterations to habitat
- Sedimentation from dredge spoils
- Elders reported decline in quality of hunting opportunities
- Lost wild rice habitat
- 70% plant species lost
- 70% bird species lost

Analysis of impacts--how did the documented impacts affect the tribe?

- Three areas of consideration:
- Environmental Impacts
- Well documented
- Economic impacts

*Commercial fishing and processing company located on Prairie Island was closed after the Lock and Dam were completed--people had to leave the reservation to secure employment

*Lost land base (without compensation)--lost farming opportunities, not much room for housing--tribal members had to reside elsewhere

*Siting and operation of nuclear power plant and waste storage facility--an unintended consequence of the dam? Dam created favorable conditions for power plant to be sited right next to reservation.

Cultural impacts--must consider how all impacts affected the tribe and cultural integrity

Taking the assessment one step further and asking the question--how did this physical alteration of the environment affect the cultural integrity of tribe?

- Significant impacts to culturally important medicinal plants
 - Elders reported physiological changes
 - roots were skinnier
 - colors were less bright
 - Certain plants less abundant and less potent
 - Other important species that were common were lost altogether
 - Medicinal plants were an important part of culture
 - songs for each plant, as the plants disappeared so did the songs and the words
 - Impacts to fishery--at one time spear fishing was integral to the culture of the tribe
 - Tribal elders reported ceremonies and songs associated with the fishery are gone
-
- Wild foods that were important--culturally and economically--to the tribe were either lost

- or diminished
- Wild berries, choke cherries, wild turnips, wild rice, sage, sweet grass, bitter root
- Songs associated with the harvesting of these plants were also lost
- Game less abundant--due to habitat destruction or alteration
- Elders reported that deer and waterfowl less abundant
- Songs and ceremonies associated with these animals and hunting activities disappeared as well
- Burial sites completely eliminated
- At least 45 burial sites were flooded and lost
- As a result of lost or diminished economic opportunities and a diminished land base, many tribal members had to leave the reservation to secure employment and housing, further eroding the cohesiveness of the tribe

Conclusions

- The construction and operation of Lock and Dam No. 3 had a significant and devastating impact on the Prairie Island environment and economy and irreversible impact on the tribe's culture. There is no doubt that the tribe's rights were ignored when, in fact, they should have been protected.
- As resources, such as wetlands, fishery, plants were destroyed or lost, there was corresponding negative and irreversible impact to the tribe's cultural integrity that were integral to that resource. Aspects of the tribe culture are gone and can not be replaced.

Robert Holden (National Congress of American Indians)

- Spoke on the importance of treaties. The Indian people are still forced to fight battles to protect their lands and culture, as in the past when treaty-making. Struggles over budgets (state governments have gotten designated dollars and tribes haven't), gaps in the regulations, and not having a steady place at the decision-making table.
- When tribes are allowed to infuse their ideas into the federal culture, good things can happen.
- NCAI will continue to garner more support for these issues by bringing in more people to work on the problem from all sectors and levels.
- Tribes should pursue emergency preparedness response and planning. It allows tribes to anticipate accidents and spills, and how to respond. Emergency preparedness is a natural extension for tribes--the Indian people have always been prepared throughout the ages for hard winters, etc., and it allows tribes to flex their sovereignty.

Discussion

- Russell Jim (Yakama) stated that his tribe wants their tribal treaty rights to be used as ARARs (Applicable and Relevant and Appropriate standards--used in determining cleanup levels in Superfund). The Hanford site has not hydrologic cleanup baseline. The estimated cost to assess the site to the tribe's satisfaction is \$21.5 million.

- IRAC has a proposed model worked out by three parties that allows equal weighting of certain factors to set cleanup priorities at sites. These factors are: technical, financial, institutional and cultural. An information system would be created so all parties could understand what each other means. The system would outline specific protocols that are institutionalized. The cultural factors must be recognized in order to prevent their irreversible loss and the waste of resources.
- Mary Arquette (St. Regis Mohawk) stated that cleaning up to a zero level of contamination remaining at a site will never be accepted. Thus we must compromise by using the most sensitive sub-species for setting cleanup standards. This goes back to our responsibility to protect welfare for the next seven generations, and our creation stories.
 - We are currently going against the cycles of nature.
 - Federal agencies fall back on science even though they know they are failing their cultural protection obligations.
 - Part of the information gathered when determining cultural impacts can be used for “restoration” under NRDA-- “restoring for the community.”
 - The scientific approach subscribes to numerical/universal language; the cultural approach does not lend itself to universal language-- there is a lot of room for miscommunication.

