



Technical Steering Panel
of the Hanford Environmental
Dose Reconstruction Project

Final Report

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Native American Working Group

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EXECUTIVE SUMMARY

The Native American Working Group (now called the Inter-Tribal Council on Hanford Health Projects) was formed to provide coordination and continuity for tribal research associated with the Hanford Environmental Dose Reconstruction Project. This group is made up of representatives of each of the nine tribes involved in the Project, TSP members, and staff from the Centers for Disease Control and Prevention, the Indian Health Service, Battelle Pacific Northwest Laboratory and the Hanford Thyroid Disease Study. The council meets regularly to coordinate tribal research.

Because of the unique lifestyle and dietary habits of Native Americans, it was recognized that the exposure to Tribal members of radioactive material released from Hanford would likely be different from that of other populations. The TSP and Battelle staff determined at the beginning of the Project that the tribes should be directly involved in collecting data regarding Native American diet, lifestyle, and populations. This work began in 1991. Additional data collection is on-going. Dose calculations will be made for each of the nine tribes.

The nine tribes involved in the Project are: Yakama, Colville, Kalispel, Spokane, Coeur d'Alene, Nez Perce, Umatilla, Warm Springs and Kootenai.

INTRODUCTION

The Hanford Environmental Dose Reconstruction Project was carried out by the Pacific Northwest Laboratory (PNL), a National Laboratory operated by Battelle-Pacific Northwest Laboratories. To direct and guide the Project, a Technical Steering Panel (TSP) was formed. The TSP was given the responsibility and authority to direct, modify and approve research methods and procedures.

From the outset of the Hanford Environmental Dose Reconstruction Project, it was clear that involvement of the eight Columbia Basin tribes was essential. Since the beginning of the Project one tribe has been added, the Kootenai Tribe. A total of nine tribes are involved in the Project; Yakama, Colville, Kalispel, Spokane, Coeur d'Alene, Nez Perce, Umatilla, Warm Springs, and Kootenai. It was realized that members of the Native American tribes may have been uniquely exposed to the radioactive material released from Hanford. Many Indian people migrated from their reservation homes to potentially higher exposure areas for hunting, fishing, or food gathering. Some worked in fields or lived, at least part of the year, out of doors where radioactive materials settled on plants or on the ground. Others lived all or for long periods of time in Columbia River fishing settlements. A number of the tribe's members lived on a "traditional" diet, which included game, plants, fish, and berries. These food sources were eaten fresh from potentially contaminated areas.

SIGNIFICANT ISSUES

The TSP and Battelle researchers determined at the beginning of the Project that the tribes must be directly involved in collecting data regarding Native American diet, lifestyle, and populations during the study period. This was deemed necessary to insure both tribal members and the public know that legitimate concerns and accurate tribal information are addressed in the study.

The Native American Working Group (NAWG), now known as the Inter-tribal Council on Hanford Health Projects (ICHHP), is composed of Tribal representatives, TSP members, staff from Centers for Disease Control and Prevention (CDC), Indian Health Service and research-technical persons from Battelle and the Hanford Thyroid Disease Study (HTDS) - Fred Hutchinson Cancer Research Center. It was formed early in the Study to provide coordination and continuity for tribal research. The Inter-tribal Council is a major link among the tribes and the TSP, and provides a basis for meaningful involvement of the nine potentially exposed tribes. The council meets regularly to coordinate tribal research.

ACCOMPLISHMENTS

During 1991-92 and early 93, the original eight tribes under contract with Battelle Pacific Northwest Laboratories collected preliminary information about the identification of food

types and quantities of foods consumed by its members. The tribal researchers also developed information about the make-up and grouping (by age and sex) of their populations, and determined life style patterns of the population groups during the releases of radioactive materials.

Also during this period the Working Group/Inter-tribal Council developed and the TSP approved, a proposed statement of Native American Data and Document Release Policy. This policy provides a basis for the TSP to support Native American confidentiality while making a special effort to include special tribal concerns in this dose reconstruction work.

The Working Group/Inter-tribal Council also developed a survey questionnaire instrument and template protocol design. This will be used by the nine tribes in the final stages of research to collect specific tribal information necessary for both the Project and Hanford Thyroid Disease Studies. The tribes are doing this work under contract with the Centers for Disease Control and Prevention.

The Native American Working Group/Inter-tribal Council on Hanford Health Projects has identified the scope of technical work that will be required for the nine tribes to complete their inquiries regarding members' potential exposure to Hanford releases of radioactive materials. The additional efforts that will be necessary within this scope of work are included in contracts being entered into between the tribes and the Centers for Disease Control.

Following is a summary outline of the scope of work completed and additional efforts that are being projected for the remainder of the Project.

REVIEW, REFINE AND CLARIFY DATA SUMMARIES DEVELOPED IN EARLIER STAGES OF WORK:

- Dietary and demographic data reduction to computer inputs
- Evaluation of dose model outputs and revision for output enhancement
- Participate in sensitivity analysis performed on these data inputs
- Review of preliminary Hanford Thyroid Disease Study results
- Selection of specific dietary, demographic, and lifestyle patterns requiring additional data collection, based on clearly defined dose-and-culturally-relevant criteria

SECONDARY STAGE OF DATA COLLECTION AND ANALYSIS:

- Produce detailed work plans for CDC contract
- Sample Survey design and refinement
 - Sampling frame development
 - Definition of "representative individuals"
 - Development of strategy for selecting sample survey respondents
 - Instrument development and pilot testing
 - Development of editorial control and data entry procedures
 - Survey administration
 - Data entry and analysis
- Oral History/Life History interviews
 - Respondent selection criteria
 - Question path development
 - Data records and storage
 - Interview administration
- Narrative report of findings from sample survey and history interviews

HISTORICAL DOCUMENT (ARCHIVES) REVIEW AND DATA RETRIEVAL:

- Identification of relevant source materials
- Review of published literature regarding food consumption and mobility patterns for historical periods in question
- Review of unpublished data sources (e.g., community health representatives' records, nutrition program records, agricultural commodities distribution program records)
- Narrative report comparing accuracy and precision of primary data with published and unpublished existing accounts.

GENERAL SUPPORT ACTIVITIES:

- Participation in Public Health Practice Training Program Sessions for Project coordinators and tribal interviewers

- Attendance at TSP meetings, Inter-tribal Council on Hanford Health Projects meetings and Workshops and Program Status Review meetings
- Development of Tribal and Public Information materials and communication with Tribal community members

The Inter-Tribal Council on Hanford Health Projects has established the following proposed objectives for the Hanford Environmental Dose Reconstruction Project:

- Tribes complete secondary data analysis to detail residential locations of tribal members
- Tribes complete primary and secondary data analysis to estimate consumption of resident fish by location in the early 1960s
- Tribes complete analysis and summary of primary food consumption survey data to provide input to dose estimates
- Inter-tribal Council on Hanford Health Projects oversees definition of "representative individual" range for each tribe based on resident location or lifestyle
- Inter-tribal Council on Hanford Health Projects supervises production of detailed representative individual doses for both air and river pathways
- Inter-tribal Council on Hanford Health Projects and the TSP Communications Subcommittee produces material for distribution among the involved tribal communities to explain the study and the meaning of its results for the Indian people of the region
- Tribes seek to publish results either singularly or in collaboration with one another
- Seek to integrate tribal research for the Hanford Thyroid Disease Study with tribal research for the Hanford Environmental Dose Reconstruction Project

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APPENDIX A

MEETING SUMMARIES:

NATIVE AMERICAN WORKING GROUP /

INTER-TRIBAL COUNCIL ON HANFORD HEALTH PROJECTS

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Native American Working Group Meeting

Pasco
(List of attendees at end)
December 9-10, 1991

Tribal Status Reports: Seven of the tribes will require extensions of their current work orders to complete the collection and compilation of preliminary food consumption data. Spokane and Coeur D'Alene are awaiting feedback from Battelle regarding their earlier submittals before defining their next work activities. Warm Springs is just about ready to receive authorization to proceed.

Collaboration Statement: A revised statement describing the commitment to collaboration between HEDR, HTDS, and the IHS Public Health Practice Training program was circulated for one last round of comments before adoption and recommendation to the TSP. Battelle will need to check and make sure that deliverable deadlines reflect current HEDR work plans.

HTDS data requirements were identified, and two categories appear to be beyond the scope of current data collection activities: information about school milk programs, and information about dietary patterns of persons ages 5-14 in the period 1944-47. Costs associated with collecting this information are likely to be covered under contract with the CDC, when such contracts are established with the tribes.

FY-92 Research and Planning: Five main activities are contemplated for a subsequent series of work orders that will carry each tribe through the end of the current fiscal year:

- 1) *Preliminary Food Consumption Data Refinement, Input, Analysis, and Review:* Tribes generally agreed they would like to have this "hands-on" opportunity to work closely with the Battelle dose modelling staff, but did not react specifically to the proposal or alternatives presented by Shipler. It was pointed out to them that for purposes of estimating level of effort and costs associated with this activity, they would have to reach agreement about the specific way they'd like to see this work proceed. It was also pointed out that this effort is currently not included in Battelle's budget, and would need to be approved by the TSP.
- 2) *Define the Scope of Long-Term Follow-On Research:* The menu of potential scoping topics was discussed, and the group asked Liebow to recommend items of higher priority along with items that should be reassessed after preliminary data are complete and some model simulations are conducted. Liebow said he will recommend, in general, that additional work on food consumption and

preparation should await the results of model simulations, while work on tribal populations, especially more detailed analysis of residential location and mobility, should become a key focus of scoping activities. This information will contribute to a discussion of "representative individual cases" and their distribution within each tribe.

- 3) *Workshops and Meetings:* The group would like Napier (or someone from Battelle) to make a presentation at a meeting on January 16-17 (probably in Spokane) regarding the specific assumptions made in the model that potentially affect Native American dose estimates. The group agreed that two other workshops, February 19 (Pasco) and April 15 (Pasco), would be organized to discuss technical issues that will help prepare group members for the Sensitivity Analysis and Model Validation Workshop that Battelle is organizing for May, 1992. At the February workshop, Houck will talk about some basic statistics concepts, and Simpson (or someone else from Battelle) will begin to talk about models and approaches to validation. Topics for the April workshop are yet to be determined. Liebow will help organize these workshops.
- 4) *Training:* Houck offered the group the resources of the IHS training staff, asking that the group identify its training needs. He will consider organizing an abbreviated format of the sessions planned for the 2-year Public Health Practice Training program, with the addition of topics like on-line bibliographic database searching, life history interviewing, and survey quality control procedures. It is not clear whether this activity should be identified in the work orders under the contracts with Battelle or as part of the new contracts with CDC.
- 5) *Long-Term Research Plans:* The content of these plans will depend on the results of the preceding activities, but it is expected that the plans will be complete by September 30, 1992.

Work Orders: Rutherford helped take away some of the mystery surrounding the Indefinite Quantity Contracting process, and some remaining questions about invoicing were addressed. By December 20, the tribes will receive specific information as a planning basis for activities to be covered by the next work orders. These work orders will probably run through the end of the fiscal year, and contract modifications necessary to accommodate this schedule will be discussed on a case-by-case basis.

Establishing the contracts with the CDC will proceed on a separate track, with the type of contract and other details yet to be determined. There is a good chance that these contracts will run concurrently with the Battelle contracts, through the end of FY-92. Many of the tribes are hoping to avoid the basic ordering agreement format.

Data and Document Release Policy: With some clarifying wording changes recommended by the Umatilla, and assuming that recommended changes expected from Nez Perce early next week are also of a clarifying nature, this policy statement will be ready to recommend to the TSP for adoption at its February meeting.

Action Items:

- Bishop will recommend work order extensions to Shipler where necessary
- Shipler's office will initiate contract modification discussions with Nez Perce to reflect reduction in indirect rates and increase in labor rates
- Liebow will draft guidance concerning statements of work for the next series of work orders
- Liebow will contact Napier regarding presentation on modelling assumptions; Battelle has committed to delivering annotations on Air Pathways Criteria document with specific reference to Native Americans
- Liebow will contact Houck and Simpson regarding workshops in preparation for the Sensitivity Analysis and Model Validation workshop
- The Working Group will formulate a response to Houck's offer regarding training opportunities available from IHS
- Battelle will provide tribes with expanded study area maps that can be used in data elicitation and scoping activities showing reservations and other relevant study area features.
- Liebow will consult with HTDS and IHS to develop "master task schedule" reflecting main activity periods and milestones for remainder of FY-92. Working Group members will submit any remaining comments regarding the HTDS/HEDR/IHS collaboration statement to Amundson by December 17
- Working Group members will submit any comments regarding the draft *Fact Sheet* text to Power by December 17

Attendees:

Warren Bishop, Deward Walker, Allen Slickpoo (TSP)
Joe Stohr, Max Power (Ecology)
Barbara Aripa, Adeline Fredin (Colville)
Delano Saluskin, Wayne Hanson (Yakima)
Dusty Saylor (Coeur D'Alene)
Donna Powaukee, Herman Reuben, Chris Webb (Nez Perce)
Vicki Pierre (Kalispel)
Betty Van Pelt, Cecilia Bearchum (Umatilla)
David Ernst (Spokane)
Madeleine Queahpama (Warm Springs)
Peter Houck (IHS)
Bruce Amundson (HTDS)
Dill Shipler, Dan Rutherford, Ed Liebow, Tracy Ikenberry, Phil Minthorn (Battelle)

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TECHNICAL STEERING PANEL OF THE HANFORD ENVIRONMENTAL DOSE RECONSTRUCTION PROJECT

Native American Working Group Meeting

Spokane
(List of attendees at end)
January 15, 1992

Tribal Status Reports: The Coeur D'Alene submitted to Battelle their supplemental data regarding agricultural practices, food preparation, and other lifestyle factors. They are waiting for Battelle feedback on the adequacy of this information. They have not yet submitted invoices for this supplemental work.

The Colville have completed their food consumption interviews and expect to have results tabulated and submitted to Battelle by the end of February, along with population totals. Data from 1951 membership rolls and per capita payment rolls have provided the basis for 1944-47 population estimates. Battelle has been invoiced through July, 1991, and the subsequent status of this account will be straightened out this month. The HEDR Project staff have had to move out of the Tribes' Environmental Trust offices, and would benefit from having the use of a personal computer. *Liebow will see if some equipment can be made available.*

The Kalispel have completed their supplemental food consumption interviews, and are inputting the results into the computer. They have not received a work order extension notice from Battelle. *Liebow will check with Shippler on the work order extension's status.*

The Nez Perce have two remaining interviews to complete; only 4 of 15 interviews will cover the earlier time period. Interviews and data compilations will be completed by the end of January. Invoicing for the Nez Perce is current. They received their work order extension, but need Battelle to attend to their request for a contract modification to reflect current direct and indirect labor rates. *Liebow will ask Rutherford what can be done to respond to this request.*

The Spokane submitted their work and a final invoice in August. They have not received feedback on the adequacy of their data, and they have not been paid. The Tribal Council's interest in continuing in this project is "flagging," largely due to what they regard as Battelle's untimely response to their preliminary work efforts. *Liebow and Ikenberry will discuss data adequacy issues with the Spokane project staff in the next two weeks, and find out what needs to happen to pay the August 1991 invoice.*

The Umatilla Tribes are completing their preliminary data tabulations, and have assigned the HEDR project to the Tribes' General Manager, Gary George. After

assessing the current status of their progress to date, George will be making project management recommendations to his Board of Trustees.

The Warm Springs Tribes have experienced a great deal of difficulty in getting their work program in place, but a work order is expected in the next week or two. TSP members Bishop and Walker have become extremely frustrated with Battelle's apparent inattention to the problems associated with executing this work order.

The Yakima have created a sampling frame, reconstructing the 1944-47 population based on 1951 enrollment data, and are mailing out letters to 320 members (25% of the eligible age groups--Hanson still thinks we are overlooking an important cohort of nursing mothers under 20 years old), seeking their participation. The aim is to interview at least 160 of these eventually, although a much smaller sub-sample will be completed for preliminary data collection purposes. The YIN set up a project account at the end of December, 1991, and are currently reconstructing expenses to be able to submit their first invoice to Battelle.

Statement of Principles Regarding HEDR/HTDS Coordination: Some clarification on the role of the Public Health Practice Training program was requested, and the statement will be rewritten to emphasize the Indian Health Service's commitment to make training available for HEDR Tribal Project staff members as requested. The revised statement will be submitted for consideration at the February TSP meeting.

Pathways Model Status and Assumptions of Interest to Indian Tribes: As requested at the previous Working Group meeting, Napier gave a detailed presentation of the Air Pathways model, summarizing the structure of the source term, atmospheric transport, environmental accumulation, and individual dose models. Placing much of his emphasis on the environmental accumulation and individual dose models, Napier discussed parameter selection, data sources, and uncertainties. He also briefly outlined the logic of sensitivity analyses, and how this will help in further defining the parameters for which additional information is needed. He indicated that the Sensitivity Analysis and Model Validation peer review meeting is now scheduled for the week of June 22. At the end of his presentation, Napier touched on the River Pathways modelling effort to date, reporting that the extent of this effort will be determined after presenting some preliminary results at the TSP's February meeting and expecting the TSP to determine the scope of additional work at its April meeting.

Hanford Thyroid Disease Study Status Update: Potential pilot study participants (N \approx 500) will be randomly selected from on basis of mother's place of residence at birth by searching birth records in six eastern Washington counties (Benton, Franklin, Walla Walla, Okanogan, Stevens, and Ferry). This sample will not be stratified with respect to ethnic background, and the same instrument will be administered to all respondents. Amundson pointed out that this sample design is intended to serve as a parallel effort to the work of the Tribal Working Group. The

total number of participants in the full-blown study will depend on the pilot study's results.

Fact Sheet: The TSP Communications Sub-Committee is meeting Friday, and Power asked to have any additional comments regarding the text of the Fact Sheet regarding tribal participation in the HEDR Project to him in time for this meeting.

John Till's Remarks: Till congratulated the group on undertaking this unprecedented inter-tribal collaborative effort, and reaffirmed the TSP's commitment to completing this research, maximizing the opportunities for Indian people to do the work itself, and to leaving a lasting legacy from this project. He also urged the group to think carefully about how we proceed, given the critical juncture in the project's progress we have reached, and the financial resources we have available.

Work Orders--"Generic" Statement of Work: It will probably be another six months until CDC is in a position to administer contracts with the Tribes, according to Sewell, so it is reasonable to proceed with work planning that extends through the end of FY-92. The "period of performance" issue in Battelle's contract will have to be addressed. A lengthy discussion of the "generic" statement of work followed, and the group reached a general agreement that this approach would provide a framework for each Tribe's activities over the next several months. Several tribal representatives said they were pleased to see a more detailed specification of milestones and deliverables in this proposed work statement. In the interests of time and effort required to formulate a proposal, Till and Walker suggested that Liebow revise the "generic" statement of work to make it more understandable, and to specify the demographic and lifestyle parameters that are to receive highest priority during the period of performance. Once the revised statement of work is approved by the Battelle, it will be sent to the Tribes for them to respond with technical and cost proposals. Tribes do not have to wait until the Working Group crafts a revised statement of work if they already have a clear notion of the work they propose to complete between now and September, 1992.

Action Items:

- Liebow will see if the Colville Confederated Tribes can be provided with a personal computer
- Liebow will check with Battelle Contracts regarding the status of Nez Perce request for a contract modification
- Liebow will check with Battelle HEDR Project Management regarding the status of the Kalispel work order extension
- Liebow will check with Battelle HEDR Project Staff regarding status of Spokane data, and arrange to provide comments to Spokane Tribal HEDR staff

- Liebow will check with Battelle Contracts regarding status of Spokane invoice from August, 1991
- Bishop will check with Battelle Contracts regarding measures that can be taken to execute Warm Springs work order
- Liebow will revise "generic statement of work" to clarify and specify recommended activities
- Liebow will send Sewell an ASCII file containing tribal leaders' names and mailing addresses for all federally recognized tribes
- Houck will prepare training session for February 19 in Pasco regarding issues relevant to Sensitivity Analysis and Model Validation
- Amundson will revise HEDR/HTDS Collaboration statement to reflect meeting discussion regarding role of IHS Training program. When this statement is revised, it will be submitted for consideration by the TSP at its February meeting.
- Bishop will submit the Data and Document Release Policy Statement for consideration by the TSP at its February meeting.
- Power will revise text of "Fact Sheet" to reflect comments received on earlier drafts

Attendees:

John Till, Warren Bishop, Deward Walker, Allen Slickpoo (TSP)
 Joe Stohr, Max Power (Ecology)
 Barbara Aripa, Adeline Fredin (Colville)
 Wayne Hanson (Yakima)
 Dusty Saylor (Coeur D'Alene)
 Donna Powauke, Herman Reuben, Chris Webb (Nez Perce)
 Vicki Pierre, Betty Jo Pigngkham (Kalispel)
 Bill Burke, Gary George (Umatilla)
 David Ernst (Spokane)
 Peter Houck (IHS)
 Mike Street (USPHS)
 Lee Ann Sewell (CDC)
 Bruce Amundson (HTDS)
 Ed Liebow, Bruce Napier (Battelle)



TECH. 'ICAL STEERI. 'G PA. 'EL
OF THE HANFORD ENVIRONMENTAL
DOSE RECONSTRUCTION PROJECT

Native American Working Group Workshop

April 22-23, 1992

Tribal Work Status

- Kalispel submitted supplementary data to Battelle in March, 1992, and are waiting for Battelle evaluation
- Coeur D'Alene submitted supplementary data to Battelle several months ago, and are waiting for Battelle evaluation
- Nez Perce received their contract modification; they have completed their 15 interviews, and are ready to begin entering these interview data in a database management system based on the CDC EPI-INFO software. Are still in process of compiling their population data, and found their trip to the Sand Point Archives in Seattle to be quite productive. Food consumption data summaries will be submitted to Battelle by May 30.
- Yakima have completed 63 interviews, and the project consultant has received the database from which to compile population data. Further progress on data entry and population data compilation has been hampered by staffing problems. Food consumption data summaries will be submitted to Battelle by May 30 (Liebow suggests starting with 18, three from each age/sex group).
- Colville are currently keying in interview data for initial 18 interviews (out of 100 completed), and have completed their population data compilation. Food consumption data summaries will be submitted to Battelle by May 30.
- Umatilla are currently keying in interview data for their 9 interviews, and have completed their population data compilation. No CTUIR representative attended the meetings, so no submittal date was identified.
- Warm Springs have team together and are ready to start work. Technical assistance from Battelle project staff will be welcome during this start-up period.

Scope of Work and Work Orders for Remainder of FY-92

- A "generic" statement of work was circulated for review, indicating four tasks from which tribes would be asked to select the specific activities that they consider most appropriate in light of their progress to date.

- TSP member Bishop plans to transmit this statement of work to Battelle, requesting that Battelle issue work orders to each tribe (except the Warm Springs) to cover the period that ends September 30, 1992.
- Battelle Sub-Contracts Manager Dan Rutherford outlined the contracting steps that would occur: Battelle issues a request for proposals, Battelle staff visit each tribe's headquarters to answer technical and contracting questions, each tribe prepares a response, seeks the necessary tribal reviews and approvals, and submits their response to Battelle. Battelle will review the response and issue a work order. Depending on the time required for tribal response, this could take as little as three weeks from the time Battelle issues the RFP until a work order is issued.
- The Nez Perce, Yakima, Colville, and Kalispel representatives indicated their governing bodies would need to review their response to the RFP. The Coeur D'Alene council will not, and no representatives were present from Umatilla and Spokane to indicate whether such a review was needed.
- Data collected to meet Hanford Thyroid Disease Study needs should be deferred to after October 1, 1992, unless a tribe had already collected these data upon specific request from the HTDS. The HTDS is working with CDC and the Colville to cover the Colvilles' costs incurred in responding to an earlier HTDS request for pilot-phase data.
- There was some discussion about whether tribes will receive payment from HTDS for work performed on the HEDR project that benefits the HTDS.

Memorandum of Understanding Between CDC and Individual Tribes

- Responding to concerns expressed by some tribal representatives about the nature of the relationship between CDC and tribal governments, CDC has indicated its willingness to establish with each tribe a Memorandum of Understanding that is intended to outline what, in practice, the "government-to-government" relationship entails. A rough draft of this MOU was circulated for discussion.
- While an MOU would be established between CDC and each tribe, the CDC has no intention of excluding the Technical Steering Panel from its role in directing the technical work of CDC contractors, including the tribes.
- Several tribes indicated that they felt such a document would not be necessary, that a contract with the CDC would effectively define this relationship.

- For those tribes that would like to consider establishing an MOU, developing the document's specific language should be completed at the same time that the CDC contracting process goes forward. It was suggested that the governing body consider adopting the MOU at about the same time it reviews the proposal to CDC.

CDC Contracts Directly With Tribes Beginning in FY-93

- Mike Donnelly, CDC's newly-installed Hanford Projects Manager, described the organization of his office (including himself, the "tribal coordinator" position that is currently being filled, and Peter Houck directing the Public Health Practice Training program and other training activities).
- CDC intends to award sole source, cost-reimbursable contracts. Tribes should think about a two-year performance period beginning in FY-93 (October, 1992). Payment can be via "line-of-credit" arrangements for those tribes with already approved lines-of-credit established.
- Donnelly outlined the contracting process that CDC intends to follow:
 - Develop Work Requirements and Statement of Work for CDC Contracts
 - Send CDC Contracts a Request for Contracts (Donnelly estimates that it typically takes 5-6 months from this point to have CDC issue awards)
 - Contracts Office provides sole source justification and develops / distributes a Request for Proposals
 - CDC holds pre-proposal workshop to clarify proposal preparation requirements
 - Each tribe responds to RFP with technical and cost proposals
 - CDC evaluates tribal response and begins negotiations with each tribe
 - Based on negotiations, tribe is asked to submit a "best and final" offer to CDC
 - "Best and Final" offer is reviewed, accepted, and a contract is awarded
- A rough outline of the work requirements was proposed; in its present form it focuses on general data collection and analysis activities, without specific reference to particular hypotheses to test, questions to answer, or products to deliver.
- There was a great deal of discussion about how specific the CDC request for proposals would be, and about how specific CDC would expect the tribes to be in their technical proposal responses. With most of the tribes still in the process of completing their preliminary data collection and analysis, it is difficult to specifically define the scope of subsequent inquiries. The proposal

evaluation and contract negotiation process needs to remain flexibility to accommodate this uncertainty.

- Coordination of tribal activities with the Hanford Health Information Network may be included in the proposals to CDC, to the extent that such coordination is relevant to the conduct of HEDR/HTDS/Public Health Practice Training work. Since HHIN is paying for meeting-related travel, Mike Sage doesn't have any difficulty in regarding staff time costs for meeting attendance as relevant to the CDC scope of work.
- Before the Native American Working Group delivers its suggestions to CDC regarding the work requirements for work beginning in FY-93, specific language should be included concerning:
 - culturally distinct patterns of food consumption, demography, and lifestyle;
 - review of information that will help to accept or challenge the current assumptions embedded in the dose modelling effort.

Data and Document Release Policy Implementation Guidance

- We ran out of time before we were able to discuss a draft guidance statement. A copy of this statement will be distributed for comment. Possibly a telephone conference among the Working Group representatives will be used to exchange comments and reach agreement on final guidance.

Action Items

- Each tribe with preliminary data summaries yet to deliver to Battelle has revised deadlines for doing so. The technical substance of subsequent work depends heavily on tribes analyzing these preliminary data.
- Bishop will transmit Statement of Work and request for Battelle to initiate work order negotiations for work to be performed by September 30, 1992.
- Battelle staff will issue requests for work order proposals to seven tribes within a week of receiving Bishop's request. Battelle staff will plan to visit each tribe by May 15 to help clarify the proposal preparation process.
- Battelle staff will visit the Warm Springs tribe to provide technical assistance with beginning preliminary data collection and analysis.
- Battelle, HTDS, and Colville staff will clarify budgetary issues involving coordination of HEDR and pilot-phase HTDS data collection efforts.

- Each tribe will review the rough draft of proposed MOU language, and inform CDC whether it would like to establish such an MOU. Any tribe wanting to establish an MOU with CDC should specify a timetable by which it would like to jointly develop this agreement.
- Bishop will revise and transmit to CDC the Working Group's recommendations regarding the work requirements to be included in CDC requests for proposals. Copies will be distributed to the Working Group's members.
- Bishop will distribute a copy of the proposed "Data and Document Release Policy Implementation Guidance" statement for discussion. A telephone conference will be organized to review, revise, and approve a statement of policy implementation guidance.
- Battelle will develop and distribute a written version of a presentation made to the Working Group by Bruce Napier in January, 1992 regarding the assumptions that are currently made by the dose modelling effort regarding Native American food consumption, lifestyle, and demographic patterns.

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US Public Health Service Offices

Seattle
August 6, 1992

Attendees: W. Bishop, M. Power, B. Amundson, V. Chase, P. Houck, M. Donnelly, E. Liebow

1. Progress on Development of Standard Protocol

Houck distributed a copy of the detailed outline he has developed, which articulates a series of objectives to be achieved in standardizing the data collection and analysis protocol, and identifies the work elements that have to be planned and carried out.

Liebow distributed a copy of his representation of HTDS and HEDR data requests, pointed out the discrepancies in the way the requested data are to be organized, and illustrated the population, food consumption, and lifestyle data categories that would have to be filled to meet the stated requirements of both studies. This illustration has age- and sex-specific annual population estimates by residential location for the period 1940-1970, and also the age/sex categories for which food consumption information has been requested in 1945-47 and 1964-66. A matrix for "percentage of time spent outdoors" is also included, along with topics to be covered in narrative reports (An Excel spreadsheet is attached for those of you with Macintosh/Excel version 2.2 or higher at your disposal; if you don't, let me know and I'll fax you a copy). ***This is only for discussion purposes; it may be too difficult to collect all the necessary information from available sources (especially residential location information), and it may also require too great an effort given the resources available.***

Questions to be answered at this juncture:

- Do we need annual age/sex composition data by residential location for **ALL** the years in the 1940-1970 period?
- Should we recommend detailed residential location data be compiled for selected years first, to see if it's feasible to collect such data, or for selected years only, if it is already apparent that collecting such data will prove difficult?
- How are we going to compile information concerning the methods used in the "pilot" (i.e., preliminary) studies to derive lessons for subsequent work planning?

- For what foods is it absolutely necessary to collect information for dose estimating purposes?

2. Summary of the Draft Agenda for the September 3 Preproposal Conference

Sea-Tac Radisson Hotel from 8:30 am to 7 pm on Thursday, September 3

8:30 Welcome and Introductions

8:45 CDC Request for Proposals

- General Instructions
- Proposal Evaluation Criteria
- Business Proposal

Noon Lunch

1:00 Overview of Study Design

5:00 Break

7:00 Technical Assistance Available if necessary

The aim of the afternoon session is to reach agreement about the basic features of the study design. The Working Group can have a "post-award" meeting to focus on contracts administration.

3. Battelle's Business Relationship with Tribes

It appears today that Battelle will be prepared to provide no-cost time extensions to the tribes through December 31, 1992 for new work orders, and that the financial implications of doing so will not be significant, given the point at which the work orders are likely to finally be in place.

4. Action Items

Liebow and Amundson will meet with Houck and Chase on Monday, August 10 to discuss the data requirements in further detail.

Houck will complete a draft of the standard protocol based on this input by Friday, August 14.

Liebow will discuss this draft with Deward Walker, and get back to Houck with any recommendations for him so he can have a revised draft ready for distribution to the Working Group by August 18.

Liebow will talk with Battelle-Richland about invoicing assistance and status of tribal statements-of-work.

Chase will complete scheduling for reservation visits during week of August 24, and notify participants of hotel choices.

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Native American Working Group Meeting

Sea-Tac Radisson Hotel
September 11, 1992

The main objectives of the meeting were to:

- (1) Review of the Centers for Disease Control sole-source Requests for Proposals issued to the tribes on August 28.
- (2) Discuss a proposed data collection and analysis protocol to be used by all participating tribes.

CDC Requests for Proposals:

The contemplated period of performance is two years from date of award. CDC expects to award contracts by the end of October, 1992. This is a very ambitious schedule for tribes to prepare their proposals, CDC to complete evaluations, request "best and final" offers, and negotiate a contract. Staying on schedule will depend heavily on tribes being able to submit their proposal by the end of September. At least a few of the tribal representatives expressed some skepticism about their ability to meet this deadline, and the CDC Contracts Specialist invited tribal representatives to coordinate with him on an individual basis for alternative submittal dates.

Organizationally, CDC Contracts Specialist Mark Federer will be the contract officer. He is based in Atlanta. Project officer responsibilities will be shared by Atlanta-based Paul Renard and Seattle-based Mike Donnelly.

The format for the business proposal is clearly spelled out in the RFPs. The format for the technical proposal should follow the evaluation criteria described on p. 44 of the RFPs, to facilitate the technical review.

If CDC negotiates deliverable dates for dose-relevant food consumption, demographic, and lifestyle data from the tribes that are different from the March 31, 1993 date spelled out in the RFPs, this could affect Battelle's ability to meet its internal project milestones to produce Native American dose estimates. CDC and the tribes need to be aware of the linkages between their schedules and Battelle's, and the TSP needs to be kept apprised of agreements with the tribes that affect Battelle work requirements.

CDC is willing to accept quarterly, rather than monthly, financial accounting if that accommodates a particular tribe's interests.

The discussion revealed that government estimates for the level of effort anticipated for any single tribe to meet the RFPs' work requirements do not exceed \$80,000 for the entire two-year period. Tribal representatives expressed keen disappointment with this information, judging that this funding level would not permit them to escape the current bind they face, attempting to complete this work with part-time staff assignments. The subject of the total amount of funds available to complete this work, and how to achieve a suitable distribution of funds among the tribal participants will be raised at the next TSP/NAWG meeting. In the interim, tribal representatives said they intend to submit proposals with their best, realistic estimates of work plans aimed at meeting the RFPs' work requirements.

Suggested Data Collection/Analysis Protocol:

Peter Houck (CDC) led this discussion, pointing out that the suggestion for standardizing the tribes' approach to data collection and analysis grew out of discussions at the Astoria TSP meeting in July. He emphasized that any tribe's decision to employ this protocol is voluntary, and that the draft currently being circulated for review reflects input from CDC, IHS, HTDS, Battelle, and the TSP.

Battelle staff committed to providing a bibliography that is relevant to the "Literature Review" section of the protocol. HARC has been compiling citations and copies of cited materials, and will circulate this internally through the normal review channels prior to making it available to the TSP and CDC.

TSP member Allen Slickpoo recommended that the "study population" definition not be restricted to a given tribe's enrolled members, but also to include non-member Indians residing on the reservation. Slickpoo reported that the Nez Perce did not have official membership rolls until 1948 (*this needs to be verified*), and that many reservations have substantial numbers of non-member Indian residents whose lifestyles were indistinguishable from those of tribal members. Liebow argued that tribal governments have responsibilities to protect the health and welfare of *members*, and that it is difficult to justify having information collected on behalf of non-members.

The next draft of the protocol will attempt to reconcile these positions, and incorporate further input from Battelle regarding core data needs, specific training recommendations (oral history interviewing, archival records searches, memory aids in research design, data interpretation, progress reporting, and quality control procedures). The next draft will be prepared in time for distribution prior to the NAWG meeting scheduled for October 7 in Pasco.

Attendees: [Clockwise] Warren Bishop (TSP), Bruce Amundson (HTDS), Deward Walker (TSP), Dick Morrill (TSP), Glynn Caldwell (TSP), Vannette Chase (CDC), Mike Donnelly (CDC), Mark Federer (CDC), J.R. Wilkinson (CTUIR), Joe Richards,

(CTUIR), Wayne Hanson (YIN), Peter Houck (CDC), Herman Rueben (NP), Lavina Harrison (NP), Colleen Murray (Battelle), Donna Powaukee (NP), Madeline Queahpama (WS), Bonnie Langeliers (WS), Ed Liebow (Battelle), David Ernst (Spokane), Vicki Pierre (Kalispel), Dusty Seylor (CDA), Daivd Burnett (CDA), Tracy Ikenberry (Battelle), Sally Toulouse (Colville), Cindy Hoke (CCT), Barbara Aripa (CCT)

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Native American Working Group

Kennewick & Pasco, Washington

October 7-8, 1992

The main points of discussion included:

- a review of the progress to date in drafting a standard data collection protocol;
- the tribes' responses to the CDC request for proposals;
- the tribes' progress in completing their preliminary data collection, analysis, and summaries;
- a review of the Environmental Transport Sub-Committee's recommendations regarding river pathway modelling approaches.

Standard Protocol Development

- While the purpose of this work is to support dose estimates and the investigation of thyroid disease outcomes, other health studies may be needed eventually. The "specific aims" need to recognize the other applications for this work.
- Battelle is developing a bibliography identifying some useful sources for establishing independent observations against which primary data can be compared. Pending internal Battelle review, this bibliography should be available to the NAWG in the next month.
- Definitions for the study population and sampling frame were ironed out:
 - The study will collect information concerning the following residential location categories: (1) "on-reservation and environs," (2) off-reservation but within the study area, and (3) out of the study area. The definition of "on-reservation and environs" will be left up to the individual tribes -- it may be the IHS "Service Area" is a useful geographic area.
 - Tribes will collect food consumption and other dose-relevant lifestyle information to develop representative individual cases for members whose *primary residence* during 1945-47 or 1964-66 was "on-reservation and environs", and any other *sizable concentration of members* residing off-reservation in the study area ("*sizable*" is understood to mean at least 15-20% of the tribal membership at the time). If this sizable concentration of members is located on another reservation, no information will be collected, as it will be assumed that

their lifestyle is the same as that of the host reservation's members. If a single tribe has salient sub-groups, more than one set of representative cases can be developed, but the maximum number of cases would be 5. "*Primary residence*" is understood to mean where one lived for more than six months during a given year.

- Ikenberry presented several recommendations about core food consumption data requirements for the HEDR model, in order of importance of contribution to dose:

Air Pathway	River Pathway
Milk	Resident fish (on Columbia below Hanford and lower tributaries near where they meet Columbia)
Leafy exposed vegetables	Salmon, steelhead, eel
Eggs	
<i>Other</i>	<i>Other</i>
Other vegetables, tree fruits, berries	
Meat	
Grains	

- Important considerations for Air Pathway:
 - 1945-47 is most important period
 - Local/regional produce is only interest
 - Fresh (as opposed to "stored") produce is of interest
 - Investigate and call to Battelle's attention any special foods
 - Model can't distinguish "traditional" from "non-traditional" foods -- the way that radionuclides are taken up by plants and animals is assumed to be about the same for foods in the same categories
 - Battelle would like a narrative report covering the periods 1948-63 and 1967-72 concerning changes in food consumption patterns in these time periods for which data are not collected
 - Other information about food preparation (was it washed or skinned?) will be necessary, as will information on how chickens were fed (for estimating concentrations in hen's eggs).

- Important considerations for the River Pathway:
 - 1964-66 is the most important time period
 - Location of the fish catch is very important, especially for resident fish
 - Information on consumption of fresh fish is most important, but stored fish may also be important
 - Try to keep track of salmon and steelhead separately
 - Investigate and call to Battelle's attention any special foods, e.g. freshwater mussels, crayfish
 - Battelle would like a narrative report covering the periods 1948-1963 and 1967-72 concerning changes in food consumption patterns between data collection periods.
 - Include information on what parts of the fish were consumed, as different radionuclides are concentrated in different parts of the fish.
- Data entry (possibility of using EPI-INFO), introducing the study to respondents through use of a booklet modelled after the HTDS interview guide, and payment to respondents for their participation were also discussed.

Tribes' Response to CDC Request For Proposals

- None of the tribes had submitted a proposal to CDC as of October 8. Donnelly strongly recommended that the tribes notify Contracts Officer Mark Federer of their intent to submit proposals. Liebow suggested the tribes consider organizing their technical proposals according to the evaluation criteria contained in the RFP.
- The Yakima proposal is assembled and submittal is awaiting a decision regarding what sort of tribal government review and approval is needed.
- The Nez Perce proposal will be submitted to CDC by October 19.
- The Warm Springs proposal will be submitted to CDC by October 12.
- The Kalispel, Spokane, and Umatilla proposals will be prepared for submittal by the end of October.
- The Coeur D'Alene proposal will be submitted to CDC shortly after the next Battelle work order is in place, which is scheduled for the week of October 12.
- No Colville representative attended the Working Group meeting, but Barbara Aripa reported earlier in the week that the proposal is complete and ready for review by the tribal council.

Tribes' Progress on Preliminary Data Collection and Analysis

- Nez Perce data entry will be completed and data summaries ready for delivery to Battelle by October 16.
- A meeting of the Yakima project staff and consultant will take place next week to discuss project status.

- The Umatilla follow-on data collection effort is ready to begin.
- Colville data summaries are ready for review by the tribal council.
- Coeur D'Alene and Spokane work orders are to be executed in the next week.
- Warm Springs population data summaries and food consumption interview development are underway.

Recommended Approaches to River Pathway Modelling

- TSP member Walker reviewed for the group the recommendations to the TSP that grew out of an Environmental Transport Sub-Committee meeting held in Seattle on September 4. Of greatest interest to the Working Group are: (1) the question of how to identify locations for which concentrations in water and fish should be estimated, and (2) what additional information is needed concerning anadromous species. Identification of traditional fishing locations is complicated by dam-building and the creation of *in lieu* sites, and by competing tribal claims about the use of these locations.

ACTION ITEMS:

- Battelle will provide a bibliography to the Working Group members by the 1st week of November, pending internal review and clearance
- Reuben will send Bishop a copy of the Columbia River Inter-tribal Fishery Commission's recent fish consumption survey for distribution to the Working Group members.
- At the earliest possible time, all tribes will notify the CDC Contracts Officer of their intent to submit proposals in response to the RFP.
- The Working Group will schedule a series of training sessions for project coordinators and interviewers concerning implementation of the standard study protocol. For this training, tribes will prepare a summary of their preliminary efforts, focusing on problems encountered and solutions tried.
- Houck will coordinate the revision of a protocol, to be sent to Bishop for distribution to the Working Group members.
- Houck will coordinate drafting a questionnaire and interviewer training guide for review and pilot testing by the Working Group members.
- CDC will provide clarification on whether subject payments/honoraria are allowable under the terms of the anticipated contracts.
- CDC will provide clarification regarding the need for clearance from the Office of Management and Budget for tribal surveys proposed in the standard study protocol.
- Walker or a CRITFC representative will summarize existing information regarding fishing locations along the Columbia River for discussion at the next Working Group meeting.

ATTENDEES

Betty Pingkham, Vicki Pierre (Kalispel), JR Wilkinson (CTUIR), Moses Dick Squeochs (Yakima), Herman Reuben (Nez Perce), Madeline Queahpama (Warm Springs), Dusty Seylor (Coeur D'Alene), David Ernst (Spokane), Warren Bishop, Deward Walker (TSP), Van Chase, Mike Donnelly, Peter Houck (CDC), Max Power (Wa Ecology), Al Conklin (Wa Health), Alan Parham (ATSDR), Bruce Amundson (HTDS, for second day), Ed Liebow, Tracy Ikenberry (Battelle). The *Colville Confederated Tribes* were not represented. Also attending on the second day were Steve Shoemaker (Battelle), and Ron Sim (Stoel, Rives, Boley, Jones and Grey; United Nuclear is his client).

