NEZ PERCE PERSPECTIVE AT HANFORD:

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Abstract.

The Nez Perce Tribe, like other federally-recognized tribes, is a sovereign nation, and the United States is required to consult on a government-to-government basis with the Tribe on actions that stand to affect the tribal resources, such as the cleanup of nuclear wastes at the Hanford facility near Richland WA. The following provides an overview of how the Nez Perce view the environmental resources at Hanford and their importance to sustaining tradition lifeways, including use of natural resources, gathering times, and tribal values and perspectives of these resources. While this writing focuses on the Department of Energy’s (DOE) obligation to Hanford’s cleanup, the Tribe’s ultimate interest includes, but is not limited to, the Tribe’s treaty-reserved rights to unrestricted access and use of uncontaminated treaty resources at Hanford.

NEZ PERCE PERSPECTIVE AT HANFORD:

1.0 Introduction

The Nez Perce Tribe has powers and authorities derived from its inherent sovereignty, from its status as the owner of land, and from legislative delegations from the Federal government. The Tribe is also a cultural entity charged with the responsibility of protecting and transmitting that culture which is uniquely Nez Perce. The Tribe is a beneficiary within the context of federal trust relationship, and a trustee responsible for the protection and betterment of its members and the protection of their rights and privileges.

The DOE – Nez Perce Tribal relationship at Hanford is defined by the trust relationship between the Federal government and the Tribe by treaty, federal statute, executive orders, administrative rules, case law, DOE’s American Indian Policy, and by the mutual interest in the safe, efficient and expeditious cleanup of the DOE weapons complex. This relationship is expressed in a Cooperative Agreement between the Nez Perce Tribe and DOE-Hanford with focus on site-specific cleanup of Hanford and extends to all trust-related activities by DOE.

The Tribe sees itself not only as a trustee of resources at Hanford, but also as technical and cultural advisors to DOE decision-making. We are asked to review and comment on documents and activities by DOE as a means to uphold their trust responsibilities and comply with other federal statutes, laws, regulations, executive orders and memoranda governing the United States’ relationship with Native Americans and the Nez Perce people. Several Nez Perce tribal departments lend their respective technical expertise to DOE Hanford issues and present recommendations to the Nez Perce Tribal Executive Committee (NPTEC) for consideration and
guidance. The NPTEC may also requests formal consultation with the federal agency to further discuss a proposal or issue.

There are limitations of the National Environmental Policy Act (NEPA). Federal regulations implementing NEPA define a set of rules for analyzing the effect of federal undertakings on the quality of the human environment. These rules include generating alternatives, evaluating the natural and human environment, and engaging the public. NEPA does not provide a framework where Tribal values or traditional lifeways are given appropriate consideration in comparison to mainstream values. However, the regulations to provide that affected Tribes have a right to participate in the NEPA process. This includes involvement in scoping, alternatives development, determining the area of potential effect (APE), and impacts analysis. It is not enough that we are invited to comment, it is our legal right to participate as a Trustee. DOE must understand that as a trustee, our perspective and values are just as valid as other trustees associated with Hanford Cleanup.

We ask that DOE begin to invite tribal participation early in the NEPA process in an attempt to allow equal input into their federal decision-making. It is paramount that the Nez Perce people carry-on their culture, which includes preserving access and use of the lower Columbia, including Hanford.

2.0 Background on Nez Perce Lifeways

For DOE decision-makers to fully understand our perspective, they must understand our past at Hanford, its historical value to us as a people, and accept our present and future role in preserving our culture that includes Hanford resources. In the past, the Nez Perce traditional lifestyle was often mislabeled as nomadic. We were a people that relied on the salmon, but more importantly, we followed a seasonal round.

2.1. Seasonal Rounds

The seasonal round is best described as a return to a specific area for the purpose of gathering resources: food, medicinal or otherwise. The seasonal round advanced in area and elevation simultaneously. It is not the act of following resources wherever they occur but rather a return to an area to gather resources based on prior knowledge or experience. It is also marked by the availability as warming seasonal temperatures foster development of the resource. Examples are the return to root digging areas as spring or summer temperatures have warmed plants to the point of opening the opportunity to harvest, or a return to a hunting area in the fall before temperatures drop to low. The map below shows how the Hanford area fits into the area used by the Nez Perce over time (Figure 1). The time for gathering resources is marked by lunar changes. Since there were more foods than there were moons during the year some resource gathering times were simultaneous. The diagram below shows how the seasons for gathering various foods correspond to the commonly used twelve-month calendar and four seasons. The Nez Perce changed elevations depending on the warming weather and this is shown through another diagram showing the names of the gathering seasons and the elevations.

The seasonal round also covered an elevation from sea level up to ten thousand feet. The map titled “Silhouette of the Northwest” shows the elevation difference in the usual and accustomed
areas used by the Nez Perce. The beginning of the seasonal round is marked with a Ke'uyit or first foods ceremony in the spring. Ke'uyit translates to “first bite” and is an annual ritual of prayer immersed in song for the first foods of the year. Traditional foods are laid out on the floor in the order in which they are gathered throughout the year beginning with Salmon. This annual ritual is an expression of gratitude to the foods.

![Silhouette of Northwest](image)

*Figure 1. Elevational profile*

for their return and for those gathered during the seasonal round. Other tribes have more than one feast such as a root feast and a huckleberry feast but the Nez Perce only have one and it is held toward the latter part of the spring (Figure 2).
2.2. Gathering Times
Gathering times are extremely important to the Nez Perce. Examples of resource gathering times are shown in Figure 3 and discussed below.

Wiluupup: Time when cold air travels. Often corresponds to the month of January.

‘Alatam’aal: Time between winter and spring or the time for fires (often corresponds to the month of February) ‘Ala=fire

Miseemi latiti’al: Time of false blossoms roughly corresponding to early March. Miseemi=to lie or speak falsely, Latii=to bloom or blossom.

Latiti’al or Latiti’aal: Time when flowers bloom. Roughly corresponds to the month of March. Latii=to bloom or blossom.

Qeziiti’aal or qeziiti’aal: Time of gathering qeziit roots. Roughly corresponds to April.

‘Apa’aal: Time for digging roots and making them into small cakes called ‘Apa. Roughly corresponds to the month of May or June.

Tusitimasatal: Ascend to higher mountain areas. Roughly corresponds to the month of June. Tusiti=higher/above
'Il'at: The time of the first run of Salmon. Roughly corresponds to the month of June.

Haso’ał: The time to gather eels or Pacific Lamprey. Roughly corresponds to the month of June.

Hesseu’aat: The time for digging and roasting qem’es bulbs. Often corresponds to the month of July. Qem’es=camas bulbs.

Q’oyxc’ał: Time of gathering Blueback Salmon. Often around the month of July. Q’oyxc=Blueback Salmon

Waw’ama’aq’ał: Season when salmon swim to the headwaters of streams (often corresponds to August). Waw’anan=headwaters

Pilk’unma’ayq’ał or pik’onma’ayq’ał: Time when Chinook Salmon return to the main river and steelhead begin their ascent. Roughly corresponds to September. Pilk’un=river

Hoop’ał: Time when Tamarack needles begin to fall. Huup=to fall (as Pine needles do). Roughly corresponds to October.

Segliw’ał: Autumn or the time roughly corresponding to November.

He’uquy: Time of elk fetus gestation roughly corresponding with winter and the month of December.

‘Alwac’ał: Time of Bison Yearling roughly corresponding to December. ‘Alawa=bison yearling.

Illustrating the extent of travels by the Nez Perce
3.0 Nez Perce Tribal Values and Environmental/Tribal Health

3.1 Oral Histories

Oral histories imparted basic beliefs, taught moral values, explained the creation of the world, the origin of rituals and customs, the location of food, and the meaning of natural phenomena. Oral tradition provides accounts and descriptions of the region’s flora, fauna, and geology. Fish and other animals are characters in many of these stories. Coyote is the main character in many
because he exhibits all the good and bad traits of human beings. Although characters and themes may differ slightly, many of these same stories are held in common by Columbia Basin tribes.

3.2. Tribal Values

Tribal values lie imbedded within the rich cultural context of oral tradition and are conveyed to the next generation by the depth of the Nez Perce language. How to properly perceive life and land are among the core tenets of which the stories speak. The numerous landmarks that season the landscape are reminders to the events, stories, and cultural practices of our people. These values are what must endure and they can only be properly conveyed by the oral traditions and language. Overall the values are intent on protecting, preserving and perpetuating resources for the sake of survival. The Nez Perce taught these values to our children for generations just as we still teach them today. The most appropriate way to understand our cultural values is to view our cultural practices conducted today on our landscape. They reflect a complex tradition showing high regard for the land. By utilizing mother earths resources, we only take what we need while preserving the resource to propagate their continued existence. Resources would not be jeopardized by the actions of the present generation at the expense of future generations. We value the landscape for the rich resources it offers our children for survival.