Day 2

Leviathan Mine, Natural Resource Damage Assessment

Brian Wallace (Chairman, Washoe Tribe of Nevada and California)

- Open pit sulfur mine is adjacent to the southern boundary of the Washoe reservation near a main water source, the Carson River
- Copper sulfate mine operated from 1863 through the 1950s: Taken over in 1950s by Anaconda, who reinitiated open pit sulfur mining. Created a 26-acre dump of low grade sulfur overburden about 30 feet deep. Documented fish kill from 1954 - 1959.
- Tribes in and around site are interested in impacts on traditional resources, access to sites that have significance to Washoe cosmology and traditional resources (pine nuts, medicinal plants, fishing, basketry, drinking water)
- In 1983, the state began to manage the site and develop a process to contain some of the flows from the site.
- Currently working to identify restorative activities.
- Starting today to gather oral history and traditions of site to identify impacts of mining and acid mine drainage to traditional Washoe culture.
- Having elders' potluck (at which they will conduct oral interviews) to start characterizing and gathering knowledge of how the tribe used the land before the mining impacts, including the traditional way of life and cultural values.
- Some of the solutions don't exist today given technology limitations.
- Working to fortify government structure to reflect culture.
- Strengthening of laws within Washoe jurisdiction; just because land is outside the current reservation boundaries doesn't lessen the site's traditional importance to the tribe. Repatriation of the homelands: work under this effort prepares us for what is to come next. Tribe is still establishing jurisdiction for regulatory primacy. Tribe has codified solid waste standards and is working on groundwater standards.
- There are about 530 people living in the impacted area. Trying to hire tribal members as part of the support process.
- Resource allocation - using GAP funding to get started, taking advantage of NRDA funding, CWA funding and working with Superfund Region 9.
- Working with the Department of Interior trying to get NRDA resources and show interest as a trustee. EPA is involved providing technical assistance, technical support, enforcement, and is involved in constructing the risk assessment. The pre-screening is reaching completion, but we still need more characterization.
- Look to responsible parties to help subsidize some activities and we want to do our best with this opportunity.
- Through NRDA trustee process, we established federal unity with interests of tribe--to strengthen tribal advocacy. Tribe is lead administrative trustee for Leviathan. The site is a premium priority for the tribe. The state of Nevada has some involvement but the process is dominated by the tribe and federal agencies. Tribe engages third party interests and conducting community outreach.

- The Leviathan Mine Council - USDA, CA, NV, DOI, ARCO has joined to come up with ideas to fund a solution
- Assess site, then economic conversions
- Containment facilities were underestimated/undersized from the beginning
- The tribe sees the mine contamination issue as an environmental security issue-- moves into a version of a human rights issue-- the right to land stewardship and survival.
- Only because of the fortuitous circumstance of having an endangered trout species in the area (that helped bring in Superfund) was the tribe able to bring to the table impacts to the tribal community and culture.
- Tribe pursuing a line of operation to address a number of objectives at the same time-- pursuit of NPL listing, using federal evidence rules in gathering cultural information, recognizing intellectual property rights of the elders' knowledge regarding impacts to the community and its ability to recover. Tribe is assimilating tools to best serve its people.

Lessons Learned in the Superfund Risk Assessment Process

Mary Arquette (St. Regis Mohawk Tribe)

- Discussed the problems facing Tribe from the GM - Messina Superfund site directly adjacent to the reservation. Also another nearby site--Reynolds. Tribe is concerned about water contamination into St. Lawrence River, and air pollution. Cattle have died from clinical fluorosis, due to the heavy air pollution.
- Risk assessment fails because it doesn't tell us what happens when plants and animals are exposed to a mixture of contaminants. Risk assessment generally works for addressing one contaminant at a time.
 - Tribe has set their own PCB standards - codified based on most sensitive subspecies. Reviewed PCB levels in animals (they found levels as high as 835-3067 ppm in turtles)
 - Epidemiological information is scarce, not clear on impacts, and is too subtle to show effects within a risk assessment (Risk assessment is not a strong enough tool to show effects from limited data).
- Tribe is coordinating with different parties to find permanent solutions to the contamination:
 - Volunteer community organizations working together on issues.
 - Had problems communicating with EPA regional office, so they published a paper of their findings/concerns.
 - Coordination between NRD & Superfund - desire not just coordination but input to benefit both processes. Often BTAG process is not enough because there is not a high enough level of coordination. BTAG representatives not always same people as the NRDA workers. NRD and Superfund are not complementary-- often remedy is not related to restoration. Tribe is more interested I restoration than monetary compensation for resource damages.
 - In this partnership with Tribe and Federal agencies, who defines "protection?" Tribes should be able to make those decisions for their lands and communities.

- Community and cultural impacts have resulted from contamination which need to be recognized in the cleanup. There are some lessons learned:
 - Environmental justice discussion is a human rights discussion, not an environmental discussion.
 - Need to incorporate children into process. The very idea of contamination breaks our trust and our children's trust in the earth--resulting in alienation from a relationship with Mother Earth.
 - Loss of being able to eat the fish has led to unemployment of fishermen. Fishermen are no longer connected to community because they have no role, this has resulted in a cultural loss (fish trading) in the community.
- Tribe's efforts for community outreach has had mixed success. Community meetings did not work. Tribe developed image of a sacred elm tree and ELM (Environmental Laughing Mother) to project a happy image of a clean Mother Earth, which has been effective in community outreach and response.