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Meeting at Seattle CDC Offices

June 15, 1993

Attendees: Bishop, Power, Chase, Donnelly, Houck, Amundson, Ikenberry, Liebow

- Status of Tribes' Preliminary Data Submittals to Battelle
 - Spokane, Umatilla, and Kalispel have preliminary data in to Battelle, along with instructions for their initial disposition
 - Colville, Coeur D'Alene, and Nez Perce will probably have data in by June 30
 - Status of Yakima data will be reviewed in a June 24 mtg
 - Warm Springs has only four completed interviews to date; June 30 deadline will be difficult to meet; will reassess weekly till then.
- Battelle Dose Estimates and Process for Discussing with Tribes
 - PNL meeting on Thursday (June 17) to review dose estimates and discuss process for discussing with tribes
 - Present plans:
 - Range of values (mean, 5th and 95th percentile doses), for one year (1945), air pathway only
 - One representative adult dose range to thyroid, one representative child dose range
 - Assess contributions to dose by non-traditional diet, traditional diet, immersion, ground-shine, and inhalation
 - PILOT code being used, not the more elaborate code, for these preliminary doses
 - Will invite tribal project coordinator to PNL to review and discuss appropriate way to approach governing body
 - Some question about how acceptable a single "representative individual case" will be - this should be understood as a "scoping" calculation that will help plan and sharpen focus of further investigations.
- Additional Fish Consumption Data for River Pathway Modelling
 - Walker will be proposing for group's consideration a cooperative effort to determine what records are available relating to fish consumption in the 1960s, to help reduce the uncertainty of river pathway doses.
 - Questions of timing, and how this activity will fit into tribes' scope of work need to be discussed with the Working Group.

- Review of available records needs to be explicit about consumption of "resident" fish (cf. anadromous species).
- Status of Tribes' Contracting Arrangements with CDC
 - All tribes who have submitted proposals have conducted negotiations by phone or in person with CDC, except for Colville, who have a phone call scheduled for this week.
 - Warm Springs and Spokane appear closest to having contracts awarded. Umatilla, Coeur D'Alene, and Yakima taking longer to respond with Best and Final offers. Kalispel just had phone negotiations this past week.
 - Nez Perce were sent a letter via fax requesting by June 30 an indication of whether (and when) a response to the RFP would be forthcoming. The Nez Perce response is receiving active attention.
- Status of OMB Review of Data Collection Protocol
 - Seattle-Hanford Projects Office currently responding to comments by CDC Office of Program Planning and Evaluation.
 - After CDC-OPPE approves, it will be passed along to the Public Health Service for review, then to DHHS, and then to OMB.
 - Payment of a participation fee is identified as the single greatest potential obstacle to OMB approval, but it is not clear what contingency planning is needed if approval is not granted to the present protocol.
 - Pressure has been applied at the Congressional level to make sure the review is expedited.
- Update on Progress of HTDS Pilot Studies
 - Reassuring view emerging that basic design features are working, with performance indicators better than expected.
 - Of 1500 subjects, 62% have been located; of those located to date, an overall participation rate of 82%, which varies slightly by region.
 - 300 people have had clinical examinations to date, very low no-show rate once appointments are made; extremely cooperative subjects when fine-needle aspiration is requested for further tests on nodules encountered.
 - Two physicians have been added for the clinical work, and pilot phase completion has been pushed back to Summer of 1994.
 - The data for the first individual dose calculations are due to be transmitted to Battelle shortly.
- Tribal Involvement in Proposed ATSDR Work
 - Tribal representatives left the June 11 workshop on community involvement strategy development in state of confusion over their role and relationship of ATSDR plans to ongoing HEDR and HTDS activities.

- An ATSDR representative should be invited to attend the July 14 meeting.
- CDC/IHS Plans for Training Tribal Staff Members
 - Two Seattle-based sessions are anticipated, one week-long course for project coordinators (probably in August or September) and one 3-day interviewer training course once OMB clearance has been obtained and interviewers are recruited.
 - Possible addition of modules on "ethnographic" research methods and basics of radiation discussed.
 - Possible training exercise to review availability of records regarding fish consumption.
- Agenda for July 14 Native American Working Group Meeting in Idaho
 - Some aspects of most topics discussed here will be included. Other suggestions should be directed to Bishop and Power.
- Arrangement for Tribal Travel Expense Reimbursement to July 14 Mtg
 - Donnelly expects contracts to be in place for four tribes.
 - For tribes not yet under contract with CDC, Battelle has said it will be willing to write "workshop agreements" with tribes who still have not obligated all of the funds authorized under their Battelle contracts.
 - If a tribe (other than the Nez Perce, who are so late with their response to the RFP) is not yet under contract with CDC and has no remaining unobligated funds under the Battelle contract, Donnelly will consider an "invitational travel" mechanism to cover their expenses.
- Conversation With Bill Burke (CTUIR)
 - Burke admonished Bishop not to lose sight of some of the original goals of involving the tribes in the Hanford studies, including training tribal members and creating a database useful for tribal health studies.
 - Efforts just underway by the ATSDR and Hanford Health Information Network may help achieve these goals.

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Summary of Native American Working Group Meeting

Post Falls, Idaho

July 14, 1993

Progress Reports:

Battelle Work Orders:

- **Spokane** - completed Work Order, reviewed preliminary dose calculations with Battelle, have scheduled a work session with Tribal Council
- **Umatilla** - completed Work Order, reviewed preliminary dose calculations with Battelle, have questions about availability of information regarding river pathway contribution to dose
- **Kalispel** - completed Work Order, need to review preliminary dose calculations
- **Coeur D'Alene** - received comments requesting clarification of food consumption summary; once clarification is provided, Work Order will be considered complete
- **Colville** - received comments requesting clarification of food consumption summary; once clarification is provided, Work Order will be considered complete
- **Nez Perce** - no cost time extension granted on Work Order; food consumption summaries will be provided to Battelle within ten days
- **Yakima** - no-cost time extension granted on Work Order; Council committee approved release of food consumption summaries to Battelle
- **Warm Springs** - no-cost time extension granted on Work Order; final interviews to be completed this week, and food consumption summaries to be prepared and delivered to Battelle within a month.

Battelle would like to have final invoices for all of these work orders received by the end of August at the latest, so they can be processed and the contracts closed-out by the end of the Federal fiscal year.

CDC Contracting Arrangements:

- **Spokane** - final contract processing currently underway
- **Warm Springs** - final contract processing currently underway
- **Umatilla** - Best and Final Offer sent to CDC
- **Kalispel** - Best and Final Offer sent to CDC
- **Colville** - Best and Final Offer sent to CDC
- **Yakima** - telephone negotiations complete; Best and Final Offer not yet sent to CDC
- **Coeur D'Alene** - telephone negotiations scheduled for week of July 19
- **Nez Perce** - initial proposal sent to CDC; awaiting technical review and telephone negotiations

If any tribal staff have questions or problems, they should feel free to phone Erica Clarke at CDC in Atlanta. The delay in establishing contracts will not affect the long-term program goals for the Native American work. Tribal projects should still anticipate a 15-month timeline.

Preliminary Dose Estimates and Discussions With Battelle:

The main purpose of calculating these doses is to help tighten the focus of subsequent studies. The preliminary calculations are limited: they are just for the 1940s; just one adult and one child are considered to be representative individuals for each tribe; only one feeding regime is considered for dairy cattle; only doses to the thyroid gland estimated. Battelle can distinguish the contributions made by "non-traditional," "traditional," and "other" pathways, and can compare these estimated doses with a dose value calculated for a non-Indian living at the same place.

If possible, Battelle would like each tribal project coordinator to schedule a visit to Richland to review these estimates and help prepare an appropriate presentation for the tribal governing body.

Hanford Health Information Network:

The Working Group reviewed the purposes for which the Network was formed under the National Defense Authorization Act of 1991:

- providing information to individuals about their potential exposures, and to health care professionals about the effects of exposure to radiation
- creating mechanisms to refer individuals who may have been exposed to radiation to knowledgeable health care professionals
- evaluating, and if feasible, putting into place the means for registering and monitoring the health status of persons who may have been exposed to Hanford releases.

A main Resource Center is operated by Seattle-based Cedar River Associates, and their work is guided by a Resource Center Advisory Board. Each participating state expects to implement a service center to be guided by a local advisory board. A special tribal service center is to be set up under the guidance of the Tribal Advisory Board.

To date, the Tribal Advisory Board has helped establish the tribal service program by determining the scope of this program, preparing a Request for Proposals for the operating service program, and selecting Northwest Portland Area Indian Health Board has been selected to negotiate a contract for providing the requested services.

Additional Data Needs For River Pathway Dose Estimates:

Deward Walker proposed further work on the contribution made by the river pathway to Native American doses.

- The contribution made by the river pathway to Native American doses is an issue of major importance to the participating tribes, but has received only a secondary emphasis to date; uncertainties regarding doses from the river pathway must be reduced as much as practicable.
- The questionnaire being reviewed by OMB does not elicit specific enough information regarding (1) locations from which fish, especially resident fish, are taken for fresh consumption, and (2) consumption by species, especially resident species.
- Although releases to the river peaked in the 1960s, Walker believes we should be interested in fish consumption in the 1940s because fish consumption may have been enough greater that its contribution to dose may not be trivial, even with the relatively low volume of radionuclide releases.
- Before trying to specify fish consumption by species and catch location, an exploration needs to be completed to determine whether information is available to do this work.
- Each tribe has the option to decide whether and how (e.g., who from a particular tribe) it will take part in this exploratory work. Walker will make a written request to each tribe's HEDR Project Coordinator to seek the tribe's authorization to explore sources of information on fish consumption of particular species caught at specific locations.
- It is important to approach this undertaking with an eye toward the training benefits that each tribe's HEDR project staff will receive from taking part. It is hoped that this work can be completed by September.

Update on HTDS Pilot Studies:

- A reassuring view emerging that basic design features are working, with performance indicators better than expected. Of 1500 subjects, more than 60% have been located; of those located to date, an overall participation rate of more than 80%, which varies slightly by region.
- A small number of Native Americans have been included in the pilot studies, as they are encountered in the sampling procedures.
- More than 300 people have had clinical examinations to date, very low no-show rate once appointments are made; extremely cooperative subjects when fine-needle aspiration is requested for further tests on nodules encountered.
- Two physicians have been added for the clinical work, and pilot phase completion has been pushed back to Summer of 1994.
- The data for the first individual dose calculations have been transmitted to Battelle.
- The Colville Confederated Tribes have requested that one of the advisory board members be removed from his position.

Agency for Toxic Substances and Disease Registry:

The agency was created 10 years ago to evaluate health effects at sites included in a national list of contaminated sites with the highest priority for cleanup. Hanford has four such "National Priority List" sites, and the agency is following its mandate by beginning health studies. The agency would like to develop an advisory board to help it communicate more effectively with interested constituencies about the results of its ongoing analyses.

At Hanford, there are three types of analyses the agency will undertake, the most elaborate of which is called a *Public Health Assessment*. Four of these will be completed at Hanford, starting with one at the 1100-Area, to be followed by Assessments of the 100, 200, and 300 Areas. It takes about two years to complete one of these Assessments, and there is a 30-day public comment period on the preliminary findings prior to its final release.

A second type of analysis, an *Evaluation*, is to be undertaken for groundwater and the Columbia River, as these are two exposure pathways common to all four National Priority List sites at Hanford. No formal consultation requirement is associated with the Evaluations.

A third type of analysis, a *Consultation*, is nearly completed. The consultation, jointly undertaken by two divisions of the agency, examines such questions as whether there are people who need help to understand potential exposures, is there a perception of present and past exposure associated with the site, and is there an indicated or perceived connection between adverse effects and exposures from the site? A consultation isn't circulated for public comment.

CDC/IHS Training Plans:

Two HEDR-related training sessions are anticipated for the Fall, 1994: First will be a week-long course for tribal project coordinators covering basic topics in public health research. Second will be a three-day course for interviewers, to be scheduled when OMB clearance is obtained and interviewers have been hired. It will focus on implementation of the survey and practice with the survey instrument.

Overall Project Timetable:

Key dates to bear in mind:

- July - December, 1993
 - Preliminary food consumption and population data summaries to be completed
 - Preliminary 1940s dose estimates for representative individuals on-reservation to be provided to tribal governing bodies

- January - June, 1995
 - Representative individual doses for each tribe to be provided by TSP
 - Population doses will be provided by the TSP for each tribe that requests such information

A generic work scheme was presented to explore the circumstances under which it would be possible for tribes to complete the scope of work covered in their contracts with CDC within the 15-month performance period. It was agreed that this is tight schedule, and that it is not intended for each tribe to be forced to work at the same pace.

ACTION ITEMS:

Each tribe will submit their final invoice and close-out papers to Battelle no later than the end of August.

Walker will submit a written request to each tribe's project coordinator regarding an exploratory look to see if information is available for further specifying fish consumption by species and catch location.

Liebow will provide the citation for the report that contains the 1945 dose distribution maps: Napier, B.A., and S.F. Snyder. 1992. *Determination of the Feasibility of Reducing the Spatial Domain of the HEDR Dose Code*. BN-SA-3678-HEDR.

Liebow will report to the group about what information Battelle is currently authorized to make available concerning river pathway contributions to dose.

ATTENDEES:

J.R. Wilkinson, Umatilla
 Dusty Seyler, Coeur D'Alene
 Barbara Aripa, Colville
 Adeline Fredin, Colville
 Madeline Queahpama, Warm Springs
 Vicki Bowman, Kalispel
 J. Herman Reuben, Nez Perce
 Stuart Harris, Nez Perce
 Russell Jim, Yakima
 David Ernst, Spokane
 Warren Bishop, TSP

Allen Slickpoo, TSP
 Deward Walker, TSP
 Max Power, Washington-Ecology
 Donna Manders, HHIN
 Mike Donnelly, CDC
 Van Chase, CDC
 Jo Freedman, ATSDR
 Greg Thomas, ATSDR
 Bruce Amundson, HTDS
 Ed Liebow, Battelle

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TECHNICAL STEERING PANEL

**OF THE HANFORD ENVIRONMENTAL
DOSE RECONSTRUCTION PROJECT**

Native American Working Group Meeting

Richland, Washington
October 6, 1993

Status of CDC Contracts and OMB Clearance for Data Collection Protocol

Spokane and CTUIR contracts have been awarded. Colville, Warm Springs, Kalispel contracts have been signed by the tribes and are awaiting official award notice from CDC. Coeur D'Alene is still in negotiations. Nez Perce is scheduled to complete a telephone conference based on their original submittal the week of October 18. The Yakima have yet to respond to last May's telephone conference with a Best and Final Offer.

The Public Health Service has completed its review of the proposed Data Collection Protocol and forwarded the clearance application to the Office of Management and Budget. If OMB does not act on the application within 90 days of receiving it, clearance is automatically granted. A Senate Indian Affairs Committee staff member indicated to Warren Bishop some additional progress in the OMB review, but this needs to be confirmed.

Work Planning Under the CDC Contracts

Van Chase distributed a format/content guide for the first deliverable requested under the CDC contracts: a detailed work plan. A draft of this work plan is due 30 days after the date of contract award. Van's office is willing to review earlier drafts prior to this submittal deadline. A June 1, 1994 deadline has been identified for tribes to submit all of their population and food consumption data summaries. The Working Group feels the rationale for having all data submitted by June 1 needs to be revisited. CDC staff was asked to be mindful of substantial differences between the tribes with respect to when they will complete their work.

Deward Walker asked the CDC staff to determine whether the "Data and Document Release Policy" created by the Working Group and adopted by the Technical Steering Panel has been incorporated into the CDC's contracts with the tribes.

Virgil Peavy, a CDC statistician, will be available for consultation in Seattle on Monday and Thursday, October 18 & 21. CDC staff will send a notice to each HEDR coordinator to remind them of this opportunity.

Warren Bishop recommended to CDC that it consider circulating a brief project update to the Working Group, perhaps as often as bi-weekly at first, as regular and frequent communication is key to the success of the Working Group members' efforts.

Plans for Training

Peter Houck will lead two training courses, one a week-long session for HEDR Project Coordinators, and the other a three-day session for each tribe's data collectors. The Coordinators' training session has been tentatively scheduled for the week of November 1-5 in Seattle, and the Data Collector's session is tentatively scheduled for the week of January 10, also in Seattle. In response to the topics suggested by Peter, some involvement by Battelle will be requested for the Coordinators' session in November to cover such topics as "data quality objectives," "uncertainty," and, more generally, how data are going to be used in calculating doses. Topics to be added to Peter's outline in the training for data collectors include: use of food models in interviewing, quality assurance, data entry and background on the database management system, "Epi-Info," and special sensitivities involved in interviewing tribal elders.

Preliminary Dose Calculations and Progress on River Pathway Modelling

Tracy Ikenberry and Bill Farris outlined two key pieces of technical work in progress at Battelle: (1) scoping calculations based on food consumption summaries provided by the tribes, and (2) river pathway modelling, including the assumptions used in modelling the river pathway, and the specific ingestion pathways that appear to make the greatest contribution to dose. The scoping calculations indicate the relative contribution of different food categories to a representative individual's dose, and these indications should guide tribal project activities in increasing the accuracy, completeness, and precision of information regarding consumption of food in the categories making the greatest contribution to dose. In the river modelling, it is now apparent that it is very important to know about the time of year and the location at which resident fish were taken for fresh consumption, and the species of fish consumed. For salmon, however, the location where they were taken from the river does not appear to have a significant effect on the dose received from eating them.

For illustration's sake, Bill Farris estimated the river-borne dose that would have been received by an individual between January 1960 and December 1967 if he consumed the following:

- 60 liters of untreated Columbia River water / month (almost 2 quarts / day)
- 5 kg (11 lbs) of fish /month year-round (species mix varies by season)
- 2 kg (4.4 lbs) of waterfowl / month between October and December each year
- 2 kg (4.4 lbs) of Willapa Bay oysters / month (year-round)
- 100 kg (220 lbs) / yr of salmon (33 kg in May, and 66 kg in August-September)
- Spent 10 hours / month boating and swimming on the river.

This leads to a dose over the 8-year period:

60% of dose	(540 millirem)	resident fish and waterfowl
18%	(150 mrem)	Willapa Bay oysters
17%	(140 mrem)	Columbia River drinking water
2%	(10 mrem)	salmon
2%	(16 mrem)	external exposure
TOTAL	860 mrem	

(This compares with an estimated background level of about 100 mrem/yr, or 800 mrem over the period covered by this rough dose estimate. The TSP's "dose decision level" is 100 mrem / year, so this "high use" individual would exceed the dose decision level.)

Action Items

- CDC and the Coeur D'Alene, Nez Perce, and Yakima need to complete contract negotiations.
- CDC will confirm the status of the OMB review
- CDC will review and communicate with the tribes about the rationale for having all data submitted by June 1.
- CDC will determine whether the "Data and Document Release Policy" has been incorporated into the CDC's contracts with the tribes.
- CDC staff will send a notice to each HEDR coordinator about Virgil Peavy's visit to Seattle the week of October 18.
- CDC staff will consider circulating a brief project update to the Working Group, perhaps as often as bi-weekly at first.
- Battelle staff will coordinate with CDC regarding participation in November and January training sessions.

Attendees

JR Wilkinson (CTUIR)
Les Spino (CTUIR)
Madeline Queahpama (Warm Springs)
Barbara Aripa (Colville)
David Ernst (Spokane)
Dusty Seyler (Coeur D'Alene)
Cliff Sijohn (Coeur D'Alene)
Herman Reuben (Nez Perce)
Warren Bishop (TSP)
Deward Walker (TSP)
John Till (TSP)

Max Power (Washington-Ecology)
Bruce Amundson (HTDS)
Greg Thomas (ATSDR)
Peter Houck (CDC/HCFA)
Van Chase (CDC)
Dill Shipler (Battelle)
Bill Farris (Battelle)
Tracy Ikenberry (Battelle)
Ed Liebow (Battelle)
Marc Witkowski (Battelle)

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TECH. 'ICAL STEERI. 'G PA. 'EL

OF THE HANFORD ENVIRONMENTAL
DOSE RECONSTRUCTION PROJECT

Meeting Regarding Native American Working Group

CDC Offices, Seattle
December 9, 1992

(Attendees: V Chase, D Lyons, M Donnelly (CDC), P Houck (HCFA), B Amundson (HTDS), W Bishop, M Power (TSP), T Ikenberry, E Liebow (Battelle))

Status Updates:

Contracts

- Nez Perce have yet to arrange a telephone conference with CDC Contracts Office to complete negotiations.
- Bishop and Liebow attempting to arrange a meeting at Yakima Nation to discuss Yakima concerns about continued participation in the study.
- Coeur D'Alene contract to be awarded momentarily.
- Draft work plans received to date have indicated that the June 1994 deadline for providing data is going to be difficult to achieve for some tribes.

OMB Clearance

- The application for clearance was sent to OMB on September 24; if no determination is made by December 24, then the clearance is automatically granted. Donnelly will apprise the group of further developments.

HTDS

- At the October, 1993 meeting of the HTDS Advisory Committee, a draft set of criteria were proposed for deciding whether to proceed with a Native American Thyroid Disease Study. These criteria are based on *statistical power*, or the ability to generalize from a sample to the population from which it was drawn. The same power thresholds applied in decisions about the main study are proposed for deciding about whether to proceed with a Native American Thyroid Disease Study.
- Although literature reviews have not uncovered any basic research concerning distinctive features of Native American thyroid functioning, additional searches are possible.
- The timing and adequacy of the HEDR work is absolutely central to decisions about proceeding with a Native American Thyroid Disease Study.
- If the study proceeds, a common definition for the study population will need to be developed and agreed to.

Preliminary Dose Estimates

- Preliminary data summaries have been received from 7 tribes, one (Nez Perce) still needs corrections before doses can be estimated.
- Air pathway dose estimates have been calculated for 6 tribes
- The Umatilla have requested a river pathway dose (in addition to the air pathway). Ikenberry has recently received the river pathway code, and can now proceed with this request.
- Presentations have been made to the Colville and Spokane councils. A presentation scheduled for the Kalispel council was attended by staff only. Presentations to the Coeur D'Alene, Warm Springs, and Umatilla governing bodies will be scheduled for January and beyond.

Interfaces with Hanford Health Information Network and ATSDR

- Northwest Area Indian Health Board will be especially useful in facilitating communications among the tribes on Hanford-related matters, but is not expected to be a source of technical assistance to the tribes.
- ATSDR will be establishing a site-specific health advisory board for its Hanford studies, and the criteria for board membership appear to lead to two Native American representatives. This advisory board may come under the authority of the Federal Advisory Committee Act, which spells out procedures for selecting members, giving public notice and records of meetings.

Training:

HEDR Project Coordinators Training

- 5 tribes were initially represented at the training, 4 had representatives stay for the entire training. 3 evaluation forms were received, which all assessed the workshop favorably.

Interviewer Training

- Some concerns expressed about forging ahead with the training scheduled for January 10-12. Instructors from Atlanta may have a difficult time rescheduling, but several of the tribes may not have interviewers on staff by then. Assuming OMB clearance is obtained, four tribes would be delayed in their interviewing if the training is rescheduled.
- Alternative instructors may be available from Fred Hutchinson; CDC will talk to the project coordinators and determine whether another location beside Seattle would likely increase attendance.

Technical Assistance After May, 1994:

- The Native American Working Group will have to make recommendations to the TSP regarding the need for technical assistance and potential sources from which this assistance could be sought.

NATIVE AMERICAN WORKING GROUP

January 19, 1994

PASCO RED LION INN

2525 North 20th

Pasco, Washington

PROPOSED AGENDA

9:00 a.m.	Status Updates <ul style="list-style-type: none">● CDC Contract Negotiations● OMB Clearance of NAWG Protocol-Survey Questionnaire● Completion of Battelle Contracts: Presentation of Preliminary Dose Calculations and Tribal Review
9:45 a.m.	Hanford Thyroid Disease Study: Native American Feasibility Decision
10:30 a.m.	Break
10:45 a.m.	Hanford Health Information Network Activities -- Including HHIN Tribal Service Program Briefing
11:15 a.m.	Tribes Work Planning and Implementation <ul style="list-style-type: none">● Need for Projected Schedule Adjustments● Project Coordinators and Interviewer Training: Critique and Evaluation
12:15 p.m.	Lunch
1:30 p.m.	Agency for Toxic Substances and Disease Registry <ul style="list-style-type: none">● Study Organization and Structure -- Progress● Native American Representation on ATSDR - Hanford Health Advisory Board
2:00 p.m.	Technical Assistance <ul style="list-style-type: none">● Scoping Effort to Reconstruct Tribal Population Distribution Within HEDRP Study Area: Time Frame● Special Source Document Location● Providing Quality Assurance● Database Management: Structure for Coding Interview Responses● Opportunity for Technical Consultation
3:00 p.m.	Break
3:15 p.m.	Presentation on River Pathway Modeling <ul style="list-style-type: none">● Concentrations of Radionuclides at Different Locations Along Columbia River and Its Tributaries● Bioconcentration Factors: Resident Fish - Salmon - Steelhead - Other River Aquatic Species● Significance for Process of Collecting Data
4:30 p.m.	Adjourn

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Native American Working Group

Pasco, Washington

January 19, 1994

1. Draft Guidelines for Recommending A Study of Thyroid Disease

- Drs. Amundson and Kopecky presented a draft of a discussion paper that proposes a process for deciding whether to go ahead with an epidemiological study of thyroid disease among tribal members. CDC will make this decision, but the Working Group will be expected to provide advice. The draft guidelines propose that this decision be based on scientific grounds, with special attention to adequate statistical power (mainly as a function of sample size). This decision will need to be made near the end of the year.
- Kopecky told the Working Group a little about statistical power and about how to calculate necessary sample sizes, based on information concerning tribal populations and representative individual dose calculations now being prepared.
- If an epidemiology study *is* recommended, respondents to the HEDR survey can expect to be re-contacted for additional information, and possibly for a health status assessment.
- Working Group members should provide comments regarding the draft guidelines directly to Amundson or other HTDS management team members.
- Tribes that haven't consulted with CDC statistician Virgil Peavey about sampling approaches are urged to do so now, while they are completing their work plans.
- Working Group members are urged to attend meetings of the HTDS Advisory Board. The next one is scheduled for April, 1994, in Spokane. CDC will provide more specific meeting information as it becomes available.

2. CDC Contract Management and Training Update

- Six tribes are now under contract with the CDC (all but Nez Perce and Yakima).

- OMB approved the study protocol earlier this month, and CDC has provided each project coordinator with specific guidance concerning compliance with the terms and conditions of this approval.
 - CDC will provide Working Group members with a summary of the contents of the OMB clearance application. The "Data and Document Release Policy" is included as part of the approved protocol.
 - CDC will provide electronic copies of the protocol, questionnaire, and EPI-Info data entry routines to tribal project staff who requested these items.
 - If the June 1994 deliverable date for tribal primary data summaries appears increasingly difficult to meet, tribes should report this to CDC Contract Specialist Erica Clarke (copies to CDC-Seattle), along with a proposed alternative date by which the deliverable could be submitted.
 - Concern was expressed for improving the mechanisms for identifying and overcoming obstacles to adequate progress.
 - CDC will be sending out a questionnaire to training participants asking an evaluation of the training sessions.
 - Dick Lyons would like each tribe to report back to him in the next two weeks regarding their specific computer hardware/software situation, and whether available equipment and software are adequate to complete each tribe's work requirements.
3. **Hanford Health Information Network Tribal Services Program**
- Andy Ross introduced his staff, Health Education specialist Ruth Jensen and Information Systems specialist Laura Cailloux. He outlined program plans in the health education, training, database management and inter-tribal communication areas, and urged Working Group members to provide specific advice on how the program can best meet their needs.
4. **Agency for Toxic Substance and Disease Registry Hanford-Related Work**
- Greg Thomas reported that initial feedback from public groups has led the agency to seek to create full-fledged Advisory Committees for all DOE-complex Superfund sites around the nation. This will require an exemption from the current administration's Executive Order placing a moratorium on new committees authorized by the Federal Advisory Committee Act. It could easily take more than a year to have a FACA-authorized advisory board in place. Thomas would like feedback on how best to incorporate tribal representation on the Hanford Advisory Board. The status of tribal rights and interests is distinct from those of public interest groups, and this

distinction should be reflected in the agency's interactions with tribal representatives.

- Technical studies are proceeding. A "public health assessment" has been drafted for the 1100 Area at Hanford, the first of four National Priority List sites for which such assessments are to be undertaken. This draft is currently undergoing internal agency review before it will be available for public comment. A public health assessment of the 200-Area is slated to start in the 2nd quarter of FY94. The agency contemplates site-wide evaluations for groundwater and for the Columbia River, but doesn't know whether these will be undertaken as "public health assessments" or as less formal "consultations." It is not clear how input regarding the public health assessment/consultation decision is to be solicited, especially in the absence of a functioning advisory board.

5. Special Scoping Study on Tribal Residential Distribution

- For the purposes of calculating doses from preliminary tribal data summaries, a simplistic assumption has been made regarding the residential location for representative individual cases. Liebow suggested that data are available from research done by Deward Walker and others indicating that for some tribes, representative individual dose calculations should eventually be made at more than one residential location. Several years ago, the Working Group had agreed that information should be gathered to permit profiles for a number of different lifestyles tied, in part, to where tribal members lived. Collecting such information may extend beyond the scope of current CDC contracts, however. Tribal researchers are encouraged to keep an eye out for information sources that will help construct residential distributions for their membership, while examining archival records for other contractually-specified purposes. A discussion paper will be drafted for further review by the Working Group.

6. Columbia River Pathway Modelling

- Ikenberry presented an overview of Battelle's efforts to model the Columbia River pathways, and explored the implications of this approach to modelling for Native American data collection. In this context, the most important emphasis in data collection should be placed on resident fish consumption and location of river-related food-consumption and lifestyle.
- The data collection instrument will need to be reexamined to assure its questions correspond with river pathway modelling data input requirements.

7. Action Items

- Distribute HTDS Study Protocol (May, 1993 version) to tribal Project Coordinators (**Amundson**)
- Distribute Donnelly's presentation overheads regarding contents of OMB clearance application to meeting attendees (**Donnelly/Chase**)
- Distribute electronic copies to those requesting the following materials (**Donnelly/Chase**):
 - OMB-Approved Data Collection Protocol
 - Survey Instrument
 - EPI-Info data entry templates (requires providing value ranges to CDC)
- Distribute training program evaluation questionnaire (**Lyons/Chase**)
- Provide CDC with identified computer hardware/software/training needs (**Tribal Project Coordinators**)
- Provide CDC with information regarding need for anticipated changes in project schedules (**Tribal Project Coordinators**).
- Produce study area maps (including river segment locations) for interview props after consulting with each tribe about their specific requirements (**Liebow**).
- Re-examine data collection instrument to assure its questions correspond with river pathway modelling data input requirements (**Chase/Liebow**).
- Provide comments to HTDS management team regarding "Draft Guidelines" paper (**AI**)
- Prepare discussion paper regarding scoping study on tribal residential locations (**Walker/Liebow**).
- Next Meeting (**Bishop** to determine date in late February / early March). Agenda will revisit "Draft Guidelines" for thyroid disease study and need for residential location study.

8. Attendance List

Warren Bishop, TSP
Deward Walker, TSP
Max Power, Washington-Ecology
Mike Donnelly, CDC
Van Chase, CDC
Dick Lyons, CDC
Yolanda Rocha, Kalispel
Vicky Bowman, Kalispel
Barbara Aripa, Colville
JR Wilkinson, Umatilla
Les Spino, Umatilla
Moses Squeochs, Yakima
David Ernst, Spokane
Dusty Seyler, Coeur D'Alene

Margaret Coffey, D'Alene
Madeline Queahpama, Warm Springs
Melva Tanewasha, Warm Springs
Jo Ann Friedman, ATSDR
Greg Thomas, ATSDR
Ken Kopecky, TSP & HTDS
Bruce Amundson, HTDS
Andy Ross, HHIN-Tribal Srvc
Ruth Jensen, HHIN-Tribal Srvc
Laura Cailloux, HHIN-Tribal Srvc
Tracy Ikenberry, Battelle-PNL
Barbara Harper, Battelle-PNL
Ed Liebow, Battelle-HARC

NATIVE AMERICAN WORKING GROUP

Wednesday, April 29, 1994

PASCO RED LION INN

2525 North 20th

Pasco, Washington

PROPOSED AGENDA

- 9:00 a.m. Status Updates
- CDC Contract Negotiations
 - Completion of Battelle Contracts and Voucher Submittals
 - Presentation of Preliminary Dose Calculations and Tribal Review
 - Questions Regarding Release of Tribal Dietary Data
- 9:45 a.m. CDC Contract - Workplan Implementation
- Outstanding Contractual Issues
 - Need for Projected Schedule Adjustments
- 10:30 a.m. Break
- 10:45 a.m. Hanford Thyroid Disease Study: Native American Study Feasibility Determination
(see attached DRAFT GUIDELINES)
- 11:15 a.m. Tribal Service Program - Hanford Health Information Network
- Briefing and Update of Activities
- 12:00 p.m. Lunch
- 1:30 p.m. Technical Assistance
- Scoping Effort to Reconstruct Tribal
Population Distribution Within HEDRP Study Area: Time Frame
 - Database Management - Data Entry and Analysis
 - Providing Quality Control
 - Emerging Training and Technical Assistance Needs
 - Need for a Technical Workshop - Nature and Structure for Workshop
 - Other
- 2:30 p.m. Break
- 2:45 p.m. ATSDR - Hanford Health Effects Council Formation -- Native American Involvement
- 3:30 p.m. Plans for Future Native American Research Support and Technical Assistance
- CDC Plans for Future Dose Calculations and Reporting Results
- 4:30 p.m. Adjourn



TECHNICAL STEERING PANEL

OF THE HANFORD ENVIRONMENTAL
DOSE RECONSTRUCTION PROJECT

Native American Working Group Meeting

Pasco, Washington
April 20, 1994

Status Updates

Contracts with CDC and Battelle

- Contracts are in place with 6 tribes. Negotiations continue with the Nez Perce and Yakama.
- Battelle sub-contracts have been closed out for the 6 tribes. Close-out is nearly complete with the Nez Perce, and Yakama close-out awaits invoicing from the tribe.
- If tribes do not think they will be able to meet the contractually stipulated June 1, 1994 deadline for delivering interview data summaries to CDC, they should submit to Andrea Stokes (CDC-Atlanta) a request for a "no-cost extension" for this deliverable, along with a justification. Van Chase can make prompt suggestions about the justification's language, if tribes fax her a draft of such requests. If there are other schedule changes resulting from this delay, they should also be included in the extension request. Budget or scope changes should be anticipated before 75% of the contract funds have been obligated.

Treatment of Preliminary Data

- Presentations have been made to 5 tribes' governing bodies, and a presentation to the Coeur D'Alene Council will be scheduled for May. The decision requested in these presentations is whether to include the preliminary data summaries and resulting representative individual dose estimates in the project record, where they are publicly available.
- Several tribes expressed concern that limitations of the preliminary data (especially small samples) make it imperative that public availability of data summaries and preliminary dose estimates be carefully controlled.
- The *Data and Document Release Policy* statement is inconsistent with the "Implementation Guidance" for this policy regarding whether a tribe's decision to withhold its data summaries and preliminary dose estimates from the project record automatically results in the tribe's withdrawal from further studies.
- Procedures for handling requests for preliminary tribal data summaries have yet to be finalized.

- Whether it is appropriate for analysis purposes to combine preliminary data with data collected with the second, more extensive dosimetric assessment questionnaire is also an open question that can only be answered when the second wave of data collection is complete.
- A proposal will be presented to the TSP to modify the *Data and Document Release Policy* statement so that careful control is maintained for preliminary data summaries without jeopardizing tribal participation in further studies.

Native American Thyroid Disease Study Feasibility Decision

- The HTDS study team has circulated for review and discussion a draft set of recommendations concerning the process and criteria for deciding whether to conduct an epidemiology study of thyroid disease for Native Americans.
- The timing of this decision may be affected by delays in the progress of tribal data collection and analysis, and by uncertainties in the process by which tribal data will be used to prepare dose estimates. Delaying the decision too long may make it difficult to keep the whole thyroid disease study team together, however, especially the clinical team that has been established to complete medical exams in the area.
- Several group members expressed concern about the possibility that a statistical power analysis may determine an infeasibly large number of interviews are needed, and the epidemiology study won't take place. If this happens, some of the health intervention benefits that could also come from the study may also be lost.
- A small group will report back to the Working Group's next meeting about study design options that would be scientifically credible and preserve the health promotion benefits that result from a thyroid disease study among Native Americans.
- The next meeting of the Hanford Thyroid Disease Study advisory committee will be Friday, May 13, in Spokane.

Hanford Health Information Network Tribal Services Program

- Visits to each tribe over the past two months have introduced the Tribal Services Program staff and discussed tribal perspectives on Hanford health-related concerns. Additional visits are planned to assist tribes in installing the EPI-Info data entry and analysis files, and to discuss the Tribal Services Program's role in community outreach activities.
- A "resource kit" is currently being reviewed by the Tribal Advisory Board; computer equipment is being ordered for each tribe, and a bulletin board system

is being established to promote electronic information exchange among tribal project staffs.

- The Kootenai Tribe of Idaho has accepted an invitation to join the Tribal Advisory Board.
- A request to extend HHIN for three years at a cost of \$8.9 million has been presented to Congress, with 9% of the funding request to be allocated to the participating tribes and Tribal Services Program.
- Negotiations are being completed with the Foley Library at Gonzaga University to create an archive of Hanford-related information that would allow for remote access via computers.

Technical Assistance

- A final version (April 15, 1994) of the questionnaire was distributed, along with the study area maps to be used as interview props. Electronic copies of the questionnaire will be distributed by the end of April. The EPI-Info data entry package is nearly complete; distribution is expected the first week of May.
- Additional technical assistance will probably be most productive if provided to each tribe on an individual basis, rather than by organizing a group workshop. Some uncertainty remains about sources of assistance to which project coordinators should turn.
- Although not included in the current scope of tribes' contracts with CDC, it may be appropriate to recommend that more information be produced about the residential distribution of tribal membership during the study period, so that dose estimates for representative individual cases more accurately reflect where people were living. When first recommended to the TSP, this was assigned a relatively low priority.

ATSDR Hanford Health Effects Council

- The Agency for Toxic Substances and Disease Registry (ATSDR) is forming advisory groups at each of 6 DOE sites, including Hanford, to provide advice on studies of health effects associated with environmental contamination. These groups are to be chartered with the authority of the Federal Advisory Committee Act (FACA). Development of the Hanford council is furthest along of any of the groups. Nominations for the Hanford council will be received until April 25, and the agency intends to select council members in time for an inaugural meeting in June.
- The nature of Native American participation in the Hanford Health Effects Council remains to be determined. A number of questions regarding the agency's plans

and procedures for honoring a "government to government" relationship with Indian tribes need to be answered, and the relationship of this new council to the Native American Working Group needs to be clarified.

- A special meeting will be held in Spokane on May 12 to decide how to organize Native American participation in the Hanford Health Effects Council.

Action Items

CDC-Seattle staff will contact CDC-Atlanta to request that face-to-face contract negotiations with the Nez Perce be completed in Lapwai at the CDC's earliest convenience.

Tribes should prepare requests for schedule changes if the June 1 deliverable does not appear feasible.

NAWG convenor Warren Bishop will request TSP approval for a modification of the Data and Document Release Policy statement.

CDC will propose procedures to the Working Group for how it will respond to public requests for access to preliminary data summaries.

Bruce Amundson will distribute copies of the final HTDS protocol to the tribal project coordinators.

Bruce Amundson will distribute information to the Working Group members about the May 13 HTDS Advisory Committee meeting in Spokane.

Barbara Aripa, JR Wilkinson, Herman Reuben, Andy Ross, and Deward Walker will work with Bruce Amundson to identify credible options for a Native American thyroid disease study design, and report back to the Working Group by the next meeting.

CDC will distribute electronic file copies of the final survey instrument and EPI-Info data entry package by the first week of May. The HHIN Tribal Services Program will visit each tribe and provide assistance in installing the EPI-Info package and training staff to operate it.

Deward Walker will draft a proposal describing the need for and approach to producing more information about tribal population distribution and mobility for discussion at the next Working Group meeting.

Greg Thomas will provide information to tribal project coordinators about the May 12 meeting to discuss tribal participation in the Hanford Health Effects Council.

JR Wilkinson, Barbara Aripa, and Ed Liebow will prepare and distribute a discussion draft about the role of the Native American Working Group and its relationship to the Hanford Health Effects Council and other Hanford-related consultations with tribal governments.

Attendees:

Barbara Aripa, Colville Confederated Tribes
Louanna Francis, Colville Confederated Tribes
Sherri Luzon, Nez Perce Tribe
Vicki Bowman, Kalispel Tribe
JR Wilkinson, CTUIR
Bill Burke, CTUIR
Dusty Seyler, Coeur D'Alene Tribe
Melva Tanawasha, Warm Springs
Deward Walker, TSP
Chuck Smith, USPHS
Donna Manders, Hanford Health Info Network
Joanne Freedman, ATSDR
Andy Ross, HHIN Tribal Svcs Prg
Ruth Jensen, HHIN Tribal Svcs Prg
Al Conklin, Washington Dept of Health
Ed Liebow, Battelle

Deb Louie, Colville Confederated Tribes
Herman Reuben, Nez Perce Tribe
David Ernst, Spokane Tribe
Guy Hopkins, Kootenai Tribe of Idaho
Les Spino, CTUIR
Margaret Coffey, Coeur D'Alene Tribe
Madeline Queahpama, Warm Springs
Warren Bishop, TSP
Allen Slickpoo, Sr., TSP
Van Chase, USPHS
Greg Thomas, ATSDR
Paul Schar, ATSDR
Laura Cailloux, HHIN Tribal Svcs Prg
Norma Guardipee, HHIN Tribal Svcs Prg
Bruce Amundson, HTDS



TECHNICAL STEERING PANEL
OF THE HANFORD ENVIRONMENTAL
DOSE RECONSTRUCTION PROJECT

Native American Working Group

Ridpath Hotel, Spokane, Washington

May 11, 1994

Attending:

Tribal Representatives:

Vickie Bowman	Kalispel	(206) 445-1147
David Ernst	Spokane	(509) 258-4581
Madeline Queahpama	Warm Springs	(503) 553-3252
JR Wilkinson	Umatilla	(503) 278-5205
Leslie Spino	Umatilla	(503) 278-5207
J. Herman Reuben	Nez Perce	(208) 843-7375
Margaret Coffey	Couer d'Alene	(208) 686-1800
Barbara Aripa	Colville	(509) 634-4711
Guy Hopkins	Kootenai	(208) 267-3519

Technical Steering Panel Members, staff:

Warren Bishop	TSP/NAWG	(206) 407-7119
Max Power	WA Ecology	(206) 407-7118
Alan Slickpoo	TSP	(208) 843-2253
Deward Walker	TSP	(303) 492-6718

Hanford Health Information Network:

Donna Manders	HHIN	(206) 705-6059
Andy Ross	Tribal Services	(503) 228-4184

Agency for Toxic Substances Disease Registry:

Greg Thomas	Seattle Office	(206) 553-2113
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Centers for Disease Control and Prevention:

Vanette Chase	Seattle Office	(206) 615-2505
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PRELIMINARY DISCUSSION:

Meeting began 10:15 AM:

1. TSP Community Meetings:

Warren Bishop reported that the first TSP community meeting went very well last night. There were _____ in attendance. Educational Services District # 101

Satellite Downlink in Spokane will be used in this evening's broadcast where the smaller communities in the Hanford Study Area are linked to the Satellite via telephone/speaker phone systems through their various high schools. The link will be with approximately 15 stations.