The Nez Perce Tribe utilized resource areas with several other tribes that carried similar resource values. The landscape is full of powerful reminders in the form of rock features associated with oral traditions that relate exploits of tribal people and the animal people. The Nez Perce elders recall hunting and fishing areas taught to them when they were young. These are the same places learned about from their elder kinsmen. The women dig roots and harvest berries in the same places that they learned from their grandmothers.

Each place utilized for resources was maintained to sustain future generations. Each plant had a window of harvest in which it could be gathered. The window of harvest was always honored because gathering at another time would either affect its strength or viability. When women were gathering *qem'ers* bulbs, they would evaluate the field to ensure that others had not already gathered past the threshold of the resource's stability. If the field looked as though others had already been there and the resource needed to be left so it could continue on, then they would simply go to another place. When a place was found which could be used for harvest, the digging would begin with prayer songs and it was common for many of the women to sing as they continued to dig. When the work was finished for the day it was closed with a prayer song just as it had begun. They were cautious about the way in which they gathered the roots as well. Arguing and fighting didn't occur while gathering foods, even among the young, because it was strictly forbidden. Root diggers were reminded by the elderly to be prayerful and concentrate on good thoughts as they conducted their work, avoiding negative feelings that might be carried by the foods to those that would consume them. Feelings from the roots always were to be returned to the original grounds from which they came or buried in the earth. They are never to be simply thrown in the garbage. Regardless of where the oral tradition originated, these stories communicate values of the site while practicing usual and accustomed rights. These teachings are tied to the landscape and illustrate a land ethic that has existed for thousands of years and has become our culture.
Fishing and hunting were conducted in the same way. Young boys were raised with the guidance of elder kinsmen. A group of hunters or fishermen would depart for areas that were, on occasion, previously scouted for the presence of fish and/or game. Young hunters and fishermen would observe the actions of those that were responsible for imparting knowledge of how to conduct oneself appropriately as game was stalked or fish were caught. Expectations were similar to those of the young women; concentrate on good thoughts and feelings, prohibited acts included fighting and arguing. Excessive pride and boasting were frowned upon by elder kinfolk since the hunt was to be conducted with the utmost humility. Hunters and fishermen learned to avoid catching the largest fish or killing the largest animal they could find because it preserved the gene pool that replaced that size animal. Upon return, the hunters were not questioned as to the number each hunter killed and it was never announced because it was deemed as a group activity. One exception was when a young hunter killed an animal for the first time or caught his first fish. At this time the family recognized the young hunter or fisherman as a provider with a ceremonial feast. The elder fishermen and hunters sat around the meat which was to be boiled, baked or prepared in some traditional fashion as stories were told conveying more teachings and proper conduct. As the elder hunters and fishermen consumed the meat the newly recognized hunter or fisherman was not allowed to partake of even a morsel of the meal. Everyone else was to eat before the hunter or fisherman could consume a meal. This reinforced their role as a provider rather than someone that merely killed game or caught fish for recreational purposes. Young hunters were taught proper shot placement, as it was crucial to the hunting experience. Young hunters were taught to shoot an animal so that it would be killed as quickly and limit the animal's suffering as much as possible. Shooting an animal or catching a fish was only part of the overall commitment to the animal's sacrifice. It had to be cleaned and taken care of with the same regard as the roots and berries. The utmost gratitude and respect was offered to the animal's spirit for imparting a tremendous gift of life to the people.

Spiritual or religious aspects of natural resources are at the heart of Indian culture. There isn't a daily activity of a traditional lifestyle that doesn't have oral traditions telling how the activity is part of the land and plays a role in taking care of the land. Even landmarks have oral traditions associated with them. These landmarks are tangible cultural reminders.

3.3. Value of Uncontaminated Resources

For natural resources to be uncontaminated as part of Nimiipuu physical and spiritual well-being, then land and waters and air from which they come should be uncontaminated otherwise the risk to human health increases the potential for illness and other ailments. For tribal use of natural resources to be fully utilized, the example of manufacturing and using a wistsitan'ot or sweat lodge is presented. One purpose of a sweat lodge is for purification. It is for cleansing and a time for meditation, spiritual reflection, healing, sharing oral history and teaching. The wistsitan'ot is often a place where the Nez Perce return to have spiritual well-being restored after family losses. It is a place of contemplation and an opportunity to relieve stress and anxiety built up from the day's activities. It is a place for centering your soul through prayer and meditation. It is also a place where many socialize with family and friends and learn what is happening in the community.
For these reasons, it is imperative that the materials used in making a sweat lodge come from the natural environment. The structure is made of willows gathered from the immediate vicinity of where the sweat lodge will stand. The covering is to be of animal hides, or other natural materials. The water for the bathing after sweating is to be from a natural spring or stream. Herbs are collected in their proper season with prayers and gratitude offered for their service.

Sitting in a sweat bath is a rigorous activity. While outwardly relaxed, your inner organs are as active as though you were exercising. The skin is the largest organ of the body and through the pores it plays a major role in the detoxifying process along with the lungs, kidneys, bowels, liver and the lymphatic and immune systems. Capillaries dilate permitting increased flow of blood to the skin in an attempt to draw heat from the surface and disperse it inside the body. The heart is accelerated to keep up with the additional demands for circulation. Impurities in the liver, stomach, muscles, brain, and most other organs are flushed from the body. It is in this way that purification occurs.

4.0 NEPA and DOE Fiduciary Responsibility

The following sections of the CEQ regulations afford affected Tribes the right to participate throughout the NEPA process and provide comment to the lead agency. As a result, DOE’s request of Tribal involvement provides the opportunity to communicate a Nez Perce perspective of Hanford resources.

Section 1501.1.6(a) and 1508.5 states that affected tribes have the right to be invited as a cooperating agency. A cooperating agency would participate throughout the entire NEPA process as a partner to the lead agency and can request the role as lead agency. Section 1501.7(a)(1) states that affected tribes are afforded the right to be a participant in the scoping process. Scoping is the term for the early meetings that define the purpose and need of the project and develops the initial range of preliminary alternatives that defines the area of potential effect (APE). Section 1503.1(a)(2ii) recognizes that Tribal governments have the right to comment on NEPA proposals. An important regulation is Section 1507.2(b) that states that “presently unquantified environmental entities and values may be given appropriate consideration”. In other words, tribal perspectives, traditional values and spiritual significance can be considered as part of the NEPA evaluation process.

In essence, tribal values are intent on protecting, preserving and perpetuating resources for the sake of perpetuating our culture. While completing NEPA, DOE must invite us early to the process and allow us to determine the extent of our involvement. DOE can meet trust obligations by incorporating tribal views on resource protection while moving forward with their proposed action. When tribal views conflict with the proposed actions, then consultation becomes an important resolution exercise for the benefit of both DOE and tribes.

Often times federal trust obligations are not clearly articulated during the NEPA process or in federal documents. When there are foreseen conflicts between the agency’s proposed action and their fiduciary responsibility of trust resources, DOE personnel sometimes will avoid tribal involvement to the point of exclusion, except for providing comment opportunities along with
the general public. If tribes are kept uninformed, we may not know the full extent of the impacts to treaty reserved rights until after implementation of a proposed action.

The Nez Perce Tribe’s approach is to fully engage DOE early when making important decisions about cleanup strategies and long-term stewardship of Hanford trust resources. By participating early and communicating our perspective through government consultation, we believe better decisions will be made for both DOE and the Nez Perce for future generations.

5.0 Tribal Perspective of Hanford Cleanup (in NEPA format)

In 2009, DOE invited Affected Tribes to participate in the development of a Programmatic EIS that would look at several locations around the country to place Greater-Than Class-C (GTCC) nuclear waste in a long-term repository. We chose to participate and develop a Tribal narrative for the benefit of the grander scheme of communicating our perspective and fostering more open dialog with DOE in future proposals at Hanford. With coordination with Confederated Tribes of the Umatilla Indian Reservation (CTUIR) and the Wanapum people, we created a list of specific issues that are uniquely a Tribal perspective. This narrative should serve only as a template to aid consultation with DOE and develop better decision-making with Nez Perce Tribe during Hanford cleanup.

The Nez Perce Tribe anticipates that DOE will incorporate the following Tribal perspective in all future decision-making. More importantly, we expect a more thorough dialog between DOE and the Nez Perce Tribe; one that embraces tribal values and includes our perspective into the NEPA process. As a Hanford stakeholder, our perspective should be valued as much as other stakeholders. Our issues summary follows the general outline of a NEPA document in order to make it easier for DOE to incorporate into Hanford decision documents.