A Pueblo Perspective in Superfund Site Assessment

Ted Garcia (POEP)

- The All Indian Pueblo Council (AIPC) is the oldest tribal organization, estimated to have been established in 1598. AIPC is a consortium of 19 Federally-recognized Indian Tribes.
- The Pueblo Office of Environmental Protection (POEP), an office within AIPC, was established in October 1991 to assist the Pueblo tribes in protecting human health, welfare and the environment. The 19 Pueblos signed a Superfund Memorandum of Agreement with EPA to establish the first tribal Superfund program.
- Discussed organizational structure of POEP background of experience with CERCLA program. Their program includes an overall project manager, four environmental scientists, one environmental technician and two project managers to manage the Superfund State/Tribal Enhanced Role pilot projects.
- Between 1990 to 1992, EPA conducted an aerial photography "fly-over" of all the Pueblo lands as part of site discovery. From the aerial survey, EPA developed a data list of over 500 potential contaminated sites. POEP identified 35 priority sites through site assessment, and conducted one removal (the first Tribal-lead removal in the country).
- Between 1993 -1998 - POEP assessed 53 sites on behalf of the Pueblos — the 53 reports are divided into: 17 site investigation reports, 32 NFRAP (No Further Remedial Action Planned) designations (this is an EPA term used when a site does not score high enough on the Hazard Ranking System, and falls out of the Superfund process), 9 sites are awaiting EPA decision, and 12 sites are in progress.
- POEP also involved in data interpretation, environmental sampling, Brownfields, Local Government Reimbursement (LGR) program, and general technical assistance to Pueblos.
- POEP is not yet involved in risk assessments

- While there are no NPL sites on Tribal lands, they do have sites outside reservation boundaries that impact tribal lands. POEP is a co-lead at the North Railroad Superfund Site in New Mexico--where there is TCE in groundwater that is migrating into Pueblo lands.
- POEP believes that Tribal sites are not viewed seriously enough for Superfund action.
 - Superfund may be the only alternative for cleanup of these sites. Deferral programs have not yet been realized for most tribes. There is no safety net to address these sites.
 - 98 - 100% of POEP sites fall out of Superfund, but remain a priority to the tribes.
 - The HRS does not effectively account for adverse impacts to cultural resources.
 - POEP's goal is to have EPA address cleanup of tribal priority sites, not necessarily through the NPL.
- Hopes to change CERCLA statute to make more fair to tribes in the future; the CERCLA language excludes Tribes from having a "free pick" for listing a site on the NPL. EPA must be consistently mindful that inequities in the statute exist and make up for that by following -through on our trust responsibilities
 - POEP would like to see proactive Tribal consideration up front from EPA - where are the Tribal-specific initiatives?
- One initiative is the State and Tribal Enhanced Role Pilot Projects. One of POEP's pilots will:
 - Look at HRS and identify areas where Tribal cultural factors can be incorporated
 - Use specific site to examine existing scoring structure point by point.
 - Work directly with tribal departments; continuous community relationship process. As individual tribes build capacity, POEP will pull back--POEP is a resource to the tribes.
 - Help modify related EPA tools-- Superfund Risk Assessment Guidance (RAGS) and SASSIT (pre- HRS score software).
 - Demonstrate to EPA that alternatives to current HRS process exist
 - Creative consultation can lead to progress.
- Need to be sensitive that coalition funding to POEP doesn't limit funding to member tribes.
- There are ways other than the pilots to address cultural impacts-- new workgroup, for example. How do we work outside the "HRS box?"

The Pilot Superfund Project for the St. Regis/Champion Wood Treatment Superfund Site on Leech Lake Reservation

John Persell (Minnesota Chippewa Tribe)

Leech Lake Pilot (Enhanced State & Tribal Role Pilot)

- Tribe impacted by an NPL site that is totally within reservation boundaries - the St.Regis/Champion wood treatment facility. Site listed on the NPL in 1983.
- 1991 Leech Lake Band began to review increasing amount of information on impacts and then went to EPA. Sought change in Fund-lead responsibility for site from State to USEPA (changed in 1995). Tribe has their own Drinking Water Quality Testing