2. **NAWG "Data Document Release Policy":**

final draft was distributed for review; to be considered at next NAWG meeting.

3. **Travel Charge:**

V. Chase stated that CDC Tribal contract travel funds can be used for attending this NAWG meeting; any adjustments to travel budget can be made later on in the contract.

4. **Agenda for the meeting:**

The following agenda items were proposed by JR Wilkinson to serve as a guide for today's discussion:

I. **Introductions**

- review agenda
- modify, make changes

II. **Goals and Objectives**

- purpose of this review exercise
- current NAWG value to other "boards"
- what aids protect tribal interests

III. **NAWG Draft Charter**

- policy versus technical aspects
- additional needs
- responsibility of NAWG representatives
- responsibility of agencies
- modify draft charter

IV. **Eventual treatment of Draft Charter**

- endorsements by tribal resolutions
- agency signatures requirement

MORNING DISCUSSION: (Questions asked, followed by discussion)

QES: "Why is there a need for this (charter)?"

This is the NAWG's first real effort to begin discussion on the national interface between the tribal representatives and their relationships with the various agencies involved with Hanford. Since there are so many

boards, panels and committees being developed, it is important that NAWG, which has a long evolving history, to be the organization to discuss this transition once the HEDR activities are completed.

QES: "Are we going to continue into another "umbilical cord" relationship as the NAWG has had with the TSP?"

It should be considered more of a viable involvement. In evaluating what has been going on in local, regional and national meetings in "community involvement" and the ATSDR, it has been noted that tribal involvement has been very limited. The levels of discussion has not properly reflected tribal needs; this has caused a great concern that tribal participation and sovereignty are not being protected.

QES: "Will ATSDR be here today? There is a problem that ATSDR may not fund future meetings."

We will include this problem in our minutes to indicate our concerns. We certainly will promote our interests in continuing and therefore get funding.

QES: "Do you all agree that this 'coalition' is on track and that it is important to develop this intercommunication initiative? Does anyone feel uncomfortable with this?"

It is very important that the NAWG facilitate communication and share common issues between the NAWG and other agencies and organizations.

That also applies to the HHIN Tribal advisory Board.

QES: "Where do you want to see the NAWG go?"

For instance the HTDS uses the NAWG as a sounding board.

QES: "Under whose auspices are we trying to be chartered?"

We are trying to interface with all groups, we have to open and keep open communications with everyone interested in Hanford.

QES: "How do you see NAWG functioning?"

For instance, the NAWG already has developed and maintains relationships with other Hanford-related organizations:

- the 9 tribes already interact with state and federal governments on a government-to-government basis and bring those concerns to the NAWG's attention as they relate to Hanford
- HEDR, "TSP/NAWG," has been the link between the technical panel and the tribes, this has been an unspoken relationship
- HTDS, the "research team" has an undefined relationship with NAWG by soliciting input on a possible "Native American Thyroid Disease Feasibility Study" as well as sharing valuable information on the conduct of their interviews, etc.
- so we see that the HHEC as expediting ATSDR to carry out their Congressional mandated health effect studies and policies with tribes in regional and national DOE sites.

We should consider the NAWG as a "model" which facilitates the exchange of technical information to and from the tribes.

We should, therefore, develop a "charter", this may not be the best word, but, on the purview that we all understand; that is, it is imperative that cross-communication be open and free with HHIN and other boards which may be developed in the future.

QES: "A key question here, does CDC, HHIN or any other organization want to take over the NAWG activities; to undertake the functions that NAWG now performs?"

With regard to HHIN, the objectives and activities for the HHIN and its Tribal Advisory Board are much different than those for the CDC.

(NOTE: at this point Max said something that I didn't get in my notes relating to this issue, there were so many conversations going on, I couldn't hear what he said)

It is important to note that the CDC is focused on 3 areas - research, training, and technical assistance; the TAB provides service and information to the tribes; the NAWG is a working group which discusses Hanford issues and is an advisory sub-committee to the Demographic Committee of the TSP. The TAB provides advice to the HHIN, not to HEDR or CDC.

The HHIN/TAB must not be absorbed by anyone !

It is important not to take away anything from either board. They both provide important functions.

QES: "HHIN has a great concern about this draft Charter and the Mission Statement, are we to understand that our organization will be included as a supporting agency for this?" We are not funded through CDC and are not considered as a federal agency; we have been mandated by Congress to undertake our activities in conjunction with viable community boards, and that is what we are doing. We are not an advisory board to any federal agency. We are also different in that we are supervised by and are directly associated with the 3 States of Washington, Idaho and Oregon and their Departments of Health.

It seems what is important is to coordinate, consolidate, and link tribes to all information sources, that is what we should focus on. As a member on both the TAB and the NAWG, the Spokane tribe has no problem serving both organization's objectives.

It must be understood, that HHIN is totally separate from CDC and ATSDR.

QES: "What will happen when the HEDR contracts are all completed?"

It is understood that all tribal contracts with CDC will be continued until completed. In the near future, other organizations who will be interested in health studies, environmental health issues and so on must have a mechanism to be formally involved with the States and tribes and nations of this region. Definitions are required; we must find a way to define all of our concerns now while we have the opportunity.

QES: "What kind of advice are you talking about? How can you advise a sick patient or someone who has been affected by Hanford? What good will an advisory board do for that patient? Advise to whom, and on what?" No one is thinking about the people who have died, suffered and are not informed!

An organization such as the NAWG and its tribal representatives provides overall advice to the tribal councils who then in turn advise their communities.

We need to present a unified position, especially with ATSDR, as they are proceeding down the road !

Break: Resumed meeting 1:05 PM

Greg Thomas of ATSDR and the HHEC provided clarification on what is happening with the nomination process to the HHEC.

- nominations are being reviewed now
- the council membership may be around 25-27
- first meeting to be scheduled for mid-to-late July, place undetermined at this time
- it is very important for the tribes to participate, and a decision on their numbers must be made soon; time is short; tribes must set plans so that the ATSDR can incorporate tribal input and provide funding to attend meetings.

SEVERAL PROPOSALS WERE CONSIDERED AS TO HOW TRIBAL PARTICIPATION WOULD BE DETERMINED FOR THE HHEC:

Proposal A

	HHEC		
	TSP	MOU	HHIN
	NAWG		TAB
Activities:	Research Training Technical Assistance		Services Education Information
Relationships:	(Federal - Tribes)		(States - Tribes)

Proposal A was presented by H. Reuben, Nez Perce. The idea was to have a Memorandum of Understanding be drafted between the TSP and the HHIN in agreeing how many representatives would be selected from each organizations and how the reps would report back to each organizations.

Proposal B

	ATSDR Board		
	NAWG	HHEC	TAB

(THHEC)

Proposal B was presented by V. Bowman, Kalispel tribe. The idea was to have a separate Tribal HHEC be created from the NAWG, the regular HHEC and the TAB would all have representation on the ATSDR Board.

It was believed this proposal would split the effectiveness of the tribal participation.

Proposal C

HHEC

NAWG

HHIN (rep)

Proposal C was presented by D. Manders, HHIN, who saw that having a TAB representative be on the NAWG would encourage communications

It was decided at this point that the HHIN and its TAB be removed from further discussion. In that since it had its own mandate, that it not be considered a supporting agency.

Some language must be included in this document so there would be information exchange.

Keep it simple.

Perhaps an MOU between the NAWG and the TAB should be drafted where a proactive involvement in information exchange between the two advisory boards would be encouraged.

Proposal D (current proposal)

ATSDR

HHEC

(FACA Board)

Greg Thomas discussed the current construction of the local HHEC; it is a FACA board with its own charter which has been accepted by the FACA board.

Proposal E

ATSDR

THHEC

HHEC

Proposal E was suggested by JR Wilkinson, Umatilla, it would create a Native American FACA. In light of President Clinton's directive to all departments to work with tribes, this could be a "first", a contemporary proposal that would recognize that tribes have a unique relationship with the federal agencies and recognizes the importance of having a separate track for input into environmental health, restoration, and other issues affecting tribes, past, present and future.

One of the problems should be considered about this proposal - for example States have ex-officio status with FACAs, they have no vote; this may be the same way tribes may be handled.

This is really a whole new concept that we will have to look into.

DRAFT CHARTER WAS EXTENSIVELY REVIEWED:

The draft charter was reviewed. Many changes in language, structure, format were made.

ACTIONS ITEMS:

1. JR Wilkinson, Ed Liebow, and Barbara Aripa will take all comments on the charter review and send out a clean draft within the next week for review and comment. A final clean draft should be sent to W. Bishop within the following week. To be discussed at the July NAWG meeting.
2. Encourage all to read "Future Native American Research", the long term TSP plan for tribes, before the next NAWG meeting
3. Greg Thomas will look into a "NATIVE AMERICAN FACA" and report back to the NAWG.

Written and Submitted by: Vanette Chase 5/12/94

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Native American Working Group

Pasco, Washington

July 13, 1994

Status Updates

- Nez Perce contractual negotiations with CDC may require a face-to-face meeting to resolve remaining issues.
- Some renewed interest in negotiating a contract has been expressed informally by Yakama representatives.
- Negotiations have been completed with several tribes to extend the deadline for delivering primary data summaries.
- Battelle has closed out seven of the tribal sub-contracts, and will shortly close out the contract with the Yakama.
- Nez Perce Tribal Executive Council will soon consider a resolution concerning the disposition of data summaries and preliminary dose calculations presented by Battelle near the end of May.
- The Yakama data summaries were delivered near the end of June, and Battelle will be preparing preliminary dose estimates to share with the Yakama Tribal Council shortly.
- Informal conversations between CDC and the Kootenai Tribe of Idaho have been inconclusive to date; a formal request submitted by the tribe for CDC consideration is needed to resolve the question of whether the tribe will be included in the HEDR studies.
- Copies of all documents in Battelle files relating to the tribal sub-contracts are being prepared for shipment to the relevant tribes.
- All data collected to date are simply being stored in "hard copy." The EPI-Info data entry program is being beta-tested in Atlanta by a CDC computer services contractor. The Kalispel have agreed to submit their data to a field test, and assuming this test works, the programs will be ready for distribution within a matter of a few weeks. HHIN Tribal Services Program will provide assistance in analysis.

Native American Working Group Operations

- A group like this is needed to continue coordination among tribes and supporting agencies on technical issues. Wording of the draft operations plan will be revised and distributed for each tribe's governing body to consider endorsing.
- ATSDR has indicated it will be in a position to pay for travel expenses for the group's members.
- A name change was recommended: The Inter-Tribal Council on Hanford Health Projects.

HTDS Feasibility Decision for Native American Thyroid Disease Study

- A small group held a couple of conference calls to discuss the advantages and disadvantages of several alternative study designs, and came to the conclusion that a *cohort* design better suits the primary purpose of the study. Questions remain concerning whether adequate data are available and also whether such a study would be logistically feasible.
- HTDS team will present analyses of statistical power and feasibility to the CDC, and the CDC will decide whether to proceed, in consultation with the HTDS, tribes, and Advisory Committee.
- If the sample size required for adequate statistical power proves infeasibly large, then HTDS will have to consider other designs and what specific, answerable questions could be addressed by these other designs.
- To make the power calculations, information from the preliminary dose estimates will be needed; HTDS will ask tribes for permission to use these estimates for calculating statistical power.

Hanford Health Information Network Tribal Services Program

- August 22-24 workshop on Health Research in Tribal Communities
- September 9-11 workshop on "Radiation Health Effects and Hanford: A Conference for Concerned Citizens and Health Care Providers"
- The Tribal Services Program is planning a mailing to tribal members in the near future to let people know where they can find out more about Hanford and the HHIN Tribal Services Program.

Scoping Work on Tribal Population Distribution

- A single geographic point for dose calculations may not produce adequately representative individual doses for tribal members; more information about

where tribal members resided at key historical points would be needed to improve assumptions incorporated into dose calculations.

- IF the Technical Steering Panel agrees that such studies are needed, and it is determined that the necessary data can be obtained feasibly, the endorsement of tribal governing bodies would still be needed.

ATTENDEES:

Guy Hopkins, Kootenai Tribe of Idaho
Laura Cailloux, Portland Area Indian Health Service Advisory Bd
Barbara Aripa, Colville
David Ernst, Spokane
Dusty Seyler, Coeur D'Alene
Joe Richards, CTUIR
Les Spino, CTUIR
JR Wilkinson, CTUIR
Herman Reuben, Nez Perce
Alfreda Peters, Yakama
Vicki Bowman, Kalispel
Madeline Queahpama
Allen Slickpoo, TSP
Warren Bishop, TSP
Deward Walker, TSP
Chuck Smith, CDC
Van Chase, CDC
Max Powers, Washington-Ecology
Ellen Hartman, Washington-Health
Dana Ward, DOE-Richland
Bruce Amundson, HTDS
Scott Davis, HTDS
Ed Liebow, Battelle-PNL

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NATIVE AMERICAN WORKING GROUP

October 16, 1994

RED LION INN AT THE QUAY

100 Columbia Street
Vancouver, Washington

PROPOSED AGENDA

- 9:00 a.m. Status Updates
- CDC Contract Negotiations
 - Status of CDC - Workplan Implementation
 - Completion of Battelle Contracts and Closeout Process
- 9:45 a.m. Hanford Thyroid Disease Study: Native American Study Feasibility Determination
- 10:00 a.m. Tribal Service Program - Hanford Health Information Network
- Briefing and Update Activities
- 10:30 a.m. Break
- 10:45 a.m. Washington/Oregon/Idaho Health Departments / Centers for Disease Control and Prevention (CDC) Cooperative Agreement Briefing
- 11:00 a.m. Research Support and Technical Assistance General Review and Discussion of Data Collection Work Underway
- Database Management - Data Entry and Analysis
 - Emerging Technical Assistance Needs
 - Procedures for Providing Quality Control
 - Survey Questionnaire - Participant Selection - Questions That Need To Be Addressed
 - Workplan Schedule Adjustments
- 12:00 p.m. Lunch
- 1:30 p.m. Agency for Toxic Substances and Disease Registry Briefing and Observations / Hanford Health Effect Council First Meeting
- 1:45 p.m. Implementation of Inter-Tribal Council on Hanford Projects
- Review of Approval by the Governing Authority of the Nine Tribes
 - Discussion of Proposed By-Laws
 - Process for Implementation

- 2:30 p.m. Break
- 2:45 p.m. Continuation of Implementation Process
- 3:30 p.m. General Discussion of Future Activities
- Plans for Native American Research Support and Technical Assistance
 - Future Workplan Scheduling - Examination of Remaining Work
 - CDC Plans for Future Dose Calculations and Reporting Assistance
- 4:30 p.m. Adjourn



Native American Working Group Meeting

Vancouver, Washington

October 26, 1994

Status Updates:

Contract Negotiations: CDC officials are meeting this week with representatives from the Kootenai, Coeur D'Alene, Nez Perce and Yakama.

Technical Work: Interviews and data entry are proceeding; specific guidance is needed from CDC on how data are to be analyzed for model input, and clarification is needed from CDC on elements of work remaining within existing work scopes after data collection is completed. Current contracts end December 31; if they are to be extended and additional funds made available, administrative actions to accomplish this need to be initiated as soon as possible.

Hanford Thyroid Disease Study Feasibility Determination: HTDS Study Management Team's request to tribes for population and preliminary dose data is to complete statistical power calculations. CTUIR was prepared to provide these data today, but no Study Management Team representatives were present; Colville had provided demographic data earlier, but will provide again along with preliminary dose estimates. CDC and the HTDS Study Management Team will be urged to examine research design issues that attend to small populations and address tribes' specific epidemiological issues.

HHIN Tribal Service Program Update: The first year of activities has been completed, with a focus on education, information/outreach, and technical assistance. Overall, Congress authorized a 3-year extension for HHIN, and appropriated FY-95 funds. The Tribal Advisory Board was presented with a proposal to review IHS and clinical databases to examine the prevalence of thyroid diseases in different IHS Service Units. A pharmacy database and the patient core component database would be reviewed; Service Unit information managers will be contacted to get their input on the advisability of conducting this study. Questions about where the results of such a study would reside remain to be answered. Two main objectives for the education / outreach activities include (1) expanding outreach and responding to the concerns expressed by people already contacted (through electronic bulletin boards, school programs, posters, brochures, and an information archives), and (2) training for health care providers. The next Tribal Advisory Board meeting will be in Portland on 1/18/95, timed to coincide with the meeting of the Northwest Area Indian Health Board meeting.

State Health Agencies/CDC Cooperative Agreement: A three-year cooperative agreement was established with Oregon, Idaho, and Washington state health agencies,

with first-year funding of \$244,000. Main activity areas include (1) developing the capability to provide individual dose assessments; (2) identifying mechanisms for providing individual dose estimates to citizens, including an assessment of special needs of Native Americans, in coordination with HHIN, and (3) evaluating the need for a Hanford Health Effects Review Working Group.

Hanford Health Effects Council & Intertribal Council on Hanford Health Projects: The central issue is how to assure that each tribe's interests are properly represented in ATSDR decision-making (*your faithful notetaker was out of the room for the review of the HHEC meeting in Richland*). Tribal representatives are in strong agreement that an inter-tribal forum is necessary for coordinating with one another on technical issues, and for making tribal representatives to the TSP and HTDS Advisory Board more accountable to the tribes whose interests they purport to represent. At the same time, many tribal representatives are very concerned about the need for ATSDR to have government-to-government relations with each tribe, and want to have a position on the Hanford Health Effects Council reserved for a representative from each of the 9 tribes. Some longer-term arrangement with the Public Health Service is also needed to support each tribe's participation in Hanford health research and activities, even after CDC & ATSDR's present Hanford-related objectives are completed. It was pointed out that in a world of infinite resources, this would be ideal: long-term cooperative agreements with each tribe, a position on HHEC for each tribe, and agency support for the inter-tribal technical coordinating forum. However, if resources are limited, tribal representatives may have to choose which of these to reduce or eliminate. ATSDR will be asked for an informal reading on the feasibility of including 9 tribal positions on the HHEC, and the by-laws for the Intertribal Council on Hanford Health Projects will be re-drafted for informal agency comment.

Action Items:

- The Native American Working Group will make a written request to CDC and the Hanford Thyroid Disease Study Management Team to consider providing support for an exploration of alternative research design strategies that attend to small populations and address tribes' specific epidemiological concerns.
- The Native American Working Group will make a written request to the CDC, the Hanford Thyroid Disease Study Management Team, and the HTDS Advisory Board to hold their meetings in the Northwest, where they can better attend to tribal interests.
- The tribes will respond to the HTDS request for preliminary dose estimates and demographic data as inputs to the feasibility determination for a Native American Thyroid Disease Study.

- ATSDR will distribute copies of the paper, "Inconclusive by Design," and the agency's published rejoinder.
- Battelle will send information on internet sites to the HHIN Tribal Services Program, along with an electronic file copy of the Environmental Justice RFA from the National Institute of Environmental Health Sciences. These files will be made available on the HHIN Tribal Services Program bulletin board system.
- Washington Department of Health will distribute copies of its special report, "Columbia River Sediments and Health Effects," along with its recent annual environmental report and a copy of the CDC cooperative agreement.
- Washington Department of Health will provide a briefing at the next meeting of the Native American Working Group.
- CDC will be asked to clarify elements of work remaining for tribal projects upon completion of the data collection. Immediate clarification will be requested on when an analysis routine will be provided by CDC to the tribes. Clarification is also requested concerning assignment of responsibility for calculation of doses based on information the tribes are producing. Clarification is also requested on the need for changes in scope, schedule and budget for tribal work if any further delays are anticipated in the availability of analysis routines from CDC.
- ATSDR will provide an informal response to the tribes' expressed wish for nine positions on the Hanford Health Effects Council, one for each tribe.
- An ad hoc committee involving JR Wilkinson, Barbara Aripa, and Ed Liebow will re-draft the proposed By-Laws for the Intertribal Council on Hanford Health Projects, based on today's discussion.
- ATSDR will be asked to informally review and comment on the re-drafted By-Laws prior to the next NAWG meeting.

Attendees:

Barbara Aripa, CCT
Les Spino, CTUIR
JR Wilkinson, CTUIR
Guy Hopkins, Kootenai
Madeline Queahpama, Warm Springs
Moses Squeochs, YIN
Dave Ernst, Spokane
Sherry Lozon, Nez Perce
Warren Bishop, TSP
Glyn Caldwell, TSP
Van Chase, CDC

Greg Thomas, ATSDR
Max Power, Washington-Ecology
Al Conklin, Washington-Health
Ellen Haars, Washington-Health
Ann Watanabe, CRITFC
Andy Ross, HHIN Tribal Svcs Program
Laura Cailloux, HHIN Tribal Svcs Program
Ruth Jensen, HHIN Tribal Svcs Program
Kaylin Anderson, Battelle
Ed Liebow, Battelle

NATIVE AMERICAN WORKING GROUP
February 15, 1995
Yellowhawk Conference Center
Confederated Tribes of the Umatilla Indian Reservation
Mission, Oregon

PROPOSED AGENDA

- | | |
|------------|--|
| 9:00 a.m. | Status Updates <ul style="list-style-type: none">• Tribal Work on Data Collection and Entry -- Tribal Representatives• CDC Database Assistance -- Chase and Liebow (CDC) |
| 9:45 a.m. | Hanford Thyroid Disease Study: Native American Study Feasibility Determination
-- Amundson (HTDS) |
| 10:00 a.m. | Tribal Service Program - Hanford Health Information Network <ul style="list-style-type: none">• Briefing and Update Activities -- Ross and Staff (IHB) |
| 10:30 a.m. | Break |
| 10:45 a.m. | Discussion <ul style="list-style-type: none">▸ Adoption of Operations Plan for the Intertribal Council on Hanford Health Effects |
| 11:30 a.m. | Washington State Department of Health -- Haars (WA DOH) <ul style="list-style-type: none">• Briefing on the Development of an "Individual Dose Assessment" Process |
| 12:00 p.m. | Lunch |
| 1:30 p.m. | Telecommunications Proposal / National Telecommunications Infrastructure Administration -- Smith (CDC) |
| 2:00 p.m. | Discussion of the Relationship of Tribes and Intertribal Council with ATSDR <ul style="list-style-type: none">• Department of Health and Human Services
Commitment for Government-to-Government Relations• ATSDR Plan for Action to Honor Commitment for Government-to-Government Relations |
| 4:30 p.m. | Adjourn |

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NATIVE AMERICAN WORKING GROUP

Thursday, May 4, 1995
Richland Tower Inn
1515 George Washington Way
Richland, Washington

PROPOSED AGENDA

- 9:00 a.m. Status Updates
- Tribal Work on Data Collection and Entry -- Tribal Representatives
 - CDC Database Assistance -- Chase and Liebow (CDC)
- 9:45 a.m. Hanford Thyroid Disease Study: Native American Study Feasibility Determination
- Update regarding Tribal Transmittal of Data
- 10:00 a.m. Tribal Service Program - Hanford Health Information Network
- Briefing and Update Activities -- Ross and Staff (IHB)
- 10:30 a.m. Break
- 10:45 a.m. Discussion
- ▶ Adoption of Proposed By-Laws for the Intertribal Council on Hanford Health Effects
- 11:30 a.m. Telecommunications Proposal / National Telecommunications Infrastructure Administration -- Briefing on Recent Developments
- Andy Ross and Laura Cailloux
- 12:00 p.m. Lunch
- 1:30 p.m. Washington State Department of Health -- Haars (WA DOH)
- 2:00 p.m. Discussion of the Relationship of Tribes and Intertribal Council with ATSDR
- Draft ATSDR Government-to-Government Policy Statement
 - Review of Draft Cooperative Agreement in Development for Proposed Arrangement between ATSDR and Tribes
- 4:30 p.m. Adjourn

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Native American Working Group

Richland, Washington

May 4, 1995

Administrative Announcements:

Changes in meeting dates, places: May 15-16 at Portland (OR) Hilton, July 26-28 at Pasco Red Lion, September 27-29 in Boise, and November 29-December 1 in Seattle.

Status of Tribes' Technical Work:

Kalispel:	Completed preliminary analysis and now drafting report.
Spokane:	Complete preliminary analysis and now drafting report.
Coeur D'Alene:	Data collection completed, awaiting tribal approval for Fred Alt to join staff to supervise analysis and report preparation.
Colville:	Data collection completed, data entry and analysis underway.
Warm Springs:	Awaiting renewal of OMB clearance to complete data collection and subsequent tasks.
Umatilla:	Awaiting renewal of OMB clearance to begin interviewing.
Nez Perce:	Work plan completed, secondary data collection underway, awaiting OMB clearance to begin interviewing.
Yakama:	Best and Final Offer is to be submitted to CDC-Contracts in a matter of days.
Kootenai:	Authorization for a sole source contract has been requested within CDC, and once received, NCEH will send tribe the Work Requirements and request for proposal.

Van Chase distributed a "technical notes" handout reviewing a number of data entry and analysis suggestions. This is expected to be followed periodically by other brief reviews of technical issues.

Van also asked for project coordinators to get caught up in their monthly progress reporting.

The Microsoft Access data entry and automated Epi-Info record conversion routines have been completed, and will be provided to the tribes along with direct assistance on how to install and operate these routines.

A question was raised about what happens to the data summaries and other report findings provided by the tribes. The reports will be evaluated by CDC as to their technical acceptability, and the data summaries will be used to produce dose estimates for representative tribal individuals. Charlie Miller will be invited to the June meeting of the Intertribal Council to discuss the options he faces in deciding how to use the tribes' data summaries for dose calculations.

Hanford Thyroid Disease Study: Native American Study Feasibility

Tribal representatives were encouraged to provide the data requested by the Fred Hutchinson Cancer Research Center in June, 1994, to help in determining the feasibility of undertaking a cohort study of Native American thyroid disease. Further attention should be directed to how Native American thyroid disease can be studied if an adequate cohort study is not feasible.

Hanford Health Information Network Tribal Services Program:

The Program's new health educator, Linda Pratt, was introduced. Since the information concerning health effects of Hanford radiation releases is lacking at this point, Linda will focus on presentations informing tribal communities about what went on at Hanford, and about the studies' progress to date. These presentations will include outside speakers, and not just the Tribal Services Program staff.

Technical assistance is available for training on the use of the Microsoft Access software. Andy Ross is completing a review of the IHS Patient Care Component database, examining thyroid illnesses by service unit and patients' age and gender.

The Northwest Portland Area Indian Health Board submitted a grant application to the National Telecommunications and Information Infrastructure Agency to expand access to the "Circle of Health" information service by placing it on the Internet and enhancing tribal capabilities for using the Internet for health-related purposes.

Intertribal Council on Hanford Health Projects:

After reviewing comments received from Herman Reuben, the By-Laws were adopted by unanimous approval of the Members present (an extra page will be added showing the signatures of those approving).

Nominations for officers were taken, and the following persons were selected by unanimous approval of the Members present:

Chair: Les Spino (Umatilla)

Vice-Chair: Madeline Queahpama (Warm Springs)

Secretary: Barbara Aripa (Colville)

Warren Bishop was asked, and agreed to serve as facilitator for the ICHHP.

Ed Liebow was asked, and agreed to serve as technical advisor for the ICHHP.

The officers, along with Margaret Coffee and Ed Liebow, will form an ad hoc committee to develop recommendations concerning financial assistance for the ICHHP.

Individual Dose Assessment System for General Population:

A CDC cooperative agreement with 3 state health agencies (WA, OR, and ID) is supporting the development of a user-friendly computerized dose assessment capability for individuals interested in receiving more information about their radiation dose. Individuals will complete a phone interview, have a questionnaire mailed to them, mail

the completed questionnaire to the Hanford Health Information Network, and receive an individual dose report along with additional health-related information.

Among the outstanding issues yet to be resolved: What steps need to be taken to ensure privacy of individuals, and what information should be included in the individual dose report (e.g., planners are dealing with how to provide information concerning where one can go for more information about health, what is risk associated with this estimated dose, what do we do with self-reported data of questionable validity?)

The three state health agencies are available to work with the ICHHP. Ellen Haars will send each HEDR project coordinator a copy of the questionnaire being drafted for the general population, and she will ask Cathy Fox-Williams to prepare a presentation to the ICHHP at its June meeting.

Status Update on ATSDR Policy Development and Cooperative Agreement Programs:

The revised draft policy statement was well-received by senior ATSDR staff, and will now undergo a legal review with CDC. It will then be distributed for comment to all federally recognized tribes. A revised version that incorporates input from tribal representatives will be published in the *Federal Register*. An optimistic timetable for finalizing this policy statement is by the Fall, 1995.

ATSDR normally establishes cooperative agreements in program areas that have been defined by a formal "Program Announcement." The agency is currently preparing its Program Announcements for FY96, and anticipates that the current complement of 24 programs will be reduced to 8, one of which would cover all activities related to Native Americans. Jim Carpenter requested that in the next several weeks, ICHHP Members provide him with suggestions for items to be considered within the scope of these cooperative agreements.

A mechanism is needed to cover the staff time for tribal participation in HHES activities; while it does *not* require a cooperative agreement to pay for tribal transportation costs to attend HHES meetings, payment for staff time is another matter.

Jim said he would look into the question of whether the ICHHP itself would be legally eligible to enter into a cooperative agreement, and continue this discussion at the May 15 meeting in Portland.

Action Items:

CDC Have Charlie Miller or someone else with knowledge about the use of tribal data summaries make a presentation at the June ICHHP meeting.

Haars Provide copies of draft Individual Dose Assessment questionnaire to HEDR project coordinators.

Have Cathy Fox-Williams make a presentation at the June ICHHP meeting about data input requirements and output alternatives currently being considered for the general population, so Members can discuss how such efforts might be appropriately tailored to the tribal community members.

Carpenter Provide feedback to Members at the May ICHHP meeting about paying for tribal staff time to participate in HHES meetings, and about ICHHP's eligibility to enter into cooperative agreements with ATSDR.

Members Get caught up on monthly progress reporting to CDC (as needed)
Submit suggestions to ATSDR for items to include in scope of anticipated cooperative agreements

Attendees:

Les Spino, CTUIR
Madeline Queahpama, Warm Springs
Barbara Aripa, Colville
David Ernst, Spokane
Sandy __, Spokane
Margaret Coffee, Coeur D'Alene
Sherri Lozon, Nez Perce
Carl Basford, Nez Perce
Allen Slickpoo, TSP
Deward Walker, TSP
Warren Bishop, TSP

Greg Combs, Washington-Ecology
Ellen Haars, Washington-Health
Van Chase, CDC
Chuck Smith, CDC
Jim Carpenter, ATSDR
Greg Thomas, ATSDR
Andy Ross, HHIN Tribal Services Program
Linda Pratt, HHIN Tribal Services Program
Gay Ann, University of Washington
Graduate School of Public Affairs
Ed Liebow, Battelle

INTER-TRIBAL COUNCIL ON HANFORD HEALTH PROJECTS

Monday, June 19, 1995

Ramada Inn
621 21st Street
Lewiston, Idaho

PROPOSED AGENDA

- 9:00 a.m. Status Updates
- Tribal Work on Data Collection and Entry -- Tribal Representatives
 - CDC Database Assistance and Demonstration -- Chase and Liebow (CDC)
- 9:45 a.m. Tribal Service Program -- Hanford Health Information Network
- Briefings and Activities Update -- Ross and Staff (IHB)
- 10:00 a.m. Hanford Thyroid Disease Study
- Briefing and Update -- Dr. Bruce Amundson
 - Native American Study Feasibility Determination
- 10:30 a.m. Break
- 10:45 a.m. Discussion of the Relationship of Tribes and Inter-Tribal Council with ATSDR
- Review of Draft "Elements for Scope of Cooperative Agreements"
 - Discussion of Arrangements for Interim Financial Support for Tribal Involvement and Participation in Hanford Health Related Projects
 - Status of Draft Government-to-Government Policy Statement
- 12:00 p.m. Lunch
- 1:30 p.m. Development of the Individual Dose Information Form
- Briefing and Update -- Dr. Pat McGavran (TSP)
- 2:15 p.m. Break
- 2:45 p.m. TSP/HEDR Briefing and Update
- Program Structure for Continuation and Completion of the HEDR Study
-- Bishop
 - Evaluation of the Present HEDR Model Related to Transfer Factors in Fish
-- Briefing on Scope of Study -- Dr. Deward Walker (TSP)
- 4:00 p.m. Adjourn

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Intertribal Council on Hanford Health Projects

Lewiston, Idaho
June 19, 1995

1. Update on Status of Tribal Projects

- OMB Clearance Renewal Application submitted to OMB as of June 19
- Yakama Nation's Best and Final Offer delivered to CDC
- Kootenai received request for proposals, requested time extension to prepare response
- Native American Lifestyle and Demography database installed at five tribal project offices; remaining to be completed shortly, as tribes request
- Training on basic use of Access database management system, and on specific use of NALD database available on request

2. Update on Hanford Health Information Network

- Tribal Environmental Health conference planned for October, probably in Yakima
- Tribal Services Program proceeding with plans to develop a video on tribal perspectives regarding Hanford; many details concerning the content of the video and the process by which the participating tribes will review and approve its production have yet to be decided.

3. Update on Hanford Thyroid Disease Study

- Full study of general population has been approved and will be underway shortly
- Population and dose estimates have been provided to Fred Hutchinson Cancer Research Center by four tribes; still waiting for information from Nez Perce, Kalispel, Coeur D'Alene, and Yakama. Power calculations and feasibility determination for cohort study cannot proceed without this information.
- Any further decisions about study design cannot be considered until the feasibility determination is made.

4. Update on Agency for Toxic Substances and Disease Registry Activities

- Status of Government-to-Government Policy Statement Development
 - Internal review comments are due to the Office of Federal Programs by June 26

- Revisions to the statement responding to these internal comments will be incorporated into a version to be published in the *Federal Register* and, at the same time, mailed to all Federally-recognized tribes, hopefully by end of July
- Interim Financial Support
 - ATSDR feels it is not in the spirit of "government-to-government" relations to provide financial assistance for tribal government representatives' time spent at HHES meetings; it is not legal to have meeting time paid for as a "speaker's fee," and the appropriate mechanism for supporting this activity is a cooperative agreement, the program announcement for which is anticipated in several months.
- Suggested Elements of Cooperative Agreement Program
 - The ICHHP suggestions have been forwarded to ATSDR staff working on drafting a program announcement, which will be completed in July. The announcement's release is planned for October or November, and it is not clear whether one or two application deadlines will be included.
 - Awards are anticipated by the end of FY-96 for work to be completed in FY97. ATSDR will consider the suggestion that the agreements be available for more than a single year.
 - ICHHP asked ATSDR to clarify how it will determine the eligibility and priority of tribal requests, with special attention to ways of reducing competition between tribes working toward a common goal.

5. Update on Individual Dose Assessment Program

- Comments are requested on three interim printed products:
 - The data record form
 - A memory tool to help prompt individuals providing information about residence and food consumption
 - The accompanying instructions
- A workshop is planned for Fall, 1995 to test the products that have been developed to that date

6. Uses of Tribal Survey Data

- CDC proposes to meet with each tribe as they complete their data collection and analysis to review data and recommend dose estimating procedures for representative individuals. For tribes that have already completed their data collection and analysis, these meetings will occur before September 30, 1995.
- A workshop is planned for later in the year to discuss issues related to the use of effective dose, organ dose, collective dose, epidemiology studies, risk analysis and communication; a special meeting for tribal concerns related to these issues is anticipated.

7. Review of Remaining HEDR Tasks

- The Technical Steering Panel expects to complete its work by the end of 1995.
- Work underway by the contractor will likely extend beyond this date.
- One task of special interest to the ICHHP, a scoping study of transfer factors in fish, was approved in Mid-May.
 - TSP member Deward Walker and Frank Half Moon (Nez Perce tribal fish biologist) are examining whether original modelling assumptions about the bioaccumulation of radionuclides in anadromous fish species are supported in the professional literature on radiation biology and fish biology.
 - The scoping study will include some review of literature concerning "resident" fish species as well.
 - A progress report is due to the TSP by July 1, and a draft report on the study's findings is due by August 1; the draft will be subject to peer review, and the ICHHP will receive regular updates on the progress of this effort.

Action Items:

- ICHHP Members that have not yet provided Fred Hutchinson Cancer Research Center with population and preliminary dose estimates for the determination of whether a Native American thyroid disease study is feasibility will do so as soon as possible.
- ICHHP and ATSDR will jointly explore other options for interim financial support.
- ICHHP will provide ATSDR with some additional suggestions regarding the desired elements of a Cooperative Agreement Program for Native American health activities.

- ICHHP Members will provide Dr. Pat McGavran (TSP) with comments concerning the Individual Dose Assessment program's interim products.
- ICHHP Members will schedule meetings with CDC staff to determine dose estimates to be calculated for each Member Tribe.
- Scoping study on transfer factors in fish will provide a progress update at the next ICHHP meeting.

Attendees:

Les Spino, Chair (Umatilla)
 Madeline Queahpama, Vice Chair
 (Warm Springs)
 Barbara Aripa, Secretary (Colville)
 Carl Basford (Nez Perce)
 Vicki Bowman (Kalispel)
 David Ernst (Spokane)
 Guy Hopkins (Kootenai)
 Moses Squeochs (Yakama)
 Warren Bishop, Facilitator (TSP)
 Allen Slickpoo (TSP)
 Deward Walker (TSP)
 Del Barth (TSP)
 Chuck Smith (USPHS)
 Van Chase (CDC)
 Jim Carpenter (ATSDR)
 Greg Combs (Washington-Ecology)

Max Power (Washington-Ecology)
 Steve West (Idaho State Health Dept)
 Pat McGavran (TSP)
 Bruce Amundson (Hanford Thyroid Disease
 Study)
 Andy Ross (HHIN Tribal Services Program)
 Linda Pratt (HHIN Tribal Services Program)
 Al Conklin (Wash State Health Dept)
 Ellen Haars (Wash State Health Dept)
 William Willard (Wash State Univ)
 Robert Mull (Wash State Univ)
 Mary Katherine Duffie (Wash State Univ)
 Sherri Lozon (Nez Perce Tribe)
 Sharon Stevens (Nez Perce Tribe)
 Stan Sobczyk (Nez Perce Tribe)
 Herman Reuben (Nez Perce Tribe)
 Ed Liebow (Battelle)



TECHNICAL STEERING PANEL OF THE HANFORD ENVIRONMENTAL DOSE RECONSTRUCTION PROJECT

Intertribal Council on Hanford Health Projects

Pasco, Washington

July 26, 1995

1. Status of ATSDR Policy Statement Development

The draft policy statement that is slated for Federal Register publication in the next several days was circulated. Once it is published, ATSDR also intends to send a copy to all federally recognized tribes, and to selected intertribal organizations, for comment. The group recommended that the announcement be accompanied by a letter briefly summarizing the history of the policy statement's development, and emphasizing the agency's interest in tribal comments. The group also recommended that language changes to the draft before publication to include mention of the federal trust responsibility. A DHHS-wide policy is also being formulated, but the timetable for completion is uncertain.

2. Status of Financial Support Issues

Completion of the OMB review of renewal application is expected near the end of September. Interview activities are on hold until this approval is renewed.

CDC can make no new funding obligations for the remainder of FY-95 (through September 30), holding up the contract award to the Yakama, and potentially delaying the award to the Kootenai of Idaho. Requests for additional funding of existing contracts cannot be honored during this period either. Several projects needed to complete the HEDR project, under the management of Radiological Assessment, Inc. are also held up until CDC can obligate funds.

No changes have occurred in the ATSDR position on near-term financial support for tribal staff time associated with Hanford Health Effects Subcommittee participation (i.e., no support forthcoming). ICHHP will send a letter to ATSDR, asking that the two HHES vacant positions reserved for Native American representatives be eliminated, and that ATSDR turn its attention to providing financial assistance for the staff time involved in participation by tribal government liaisons. ICHHP will acknowledge a resolution enacted in 1994 by the National Congress of American Indians pointing out the barriers to government-to-government relationships posed by tribal participation in Federal Advisory Committee Act-authorized activities. ICHHP will also acknowledge the ground-breaking enterprise in which the tribes and the agency are engaged.

3. Suggested Scope of Cooperative Agreement Program

ATSDR intends to review its decision in the next several days concerning whether a single cooperative agreement program can be developed for Native American Health Activities. The agency has made a strong commitment to creating a separate funding pool for tribes with geographic, historical, cultural, and legal ties to contaminated federal facilities, as the ICHHP recommended. Multi-year funding for these agreements is possible, consistent with another ICHHP recommendation.

Equipment purchases, recommended as part of the technical capacity building scope element, must be limited to less than \$5,000 per request, or a complex set of financial assistance rules apply.

It was recommended that the scope of the agreements be structured in such a way that support for inter-tribal coordination through the ICHHP is allowable, even if the ICHHP does not enter into an agreement on its own (for a variety of reasons, ICHHP may not be incorporated in a way that allows it to receive federal funds).

Drafting a Program Announcement is not expected to begin until mid-October; once the announcement is issued, ATSDR expects to offer to hold a workshop to provide guidance regarding the application process. Proposals, once submitted, are subject to an Objective Review before agreements are negotiated. This whole process is expected to take well into FY-96.

It would be to the tribes' advantage to begin to anticipate the application process.

4. Consortium for Risk Evaluation with Stakeholder Participation (CRESP)

The group heard a brief presentation about a new effort underway with funding from the DOE Office of Environmental Management aimed at setting risk-based cleanup standards with participation from a wide range of interested parties, not just technical risk assessment specialists. The consortium involves researchers from the University of Washington, Rutgers University, and a number of other institutions. Its efforts will focus on DOE's Hanford and Savannah River sites. More detailed information about the consortium and its plans will be mailed to ICHHP members.

5. Status of Tribal Proposal to the Telecommunications and Information Infrastructure Agency

The proposal submitted in April by the Northwest Portland Area Indian Health Board will be reviewed in the next several days, and winners will be asked to negotiate awards sometime in mid- to late August.

6. Meeting Schedule

Technical Steering Panel	Sept 6-8, Pasco
HHES	Sept 27-29, Boise
HHES	Nov 29-Dec 1, Seattle
Technical Steering Panel	Dec 5-7, Richland

7. Action Items

ICHHP will send a letter to ATSDR asking for closure on the issue of the HHES vacant positions and directing its attention to near-term financial assistance issues.

The Consortium for Risk Evaluation with Stakeholder Participation will provide more information concerning its work plans to the ICHHP.