5.1. Climate, Air Quality and Noise

5.1.1. Climate

Climate is one of the dominate issues of our time. Any programmatic EIS that makes decisions about radio-active waste storage for thousands of years must give serious consideration to the likelihood of climate change on a storage facility. The false assumption that the climate is a constant when considering long-term storage decisions could lead to inadequate design. The reality is that nuclear waste storage will last for thousands of years and climate will likely be different with potential to reach similar condition of history. For instance, the last glacial period ended approximately 11,000 years ago. The maximum extent of glaciation was approximately 18,000 years ago. This is a brief time period considering the half-life of many radio-active isotopes. Columbia Plateau Tribes have stories about the world being transformed from a time considered prehistoric to what is known today. The Nez Perce remember volcanoes, great floods, and animals now extinct. Oral histories also indicate a time when the climate was much wetter and supported vast forests in the region.
These distinct climatic periods have occurred during which Tribal life had to adapt for our people to survive. Our oral history tells of our struggles against volcanic activity where our world seemed on fire, of great floods, and of the previous ice age. Scientific and historic knowledge validates our oral history for many thousands of years.

Oral histories describe a time when Gable Mountain or Nookchka (Reflander1986: 305), a major landscape feature on the Hanford Reservation, rose out of the Missoula floods. There is a story about Indian people who fought severe winds that were common a long time ago. One story tells how a family trained their son by having him fight with the ice in the river until he became strong enough to fight the cold winds.

Holocene (Roberts 1998) is the term used to describe the climate during the last glaciers (110,000 to 11,700 years ago), covering much of the northwestern North America. Arctic foxes found at Marmes Rock Shelter provide some of this archeological record (Browman and Munsell 1969; Hicks 2004). The Palynological data would be a good source for recreating climates that supported ecosystems of the past 10,000 years. This information should be a minimal basis for climate analysis relative to decision-making in long-term storage of radio-active waste at Hanford.

5.1.2. Air Quality

Air quality monitoring results of past and present monitoring of the Hanford site should be summarized and presented in a NEPA document. This should include measures of radio-active dust at locations like the Environmental Restoration Disposal Facility (ERDF), various plant emission stacks, venting systems, and power generation sites. Also, fugitive dust needs to be described relative to inversions and health risks. Also, this section should describe seasonal and daily wind patterns where fugitive dust could impact visibility and the Hanford viewshed.

The Nez Perce believe that radioactivity is brought into the air and distributed by the high winds that commonly occur at Hanford. Past Hanford NEPA documents provided little if any information about radio-active soil/dust dispersal capabilities of wind. ERDF Site managers occasionally send workers home and close down the facility due to blowing dust impairing worker visibility and creating an unsafe work environment. These situations are part of the existing environment and yet are not described.

There is typically no mention of high winds or their ability to pick up contaminated soils from active demolition areas or waste soils placed at ERDF. Do the ERDF or demolition sites operate with work stoppage if wind speeds exceed some level? Do excavation or demolition sites that create radio-active debris operate under temporary structures to prevent wind dispersals? This type of information needs to be presented.

Winds commonly blow 40-45 miles per hour and intermittently much stronger at Hanford (http://www.bess.wa.gov/windstorms.pdf). High winds over 150-mile per hour were recorded in 1972 on Rattlesnake Mountain; and in 1990, winds on the mountain were recorded at 90 miles per hour. Dust devils can be massive in size, spin up to 60 miles per hour, and frequently occur at the site. Tornadoes have been observed in Benton County which is regionally famous for
receiving strong winds. It is important to understand how wind has the potential to distribute radio-active and chemical waste at Hanford during excavation, handling, transport, and storage of these contaminants.

5.1.3. Noise

Non-natural noise can be offensive to native people during traditional ceremonies. Noise-generating projects can interrupt the thoughts and focus and thus the spiritual balance and harmony of the Tribal community at a ceremony (Greider 1993). The general values or attributes from a tribal perspective is for the natural environment to provide solitude, quietness, darkness and an uncontaminated environment. These attributes provide unquantifiable value that allows for spiritual connection to mother earth. These attributes of nature are fragile.

The noise generated by the Hanford facility may have the potential to interfere with ceremonies held at sites like Gable Mountain and Rattlesnake Mountain. The disruption of natural harmony at ceremonial sites has not been surveyed or even discussed.

The Nez Perce Tribe recommends that quiet zones and time periods be identified for known Native American ceremonial locations on and near the Hanford site. Not all ceremonial sites have been shared with DOE or the non-Indian public. For this reason, tribal values of the Hanford environment that already supports solitude should be documented. These values are also discussed in our new recommended section that we titled "Viewshed".

5.1.4. Light Pollution

Light pollution is a broad term that refers to multiple problems, all of which are caused by inefficient, unappealing, or (arguably) unnecessary use of artificial light. Artificial light can create measurable harm to the environment by affecting nocturnal and diurnal animals. It can affect reproduction, migration, feeding and other aspects of animal survival. Artificial light can also reduce the quality of experience during tribal cultural and ceremonial activities. Presently, there is no discussion in an EIS about how artificial light may cause harm to the Hanford environment especially those areas regularly visited by tribal members for ceremonial purposes.

5.2. Geology and Soils

5.2.1. Geology

5.2.1.1. Physiography

The Yakima Fold Belt and the Palouse Slope play potentially very significant roles at Hanford both culturally and geologically. Rattlesnake and Gable Mountains are examples of folded basalt structures within the Yakima Fold Belt. These geological features have direct bearing on the groundwater and its flow direction. There are oral history accounts of these basalt features above the floodwaters of Lake Missoula. Many other topography features have oral history explanations such as the Mooi Mooi (ground undulations found along the river terrace) and the sand dunes.
5.2.1.2. Site Geology and Stratigraphy—

Central Plateau

The Central Plateau is underlain by suprabasalt sediments comprised of the Ringgold, Cold Creek, and Hanford formations. There is a large amount of variability in the geology and hydraulic conductivity underneath the Central Plateau. Better understanding of the geology is probably one of the most important elements for evaluating potential Hanford remediation strategies. It should be noted that within both the vadose zone and aquifer, there are major erosional channels filled with gravel that can be traced across the Central Plateau.

Clastic dikes are networks of vertical features like cracks that developed in the vadose zone. How clastic dikes may influence contaminant transport is not well understood. There is a question as to whether or not the DOE has looked for them at the proposed site. They are known to be present in the 200 Areas.

Regional Seismicity—The Pasco Basin has been tectonically active and needs consideration if there is interest in putting more contaminants in the ground at Hanford. The local region is under north-south compressional force that has caused the surface to wrinkle in folds that trend approximately east-west, thus creating the Yakima Fold Belt. Fault movement along these folds occurs periodically, and studies have shown these to be considered active fault zones (Repasky, TR, et.al., 1998; Campbell, N.P., et.al., 1995). Emerging research being reported through the USGS is highlighting the importance of the Cascadian subduction zone under the Cascades into the Yakima Fold Belt.

The Pasco Basin includes a feature called the Olympic-Wallowa Lineament (the OWL). Surface features are used to identify a structural “line” within the earth’s crust that can be traced roughly from southeast of the Wallowa Mountains, under Hanford, through the Cascades and Puget Sound.

The 1936 earthquake and the 1973 earthquakes at Hanford justify the requirement earthquake-resistant buildings. Any storage structure of highly contaminated nuclear waste should also have backup safety systems as a secondary line of defense against earthquakes.
5.2.2. Soils

Soil is part of mother earth that supports plant and animal life which Native people rely for our traditional lifeways. We understand the importance of soils and minerals through our traditional use of them. Clays were used as a building material, for creating mud baths, and for making pottery. One of the best known attributes of soils is its ability to filter water. Hanford has delineated contamination areas called operable units (OUs) for surface contamination. It is essential for the soils section of the Affected Environment Chapter to graphically illustrate and describe the surface contamination OUs. The influence of past releases on soil chemistry and properties are not understood. Sandy soils at Hanford already have high transmissivity. Such changes could increase water and contaminant transport.

Oral histories document medicinal properties of soil for healing wounds. Soils from the White bluffs were used for cleaning hides, making paints, and whitewashing villages.

5.3. Minerals and Energy Resources

The extent and value of mineral resources displaced by the present contamination in the Central Plateau has not been documented. DOE has designated this area as industrial use according to the Comprehensive Land Use Plan (CLUP). It appears that DOE’s present vision is to allow temporary and long-term waste storage at the uncontaminated surface in this area while continuing pump and treat technology and natural attenuation for managing vadose and groundwater contamination. This may seem like a reasonable strategy by DOE from a technical standpoint but this strategy will likely prevent tribal use of the area for thousands of years. As a result, there is a loss of resource use to the Nez Perce, including use of soils and minerals.

5.4. Water Resources

5.4.1. Groundwater

Purity of water is very important to the Nez Perce, considering their cultural connection and direct use of water. We expect DOE to manage for optimum achievable water quality and not for a minimum water quality threshold.

There is insufficient characterization of the vadose zone and groundwater. It is essential for the Groundwater section of the Affected Environment chapter to describe existing groundwater contamination and where information is lacking. Hanford has delineated operable units (OUs) for subsurface contamination based in existing characterization data. But, DOE needs to better characterize these OUs and graphically illustrate them in the document.