- Laboratory (John is the Director).
- Sought money from many places to stay involved at site--EPA cooperative agreements and EJ grant.
 - EPA is re-assessing the site based upon findings at the 5-year review. Tribe hoping next sampling season (this Spring) will offer opportunity to analyze samples pertinent to site.
 - Need to have a certified Quality Assurance Project Plan (QAPP) to establish quality of data you will use. The data you take to elders and EPA needs to be good data; this is especially difficult when considering subsistence diets because you may need to establish contamination levels that go below instrument detection levels.
 - EPA published a useful fish consumption document to transpose fish consumption allowances for subsistence living (July 1997). Using this document the tribe calculated and approved a threshold fish consumption value of 180 lbs/year. This level could change.
 - Through this pilot, the Tribe will:
 - Develop methods of gathering information using expert elicitation,
 - Conduct informational meetings among tribal communities,
 - Review EPA information--especially technical data review of FY99 Site Assessment
 - Maintain a tribal administrative record,
 - Identify contaminants of concern,
 - Conduct literature searching, include endocrine disruption, for chemicals of concern,
 - Identify exposed populations, determine pathways, and utilize available literature,
 - Develop tribal risk assessment expertise to draft a Leech Lake Ojibway Subsistence Exposure Scenario (LLOSES) by November 1999 and finalize document by 08/31/2000.
 - Review of technical data will include ecological impacts, identify resources of concern vital to the health of the Tribes ecosystems.
 - Not certain if review will include cultural impacts - will likely have a section on quality of life/cultural impacts to address the issue of community well-being.
 - Tribe will also adopt interim tribal standards and laws - the only sure way to get attention to these concerns. EPA is unsure if how far they can enforce standards based on cultural factors, so Tribe will develop and enforce their own standards and laws whether or not they are used by EPA. Enforceable standards can be used as tribal ARARs for the site.
 - Tribes should not let counties and states drive wedges between tribes. It is about the only thing that can stop tribes today-- there has been a lot of progress in the last 15 years thanks to hard work by tribes, trusted scientists and seeking the truth.

Environmental Action Plan (EAP) Project (Comparative Risk Assessment Method)

Tiffany Allgood (Coeur d' Alene Tribe)

- Discussed Risk Assessment vs. Comparative Risk - As Environmental Planner for the Tribe-- focus is on long range environmental planning. Need an assessment process (not strictly based on Superfund issues) to inform the planning process. Result is an environmental action plan.
- Comparative risk

- Looks at comparative human health, ecological and quality of life impacts across problems.
- Includes both qualitative and quantitative descriptions of risk and impacts.
- Integrates science and public values to arrive at the best professional judgement.
- Main objective is to create an Environmental Action Plan specific to Coeur d'Alene
- Process overview:
 - Preliminary goals: improve local environment, include general public, tribe and others, increase communication among communities, and provide tools for planning.
 - Created steering committee that works for the Tribal Council. Committee composed of Indians and Non-Indians; makes recommendations to the Tribal Council. EPA sat as observer and provided technical assistance (especially through the Western Technical Assistance Center for Support).
 - Opened all committee meetings to the public.
 - Put industry on the technical workgroup along with other stakeholders - they did not include them in the steering committee.
 - Three subgroups of steering committee: Human Health, Ecology and Quality of Life.
- Comparative risk project conducted in three phases:
 1. Comparative risk assessment-- (Early Spring 1999 completion date);
 - Create list environmental concerns (human health, ecology, quality of life)
 - Determine the land-use history of tribe; frame changes to the land since settlement.
 - Collect and analyze the information on concerns
 - Rank concerns for their severity (qualitatively: low, medium, high and extreme)
 - Write assessment report
 - Ranking is tool to get people to interact with the information, not a tool for ranking priorities.
 - All concerns could be high priority, steering committee decides how to handle them.
 2. Comparative risk management--estimated to take 1 year; and
 - Assessment report used as a baseline
 - Develop strategy to reduce concerns
 - Write up the Environmental Action Plan (EAP)
 - Use the EAP to finalize the Tribal Environmental Agreement (TEA) with EPA
 - EAP is focused on reservation area and includes spirituality as a quality of life issue.
 - Need to make protection of each resource legally binding.
 - Time lines - risk assessment - 1 ½ years, risk management year 2
 3. Implementation--ongoing.
- Next steps: finish comparative risk assessment - 2/99; finalize EAP with ranking - 4/99;

- and begin management phase - 5/99, 6/99
- Draft EAP: contain 5 sections: land use history maps, human health, ecology, quality of life, and economic report.
 - Economic impacts are difficult to quantify, so economic report speaks to role of natural resources in the reservation's economy.
- Quality of Life Criteria
 - QOL criteria include impacts to tribal culture, impacts to future generations (the next 100 years), impacts to local lifestyles, fairness and equity.
 - Criteria cover the whole spectrum from individual to community.
 - **Subsistence/Economic: how tribal members earn a living, equality, land productivity
 - **Spiritual/Moral: freedom, culture, religion
 - **Aesthetics: (ties between humans and land) recreation, appreciation of nature, open spaces
 - **Community Well-Being: future, inclusiveness, balance, land use.
 - **Personal Well-Being: health, income, rights, peace of mind. "suumesh" the spiritual guidance and life-giving vitality emanating from a personal relationship with a particular animal spirit.

Brenda Brandon: TOSNAC

(add background) and statements

Roundtable Discussion

Issues Emerging from Afternoon Roundtable Discussion

Cultural Issues

- Culturally-sensitive issues that cannot be shared with those funding us are spiritual in nature - problems because of litigation.
- Incorporating cultural aspects into risk assessment. These are closely guarded and not easily shared with non-tribal members (take idea back to elders).
- Culture is tribe-specific. It must be defined by tribal elders who will tell you what to look at.
- There need to be standards developed for risk assessment that are specific to Native Americans regarding exposure.
- Must be careful in creating a generic approach.
- Integrate cultural values into environmental planning actions.
- Integrate cultural values into risk assessment, maybe add "local" cultural values.
- Turning qualitative elements into qualitative changes.