Attendees:

Les Spino - CTUIR	Marie Murray - ATSDR
Madeline Queahpama - CTWSIR	Del Barth - TSP
Moses Squeochs - YIN	Greg Thomas - ATSDR
Guy Hopkins - KTI	Chuck Smith - USPHS
David Ernst - SPO	Van Chase - CDC
Fred Alt - CDA	Holly Morris - DOE-RL
Chris Young - CCT	Mike Mihalek - HHES
Warren Bishop - TSP	Gay Ann - CRESP
Jim Carpenter - ATSDR	Ed Liebow - Battelle

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INTER-TRIBAL COUNCIL ON HANFORD HEALTH PROJECTS

Wednesday, September 6, 1995

Red Lion Inn

2525 North 20th Street

Pasco, Washington

PROPOSED AGENDA

- 9:00 a.m. Status Updates
- Survey Questionnaire -- OMB Review
 - Contract Extensions and New Contracts
 - Workplan Requirements -- Monthly Reports
 - Hanford Thyroid Disease Study -- Native American Study Feasibility Determination
- 9:45 a.m. Tribal Service Program -- Hanford Health Information Network
- Briefings and Activities Update -- Ross and Staff (TSB)
- 10:15 a.m. Break
- 10:30 a.m. Development of the Individual Dose Assessment Process
 -- Kathy Fox-Williams, WA Department of Health
- Individual Dose Information Form
 - Instructional and Informational Booklet for filling out IDA Form
- 12:00 p.m. Lunch
- 1:30 p.m. Evaluation of the Present HEDR Model Related to Transfer Factors in Fish TSP Research Project
- Briefing and Progress Report -- Dr. Deward Walker (TSP)
- 2:15 p.m. TSP/HEDR Briefing and Update -- Bishop
- 2:30 p.m. Break
- 2:45 p.m. Discussion of ICHHP -- ATSDR (Hanford Health Effects Subcommittee) Relationships
- Interim Financial Support for ICHHP Members of the HHE Subcommittee
 - Projected Risk Assessment Workshops
- 4:00 p.m. Adjourn

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TECHNICAL STEERING PANEL **OF THE HANFORD ENVIRONMENTAL** **DOSE RECONSTRUCTION PROJECT**

Intertribal Council on Hanford Health Projects

Pasco, Washington
September 6, 1995

There was not a quorum for this meeting; only three Members were present (Nez Perce, Umatilla, Spokane).

Status Updates:

OMB Review of Data Collection Protocol: Approval expected by September 28. Members are urged make preparations to proceed as soon as notice of approval is received.

Contract Extensions, Modifications, and New Contracts: Once DOE funding uncertainties are clarified, award notice to Yakama and continued negotiations with Kootenai are expected to proceed swiftly. Umatilla scheduled for September 12 telephone conference with CDC to discuss contract extension. The need for extensions and modifications for other tribes should be brought to CDC's attention promptly. Tribal representatives are urged to attend more closely to monthly progress reporting requirements in their contracts; the possibility of changing this requirement to quarterly may be discussed in the context of contract modifications.

Hanford Thyroid Disease Study: A determination of the feasibility for a cohort-design Native American thyroid disease study cannot be made without information that three tribes have yet to provide. For those tribes that have submitted this information, the ICHHP will ask the Fred Hutchinson Cancer Research Center to write a letter indicating that it appears infeasible to do a cohort-design epidemiological study for an individual tribe, and that FHCRC would like to retain the data provided by the tribe to determine the feasibility of a Native American epidemiology study. TSP Member Walker encouraged the ICHHP Members to examine the advisability of proceeding with an epidemiology study, even if it is determined to be feasible to do so. ICHHP Convenor Bishop was asked to write letters to each of the three tribes from whom information has not yet been received encouraging them to provide this information.

Hanford Health Information Network Tribal Services Program

"Our Land, Our Health" Conference set to begin with Hanford Tour on September 7. A rough-cut of a video on tribal perspectives regarding Hanford is to be screened at the September 26 meeting of the HHIN Tribal Advisory Board. No word has yet been received concerning the status of the application to the Telecommunications and Information Infrastructure Agency. The Northwest Area Portland Indian Health Board has approached CDC about assuming responsibility for the Public Health Practice Training program, for which no plans have been announced about continuing it beyond

its current session. The ICHHP Chair expressed concern about conflicts posed by the HHIN-Tribal Services Program meetings schedule.

Individual Dose Assessment Development Process

Kathy Fox-Williams, from the Washington Department of Health Services, outlined progress to date in developing the Individual Dose Assessment tools for the general population. Focus groups are planned to test the IDA process, and several people recommended that plans should be made for examining how this process can be made more sensitive to tribal information needs. The ICHHP Chair asked Washington Department of Health Services to prepare a letter outlining difficulties encountered in getting the "EXPAND" automated routines to operate properly. Battelle will send Ms. Fox-Williams a copy of the Native American Lifestyle and Demography (NALD) database and technical documentation.

Transport Factors in Fish

TSP Member Walker reported to the group on his effort to date to evaluate the PNL river pathway modelling with respect to the use of professional literature on transport factors and bioaccumulation of radionuclides in fish. A progress report is due to the TSP by the end of September, and Walker requested comments on his draft. Upon a brief review of the incomplete draft, Walker was encouraged to make several revisions that (1) relate his recommendations to the literature reviewed, (2) describe the criteria by which the "relevance" of source material was determined, and (3) take a different tone in characterizing the appearance of bibliographic sources that were not cited in earlier river pathway modelling documentation. This report, when completed, will be subject to peer review by the Technical Steering Panel and CDC.

Update on TSP/HEDR Project Status

Projects that have been delayed by funding uncertainties will not be completed until after the TSP ends its work at the end of 1995. Tribal work on the HEDR Project will retain its high priority, and plans are underway to clarify the oversight role of the three states (Washington, Oregon, and Idaho) in remaining HEDR Project work. Recommendations to CDC that are to be made through the TSP must be forthcoming in the next 4 months.

ATSDR and Hanford Health Effects Subcommittee

The comment period for draft policy statement closed on September 1, and a review of the comments received will be presented at the September 26 HHES meeting in Boise.

A letter requesting agency attention to interim funding issues has been received from ICHHP, and Carpenter reported that he has received assurances that if DOE funding is approved, and the plan to create a single Native American Cooperative Agreement program does not suit ICHHP Member needs, a separate cooperative agreement program can be put in place that is more suitable. ICHHP Members were told not to

expect anything to be in place until after DOE funding is approved, which will probably not occur until December.

A series of workshops is planned by the Public Health Activities working group of the HHES to solicit input on medical monitoring issues. The first of these workshops will be held in Seattle on November 8-9, and it will focus on radiation risks. Three other workshops will follow, probably after the first of the year, focusing on the other 8 content areas identified by the Public Health Activities working group. Plans for ICHHP member participation will have to be worked out at the September 26 meeting, but ATSDR currently envisions a limited workshop invitation list, with official invitations extended to 2 HHES members and 1 ICHHP Member.

The HHES Health Studies working group has recommended to ATSDR a specific study of birth outcomes related to radiation exposure, along with the creation of an exposure registry, and a scheme for prioritizing further health studies.

Gerry Poje, visiting from the National Institute of Environmental Health Sciences, took this opportunity to inform the group of the Federal interagency working group on environmental justice, and the efforts of this Interagency Working Group's Native American Task Force, which is just about to release a document the ICHHP may find relevant concerning environmental justice executive order compliance in Indian communities. Poje will provide the ICHHP with copies of this document when it is available. Poje will also provide the group with a point of contact for the DHHS Environmental Health Policy Committee, whose membership is drawn from several HHS agencies that could be important sources of ongoing support to the ICHHP.

Action Items:

- ICHHP will ask the Fred Hutchinson Cancer Research Center to write a letter indicating that it appears infeasible to do a cohort-design epidemiological study for an individual tribe, and that FHCRC would like to retain the data provided by the tribe to determine the feasibility of a Native American epidemiology study.
- Facilitator Bishop was asked to write letters to each of the three tribes from whom information has not yet been received encouraging them to provide this information.
- The ICHHP Chair requested Washington Department of Health Services to prepare a letter outlining difficulties encountered in getting the "EXPAND" automated routines to operate properly.
- Battelle will send Ms. Fox-Williams a copy of the Native American Lifestyle and Demography (NALD) database and technical documentation.

- Gerry Poje, NIEHS, will provide the ICHHP with copies of a document from the Native American Task Force of the Interagency Working Group on Environmental Justice, when it is available.
- Poje will also provide the group with a point of contact for the DHHS Environmental Health Policy Committee.

Attendees:

Les Spino, ICHHP Chair
 Carl Basford, Nez Perce Tribe
 David Ernst, Spokane Tribe
 JR Wilkinson, CTUIR
 Warren Bishop, TSP and ICHHP
 Facilitator
 Del Barth, TSP and HHES
 Deward Walker, TSP
 Chuck Smith, PHS
 Van Chase, CDC

Jim Carpenter, ATSDR
 Lou Stone, HTDS Advisory Committee
 Greg Thomas, ATSDR
 Greg Combs, Washington-Ecology
 Kathy Fox-Williams, Washington Health
 Services
 Andy Ross, HHIN Tribal Services Program
 Gerry Poje, National Institute on
 Environmental Health Sciences
 Ed Liebow, Battelle



Meeting with Spokane Tribe CDC/NCEH Radiation Studies Branch

Atlanta, Georgia
September 14, 1995

Several Radiation Studies Branch staff, representing both the Dosimetry and Epidemiology divisions, met with David Ernst and Sandy Wyncoop to establish a process for developing dose estimates based on the data collected and analyzed by the Spokane Tribe.

The meeting reviewed:

- The tribal data collection efforts and preliminary dose estimates prepared for representative individual members of the Spokane Tribe
- The tabulated summaries from the preliminary and follow-up data collection and analysis.
- The availability of records and summary output in electronic and hard-copy formats.
- Points where coordination with the Hanford Thyroid Disease Study and Individual Dose Assessment process are needed.
- The paramount need to interpret the dose reconstruction and related health studies in terms that are meaningful and relevant to the Tribe's governing body.

Follow-up Actions:

1. Data Pooling

- CDC (Mellinger) will compare the tabulated Phase I and Phase II food consumption summaries by age/gender cohort to see if there appear to be noticeable differences in mean consumption values.
- Depending on the results of this comparison, Mellinger will either (a) suggest the best way of pooling these data for purposes of constructing CIDER diet files to be used in reference individual dose estimates, (b) request more information from Phase I individual records to complete a

more detailed test before determining whether (and how) to pool Phase I and Phase II data.

2. Dose Calculations

- Dosimetry staff will review the tabulated food consumption summaries, and begin to construct reference individual scenario files.
- Dosimetry staff will conduct sensitivity analyses on key food categories to determine the extent to which dose estimates are affected by use of non-traditional transfer factors as surrogates for traditional foods (e.g., beef cattle for elk, carrots for roots).
- Dosimetry staff will construct reference individual cases, and explicitly articulate the assumptions that are used to do so.
- CDC will ask the Spokane Tribe to review these reference cases and accompanying assumptions.
- If the reference cases appear to the Tribe to capture the range of tribal members' experience, CDC will prepare a set of dose estimates for reference individuals.
- CDC will present these results to the Tribe and be available to help interpret their meaning.

3. Information Exchange and Communications

- CDC will send a letter to the Spokane Tribe by October 15 outlining a timetable for completing the dose calculations outlined in (2) above.
- CDC will brief the Intertribal Council on Hanford Health Projects, the Technical Steering Panel, the Hanford Thyroid Disease Study, and the Washington State Department of Health Services on the process established as a result of today's meeting.
- CDC will help the Spokane Tribe establish a data file exchange capability, probably through the remote access utility package called "CDC-Wonder."

Attendees:

Mike Donnelly
Elizabeth Donnelly
Bob Whitcomp
Leann Denham,
Felix Rogers
Chuck Smith
Charlie Miller

Van Chase
Ann Mellinger
Alfredo Vergara
David Ernst
Sandy Wyncoop
Ed Liebow

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APPENDIX B

OPERATION PLAN FOR THE INTER-TRIBAL COUNCIL ON HANFORD HEALTH PROJECTS

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**OPERATION PLAN FOR THE
INTER-TRIBAL COUNCIL
ON HANFORD HEALTH PROJECTS**

(August 1994)

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OPERATION PLAN FOR THE INTER-TRIBAL COUNCIL ON HANFORD HEALTH PROJECTS (August 1994)

INTRODUCTION

The Inter-tribal Council on Hanford Health Project's (ICHHP) Operation Plan (Plan) provides a common, basic framework for coordinating technical activities of member tribes or nations and federal/state agencies facing health issues related to Hanford. The broad goal is to establish this framework for the ICHHP with attendant by-laws.

The ICHHP By-laws, to be developed at a later date, will outline procedures in coordinating tribal/federal/state activities relevant to ICHHP activities and interests. These by-laws, in turn, will guide the long-term functions of the ICHHP. By-laws by their very nature evolve as issues demand functional change. The Operation Plan and By-laws should increase the efficiency whereby member tribes and agencies can conduct various Hanford health-related studies and programs.

The ICHHP will, under this Plan and By-laws, consist of technical representatives from each of the member tribes. The ICHHP would provide technical assistance in coordinating Hanford health-related activities with the various agencies/organizations involved in doing such research. The ICHHP does not establish policy for member tribes, nor does it alter any tribes'/nation's sovereignty. Policy and contract issues are determined by the governing organization of each member tribe.

Section outline:

- INTRODUCTION
 - Provides an introduction to the ICHHP
- BACKGROUND
 - What is Hanford? Why is there this need?
- SCOPE OF THE PROBLEM
 - What is the scope of the problem?
- TRIBAL SOVEREIGNTY
 - Introduction to government-to-government relations

- MISSION STATEMENT FOR ICHHP
 - Represents core ICHHP philosophy
- INTER-TRIBAL COUNCIL ON HANFORD HEALTH PROJECTS
 - Background History of the ICHHP
- MEMBERSHIP
 - Outlines member Tribes/Nations
- COORDINATING AGENCIES OR ACTIVITIES
 - List of affected agencies
- COORDINATION OF ACTIVITIES
 - Maintaining scientific credibility
- BY-LAWS
 - Drafts under consideration

BACKGROUND

The U.S. Government in 1943 scouted locations to site a facility for the Manhattan Project. This facility, later known as the Hanford Nuclear Reservation in Southeastern Washington state, was to be the cornerstone of the nation's nuclear weapons plutonium production for nearly 50 years. Hanford nuclear operations were kept secret from the American people until the mid-1980's.

Hanford operations discharged tremendous amounts of radioactive materials and hazardous chemicals into the air, water, and soil during its operations. The magnitude of those releases, the movement of the contaminants through various pathways and the potential of the contaminants to cause adverse human health impacts are currently being researched and will continue into the foreseeable future.

Regardless, Northwest communities have become aware of the deleterious effects of radiation through the declassification of sensitive materials and studies and are now demanding that the potential link between adverse health patterns and Hanford emissions be explored. This demand creates legitimate health research and health care delivery needs. Several federal and state government agencies currently are sponsoring initiatives researching these health issues.

The Native American tribes located in the Pacific Northwest, downwind or downriver from the Hanford facility, are especially aware of the potential health effects their communities may have experienced from the five decades of exposure to Hanford operations.

Because of the unique dietary, lifestyle, and demographic characteristics of Native peoples, answering the following question is critical: *"Were tribal members, as a population subset, at greater risk to the effects of radiation than the non-Native peoples due to their unique culture and lifestyle?"* One currently established organization focused on this question is the Inter-Tribal Council on Hanford Health Projects (ICHHP).

SCOPE OF THE PROBLEM

Various health studies and programs currently underway or proposed are being sponsored or funded by the following agencies:

- US Public Health Service
 - ***Centers for Disease Control and Prevention (CDC)***
 - "Hanford Environmental Dose Reconstruction Project" (HEDRP)
 - "Hanford Thyroid Disease Study" (HTDS)
 - ***Agency for Toxic Substances and Disease Registry (ATSDR)***
 - Hanford health research and public health assessments
 - ***Indian Health Service/CDC***
 - "Public Health Practice Training Program"
- State/Federal Emergency Services Agencies
- State Health agencies of Washington, Oregon, and Idaho
- US Department of Energy (DOE)
 - ***Office of Environment, Health, and Safety***
- National Institute for Occupational Safety and Health (NIOSH)

It is highly recommended that each agency or program noted above coordinate policy development, research design, equipment utilization, and technical assistance with the ICHHP tribes to avoid duplication of services, unnecessary activities, or missed opportunities to provide targeted and desired services. The justification of the ICHHP, in preparing this Operation Plan and By-laws, is not only to coordinate technical activities between member tribes and various agencies, but to protect tribal sovereignty and to maintain scientific credibility.

TRIBAL SOVEREIGNTY

Cognizant federal agencies need to acknowledge and fulfill their trust responsibilities to tribes or nations as defined by respective Treaties, executive orders, federal laws, and federal/tribal Court rulings. The trust responsibility produces an additional responsibility which is distinctly different from an agency's responsibilities to the general public. The government-to-government relationship must be maintained.

One component of the trust responsibility is that federal agencies must acknowledge that each tribe has the right to control information pertaining to the location and use of natural or cultural resources, demographic information, and other aspects of its memberships' diet and lifestyle that may result from Hanford-health research.

MISSION STATEMENT FOR ICHHP

To protect the sovereignty of participating Tribes, to maintain the scientific credibility representing sensitive cultural information, and to support the government-to-government relationship on a technical level.

INTER-TRIBAL COUNCIL ON HANFORD HEALTH PROJECTS

The Native American Working Group (NAWG) was convened in 1991 to coordinate tribal participation in the activities of the Technical Steering Panel (TSP). The TSP directs the Hanford Environmental Dose Reconstruction Project (HEDRP).

The NAWG functioned without a formalized charter, guidelines, or memoranda since its original inception. Because of the 1994 reformulation of the TSP and the impending work associated with the Hanford Thyroid Disease Study, it became apparent to tribal representatives that there is value in continuing the NAWG. The members of the NAWG agreed, without dissent, that the NAWG is the best available forum for representing tribal technical interests to federal and state agencies. However, because of the increase in the scope of work that NAWG representatives would like to address, a new name was agreed to: the Inter-tribal Council on Hanford Health Projects (ICHHP).

Today, the ICHHP faces major decisions concerning research:

- Design for health studies (i.e., the Hanford Thyroid Disease Study)
- Training and equipment support for dose reconstruction
- Risk assessment methodology and application
- Encompassing concerns about the presentation of research project results

These challenges, along with a recent initiative by the U.S. Public Health Service (PHS) to form a Hanford Health Effects Council (HHEC), are confronting Native American communities.

The HHEC, with authority under Federal Advisory Committee Act, is to provide community, Tribal, and local governments an opportunity for involvement in the various health studies and programs managed by two PHS agencies: the Agency for Toxic Substances and Disease Registry (ATSDR) and the Centers for Disease Control and Prevention (CDC). This initiative, and others, has challenged ICHHP members to review their options.

The Operation Plan is the direct response of the ICHHP representatives placing a significant value on continuing to coordinate their technical activities through the established ICHHP. This action will aid in protecting tribal interests, rights, and responsibilities while maintaining scientific credibility.

MEMBERSHIP

The ICHHP consists of technical representatives from each tribe/nation listed below. Each tribe will appoint a representative and an alternate to participate in the ICHHP's regular or special meetings. The tribes listed below are the proposed members of the ICHHP:

- Coeur d'Alene Tribe
- Colville Confederated Tribes
- Confederated Tribes and Bands of the Yakama Indian Nation
- Confederated Tribes of the Umatilla Indian Reservation
- Confederated Tribes of the Warm Springs Indian Reservation
- Kalispel Tribes
- Kootenai Tribe of Idaho
- Nez Perce Tribe
- Spokane Tribe

Petition for membership to the ICHHP will be established in the ICHHP By-Laws.

COORDINATING AGENCIES OR ACTIVITIES

The members of ICHHP will coordinate their involvement with the following, including but not limited to, state and federal agencies:

- Agency for Toxic Substance and Disease Registry
- Center for Disease Control and Prevention
- Department of Energy
- Hanford Health Information Network-Tribal Advisory Board

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APPENDIX C

BY-LAWS FOR THE INTER-TRIBAL COUNCIL ON HANFORD HEALTH PROJECTS

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**BY - LAWS FOR THE
INTER - TRIBAL COUNCIL
ON HANFORD HEALTH
PROJECTS**

(Approved: May 4, 1995)

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**BY - LAWS FOR THE
INTER - TRIBAL COUNCIL ON HANFORD HEALTH PROJECTS
(Adopted May 4, 1995)**

PREAMBLE

Tribal governments in the area potentially affected by the Department of Energy Hanford facility, responsible for protecting the health and welfare of their membership, have taken an active part in efforts to determine Hanford's possible public health effects. Numerous efforts are underway currently, sponsored by the Department of energy and a number of agencies of the U.S. Public Health Service.

Tribal participation in Hanford-related public health studies are guided by the principles of ***coordination, tribal sovereignty*** and ***scientific credibility***.

Derived from the principle of ***sovereignty*** are the need for:

- federal, state and other agencies to fulfill their trust and other responsibilities by working with each involved tribe on a government-to-government basis; and
- each tribes right to control the distribution of information concerning the location and use of natural resources by its members, and other aspects of its members diet and lifestyle that may result in Hanford-related health effects.

From the concept of ***scientific credibility*** comes the need for:

- technically sound methods, adequate control over the quality of data collection and analysis; and
- consistency and coordination among tribes in the design and implementation of Hanford-related health research and public health activities.

These goals are consistent with:

- the needs of member tribes;
- President Clinton's Administrative Order on the tribal/federal government-to-government relationship (59 FR 22951, May 4, 1994);
- the Clinton Executive Order (12898, February 11, 1994) on environmental justice, and the trust responsibility doctrine.

Furthermore, the U.S. Department of Energy (DOE), which is a prime sponsor of numerous studies directly related to the ICHHP, promulgated an Indian Policy (DOE Order Series 1230.2, April 8, 1992). The Executive Order and the DOE 's Indian Policy are two examples of the unique status Indian tribes have relative to working with the federal government.

ICHHP BY-LAWS

I. Name of the Organization

- A. The Inter-tribal Council on Hanford Health Project (ICHHP) will be the name of the organization. The membership can change the name if they see the need to do so.
- B. The ICHHP has evolved directly from the Native American Working Group (NAWG), which was formed in 1991 to coordinate technical activities associated with the collection and analysis of Native American data for the Hanford Environmental Dose Reconstruction Project, under the guidance of the Technical Steering Panel (TSP).

II. Mission of the Organization

- A. The ICHHP is a consortium of sovereign nations. Its tribal representatives are authorized to act on technical matters, but sole authority to decide policy matters remains with each tribes' governing bodies, unless a governing body explicitly delegates his authority to its ICHHP representative.
- B. The ICHHP will provide a technical forum in which participating tribes can coordinate Hanford-related research and health activities, protect their sovereignty, and maintain the scientific credibility of work representing tribal members' lifestyles, dietary habits, and health status.
- C. The main purpose of the ICHHP is to coordinate tribal activities in research design, training, and technical issues on behalf of member tribes. This coordination should increase efficiency in the delivery of services and reduce conflicts.

III. Membership and Sponsoring Agencies

- A. Members of the ICHHP will include:

Coeur d'Alene Tribe
Colville Confederated Tribes
Confederated Tribes of the Umatilla Indian Reservation

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Confederated Tribes of the Warm Springs Indian Reservation
Confederated Tribes and Bands of the Yakama Indian Nation
Kalispel Tribe
Kootenai Tribe of Idaho
Nez Perce Tribe
Spokane Tribe

- B. Adding new membership to the ICHHP, with corresponding terms, shall be determined by quorum (Section IX) and voting procedures (Section X).
- C. Support agencies will include, but not be limited to:
 - Agency for Toxic Substances and Disease Registry
 - Centers for Disease Control and Prevention
 - Department of Energy
 - Hanford Health Information Network, Tribal Advisory Board
 - Hanford Environmental Dose Reconstruction Project, - Technical Steering Panel
 - Hanford Thyroid Disease Study
 - U.S. Indian Health Service, Portland Area Office
 - State Health Agencies of Washington, Oregon, and Idaho
 - State of Washington Department of Ecology
 - Northwest Portland Area Indian Health Board
- D. Representative from these supporting agencies and research project organizations will be invited to attend regular and special scheduled meetings of the ICHHP.

IV. ICHHP Affiliations

To increase accountability of (and assure appropriate interaction with) other advisory groups to the member tribes, the ICHHP will affiliate with these groups in the manner listed below. Affiliation with these advisory boards does not replace the need for direct, government-to-government interactions with the agencies that sponsor and benefit from the advisory boards' activities.

- A. *Hanford Health Effects Subcommittee* (sponsored by Agency for Toxic Substances and Disease Registry)
 - 1. Each member of the ICHHP will have a government liaison position on the subcommittee to ensure that ICHHP interests are brought to the subcommittee's attention.

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2. The subcommittee will recognize the ICHHP as the organization responsible for coordinating technical aspects of tribal involvement in Hanford-related health studies and other public health activities.
- B. *Hanford Thyroid Disease Study Advisory Committee* (sponsored by U.S. Centers for Disease Control and Prevention)
1. The ICHHP will request that it be assigned the responsibility to nominate tribal representatives to the Advisory Committee.
 2. The ICHHP will request regular updates from the tribal representative(s) to this committee.
- C. *Technical Steering Panel, Hanford Environmental Dose Reconstruction Project* (sponsored by U.S. Centers for Disease Control and Prevention)
1. The ICHHP will request regular updates from the tribal representative(s).
- D. *Hanford Health Information Network - Tribal Advisory Board* (sponsored by U.S. Department of Energy grant to the health agencies of Washington, Oregon, and Idaho)
1. The ICHHP will request regular updates from representatives.

V. Officers

- A. The ICHHP membership will elect/appoint a Chair, a Vice-Chair, and a Secretary.
- B. Each officer will serve a two-year term.
- C. The Chair will preside at all meetings of the ICHHP, appoint temporary officers in the absence of officers or vacancies; prepare the agendas for meetings; and carry out all duties assigned at any Regular or Special Meetings of the ICHHP.
- D. The Vice-Chair will act in place of the Chair in the event of the Chair's absence or at the Chair's request, and will succeed the Chair if, for any reason(s), the Chair is unable to serve the full term of office.

- E. The Secretary will maintain correspondence and files, distribute meeting announcements, provide minutes of each meeting to the ICHHP membership, and track activities designated as "action items" at ICHHP meetings.
- F. Vacancies will be filled by appointment as determined by the ICHHP membership. Such appointees will serve the remainder of the term for the office filled.

VI. Preparing Technical Statements and Recommendations

- A. Technical statements and recommendations on behalf of the ICHHP shall represent the consensus of tribal representative. These statements will be issued on behalf of the ICHHP, and not the member tribes, unless explicitly stated.
- B. The ICHHP will review and, if appropriate, adopt the current Amended Data and Document Release Policy (April 23, 1994) in use by the NAWG to address the current HEDRP study.
- C. The ICHHP will review and provide recommendations concerning proposed research design and related decision-making criteria; specifically for determining the feasibility of undertaking a Native American Thyroid Disease Study. This may also involve other proposed activities that may be conducted in the future.
- D. The ICHHP will identify the need for (a) additional study, research and tribal health activities, including delivery of services when these services may be Hanford related, based on findings from work currently underway; and (b) resources required to participate in these studies and other health activities.
- E. Adoption of ICHHP technical policy statements and recommendations will meet the requirements of quorum (Section IX) and voting (Section X).

VII. Meetings

- A. The ICHHP will establish an annual meeting schedule to seek information and to provide direction and guidance to the agencies responsible for conducting various Hanford-related health research and tribal health activities.

- B. Regular meetings will include reports from supporting agencies (Section III [C]) and affiliated advisory boards (Section IV) on each organization's current, proposed, or anticipated activities and efforts to address issues that were brought to their attention at previous ICHHP meetings.
- C. Special meetings of the ICHHP may be called by a quorum vote or by the Chair polling the membership in the event an issue demands immediate consideration.

VIII. Financial and Technical Support for ICHHP Activities

- A. The ICHHP will review and provide recommendations to supporting agencies concerning:
 - Training and technical assistance needed by tribal projects' staff to ensure the highest quality in Hanford health-related data collection and analysis undertaken by participating tribes. The ICHHP expects supporting agencies to coordinate the provision of training and technical assistance.
 - Training needed for agency personnel concerning relevant aspects of Native American culture, history, and political structure that will enhance "government-to-government" interactions.
 - Supporting agencies' plans for providing the financial and technical resources necessary for ICHHP members to undertake Hanford-related health research and tribal health activities.
 - The needs of the ICHHP to adequately and fully meet its organizational requirements. This may include financial assistance for full-time ICHHP support staff. Any funding for ICHHP will not affect any member tribes' current or future funding opportunities.
 - The presentation of research results to tribal members, to the general non-Indian public, to public health researchers, practitioners, and administrators.
 - Information that should be made available to tribal members concerning appropriate Hanford-related information and health care services that might be available.

IX. Quorum

- A. A quorum of the ICHHP shall consist of six (6) of the nine (9) tribes represented.

X. Voting Procedures

- A. Unanimous consent will be the goal in developing ICHHP technical policy statements or other matters that require a vote. If a formal vote is required, a two-thirds majority vote is needed to support a particular recommendation.

XI. Amendments to These By-Laws

- A. Amendments to the By-Laws can be proposed at any Regular or Special meeting by any tribal representative, and must be approved by a two-thirds majority of affirmative votes of the membership.

XII. Procedures

- A. In the absence of specific instructions from the By-Laws, the ICHHP will follow the parliamentary procedures spelled out by the *Robert's Rules of Orders*.

XIII. Adoption

- A. The adoption of these By-Laws shall be approved by unanimous consent of the ICHHP membership.


XIV. Subcommittees

- A. Subcommittees will be convened at the desire of the ICHHP membership. The ICHHP shall establish deliverables, timetables, and membership of such subcommittees.
- B. Subcommittees may convene appropriate meetings in concert with, or separate from, the main ICHHP body. Subcommittee members are eligible for appropriate funding to complete its assigned activities.

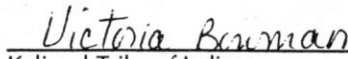
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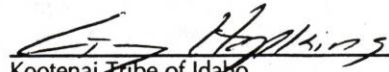
XV. ICHHP "Sunset"

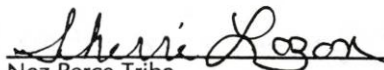
- A. The ICHHP can be disbanded with the unanimous consent of the members of the ICHHP.

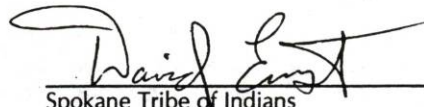

Coeur d'Alene Tribe



Colville Confederated Tribes

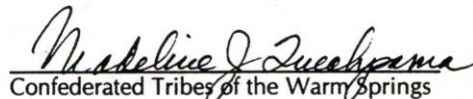

Kalispel Tribe of Indians

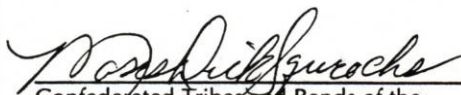

Kootenai Tribe of Idaho


Nez Perce Tribe


Spokane Tribe of Indians


Confederated Tribes of the Umatilla
Indian Reservation


Confederated Tribes of the Warm Springs


Confederated Tribes and Bands of the
Yakama Indian Nation

APPENDIX D

NATIVE AMERICAN WORKING GROUP DATA and DOCUMENT RELEASE POLICY

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NATIVE AMERICAN WORKING GROUP
DATA AND DOCUMENT RELEASE
POLICY

POLICY STATEMENT

(As Last Amended, April 23, 1994)

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**NATIVE AMERICAN WORKING GROUP
DATA AND DOCUMENT RELEASE POLICY
POLICY STATEMENT**

(As Last Amended, April 23, 1994)

A. INTRODUCTION

In order to begin to address the distinctive cultural and lifestyle differences of Native Americans in the Dose Reconstruction Project, tribal researchers have been asked to gather and report population, diet, and lifestyle information. Use of these data will be important in determining both individual radiation doses for Native Americans and collective impact on the eight tribes and tribal confederations that reside in the Intermountain Northwest. ***The Technical Steering Panel of the Dose Reconstruction Project must have sufficient high-quality data to estimate Native American doses.***

Collection, compilation, analysis, and comparative use of these data pose several issues. These issues, illustrated below, require a carefully thought out policy and process to control access to, use and evaluation of, and reporting about the data. For historic and cultural reasons, some of these issues are quite different from those affecting the general population.

B. THE ISSUES

Tribal Sovereignty: Treaties, federal laws, and state policy all recognize the governmental separateness and sovereignty of the tribes and tribal confederations. Data and document review and release issues involve government-to-government relationships for the tribes and for involved state and federal agencies.

Collective vs. Individual Focus: The overall objective of the Dose Reconstruction Project is to provide a means to estimate individual doses that may have resulted from Hanford releases. Individual Native Americans must have equal access to such estimates. In addition, however, tribes are culturally and politically distinctive. Tribal governments have responsibility for the health and welfare of enrolled members. They may pursue questions of effects, liability, compensation, etc. on behalf of their members collectively. Tribal representatives, therefore, need to consider both the individual and the collective validity and implications of HEDR information.

Written vs. Oral Culture: In order to participate in the HEDR Project, the tribes are committing to gather culturally sensitive information that might otherwise be retained and protected in an oral tradition. The written nature may make it accessible to and subject to manipulation by persons who would not otherwise have access.

Specification of Types of Native Foods and Medicines: For example, in order to see whether dietary differences from the surrounding culture led to differences in doses, information is needed on foods--game, plants, seeds, roots, etc.--consumed by Native Americans. Specific information about which things were consumed, for which purposes, and where they were found, however, may divulge cultural or religious information the tribes wish to keep confidential. Such information is protected under the American Indian Religious Freedom Act. The information may also feed commercial exploitation of materials and sources against the wishes of the tribes.

Confidentiality of the Location of Culturally Sensitive Sites: The tribes participating in the HEDR project also have concerns that these studies may reveal the location of sites where important cultural and archeological resources are situated, which resources may be subject to exploitation or raiding in the event their location is made public.

Confidentiality of Informants: Another example of the importance of oral culture relates to confidentiality of informants. Much of the dietary and lifestyle information needed to assess whether Native American doses are different from those to the general population will come from interviews with tribal members. In order to protect traditional family knowledge about sources of various materials and to prevent exploitation by non-Indian researchers, guarantees of confidentiality need to be clear and reliable.

C. TYPES OF INFORMATION

In order to develop a policy and process to deal satisfactorily with these issues, it is helpful to delineate the different kinds of information involved:

- Raw data--e.g. records of interviews, completed questionnaires, tribal rolls;
- Compiled data--e.g. tables in which raw data are summarized;
- HEDR Project calculations or conclusions developed from compiled data--e.g. preliminary estimates of individual or group radiation doses; ranges of possible doses by category of persons; comparisons of possible doses;

- Cultural or other studies not related directly to radiation dose calculations but utilizing raw or compiled data gathered in the HEDR Project; and
- Others' calculations or conclusions developed from data compiled for the HEDR Project—e.g. independent scholarly analysis; governmental studies; media analyses.

D. ISSUES TO BE ADDRESSED FOR EACH TYPE OF INFORMATION

A policy and process to protect and balance the rights and needs of individuals, tribes, researchers, and the public must address questions like the following for each of the above types of information:

- How is the information to be used?
- Who reviews it?
- How is the information distributed?
- What approvals are necessary for access to it?

E. PARTIES TO CONSIDER

The following parties in the process need to be considered:

- Tribal researchers
- Tribal members
- Tribal officials
- Native American Working Group
- TSP members
- Battelle researchers
- Other researchers
- News media
- General public

F. POLICY STATEMENT

The following policies are proposed to govern use of tribal data and calculations based on them. These policies balance legitimate tribal concerns about protection of individual and cultural rights and resources, the importance the TSP assigns to having complete, quality data and techniques used in the Dose Reconstruction Project, and the TSP's commitment that all of its work be open to public and independent scrutiny.

1. ***Each tribe retains sole possession and control of raw data collected by the tribe.*** This includes completed survey forms, questionnaire responses, audio tapes, and working notes.
 - a. In order to meet requirements for quality assurance and verification of data, the TSP may request that its members or their designees be permitted to independently review raw data. The reviewer(s) will agree not to remove, release or disclose raw data.
 - b. Tribes should take reasonable measures to protect confidentiality of informants. They will provide informed consent information and assurances of confidentiality to all persons interviewed.
2. ***Once tribal data are collected and compiled into summary tables, tribal governing authorities (e.g. Council, Board of Trustees) have the authority to decide whether to transmit the data to HEDR researchers.*** A tribal governing body may request that dose estimates be calculated based on the compiled preliminary data ***before*** deciding to release the summary data to the TSP. If the tribal governing body does not approve release of the compiled preliminary data, calculations based on the preliminary data will not be made a part of the TSP record, and the TSP will not initiate further calculations based on the preliminary data. Unless otherwise provided for through negotiations involving the TSP and that tribe, no further effort will be made by TSP to produce dose estimates based on tribe-specific preliminary data.
3. ***Once a tribal governing authority has approved release of compiled data, it may request further analysis of that data.*** All further analyses and calculations based on the approved data will be submitted to the tribal governing authority and to the Native American Working Group ***before*** being transmitted to the TSP and becoming part of the public record. The tribal governing authority and the Working Group may make comments that will be attached to the calculations and become an integral part of the record.

4. ***Once TSP receives approved compiled data and/or calculations, they become public information, consistent with TSP policy.*** Tribal governing body and Native American Working Group comments, if any, will be directly attached. A notice will also be attached, warning that the data and calculations should be referenced or reproduced only with appropriate acknowledgement of tribal comments.
5. ***Independent researchers may use the compiled data, calculations, analyses, and comments thus released by the TSP.*** They will be expected to abide by the requirement that tribal comments be acknowledged. Use of this information provides no claim to access to raw data, which is controlled by the tribal Governments.
6. ***Each tribe will be encouraged and supported as required in providing information about compiled data or calculations to its own people and to the news media.*** TSP and the Native American Working Group will assist any tribe that so requests to prepare materials for briefing tribal governing bodies or tribal members. TSP will make no press announcement or release, nor prepare documents summarizing compiled data or calculations regarding an individual tribe or tribes without the written request or concurrence of tribal governments.

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APPENDIX E

NATIVE AMERICAN DATA COLLECTION FOR THE
HANFORD ENVIRONMENTAL DOSE RECONSTRUCTION
-- STUDY PROTOCOL

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HANFORD ENVIRONMENTAL DOSE RECONSTRUCTION PROJECT

(HEDR)

NATIVE AMERICAN WORKING GROUP

PROTOCOL

AND

SOLE SOURCE CONTRACT (EXAMPLE)

DECEMBER 1992

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SECTION C - DESCRIPTION/SPECIFICATIONS/WORK STATEMENT

STATEMENT OF WORK

I. BACKGROUND

The Centers for Disease Control and Prevention (CDC) is sponsoring two major environmental and health impact studies, relating to operation of U.S. Government facilities at the Hanford Site, in Washington State. These studies are generally known as the Hanford Environmental Dose Reconstruction (HEDR) Project, and the Hanford Thyroid Disease Study (HTDS).

The HEDR project is funded as part of a Memorandum of Understanding (MOU) between the Department of Energy (DOE) and the CDC. The primary purpose of the HEDR Project is to reconstruct doses to offsite members of the public resulting from radionuclide releases since 1944. The HTDS is funded directly through Congress; its primary purpose is to determine if individuals exposed to radioactive Iodine released from the Hanford facility have an increased incidence of thyroid disease.

Eight Native American Indian Tribes (Coeur D'Alene, Colville, Kalispel, Nez Perce, Spokane, Umatilla, Warm Springs, and Yakima) have reservation lands within the study area and are participating in the HEDR and HTDS projects, as further discussed below. Success of both the HEDR and HTDS projects depends significantly upon the quality input of data which is unique to these Native American Tribes.

II. PURPOSE

The purpose of this contract is to identify, collect, record, evaluate and deliver data, unique to the _____ Tribe of Indians, as appropriate for input into the Hanford Environmental Dose Reconstruction Project, and Hanford Thyroid Disease Study, which are currently being conducted under separate CDC sponsored contracts.

III. TASKS

Independently, and not as an agent of the Government, the contractor shall furnish personnel, materials, supplies, and equipment to identify, retrieve, evaluate and deliver data, unique to the _____ Tribe of Indians, as appropriate for input into the Hanford Environmental Dose Reconstruction Project and the Hanford Thyroid Disease Studies. These data will include, but not be limited to, dietary, lifestyle, and demographic data.

More specifically, the contractor shall accomplish activities, as outlined below. During the course of the contract, it is contemplated that the Co-Project Officers will coordinate the availability of specialized technical expertise as appropriate to ensure successful attainment of coordinated contract objectives. From time to time, the Co-Project Officers may require the contractor to meet with the Government and/or CDC contractors to discuss and resolve areas of common concern.

A) Primary Data Collection and Analysis

Study Design

The contractor shall develop a tribal-specific study design, using the study protocol outline developed by the Native American Working Group (NAWG) and approved by the Office of Management and Budget (OMB), for review and approval of the Government. The study design shall address how information would be collected to ensure quality of the data, as well as describe how the contractor will:

- o Develop a sampling frame that lists those Tribal members alive today who were alive during the periods being studied by the HEDR and HTDS projects
- o Develop a sampling strategy to select a subset of those people listed in the sampling frame who reflect a representative individual for which radiation doses will be calculated
- o Develop procedures to administer the questionnaire
- o Develop a set of procedures to review each completed interview record for completeness, accuracy, and range of values
- o Describe a set of procedures for accurately creating an electronic record of the information contained on the interview record
- o Conduct oral and life history interviews, including the development of an interview guide and procedures for creating and storing information received from the interviews
- o Develop a narrative report summarizing findings from primary data collection.

Upon approval of the study design, the contractor shall commence data collection activities, and implement a tribal survey, using the study protocol outline developed by the NAWG and approved by the OMB, as outlined in the approved study design.

B) Historical Document Review and Retrieval

The contractor shall develop a plan for establishing a data base of historical documents pertinent to the HEDR and HTDS projects, for review and approval of the Government. The historical document review and retrieval plan shall:

- o Describe methods for ensuring the identification and review of relevant source materials
- o Describe procedures for ensuring the confidentiality of sensitive information obtained from historical document review
- o Describe data base development including data entry and quality control procedures
- o Describe methods for providing complete hard copy and computerized documentation
- o Describe procedures for providing a narrative report of findings

Upon approval of the historical document review and retrieval plan, the contractor shall commence data base development activities, in accordance with the approved plan.

Upon completion of the contract, the Government will be provided with complete documentation of any computer data bases utilized to meet the data collection requirements of the contract.

C) Accuracy and Precision Measurement Plan

The contractor shall develop a plan to seek independent measures of accuracy and precision of the primary data being collected, subject to review and approval of the Government. The plan shall include, but not necessarily be limited to, the following:

- o Procedures to ensure the review of available published literature regarding food consumption and mobility patterns for defined historical periods.
- o Procedures to ensure the review of unpublished data sources (e.g. community health representatives records, nutrition program records, agricultural commodities distribution program records, etc.)
- o Describe procedures for developing a narrative report comparing accuracy and precision of primary data with other published and unpublished accounts.

Upon approval of the plan, the contractor shall commence activities to ensure accuracy and precision of the primary data collected in accordance with the approved plan.

D) Review and Refinement of Data Inputs

The contractor shall provide a plan to be available, when requested by the Government, to provide clarification and consultation to other HEDR and HTDS researchers regarding the entry of all primary data and sensitivity analyses.

E) Training

The contractor will ensure that project personnel receive training as appropriate to ensure successful completion of contract activities. During performance of the contract, the Co-Project Officers will be available to assist the contractor in the identification of training needs, and provide advice on the availability of programs to meet those needs.

F) Contractor Attendance at Meetings and Workshops

The contractor shall provide appropriate representation at CDC/IHS Public Health Practice Training Program Workshops, Technical Steering Panel (TSP) meetings, Native American Working Group (NAWG) meetings and workshops, and periodic contract status meetings as may be determined appropriate by the Co-Project Officers.

G) Public Information and Communication

Significant to the success of this project is the involvement of tribal members, and dissemination of appropriate information to ensure that they are periodically appraised of the status and results of both HEDR and HTDS projects. Acting in coordination with the Government and its primary contractors for these studies, the contractor will be responsible for development and dissemination of materials as appropriate to ensure accomplishment of this objective.