From the perspective of the Nez Perce Tribe, the greatest long-term threat at the Hanford site lies in the groundwater contamination and its difficulty to be cleaned up. There is a tremendous volume of radioactive and chemical contamination in the groundwater that needing further evaluation. For instance, the mechanisms of flow and transport of contaminants through the soil...
to the groundwater are still largely speculative. This coupled with limited technical ability to remediate the vadose and groundwater puts the Columbia River at continual risk.

5.4.2. Water Use

The Columbia River is the lifeblood of the Nez Perce people. It supports the salmon and every traditional food or material that our people rely for subsistence. It is an essential human right to have clean water. If water is contaminated then it contaminates all living things including tribal members that exercise a traditional lifestyle. Making a sweat lodge and sweating is a perfect example. It is a process of cleansing and purification. However, if water is contaminated and/or the sweat lodge materials then the process of cleansing would actually contaminate the individual.

Tribal people are well known for adopting technology if instituted wisely or didn’t threaten our people or elements of the environment. This approach applies to tribal use of groundwater too. Even though groundwater was not used except at springs, tribes would have developed wells eventually if seen as an appropriate use. Existing contamination is considered an impact to tribal rights to utilize springs and groundwater.

The hyporheic zone in the Columbia River needs to be more fully characterized to understand how contaminated groundwater is entering the Columbia River. Contaminated groundwater plumes at Hanford are moving towards the Columbia River and some contaminants like chromium are already recharging to the river. It is the philosophy of the Columbia River Tribes that groundwater restoration and protection be paramount in DOE’s management of Hanford. Institutional controls such as preventing use of groundwater should only be a temporary safety measure for human health and the environment. We prefer a proactive corrective cleanup strategy over DOE’s inference to use surface barriers, natural attenuation and institutional controls as a long-term management option. In our opinion, monitoring natural attenuation is not a cleanup strategy. By not actively pursuing cleanup of vadose and groundwater contamination, DOE is limiting surface land use to none other than waste disposal or energy parks. Future waste disposal or development of energy parks does not meet the Nez Perce Tribes end-state vision and actually places limitations to future tribal use. Such important land use decisions or proposed changes to land use must be consulted with our Tribal leadership on a government to government basis.

5.5. Human Health

Nez Perce health involves access to traditional foods and places. Both are located on the Hanford facility and can be limited by institutional controls or impacted by inadequate cleanup.

Definition of Tribal health- Native American ties to the environment are much more complex and intense than is generally understood by risk assessors (Harris 1998, Oren Lyons; http://www.ratical.org/many_worlds/6Nations/0LatUNIn92.htm; http://www.youtube.com/watch?v=hDF7a23hVg). All of the foods and implements gathered and manufactured by the traditional American Indian are interconnected in at least one way, but more often in many ways. Therefore, if the link between a person and his/her environment is severed
through the introduction of contamination or physical or administrative disruption, the person's health suffers, and the well being of the entire community is affected.

To many American Indians, individual and collective well being is derived from membership in a healthy community that has access to, and utilization of ancestral lands and traditional resources. This wellness stems from and is enhanced by having the opportunity and ability to live within traditional community activities and values. If the links between a tribal person and his or her environment were severed through contamination or DOE administrative controls, the well being of the entire community is affected.

5.6. Risk Assessments

Risk assessments should take a public health approach to defining community and individual health. Public health naturally integrates human, ecological, and cultural health into an overall definition of community health and well-being. This broader approach used with risk assessments is adaptable to indigenous communities that turn to the local ecology for food, medicine, education, religion, occupation, income, and all aspects of a good life (Harris, 1998, 2000; Harper and Harris, 2000).

"Subsistence" in the narrow sense refers to the hunting, fishing, and gathering activities that are fundamental to the way of life and health of many indigenous peoples. The more concrete aspects of a subsistence lifestyle are important to understanding the degree of environmental contact and how subsistence is performed in contemporary times. Also, traditional knowledge can be learned directly from nature. Through observation this knowledge is recognized and a spiritual connection is often attained as a result. Subsistence utilizes traditional and modern technologies for harvesting and preserving foods as well as for distributing the produce through communal networks of sharing and bartering. The following is a useful explanation of "subsistence," slightly modified from the National Park Service:

"While non-native people tend to define subsistence in terms of poverty or the minimum amount of food necessary to support life, native people equate subsistence with their culture. It defines who they are as a people. Among many tribes, maintaining a subsistence lifestyle has become the symbol of their survival in the face of mounting political and economic pressures. To Native Americans who continue to depend on natural resources, subsistence is more than eking out a living. The subsistence lifestyle is a communal activity that is the basis of cultural existence and survival. It unifies communities as cohesive functioning units through collective production and distribution of the harvest. Some groups have formalized patterns of sharing, while others do so in more informal ways. Entire families participate, including elders, who assist with less physically demanding tasks. Parents teach the young to hunt, fish, and farm. Food and goods are also distributed through native cultural institutions. Nez Perce young hunters and fishermen are required to distribute their first catch throughout the community at a first feast (first bite) ceremony. It is a ceremony that illustrates the young hunter is now a man and a provider for his community. Subsistence embodies cultural values that recognize both the social obligation to share as well
Appendix W ▪ American Indian Tribal Perspectives and Scenarios

as the special spiritual relationship to the land and resources.” (National Park Service: http://www.cr.nps.gov/aad/cg/sf a999/ subsist.htm)

The following four environmental categories contribute to individual and community health. Impacts to any of these can adversely affect health. Metrics associated with impacts within each of these categories are presented in Harper and Harris (1999).

5.6.1 Human Health-related Goods and Services

This category includes the provision of water, air, food, and native medicines. In a tribal subsistence situation, the land provided all the food and medicine that was necessary to enjoy long and healthy lives. From a risk perspective, those goods and services can also be exposure pathways.

5.6.2. Environmental Functions and Services.

This category includes environmental functions such as soil stabilization and the human services that this provides, such as erosion control or dust reduction. Dust control in turn would provide a human health service related to asthma reduction.

Environmental functions such as nutrient production and plant cover would provide wildlife services such as shelter, nesting areas, and food, which in turn might contribute to the health of a species important to ecotourism. Ecological risk assessment includes narrow examination of exposure pathways to biota as well as examination of impacts to the quality of ecosystems and the services provided by individual biota, ecosystems, and ecology.

5.6.3. Social and Cultural Goods, Functions, Services, and Uses

This category includes many things valued by suburban and tribal communities about particular places or resources associated with intact ecosystems and landscapes. Some values are common to all communities, such as the aesthetics of undeveloped areas, intrinsic existence value, environmental education, and so on.

5.6.4. Economic Goods and Services

This category includes conventional dollar-based items such as jobs, education, health care, housing, and so on. There is also a parallel non-dollar indigenous economy that provides the same types of services, including employment (i.e., the functional role of individuals in maintaining the functional community and ensuring its survival), shelter (house sites, construction materials), education (intergenerational knowledge required to ensure sustainable survival throughout time and maintain personal and community identity), commerce (barter items and stability of extended trade networks), hospitality, energy (fuel), transportation (land and water travel, waystops, navigational guides), recreation (scenic visitation areas), and economic support for specialized roles such as religious leaders and teachers.

5.7. Ecology
The Nez Perce people have lived in these lands for a very long time and learning about the resources and their ecological interrelationships. We knew about environmental indicators that foretold seasons and their conditions to come. Mother earth will communicate to you, if you are willing to pay attention. When Cliff Swallows first appear in the spring, their arrival is an indicator that the fish are coming up the river. Doves are our fish counters, telling if the fish will be abundant. Many natural phenomena foretell the earth is about to come alive again in spring, even though things are still dormant underground. The Nez Perce have traditional ecological knowledge and even have ceremonies that acknowledge them, like the arrival of spring. The winds also bring information about what will happen in our environment and provides guidance about how to bring balance to our lands.

5.7.1. Biodiversity on the National Monument

The Monument encompasses a biologically diverse landscape containing an irreplaceable natural and historic legacy. Limited development at Hanford over approximately 70 years of Government operation has allowed for the Monument to become a haven for important and increasingly scarce plants and animals of scientific, historic and cultural interest. It supports a broad array of newly discovered or increasingly uncommon native plants and animals. Migrating salmon, birds and hundreds of other native plant and animal species, some found nowhere else in the world, rely on its natural ecosystems. The Monument also includes 46.5 miles of the last free-flowing, non-tidal stretch of the Columbia River, known as the “Hanford Reach.”

5.7.2. Salmon

The Columbia River tribes see themselves as the keepers of ancient truths and laws of nature. Respect and reverence for the perfection of Creation are the foundation of our cultures. Salmon are a large part of our spiritual and cultural identity. Tribal values are transferred from generation to generation through fishing and associated activities tied to the salmon returns. Without salmon, Columbia River tribes would lose the foundation of their spiritual and cultural identity.