Communications/Information Exchange Issues

- No records/documentation of past activities at formerly used sites (e.g., military). There is an unwillingness to provide information.
- Maybe Superfund personnel can help obtain past site information.

- Communication between EPA and tribes - EPA does not know answers to questions.
- Communication within EPA (e.g., between regions and headquarters).
- More frequent meetings with tribes dealing with Superfund issues to share information.
- Enhance and promote one another's tribal lands.
- Any issues outside Superfund, contact EPA's American Indian Environmental Office at (202)260-7519.
- Involving tribes early/at the start of the process - people need to get consensus.
- Tribal money is being spent going to meetings, but agencies don't know what they are talking about (opportunity costs).
- Use the many good researchers in the tribal community.
- When agencies do not live up to their responsibility, then go to elected representatives.
- Information clearinghouse?
- Bibliography (re: risk assessment).
- People at agencies ask the questions, but don't stay to listen to the answers.
- Make sure people/agencies who have money hear us.
- Tribal work group to share information.
- To be effective at these types of meetings, bring together the heads of BIA, DOE, DOD, EPA, etc.
- Focus on keeping information flowing between tribes.
- Gaining an audience with congressional representatives to raise Superfund reauthorization issues.
- NTEC does not have a hardcopy library, it is not really the best venue for a clearinghouse.
- Not all tribes are members of national organizations. It is necessary to get information directly to individuals.
- Increase the quality of information and streamline distribution.
- Help identify information of federally-funded activities.
- Newly established Tribal Association on Solid Waste and Emergency Response (TASWER) will serve as information clearinghouse for federally-recognized tribes (The association will provide information and feedback on program-specific issues within OSWER (EPA Headquarters)--solid waste (RCRA), hazardous waste (RCRA and Superfund), underground storage tanks (RCRA), Emergency planning and response (EPCRA and Superfund), federal facilities (RCRA and Superfund), and technology innovation (RCRA and Superfund).

Legal Issues

- Anti-discrimination laws do not address Native Americans.
- Inequities between states/tribes when applying for grants - general treatment EPA , Congress.
- NARF - Native American Rights Fund - possible assistance (Don Wharton)

Other Issues

- Erosion Control (Federal Highway Administration, Army Corps of Engineers)
- Make a list of tribal NRD programs.
- Make a list of tribal Superfund programs.
- Be proactive in the “system way.”
- Pilot studies “outside” box and share information with other tribes.

Day 3

Barbara Harper (Yakama Nation)

- Tribal lands near Hanford. Hanford site rests on 18% of tribal ancestral lands.
 - Risk assessment being used increasingly to determine budgets, projects, etc. whether or not tribes are involved.
 - There are data gaps in risk assessment that do not account for tribal exposures.
 - As a risk assessor, need to understand assumptions, flaws, strengths/weaknesses of models, model sensitivity, and how models relate exposure to health effects, etc.
 - Also, as tribal employee, need to understand culture.
 - Principles of risk assessment:
 - compliance with treaty, Federal trust responsibility
 - preserving options for future generations
 - Treaty and Federal trusteeship precedes the more recent Presidential Executive Orders and EPA initiatives, so they are precedent.
 - Can't generalize - every tribal situation is different so build flexibility into process.
 - Using risk assessment models does not mean that exposure is O.K. with tribes.
 - Regard it as buying time to get to target condition.
 - Risk assessment is only a tool - risk assessors can help make decisions as to when to use risk assessment and when to use other, better tools.
 - Constant tension to keep information confidential which makes it more important for tribes to build internal tribal capacity to keep the information in-house. In addition, risk professionals need more training in the legal aspects of confidential information.
 - Modeling tools are very generic - don't distinguish between species (i.e., deer = cows, native plants = non-native plants), just distinguish amounts consumed. Therefore, risk assessment can be done without disclosing what plants/animals were consumed.
 - Location info: there is no reason to publish the locations of sacred resources in the first place--it does not matter in the overall risk assessment.
 - Modeling tools need to be based on "multi-generational" health. Current models only look at the "here and now."
 - Specific things to think about: tribally-relevant exposure standards, risk ethics, intellectual property rights, informed consent.
 - There is no "automatic" route for the academic community to ask questions of Tribes on a willy nilly basis. We don't need to mine the tribes for info to do the Risk Assessment.
-
- Example of Tribe's efforts in this area: Solid Waste Environmental Impact Statement (EIS) @ Hanford - Tribe is coauthoring part of the SW EIS to incorporate tribal concerns.
 - EIS started before Tribes were involved.
 - Tribal message is:
 - Tribe pushing for more cleanup, want to restore the disturbed ecology of the region and cultural resources..