IV. DELIVERABLES

A. Draft Study Design

The contractor shall provide a draft study design for meeting the requirements of this contract within 30 days of the award of this contract. This draft study design will be submitted for the approval of the Government and will describe specific methods for meeting the requirements described in Section III of the Statement of Work. The contractor shall provide five (5) copies of the draft study design.

B. Final Study Design

The contractor shall provide a final study design, incorporating the Government's review comments on the draft study design within 21 days of receiving the Government's written comments. The contractor shall provide five (5) copies of the final study design.

C. Monthly Progress Reports

The contractor shall provide monthly written progress reports, detailing the current status of ongoing contract activities. The reports shall be narrative in form and include a summary of progress toward completion of each contract task, and an assessment of any perceived problems that might impede performance. Monthly reports shall be delivered no later than the 20th of each month immediately following the reporting period. The contractor shall provide three (3) copies of each monthly report.

D. Summary of Primary Data Collection

The contractor shall provide to the Government by June 1, 1994, a summary of all primary data collected, in the format specified in the study protocol outline developed by the NAWG and approved by the OMB.

E. Draft Final Report

The contractor shall provide a draft final report no later than 45 days prior to the expiration date of this contract for review by the Government. The report shall summarize data collection and historical document review and retrieval findings, as well as a summary of accomplishments in meeting all other tasks specified in this contract. The contractor shall provide five (5) copies of this report.

F. Final Report

Following review of the draft final report by the Government and receipt by the contractor of the Government's written comments, the

Section C

contractor shall provide a final report on or before the expiration date of the contract. The contractor will provide five (5) copies of this report.

SECTION D - PACKAGING AND MARKING

THERE ARE NO CLAUSES INCLUDED IN THIS SECTION

SECTION E - INSPECTION AND ACCEPTANCE

E.1 52.252-2 CLAUSES INCORPORATED BY REFERENCE (JUN 1988)

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available.

NUMBER	DATE	TITLE
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52.246-5	APR 1984	INSPECTION OF SERVICES - COST-REIMBURSEMENT
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E.2 INSPECTION AND ACCEPTANCE

Inspection and acceptance of all work performed under this contract shall be by the Contracting Officer or a duly authorized representative.

SECTION F - DELIVERIES OR PERFORMANCE

F.1 52.252-2 CLAUSES INCORPORATED BY REFERENCE (JUN 1988)

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available.

NUMBER	DATE	TITLE
52.212-13	APR 1984	STOP-WORK ORDER Alternate I (APR 1984)

F.2 PERIOD OF PERFORMANCE

The performance period shall be 15 months from the contract award date.

F.3 DELIVERY SCHEDULE

The contractor shall deliver to the Co-Project Officers, Centers for Disease Control and Prevention, National Center for Environmental Health, Radiation Studies Branch, 4770 Buford Highway N.E., Building 101, Room 3146, Atlanta, Georgia 30341-3724 and U.S. PHS-CDC, Region 10, 2201 Sixth Avenue, M/S RX-22, Seattle, Washington 98121, the following items, within the timeframes specified below.

In addition, one (1) copy of the Monthly Progress Reports, and one (1) copy of the Final Report shall be furnished to the Contracting Officer, Centers for Disease Control and Prevention, Procurement and Grants Office, Program Acquisition Branch, Section B, 255 East Paces Ferry Road N.E., Room 507, Atlanta, Georgia 30305.

A. Draft Study Design

The contractor shall provide a draft study design for meeting the requirements of this contract within 30 days of the award of this contract. This draft study design will be submitted for the approval of the Government and will describe specific methods for meeting the requirements described in Section III of the Statement of Work. The contractor shall provide five (5) copies of the draft study design.

B. Final Study Design

The contractor shall provide a final study design incorporating the Government's review comments on the draft study design within 21 days of receiving the Government's written comments. The contractor shall provide five (5) copies of the final study design.

C. Monthly Progress Reports

The contractor shall provide monthly written progress reports, detailing the current status of ongoing contract activities. The reports shall be narrative in form and include a summary of progress toward completion of each contract task, and an assessment of any perceived problems that might impede performance. Monthly reports shall be delivered no later than the

F.3 (Continued)

20th of each month immediately following the reporting period. The contractor shall provide three (3) copies of each monthly report.

D. Summary of Primary Data Collection

The contractor shall provide to the Government by June 1, 1994, a summary of all primary data collected, in the format specified in the study protocol outline developed by the NAWG and approved by the OMB.

E. Draft Final Report

The contractor shall provide a draft final report no later than 45 days prior to the expiration date of this contract for review by the Government. The report shall summarize data collection and historical document review and retrieval findings, as well as a summary of accomplishments in meeting all other tasks specified in this contract. The contractor shall provide five (5) copies of this report.

F. Final Report

Following review of the draft final report by the Government and receipt by the contractor of the Government's written comments, the contractor shall provide a final report on or before the expiration date of the contract. The contractor will provide five (5) copies of this report.

SECTION G - CONTRACT ADMINISTRATION DATA

G.1 INVOICE SUBMISSION

- (a) The Contractor shall submit an original and four copies of contract invoices/vouchers to the address shown below:

Centers for Disease Control and Prevention (CDC), PGO
 Program Acquisition Branch
 Attn: Contracting Officer
 255 East Paces Ferry Road, N.E., Room 507
 Atlanta, Georgia 30305

- (b) The Contractor agrees that its invoice/voucher shall adhere to the guidelines set forth in the instructions entitled "Billing Instructions for Negotiated Cost Type Contract," which are attached hereto.

G.2 NEGOTIATED INDIRECT COST RATES

- (a) Notwithstanding the provisions of the clause entitled Allowable Cost and Payment in Section I, Contract Clauses, allowable indirect costs under this contract shall be obtained by applying negotiated overhead rates to bases agreed upon by the parties, as specified below.
- (b) The Contractor shall be reimbursed for allowable indirect costs at the following rate(s):

TYPE	EFFECTIVE PERIOD		RATE	BASE
	FROM	TO		
Fixed Carry-forward	Contract Award	9/30/94	34.0%	(a)
Provisional	10/01/94	until amended	34.0%	(a)

Base:

- (a) Total direct costs less capital expenditures, directly funded indirect programs, and any passthrough funds. Passthrough funds are normally defined as major subcontracts, payments to participants, stipends to eligible recipients, and subgrants, which normally require minimal administrative effort.

Treatment of Fringe Benefits: Fringe benefits applicable to direct salaries and wages are treated as direct costs; fringe benefits applicable to indirect salaries and wages are treated as indirect costs.

G.3 REIMBURSEMENT OF COST

- (a) For the performance of this contract, the Government shall reimburse the Contractor the cost (hereinafter referred to as allowable cost) determined by the Contracting Officer to be allowable in accordance with the clause

G.3 (Continued)

entitled Allowable Cost and Payment in Section I, Contract Clauses, and included in but not limited to the following:

- (1) All direct materials and supplies which are used in the performing of the work provided for under the contract, including those purchased for contracts and purchase orders.
- (2) All direct labor, including supervisory, that is properly chargeable directly to the contract, plus fringe benefits.
- (3) All other items of cost budgeted for and accepted in the negotiation of this basic contract or modifications thereto.
- (4) Special expenditures which, upon request from the Contractor, the Contracting Officer approves as being an allowable cost under this contract.
- (5) All travel costs plus per diem or actual subsistence for personnel while in an actual travel status in direct performance of the work and services required under this contract. These costs will be in accordance with the Contractor's policy and subject to the following:
 - (a) Air travel shall be by the most direct route using "air coach" or "air tourist" (less than first class) unless it is clearly unreasonable or impractical (e.g., not available for reasons other than avoidable delay in making reservations, would require circuitous routing or entail additional expense offsetting the savings on fare, or would not make necessary connections).
 - (b) Rail travel shall be by the most direct route, first class with lower berth or nearest equivalent.
 - (c) Costs incurred for lodging, meals, and incidental expenses shall be considered reasonable and allowable to the extent that they do not exceed on a daily basis the per diem rates set forth in the Federal Travel Regulations.
 - (d) Travel via privately owned automobile shall be at \$0.25 per mile.
- (6) Consultant services in an amount not to exceed \$_____
- (b) Except as stated herein, the Contractor shall not incur costs unless the prior written authorization of the Contracting Officer has been obtained. When without such prior authorization, incurrence with the intent of claiming reimbursement as direct costs shall therefore be at the Contractor's own risk.

G.4 PROJECT DIRECTOR

Work and services will be conducted under the direction of _____. The Government reserves the right to approve any necessary successor to the Project Director.

G.5 CO-PROJECT OFFICERS

Paul G. Renard and Mike Donnelly are hereby designated as the Co-Project Officers for this contract. The Co-Project Officers are responsible for guiding the technical aspects of the project. The Co-Project Officers shall not make any commitments or authorize any changes that affect the contract price, terms, or conditions; any such changes shall be referred to the Contracting Officer for action.

SECTION H - SPECIAL CONTRACT REQUIREMENTS

H.1 KEY PERSONNEL

The key personnel cited below are considered essential to the work being performed under this contract. If these individuals leave the Contractor's employ or are reassigned to other programs, the Contractor shall notify the Contracting Officer reasonably in advance and shall submit justification (including proposed substitutions) insufficient detail to permit evaluation of the impact on the program. No diversion or replacement shall be made by the Contractor without the written consent of the Contracting Officer.

Personnel

Title

Project Director
Researcher

H.2 INCORPORATION OF TECHNICAL PROPOSAL

The Contractor's technical proposal dated _____, as revised by the best and final offer dated _____, submitted in response to RFP 200-92-0558(P), is hereby incorporated into the contract by reference. The Contractor shall perform the work substantially as set forth in the technical proposal. Any revisions to the technical proposal that would significantly alter the technical approach must be approved in writing by the Contracting Officer. In the event of a conflict between Section C, Statement of Work, and the Contractor's technical proposal, Section C shall take precedence.

H.3 OFFICE EQUIPMENT

Notwithstanding any other provision of this contract, the Contractor shall not purchase or lease under this contract any items of office equipment, including office furniture or machines. Recovery of the cost of such items shall be allowable only to the extent that it is properly includable in the indirect cost charged to this contract.

H.4 IDENTIFICATION OF DATA

The Contractor shall identify the technical data delivered to the Government as required by this contract with the number of the contract and the name and address of the Contractor or subcontractor who generated the data.

H.5 DATA COLLECTION APPROVAL

This contract is subject to the Paperwork Reduction Act, requiring the Assistant Secretary for Management and Budget (ASMB) and the Office of Management and Budget (OMB) to approve the action. The Contractor is not authorized to expend any funds or take any action whatsoever in soliciting data from any of the public respondents until the Contracting Officer has notified the Contractor that ASMB and OMB final approval has been obtained. The Contractor shall provide the Project Officer with all information necessary to

H.5 (Continued)

obtain final clearance.

H.6 CONTRACT FINANCIAL REPORT

- (a) Financial reports on Form MHS-646, Financial Report of Individual Project/Contract, shall be submitted by the Contractor in accordance with the instructions which accompany the form in an original and two copies, not later than thirty (30) working days after the close of the reporting period. The line entries for subdivisions of work and elements of cost (expenditure categories) to be reported within the total contract shall be stated in paragraph (d) below. Subsequent changes and/or additions in the line entries shall be made in writing.
- (b) The first financial report shall cover the period consisting of the first full three calendar months following the date of the contract, in addition to any fractional part of the initial month.
- (c) If the final payment of this contract is to be made on the basis of a desk audit, the Contracting Officer may require the Contractor to submit detailed support for costs contained in one or more interim financial reports.

H.7 METHOD OF PAYMENT - LETTER OF CREDIT

- A. The contractor shall be paid with funds made available under Federal Reserve Letter of Credit Number 1910875018A1, established by the Department of Health and Human Services, against which the contractor will withdraw funds pursuant to Federal Reserve Letter of Credit procedures contained in Treasury Department Circular 1075 (31 CFR Part 205).
- B. At the request of the contractor and subject to the following conditions, the Government shall make advance payments, from time to time, to the contractor.
 - 1. No advance payment shall be made:
 - a. without the approval of the office administering advance payments, hereinafter referred to as the "Administering Office" and designated in paragraph H, hereof, as to the financial necessity therefor (except in the case of educational institutions),
 - b. in an amount which, together with all advance payments made, would exceed the funded contract amount, and/or
 - c. without a properly certified invoice.
 - 2. The contractor shall:
 - a. initiate cash drawdowns only when actually needed for its disbursements,
 - b. report timely the cash disbursements and balances as required by the Administering Office, and
 - c. impose the same standards of timing and amount upon any subcontractors including the furnishing of reports of cash

H.7 (Continued)

disbursements and balances. Failure to adhere to these material provisions will be considered an event under paragraph F of this clause.

- C. Funds drawn by the contractor against the Federal Reserve Letter of Credit shall be only for current allowable expenditures necessary for performance of the contract.
- D. When requested in writing by the Contracting Officer, the Contractor shall repay to the Government such part of the unliquidated balance of the advance payments as shall, in the opinion of the Contracting Officer, be in excess of the contractor's current needs or in excess of the funded contract amount.
- E. If, upon completion or termination of this contract, all amounts obtained by the contractor under the Letter of Credit have not been fully liquidated by authorized charges under the contract, the balance thereof shall be deducted from any sums otherwise due to the contractor from the Government, and any excess funds shall be repaid by the contractor to the Government upon demand.
- F. Upon the happening of any of the following events of default:
 - 1. a finding of the Administering Office that the contractor:
 - a. has failed to observe any of the covenants, conditions, or warranties of these provisions, or has failed to comply with any material provision of the contract,
 - b. has so failed to make progress, or is in such unsatisfactory financial condition, as to endanger performance of the contract,
 - c. has allocated inventory to this contract substantially exceeding reasonable requirements, or
 - d. is delinquent in payment of taxes, or costs of performance of the contract in the ordinary course of business,
 - 2. appointment of a trustee, receiver or liquidator for all or a substantial part of the contractor's property, or institution of bankruptcy, reorganization, arrangement of liquidation proceeding by or against the contractor,
 - 3. service of any writ of attachment, levy of execution, or commencement of garnishment proceedings, or
 - 4. the commission of an act of bankruptcy, the Government, without limiting any rights it may otherwise have, may, at its discretion, and upon written notice to the contractor, withhold further withdrawals under the Letter of Credit and withhold further payments under the contract. Payment can also be stopped for lack of submission of timely and accurate reports, in accordance with contract requirements. Upon the continuance of any such events of default for a period of thirty (30) days after such written notice to the contractor, the Government may, at its discretion, and without limiting any other rights which the Government may have, take the following additional actions as it may deem appropriate, under the circumstances:

H.7 (Continued)

- a. charge interest on advance payments outstanding during the period of any such default at the rate established by the Secretary of the Treasury pursuant to Public Law 92-41, 80 Statute 97 for the Renegotiation Board,
 - b. demand immediate repayment of the unliquidated balance of advance payments hereunder, and/or
 - c. take possession of, and with or without advertisement, sell, at public sale, at which the Government may be purchaser, or, at private sale, all or any part of the property in which the Government has a lien under the contract and, after deducting any expenses incident to such sale, apply the net proceeds of such sale in reduction of the unliquidated balance of advance payments hereunder and in reduction of any other claims of the Government against the contractor.
- G. No interest shall be charged for advance payments made hereunder, except during a period of default, as provided in paragraph F, hereof. The contractor shall charge interest at the rate established by the Secretary of the Treasury pursuant to Public Law 92-41, 85 Statute 97, for the Renegotiation Board, on subadvances or downpayments to subcontractors, and such interest will be credited to the account of the Government. However, interest need not be charged on subadvances on subcontracts with educational or research institutions, provided such subcontracts were awarded on a no-profit/fee basis and were for research, development or experimental work.
- H. The office administering advance payments under this contract is designated as follows:

Centers for Disease Control and Prevention
Program Acquisition Branch, Section B
Procurement and Grants Office
255 East Paces Ferry Road N.E., Room 507
Atlanta, Georgia 30305

PART II - CONTRACT CLAUSES

SECTION I - CONTRACT CLAUSES

I.1 52.252-2 CLAUSES INCORPORATED BY REFERENCE (JUN 1988)

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available.

I. FEDERAL ACQUISITION REGULATION (48 CFR CHAPTER 1) CLAUSES

NUMBER	DATE	TITLE
52.203-1	APR 1984	OFFICIALS NOT TO BENEFIT
52.203-3	APR 1984	GRATUITIES
52.203-5	APR 1984	COVENANT AGAINST CONTINGENT FEES
52.203-6	JUL 1985	RESTRICTIONS ON SUBCONTRACTORS SALES TO THE GOVERNMENT
52.203-7	OCT 1988	ANTI-KICKBACK PROCEDURES
52.209-6	NOV 1992	PROTECTING THE GOVERNMENT'S INTEREST WHEN SUBCONTRACTING WITH CONTRACTORS DEBARRED, SUSPENDED, OR PROPOSED FOR DEBARMENT
52.215-1	FEB 1993	EXAMINATION OF RECORDS BY COMPTROLLER GENERAL
52.215-2	FEB 1993	AUDIT - NEGOTIATION
52.215-31	SEP 1987	WAIVER OF FACILITIES CAPITAL COST OF MONEY
52.215-33	JAN 1986	ORDER OF PRECEDENCE
52.216-7	JUL 1991	ALLOWABLE COST AND PAYMENT

If the contract is with an educational institution, the clause, 52.216-7, ALLOWABLE COST AND PAYMENT, will be modified by deleting from paragraph (a) the words "Subpart 31.2" and substituting for them "Subpart 31.3." If the contract is with a State or local government, the clause will be modified by deleting from paragraph (a) the words "Subpart 31.2" and substituting for them "Subpart 31.6." If the contract is with a nonprofit organization other than an educational institution, a State or local government, or a nonprofit organization exempted under OMB Circular No. A-122, the clause will be modified by deleting from paragraph (a) the words "Subpart 31.2" and substituting for them "Subpart 31.7." (Reference FAR 16.307(a))

If the contract is with a hospital (profit or nonprofit), the clause will be modified by deleting from paragraph (a) the words "Subpart 31.2 of the Federal Acquisition Regulation (FAR)" and substituting "45 CFR part 74 Appendix E." (Reference HHSAR 316.307(a))

52.216-11	APR 1984	COST CONTRACT - NO FEE
52.219-8	FEB 1990	UTILIZATION OF SMALL BUSINESS CONCERNS AND SMALL DISADVANTAGED BUSINESS CONCERNS
52.219-13	AUG 1986	UTILIZATION OF WOMEN-OWNED SMALL BUSINESSES
52.220-3	APR 1984	UTILIZATION OF LABOR SURPLUS AREA CONCERNS
52.222-2	JUL 1990	PAYMENT FOR OVERTIME PREMIUMS
52.222-3	APR 1984	CONVICT LABOR
52.222-26	APR 1984	EQUAL OPPORTUNITY
52.222-35	APR 1984	AFFIRMATIVE ACTION FOR SPECIAL DISABLED AND VIETNAM ERA VETERANS
52.222-36	APR 1984	AFFIRMATIVE ACTION FOR HANDICAPPED WORKERS
52.222-37	JAN 1988	EMPLOYMENT REPORTS ON SPECIAL DISABLED VETERANS AND VETERANS OF THE VIETNAM ERA
52.223-2	APR 1984	CLEAN AIR AND WATER
52.223-6	JUL 1990	DRUG-FREE WORKPLACE

Section I

52.225-11	MAY 1992	RESTRICTIONS ON CERTAIN FOREIGN PURCHASES
52.227-1	APR 1984	AUTHORIZATION AND CONSENT
52.227-2	APR 1984	NOTICE AND ASSISTANCE REGARDING PATENT AND COPYRIGHT INFRINGEMENT
52.227-14	JUN 1987	RIGHTS IN DATA - GENERAL
52.232-17	JAN 1991	INTEREST
52.232-20	APR 1984	LIMITATION OF COST
52.232-23	JAN 1986	ASSIGNMENT OF CLAIMS
52.232-25	SEP 1992	PROMPT PAYMENT
52.232-28	APR 1989	ELECTRONIC FUNDS TRANSFER PAYMENT METHODS
52.233-1	DEC 1991	DISPUTES
52.233-3	AUG 1989	PROTEST AFTER AWARD ALTERNATE I JUN 1985
52.242-1	APR 1984	NOTICE OF INTENT TO DISALLOW COSTS
52.242-13	APR 1991	BANKRUPTCY
52.243-2	AUG 1987	CHANGES - COST-REIMBURSEMENT Alternate I (APR 1984)
52.244-2	JUL 1985	SUBCONTRACTS (COST-REIMBURSEMENT AND LETTER CONTRACTS)
52.244-5	APR 1984	COMPETITION IN SUBCONTRACTING
52.249-6	MAY 1986	TERMINATION (COST-REIMBURSEMENT)
52.251-1	APR 1984	GOVERNMENT SUPPLY SOURCES
52.253-1	JAN 1991	COMPUTER GENERATED FORMS

II. DEPARTMENT OF HEALTH AND HUMAN SERVICES ACQUISITION REGULATION (HHSAR) (48 CFR CHAPTER 3) CLAUSES

NUMBER	DATE	TITLE
352.202-1	APR 1984	DEFINITIONS Alternate I (APR 1984)
352.228-7	DEC 1991	INSURANCE-LIABILITY TO THIRD PERSONS
352.232-9	APR 1984	WITHHOLDING OF CONTRACT PAYMENTS
352.233-70	APR 1984	LITIGATION AND CLAIMS
352.242-71	APR 1984	FINAL DECISIONS ON AUDIT FINDINGS
352.249-14	APR 1984	EXCUSABLE DELAYS
352.270-6	JUL 1991	PUBLICATIONS AND PUBLICITY
352.270-7	APR 1984	PAPERWORK REDUCTION ACT

I.2 52.203-9 REQUIREMENT FOR CERTIFICATE OF PROCUREMENT INTEGRITY--MODIFICATION (NOV 1990)

- (a) Definitions. The definitions set forth in FAR 3.104-4 are hereby incorporated in this clause.
- (b) The Contractor agrees that it will execute the certification set forth in paragraph (c) of this clause when requested by the Contracting Officer in connection with the execution of any modification of this contract.
- (c) Certification. As required in paragraph (b) of this clause, the officer or employee responsible for the modification proposal shall execute the following certification:

CERTIFICATE OF PROCUREMENT INTEGRITY--MODIFICATION (NOV 1990)

- (1) I, [Name of certifier] _____, am the officer or employee responsible for the preparation of this modification proposal and hereby certify that, to the best of my knowledge and belief, with the exception of any information described in this certification, I have no information concerning a violation or possible violation of subsection 27(a), (b), (d), or (f) of the Office of Federal Procurement Policy Act, as amended* (41 U.S.C.

I.2 (Continued)

423), (hereinafter referred to as "the Act"), as implemented in the FAR, occurring during the conduct of this procurement (contract and modification number).

- (2) As required by subsection 27(e)(1)(B) of the Act, I further certify that to the best of my knowledge and belief, each officer, employee, agent, representative, and consultant of [Name of Offeror] who has participated personally and substantially in the preparation or submission of this proposal has certified that he or she is familiar with, and will comply with, the requirements of subsection 27(a) of the Act, as implemented in the FAR, and will report immediately to me any information concerning a violation or possible violation of subsections 27(a), (b), (d), or (f) of the Act, as implemented in the FAR, pertaining to this procurement.
- (3) Violations or possible violations: (Continue on plain bond paper if necessary and label Certificate of Procurement Integrity--Modification (Continuation Sheet), enter NONE if none exists)

[Signature of the officer or employee responsible for the modification proposal and date]

[Typed name of the officer or employee responsible for the modification proposal]

- * Subsections 27(a), (b), and (d) are effective on December 1, 1990.
Subsection 27(f) is effective on June 1, 1991.

THIS CERTIFICATION CONCERNS A MATTER WITHIN THE
JURISDICTION OF AN AGENCY OF THE UNITED STATES AND THE
MAKING OF A FALSE, FICTITIOUS, OR FRAUDULENT CERTIFICATION
MAY RENDER THE MAKER SUBJECT TO PROSECUTION UNDER TITLE 18,
UNITED STATES CODE, SECTION 1001.

(End of Certification)

- (d) In making the certification in paragraph (2) of the certificate, the officer or employee of the competing Contractor responsible for the offer or bid, may rely upon a one-time certification from each individual required to submit a certification to the competing Contractor, supplemented by periodic training. These certifications shall be obtained at the earliest possible date after an individual required to certify begins employment or association with the contractor. If a contractor decides to rely on a certification executed prior to the suspension of section 27 (i.e., prior to December 1, 1989), the Contractor shall ensure that an individual who has so certified is notified that section 27 has been reinstated. These certifications shall be maintained by the Contractor for a period of 6 years from the date a certifying employee's

I.2 (Continued)

employment with the company ends or, for an agency, representative, or consultant, 6 years from the date such individual ceases to act on behalf of the contractor.

- (e) The certification required by paragraph (c) of this clause is a material representation of fact upon which reliance will be placed in executing this modification.

I.3 52.203-10 PRICE OR FEE ADJUSTMENT FOR ILLEGAL OR IMPROPER ACTIVITY (SEP 1990)

- (a) The Government, at its election, may reduce the price of a fixed-price type contract or contract modification and the total cost and fee under a cost-type contract or contract modification by the amount of profit or fee determined as set forth in paragraph (b) of this clause if the head of the contracting activity or his or her designee determines that there was a violation of subsection 27(a) of the Office of Federal Procurement Policy Act, as amended (41 U.S.C. 423), as implemented in the FAR. In the case of a contract modification, the fee subject to reduction is the fee specified in the particular contract modification at the time of execution, except as provided in subparagraph (b)(5) of this clause.
- (b) The price or fee reduction referred to in paragraph (a) of this clause shall be--
 - (1) For cost-plus-fixed-fee contracts, the amount of the fee specified in the contract at the time of award;
 - (2) For cost-plus-incentive-fee contracts, the target fee specified in the contract at the time of award, notwithstanding any minimum fee or "fee floor" specified in the contract;
 - (3) For cost-plus-award-fee contracts--
 - (i) The base fee established in the contract at the time of contract award;
 - (ii) If no base fee is specified in the contract, 30 percent of the amount of each award fee otherwise payable to the Contractor for each award fee evaluation period or at each award fee determination point.
 - (4) For fixed-price-incentive contracts, the Government may--
 - (i) Reduce the contract target price and contract target profit both by an amount equal to the initial target profit specified in the contract at the time of contract award; or
 - (ii) If an immediate adjustment to the contract target price and contract target profit would have a significant adverse impact on the incentive price revision relationship under the contract, or adversely affect the contract financing provisions, the Contracting Officer may defer such adjustment until establishment of the total final price of the contract. The total final price established in accordance with the incentive price revision provisions of the contract shall be reduced by an amount equal to the initial target profit specified in the

I.3 (Continued)

contract at the time of contract award and such reduced price shall be the total final contract price.

- (5) For firm-fixed-price contracts or contract modifications, by 10 percent of the initial contract price; 10 percent of the contract modification price; or a profit amount determined by the Contracting Officer from records or documents in existence prior to the date of the contract award or modification.
- (c) The Government may, at its election, reduce a prime contractor's price or fee in accordance with the procedures of paragraph (b) of this clause for violations of the Act by its subcontractors by an amount not to exceed the amount of profit or fee reflected in the subcontract at the time the subcontract was first definitively priced.
- (d) In addition to the remedies in paragraphs (a) and (c) of this clause, the Government may terminate this contract for default. The rights and remedies of the Government specified herein are not exclusive, and are in addition to any other rights and remedies provided by law or under this contract.

I.4 52.203-12 LIMITATION ON PAYMENTS TO INFLUENCE CERTAIN
FEDERAL TRANSACTIONS (JAN 1990)

(a) Definitions.

"Agency," as used in this clause, means executive agency as defined in 2.101.

"Covered Federal action," as used in this clause, means any of the following Federal actions:

- (a) The awarding of any Federal contract;
- (b) The making of any Federal grant;
- (c) The making of any Federal loan;
- (d) The entering into of any cooperative agreement; and,
- (e) The extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

"Indian tribe" and "tribal organization," as used in this clause, have the meaning provided in section 4 of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450B) and include Alaskan Natives.

"Influencing or attempting to influence," as used in this clause, means making, with the intent to influence, any communication to or appearance before an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with any covered Federal action.

"Local government," as used in this clause, means a unit of government in a State and, if chartered, established, or otherwise recognized by a State for the performance of a governmental duty, including a local public authority, a special district, an intrastate district, a council of

I.4 (Continued)

governments, a sponsor group representative organization, and any other instrumentality of a local government.

"Officer or employee of an agency," as used in this clause, includes the following individuals who are employed by an agency:

- (a) An individual who is appointed to a position in the Government under title 5, United States Code, including a position under a temporary appointment.
- (b) A member of the uniformed services as defined in subsection 101(3), title 37, United States Code.
- (c) A special Government employee, as defined in section 202, title 18, United States Code.
- (d) An individual who is a member of a Federal advisory committee, as defined by the Federal Advisory Committee Act, title 5, United States code, appendix 2.

"Person," as used in this clause, means an individual, corporation, company, association, authority, firm, partnership, society, State, and local government, regardless of whether such entity is operated for profit or not for profit. This term excludes an Indian tribe, tribal organization, or any other Indian organization with respect to expenditures specifically permitted by other Federal law.

"Reasonable compensation," as used this clause, means, with respect to a regularly employed officer or employee of any person, compensation that is consistent with the normal compensation for such officer or employee for work that is not furnished to, not funded by, or not furnished in cooperation with the Federal Government.

"Reasonable payment," as used this clause, means, with respect to professional and other technical services, a payment in an amount that is consistent with the amount normally paid for such services in the private sector.

"Recipient," as used in this clause, includes the Contractor and all subcontractors. This term excludes an Indian tribe, tribal organization, or any other Indian organization with respect to expenditures specifically permitted by other Federal law.

"Regularly employed," as used in this clause, means, with respect to an officer or employee of a person requesting or receiving a Federal contract, an officer or employee who is employed by such person for at least 130 working days within 1 year immediately preceding the date of the submission that initiates agency consideration of such person for receipt of such contract. An officer or employee who is employed by such person for less than 130 working days within 1 year immediately preceding the date of the submission that initiates agency consideration of such person shall be considered to be regularly employed as soon as he or she is employed by such person for 130 working days.

"State," as used in this clause, means a State of the United States, the District of Columbia, the Commonwealth of Puerto Rico, a territory or possession of the United States, an agency or instrumentality of a State, and multi-State, regional, or interstate entity having governmental duties

I.4 (Continued)

and powers.

(b) Prohibitions.

- (1) Section 1352 of title 31, United States Code, among other things, prohibits a recipient of a Federal contract, grant, loan, or cooperative agreement from using appropriated funds to pay any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with any of the following covered Federal actions: the awarding of any Federal contract; the making of any Federal grant; the making of any Federal loan; the entering into of any cooperative agreement; or the modification of any Federal contract, grant, loan, or cooperative agreement.
- (2) The Act also requires Contractors to furnish a disclosure if any funds other than Federal appropriated funds (including profit or fee received under a covered Federal transaction) have been paid, or will be paid, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with a Federal contract, grant, loan, or cooperative agreement.
- (3) The prohibitions of the Act do not apply under the following conditions:
 - (i) Agency and legislative liaison by own employees.
 - (A) The prohibition on the use of appropriated funds, in subparagraph (b)(1) of this clause, does not apply in the case of a payment of reasonable compensation made to an officer or employee of a person requesting or receiving a covered Federal action if the payment is for agency and legislative liaison activities not directly related to a covered Federal action.
 - (B) For purposes of subdivision (b)(3)(i)(A) of this clause, providing any information specifically requested by an agency or Congress is permitted at any time.
 - (C) The following agency and legislative liaison activities are permitted at any time where they are not related to a specific solicitation for any covered Federal action:
 - (1) Discussing with an agency the qualities and characteristics (including individual demonstrations) of the person's products or services, conditions or terms of sale, and service capabilities.
 - (2) Technical discussions and other activities regarding the application or adaptation of the person's products or services for an agency's use.
 - (D) The following agency and legislative liaison activities are permitted where they are prior to formal solicitation of any covered Federal action--

I.4 (Continued)

- (1) Providing any information not specifically requested but necessary for an agency to make an informed decision about initiation of a covered Federal action;
 - (2) Technical discussions regarding the preparation of an unsolicited proposal prior to its official submission; and
 - (3) Capability presentations by persons seeking awards from an agency pursuant to the provisions of the Small Business Act, as amended by Pub. L. 95-507, and subsequent amendments.
- (E) Only those services expressly authorized by subdivision (b)(3)(i)(A) of this clause are permitted under this clause.
- (ii) Professional and technical services.
- (A) The prohibition on the use of appropriated funds, in subparagraph (b)(1) of this clause, does not apply in the case of--
- (1) A payment of reasonable compensation made to an officer or employee of a person requesting or receiving a covered Federal action or an extension, continuation, renewal, amendment, or modification of a covered Federal action, if payment is for professional or technical services rendered directly in the preparation, submission, or negotiation of any bid, proposal, or application for that Federal action or for meeting requirements imposed by or pursuant to law as a condition for receiving that Federal action.
 - (2) Any reasonable payment to a person, other than an officer or employee of a person requesting or receiving a covered Federal action or an extension, continuation, renewal, amendment, or modification of a covered Federal action if the payment is for professional or technical services rendered directly in the preparation, submission, or negotiation of any bid, proposal, or application for that Federal action or for meeting requirements imposed by or pursuant to law as a condition for receiving that Federal action. Persons other than officers or employees of a person requesting or receiving a covered Federal action include consultants and trade associations.
- (B) For purposes of subdivision (b)(3)(ii)(A) of this clause, "professional and technical services" shall be limited to advice and analysis directly applying any professional or technical discipline. For example, drafting of a legal document accompanying a bid or proposal by a lawyer is allowable. Similarly, technical advice provided by an engineer on the performance or operational capability of a piece of equipment rendered directly in the negotiation of a contract is allowable. However, communications with the

I.4 (Continued)

intent to influence made by a professional (such as a licensed lawyer) or a technical person (such as a licensed accountant) are not allowable under this section unless they provide advice and analysis directly applying their professional or technical expertise and unless the advice or analysis is rendered directly and solely in the preparation, submission or negotiation of a covered Federal action. Thus, for example, communications with the intent to influence made by a lawyer that do not provide legal advice or analysis directly and solely related to the legal aspects of his or her client's proposal, but generally advocate one proposal over another are not allowable under this section because the lawyer is not providing professional legal services. Similarly, communications with the intent to influence made by an engineer providing an engineering analysis prior to the preparation or submission of a bid or proposal are not allowable under this section since the engineer is providing technical services but not directly in the preparation, submission or negotiation of a covered Federal action.

- (C) Requirements imposed by or pursuant to law as a condition for receiving a covered Federal award include those required by law or regulation and any other requirements in the actual award documents.
- (D) Only those services expressly authorized by subdivisions (b)(3)(ii)(A)(1) and (2) of this clause are permitted under this clause.
- (E) The reporting requirements of FAR 3.803(a) shall not apply with respect to payments of reasonable compensation made to regularly employed officers or employees of a person.

(c) Disclosure.

- (1) The Contractor who requests or receives from an agency a Federal contract shall file with that agency a disclosure form, OMB standard form LLL, Disclosure of Lobbying Activities, if such person has made or has agreed to make any payment using nonappropriated funds (to include profits from any covered Federal action), which would be prohibited under subparagraph (b)(1) of this clause, if paid for with appropriated funds.
- (2) The Contractor shall file a disclosure form at the end of each calendar quarter in which there occurs any event that materially affects the accuracy of the information contained in any disclosure form previously filed by such person under subparagraph (c)(1) of this clause. An event that materially affects the accuracy of the information reported includes--
 - (i) A cumulative increase of \$25,000 or more in the amount paid or expected to be paid for influencing or attempting to influence a covered Federal action; or
 - (ii) A change in the person(s) or individual(s) influencing or attempting to influence a covered Federal action; or

I.4 (Continued)

- (iii) A change in the officer(s), employee(s), or Member(s) contacted to influence or attempt to influence a covered Federal action.
- (3) The Contractor shall require the submittal of a certification, and if required, a disclosure form by any person who requests or receives any subcontract exceeding \$100,000 under the Federal contract.
- (4) All subcontractor disclosure forms (but not certifications) shall be forwarded from tier to tier until received by the prime Contractor. The prime Contractor shall submit all disclosures to the Contracting Officer at the end of the calendar quarter in which the disclosure form is submitted by the subcontractor. Each subcontractor certification shall be retained in the subcontract file of the awarding Contractor.
- (d) Agreement. The Contractor agrees not to make any payment prohibited by this clause.
- (e) Penalties.
 - (1) Any person who makes an expenditure prohibited under paragraph (a) of this clause or who fails to file or amend the disclosure form to be filed or amended by paragraph (b) of this clause shall be subject to civil penalties as provided for by 31 U.S.C. 1352. An imposition of a civil penalty does not prevent the Government from seeking any other remedy that may be applicable.
 - (2) Contractors may rely without liability on the representation made by their subcontractors in the certification and disclosure form.
- (f) Cost allowability. Nothing in this clause makes allowable or reasonable any costs which would otherwise be unallowable or unreasonable. Conversely, costs made specifically unallowable by the requirements in this clause will not be made allowable under any other provision.

PART III - LIST OF DOCUMENTS, EXHIBITS AND OTHER ATTACHMENTS

SECTION J - LIST OF ATTACHMENTS		
ATTACHMENT NUMBER	TITLE	NUMBER OF PAGES
J.1	CDC Billing Instructions for Negotiated Cost-Type Contracts	7
J.2	HHS Form 646, Financial Report of Individual Project/Contract	3

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APPENDIX F

REQUEST FOR REVIEW AND APPROVAL FOR REINSTATEMENT

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**NATIVE AMERICAN DATA COLLECTION
AND ANALYSIS
FOR THE HANFORD ENVIRONMENTAL DOSE
RECONSTRUCTION (HEDR) PROJECT**

**REQUEST FOR OMB REVIEW AND APPROVAL
FOR REINSTATEMENT**

April, 1995

**Submitted to: Office of Program Planning and Evaluation (OPPE)
Centers for Disease Control and Prevention**

**Office of Health Planning and Evaluation, Division
of Data Policy, Public Health Service**

Office of Management and Budget (OMB)

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**SUMMARY OF THE SUPPORTING STATEMENT FOR
REQUEST FOR OMB REVIEW AND APPROVAL
FOR REINSTATEMENT**

**Native American Data Collection and Analysis for the
Hanford Environmental Dose Reconstruction (HEDR) Project**

In 1986, the Hanford Health Effects Review Panel, convened by the Centers for Disease Control and Prevention (CDC) at the request of the Washington State Nuclear Waste Board and the Indian Health Service (IHS), recommended that historical radiation doses from the Hanford Nuclear Site be reconstructed. The primary purpose of the Hanford Environmental Dose Reconstruction (HEDR) Project is was to estimate radiation doses that people received from Hanford Site operations beginning in 1944. Funding for the project is provided through a Memorandum of Understanding (MOU) between the Department of Energy (DOE) and the Department of Health and Human Services (DHHS). The CDC contracted with Battelle Pacific Northwest Laboratories to conduct the research. A final dosimetric report (HEDR) was submitted by the Battelle, Pacific Northwest Laboratories, in April, 1994. The HEDR Project continues to be directed by an independent Technical Steering Panel (TSP) consisting of technical experts selected by regional university representatives, as well as individuals who represent the states of Washington, Oregon, and Idaho, regional Native American tribes, and the general public.

In 1988, the Hanford Thyroid Disease Study (HTDS) was mandated by an act of Congress (P.L. 100-607). Its primary purpose was to determine whether the prevalence of thyroid disease is increased among persons exposed as young children to the releases of radioactive iodine from Hanford facility. Information from the HEDR Project will be employed by the HTDS study team to help determine if a dose-response relationship exists within the study population. Funding was appropriated by Congress to the CDC which has awarded a contract to the Fred Hutchinson Cancer Research Center in Seattle, WA, for conduct of the HTDS Study. The Hanford Thyroid Disease Study received approval from OMB for the pilot phase of its study for use through December 31, 1994, under OMB No. 0920-0296. A full Epidemiologic HTDS study was approved in January, 1995 to continue through December, 1997, under the same OMB No. 0920-0296.

Since September, 1993, CDC has awarded sole source contracts to seven of the nine Native American tribes whose reservation lands fall within the study area. These seven include, Coeur d'Alene, Colville, Kalispel, Nez Perce, Spokane, Umatilla, and Warm Springs. The Yakima Nation has not completed it's negotiations with CDC on their contract, however, it is forthcoming. The ninth

tribe, Kootenai Tribe of Idaho, just recently expressed an interest in submitting a request to CDC to undertake the tribal HEDR study, and is currently preparing a proposal. The purpose of these tribal contracts is to identify, collect, evaluate, and deliver dietary and life-style data unique to each tribe and as appropriate for input into the HEDR and HTDS projects described above.

This request for reinstatement is for a period of 3 years, for review and approval of the continued use of a study protocol design (Attachment A), tribal questionnaire (Attachment B), and instruction booklet (Attachment C). These documents will be used by those remaining tribes to continue to collect the information required for the two projects, HEDR and HTDS, once OMB clearance has been obtained. The original OMB number for this Project was # 0920-03335, issued December 30, 1993, and expired January 31, 1995.

REQUEST FOR OMB REVIEW AND APPROVAL
FOR REINSTATEMENT

Native American Data Collection and Analysis for the
Hanford Environmental Dose Reconstruction (HEDR) Project

A. JUSTIFICATION

1. Circumstances of Information Collection

The Hanford Nuclear Reservation occupies an area of approximately 560 square miles in southeastern Washington adjacent to the towns of Pasco, Kennewick, and Richland. The facility was established in 1943 as part of the Manhattan Project to produce plutonium-239 for the development of the first nuclear weapons. The initial Hanford production reactor (B) became operational in September 1944, and was followed by a second (D) in December. Two chemical separations plants, which constitutes the second phase of plutonium production, began to operate in 1944 and 1945. By 1957 there were six additional production reactors and two fuel reprocessing plants on the site.

In February 1986, largely as the result of repeated requests from citizens groups and the Native American tribes and nations of the area, as well as requests from the Centers for Disease Control and Prevention (CDC), the State of Washington, and the United States Department of Energy (DOE) made public over 19,000 pages of documents (many of which were previously classified) describing atmospheric releases of radiation that occurred between 1944 and 1957. An additional 20,000 pages were released in 1987, and approximately 25,000 more pages have been made available since late 1987. These documents indicate that during the initial years of plutonium production at Hanford, substantial quantities of radionuclides were released into the surrounding atmosphere. A primary component of these releases was radioactive iodine, principally I-131.

Although it is uncertain exactly how much material was released from the Hanford site, it is now estimated that about 740,000 curies of radioactive iodine were released into the atmosphere during the years 1944-47. (As a point of comparison, approximately 10-15 curies of I-131 were released during the Three Mile Island accident). The largest releases occurred during these

early years of Hanford operations. Radiation monitoring data recently made available indicate that these atmospheric releases of I-131 were carried by prevailing winds and deposited in areas surrounding the site.