Columbia River salmon runs, once the largest in the world, have declined over 90% during the last century. The 7.4 – 12.5 million average annual numbers of fish above Bonneville Dam have dropped to 600,000. Of these, approximately 350,000 are produced in hatcheries. Many salmon stocks have been removed from major portions of their historic range (Columbia Basin Fish and Wildlife Authority, 2009).

Multiple salmon runs reach the Hanford Nuclear Reservation. These runs include Spring Chinook, Fall Chinook, Sockeye, Silver and Steelhead. The runs tend to begin in April and end in November. Salmon runs have been decimated as a result of loss and change of habitat. The losses were and are largely due to non-tribal commercial fisheries, agriculture and irrigation diversion, and especially construction of hydro-projects on the Columbia River. Protection and preservation of anadromous fisheries were not a priority when the 227 Columbia River dams were constructed during the last half-century. Some dams were constructed without fish ladders, eliminating approximately half of the spawning habit available in the Columbia System.
The Hanford Reach is approximately 51 miles long and is the only place on the upper mainstream of the Columbia River where Chinook salmon still spawn naturally. This reach is the last free-flowing section of the Columbia River above Bonneville Dam. It produces about eighty to ninety percent of the fall Chinook salmon run on the Columbia River.

The Columbia River Tribes, out of a deep commitment to the fisheries and in spite of the odds, plan to restore stocks of Chinook, Coho, Sockeye, Steelhead, Chum, Sturgeon and Pacific Lamprey to the Columbia and its tributaries. This effort was united in 1995 under a recovery plan called the Wy-Kan-Ush-Mi Wa-Kish-Wit (Spirit of the Salmon). Member tribes are the Nez Perce, Umatilla, Warm Springs and Yakama. Affected Tribes are co-managers of Columbia River fisheries and assist in tagging fry and counting redds along the Hanford Reach for the purpose of estimating fish returns. This information is essential in the negotiation of fish harvest between the United States and Canada as well as between Indian and non-Indian fishermen.

In many ways, the loss of salmon mirrors the plight of native people along the Columbia River. Elders remind us that the fate of humans and salmon are linked. The circle of life has been broken with the loss of traditional fishing sites and great declines in salmon runs. Our goal is to restore this great resource and in that effort, perpetuate our heritage and culture.

5.8. Socioeconomics

5.8.1. Modern Tribal Economy

A subsistence economy is one in which currency is limited because many goods and services are produced and consumed within families or bands, and currency is based as much on obligation and respect as on tangible symbols of wealth and immediate barter. It is well-recognized in anthropology that indigenous cultures include networks of materials interlinked with networks of obligation. Together these networks determine how materials and information flow within the community and from the environment. Today there exists with tribal people an integrated interdependence between formal (cash-based) and informal (barter and subsistence-based) economic sectors. This relationship must be considered when thinking of economics and employment of tribal people (http://www.ratical.org/many_worlds/6Nations/01AatuNin92.html; http://www.youtube.com/watch?v=hDF7ia23hWg).

Indian people engage in a complex web of exchanges that often involves traditional plants, minerals, and other natural resources. These exchanges are a foundation of community and intertribal relationships. Indian people catch salmon that become gifts to others living near and far. Sharing self-gathered food or self-made items is a part of establishing and maintaining reciprocal relationships. People have similar reciprocal relationships with mother earth including physical places and elements of nature. This mutual respect applies to all. Present contamination at Hanford, extended timelines for cleanup, and proposals to place more waste at Hanford may displace or limit traditional and contemporary tribal use of resources, and thus limit the long-term production that permeates Indian life.

Use of the Hanford site and surrounding areas by tribes was primarily tied to the robust Columbia River fishery. Tribal families and bands lived along the Columbia either year round or...
seasonally for catching, drying and smoking salmon. Past associated activities included gatherings for such events like marriages, trading, ceremonial feasts, harvesting, fishing, and mineral collection. The loss of salmon runs, the loss of fishing sites now under water, and the loss of habitat and access have limited the once natural surplus of the Hanford area. This once robust area used to support the gifting and barter system of Columbia River Tribes when traveling and living along the river.

It is likely that the future of salmon in the Columbia system will be determined within the lifetime of Hanford clean-up and the lifecycle of stored waste temporarily stored at Hanford. With the tremendous efforts to recover salmon (and other fish species) by tribes, government agencies, and conservation organizations, Tribal expectations are that these species will be recovered to stronger healthy populations. If salmon and other anadromous fish species were to recover, the regional economy and tribal barter economy would likely greatly improve. Higher fish returns and the associated social and economic potential needs to be considered within the lifecycle of waste at Hanford. Salmon and other species are at the heart of the Nez Perce culture. Any cleanup decisions at Hanford that affect tribal use for hundreds or thousands of years must consider the inherent risk to tribal rights and culture, including social and economic elements tied to salmon runs.

5.8.2. Direct Production

Direct production by tribes is part of the economy that needs to be represented, especially considering the Tribe’s emphasis on salmon recovery. This type of individual commerce in modern economics is termed and calculated as “direct production”. The increase in direct production would be relational to the region’s salmon recovery, yet there is no economic measure (within the NEPA process) to account for this robust element of a traditional economy.

In a traditional sense, direct production is a term of self and community reliance on the environment for existence as opposed to employment through modern economies. Direct production is use of salmon and raw plant materials for foods, ceremonial, and medicinal needs and the associated trading or gifting of these foods and materials. Direct production needs to be understood and should include the role of plant foods, ceremonial plants, medicinal plants, beadwork, hide work, tule mats and dried salmon.

To provide an example, consider the season prior to the flooding of Celilo Falls when an estimated 1500 native fisherman assembled at the site during peak fishing season. Now consider these men and their families trading and gifting. This would be a substantial economic element to consider, and it is directly tied to salmon and associated Columbia River. It would make for a tremendous scene today to see that number of people fishing and drying meat. What would be the direct production generated from 1500 fishermen and their families trading and gifting salmon, dentalia shells, mountain sheep horns, bows, horses, baskets, tule mats, buffalo robes, leather, rawhide, and hand-made art like bead work? It is a day worth someday witnessing again.

5.9. Environmental Justice
President Clinton signed Executive Order 12898 to address Environmental Justice issues and to commit each federal department and agency to "make achieving Environmental Justice part of its mission." (Environmental Biosciences Program 2001). According to the Executive Order, no single community should host disproportionate health and social burdens of society’s polluting facilities. Many American Indians are concerned about the interpretation of “Environmental Justice” by the U.S. Federal Government in relation to tribes. By this definition, tribes are included as a minority group. However, the definition as a minority group fails to recognize tribes’ sovereign nation-state status, the federal trust responsibility to Tribes, or protection of treaty and statutory rights of American Indians. Because of a lack of these details, tribal governments and federal agencies have not been able to develop a clear definition of Environmental Justice in Indian Country, and thus it is difficult to determine appropriate actions in cases like Hanford.

If federal decision-making does not fully protect trust resources to the degree necessary to protect aboriginal uses, those decisions could be interpreted to be a violation of aboriginal rights. Decisions that cause continued degradation of trust resources could place undue burden to tribal people and could also be considered an Environmental Justice issue. Many federal and state environmental laws and regulations designed to protect the environment are not interpreted by regulators to fully address the concerns of Native Americans. This topic deserves more review and discussion among regulators to better define what constitutes a violation of federal trust responsibilities. When does a loss of protected tribal use by government action(s), like those occurring at Hanford, become a violation of aboriginal rights and trigger an environmental justice issue? A review of existing case law might summum such an argument or opinion.

5.10. Land Use

The Nez Perce Tribe recommends that DOE continue efforts to identify special places and landscapes with spiritual significance. Newly identified sites would be added to those already requiring American Indian ceremonial access and protection through long-term stewardship. Native people maintain that aboriginal and treaty rights allow for the protection, access to, and use of resources. These rights were established at the origin of the Native People and persist forever. There are sites or locations within the existing Hanford reservation boundary with tribal significance that are presently restricted through DOE’s institutional controls and should be considered for special protections or set aside for traditional and contemporary ceremonial uses. Sites like the White Bluffs, Gable Mountain, Rattlesnake Mountain, Gable Butte, and the islands on the river are known to have special meaning to Tribes and should be part of the discussion for special access and protection. These locations should be placed in co-management with DOE, FWS and the Tribes for long-term management and protection.

5.10.1. Tribal Access

There are several federal regulations, policies, and executive orders that define tribal access at Hanford, assuming hazard risk levels are acceptable. Institutional controls associated with the ClUP or the CCP should not override tribal rights to access areas that no longer have human health hazards. The following is a brief summary of those legal and regulatory references:
According to the American Indian Religious Freedom Act, tribal members have a protected right to conduct religious ceremonies at locations on public lands where they are known to have occurred before. There has been an incomplete effort to identify the full extent of tribal ceremonial use at Hanford. Part of the reason may be affected Tribes desire to not share such information. Executive Order 13007 supports the American Religious Freedom Act by stating that Tribal members have the right to access ceremonial sites. This includes a directive to agencies to maintain existing trails or roads that provide access to these sites.