- All natural resources = cultural resources (not only in terms of artifacts).
 - Complete (holistic) assessment is a matter of cultural survival. Eco risk reflect landscape ecology.
 - Optimizing impacts, or trading one resource for another is not an option.
 - Need to make sure tribal involvement is more than a check of a box.
 - Involvement of Tribe does not imply agreement
- The power of NRDA is congruent with tribal interests at Hanford--Nez Perce, Umatilla and Yakama are natural resource trustees.
 - BIA does not vote for tribes.
 - The consensus process works because there are no conflicting interests in the trustee council.
 - Rather than conducting formal damage assessments, tribes doing studies to fill data gaps.
 - Major issue is chromium contamination from ground water. Chromium is up welling into salmon spawning areas. Contamination can result in more cleanup but not more relaxed cleanup standards. The default cleanup standards use Water Quality Standards, but lower cleanup levels may be needed.
 - Results of effective tribal participation in the process:
 - Language into documents that describes Yakama concerns
 - Species identified by the tribes are getting more attention
 - Cultural uses of resources are written directly into documents in valid language
 - Recognition that cultural use can be impaired even at contamination levels below drinking water standards. That “residual impairment of cultural use” is another way to describe degradation, and we can have other standards.
 - Treaty is legally recognized in the process.
- Groundwater/Vadose Zone Project with Bechtel.
 - The major change in approach is attempting to “tell the story” not just model the contamination.
 - Starting to look at the cumulative effects of a lot of contaminants in the groundwater both now and for the future. Looking at the big picture, politically, to get the most open assessment of the data.
 - Tribal involvement has been **integral** to help Bechtel write guidance. Bechtel could not write the guidance without the tribe, even if they wanted to.
 - Disproportionate Impacts to tribes:
 - EPA focuses attention on the human health aspect.
 - Two parts to evaluate: (1) exposure to contamination and (2) sensitivity to exposure.
 - Tribal people have greater exposures due to lifestyle. Find that, other factors being equal, tribal people are 2 to 100 times more exposed than other people. Exposure varies with the type of contaminant and activity.
 - Certain segments of the population are more sensitive to exposure. Consequences are potentially significant to health and culture, and can lead to a series of levels of

injustices: Tribal nutritional status may be poorer resulting in greater susceptibilities, diabetes from changing from traditional diets (traditional foods are contaminated), breast-feeding dilemma--either contaminate the baby or baby does not get the benefits of breast-feeding, reduced ceremonial use of foods, and exposure to other contaminants.

- For the tribe, the same principles apply to natural resources and cultural practices. There are disproportionate impacts among these for tribes. Incorporating them into the EJ guidance. Extent of impacts depends on to what extent the tribe practices the activities.
- Tips for Success/Lessons Learned:
 - NRDA allows compensation for human use of resources
 - NRDA does not exclude cultural use of resources - Yakama getting Department of Energy to recognize that cultural resources can be impacted below drinking water standards - a big conceptual step.
 - Groundwater beta zone project - approach should be not just modeling, but telling a story.
 - Combining EIS and CERCLA assessments.
 - Know the players in the “decision” context.
 - Recognize there are multiple competing agendas--determine who is credible, which risk assessor uses the most credible model and data techniques.
 - Watch the process carefully--think ahead for new methods that may be needed in the future.
 - Establish a good working relationship without compromising. Tribe worked hard to maintain open communication. Maintain vigilance to keep your goals straight while selecting and using risk tools. For example, do not pick the easiest tool if it does not strictly meet your goals.
 - Important to have the right people in the right places, which has allowed this to happen.
- Tribe’s participation in the SW EIS has encouraged opportunities to work together and good progress has happened. The EIS has a much better Environmental Justice section.
- Challenges:
 - Progress in getting invited to be project team leaders.
 - Equity and environmental justice - are there differences between tribal people exercising treaty rights and typical exposure?
 - Remind EPA there are complications in Indian Country - ARAR list is longer.
 - If scientists are well grounded in science and treaty rights, almost nothing we can’t make relevant to tribes.
 - DOE still needs to understand the more integrated holistic view of the tribe.
 - DOE can still pick the wrong cleanup alternative despite the Yakama’s best analysis and position.

- Summary of Risk Roundtable:
 - Goal is to assemble risk tools into a risk tool kit.
 - Goal is to understand tribal needs.
 - Understand details of risk tools.
 - If a tool can be adapted to support a tribal need, modify it.
 - Some areas may require whole new approach.
 - Don't use something too quickly. Test it out first to ensure the tool will meet your needs. Don't unnecessarily compromise.
- Highlights of tools the Roundtable is exploring to figure out how to measure risk to cultures:
 - Comparative risk--not used in the cleanup arena, but in the planning arena. How can we incorporate the Quality of Life criteria into the methodology for setting cleanup levels-- Challenge is to get that into cleanup aspects.
 - Start thinking about how cultural values can be used to set up cleanup levels.
 - Landscape Level methods-- found in natural resource damage literature. What is an injury? We should keep the concept of people and culture together with natural resources when evaluating the injury to the environment through time (measuring the impacts). Think in terms of "eco-cultural health" -putting people with the land.
 - Ethno habitat - term in an EIS in which human uses are described in conjunction with environmental impacts.
 - Dependency webs - developed by Tulalip Tribe in conjunction with EPA. Tells ecosystem "stories" and shows links within the ecosystem.
 - Lead exposure problems: we know that calcium deficiencies in the diet lead to greater absorption of lead (Pb) into the body.
 - Gradually shifting the "cleanup" paradigm from focus on the "source" to focus on the "receptor" - taking a holistic look at cleanup impacts- Some success with this at Hanford.