Because I-131 concentrates in the thyroid gland, adverse health effects associated with the Hanford radiation releases would most likely be diseases of this organ. Human exposure to I-131 can take place through a number of pathways. For example, airborne radioactive material can settle on vegetation, soil, or lakes and rivers. Consumption of contaminated vegetables, roots, fish, and meat are potential pathways for human exposure. Cows may eat contaminated grass and produce contaminated milk which is then consumed by children and adults. (Attachments K,L,M, and N will provide additional insight into this process.)

The disclosure of this information prompted widespread concern among persons living close to Hanford. Residents questioned whether such releases in the past may have increased their risk of developing disease, particularly cancer. Two panels of experts and lay persons were convened in 1986 to evaluate this information and recommend a course of action. One panel, convened by CDC, concluded that substantial quantities of radionuclides, particularly I-131, had been released between 1944 and 1956, and that off-site radiation exposures to the thyroid were probably high enough to warrant further study of health effects. Specifically, two major recommendations were made:

- 1) a comprehensive study be undertaken to estimate potential radiation doses that could have been received by individuals exposed to the Hanford radiation releases; and

- 2) a study of thyroid morbidity be conducted among persons exposed to Hanford radiation.

As a result of these efforts, a comprehensive study of potential radiation doses was funded by the United States Department of Energy (DOE) through a Memorandum of Understanding (MOU) with Department of Health and Human Services (DHHS). The CDC was directed to sponsor the research which was completed by Battelle and reported by the TSP on April 21, 1994, "Summary: Radiation Dose Estimates from Hanford Radioactive Material Releases to the Air and the Columbia River." The objective of the Hanford Environmental Dose

Reconstruction (HEDR) Project was to develop estimates of potential radiation doses that people may have received from Hanford operations.

The initial technical work of the HEDR Project was performed under a CDC contract with Battelle Pacific Northwest Laboratories. The study was directed by an independent 18 member Technical Steering Panel (TSP) comprised of experts in radiation dosimetry and human population studies, as well as individuals representing the interests of Native Americans, the States of Washington, Oregon, and Idaho, and the public. Preliminary results from the HEDR Project Phase I results released in August, 1991, provide strong evidence that large numbers of people, particularly children, may have been exposed to thyroid doses in the range of several hundred rad (a measure of the amount of radiation energy absorbed by an organ such as the thyroid gland).

Native American populations with reservation lands in the study area may also have been exposed to high doses. Native American exposures may have occurred through a variety of pathways. Many Native Americans migrated from their reservation homes to potentially higher exposure areas for hunting, fishing, or gathering. Many lived, at least part of the year, out of doors. This lifestyle may have exposed individuals to fallout on land surfaces, lakes and rivers. Many Native Americans also lived on a "traditional" diet, which included game, plants, fish, and berries. These foods were eaten fresh from potentially contaminated areas (See Attachment N). A clearer understanding of how Native Americans' unique lifestyle and diet may have influenced the doses they received and the potential health effects of these doses must still be determined.

On November 4, 1988, the United States Congress enacted Public Health Law 100-607 (Attachment E), mandating the CDC to "conduct a study of thyroid morbidity of the population (including Indian tribes and tribal organizations) in the vicinity of Hanford, in the State of Washington, during the years 1944 through 1957". The Hanford Thyroid Disease Study (HTDS), being conducted to satisfy this mandate. Funding for this study was appropriated directly by Congress to CDC. A contract was awarded to the Fred Hutchinson Cancer Research Center (FHCRC) on September 19, 1989 to conduct this research. The primary objective of the Hanford Thyroid Disease Study is to determine whether thyroid morbidity (including but not limited to

hypothyroidism, benign neoplasia, and malignant neoplasia) is increased among persons exposed to releases of radioactive iodine from the Hanford Nuclear Site between 1944 and 1957, and who received a radiation dose to the thyroid as a result, relative to persons who did not receive radiation doses to the thyroid from Hanford. The pilot phase was completed January 24, 1995, "Hanford Thyroid Disease Study: Pilot Study Final Report." under CDC Contract #200-89-0716, with clearance under OMB No. 0920-0296.

Nine Native American Tribes (Coeur d'Alene, Colville, Kootenai, Kalispel, Nez Perce, Spokane, Umatilla, Warm Springs, and Yakima) have reservation lands which fall within the study area of these two major projects and therefore are involved in the research. CDC has awarded sole source contracts to seven of the tribes to gather data for both the HEDR and HTDS projects. Prior to the CDC contracts, the tribes performed HEDR-related work under a non-government contract with Battelle Pacific Northwest Laboratories, these preliminary studies were referred to as "Phase 1". The primary purpose of "Phase One" was to determine the feasibility of data gathering, and subsequent data analysis on a small sample of tribal members. This information in conjunction with HTDS methods were used to prepare the tribal protocol and HEDR questionnaire.

Technical direction and guidance for the Native American researchers is provided through the Native American Working Group (NAWG), a subcommittee of the TSP and chaired by a TSP member. The NAWG consists of members of the TSP, the HEDR Project, HTDS, the CDC, and representatives from each of the nine Native American tribes.

This request for OMB reinstatement is for the continuation of use of the tribal questionnaire and a template protocol design developed by the NAWG which will continue to be used by these tribes to collect the specific tribal information necessary for both the HEDR and HTDS studies. The tribal questionnaire was developed using the HTDS questionnaire as a model and is very similar in nature.

The protocol and tribal questionnaire have been designed specifically for these Native American tribes. They contain only those items essential in determining for each tribal "representative individual" a thyroid radiation dose from Hanford.

Changes in the tribal questionnaire were based on the fact that these data will be used to calculate radiation doses, which will then be used to determine the feasibility of conducting any future studies of health effects (including a separate study of thyroid disease in Native Americans). Specifically, the tribal questionnaire deleted questions regarding health effects (i.e. medical history, medical radiation) and also deleted questions which the HEDR computer model cannot use (i.e. water supply). Questions on specific Native American foods were added to customize the instrument and respond to Native American concerns about the effects their diets may have had on the doses they may have received. Information regarding living near, using, and working on the Columbia River downstream from Hanford were included to determine what impact a more traditional lifestyle may have had on health effects. (Attachments K,L,M, and N may provide additional insight on the relationship between radiation doses and dietary/lifestyle habits.)

The data collection authority for this study is section 301 of the Public Health Service Act (42 USC 241). (Attachment D)

2. Purpose and Use of Information

The purpose and use of the information remains unchanged since the December 1993 OMB approval.

The dietary and life-style data to be collected using the approved protocol and tribal questionnaire will be used to estimate radiation exposure and to determine whether Native American exposure differed substantially from that of the general population. Exposure estimates will then be used to determine whether a full epidemiologic study of thyroid disease specifically in the Native American population is scientifically justifiable and feasible. The dosimetry reconstruction models developed in the HEDR Project and presented by Battelle in April, 1994 will be used to calculate thyroid radiation doses for "representative individuals" determined by each of the tribes. This determination will be based on lifestyle and food consumption data believed to be typical of individual tribal members from each of the nine tribes.

The public health impacts resulting from operation of the DOE Nuclear Weapons Complex have been well cited, including those contained in the 1991 report from the United States Congress, Office of Technology Assessment

titled, Complex Cleanup - The Environmental Legacy of Nuclear Weapons Production. There are no other efforts anticipated to determine Native American radiation doses or whether or not the anecdotal reports of increased thyroid disease in the area are accurate, and if so, if they are a result of Hanford radiation releases. Additionally, the results of this data collection may be used to justify future decisions on whether to conduct further studies of potential health effects the Native American population may have experienced from Hanford radiation releases.

3. Use of Improved Information Technology

The use of improved information technology remains the same.

The collection of data from individual study subjects will continue to be collected by personal interview. Because relatively few Native American households have telephones, the Computer Assisted Telephone Interview (CATI) used in the HTDS protocol cannot be used by tribal researchers. To increase the efficiency of these personal interviews and consequently decrease respondent burden, the following procedures will be continued:

- a. Each tribal interviewer participates in a three day training program provided by the CDC/IHS Public Health Practice Training Program. The training program includes: a full review of HEDR and HTDS projects; basics of surveys; a review of the study protocol; interviewer roles and responsibilities; interview techniques; recording information; a review of the tribal questionnaire; and practice in administering the questionnaire.
- b. Interviews will occur at a site which is convenient for the study subject, most often their residence.
- c. An Instruction Booklet was sent to each person in advance of the interview to assist them in preparation and to minimize the amount of time required for the interview (Attachment C).
- d. There are no legal obstacles to reduce the burden.

4. Efforts to Identify Duplication

There have been no substantial changes in this area since the previous OMB approval.

An extensive review of the scientific literature has been conducted to find other studies of health effects from Hanford radiation releases or other similar long term exposures. There have been no studies reported of the possible doses Native Americans may have received or the possible induction of thyroid disease among Native Americans exposed to radiation releases from Hanford. Dietary and life-style data sufficient to estimate the radiation exposure of members of the nine tribes are not available elsewhere.

Although studies have been conducted on the health effects of exposure to acute high level radiation releases, the health effects of long term exposure to low levels of radiation have not been as well understood. Because the radiation exposure around Hanford occurred over a period of many years, this study will provide unique insight into the possible effects of this type of exposure on Native Americans. Also, Native American populations in the area have raised questions about whether their lifestyle and food consumption habits may have exposed them to higher levels of radiation than those experienced by the general population; the results of this data collection will help answer these questions. As previously stated, results from this data collection will be used to determine the need for additional studies of radiation induced health effects in the Native American population.

Discussions by the Fred Hutchinson Cancer Research Center, Hanford Thyroid Disease Study staff with numerous scientific experts in radiation effects, and with persons from the Department of Energy, the States of Washington, Oregon, Idaho, the Native American Tribes in the region, the US Environmental Protection Agency (EPA), Battelle Pacific Northwest Laboratories, the Technical Steering Panel (TSP) of the Hanford Environmental Dose Reconstruction Project and the Radiation Effects Research Foundation in Japan reveal no comparable study has been done or is being planned currently regarding Hanford radiation releases.

As described above, there have been no previous attempts to collect data that could be used to estimate Native Americans' radiation exposure or to determine whether Hanford radiation releases have resulted in increased thyroid disease among persons exposed, including members of the Native American populations in

the area. Routinely available mortality data are not suitable for this purpose, as most of the thyroid diseases of interest are quite treatable and seldom result in death. There are no comprehensive population based cancer registries covering the area, and no registration systems that would be suitable for tracking incidence of non-malignant thyroid disease.

5. Involvement of Small Entities

There have been no changes in this area since the previous OMB approval.

The data to be collected by the Native American researchers are to be obtained from individual study subjects or knowledgeable family members. No data will be collected from small businesses.

6. Consequences if Information Collected Less Frequently

No changes have been made in this area since the previous OMB approval.

The data collection in this study will be performed on a one time basis for each respondent. Re-contacting of selected respondents will be performed for quality control purposes only.

7. Consistency With the Guidelines in 5 CFR 1320.6

No changes have been made in this area since the previous OMB approval.

The results will be representative of the diets and life styles of "typical" members of each of the nine affected tribes. Since individual members of each tribe may have a lifestyle and diet which differs from that selected to represent the "typical" member, and since these factors are significant contributors to the potential radiation dose an individual may have received, results will not be generalizable. However, as mandated in Public Law 100-607 (Attachment E), this research will determine the feasibility of conducting a full study of the health effects, including thyroid disease, of Hanford radiation releases on Native American populations in the area.

Payment of a one time \$50 participation fee to key tribal survey respondents will be provided and is justified for a variety of reasons. Since the period

of interest began in 1944, tribal elders will be the principal respondents of the survey and will be asked to recall details of daily life 50 years ago. Payment of a participation fee will address a cultural expectation for validating the importance of this information exchange.

Additionally, the historical period in question has been marked by significant dislocations and social stress that are difficult for many tribal members to discuss. Payment of a modest fee will convey a sense that tribal members' insights and experiences make a valued contribution to the dose reconstruction and thyroid disease studies.

Finally, pilot phases of HEDR work performed by the tribes prior to the contracts with CDC and funded through contracts with Battelle Pacific Northwest Laboratories provided for payment of a participation fee. The \$50 amount was based on recommendations of the NAWG and represents an average amount provided by tribal researchers in the earlier phases of work sponsored by Battelle Pacific Northwest Laboratories (prior to government sponsorship). Tribal researchers have indicated that the community has developed an expectation for payment based on this earlier work. They further state that failure to pay a participation fee will reduce the response rate.

Supporting statements from the Chairman of the HEDR Technical Steering Panel and the Native American Working Group (NAWG) Coordinator are included as Attachments G and H respectively. Attachment G is a letter sent by the TSP Chair to all the tribes which conveys the significance of their continuing research. Attachment H is a copy of a letter from the NAWG Coordinator to the Deputy Branch Chief, Radiation Studies Branch, Centers for Disease Control and Prevention, supporting payment of a participation fee.

8.a. Consultation Outside the Agency

No changes have been made in this area since the previous OMB approval.

In conducting both the HEDR and HTDS studies, consultations have been made with the Department of Energy, members of the team conducting a study of radiation fallout effects in Utah, members of the Technical Steering Panel (TSP) of the Hanford

Environmental Dose Reconstruction (HEDR) Project, and the contractor responsible for this study, Battelle Pacific Northwest Laboratories. Research Coordinators from each of the Native American Tribes regularly attend meetings of the Native American Working Group (NAWG) and the HEDR Technical Steering Panel, and have been consulted extensively regarding alternate sources of data and the formulation of the protocol and survey instrument. A list of these tribal consultants is included in section B.5 (c) of this document.

Other consultants have been used to refine the proposed study protocol and tribal questionnaire and ensure that only data necessary and sufficient for the HEDR and HTDS projects will be collected.

A partial listing of these consultants include the following:

Ed Liebow, PhD, Battelle Pacific Northwest Laboratories, 1992 - present; (206) 528-3311.

Tracey Ikenberry, Battelle Pacific Northwest Laboratories, 1992, (509) 375-2338.

Bob Goldsmith, PhD, Director of the Office of Epidemiology and Health Surveillance, U.S. Department of Energy, 1989; (301) 353-4739.

Deward Walker, PhD, HEDR Technical Steering Panel, 1992 - present; (303) 492-6719.

Warren Bishop, HEDR Technical Steering Panel, 1992 - present, (360) 407-7119.

Max Power, PhD, Washington State Department of Ecology, 1992 - present, (360) 407-7118.

John Till, PhD, Chairman HEDR Technical Steering Panel; Member of Study Team, Utah Nuclear Testing Exposure Study, 1991 - 1994, (803) 536-4883.

Bruce Napier, PhD, HEDR Project Technical Coordinator, Battelle Pacific Northwest Laboratories, 1991 - 1994, (509) 375-3896.

Bruce Amundson, M.D., Study Management Team, Hanford Thyroid Disease Study (HTDS), Fred Hutchinson Cancer Research Center, 1992 - present, (206) 667-6026.

Ken Kopecky, PhD, HTDS Study Management Team, Fred Hutchinson Cancer Research Center, HEDR Technical

Steering Panel, 1992 - present, (206) 667-5733.

Scott Davis, PhD, Principal Investigator, HTDS, Fred Hutchinson Cancer Research Center, 1992 - present, (206) 667-5733.

Steven Helgersen, MD, M.P.H., Indian Health Service; presently Health Care Financing Administration, 1992, (206) 615-2310.

Ernie Kimball, M.P.H., Public Health Service, Indian Health Service, Portland Area Office, 1992 - present, (206) 615-2781.

Paul Garbe, DVM, Centers for Disease Control, National Center for Environmental Health, 1992 - present, (404) 488-7040.

Peter M. Houck, MD, 1992 - 1994, (206) 553-0502. Health Care Financing Administration, Region X, Seattle (206) 615-2310.

8.b. Summary of Major Problems

No changes have been made in this area since the previous OMB approval.

There have been no major problems which have not been solved through consultation to this point.

8.c. Description of Public Comment Opportunities

There have been no changes made in this area since the previous OMB approval.

NAWG and TSP meetings are open to public participation. The involvement of Native American tribes in HEDR and HTDS in general and this proposed data collection activity in particular has been approved by the government of each tribe, including its tribal council.

The HTDS study protocol underwent an extensive peer and public review process in 1990. This process included the distribution of over 150 copies of the protocol documents to both technical and non-technical persons. The general public was included in this process through a series of seven public meetings held throughout the Pacific Northwest. Extensive advertising via local

newspapers and radio stations was employed to inform the general public about the meetings. Flyers were sent to the mailing list for the HEDR project, and were distributed at public meetings.

A fact sheet on Native American involvement in the HEDR Project was mailed to those on the same mailing list and is also distributed at public meetings of the Technical Steering Panel. Copies of the HTDS study protocol were placed in over 50 public and university libraries in Washington, Oregon and Idaho for review by members of the public. Public comment forms were provided with copies of the protocol, and toll-free numbers have been established for any one wishing to comment on either the HTDS or the HEDR Project.

Following submission of the HTDS protocol by the contractor to the CDC for approval, a sixty-six page "Comment and Response Report on the HTDS Draft Protocols" was made available to the public. This report describes all comments received on the draft protocols from all sources, and any modifications made to the protocol as a result.

9. Assurance of Confidentiality

No changes have been made to this area since the previous OMB approval.

All records with identifiable information are protected by the Privacy Act System of Records 09-20-0136, "Epidemiologic Studies and Surveillance of Health Problems" and will remain the property of each tribe.

Any written records containing identifiable information will be kept in locked files. Only those tribal members directly involved in the study will have access to identifying information. Only summary information, in the form of tables, without identifiers, will be released for inclusion into the HEDR Project model.

10. Questions of a Sensitive Nature

No changes have been made in this area since the previous OMB approval.

No questions of a sensitive nature will be asked as part of this tribal questionnaire.

11. Estimates of Annualized Cost

There have been no changes to this area since the previous OMB approval. The total annualized cost for the seven existing contracts is \$732,325, which includes \$21,700, in federal staff time of three employees (30%, 5% and 5%).

There will be no direct costs to the study subject or family member respondent other than their time to participate. Survey respondents will be offered payment of a one time \$50 participation fee. The estimated time required of the study participant for review of the Interviewee Guide and administration of the questionnaire is three hours.

At this time, the following tribal contracts have been awarded:

Table 1.

NATIVE AMERICAN CONTRACTS

TRIBE	AMOUNT
COEUR D'ALENE	\$114,007
COLVILLE	\$104,190
KALISPEL	\$101,300
KOOTENAI	(PENDING REVIEW)
NEZ PERCE	\$157,768
SPOKANE	\$ 59,273
UMATILLA	\$121,880
WARM SPRINGS	\$108,617
YAKAMA	(negotiating Best and Final Offer)
TOTALS	\$767,035

(UPDATED: 03/28/95)

12. Estimates of Annualized Burden

No changes have been made in this area since the previous OMB approval.

Response burden was estimated from tribal research experience using a similar questionnaire while conducting research under a subcontract with Battelle Pacific Northwest Laboratories and prior to government sponsorship of the research. The number of respondents within each tribe will vary widely, based on the tribal membership and work already accomplished under the Battelle subcontract. Estimates included in the accompanying Table 2. are based on the total number of respondents anticipated for all nine tribes. A verification that the interview took place will be performed on an estimated 10% of randomly selected respondents within 1 week of the original interview date (Attachment J).

Table 2.

STUDY SUBJECT/FAMILY MEMBER RESPONDENT
Estimated Respondents from
Combined Nine Tribes

Form Name or Activity	No. of Respondents	No. Responses Per Respondent	Hours/Per Response	Response Burden
Instruction Booklet (Attachment C)	1500	1	1	1500
Interview Questionnaire (Attachment B)	1500	1	2	3000
Interview Verification (Attachment J)	150	1	5/60	13
TOTAL				4513

The proposed collection of information is included in the 1993-1994 Information Collection Budget as exhibit HC3-007.

13. Changes in Burden

This tribal questionnaire was a new information collection method which was employed under the first OMB clearance. We are requesting this questionnaire be continued to be used through December 1998. The burden has not been changed.

14. Time Schedule, Publication and Analysis Plans

The sampling technique for each tribe has been determined during a consultation session scheduled with a CDC sampling statistician, Mr. Virgil Peavy. The consultation was held during the first month of the study, October, 1993. Each tribe which has negotiated a contract since October 1993 has also consulted with Mr. Peavy.

Data collection using the individual tribal questionnaires is scheduled to begin within one month of OMB approval, and to conclude within six months after that. Within one month following the end of the data collection, verification, and analysis, each tribe will submit a Preliminary Data Summary to CDC according to the provisions of the "Technical Steering Panel's Native American Data and Document Release Policy"

(Attachment F).

A Data Analysis Program has been developed and tested which each tribe will use to produce their preliminary HEDR Data Summaries. Attachment O provides a set of "user friendly" instructions to assist each tribal HEDR coordinator in completing this section of their contract. Also in the attachment are Table Shells on which Preliminary Data Summaries are to be summarized and submitted to CDC.

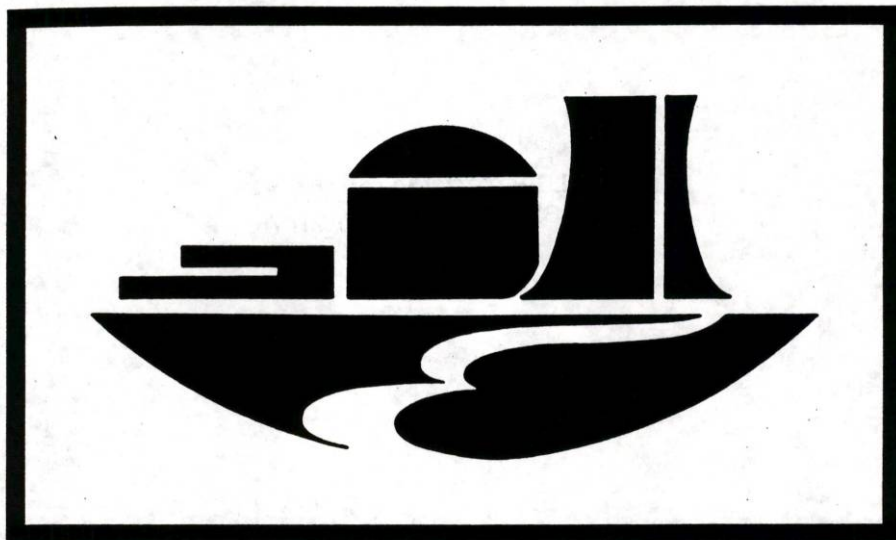
Preliminary data analysis will be performed by tribal researchers as described in Attachment A, Section IV, B, 6 i, ii, and iii, using the "Native American Data Collection and Analysis Program" of Attachment O. Data will be summarized for each individual tribe and presented in tabular form as described in Tables 1-4, of the Protocol, with expanded info onto Tables 1-32, pages ___ of Attachment P. Primary data collected will be compared with any unpublished and previously published data. The precision and accuracy of the data will be compared to other sources and summarized in a narrative report. Additional analysis will consist of calculation of doses for representative, tribal specific individuals using the computer model developed by Battelle and will be included in the final report issued by the Technical Steering Panel. The report will offer their interpretation of the study results and recommendations for additional research. This report will be issued in early to mid 1996.

Currently, Colville, Couer d'Alene, Kalispel and Spokane tribes have completed the interview phase of their HEDR Project. The Kalispel tribe has completed the data analysis of their interviews and have prepared Preliminary Data Summaries. They are preparing the final report for the HEDR Project. They have had no problems in completing the deliverables for the CDC contract. The Spokane Tribe has completed their HEDR Project and are preparing the final report. The other 2 tribes are currently validating interview records, data entry and will be ready to analyze their data by April 30, 1995. Among the remaining 4 contractual tribes, the Warm Springs have completed one-half of their interviews and have been placed on hold until OMB approval has been received. The Umatilla, Nez Perce, Yakima, and Kootenai tribes have not yet begun the interviews and will wait until OMB clearance has been received.

It has been most difficult to prepare and/or project an

September 1995

Integrated Data Base Report—1994: U.S. Spent Nuclear Fuel and Radioactive Waste Inventories, Projections, and Characteristics



Prepared for

U.S. Department of Energy
Office of Civilian Radioactive Waste Management
Office of Environmental Management
Washington, D.C. 20585

Prepared by

Oak Ridge National Laboratory
Managed by Lockheed Martin Energy Systems, Inc., for the
U.S. Department of Energy under contract DE-AC05-84OR21400

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Table 4.7. Actual 1994 cumulative storage inventory and projected average annual storage additions of LLW at DOE sites

Physical form	Cumulative ^b		Projected annual addition ^a					
			1995		1996-2000		2001-2030	
	Volume (m ³)	Activity (Ci)	Volume (m ³)	Activity (Ci)	Volume (m ³ /year)	Activity (Ci/year)	Volume (m ³ /year)	Activity (Ci/year)
Debris								
Combustible	5,699	43,015	127	22	-3	-8,600	-46	0
Noncombustible and compactible	265	71	156	16	140	21	106	48
Noncombustible and combustible mixed	13,860	498,720	375	172	-387	-77,016	41	0
Activated metal/equipment/hardware	1,554	280,028	188	45,030	418	45,100	204	0
Contaminated metal/equipment/hardware	11,319	1,572,217	243	31,773	142	5,210	300	83
Filter media (as-is, solidified, dewatered)	692	13	8	3	-12	6	-1	19
Biological waste and carcasses (as-is, solidified)	707	17,250	3	0	3	0	4	0
Asbestos-contaminated waste (as-is, solidified)	646	0	19	1	7	5	2	0
Soil/sediment/rubble (as-is, solidified, dewatered)	1,646	84	154	-1	268	0	68	0
Solidified liquids/chelates/oils	1,309	983,400	-681	-969,990	-1	0	0	0
Solidified sludge/resin (dewatered, solidified)	7,447	120	-397	-4	13	0	-22	0
Sources (sealed sources, devices, and gauges)	4 ^c	344,063 ^c	0 ^d	5 ^d	<1 ^e	101 ^e	0 ^f	<1 ^f
Paint waste	1	0	0	0	0	0	0	0
Salt waste	161	4	0	0	0	0	0	0
Incinerator ash (solidified, as-is)	169	0	2	0	2	0	3	0
Activated carbon (charcoal)	82	0	2	0	3	0	1	0
Other inorganic particulates	1,561	49	18	0	13	-1	0	0
Other								
EM-30 program waste	11,981	186,397	49	0	54	0	120	0
EM-40 program waste	67,000 ^{g,h}	i	i	i	i	i	i	i
Total	125,890 ^j	3,925,431	268	-892,972	661	-35,175	782	151

^aNegative values indicate a decrease in stored volume or radioactivity.^bCumulative storage as of December 31, 1994.^cIncluded in radioactivity value for sources are 1,085 sources with no volume estimate.^dIncluded in radioactivity value for sources are 58 sources with no volume estimate.^eIncluded in radioactivity value for sources are 189 sources with no volume estimate.^fIncluded in radioactivity value for sources are 20 sources with no volume estimate.^gFor EM-40 program LLW, data only available for cumulative storage volume for physical form "other." FUSRAP and UMTRAP sites are not included.^hExcludes 10,000 m³ at Fernald and 190,000 m³ at Weldon Spring of 11c(2) by-product material that is in storage. Total shown is rounded to two significant figures.ⁱNot available.^jBased on numerical sum of separate site entries.

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overall time schedule for the entire HEDR project. The main reasons are that - several tribes took a longer period of time negotiating their contracts with CDC and thus began their projects at different starting dates; internal tribal factors have impeded program managers access to tribal rolls needed to determine the sampling frame; other tribal activities took priority over the HEDR project; and, many of the tribal HEDR staff, who were hired on temporary status, have moved on to more permanent positions. In addition, agency delays have caused tribal delays for instance - the first OMB approval clearance process took several months delaying the use of an approved tribal questionnaire which had to be revised several times to incorporate input criteria required by the TSP; a data entry program had to be developed and field tested prior to tribal use; and, finally a "user friendly" data analysis program had to be developed and tested before such a large data base could be accommodated.

At this time, the entire CDC tribal project technical programs have been developed and tested and are in use. With the use of these various instruments, final results are now being produced by 4 tribes. For the remaining 5 tribes, yet to begin and/or complete their projects, all instruments are now in place, therefore, no further delays are anticipated.

B. COLLECTION OF INFORMATION EMPLOYING STATISTICAL METHODS

No substantial changes have been made to this area since previous OMB approval.

1. Respondent Universe and Sampling Methods

a. Respondent universe

The respondent universe will be males and females, regardless of residence, who were alive during any of the years 1944 through 1947 and 1964 through 1966, and were ever enrolled as members of any of the nine Native American tribes named earlier in this application.

b. Sampling methods

Because the populations of the nine tribes vary substantially (from 150 to 8,000 persons), the decision whether to employ probability-based sampling and the sampling method to be used will be made on a tribe-by-tribe basis. If probability-based sampling is not used, then all eligible tribal members will be invited to participate. The sampling approach for each tribe

receiving a CDC contract beginning October 1993 was determined during a consultation session scheduled with a CDC sampling statistician, Mr. Virgil Peavy, during October, 1993, the first month after receiving the award. It was suggested that probability-based sampling be performed to choose individuals to represent the study population if justified by the number of individuals in each population subgroup of the sample frame and the resources available to carry out the survey. Random sampling or random-start, systematic sampling would be the methods used.

The sampling component of the HEDR study protocol was completed for each tribe when population and preliminary food consumption data became available upon the completion of Collection and collation of Phase 1 data conducted under previous non-government contracts with Battelle Pacific Northwest Laboratories.

It was advised that if probability-based sampling was not used for a given tribe because of a small sample frame for that tribe, then a survey of all members of that tribe's sample frame should be attempted. A sampling statistician has been consulted to assist in finalizing sample design.

2. Information Collection Procedures

No substantial changes have been made in this area since previous OMB approval.

a) Sample Frame

The sample frame will be a list of all members of the study population who are currently alive and who were alive at any time during the periods 1944-1947 or 1964-1966. A list of these individuals will be identified as described in the study protocol (Attachment A) section IV.B.2.a.i-ii (Page 4 of protocol). Tribal researchers will develop this list using data sources which include tribal enrollment lists, and other data files from the Bureau of Indian Affairs (BIA) or the Indian Health Service (IHS). Data will be sought from a subject's older relatives (i.e., mother, father, aunt, uncle, siblings) for years when the subject was under 15 years of age. Methods and procedures for finding subjects and introducing the survey will be developed by individual tribal researchers as described in the protocol (Attachment A)

section IV.B.4.c,d. (Page 9 of protocol). Survey introductions developed by tribal researchers will be subject to CDC review and approval. Survey participants will be issued a statement of informed consent developed by the individual tribes. This statement will be similar in nature to one presented as Attachment I of this document and will be subject to CDC review and approval. Statements of informed consent will include required references to legislative authorization, use to be made of the data, the voluntary nature of participation, and any consequences of not participating.

b) Stratification

The sample frame may be stratified if probability-based sampling is to be used and the sample frame is of adequate size. Stratification variables would include sex, and might include age (if population data demonstrate sufficient heterogeneity), and residence if other data sources (e.g., ethnographic studies) suggest that given residency sub-populations have diets and life-styles that differ substantially from the entire population.

c) Sample size and accuracy needs

If sampling is used, the sample size will be chosen so that the proportion of respondents answering "yes" to yes/no questions is within 10% of the true proportion and the mean value of responses to continuous-variable questions is within 10% of the true mean. These criteria have been specified as sufficient and acceptable by the dose modelers at Battelle Pacific Northwest Laboratories. The sample size will be calculated using standard methods described in: Cochran, WG. 1977. Sampling Techniques, 3rd edition, Wiley, New York, Eq. 4.2, p.75; and Gilbert, RO. 1987. Statistical Methods for Environmental Pollution Monitoring, Van Nostrand Reinhold, New York, Eq. 4.12, p. 33. Sample size calculations have been performed in conjunction with a sampling statistician from the Centers for Disease Control.

Problems with recalling dietary information will be minimized by using an Instruction Booklet (Attachment C) that includes memory prompts specifically developed for and by each tribe. In addition, the mathematical computer model

developed by Battelle Laboratories assumes that there will be dose uncertainty caused by inaccurate recall, and therefore calculates a dose range, rather than a point estimate.

d) Unusual problems regarding sampling

The large variation in tribal populations and the current lack of population data for the years of interest (1944-47 and 1964-66) make it impossible at this time to describe final sampling designs. A specific sampling plan has been submitted by nine tribes presently under contract with CDC.

e. Data collection cycle

Data will be collected once from each study subject, with the exception of selected subjects who will be recontacted for data quality control reasons. Survey respondents will be offered a one time \$50 payment for their participation in the survey.

3. Methods to Maximize Response Rates

It initially was difficult to predict the expected response rate for tribes that ultimately would use probability-based sampling because: 1) it was not yet known which tribes would use such sampling and 2) the sampling methods included in the study protocol have not been employed in any of the tribes' previous work on this project. However, several of the smaller tribes have achieved near complete response during preliminary field work from subjects chosen with non-probability based methods.

In addition, preliminary results of a similar survey being used in the Hanford Thyroid Disease Study (HTDS) pilot phase, have demonstrated an 83% response rate. The response rate for the 4 tribes who have completed their interviews has been more than 90%.

Methods for making initial contact with subjects will be determined by tribal researchers and based on local resources, traditions, and conditions. Use of an initial contact letter will be recommended. At least five attempts will be made to locate and enroll individuals selected for interview. A variety of methods (e.g., letter,

telephone, home visit) will be used if the initial attempt to contact is unsuccessful.

Once initial contact has been made, the project will be explained to the subject. If he/she agrees to participate, an Instruction Booklet (Attachment C) will be sent prior to the interview. This book will further explain the project, include memory prompts, and encourage note taking so that the interview itself will be as short as possible and thus respondent burden will be reduced. Problems with English-language literacy are not anticipated in this study group.

Key survey respondents will be offered a one time \$50 payment for their participation in the survey. Justification for this payment is included in Section A-8 of this request.

Sample size calculations, if performed, will anticipate non-responders. Should the expected non-response rate be exceeded, additional subjects will be chosen using probability-based techniques, in consultation with a statistician.

4. Tests of Procedures

No major changes were made to this area, other than those indicated since the previous OMB approval.

a. Pilot testing

Previous tribal experience with HEDR data collection activities will partially substitute for pilot testing. However, the procedure described in the study protocol and tribal questionnaire will be tested on nine tribal employees who will not be included in the main study. All tribes under contract have completed the pilot test of the questionnaire using 9 or fewer people. The primary purpose of doing the pilot test was to determine how long it would take to implement the questionnaire. Most tribes determined it would take about two hours.

b. Use of survey instrument in previous studies

The tribal questionnaire is a derivative of the Hanford Thyroid Disease Study questionnaire, OMB Number 0920-0296.

Changes in that OMB approved tribal questionnaire

have been made for a variety of reasons.

First, this tribal research will focus on calculating radiation doses, not on determining health effects.

Second, questions regarding Native American food consumption have been added to address concerns that these unique diets may have contributed to higher doses.

Third, some of the data asked for in the HTDS questionnaire is not needed or cannot be utilized in the HEDR computer model.

Specifically, alterations of that OMB approved tribal questionnaire include: 1) deletion of a large number of questions regarding medical history, exposure to medical radiation, water supply, subjects' mothers' diet during pregnancy and lactation; 2) addition of questions regarding fish consumption; 3) modification of some questions to reflect traditional Native American foods; and, 4) some questions were added to determine exposure to and daily use of Columbia River water during the study period.

c. Notification of OMB of modifications

OMB will be informed as soon as possible of any changes in the protocol or survey instrument that result from pilot testing.

5. Statistical Consultants

No changes have been made to this area, unless otherwise indicated since the previous OMB approval.

a. Data collection Study Design

Peter M. Houck, MD
Initially, Radiation Studies Branch, Division of
Environmental Hazards and Health Effects, National
Center for Environmental Health, CDC. 206-553-0502
Now with HCFA, Region X Seattle, 206-615-2310.

Dr. Houck prior to moving to HCFA, developed a rough draft of adapting the protocol to a study design to be used by the tribes. CDC staff

including, Dr. Anne Mellinger and Vanette Chase, converted the study design into a questionnaire format, from which a workable data entry program was developed into which the tribal HEDR coordinators inputted their interview data.

The EpiInfo Program which was used to develop the tribal questionnaire was too difficult to use. A more "user friendly" program was developed by Battelle staff, Dr. E. Liebow and Marcus Lester, and CDC staff, Vanette Chase. Microsoft Access v. 2 software was used to develop both a data entry and data analysis program which the tribes are being trained to use in the analysis phase of their projects. The final product, Preliminary Data Summaries, remains the same.

b. Statistical consultants

Virgil Peavy, MS
Public Health Practice Program Office, Office of
the Director, CDC. 404-639-0400

Kenneth Kopecky, PhD
Fred Hutchinson Cancer Research Center, Seattle,
WA. 206-667-5733

Scott Davis, PhD
Fred Hutchinson Cancer Research Center, Seattle,
WA. 206-667-2750

Marcus Lester
Computer Programmer, Battelle Human Affairs
Research Center, Seattle, 206 528-3308

Mr. Lester, with Dr. Liebow and Vanette Chase developed a "Native American Data Analysis Program" which the HEDR coordinators are using to analyze their data. The resulting Preliminary Data Summaries will be used to calculate individual and representative doses.

Edward Liebow, PhD
Battelle Human Affairs Research Center, Seattle,
WA. 206-528-3311

Tracey Ikenberry
Battelle Pacific Northwest Laboratory, Richland,
WA. 509-375-2338

c. Data collection/ Deliverable receipt

Mr. Fred Alt - (Data Collection)
Coeur d'Alene Tribal Headquarters (208) 274-3101

Mr. Cliff Sijohn
Coeur d'Alene Tribal Headquarters (208) 274-3101

Ms. Barbara Aripa - (Data Collection)
Colville Tribal Headquarters (509) 634-4711

Ms. Sally Ann Toulouse
Colville Tribal Headquarters (509) 634-8811

Ms. Vickie Bowman - (Data Collection)
Kalispel Tribal Headquarters (509) 445-1147

Mr. David Bonga
Kalispel Tribal Headquarters (509) 445-1147

Carl Basford - (Data Collection)
Nez Perce Tribe (208) 843-2253

Ms. Donna Powakee (Administration)
Nez Perce Tribe (208) 843-5423

Mr. David Ernst - (Data Collection and
Administration)
Spokane Tribal Headquarters (509) 258-4581

Mr. J.R. Wilkinson - (Data Collection)
Confederated Tribes of the Umatilla Indian
Reservation (503) 276-3449

Mr. Joseph Richards- (Administration)
Confederated Tribes of the Umatilla Indian
Reservation (503) 276-3447

Ms. Madeline Queahpama - (Data Collection)
Confederated Tribes of the Warm Springs (503)
553-3252

Ms. Bonnie Langeliers- (Administration)
Confederated Tribes of the Warm Springs (503)
553-3218

Mr. Moses Dick Squeochs - (Data Collection and
Administration)
Confederated Tribes and Bands of the Yakama Indian
Nation (509) 865-5121

Mr. Mark Federer
Contracts Specialist
Centers for Disease Control and Prevention

Ms. Erika Clarke
Contracts Specialist
Centers for Disease Control

Lisa Jordan
Contract Specialist
Centers for Disease Control

Barry Smith
Contract Specialist
Centers for Disease Control

Mr. Michael R. Donnelly
Project Officer, Atlanta, GA
Centers for Disease Control

Mr. Charles Smith
Public Health Advisor, Program Field Manager
Centers for Disease Control, Seattle, WA

d. Data analysis

Bruce Napier, PhD,
Edward Liebow, PhD
Battelle Pacific Northwest Laboratory, Richland
WA.

Bruce Amundson, MD
Fred Hutchinson Cancer Research Center, Seattle,
WA.

Charles W. Miller, PhD
Radiation Studies Branch
Centers for Disease Control

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**NATIVE AMERICAN DATA COLLECTION AND ANALYSIS
FOR THE HANFORD ENVIRONMENTAL DOSE RECONSTRUCTION
(HEDR) PROJECT**

**REQUEST FOR OMB REVIEW AND APPROVAL
FOR REINSTATEMENT**

LIST OF ATTACHMENTS

- Attachment A - Study Protocol for Native American Data Collection for the Hanford Environmental Dose Reconstruction Project
- Attachment B - Tribal Questionnaire, dated August 15, 1994
- Attachment C - Instruction Booklet
- Attachment D - Copy of Legislation Authorizing Data Collection (Section 301, Public Health Service Act)
- Attachment E - Copy of Public Health Law 100-607
- Attachment F - Native American Data and Document Release Policy (with cover letter from Technical Steering Panel)
- Attachment G - Copy of Letter from John E. Till, Chairman, Technical Steering Panel (sent to all Native American Tribes involved in Hanford studies)
- Attachment H - Copy of Letter from Warren A. Bishop, Coordinator, Native American Working Group and Technical Steering Panel member (sent to Deputy Branch Chief, Radiation Studies Branch, Centers for Disease Control and Prevention)
- Attachment I - Sample Statement of Informed Consent
- Attachment J - Tribal Questionnaire Validation Script
- Attachment K - TSP Fact sheet - "Dose Reconstruction Project Findings Will Benefit Health Effects Research"
- Attachment L - TSP Fact Sheet - "Radiation and the Thyroid Gland"
- Attachment M - TSP Fact Sheet - "Radioactivity and the Food Chain"

Attachment N - TSP Fact Sheet - "Columbia Basin's American
Indians Involved in Hanford Dose Reconstruction"

Attachmnet O - "Native American Data Analysis Program"
Instructions; with Shell Tables

MEMORANDUM

Date: August 23, 1993

From: Hanford Projects Coordinator
Radiation Studies Branch
Division of Environmental Hazards and Health Effects
National Center for Environmental Health

Subject: Cost Estimates for Hanford Related Native American
Contracts

To: Diane Roberts
Office of Program Planning and Evaluation

In response to your comments on the previously submitted "Request for OMB Review and Approval of Native American Data Collection and Analysis for the Hanford Environmental Dose Reconstruction (HEDR) Project", I have removed certain cost estimates from section A-12 of the document. The specific language is contained below:

Negotiations are ongoing and contracts have not yet been awarded to seven of the eight Tribes, however, the cost to the federal government is estimated to be \$650,000. Of this amount, approximately \$600,000 will be provided to the eight tribes to cover research, travel costs, and training. Personnel costs for federal employees involved in oversight and/or analysis are estimated to be \$50,000.

The average annual cost for these projects is currently estimated to be \$450,000. As these are cost reimbursable contracts, these costs could be exceeded if actual costs are higher than anticipated.

One contract has been awarded to the Spokane Tribe in the amount of \$59,273 for a 15 month period of performance. The annualized cost for this contract is \$47,418.

My understanding is that you will relay this information to OMB as part of your finalized letter. Please notify me if you need additional information.

Mike Donnelly

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FORM APPROVED:

OMB NUMBER: 0920-XXXX

EXPIRATION DATE:

Public reporting burden for this collection of information is estimated to average 5 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to PHS Reports Clearance Officer; ATTN: PRA; Hubert H. Humphrey Bg, Room 721-B; Independence Ave., S.W.; Washington, DC 20201, and to the Office of Management and Budget; Paperwork Reduction Project (0920-XXXX); Washington, DC 20503.

SCRIPT:

INTERVIEW VERIFICATION

Hello, may I speak to (PARTICIPANT'S NAME)?

If the participant is unavailable, establish a time to call back. When you confirm that you have the participant on the line, proceed.