DOE managers that are considering moving waste or placement of new waste at Hanford must evaluate potential impacts to ceremonial access as part of DOE's trust responsibilities. There are locations that have specific protections due to cultural significance like burial sites, artifact clusters, etc. These types of areas are further described under the Cultural Resources Section of this writing. As DOE decommissioning and reclamation occurs across the Hanford site, findings of culturally significant areas will continue to expand the list of sites with special protections. These protections override existing land use designation of the CLUP or other DOE documents and should be stated as such in these documents to direct managers in their legal obligations.

5.10.2. Comprehensive Land Use Plan (CLUP)

The present DOE land use document for Hanford, called the Comprehensive Land Use Plan (CLUP), has institutional controls that limit present and future use by Native Americans. DOE plans to remove some institutional controls over time as the contamination footprint is reduced as a result of instituting their 2015 vision along the river and the proposed cleanup of the 200 area. With removal of institutional controls, the affected tribes assume they can resume access to usual and accustomed areas.

Future decisions about land transfer must consider the implications for Usual and Accustomed uses (aboriginal and treaty reserved rights) in the long-term management of resource areas. The 50-year management time horizon of the CLUP does not create permanent land use designations. On the contrary, land use designations or their boundaries can be changed in the interim at the discretion of DOE and/or through requests to DOE by Hanford stakeholders. The CLUP is often misused by assuming designations are permanent. Also, it is important to note that the interim land use designations in the CLUP cannot abrogate treaty rights. That requires an act of Congress.

5.10.3. Hanford National Monument

A Presidential Proclamation established the Hanford Reach National Monument (Monument) (Presidential Proclamation 7319) and directed the DOE and the U.S. Fish and Wildlife Service (FWS) to jointly manage the monument. The Monument covers an area of 196,000 acres on the Department of Energy’s (DOE) Hanford Reservation. DOE agreements and permits delegate authorities to FWS for 165,000 acres while DOE still directly manages approximately 29,000 acres, and the Washington Department of Fish and Wildlife manages the remaining 800 acres (approximately) through a separate DOE permit.
The co-management of the Monument directs each agency to fulfill several missions. The FWS is responsible for the protection and management of Monument resources and people's access to lands under FWS control. The FWS also has the responsibility to protect and recover threatened and endangered species; administer the Migratory Bird Treaty Act; and protect fish, wildlife and Native American trust resources and other trust resources within and beyond the boundaries of the Monument (USFWS, 2008).

The FWS developed a comprehensive conservation plan (CCP) for management of the Monument as part of the National Wildlife Refuge System as required under the National Wildlife Refuge System Improvement Act. The CCP is a guide to managing the Monument lands. It should be understood that FWS management of the Monument is through permits or agreements with the DOE.

Tribes participated in the development of the CCP with regard to protection of natural and cultural resources and tribal access. Based on the Presidential Proclamation that established the Hanford Reach National Monument, affected tribes assume that all of Hanford will be restored and protected (Federal Register, 36 (23):1271-1329).

5.10.4. Operable Units ((OUs)

Hanford has delineated contamination areas called operable units (OUs) for both surface and subsurface contamination. It is essential for the soils and groundwater sections of the Affected Environment Chapter to graphically illustrate and describe the surface and subsurface OUs. Land under consideration for long-term waste retrieval or disposal should describe the Land Use designation (according to the CLUP) but also describes the extent of surface and subsurface contamination that primarily dictated that designation. For example, the 200 West area lies over part of the 200 ZP-1 groundwater OU. This OU has contamination from uranium, technetium, iodine 129 and other radioactive and chemical constituents. The extent and timeframe for its cleanup should be understood within the context of any proposed actions on its surface.

Land use designations in the CLUP may allow a waste repository or energy generation facility to be placed, but without considering the contamination underneath, such actions could be in the way of future characterization needs and cleanup strategies of vadose contamination or groundwater plumes.

5.11. Transportation

5.11.1 Traditional Transportation

Indian people have been traveling their homeland to usual and accustomed areas for a very long time. Early modes of transportation began with foot travel. Domesticated dogs were utilized to carry burdens. Dugout canoes were manufactured and used to traverse the waterways when the waters were amiable. Otherwise, trails following the waterways were best means for travel. With the arrival of the horse, it changed how people traveled. Numerous historians note that horses arrived to the Columbia Plateau in the late 1700's. That is incorrect according to Tribal history. The arrival of the horse was actually a full century earlier in the late 1600's. Their acquisition quickened tribal movement on an already extant and heavily used travel network. This travel
network was utilized by many tribal groups on the Columbia Plateau and was paved by thousands of years of foot travel. Early explorers and surveyors utilized and referenced this extensive trail network. Some of the trails have become major highways and the Columbia and Snake Rivers are still a crucial part of the modern transportation network.

The Middle Columbia Plateau of the Hanford area is the crossroads of the Columbia Plateau located half way between the Great Plains and the Pacific Northwest Coast. Major Columbia River tributaries including the Walla Walla, Snake, and Yakima Rivers flow into this section of the main stem Columbia River. These rivers form a critical part of a complex transportation network through the region that includes the Hanford reach. The slow water at the Wallula Gap was one of the few places where horses could traverse the river year round. This river crossing provided access to a vast web of trails that crossed the region, including portions of these trails known to cross Hanford.

5.11.2. Present Transportation

There are two interstate highways [Interstate 90 (I-90) and Interstate 84 (I-84)], an interstate rail line and the Columbia River barging system that support Hanford. If Hanford is proposing the transportation of hazardous chemicals including waste, DOE needs to provide number of shipments, the method of transportation, and timing. DOE must also provide an emergency response plan and have available response equipment in case of an emergency.

The interstate highway system is a primary transportation corridor for shipping nuclear waste through the states of Oregon, Washington, and Idaho. Waste moving across these states will cross many major salmon bearing rivers that are important to the Tribes. Major rail lines also cross multiple treaty resource areas.

The Nez Perce Tribe believes that decision-making criteria for selecting rail, barge or highway routing should be made public and should allow tribal input. Criteria for protecting treaty resources and other environmental protections must be part of that matrix. The public needs to be assured that the public health and highly valued resources like salmon and watersheds are properly considered and protected when it comes to transporting waste into and out of Hanford.

Northwest river systems have received significant federal and state resources over recent decades in an attempt to recover salmon and rehabilitate damaged watersheds. DOE needs to describe how public safety, and the protection of salmon and watersheds “fit” into the criteria selection process for determining transportation options. The protection and enhancement of existing river systems are critical to sustaining tribal cultures along the Columbia River.

5.12. Cultural Resources

From a tribal perspective, all things of the natural environment are recognized as a cultural resource. This is a different perspective from those who think of cultural resources as artifacts or historic structures. The natural environment provides resources for a subsistence lifestyle for tribal people. This daily connection to the land is crucial to Nez Perce culture and has been throughout time. All elements of nature therefore are the connection to tribal religious beliefs
and the foundation of their aboriginal rights recognized in the 1855 treaty. Oral histories confirm this cultural and religious connection.

"According to our religion, everything is based on nature. Anything that grows or lives, like plants and animals, is part of our religion..." Horace Settell (Nez Perce Tribal Elder)

5.12.1. Landscape and Ethno-habitat

For thousands of years, American Indians have utilized the lands in and around the Hanford Site. Historically, groups such as the Yakama, the Walla Walla, the Wanapum, the Palouse, the Nez Perce, the Columbia, and others had ties to the Hanford area. "The Hanford Reach and the greater Hanford Site, a geographic center for regional American Indian religious activities, is central to the practice of the Indian religion of the region and many believe the Creator made the first people here" (DOE 1994). Indian religious leaders such as Smohalla, a prophet of Priest Rapids who brought the Washini religion to the Wanapum and others during the late 19th century, began their teachings here (Relander 1986). Prominent landforms such as Rattlesnake Mountain, Gable Mountain, and Gable Butte, as well as various sites along and including the Columbia River, remain sacred. American Indian traditional cultural sites within the Hanford Site include, but are not limited to, a wide variety of places and landscapes: archaeological sites, cemeteries, trails and pathways, campsites and villages, fisheries, hunting grounds, plant gathering areas, holy lands, landmarks, important places in Indian history and culture, places of persistence and resistance, and landscapes of the heart (Bard 1997). Because affected tribal members consider these places sacred, many traditional cultural sites remain unidentified." NEPA 18.4.6.1.2 (p. 4.120).

5.12.2. Viewshed

The Nez Perce Tribe utilizes vantage points to maintain a spiritual connection to the land. Viewsheds tend to be panoramic and are made special when they contain prominent uncontaminated topography. The viewshed panorama is further enhanced by abrupt changes in topography and or habitats.

Nighttime viewsheds are also significant to indigenous people who still use the Hanford Reach. Each tribe has stories about the night sky and why stars lie in their respective places. The patterns convey spiritual lessons which are conveyed through oral traditions. Often, light pollution from neighboring developments diminishes the view of the constellations.