Discussion

- Have you considered synergy between contaminants? Not only contaminants, but impacts.
Response:
 - Continue to be a problem; not much information in the literature; and we will probably miss synergistic effects.
 - This forces us to continue to try to be overly cautious.
 - Use dependency webs to describe some synergistic effects.
- Cultural risks/impacts may occur without exposure. Must be brought up early at the discussion table to give it equal weight with other considerations.
- Is there mechanism to resolve disagreements when tribe and DOE disagree over priorities or decisions?
Response:
 - Nothing formal for resolving that.
 - Consensus is usually used, but DOE is the final decision maker.
 - If trustees disagree, it goes back to square 1.
 - Did not settle for a least common denominator.

- Do risk models take into account natural phenomena?
Response: No
- Wilfred Ashby made a statement:
 - First nations people are equal stewards of air, water and land.
 - Still alive, should not be treated like we are gone or uneducated. We have great common sense.
 - Should not impose requirements or enact laws without consulting with members.
 - Natives or people residing on native lands do not get the help they need based on things our government has forced them to do. The government is supposed to work for us-- support from the consent of the people.
 - Government won't pay for trips to the hospital unless there is a threat of loss of life or limb.
 - Lawyers are not getting consent of people.
 - Listen to elders.
 - Freedom of speech and opportunity.
 - Learn from the past or lose the value of native wisdom
 - Stand up to morals that keep our people healthy.
 - Take the time to have relationships among us.
- Tribal diversity - Yakama lots of community involvement, but not all tribes have advantage of environmental knowledge.
- How do you address tribes that say that they won't clean up a site, because the Creator will take care of it?
- How do you measure cultural risk?
Response:
 - Know about culture and document it.
 - Get more information on the table (without giving too much away) to explain and enlighten the process.
 - Constructed scales based on elicitation.
- Are any trustees tribal members?
Response:
 - Three tribes -Nez Perce, Umatilla, and Yakama.
 - Also, Washington State Department of Environmental Quality, DOI, Department of Natural Resources.
- If all agreements made by consensus, do tribal members get "out voted?"
Response:
 - No.
 - If the group is polarized on a particular issue, they would go back to the beginning.
 - It hasn't really happened yet.
- Defining cultural risks
 - You should be able to tell the other side there is an issue, that should suffice for them. They need to be educated to understand that.

Action Items resulting from Combined Work Sessions**Action Items****Regarding creation of a national workgroup to follow-up to work shared at this conference:**

- Expectations of work group:
 - Provide EPA with direction
 - Will be defined at beginning of work group
 - Analysis of different options
 - Decision of future pathway
 - Audience is tribes
- Establish national work group to discuss cultural impacts. We can qualify cultural impacts but may not be able to quantify them.
- Form group that focuses on RA and cultural impacts. Do site-specific work to incorporate tribal concerns.

- **Composition of Workgroup:**
 - Tribal membership.
 - Possibly have universities work in tandem.
 - Tribal elders may appoint representatives and they may not be tribal members.
 - What about smaller tribes with less resources?
 - One work group may leave out input of a large number of tribes. Different ways for different tribes?
 - Need to hear voices of tribes, big and small. One work group for all 570+ tribes might be difficult.
 - Dynamic membership - involve new people along the way, if necessary.

- **Process for establishing a Workgroup:**
 - Request that people respond to an invitational letter — which tribes want to be active, which just want to be informed
 - Letter to all tribes early-mid January/as soon as possible.
 - Carefully word letter not to be too focused on Superfund/HRS.
 - Response by tribes- tribes need 8 weeks to respond.
 - February for first meeting?
 - Tie into NTEC National Conference.
 - Interested parties should contact Jerry at NTEC.
 - Form group as expeditiously as possible.

Workgroup Logistics and Communications:

- On-site meetings.
- Need some time to consider work group ideas internally.
- Identify action items from previous meetings on relevant risk issues, and learn status.
- Get information about other pilots that have cultural implications.
- Have teleconference access for those who can't attend the workgroup meetings.
- Have a conference call to set up the initial meeting.
- Need to define type of risks that will be addressed by group.
- A lot of information is out there, need to gather it.
- Methods of communicating work group progress/archives — through phone calls.
- To rank cleanups must somehow use existing process. Must incorporate tribal concerns into science “clean according to our standards.”

• Improving Tribal Communications

- Needs to be some level of flexibility to contact different regions because some regions are unresponsive.
- Network with other tribes.
- Utilize EPA regional tribal assistance groups.
- Region 8 tribal members have ongoing meetings/conference calls.
- Coordinate existing resources, especially those groups that work with groups.