This is (NAME) calling from the (NAME OF TRIBE) Hanford Studies Project (OR TRIBAL ORGANIZATION). Recently, you were interviewed by (INTERVIEWER'S NAME). Do you remember that interview?

If yes, proceed.

If no, clarify whether the person you are speaking with is the subject.

I am conducting a quality control check of (INTERVIEWER'S NAME) work, and I would like to ask you a few questions about that interview if you have just a few minutes.

If not: determine a time to call back

If so: proceed

Again, these questions are to verify that the interview took place and clarify any remaining questions you may have. Can we begin?

What is your (subject's) birthdate?

Conduct verification of one Residence History question (#8), two to three Food Consumption History questions (#49, #62, #96).

After completing this verification ask:

What other questions do you have about the study?

If questions respond as necessary and appropriate

If not complete the interview verification by saying

Again, thank you for your help with this study.

SAMPLE

STATEMENT OF INFORMED CONSENT

The (Name of Tribe) is participating in the Hanford Environmental Dose Reconstruction (HEDR) project. This research is sponsored by the Centers for Disease Control and Prevention (CDC) under authority of Section 301 of the Public Health Service Act (42 USC 241). The purpose of this study is to determine radiation doses individuals may have received as a result of historic radiation releases from the Hanford Nuclear Reservation beginning in the 1940's.

The project will interview a representative sample of people who were tribal members during the periods 1944-1947 and 1964-1967. You have been selected to be a part of this study. Your participation is voluntary and you will suffer no consequences if you do not agree to participate.

If you agree to participate, we will be asking questions about your diet, residence history, and migration patterns or those for other members of your immediate family. All of the responses will be presented in a summary format and no individuals will be identified by name in reporting any of the results.

The interview may take several hours and you will be paid a one-time \$\$\$ fee for your participation. You may be recontacted in the future for quality control purposes. All of the information provided will be kept confidential by the (NAME OF TRIBE). Only summary information will be provided in the study results.

PARTICIPANT'S STATEMENT

I certify that the preceding has been read to me, that I have had an opportunity to review the consent form and ask questions, and that I understand the purpose of this research project. I understand that if I have any questions about this research, I may contact (NAME, TELEPHONE NUMBER of Tribal Contact). My signature means that I voluntarily agree to participate in this study and have received a copy of this consent form.

Signature of Participant

Date

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APPENDIX G

OFFICE OF MANAGEMENT and BUDGET APPROVAL

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Robert Polson
Department of Health and Human Services
Room 531-H
Hubert H. Humphrey Building
Washington, DC 20201

09/22/95

In accordance with the Paperwork Reduction Act, OMB has taken the following action on your request for approval of the reinstatement of an information collection received on 06/28/95.

TITLE: Native American Data Collection and Analysis for the Hanford Environmental Dose Reconstruction (HEDR) Project

AGENCY FORM NUMBER(S): None

ACTION: APPROVED

OMB NO.: 0920-0335

EXPIRATION DATE: 09-30-98

BURDEN	RESPONSES	BURDEN HOURS
Previous Status	0	0
New Status	3,000	4,513
Difference	3,000	4,513
Explanation of difference		
Program Change		4,513
Adjustment		0

TERMS OF CLEARANCE:

This information collection is approved for use through 8/98.

- NOTE: 1. The OMB Control Number must be displayed as required by 5 CFR 1320.4 and 5 CFR 1320.5.
2. You must send OMB one copy of the final version of any document being sent to each respondent.

OMB Authorizing Official

Title

James B. MacRae

Deputy Administrator, Office of
Information and Regulatory Affairs

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APPENDIX H

NATIVE AMERICAN DATA COLLECTION FOR THE
HANFORD ENVIRONMENTAL DOSE RECONSTRUCTION PROJECT
-- SURVEY QUESTIONNAIRE

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Native American Data Collection for the Hanford
Environmental Dose Reconstruction Project

Survey Questionnaire

FORM APPROVED: 12/30/93

OMB NUMBER: 0920-03335

EXPIRATION DATE: 10/31/94

Public reporting burden for this collection of information is estimated to average 2 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to PHS Reports Clearance Officer; ATTN: PRA; Hubert H. Humphrey Bg, Room 721-B; Independence Ave., S.W.; Washington, DC 20201, and to the Office of Management and Budget; Paperwork Reduction Project (0920-03335); Washington, DC 20503.

_____ ID # Use a unique non-social security number
assigned to each respondent which will be
held in confidence by tribe

Date of attempted contact (mo/day/yr)	Time	Interviewer	Result*
1) ____/____/____	_____	_____	_____
2) ____/____/____	_____	_____	_____
3) ____/____/____	_____	_____	_____
4) ____/____/____	_____	_____	_____
5) ____/____/____	_____	_____	_____

*Result code:

- 1 Completed interview
- 2 Not at home at time of visit
- 3 Moved locally
- 4 Temporarily absent
- 5 Permanently absent
- 6 Deceased
- 7 Total refusal
- 8 Refusal during interview by respondent or other member of the
family
- 9 Respondent not competent
- 10 Other (specify) _____

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ESTABLISHING CONTACT WITH RESPONDENT:

START BY SAYING:

Hello, my name is (interviewer name) from the (Tribe) Hanford study program. On (date) we made an appointment for an interview with you. I am here to conduct the interview.

During the interview you will need to have the Instruction Booklet that we sent to you earlier. Do you have it with you now?

IF "NO" SAY:

I'll be happy to wait while you get it.

IF, FOR SOME REASON, THE RESPONDENT DOES NOT HAVE THE INSTRUCTION BOOKLET, SAY:

I'm sorry you do not have the Instruction Booklet. You will need it during the interview, therefore we will need to reschedule. Let me confirm your mailing address so we can send you another booklet. I will contact you again in the next few days to reschedule your interview.

Thank you for your patience.

IF RESPONDENT DOES HAVE THE INSTRUCTION BOOKLET, PROCEED ON TO NEXT PAGE:

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SECTION I. BACKGROUND INFORMATION

As you probably remember, this interview is part of a study about radiation exposures from the Hanford Nuclear Reservation from the 1940's through 1970. We hope that you can help by supplying some very important information about yourself. You were selected to participate in the study. The information you provide will help answer some very important questions about how much radiation exposure people received from Hanford.

Because the public was not aware of the radiation releases from Hanford, you could not have known about the possible exposure from Hanford at that time, or the possibility of side effects. Your answers to the questions will not mean that you did anything wrong, or could have prevented any exposure by doing things differently.

Of course, it is important to remember that we are asking about events that occurred long ago. Food supplies today are not contaminated with radiation.

I hope you have had a chance to look over the materials and think about the things we will be discussing today. Before we begin the questions, there are a few things I need to mention:

- I want to assure you that the tribe will keep the information you give confidential and in a secure, locked cabinet.
- All information collected during this interview will be combined with information from other tribal members and no individual will be identified in any report.
- You may refuse to answer any question, or end the interview at any time.
- Try to be as accurate and complete as possible when giving answers. Don't feel rushed, and do not hesitate to ask me to repeat a question. Our goal is to obtain the most accurate information you can give. You may not know the answers to some of the questions. Just do the best you can.
- When answering a question, please feel free to tell me everything that comes to mind, even if you aren't sure it applies to that particular question. Anything you think of may be helpful later.
- My supervisor may contact you at a later time to be sure that this interview was conducted properly.

We are almost ready to begin the questions, but before we do so, let's look at the Calendar of Events in the Instruction Booklet that we sent to you. I would like you to notice a few things about this booklet. For instance, you'll see the date of the attack on Pearl Harbor, and other important dates. We have found that this helps people during the interview.

Have you added a few dates to the calendar that were important in your own life?

Are there any other events from the 1940's or mid-1960's that were important to you? If there are, please mark them on the calendar.

Finally, please enter your birthday on your calendar.

PREPARATORY INFORMATION:

1. DATE: ____/____/____ (month/day/year)
2. START TIME: ____ : ____ A.M. / P.M.
3. Interviewer _____
4. Subject's sex ____ (M or F)
5. Is there another informant at the interview? ____ (yes or no)

IF YES, ASK OTHER INFORMANT:

6. What is your relationship to respondent? _____

THEN, ASK THE RESPONDENT:

7. What is your birth date?
- 7a. ____/____ month
- 7b. ____/____ day
- 7c. ____ year
- 7d. ____ WRITE IN FULL YEAR OF BIRTH, (ex: 1899, 1917, 1932, 1951, 1964, etc.)

IF RESPONDENT WAS BORN AFTER DECEMBER 1947: GO TO "FOOD CONSUMPTION HISTORY" on page 11

IF RESPONDENT WAS BORN BEFORE JANUARY 1948: INTERVIEWER PROCEED:

Now, let's begin the questions on where you used to live.

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SECTION II. RESIDENCE HISTORY

HAVE THE STUDY AREA MAP AVAILABLE

HAVE THE RESIDENCE HISTORY QUESTIONNAIRE AVAILABLE TO REVIEW

Now I would like to review all of the locations where you lived for periods of one month or more during the years 1944 through 1947. Let's look at your Residence History Questionnaire.

For residence locations in our study area I will be reviewing the dates you lived at each location and ask you to locate that location on this map. For residence locations outside our study area, I will be reviewing the dates you lived in each county and state only. Are you ready to begin?

Residence History for the years 1944 through 1947

Location 1: Is the following information correct? If not correct, record correct information.

8a. _____/_____/_____ From: (month/day/year)
8b. _____/_____/_____ To: (month/day/year)
8c. _____ At: (address)
8d. _____ (city)
8e. _____ (state)
8f. _____ (county).

If WITHIN THE STUDY AREA, SAY: Where is that on this map?

8g. _____ INTERVIEWER WRITE IN GRID LOCATION CODE

Location 2:

9a. _____/_____/_____ From: (month/day/year)
9b. _____/_____/_____ To: (month/day/year)
9c. _____ (address)
9d. _____ (city)
9e. _____ (state)
9f. _____ (county).

IF WITHIN THE STUDY AREA, SAY: Where is that on this map?

9g. _____ INTERVIEWER WRITE IN GRID LOCATION CODE

Location 3:

10a. _____/_____/_____ From: (month/day/year)
10b. _____/_____/_____ To: (month/day/year)
10c. _____ At: Address
10d. _____ (city)
10e. _____ (state)
10f. _____ (county)

IF WITHIN STUDY AREA, SAY: Where is that on this map?

10g. _____ **INTERVIEWER WRITE IN GRID LOCATION CODE.**

Location 4:

11a. _____/_____/_____ From: (month/day/year)
11b. _____/_____/_____ To: (month/day/year)
11c. _____ At: (address)
11d. _____ (city)
11e. _____ (state)
11f. _____ (county)

IF WITHIN STUDY AREA, SAY: Where is that on this map?

11g. _____ **INTERVIEWER WRITE IN GRID LOCATION CODE**

Location 5:

12a. _____/_____/_____ From: (month/day/year)
12b. _____/_____/_____ To: (month/day/year)
12c. _____ At: (address)
12d. _____ (city)
12e. _____ (state)
12f. _____ (county)

IF WITHIN STUDY AREA, SAY: Where is that on this map?

12g. _____ **INTERVIEWER WRITE IN GRID LOCATION CODE**

Location 6:

13a. _____/_____/_____ From: (month/day/year)
13b. _____/_____/_____ To: (month/day/year)
13c. _____ At: (address)
13d. _____ (city)
13e. _____ (state)
13f. _____ (county) information.

IF WITHIN STUDY AREA, SAY: Where is that on this map?

13g. _____ **INTERVIEWER WRITE IN GRID LOCATION CODE**

Location 7:

14a. ____/____/____ From: (month/day/year)
14b. ____/____/____ To: (month/day/year)
14c. _____ At: (address)
14d. _____ (city)
14e. _____ (state)
14f. _____ (county)

IF WITHIN STUDY AREA, SAY: Where is that on this map?

14g. _____ INTERVIEWER WRITE IN GRID LOCATION CODE

Location 8:

15a. ____/____/____ From: (month/day/year)
15b. ____/____/____ To: (month/day/year)
15c. _____ At: (address)
15d. _____ (city)
15e. _____ (state)
15f. _____ (county)

IF WITHIN STUDY AREA, SAY: Where is that on this map?

15g. _____ INTERVIEWER WRITE IN GRID LOCATION CODE

Location 9:

16a. ____/____/____ From: (month/day/year)
16b. ____/____/____ To: (month/day/year)
16c. _____ At: (address)
16d. _____ (city)
16e. _____ (state)
16f. _____ (county)

IF WITHIN STUDY AREA, SAY: Where is that on this map?

16g. _____ INTERVIEWER WRITE IN GRID LOCATION CODE

Location 10:

17a. ____/____/____ From: (month/day/year)
17b. ____/____/____ To: (month/day/year)
17c. _____ At: (address)
17d. _____ (city)
17e. _____ (state)
17f. _____ (county)

IF WITHIN STUDY AREA, SAY: Where is that on this map?

17g. _____ INTERVIEWER WRITE IN GRID LOCATION CODE

Location 11.

18a. ____/____/____ From: (month/day/year)
18b. ____/____/____ To: (month/day/year)
18c. _____ At: (address)
18d. _____ (city)
18e. _____ (state)
18f. _____ (county)

IF WITHIN STUDY AREA SAY: WHERE IS THAT ON THIS MAP?

18g. _____ INTERVIEWER WRITE IN GRID LOCATION CODE.

Location 12:

19a. ____/____/____ From: (month/day/year)
19b. ____/____/____ To: (month/day/year)
19c. _____ At: (address)
19d. _____ (city)
19e. _____ (state)
19f. _____ (county)

IF WITHIN STUDY AREA, SAY: Where is that on this map?

19g. _____ INTERVIEWER WRITE IN GRID LOCATION CODE

Location 13.

20a. ____/____/____ From: (month/day/year)
20b. ____/____/____ To: (month/day/year)
20c. _____ At: (address)
20d. _____ (city)
20e. _____ (state)
20f. _____ (county)

IF WITHIN STUDY AREA, SAY: Where is that on this map?

20g. _____ INTERVIEWER WRITE IN GRID LOCATION CODE

Location 14:

21a. ____/____/____ From: (month/day/year)
21b. ____/____/____ To: (month/day/year)
21c. _____ At: (address)
21d. _____ (city)
21e. _____ (state)
21f. _____ (county)

IF WITHIN STUDY AREA, SAY: Where is that on this map?

21g. _____ INTERVIEWER WRITE IN GRID LOCATION CODE.

Location 15:

22a. _____/_____/_____ From: (month/day/year)
22b. _____/_____/_____ To: (month/day/year)
22c. _____ At: (address)
22d. _____ (city)
22e. _____ (state)
22f. _____ (county)

IF WITHIN STUDY AREA, SAY: Where is that on this map?

22g. _____ **INTERVIEWER WRITE IN GRID LOCATION CODE.**

Location 16:

23a. _____/_____/_____ From: (month/day/year)
23b. _____/_____/_____ Ro: (month/day/year)
23c. _____ At: (address)
23d. _____ (city)
23e. _____ (state)
23f. _____ (county)

IF WITHIN STUDY AREA, SAY : Where is that on this map?

23g. _____ **INTERVIEWER WRITE IN GRID LOCATION CODE.**

INTERVIEWER: BE SURE TO COLLECT THE RESIDENCE HISTORY QUESTIONNAIRE FOR YOUR TRIBAL RECORDS.

PLACE THE RESPONDENT'S ID# ON THE RESIDENCE HISTORY QUESTIONNAIRE.

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FOOD CONSUMPTION HISTORY

Let's turn to page _____ of the Instruction Booklet, and talk about what you ate during the years 1944 through 1947 and 1964 through 1966.

SECTION III. MILK AND DAIRY PRODUCTS

The next questions are about fresh milk and dairy products you consumed. When I say fresh milk, I mean any milk that was not powdered or canned. It might have been obtained from a dairy or a store, delivered to your home, or obtained from a family or neighborhood cow or goat. I am also interested in breast milk that you consumed as a baby.

I will also need to know about any fresh dairy products. By fresh dairy products, I mean foods like cream, butter, buttermilk, cottage cheese, yogurt, and ice cream. I do not want you to include aged dairy products, such as cheddar cheese, or other hard cheeses.

DATA ENTRY NOTE: Year of respondent's birth _____ (MUST ENTER)

IF RESPONDENT WAS BORN AFTER 1947: GO TO (1964-66) ON PAGE 13

IF RESPONDENT WAS BORN BEFORE 1948: INTERVIEWER PROCEED;

Let's start with the years 1944 through 1947:

25. Were you nursed or breast-fed at any time from 1944 through 1947?

_____ YES 1 NO 2 DON'T KNOW 9

IF "No" OR "DON'T KNOW": GO TO QUES. # 30 ON PAGE 12

26. At what age in months did breast feeding begin?
_____ months of age

27. Would that be in (month/year)?

27a. _____ month

27b. _____ year

28. How many months old were you when nursing or breast-feeding stopped?
 _____ months of age
29. Would that be in (month/year)?
- 29a. _____ month
 29b. _____ year
30. How many months old were you when you first drank fresh milk other than breast milk?
 Note: A baby could be receiving both breast milk and cow or goat milk at the same time.
 _____ months of age
31. Would that be in (month/year)?
- 31a. _____ month
 31b. _____ year
32. How many months old were you when you first ate foods other than milk?
 _____ months of age
33. Would that be in (month/year)?
- 33a. _____ month
 33b. _____ year
34. During the years 1944 through 1947 did you ever eat or drink fresh milk or dairy products made from fresh cow's or goat's milk?
 _____ YES 1 NO 2 DON'T KNOW 9

IF "NO" OR "DON'T KNOW": GO TO (1964-66) on page 13

HAVE AN 8 OUNCE CUP AVAILABLE

35. On average, about how many 8 ounce cups or bottles of fresh cow or goat milk did you drink per week during:
- 35a. _____ Winter January - March
 35b. _____ Spring April - June
 35c. _____ Summer July - September
 35d. _____ Fall October-December

HAVE THE LIST OF DAIRIES AND BRANDS AVAILABLE FOR REFERENCE:

36. Where was this milk obtained? (CHECK ANY THAT APPLY)

- 36a. _____ Store bought
36b. _____ (Brand or dairy) _____
36c. _____ Home delivered _____
36d. _____ (Brand) _____
36e. _____ Family or neighborhood cow or goat
36f. _____ Other (Describe _____)
36g. _____ Source totally unknown

NOTE: "Other" sources might include school lunch programs, military posts, etc.

37. On average, about how many 8 ounce servings--about a cup--of dairy products other than milk (ice cream, cottage cheese, etc) did you eat per week during:

- 37a. _____ Winter January - March
37b. _____ Spring April - June
37c. _____ Summer July - September
37d. _____ Fall October-December

38. Where were these dairy products obtained? (CHECK ALL THAT APPLY)

- 38a. _____ Store bought
38b. _____ (Brand or dairy) _____
38c. _____ Home delivered _____
38d. _____ (Brand) _____
38e. _____ Made from milk from family or neighborhood cow or goat
38f. _____ Other (describe _____)
38g. _____ Source totally unknown

NOTE: "Other" sources might include school milk programs, military posts, etc.

DATA ENTRY NOTE: Respondent's year of birth _____ (HIT <ENTER>)

Let's look at the years 1964 through 1966

The next few questions are about fresh milk and dairy products consumed during the years 1964 through 1966. Again, when I say fresh milk, I mean any milk that was not powdered or canned.

IF RESPONDENT WAS BORN BEFORE 1960: GO TO QUES. # 44 ON PAGE 14

39. Were you nursed or breast-fed at any time from 1964 through 1966?

_____ YES 1 NO 2 DON'T KNOW 9

IF "NO" OR "DON'T KNOW": GO TO QUES. # 44 ON PAGE 14

40. At what age in months did breast feeding begin?
____ months of age
41. Would that be in (month/year)?
- 41a. ____ month
41b. ____ year
42. How many months old were you when breast feeding stopped?
____ months of age
43. Would that be in (month/year)?
- 43a. ____ month
43b. ____ year
44. How many months old were you when you first drank fresh milk other than breast milk?
____ months of age
45. Would that be in (month/year)?
- 45a. ____ month
45b. ____ year
46. How many months old were you when you first ate foods other than milk?
____ months of age
47. Would that be in (month/year)?
- 47a. ____ month
48a. ____ year
48. During the years 1964 through 1966 did you ever eat or drink fresh milk or dairy products made from raw or processed cow's or goat's milk?

____ YES 1 NO 2 Don't know 9

IF "NO" OR "DON'T KNOW": GO TO SECTION IV, "GREEN AND LEAFY VEGETABLES" ON PAGE 16

HAVE AN 8 OUNCE CUP AVAILABLE

49. On average, about how many 8 ounce cups or bottles of fresh cow or goat milk did you drink per week during:

- 49a. _____ Winter January - March
49b. _____ Spring April - June
49c. _____ Summer July - September
49d. _____ Fall October-December

PLEASE REFER TO LIST OF REGIONAL DAIRIES AND BRAND NAMES OF MILK.

50. Where was this milk obtained? (CHECK ANY THAT APPLY)

- 50a. _____ Store bought
50b. _____ (Brand or dairy) _____
50c. _____ Home delivered
50d. _____ (Brand) _____
50e. _____ Family or neighborhood cow or goat
50f. _____ Other (describe _____)
50g. _____ Source totally unknown

NOTE: "Other" sources might include school milk programs, military posts, etc.

51. On average, about how many 8 ounce servings---about a cup--- of dairy products other than milk (ice cream, cottage cheese, etc) did you eat per week during:

- 51a. _____ Winter January - March
51b. _____ Spring April - June
51c. _____ Summer July - September
51d. _____ Fall October-December

52. Where were these dairy products obtained? (CHECK ALL THAT APPLY)

- 52a. _____ Store bought
52b. _____ (Brand or dairy) _____
52c. _____ Home delivered
52d. _____ (Brand) _____
52e. _____ Made from milk from family or neighborhood cow or goat
52f. _____ Other (describe _____)
52g. _____ Source totally unknown

NOTE: "Other" sources might include school milk programs, military posts, etc.

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SECTION IV: GREEN AND LEAFY VEGETABLES AND PLANTS

Next I will be asking you about green and leafy vegetables and traditional plants you may have eaten. Examples of this kind of vegetable include lettuce, cabbage, and spinach. I am interested in vegetables and plants that were grown locally or regionally within the Hanford study area (SHOW GRID MAP OF STUDY AREA) that were eaten fresh or stored. Fresh vegetables and plants would have been eaten within a few days of harvest, while stored vegetables and plants would have been dried, home canned, frozen, or otherwise preserved before being eaten.

These vegetables and plants could come from your garden, from a friend, neighbor, or relative's garden, a grocery store, directly from a farmer or at a local farmer's market or roadside stand, or collected from traditional gathering areas. For vegetables from a market or store, I am only interested in those that were grown **LOCALLY OR REGIONALLY**.

DATA ENTRY NOTE: Respondent's year of birth ____ (HIT <ENTER>)

IF RESPONDENT WAS BORN AFTER 1947: GO TO (1964-66) ON PAGE 17

Let's turn to page ____ of the Instruction Booklet and think about the green leafy vegetables you ate during the years 1944 through 1947:

HAVE AVAILABLE A 6 INCH DIAMETER BOWL WHICH WOULD REPRESENT A SINGLE SERVING:

53. Did you eat any green, leafy vegetables or plants during these years?

____ YES 1 NO 2 DON'T KNOW 9

IF "NO" OR "DON'T KNOW": GO TO (1964-66) on page 17

54. A serving of fresh green leafy vegetables, that is, not stored prior to eating, is equal to a small bowl full of uncooked vegetable. On average, about how many servings of FRESH green leafy vegetables and plants did you eat per week during:

- 54a. _____ Winter January - March
54b. _____ Spring April - June
54c. _____ Summer July - September
54d. _____ Fall October-December

55. Were these vegetables washed before eating?

_____ YES 1 NO 2 DON'T KNOW 9

56. On average, about how many servings of STORED green leafy vegetables and plants did you eat per week during:

- 56a. _____ Winter January - March
56b. _____ Spring April - June
56c. _____ Summer July - September
56d. _____ Fall October-December

57. Were these vegetables washed before storage?

_____ YES 1 NO 2 DON'T KNOW 9

Now, let's talk about the years 1964 through 1966:

Please turn to page _____ of the Instruction Booklet and think about the green leafy vegetables you ate during the years 1964 through 1966:

58. Did you eat any green, leafy vegetables or plants during these years?

_____ YES 1 NO 2 DON'T KNOW 9

IF "NO" OR "DON'T KNOW ": GO TO SECTION V, "OTHER VEGETABLES AND PLANTS" ON PAGE 19

59. On average, about how many servings of FRESH green leafy vegetables did you eat per week during:

- 59a. _____ Winter January - March
59b. _____ Spring April - June
59c. _____ Summer July - September
59d. _____ Fall October-December

60. Were these vegetables washed before eating?

_____ YES 1 NO 2 DON'T KNOW 9

61. On average, about how many servings of STORED green leafy vegetables did you eat per week during:

61a. _____	Winter	January - March
61b. _____	Spring	April - June
61c. _____	Summer	July - September
61d. _____	Fall	October-December

62. Were these vegetables washed before being eaten?

_____ YES 1 NO 2 DON'T KNOW 9

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SECTION V. OTHER VEGETABLES AND PLANTS

Next I would like to talk about other fresh or stored vegetables and plants grown locally or regionally in the Hanford Study area (SHOW STUDY AREA GRID MAP) that you might have eaten. These would include vegetables such as corn, beans, squash, non-leafy traditional plants and so on. Fresh vegetables and plants would have been eaten within a few days of harvest, while stored vegetables and plants would have been dried, home canned, frozen, or otherwise preserved before being eaten.

These vegetables and plants could have come from your garden, from a friend, neighbor, or relative's garden, a grocery store, directly from a farmer or at a local farmer's market or roadside stand, or collected from traditional gathering areas. For vegetables from a market or store, I am only interested in those that were grown locally or regionally in the Hanford study area.

DATA ENTRY NOTE: Respondent's year of birth _____ (HIT <ENTER>)

IF RESPONDENT WAS BORN AFTER 1947: GO TO (1964-66) ON PAGE 20

Let's turn to page _____ of the Instruction Booklet, and think about the these vegetables you ate during the years 1944 through 1947:

HAVE A 6 INCH DIAMETER BOWL AVAILABLE, REPRESENTING A SINGLE INDIVIDUAL SERVING

63. Did you eat any of this type of vegetable during these years?

_____ YES 1 NO 2 DON'T KNOW 9

IF "NO" OR "DON'T KNOW": GO TO (1964-66) ON PAGE 20

64. On average, about how many servings of FRESH vegetables did you eat per week during:

64a.	_____ Winter	January - March
64b.	_____ Spring	April - June
64c.	_____ Summer	July - September
64d.	_____ Fall	October-December

65. Were these vegetables washed before eating?

_____ YES 1 NO 2 DON'T KNOW 9

66. On average, about how many servings of STORED vegetables did you eat per week during:

- 66a. _____ Winter January - March
66b. _____ Spring April - June
66c. _____ Summer July - September
66d. _____ Fall October-December

67. Were these vegetables washed before being eaten?

_____ YES 1 NO 2 DON'T KNOW 9

Now, let's talk about the years 1964 through 1966:

Please turn to page _____ of the Instruction Booklet, and think about the vegetables you ate during the years 1964 through 1966:

68. Did you eat any of these vegetables during these years?

_____ YES 1 NO 2 DON'T KNOW 9

IF "NO" OR "DON'T KNOW": GO TO SECTION VI, "FRUITS AND BERRIES" ON PAGE 21

69. On average, about how many servings of FRESH vegetables did you eat per week during:

- 69a. _____ Winter January - March
69b. _____ Spring April - June
69c. _____ Summer July - September
69d. _____ Fall October-December

70. Were these vegetables washed before eating?

_____ YES 1 NO 2 DON'T KNOW 9

71. On average, about how many servings of STORED vegetables did you eat per week during:

- 71a. _____ Winter January - March
71b. _____ Spring April - June
71c. _____ Summer July - September
71d. _____ Fall October-December

72. Were these vegetables washed before being eaten?

_____ YES 1 NO 2 DON'T KNOW 9

SECTION VI: FRUITS AND BERRIES

Next I will be asking about fruits and berries grown **LOCALLY OR REGIONALLY** within the Hanford study area (**SHOW STUDY AREA GRID MAP**) that you may have eaten fresh, that is, eaten within several days of being harvested, or after being stored by canning, freezing, or drying.

Fruits and berries may have been grown on your own trees or garden, may have come from a friend, neighbor, or relative, could have been purchased from a farmer, farmer's market, or grocery store, or could have been collected at traditional gathering sites. For fruits and berries purchased from a grocery store or farmer's market, please estimate only the amount that was grown **LOCALLY OR REGIONALLY**.

The fruits we are interested in fall into two general categories: the first category is those grown on bushes and vines, such as berries and grapes, and the other category is tree fruit such as apples, peaches, apricots, and cherries.

A serving of fresh tree fruit is equal to a piece of fruit, except cherries for which a serving is equal to a cup full--about 8 ounces. A serving of berries or grapes is also equal to an 8 ounce cup.

Please turn to page ____ of the Instruction Booklet.

DATA ENTRY NOTE: Respondent's year of birth: _____ (HIT <ENTER>)

IF RESPONDENT WAS BORN AFTER 1947: GO TO (1964-66) ON PAGE 22

HAVE AVAILABLE AN 8 OUNCE CUP TO REPRESENT A SERVING:

Let's start with the years 1944 through 1947:

73. Did you eat any fruit or berries during these years?

_____ YES 1 NO 2 DON'T KNOW 9

IF "NO" OR "DON'T KNOW": GO TO (1964-66) ON PAGE 22

74. On average, about how many servings of FRESH fruits or berries did eat per week during:

74a.	_____	Winter	January - March
74b.	_____	Spring	April - June
74c.	_____	Summer	July - September
74d.	_____	Fall	October-December

75. Were these washed before eating?

_____ YES 1 NO 2 DON'T KNOW 9

76. On average, how many servings of STORED fruits and berries did you eat per week during:

76a. _____ Winter January - March
76b. _____ Spring April - June
76c. _____ Summer July - September
76d. _____ Fall October-December

77. Were these washed before being eaten?

_____ YES 1 NO 2 DON'T KNOW 9

Now let's talk about the years 1964 through 1966:

78. Did you eat any fruit or berries during these years?

_____ YES 1 NO 2 DON'T KNOW 9

IF "NO" OR "DON'T KNOW": GO TO SECTION VII, "EGG CONSUMPTION" ON PAGE 24

79. On average, about how many servings of FRESH fruits or berries did you eat per week during:

79a. _____ Winter January - March
79b. _____ Spring April - June
79c. _____ Summer July - September
79d. _____ Fall October-December

80. Were these washed before eating?

_____ YES 1 NO 2 DON'T KNOW 9

81. On average, about how many servings of STORED fruits and berries did eat per week during:

81a. _____ Winter January - March
81b. _____ Spring April - June
81c. _____ Summer July - September
81d. _____ Fall October-December

82. Were these washed before being eaten?

_____ YES 1 NO 2 DON'T KNOW 9

SECTION VII: EGG CONSUMPTION

I will now ask about eggs you ate.

I am interested in eggs from local domestic "free-range" chickens, geese, ducks, or turkeys. That is, birds that were allowed to roam outside. These birds may have been in a coop some of the time, and the area they were allowed to roam in may have been small. I am not interested in any eggs from birds that were always in a coop.

I am also interested in eggs collected from wild birds such as geese, ducks, and pheasants.

Please try to include eggs used as ingredients in other foods.

Please turn to page ____ of the Instruction Booklet.

DATA ENTRY NOTE: Respondent's year of birth ____ (HIT <ENTER>)

IF RESPONDENT WAS BORN AFTER 1947: GO TO (1964-66) ON PAGE 24

Let's start with the years 1944 through 1947:

83. Did you ever eat fresh eggs from local domestic "free-range" birds during these years?

____ YES 1 NO 2 DON'T KNOW 9

If "NO" OR "DON'T KNOW": GO TO (1964-66) ON PAGE 24

84. On average, about how many "free range" domestic eggs did you eat per week during:

84a. _____	Winter	January - March
84b. _____	Spring	April - June
84c. _____	Summer	July - September
84d. _____	Fall	October-December

85. Did you eat eggs from local "wild" birds during these years?

____ YES 1 NO 2 DON'T KNOW 9

IF "NO" OR "DON'T KNOW": GO TO Ques. # 87 ON PAGE 24

86. On average, about how many "wild" bird eggs did you eat per week during:

- | | | | |
|------|-------|--------|------------------|
| 86a. | _____ | Winter | January - March |
| 86b. | _____ | Spring | April - June |
| 86c. | _____ | Summer | July - September |
| 86d. | _____ | Fall | October-December |

Now let's talk about the years 1964 through 1966:

87. Did you ever eat eggs from local domestic "free-range" birds during these years?

_____ YES 1 NO 2 DON'T KNOW 9

IF "NO" OR "DON'T KNOW": GO TO Ques. # 89

88. On average, about how many "free range" domestic eggs did you eat per week during:

- | | | | |
|------|-------|--------|------------------|
| 88a. | _____ | Winter | January - March |
| 88b. | _____ | Spring | April - June |
| 88c. | _____ | Summer | July - September |
| 88d. | _____ | Fall | October-December |

89. Did you ever eat eggs from local "wild" birds during these years?

_____ YES 1 NO 2 DON'T KNOW 9

IF "NO" OR "DON'T KNOW": GO TO SECTION VIII, "MEAT CONSUMPTION" on page 25

90. On average, about how many "wild" bird eggs did you eat per week during:

- | | | | |
|------|-------|--------|------------------|
| 90a. | _____ | Winter | January - March |
| 90b. | _____ | Spring | April - June |
| 90c. | _____ | Summer | July - September |
| 90d. | _____ | Fall | October-December |

SECTION VIII: MEAT CONSUMPTION

Now I'd like to talk to you about fresh and stored meat that you may have eaten. This would include domestically grown beef or veal, pork, mutton or lamb, and large or small wild game. Fresh meat would have been eaten soon after the animal was killed. Stored meat would have been dried, smoked, canned, salted, or frozen before being eaten. I am only interested in meat from animals raised or grown locally or regionally within the Hanford Study Area (SHOW STUDY AREA GRID MAP). It could have come from a grocery store or butcher shop, animals you or your family butchered, or game that you or your family hunted.

Please turn to page ____ of the Instruction Booklet.

A SERVING OF MEAT WOULD BE EQUAL TO 4 OUNCES, ABOUT THE SIZE OF A REGULAR HAMBURGER. HAVE AVAILABLE A 4 OZ MEAT MODEL

DATA ENTRY NOTE: Respondent's year of birth _____ (HIT <ENTER>)

IF RESPONDENT WAS BORN AFTER 1947: GO TO (1964-66) ON PAGE 27

Let's start with the years 1944 through 1947:

I AM GOING TO ASK SEPARATE QUESTIONS ABOUT "DOMESTIC" MEAT AND WILD GAME.

91. Did you eat any fresh domestic meat during these years?

_____ YES 1 NO 2 DON'T KNOW 9

IF "NO" OR "DON'T KNOW": GO TO (1964-66) ON PAGE 27

92. On average, about how many servings of FRESH domestic, locally or regionally grown meat did you eat per week during:

92a. _____	Winter	January - March
92b. _____	Spring	April - June
92c. _____	Summer	July - September
92d. _____	Fall	October-December

93. How was the fresh meat usually prepared prior to eating?
(i.e. boiled, roasted, fried, dried & smoked, salted etc.)

94. In general, where was this meat obtained? (CHECK ANY THAT
APPLY.)

94a. _____ Store bought

94b. _____ Home raised

94c. _____ Neighbor or friend

94d. _____ Other (Describe) _____

94e. _____ Source totally unknown

95. On average, about how many servings of STORED domestic,
locally grown meat did you eat per week during:

95a. _____ Winter January - March

95b. _____ Spring April - June

95c. _____ Summer July - September

95d. _____ Fall October-December

96. How was the meat prepared for storage? _____

97. In general, where was this meat obtained? (CHECK ANY THAT
APPLY.)

97a. _____ Store bought

97b. _____ Home raised

97c. _____ Neighbor or friend

97d. _____ Other (Describe) _____

97e. _____ Source totally unknown

98. On average, about how many servings of FRESH wild, locally
or regionally hunted meat did you eat per week during:

98a. _____ Winter January - March

98b. _____ Spring April - June

98c. _____ Summer July - September

98d. _____ Fall October-December

99. How was the fresh meat usually prepared prior to eating?

100. In general, where was this meat hunted?

101. On average, about how many servings of STORED wild, locally hunted meat did you eat per week during:

- 101a. _____ Winter January - March
101b. _____ Spring April - June
101c. _____ Summer July - September
101d. _____ Fall October-December

102. How was the meat prepared for storage _____

103. In general, where was this meat hunted? _____

Now let's talk about the years 1964 through 1966:

104. Did you eat any domestic or wild game meat during these years?

_____ YES 1 NO 2 DON'T KNOW 9

If "NO" OR "DON'T KNOW": GO TO SECTION IX, "POULTRY, WATERFOWL, AND GAMEBIRDS" ON PAGE 29

105. On average, about how many servings of FRESH domestic, locally or regionally grown meat did you eat per week during:

- 105a. _____ Winter January - March
105b. _____ Spring April - June
105c. _____ Summer July - September
105d. _____ Fall October-December

106. How was the fresh meat usually prepared prior to eating?

107. In general, where was this meat obtained? (CHECK ANY THAT APPLY.)

- 107a. _____ Store bought
107b. _____ Home raised
107c. _____ Neighbor or friend
107d. _____ Other (Describe) _____
107e. _____ Source totally unknown

108. On average, about how many servings of STORED domestic, locally grown meat did you eat per week during:

- 108a. _____ Winter January - March
108b. _____ Spring April - June
108c. _____ Summer July - September
108d. _____ Fall October-December

109. How was the meat prepared for storage? _____

110. In general, where was this meat obtained? (CHECK ANY THAT APPLY.)
- 110a. _____ Store bought
110b. _____ Home raised
110c. _____ Neighbor or friend
110d. _____ Other (Describe) _____
110e. _____ Source totally unknown
111. On average, about how many servings of FRESH wild, locally or regionally hunted meat did you eat per week during:
- 111a. _____ Winter January - March
111b. _____ Spring April - June
111c. _____ Summer July - September
111d. _____ Fall October-December
112. How was the fresh meat usually prepared prior to eating?

113. In general, where was this meat hunted? _____

114. On average, about how many servings of STORED wild, locally hunted meat did you eat per week during:
- 114a. _____ Winter January - March
114b. _____ Spring April - June
114c. _____ Summer July - September
114d. _____ Fall October-December
115. How was the meat prepared for storage? _____

116. In general, where was this meat hunted? _____

SECTION IX: POULTRY, WATERFOWL, AND GAME BIRDS

Now I'd like to ask you about locally or regionally grown fresh and stored domestic chicken, duck, or turkey, and wild waterfowl and game bird meat that you may have eaten. Fresh meat would have been eaten soon after the bird was killed. Stored meat would have been dried, smoked, salted, home canned, or frozen before being eaten. I am only interested in birds grown locally or regionally within the Hanford Study Area.. (SHOW GRID MAP)

Please turn to page ____ of the Instruction Booklet.

A SERVING OF POULTRY IS FOUR OUNCES, ABOUT THE SIZE OF A HAMBURGER PATTY; OR ABOUT ONE DRUMSTICK AND A THIGH OF A MEDIUM SIZE CHICKEN.

DATA ENTRY NOTE: Respondent's year of birth ____ (HIT <ENTER>)

IF RESPONDENT WAS BORN AFTER 1947: GO TO (1964-66) on page 32

Let's talk first about the years 1944 through 1947:

117. Did you eat any locally grown poultry meat during these years?

____ YES 1 NO 2 DON'T KNOW 9

IF "NO" OR "DON'T KNOW": GO TO (1964-66) ON PAGE 31

118. On average, about how many servings of FRESH locally grown domestic bird meat did you eat per week during:

118a. _____	Winter	January - March
118b. _____	Spring	April - June
118c. _____	Summer	July - September
118d. _____	Fall	October-December

119. How was the fresh bird meat generally prepared prior to eating? _____

120. In general, where was this bird meat obtained? (CHECK ANY THAT APPLY.)

- 120a. _____ Store bought
120b. _____ Home grown
120c. _____ Neighbor or friend
120d. _____ Other (Describe) _____
120e. _____ Source totally unknown

121. On average, about how many servings of STORED locally grown domestic bird meat did you eat per week during:

- 121a. _____ Winter January - March
121b. _____ Spring April - June
121c. _____ Summer July - September
121d. _____ Fall October-December

122. How was the bird meat prepared for storage? _____

123. In general, where was this bird meat obtained? (CHECK ANY THAT APPLY.)

- 123a. _____ Store bought
123b. _____ Home grown
123c. _____ Neighbor or friend
123d. _____ Other (Describe) _____
123e. _____ Source totally unknown

124. Did you eat any locally hunted wild waterfowl or game bird meat during these years?

_____ YES 1 NO 2 DON'T KNOW 9

IF "NO" OR "DON'T KNOW": GO TO (1964-66) ON PAGE 31

125. An average, about how many servings of FRESH locally hunted wild bird meat did you eat per week during:

- 125a. _____ Winter January - March
125b. _____ Spring April - June
125c. _____ Summer July - September
125d. _____ Fall October-December

126. How was the fresh bird meat generally prepared prior to eating? _____

127. In general, where was this bird meat hunted? _____

128. On average, about how many servings of STORED locally hunted wild bird meat did you eat per week during:

- 128a. _____ Winter January - March
128b. _____ Spring April - June
128c. _____ Summer July - September
128d. _____ Fall October-December

129. How was the bird meat prepared for storage?

130. In general, where was this bird meat hunted? _____

Now let's talk about the years 1964 through 1966

131. Did you eat any locally grown domestic poultry meat during these years?

_____ YES 1 NO 2 DON'T KNOW 9

IF "NO" OR "DON'T KNOW": GO TO QUES. # 138 ON PAGE 32

132. On average, about how many servings of FRESH locally grown domestic bird meat did you eat per week during:

- 132a. _____ Winter January - March
132b. _____ Spring April - June
132c. _____ Summer July - September
132d. _____ Fall October-December

133. How was the fresh poultry meat generally prepared prior to eating?

134. In general, where was this poultry meat obtained? (CHECK ANY THAT APPLY.)

- 134a. _____ Store bought
134b. _____ Home grown
134c. _____ Neighbor or friend
134d. _____ Other (Describe) _____
134e. _____ Source totally unknown

135. On average, about how many servings of STORED locally grown domestic bird meat did you eat per week during:

- 135a. _____ Winter January - March
135b. _____ Spring April - June
135c. _____ Summer July - September
135d. _____ Fall October-December

136. How was the bird meat prepared for storage? _____

137. In general, where was this bird meat obtained? (CHECK ANY THAT APPLY.)

137a. _____ Store bought

137b. _____ Home grown

137c. _____ Neighbor or friend

137d. _____ Other (Describe _____)

137e. _____ Source Totally Unknown

138. Did you eat any locally hunted wild waterfowl or game bird meat during these years?

_____ YES 1 NO 2 DON'T KNOW 9

IF "NO" OR "DON'T KNOW": GO TO SECTION X, "FISH CONSUMPTION" ON PAGE 33

139. On average, about how many servings of FRESH locally hunted wild bird meat did you eat per week during:

139a. _____ Winter January - March

139b. _____ Spring April - June

139c. _____ Summer July - September

139d. _____ Fall October-December

140. How was the fresh bird meat generally prepared prior to eating? _____

141. In general, where was this bird meat hunted? _____

142. On average, about how many servings of STORED locally hunted wild bird meat did you eat per week during:

142a. _____ Winter January - March

142b. _____ Spring April - June

142c. _____ Summer July - September

142d. _____ Fall October-December

143. How was the bird meat prepared for storage? _____

144. In general, where was this bird meat hunted? _____

SECTION X: FISH CONSUMPTION

Now I'd like to talk to you about fresh and stored fish that may have eaten. Fresh fish would have been eaten soon after being caught. Stored fish would have been dried, smoked, canned, pickled or frozen before being eaten.