There are several culturally significant viewsheds located on the Hanford site. The continued tribal use of these sites brings spiritual renewal. The potential to impact viewsheds should be considered when accessing new DOE proposals. Special travel considerations should be given to tribal elders and youth to accommodate their desire to reach traditional ceremonial sites that have viewshed values.

5.13.3. Salmon as a Cultural Resource

Nez Perce life is perceived as being intertwined with the life of the salmon. Salmon remain a core part of oral traditions of Columbia Plateau Tribes and still maintains a presence in native
people’s diet just as it has for generations. Salmon are recognized as the first food at tribal ceremonies and feasts. One example is the ke’uyit, which translates to “first bite.” It is a Nez Perce ceremonial feast that is held in Spring to recognize the foods that return to take care of the people. It is a long-standing ceremony that attendees immerse themselves in prayer, songs and dancing throughout its activities.

A core tenant of the plateau people is to extend gratitude to the foods for sustaining their life. A parallel exists between the dwindling numbers of salmon returning to the Columbia and the struggle of the Nez Perce people (Landeen and Pinkham 1999).

5.14. Waste Management

The Nez Perce Tribe will continue to work with DOE through its cooperative agreement to ensure that cleanup decisions protect human health, the environment, and tribal rights. The Nez Perce Tribe’s goal of the Hanford cleanup is to restore the land to uncontaminated pre-Hanford conditions for unrestricted use. Our end-state vision would allow Tribal members to utilize the area in compliance with the Usual and Accustomed treaty rights reserved and guaranteed in the 1855 treaty (Nez Perce Tribe 2005).

5.15. Cumulative Impacts

As part of any EIS process, a cumulative risk assessment needs to be developed for Hanford. This risk assessment needs to utilize the three existing Hanford Tribal risk scenarios (CTUIR, Yakama Indian Nation, and DOE-Hanford), and include existing calculated values as part of Hanford risk to determine cumulative impacts.

The cumulative loss of tribal access through use of institutional controls, including fencing needs to be clearly graphically displayed. This public and tribal access limitation must be described as part of the existing environment. Any change to size and time extent of existing access due to additional restrictions from the proposed action, especially tribal access, needs to be clearly understood. For example, the proposed placement of a waste repository with 10,000-year half-life of waste products would greatly extend the time of access limitations.

The Natural Resource Damage Assessment and Restoration Program (NRDA) directs Federal Agencies like DOE to restore natural resources injured as a result of oil spills or hazardous substance releases into the environment. Damage assessments provide the basis for determining the restoration needs that address the public’s loss and use of natural resources. If restoration is not met then compensation and mitigation will complete redress of loss of use.

This existing loss of use of the central plateau from deep vadose and groundwater contamination has not yet been quantified. Present land use designation of industrial use by the CLUP could compromise and add complexity to the NRDA process by allowing or targeting industrial use with no regard or understanding of how this surface use may limit future cleanup strategies. The consequences of such surface use proposals blur the lines of what is considered a loss of use from waste contamination versus loss of use due to access restrictions for safety reasons associated with surface uses like waste storage.
Land use designation is largely due to contamination but should not be the sole point of directing surface use to long-term waste storage extending time to cleanup existing contamination. There is no discussion of how surface uses may hinder cleanup strategies or placement of pump and treat wells or their associated monitoring wells. Overall, there is a need to consider how any surface proposed actions will affect long-term cleanup and/or the NRDA process.

6. Acknowledgments

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TREATY RIGHTS AND OBLIGATIONS

The Nez Perce Tribe is a sovereign government whose territory comprises over 13 million acres of what are today northeast Oregon, southeast Washington, and north-central Idaho. In 1855 the Nez Perce Tribe entered into a treaty with the United States, securing, among other guarantees a permanent homeland, as well as fishing, hunting, gathering, and pasturing rights. (Treaty with the Nez Perces, June 11, 1855; 12 Stat. 957).

Since 1855, many federal and state actions have recognized and reaffirmed the Tribe's treaty-reserved rights. Because these rights are of enormous importance to the Tribe's subsistence and cultural fabric, the ecosystems that support fish and wildlife must remain undamaged and productive. DOE recognizes the existence of reserved treaty rights and has shown a commitment to identifying and assessing impacts of all DOE activities to both on and off-reservation lands.

The Nez Perce Tribe has the responsibility to protect the health, welfare, and safety of its members, and the environment and cultural resources of the Tribe. Therefore, activities related to the Hanford operations and cleanup should avoid endangering the Tribe's environment and culture, or impairing their ability to protect the health and welfare of Tribal members.

The Nez Perce Tribe Treaty of 1855

The Nez Perce Tribe Treaty of 1855 promulgated articles of agreement between the United States and the Tribe. The Treaty is superior to any conflicting state laws or state constitutional provisions under the Supremacy Clause of the U.S. Constitution (Art. VI, cl. 2).

Under the Treaty of 1855, the Tribe ceded certain areas of its aboriginal lands to the United States and reserved for its exclusive use and occupation certain lands, rights, and privileges; and the United States assumed fiduciary responsibilities to the Tribe.

Rights reserved under the Treaty of 1855 include those found in Article 3 of the Treaty, "The exclusive right of taking fish in all the streams where running through or bordering said reservation is further secured to said Indians; as also the right of taking fish at all usual and accustomed places in common with citizens of the Territory, and of erecting temporary buildings for curing, together with the privilege of hunting, gathering roots and berries, and pasturing their horses and cattle upon open and unclaimed land."

The reserved rights to the aforementioned areas are a fundamental concern to the Nez Perce Tribe. The fish, roots, wild game, religious sites, and ancestral burial and living sites remain integral to the Nez Perce culture. The Tribe expects, accordingly, to be the primary consulting

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party in all federal actions related to Hanford that stand to affect or implicate the Tribe's treaty-
reserved or cultural interests.

Treaty Reserved Resources

Treaty reserved resources situated on and off the Reservation (hereinafter referred to as "Tribal
Resources") include but are not limited to:

Tribal water resources located within the Columbia, Snake, and Clearwater River Basins
including those water resources associated with the Tribe's usual and accustomed fishing areas
and Tribal springs and fountains described in Article 8 of the Nez Perce Tribe Treaty of 1863;

Fishery resources situated within the Reservation, as well as those resources associated with the
Tribe’s usual and accustomed fishing areas in the Columbia, Snake, and Clearwater River
Basins;

Areas used for the gathering of roots and berries, hunting, pasturing and other cultural activities
within open and unclaimed lands including lands along the Columbia, Clearwater, and Snake
River Basins;

Open and unclaimed lands which are or may be suitable for grazing:
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Forest resources situated on the Reservation and within the ceded areas of the Tribe;

Land holdings held in trust or otherwise located on and off the Nez Perce Reservation in the States of Idaho, Oregon; and Washington;

Culturally sensitive areas, including, but not limited to, areas of archaeological, religious, and historic significance, located both on and off the Reservation.

FEDERAL RECOGNITION OF TRIBAL SOVEREIGNTY

A unique political relationship exists between the United States and Indian Tribes, as defined by treaties, the United States Constitution, statutes, federal policies, executive orders, court decisions, which recognize Tribes as separate sovereign governments.

As a fiduciary, the United States and all its agencies owe a trust duty to the Nez Perce Tribe and other federally-recognized tribes. See United States v. Cherokee Nation of Oklahoma, 480 U.S. 700, 707 (1987); United States v. Mitchell, 463 U.S. 206, 225 (1983); Seminole Nation v. United States, 316 U.S. 286, 296-97 (1942). This trust relationship has been described as “one of the primary cornerstones of Indian law,” Felix Cohen, Handbook of Federal Indian Law 221 (1982), and has been compared to one existing under the common law of trusts, with the United States as trustee, the tribes as beneficiaries, and the property and natural resources managed by the United States as the trust corpus. See, e.g. Mitchell, 463 U.S. at 225.

The United States’ trust obligation includes a substantive duty to consult with a tribe in decision-making to avoid adverse impacts on treaty resources and a duty to protect treaty-reserved rights “and the resources on which those rights depend.” Klamath Tribes v. U.S., 24 Ind. Law Rep. 3017, 3020 (D. Or. 1996). The duty ensures that the United States conduct meaningful consultation “in advance with the decision maker or with intermediaries with clear authority to present tribal views to the ... decision maker.” Lower Brule Sioux Tribe v. Deer, 911 F. Supp. 395, 401 (D. S.D. 1995).

Consistent with the United States’ trust obligation to Tribes, Congress has enacted numerous laws to protect Tribal resources and cultural interests, including, but not limited to, the National Historic Preservation Act (NHPA) of 1966; the Archaeological Resources Protection Act of 1979; the Native American Graves Protection and Repatriation Act (NAPRA) of 1990; and the American Indian Religious Freedom Act (AIRFA) of 1978.