• Obtaining Information

- Make a list of other national environmental programs that could be helpful (TOC, TASWER, NTEC, NCAI), and include contacts.
- Provide background index of projects that have been done (EPA) in Indian Country. Also include other agency information.
- Peer exchange program. Facilitate people from different tribes being able to work together to exchange information.
- Maybe expand RCRA peer matching program to address some of these issues.
- OSWER training forum - developing computer Internet glossary of information sites. Contact Diane Ruthrup.
- Fair Labor Standards Act is the only act that applies to Native Americans.
- Any region can contact Charles C. in region 9 for “scientific” questions - he will find the correct contact. Wilfred will serve as contact for indigenous knowledge in Alaska, TOSNAC too. OSWER will commit to creating an index of tribal technical resources which may need to be beyond EPA.
- Do other tribes have enforcement authority with tribal rules and regulations?
 - Associated with land base.
 - Should be addressed under legal issues. Want to see something in science to move us forward - how do we get our needs reflected in science?
 - Form a group of available Native American scientists who have experience to provide

- guidance.
- To get group:
 - contacts at tribes that have Superfund programs.
 - NAV Institute of Tribal Environmental Professionals.
 - AISES
 - Use Haskell University as starting point?

- **Funding:**
- Notify participants about appropriations for Y2K - someone should take the lead (planning meetings, TOC involvement).
- When appropriating money have a tribal contact at the start to point out stumbling blocks.
- Is there another meeting after this?

The Intertribal Risk Assessment Committee (IRAC) is comprised of tribal representatives to focus on the myriad of risk issues facing tribal communities; to promote tribal views on environmental risk management including assessments and other guidelines, methodologies, and decision-making processes affecting tribes; and, to facilitate communication on risk between Indian tribes and federal agencies.

Members of the IRAC have reached a level of experience and knowledge to recognize the lack of uniformity in the risk assessment process and the terminology of risk, and that standard risk assessment models and processes fail to address or include impacts to tribal cultural integrity, fail to protect and preserve cultural resources (which includes natural resources), and fail to honor treaty-protected subsistence rights, such as hunting, gathering, and collecting.

To IRAC members, a tribe's cultural integrity is paramount and must be considered from a holistic viewpoint. It is an oversimplification to attempt to evaluate how an action might impact only a specific aspect of tribal culture. Mainstream science errs, for instance, when evaluating a contaminant in the environment that impacts a treaty-protected right (i.e., subsistence fishing) because the technical risk analysis does not and cannot comprehend the total impact of such a loss to the tribe's culture as a whole. If the fish are lost, likely to follow will be the loss of related ceremonies, stories, songs, and selected terminology within the language. The IRAC has been working to help ensure that these concerns are included in risk assessment models and analysis.

Above all, the IRAC recognizes that each tribe is a unique government and should be treated accordingly. That is, there is no "one size, fits all" risk assessment methodology that can be universally applied by federal agencies. The IRAC has never endeavored to develop a "tribal" risk assessment model that could be used for several tribes, scenarios, and resources. Each American Indian and Alaska Native community covered by federal fiduciary accountability must be ensured full consultation on a government-to-government basis.

IRAC members Mary Arquette, Jeanette Wolfley, Robert Holden, Russell Jim, Gio Nguyen, and Heather Westra presented a "Critical Appraisal of Risk Analysis for Native Bio-resources" and "Ecological Risk Co-Management of Native Resources."

Tribal Superfund Programs

Contact Name	Tribe Name	Phone
Dave Arquette	St. Regis Mohawk	

Tribal Risk Conference**Additional Information**

J. Ned Black	U.S. EPA, Region 9	415-744-2354
Gerald W. Bowes	State Water Board	916-657-1029
Brenda Brandon	TOSNAC	877-4TOSNAC
Clarence A. Callahan	U.S. EPA, Region 9	415-744-2314
Phil Cerner	Couer d' Alene Tribe	208-667-4119
Gerald "Buzz" Chernoff	CA Fish and Game	916-324-6450
Doug Cox	Menominee	715-799-4937
Kent Curtis	ITEC, Region 6	918-458-5496
Lydelle Davis	Navajo Nation	520-871-7296
Ted Garcia	POEP, Region 6	505-884-0480
Susan Hanson	Shoshone-Bannock	208-238-2627
Don Lollock	CA Fish and Game	916-445-8285
Dan Marsin	Gila River Indian Community, Region 9	520-562-2416
Nanci Peters	Yakama	
James W. Polisini	Department of Toxics	818-551-2853
Renee Red Dog	Tohono O'Odham Nation, Region 9	520-383-2221
Sheila Sevenstar	ITEC, Region 6	918-458-5496
Barbara Sherupski	POEP, Region 6	505-884-0480
Bill Sullivan	Puyallup	
Laurie Sullivan	NOAA	415-744-1893
Bob Ulibarri	Hoopa Valley, Region 9	530-625-5515
TBD 1/1/99	U.S. Fish and Wildlife	