Executive Orders

Executive Order 13007, May 25, 1996 [51 Fed. Reg. 22738, 22742]. Under this order, each executive branch agency with statutory or administrative responsibility for the management of Federal lands shall, to the extent practicable, permitted by law, and not clearly inconsistent with essential agency functions, (1) accommodate access to and ceremonial use of Indian sacred sites by Indian religious practitioners and (2) avoid adversely affecting the physical integrity of such sacred sites. Where appropriate, agencies shall maintain the confidentiality of sacred sites.
This Executive Order directs Federal land-managing agencies to accommodate Native Americans' use of sacred sites for religious purposes and to avoid adversely affecting the physical integrity of sacred sites. Some sacred sites may be considered traditional cultural properties and, if older than 50 years, may be eligible for the National Register of Historic Places. Thus, compliance with the Executive Order may overlap with Section 106 and Section 110 of NHPA. Under the Executive Order, Federal agencies managing lands must implement procedures to carry out the directive's intent. Procedures must provide for reasonable notice where an agency's action may restrict ceremonial use of a sacred site or adversely affect its physical integrity. Federal agencies with land-managing responsibilities must provide the President with a report on implementation of Executive Order No. 13007 one year from its issuance.

Executive Order No. 13007 builds upon a 1994 Presidential Memorandum concerning government-to-government relations with Native American tribal governments. The Memorandum outlined principles Federal agencies must follow in interacting with federally recognized Native American tribes in deference to Native Americans' rights to self-governance. Specifically, Federal agencies are directed to consult with tribal governments prior to taking actions that affect federally recognized tribes and to ensure that Native American concerns receive consideration during the development of Federal projects and programs. The 1994 Memorandum amplified provisions in the 1992 amendments to NHPA enhancing the rights of Native Americans with regard to historic properties.

**Executive Order 11593**

Section 1. Policy. The Federal Government shall provide leadership in preserving, restoring and maintaining the historic and cultural environment of the Nation. Agencies of the executive branch of the Government (hereinafter referred to as "Federal agencies") shall (1) administer the cultural properties under their control in a spirit of stewardship and trusteeship for future generations, (2) initiate measures necessary to direct their policies, plans and programs in such a way that federally owned sites, structures, and objects of historical, architectural or archaeological significance are preserved, restored and maintained for the inspiration and benefit of the people, and (3), in consultation with the Advisory Council on Historic Preservation (16 U.S.C. 470i), institute procedures to assure that Federal plans and programs contribute to the preservation and enhancement of non-federally owned sites, structures and objects of historical, architectural or archaeological significance.

The Executive Order requires Federal agencies to administer cultural properties under their control and direct their policies, plans, and programs in such a way that federally owned sites, structures, and objects of historical, architectural, or archaeological significance were preserved, restored, and maintained. To achieve this goal, Federal agencies are required to locate, inventory, and nominate to the National Register of Historic Places all properties under their jurisdiction or control that appear to qualify for listing in the National Register. The courts have held that Executive Order No. 11593 obligates agencies to conduct adequate surveys to locate "any" and "all" sites of historic value, although this requirement applies only to federally owned or federally controlled properties. Moreover, the Executive Order directs agencies to reconsider any plans to transfer, sell, demolish, or substantially alter any property determined to be eligible for the National Register and to afford the Council an opportunity to
comment on any such proposal. (254) Again, the requirement applies only to properties within Federal control or ownership. (255) Finally, the Executive Order requires agencies to record any listed property that may be substantially altered or demolished as a result of Federal action or assistance and to take necessary measures to provide for maintenance of and future planning for historic properties. (256)

Executive Order 13175, November 6, 2000

Executive Order 13175 establishes regular and meaningful consultation and collaboration with tribal officials in the development of Federal policies that have tribal implications, to strengthen the United States government-to-government relationships with Indian tribes, and to reduce the imposition of unfunded mandates upon Indian tribes. The executive Order applies to all federal programs, projects, regulations and policies that have Tribal Implications.

E.O. further provides that each “agency shall have an accountable process to ensure meaningful and timely input by tribal officials in the development of regulatory policies that have tribal implications.” According to the President’ April 29, 1994 memorandum regarding Government-to-Government Relations with Native American Tribal Governments, federal agencies “shall assess the impacts of Federal Government plans, projects, programs, and activities on tribal trust resources and assure that Tribal government rights and concerns are considered during the development of such plans, projects, programs, and activities.” As a result, Federal agencies must proactively protect tribal interest, including those associated with tribal culture, religion, subsistence, and commerce. Meaningful consultation with the Nez Perce Tribe is a vital component of this process.

On November 5, 2009 President Obama issued a Presidential Memorandum for the Heads of Executive Departments and Agencies. That Memorandum affirms the United States’ government-to-government relationship with Tribes, and directs each agency to submit to the Office of Management and Budget (OMB), within 90 days and following consultation with tribal governments, “a detailed plan of actions the agency will take to implement the policies and directives of Executive Order 13175.”

U.S. Department of Energy American Indian Policy

On November 29, 1991, DOE announced a seven-point American Indian Policy, which formalizes the government-to-government relationship between DOE and federally recognized Indian Tribes. A key policy element pledges prior consultation with Tribes where their interests or reserved treaty rights might be affected by DOE activities. The DOE American Indian Policy provides another basis for the Cooperative Agreement. The Cooperative Agreement will also serve as an Office of Environmental Management Implementation Plan for the DOE American Indian Policy regarding interactions with the Nez Perce Tribe.
THE ROLES OF THE NEZ PERCE TRIBE AT HANFORD

The Tribe has a duty to protect its reserved treaty rights and privileges, environment, culture, and welfare as well as to educate its members and neighboring public to its activities. The Tribe assumes many different roles. It is a governmental entity with powers and authorities derived from its inherent sovereignty, from its status as the owner of land, and from legislative delegations from the Federal government. The Tribe exercises its powers and authority to serve its members and to regulate activities occurring within the reservation. The Tribe is also a cultural entity and is accordingly charged with the responsibility of protecting and transmitting that culture which is uniquely Nez Perce. The Tribe is also a beneficiary within the context of federal trust relationship with, and obligations to Indian Tribes. The Tribe is a trustee responsible for the protection and betterment of its members and the protection of its and their rights and privileges. The Tribe is also party to treaties between itself and the United States government.

Nez Perce and DOE Relationship

The relationship between the Tribe and DOE is defined by the trust relationship that exists between the Federal government and the Tribe, by treaty, federal statute, executive orders, administrative rules, caselaw, DOE’s American Indian Policy, and by the mutual and generally convergent interests of the parties in the efficient and expeditious cleanup of the DOE weapons complex, and by the Cooperative Agreement. The structured relationship embodied by the Cooperative Agreement can best be described as a partnership grounded in the site-specific cleanup of Hanford, and extends to all trust-related activities of the Department.

The Tribe sees itself not only as an advisor to DOE, but also as a technical resource available to assist DOE. The Tribe sees its members and employees as a source of technically trained and certified labor for environmental restoration and decontamination and decommissioning work. The continuation of the Cooperative Agreement contemplates an approach that will integrate these and other roles into a comprehensive Nez Perce-DOE program.

The Tribe is asked to review and comment on documents and activities by DOE implicates our Treaty reserved rights and DOE’s acknowledgment of other federal statutes, laws, regulations, executive orders and memoranda governing the United States’ relationship with Native Americans and the Nez Perce people. Several tribal departments lend their respective technical expertise to DOE Hanford issues and present recommendations to the Nez Perce Tribal Executive Committee (NPTEC), for consideration and guidance. The NPTEC also may requests formal consultation with the federal agency to discuss a proposal or issue further.

Consultation with Native Americans

DOE’s consultation responsibilities to the Tribe are enumerated generally in the document entitled, Consultation with Native Americans. This policy defines consultation in relevant part:
“Consultation includes, but is not limited to: prior to taking any action with potential impacts upon American Indian and Alaska Native nations, providing for mutually agreed protocols for timely communication, coordination, cooperation, and collaboration to determine the impact on traditional and cultural lifeways, natural resources, treaty and other federally reserved rights involving appropriate tribal officials and representatives through the decision making process.”

In regard to security clearance, none of the various provisions of the continuation of the Cooperative Agreement shall be construed as providing for the release of reports or other classified information designated as "classified" or "Unclassified Controlled Nuclear Information" to the Nez Perce Tribe, or as waiving any other security requirements. Classified information includes National Security Information (10 CFR Part 1045) and Restricted Data (10 CFR Part 1016). Unclassified Controlled Nuclear Information is described in 10 CFR Ch. X, Part 1017.

In the event that reports or information requested under the provisions of the continuation of the Cooperative Agreement, while not "classified" or "Unclassified Controlled Nuclear Information," are determined by DOE-RL to be subject to the provisions of the Privacy Act, or the exemptions provided under the Freedom of Information Act, DOE-RL may, to the extent authorized by law, provide such reports or information to the Tribes upon receipt of the Tribe's written assurance that the Nez Perce Tribe will maintain the confidentiality of such data.