I am interested in salmon, steelhead, and eel that were caught anywhere in either the Columbia River or Snake River drainages. I am also interested in other varieties of fish that were caught in the Columbia River downstream from Hanford or in the mouths of other rivers where they meet the Columbia downstream from Hanford.

We are not interested in information regarding resident or non-migratory fish caught in the Columbia River upstream from Hanford.

PLEASE TURN TO PAGE _____ OF THE INSTRUCTION BOOKLET.

A SERVING OF FISH IS FOUR OUNCES, ABOUT THE SIZE OF A REGULAR HAMBURGER PATTY; OR, A 2 INCH BY 3 INCH FILET.

DATA ENTRY NOTE: Respondent's year of birth _____ (MUST ENTER)

IF RESPONDENT WAS BORN AFTER 1947: GO TO (1964-66) on page 44

Let's start with the years 1944 through 1947:

145. Did you eat any fish during these years?

_____ YES 1 NO 2 DON'T KNOW 9

IF "NO" OR "DON'T KNOW": GO TO (1964-66) ON PAGE 44

146. On average, about how many servings of FRESH salmon did you eat per week during:

146a.	_____ Winter	January - March
146b.	_____ Spring	April - June
146c.	_____ Summer	July - September
146d.	_____ Fall	October-December

147. How was the fresh salmon prepared prior to eating? _____

148. In general, where was this salmon obtained? (CHECK ANY THAT APPLY.)

USE STUDY AREA MAP:

- 148a. _____ section 1 = upriver from Ringold
- 148b. _____ section 2 = Ringold
- 148c. _____ section 3 = Richland and Yakima River
- 148d. _____ section 4 = Kennewick/Pasco
- 148e. _____ section 5 = Snake and Walla Walla rivers
- 148f. _____ section 6 = Umatilla/Boardman and Umatilla River
- 148g. _____ section 7 = Arlington
- 148h. _____ section 8 = John Day/Biggs and John Day River
- 148i. _____ section 9 = Deschutes River
- 148j. _____ section 10 = The Dalles/Celilo
- 148k. _____ section 11 = Klickitat River
- 148l. _____ section 12 = White Salmon/Cascade Locks
- 148m. _____ section 13 = lower river
- 148n. _____ section 14 = Willapa Bay
- 148o. _____ Other river
- 148p. _____ Source totally unknown

149. On average, about how many servings of STORED salmon did you eat per week during:

- 149a. _____ Winter January - March
- 149b. _____ Spring April - June
- 149c. _____ Summer July - September
- 149d. _____ Fall October-December

150. How was the salmon prepared for storage? _____

151. In general, where was this fish obtained? (CHECK ANY THAT APPLY.)

USE STUDY AREA MAP

- 151a. _____ section 1 = upriver from Ringold
- 151b. _____ section 2 = Ringold
- 151c. _____ section 3 = Richland and Yakima River
- 151d. _____ section 4 = Kennewick/Pasco
- 151e. _____ section 5 = Snake and Walla Walla rivers
- 151f. _____ section 6 = Umatilla/Boardman and Umatilla River
- 151g. _____ section 7 = Arlington
- 151h. _____ section 8 = John Day/Biggs and John Day River
- 151i. _____ section 9 = Deschutes River
- 151j. _____ section 10 = The Dalles/Celilo
- 151k. _____ section 11 = Klickitat River
- 151l. _____ section 12 = White Salmon/Cascade Locks
- 151m. _____ section 13 = lower river
- 151n. _____ section 14 = Willapa Bay
- 151o. _____ Other river
- 151p. _____ Source totally unknown

152. On average, about how many servings of FRESH steelhead did you eat per week during:

- 152a. _____ Winter January-March
152b. _____ Spring April - June
152c. _____ Summer July- September
152d. _____ Fall October - December

153. How was the fresh steelhead prepared prior to eating? _____

154 In general, where was the steelhead obtained? (CHECK ANY THAT APPLY.)

USE STUDY AREA MAP

- 154a. _____ section 1 = upriver from Ringold
154b. _____ section 2 = Ringold
154c. _____ section 3 = Richland and Yakima River
154d. _____ section 4 = Kennewick/Pasco
154e. _____ section 5 = Snake and Walla Walla rivers
154f. _____ section 6 = Umatilla/Boardman and Umatilla River
154g. _____ section 7 = Arlington
154h. _____ section 8 = John Day/Biggs and John Day River
154i. _____ section 9 = Deschutes River
154j. _____ section 10 = The Dalles/ Celilo
154k. _____ section 11 = Klickitat River
154l. _____ section 12 = White Salmon/ Cascade Locks
154m. _____ section 13 = Lower river
154n. _____ section 14 = Willapa Bay
154o. _____ other river
154p. _____ Source totally unknown

155. On average, about how many servings of STORED steelhead did you eat per week during:

- 155a. _____ Winter January- March
155b. _____ Spring April - June
155c. _____ Summer July - September
155d. _____ Fall October - December

156. How was the steelhead prepared for storage: _____

157. In general, where was the steelhead obtained? (CHECK ANY THAT APPLY.)

USE STUDY AREA MAP

- 157a. _____ section 1 = upriver from Ringold
157b. _____ section 2 = Ringold
157c. _____ section 3 = Richland and Yakima River
157d. _____ section 4 = Kennewick/Pasco

- 157e. _____ section 5 = Snake and Walla Walla rivers
 157f. _____ section 6 = Umatilla/Boardman and Umatilla River
 157g. _____ section 7 = Arlington
 157h. _____ section 8 = John Day/Biggs and John Day River
 157i. _____ section 9 = Deschutes River
 157j. _____ section 10 = The Dalles/ Celilo
 157k. _____ section 11 = Klickitat River
 157l. _____ section 12 = White Salmon/ Cascade Locks
 157m. _____ section 13 = Lower river
 157n. _____ section 14 = Willapa Bay
 157o. _____ other river
 157p. _____ Source totally unknown

158. On average, about how many servings of FRESH eel (lamprey) did you eat per week during:

- 158a. _____ Winter January - March
 158b. _____ Spring April - June
 158c. _____ Summer July - September
 158d. _____ Fall October-December

159. How was the fresh eel prepared prior to eating? _____

160. In general, where was this eel obtained? (CHECK ANY THAT APPLY.)

USE STUDY AREA MAP:

- 160a. _____ section 1 = upriver from Ringold
 160b. _____ section 2 = Ringold
 160c. _____ section 3 = Richland and Yakima River
 160d. _____ section 4 = Kennewick/Pasco
 160e. _____ section 5 = Snake and Walla Walla rivers
 160f. _____ section 6 = Umatilla/Boardman and Umatilla River
 160g. _____ section 7 = Arlington
 160h. _____ section 8 = John Day/Biggs and John Day River
 160i. _____ section 9 = Deschutes River
 160j. _____ section 10 = The Dalles/Celilo
 160k. _____ section 11 = Klickitat River
 160l. _____ section 12 = White Salmon/Cascade Locks
 160m. _____ section 13 = lower river
 160n. _____ section 14 = Willapa Bay
 160o. _____ other river
 160p. _____ Source totally unknown

161. On average, about how many servings of STORED eel (lamprey) did you eat per week during:

- 161a. _____ Winter January - March
 161b. _____ Spring April - June
 161c. _____ Summer July - September
 161d. _____ Fall October-December

162. How was the eel prepared for storage? _____

163. In general, where was this eel obtained? (CHECK ANY THAT APPLY.)

USE STUDY AREA MAP:

- 163a. _____ section 1 = upriver from Ringold
163b. _____ section 2 = Ringold
163c. _____ section 3 = Richland and Yakima River
163d. _____ section 4 = Kennewick/Pasco
163e. _____ section 5 = Snake and Walla Walla rivers
163f. _____ section 6 = Umatilla/Boardman and Umatilla River
163g. _____ section 7 = Arlington
163h. _____ section 8 = John Day/Biggs and John Day River
163i. _____ section 9 = Deschutes River
163j. _____ section 10 = The Dalles/Celilo
163k. _____ section 11 = Klickitat River
163l. _____ section 12 = White Salmon/Cascade Locks
163m. _____ section 13 = lower river
163n. _____ section 14 = Willapa Bay
163o. _____ other river
163p. _____ Source totally unknown

For the following types of fish eaten from 1944 through 1947, we want to know about fish that were caught downstream from Hanford in the Columbia River itself, or in the rivers flowing into it.

164. On average, about how many servings of FRESH bullhead, catfish, suckers, whitefish, chiselmouth, chub, sturgeon, minnows, and shiners did you eat per week during:

- | | | |
|-------------|--------|------------------|
| 164a. _____ | Winter | January - March |
| 164b. _____ | Spring | April - June |
| 164c. _____ | Summer | July - September |
| 164d. _____ | Fall | October-December |

165. How was this fresh fish prepared prior to eating? _____

166. In general, where was this fish obtained? (CHECK ANY THAT APPLY.)

USE STUDY AREA MAP:

- 166a. _____ section 1 = Hanford Reservation above Ringold
166b. _____ section 2 = Ringold
166c. _____ section 3 = Richland and mouth of Yakima River
166d. _____ section 3u = Yakima River, upstream from mouth at Columbia
166e. _____ section 4 = Kennewick Pasco
166f. _____ section 5 = Mouths of Snake/Walla Walla Rivers
166g. _____ section 5u = Snake or Walla Walla Rivers, upstream from mouth at Columbia

- 166h. _____ section 6 = Umatilla/Boardman, mouth of Umatilla River
 166i. _____ section 6u = Umatilla River, upstream from mouth at Columbia
 166j. _____ section 7 = Arlington
 166k. _____ section 8 = John Day/Biggs, mouth of John Day River
 166l. _____ section 8u = John Day River, upstream from mouth at Columbia
 166m. _____ section 9 = Mouth of Deschutes River
 166n. _____ section 9u = Deschutes River, upstream from mouth at Columbia
 166o. _____ section 10 = The Dalles/Celilo
 166p. _____ section 11 = Mouth of Klickitat River
 166q. _____ section 11u = Klickitat River, upstream from mouth at Columbia
 166r. _____ section 12 = White Salmon/ Cascade Locks
 166s. _____ section 13 = Lower Columbia River
 166t. _____ section 14 = Willapa Bay
 166u. _____ Source totally unknown

167. On average, about how many servings of STORED bullhead, catfish, sucker, sturgeon, chiselmouth, chub, minnows, shiners, and whitefish did you eat per week during:

- 167a. _____ Winter January - March
 167b. _____ Spring April - June
 167c. _____ Summer July - September
 167d. _____ Fall October-December

168. How was this fresh fish prepared prior to eating? _____

169. In general, where was this fish obtained? (CHECK ANY THAT APPLY.)

USE STUDY AREA MAP:

- 169a. _____ section 1 = Hanford Reservation above Ringold
 169b. _____ section 2 = Ringold
 169c. _____ section 3 = Richland and mouth of Yakima River
 169d. _____ section 3u = Yakima River, upstream from mouth at Columbia
 169e. _____ section 4 = Kennewick Pasco
 169f. _____ section 5 = Mouths of Snake/Walla Walla Rivers
 169g. _____ section 5u = Snake or Walla Walla Rivers, upstream from mouth at Columbia
 169h. _____ section 6 = Umatilla/Boardman, mouth of Umatilla R.
 169i. _____ section 6u = Umatilla River, upstream from mouth at Columbia
 169j. _____ section 7 = Arlington
 169k. _____ section 8 = John Day/Biggs, mouth of John Day River
 169l. _____ section 8u = John Day River, upstream from mouth at Columbia
 169m. _____ section 9 = Mouth of Deschutes River
 169n. _____ section 9u = Deschutes River, upstream from mouth at Columbia

- 169o. _____ section 10= The Dalles/Celilo
169p. _____ section 11= Mouth of Klickitat River
169q. _____ section 11u= Klickitat River, upstream from mouth at
Columbia
169r. _____ section 12= White Salmon/Cascade Locks
169s. _____ section 13= Lower Columbia River
169t. _____ section 14= Willapa Bay
169u. _____ Source totally unknown
170. On average, about how many servings of FRESH perch, crappie,
bluegill, punkinseed did you eat per week during:
- 170a. _____ Winter January - March
170b. _____ Spring April - June
170c. _____ Summer July - September
170d. _____ Fall October-December
171. How was this fresh fish prepared prior to eating?

- | | | | |
|-------|-------|--------------|--|
| 172a. | _____ | section 1 = | Hanford Reservation above Ringold |
| 172b. | _____ | section 2 = | Ringold |
| 172c. | _____ | section 3 = | Richland and mouth of Yakima River |
| 172d. | _____ | section 3u= | Yakima River, upstream from mouth at Columbia |
| 172e. | _____ | section 4 = | Kennewick Pasco |
| 172f. | _____ | section 5 = | Mouths of Snake/Walla Walla Rivers |
| 172g. | _____ | section 5u= | Snake of Walla Walla Rivers, upstream from mouth at Columbia |
| 172h. | _____ | section 6 = | Umatilla/Boardman, mouth of Umatilla River |
| 172i. | _____ | section 6u= | Umatilla River, upstream from mouth at Columbia |
| 172j. | _____ | section 7 = | Arlington |
| 172k. | _____ | section 8 = | John Day/Biggs, mouth of John Day River |
| 172l. | _____ | section 8u= | John Day River, upstream from mouth at Columbia |
| 172m. | _____ | section 9 = | Mouth of Deschutes River |
| 172n. | _____ | section 9u= | Deschutes River, upstream from mouth at Columbia |
| 172o. | _____ | section 10= | The Dalles/Celilo |
| 172p. | _____ | section 11= | Mouth of The Klickitat River |
| 172q. | _____ | section 11u= | Klickitat River, upstream from mouth at Columbia |
| 172r. | _____ | section 12= | White Salmon/ Cascade Locks |
| 172s. | _____ | section 13= | Lower Columbia River |
| 172t. | _____ | section 14= | Willapa Bay |
| 172u. | _____ | | Source totally unknown |

173. On average, about how many servings of STORED perch, crappie, bluegill, and punkinseed did you eat per week during:

173a.	_____	Winter	January - March
173b.	_____	Spring	April - June
173c.	_____	Summer	July - September
173d.	_____	Fall	October-December

174. How was this fresh fish prepared prior to eating? _____

175. In general, where was this fish obtained? (CHECK ANY THAT APPLY.)

USE STUDY AREA MAP:

175a.	_____	section 1	= Hanford Reservation above Ringold
175b.	_____	section 2	= Ringold
175c.	_____	section 3	= Richland and mouth of Yakima River
175d.	_____	section 3u	= Yakima River, upstream from mouth at Columbia
175e.	_____	section 4	= Kennewick Pasco
175f.	_____	section 5	= Mouths of Snake/Walla Walla Rivers
175g.	_____	section 5u	= Snake or Walla Walla Rivers, upstream from mouth at Columbia
175h.	_____	section 6	= Umatilla/Boardman, mouth of Umatilla River
175i.	_____	section 6u	= Umatilla River, upstream from mouth at Columbia
175j.	_____	section 7	= Arlington
175k.	_____	section 8	= John Day/Biggs, mouth of John Day River
175l.	_____	section 8u	= John Day River, upstream from mouth at Columbia
175m.	_____	section 9	= Mouth of Deschutes River
175n.	_____	section 9u	= Deschutes River, upstream from mouth at Columbia
175o.	_____	section 10	= The Dalles/Celilo
175p.	_____	section 11	= Mouth of Klickitat River
175q.	_____	section 11u	= Klickitat River, upstream from mouth at Columbia
175r.	_____	section 12	= White Salmon/ Cascade Locks
175s.	_____	section 13	= Lower Columbia River
175t.	_____	section 14	= Willapa Bay
175u.	_____	Source totally unknown	

176. On average, about how many servings of FRESH bass, trout, and squawfish did you eat per week during:

176a.	_____	Winter	January - March
176b.	_____	Spring	April - June
176c.	_____	Summer	July - September
176d.	_____	Fall	October-December

177. How was this fresh fish prepared prior to eating? _____

178. In general, where was this fish obtained? **CHECK ANY THAT APPLY**

USE STUDY AREA MAP

- 178a. _____ section 1 = Hanford Reservation above Ringold
178b. _____ section 2 = Ringold
178c. _____ section 3 = Richland and mouth of Yakima River
178d. _____ section 3u = Yakima River, upstream from mouth at Columbia
178e. _____ section 4 = Kennewick Pasco
178f. _____ section 5 = Mouths of Snake/Walla Walla Rivers
178g. _____ section 5u = Snake or Walla Walla Rivers, upstream from mouth at Columbia
178h. _____ section 6 = Umatilla/Boardman, mouth of Umatilla River
178i. _____ section 6u = Umatilla River, upstream from mouth at Columbia
178j. _____ section 7 = Arlington
178k. _____ section 8 = John Day/Biggs, mouth of John Day River
178l. _____ section 8u = John Day River, upstream from mouth at Columbia
178m. _____ section 9 = Mouth of Deschutes River
178n. _____ section 9u = Deschutes River, upstream from mouth at Columbia
178o. _____ section 10 = The Dalles/Celilo
178p. _____ section 11 = Mouth of Klickitat River
178q. _____ section 11u = Klickitat River, upstream from mouth at Columbia
178r. _____ section 12 = White Salmon/ Cascade Locks
178s. _____ section 13 = Lower Columbia River
178t. _____ section 14 = Willapa Bay
178u. _____ Source totally unknown

179. On average, about how many servings of STORED bass, trout, and squawfish did you eat per week during:

- | | | |
|-------------|--------|------------------|
| 179a. _____ | Winter | January - March |
| 179b. _____ | Spring | April - June |
| 179c. _____ | Summer | July - September |
| 179d. _____ | Fall | October-December |

180. How was this fresh fish prepared prior to eating? _____

181. In general, where was this fish obtained? (CHECK ANY THAT APPLY)

USE STUDY AREA MAP:

- 181a. _____ section 1 = Hanford Reservation above Ringold
181b. _____ section 2 = Ringold
181c. _____ section 3 = Richland and mouth of Yakima River
181d. _____ section 3u = Yakima River, upstream from mouth at Columbia
181e. _____ section 4 = Kennewick Pasco
181f. _____ section 5 = Mouths of Snake/Walla Walla Rivers
181g. _____ section 5u = Snake or Walla Walla Rivers, upstream from mouth at Columbia
181h. _____ section 6 = Umatilla/Boardman, mpouth of Umatilla River
181i. _____ section 6u = Umatilla Riveer, upstream from mouth at Columbia
181j. _____ section 7 = Arlington
181k. _____ section 8 = John Day/Biggs, mouth of John Day River
181l. _____ section 8u = John Day River, upstream from mouth at Columbia
181m. _____ section 9 = Mouth of Deschutes River
181n. _____ section 9u = Deschutes River, upstream from mouth at Columbia
181o. _____ section 10 = The Dalles/Celilo
181p. _____ section 11 = Mouth of Klickitat River
181q. _____ section 11u = Klickitat River, upstream from mouth at Columbia
181r. _____ section 12 = White Salmon/ Cascade Locks
181s. _____ section 13 = Lower Columbia River
181t. _____ section 14 = Willapa Bay
181u. _____ Source totally unknown

182. On average, about how many servings of FRESH shellfish or crawfish did you eat per week during:

- | | | |
|-------------|--------|------------------|
| 182a. _____ | Winter | January - March |
| 182b. _____ | Spring | April - June |
| 182c. _____ | Summer | July - September |
| 182d. _____ | Fall | October-December |

183. How was the fresh shellfish or crawfish prepared prior to eating? _____

184. In general, where was this shellfish or crawfish obtained? (CHECK ANY THAT APPLY)

USE STUDY AREA MAP:

- 184a. _____ section 1 = Hanford Reservation above Ringold
184b. _____ section 2 = Ringold
184c. _____ section 3 = Richland and mouth of Yakima River
184d. _____ section 3u = Yakima River, upstream from mouth at Columbia

- 184e. _____ section 4 = Kennewick Pasco
 184f. _____ section 5 = Mouths of Snake/Walla Walla Rivers
 184g. _____ section 5u = Snake or Walla Walla Rivers, upstream
 from mouth at Columbia
 184h. _____ section 6 = Umatilla/Boardman, mouth of Umatilla
 River
 184i. _____ section 6u = Umatilla River, upstream from mouth at
 Columbia
 184j. _____ section 7 = Arlington
 184k. _____ section 8 = John Day/Biggs, mouth of John Day River
 184l. _____ section 8u = John Day River, upstream from mouth at
 Columbia
 184m. _____ section 9 = Mouth pf Deschutes River
 184n. _____ section 9u = Deschutes River, upstream from mouth at
 Columbia
 184o. _____ section 10 = The Dalles/Celilo
 184p. _____ section 11 = Mouth of Klickitat River
 184q. _____ section 11u = Klickitat River, upstream from mouth at
 Columbia
 184r. _____ section 12 = White Salmon/ Cascade Locks
 184s. _____ section 13 = Lower Columbia River
 184t. _____ section 14 = Willapa Bay
 184u. _____ Source totally unknown

185. On average, about how many servings of STORED shellfish or
 crawfish did you eat per week during:

- 185a. _____ Winter January - March
 185b. _____ Spring April - June
 185c. _____ Summer July - September
 185d. _____ Fall October-December

186. How was the shellfish or crawfish prepared for storage?

187. In general, where was this shellfish or crawfish obtained?
 (CHECK ANY THAT APPLY)

USE STUDY AREA MAP:

- 187a. _____ section 1 = Hanford Reservation above Ringold
 187b. _____ section 2 = Ringold
 187c. _____ section 3 = Richland and mouth of Yakima River
 187d. _____ section 3u = Yakima River, upstream from mouth at
 Columbia
 187e. _____ section 4 = Kennewick Pasco
 187f. _____ section 5 = Mouths of Snake/Walla Walla Rivers
 187g. _____ section 5u = Snake or Walla Walla Rivers, upstream
 from mouth at Columbia
 187h. _____ section 6 = Umatilla/Boardman, mouth of Umatilla
 River
 187i. _____ section 6u = Umatilla River, upstream from mouth at
 Columbia

- | | | | | |
|-------|-------|-------------|---|---|
| 187j. | _____ | section 7 | = | Arlington |
| 187k. | _____ | section 8 | = | John Day/Biggs, mouth of John Day River |
| 187l. | _____ | section 8u | = | John Day River, upstream from mouth at
Columbia |
| 187m. | _____ | section 9 | = | Mouth of Deschutes River |
| 187n. | _____ | section 9u | = | Deschutes River, upstream from mouth at
Columbia |
| 187o. | _____ | section 10 | = | The Dalles/Celilo |
| 187p. | _____ | section 11 | = | Mouth of Klickitat River |
| 187q. | _____ | section 11u | = | Klickitat River, upstream from mouth at
Columbia |
| 187r. | _____ | section 12 | = | White Salmon/ Cascade Locks |
| 187s. | _____ | section 13 | = | Lower Columbia River |
| 187t. | _____ | section 14 | = | Willapa Bay |
| 187u. | _____ | Source | = | totally unknown |

Now let's talk about the years 1964 through 1966:

Remember, for salmon, steelhead, and eel, we are interested in fish caught anywhere in the Snake or Columbia river drainage systems.

188. Did you eat any fish during these years?

YES 1 NO 2 DON'T KNOW 9

IF "NO" OR "DON'T KNOW": GO TO SECTION XI, "COLUMBIA RIVER
WATER EXPOSURE" ON PAGE 55

189. On average, about how many servings of FRESH salmon did you eat per week during:

189a.	_____	Winter	January - March
189b.	_____	Spring	April - June
189c.	_____	Summer	July - September
189d.	_____	Fall	October-December

190. How was the fresh salmon prepared prior to eating?

191. In general, where was this salmon obtained? (CHECK ANY THAT APPLY.)

USE STUDY AREA MAP:

191a. _____ section 1 = upriver from Ringold
191b. _____ section 2 = Ringold
191c. _____ section 3 = Richland and Yakima River
191d. _____ section 4 = Kennewick/Pasco
191e. _____ section 5 = Snake and Walla Walla rivers
191f. _____ section 6 = Umatilla/Boardman and Umatilla River

- 191g. _____ section 7 = Arlington
 191h. _____ section 8 = John Day/Biggs and John Day River
 191i. _____ section 9 = Deschutes River
 191j. _____ section 10 = The Dalles/Celilo
 191k. _____ section 11 = Klickitat River
 191l. _____ section 12 = White Salmon/Cascade Locks
 191m. _____ section 13 = lower river
 191n. _____ section 14 = Willapa Bay
 191o. _____ Other river
 191p. _____ Source totally unknown

192. On average, about how many servings of STORED salmon did you eat per week during:

- 192a. _____ Winter January - March
 192b. _____ Spring April - June
 192c. _____ Summer July - September
 192d. _____ Fall October-December

193. How was the salmon prepared for storage? _____

194. In general, where was this fish obtained? (CHECK ANY THAT APPLY.)

USE STUDY AREA MAP:

- 194a. _____ section 1 = upriver from Ringold
 194b. _____ section 2 = Ringold
 194c. _____ section 3 = Richland and Yakima River
 194d. _____ section 4 = Kennewick/Pasco
 194e. _____ section 5 = Snake and Walla Walla rivers
 194f. _____ section 6 = Umatilla/Boardman and Umatilla River
 194g. _____ section 7 = Arlington
 194h. _____ section 8 = John Day/Biggs and John Day River
 194i. _____ section 9 = Deschutes River
 194j. _____ section 10 = The Dalles/Celilo
 194k. _____ section 11 = Klickitat River
 194l. _____ section 12 = White Salmon/Cascade Locks
 194m. _____ section 13 = lower river
 194n. _____ section 14 = Willapa Bay
 194o. _____ Other river
 194p. _____ Source totally unknown

195. On average, about how many servings of FRESH steelhead did you eat per week during:

- 195a. _____ Winter January-March
 195b. _____ Spring April - June
 195c. _____ Summer July- September
 195d. _____ Fall October - December

196. How was the fresh steelhead prepared prior to eating? _____

197. In general, where was the steelhead obtained? (CHECK ANY THAT APPLY.)

USE STUDY AREA MAP:

- 197a. _____ section 1 = upriver from Ringold
197b. _____ section 2 = Ringold
197c. _____ section 3 = Richland and Yakima River
197d. _____ section 4 = Kennewick/Pasco
197e. _____ section 5 = Snake and Walla Walla rivers
197f. _____ section 6 = Umatilla/Boardman and Umatilla River
197g. _____ section 7 = Arlington
197h. _____ section 8 = John Day/Biggs and John Day River
197i. _____ section 9 = Deschutes River
197j. _____ section 10 = The Dalles/ Celilo
197k. _____ section 11 = Klickitat River
197l. _____ section 12 = White Salmon/ Cascade Locks
197m. _____ section 13 = Lower river
197n. _____ section 14 = Willapa Bay
197o. _____ other river
197p. _____ Source totally unknown

198. On average, about how many servings of STORED steelhead did you eat per week during:

- 198a. _____ Winter January- March
198b. _____ Spring April - June
198c. _____ Summer July - September
198d. _____ Fall October - December

199. How was the steelhead prepared for storage: _____

200. In general, where was the steelhead obtained? (CHECK ANY THAT APPLY.)

USE STUDY AREA MAP:

- 200a. _____ section 1 = upriver from Ringold
200b. _____ section 2 = Ringold
200c. _____ section 3 = Richland and Yakima River
200d. _____ section 4 = Kennewick/Pasco
200e. _____ section 5 = Snake and Walla Walla rivers
200f. _____ section 6 = Umatilla/Boardman and Umatilla River
200g. _____ section 7 = Arlington
200h. _____ section 8 = John Day/Biggs and John Day River
200i. _____ section 9 = Deschutes River
200j. _____ section 10 = The Dalles/ Celilo
200k. _____ section 11 = Klickitat River
200l. _____ section 12 = White Salmon/ Cascade Locks
200m. _____ section 13 = Lower river
200n. _____ section 14 = Willapa Bay
200o. _____ other river
200p. _____ Source totally unknown

201. On average, about how many servings of FRESH eel (lamprey) did you eat per week during:

201a. _____ Winter January - March
201b. _____ Spring April - June
201c. _____ Summer July - September
201d. _____ Fall October-December

202. How was the fresh eel prepared prior to eating? _____

203. In general, where was this eel obtained? (CHECK ANY THAT APPLY.)

USE STUDY AREA MAP:

203a. _____ section 1 = upriver from Ringold
203b. _____ section 2 = Ringold
203c. _____ section 3 = Richland and Yakima River
203d. _____ section 4 = Kennewick/Pasco
203e. _____ section 5 = Snake and Walla Walla rivers
203f. _____ section 6 = Umatilla/Boardman and Umatilla River
203g. _____ section 7 = Arlington
203h. _____ section 8 = John Day/Biggs and John Day River
203i. _____ section 9 = Deschutes River
203j. _____ section 10 = The Dalles/Celilo
203k. _____ section 11 = Klickitat River
203l. _____ section 12 = White Salmon/Cascade Locks
203m. _____ section 13 = lower river
203n. _____ section 14 = Willapa Bay
203o. _____ other river
203p. _____ Source totally unknown

204. On average, about how many servings of STORED eel (lamprey) did you eat per week during:

204a. _____ Winter January - March
204b. _____ Spring April - June
204c. _____ Summer July - September
204d. _____ Fall October-December

205. How was the eel prepared for storage? _____

206. In general, where was this eel obtained? (CHECK ANY THAT APPLY.)

USE STUDY AREA MAP:

206a. _____ section 1 = upriver from Ringold
206b. _____ section 2 = Ringold
206c. _____ section 3 = Richland and Yakima River
206d. _____ section 4 = Kennewick/Pasco
206e. _____ section 5 = Snake and Walla Walla rivers

- 206f. _____ section 6 = Umatilla/Boardman and Umatilla River
 206g. _____ section 7 = Arlington
 206h. _____ section 8 = John Day/Biggs and John Day River
 206i. _____ section 9 = Deschutes River
 206j. _____ section 10 = The Dalles/Celilo
 206k. _____ section 11 = Klickitat River
 206l. _____ section 12 = White Salmon/Cascade Locks
 206m. _____ section 13 = lower river
 206n. _____ section 14 = Willapa Bay
 206o. _____ other river
 206p. _____ Source totally unknown

Now, for the following types of fish eaten from 1964 through 1966, we want to know about fish that were caught downstream from Hanford in the Columbia River itself, or in the rivers flowing into it.

207. Did you eat any fresh bullhead, catfish, suckers, whitefish, chiselmouth, chub, sturgeon, minnows, and shiners during these years?

_____ YES 1 NO 2 DON'T KNOW 9

208. On average, about how many servings of FRESH bullhead, catfish, suckers, whitefish, chiselmouth, chub, sturgeon, minnows, and shiners did you eat per week during:

- 208a. _____ Winter January - March
 208b. _____ Spring April - June
 208c. _____ Summer July - September
 208d. _____ Fall October-December

209. How was this fresh fish prepared prior to eating? _____

210. In general, where was this fish obtained? (CHECK ANY THAT APPLY.)

USE STUDY AREA MAP:

- 210a. _____ section 1 = Hanford Reservation above Ringold
 210b. _____ section 2 = Ringold
 210c. _____ section 3 = Richland and mouth of Yakima River
 210d. _____ section 3u = Yakima River, upstream from mouth at Columbia
 210e. _____ section 4 = Kennewick Pasco
 210f. _____ section 5 = Mouths of Snake/Walla Walla Rivers
 210g. _____ section 5u = Snake or Walla Walla Rivers, upstream from mouth at Columbia
 210h. _____ section 6 = Umatilla/Boardman, mouth of Umatilla River
 210i. _____ section 6u = Umatilla River, upstream from mouth at Columbia
 210j. _____ section 7 = Arlington
 210k. _____ section 8 = John Day/Biggs, mouth of John Day River

- 210l. _____ section 8u = John Day River, upstream from mouth at Columbia
 210m. _____ section 9 = Mouth of Deschutes River
 210n. _____ section 9u = Deschutes River, upstream from mouth at Columbia
 210o. _____ section 10 = The Dalles/Celilo
 210p. _____ section 11 = Mouth of Klickitat River
 210q. _____ section 11u = Klickitat River, upstream from mouth at Columbia
 210r. _____ section 12 = White Salmon/ Cascade Locks
 210s. _____ section 13 = Lower Columbia River
 210t. _____ section 14 = Willapa Bay
 210u. _____ Source totally unknown

211. On average, about how many servings of STORED bullhead, catfish, sucker, sturgeon, chiselmouth, chub, minnows, shiners, and whitefish did you eat per week during:

- 211a. _____ Winter January - March
 211b. _____ Spring April - June
 211c. _____ Summer July - September
 211d. _____ Fall October-December

212. How was this fresh fish prepared prior to eating? _____

213. In general, where was this fish obtained? (CHECK ANY THAT APPLY.)

USE STUDY AREA MAP:

- 213a. _____ section 1 = Hanford Reservation above Ringold
 213b. _____ section 2 = Ringold
 213c. _____ section 3 = Richland and mouth Yakima River
 213d. _____ section 3u = Yakima River, upstream from mouth at Columbia
 213e. _____ section 4 = Kennewick Pasco
 213f. _____ section 5 = Mouths of Snake/Walla Walla Rivers
 213g. _____ section 5u = Snake or Walla Walla Rivers, upstream from mouth at Columbia
 213h. _____ section 6 = Umatilla/Boardman, mouth of Umatilla River
 213i. _____ section 6u = Umatilla River, upstream from mouth at Columbia
 213j. _____ section 7 = Arlington
 213k. _____ section 8 = John Day/Biggs, mouth of John Day River
 213l. _____ section 8u = John Day River, upstream from mouth at Columbia
 213m. _____ section 9 = Mouth of Deschutes River
 213n. _____ section 9u = Deschutes River, upstream from mouth at Columbia
 213o. _____ section 10 = The Dalles/Celilo
 213p. _____ section 11 = Mouth of Klickitat River
 213q. _____ section 11u = Klickitat River, upstream from mouth at Columbia
 213r. _____ section 12 = White Salmon/ Cascade Locks

- 213s. _____ section 13 = Lower Columbia River
 213t. _____ section 14 = Willapa Bay
 213u. _____ Source totally unknown

214. On average, about how many servings of FRESH perch, crappie, bluegill, punkinseed did you eat per week during:

- 214a. _____ Winter January - March
 214b. _____ Spring April - June
 214c. _____ Summer July - September
 214d. _____ Fall October-December

215. How was this fresh fish prepared prior to eating? _____

216. In general, where was this fish obtained? CHECK ANY THAT APPLY:

USE STUDY AREA MAP:

- 216a. _____ section 1 = Hanford Reservation above Ringold
 216b. _____ section 2 = Ringold
 216c. _____ section 3 = Richland and mouth of Yakima River
 216d. _____ section 3u = Yakima River, upstream from mouth at Columbia
 216e. _____ section 4 = Kennewick Pasco
 216f. _____ section 5 = Mouths of Snake/Walla Walla Rivers
 216g. _____ section 5u = Snake or Walla Walla Rivers, upstream from mouth at Columbia
 216h. _____ section 6 = Umatilla/Boardman, mouth of Umatilla River
 216i. _____ section 6u = Umatilla River, upstream from mouth at Columbia
 216j. _____ section 7 = Arlington
 216k. _____ section 8 = John Day/Biggs, mouth of John Day River
 216l. _____ section 8u = John Day River, upstream from mouth at Columbia
 216m. _____ section 9 = Mouth of Deschutes River
 216n. _____ section 9u = Deschutes River, upstream from mouth at Columbia
 216o. _____ section 10 = The Dalles/Celilo
 216p. _____ section 11 = Mouth of Klickitat River
 216q. _____ section 11u = Klickitat River, upstream from mouth at Columbia
 216r. _____ section 12 = White Salmon/ Cascade Locks
 216s. _____ section 13 = Lower Columbia River
 216t. _____ section 14 = Willapa Bay
 216u. _____ Source totally unknown

217. On average, about how many servings of STORED perch, crappie, bluegill, and punkinseed did you eat per week during:

- 217a. _____ Winter January - March
 217b. _____ Spring April - June
 217c. _____ Summer July - September
 217d. _____ Fall October-December

218. How was this fresh fish prepared prior to eating? _____

219. In general, where was this fish obtained? (CHECK ANY THAT APPLY.)

USE STUDY AREA MAP:

- 219a. _____ section 1 = Hanford Reservation above Ringold
219b. _____ section 2 = Ringold
219c. _____ section 3 = Richland and mouth of Yakima River
219d. _____ section 3u = Yakima River, upstream from mouth at Columbia
219e. _____ section 4 = Kennewick Pasco
219f. _____ section 5 = Mouths of Snake/Walla Walla Rivers
219g. _____ section 5u = Snake or Walla Walla Rivers, upstream from mouth at Columbia
219h. _____ section 6 = Umatilla/Boardman, mouth of Umatilla River
219i. _____ section 6u = Umatilla River, upstream from mouth at Columbia
219j. _____ section 7 = Arlington
219k. _____ section 8 = John Day/Biggs, mouth of John Day River
219l. _____ section 8u = John Day River, upstream from mouth at Columbia
219m. _____ section 9 = Mouth of Deschutes River
219n. _____ section 9u = Deschutes River, upstream from mouth at Columbia
219o. _____ section 10 = The Dalles/Celilo
219p. _____ section 11 = Mouth of Klickitat River
219q. _____ section 11u = Klickitat River, upstream from mouth at Columbia
219r. _____ section 12 = White Salmon/ Cascade Locks
219s. _____ section 13 = Lower Columbia River
219t. _____ section 14 = Willapa Bay
219u. _____ Source totally unknown

220. On average, about how many servings of FRESH bass, trout, and squawfish did you eat per week during:

- 220a. _____ Winter January - March
220b. _____ Spring April - June
220c. _____ Summer July - September
220d. _____ Fall October-December

221. How was this fresh fish prepared prior to eating? _____

222. In general, where was this fish obtained? CHECK ANY THAT APPLY

USE STUDY AREA MAP:

- 222a. _____ section 1 = Hanford Reservation above Ringold
222b. _____ section 2 = Ringold
222c. _____ section 3 = Richland and mouth of Yakima River

- 222d. _____ section 3u = Yakima River, upstream from mouth at
Columbia
- 222e. _____ section 4 = Kennewick Pasco
- 222f. _____ section 5 = Mouths of Snake/Walla Walla Rivers
- 222g. _____ section 5u = Snake or Walla Walla Rivers, upstream
from mouth at Columbia
- 222h. _____ section 6 = Umatilla/Boardman, mouth of Umatilla
River
- 222i. _____ section 6u = Umatilla River, upstream from mouth at
Columbia
- 222j. _____ section 7 = Arlington
- 222k. _____ section 8 = John Day/Biggs, mouth of John Day River
- 222l. _____ section 8u = John Day River, upstream from mouth at
Columbia
- 222m. _____ section 9 = Mouth of Deschutes River
- 222n. _____ section 9u = Deschutes River, upstream from mouth at
Columbia
- 222o. _____ section 10 = The Dalles/Celilo
- 222p. _____ section 11 = Mouth of Klickitat River
- 222q. _____ section 11u = Klickitat River, upstream from mouth at
Columbia
- 222r. _____ section 12 = White Salmon/ Cascade Locks
- 222s. _____ section 13 = Lower Columbia River
- 222t. _____ section 14 = Willapa Bay
- 222u. _____ Source totally unknown

223. On average, about how many servings of STORED bass, trout,
and squawfish did you eat per week during:

- 223a. _____ Winter January - March
- 223b. _____ Spring April - June
- 223c. _____ Summer July - September
- 223d. _____ Fall October-December

224. How was this fresh fish prepared prior to eating? _____

225. In general, where was this fish obtained? (CHECK ANY THAT
APPLY)

USE STUDY AREA MAP:

- 225a. _____ section 1 = Hanford Reservation above Ringold
- 225b. _____ section 2 = Ringold
- 225c. _____ section 3 = Richland and mouth of Yakima River
- 225d. _____ section 3u = Yakima River, upstream from mouth at
Columbia
- 225e. _____ section 4 = Kennewick Pasco
- 225f. _____ section 5 = Mouths of Snake/Walla Walla Rivers
- 225g. _____ section 5u = Snake or Walla Walla Rivers, upstream
from mouth at Columbia
- 225h. _____ section 6 = Umatilla/Boardman, mouth of Umatilla
River
- 225i. _____ section 6u = Umatilla River, upstream from mouth at
Columbia
- 225j. _____ section 7 = Arlington

- 225k. _____ section 8 = John Day/Biggs, mouth of John Day River
225l. _____ section 8u = John Day River, upstream from mouth at
Columbia
225m. _____ section 9 = Mouth of Deschutes River
225n. _____ section 9u = Deschutes River, upstream from mouth at
Columbia
225o. _____ section 10 = The Dalles/Celilo
225p. _____ section 11 = Mouth of Klickitat River
225q. _____ section 11u = Klickitat River, upstream from mouth at
Columbia
225r. _____ section 12 = White Salmon/ Cascade Locks
225s. _____ section 13 = Lower Columbia River
225t. _____ section 14 = Willapa Bay
225u. _____ Source totally unknown

226. On average, about how many servings of FRESH shellfish or crawfish did you eat per week during:

- | | | | |
|-------|-------------------|--------|------------------|
| 226a. | <u> </u> | Winter | January - March |
| 226b. | <u> </u> | Spring | April - June |
| 226c. | <u> </u> | Summer | July - September |
| 226d. | <u> </u> | Fall | October-December |

227. How was the fresh shellfish or crawfish prepared prior to eating?

228. In general, where was this shellfish or crawfish obtained?
(CHECK ANY THAT APPLY)

USE STUDY AREA MAP:

- ```

228a. _____ section 1 = Hanford Reservation above Ringold
228b. _____ section 2 = Ringold
228c. _____ section 3 = Richland and mouth of Yakima River
228d. _____ section 3u = Yakima River, upstream from mouth at
 Columbia
228e. _____ section 4 = Kennewick Pasco
228f. _____ section 5 = Mouths of Snake/Walla Walla Rivers
228g. _____ section 5u = Snake or Walla Walla Rivers, upstream
 from mouth at Columbia
228h. _____ section 6 = Umatilla/Boardman, mouth of Umatilla
 River
228i. _____ section 6u = Umatilla River, upstream from mouth at
 Columbia
228j. _____ section 7 = Arlington
228k. _____ section 8 = John Day/Biggs, mouth of John Day River
228l. _____ section 8u = John Day River, upstream from mouth at
 Columbia
228m. _____ section 9 = Mouth of Deschutes River
228n. _____ section 9u = Deschutes River, upstream from mouth at
 Columbia
228o. _____ section 10 = The Dalles/Celilo
228p. _____ section 11 = Mouth of Klickitat River
228q. _____ section 11u = Klickitat River, upstream from mouth at
 Columbia

```



- 228r. \_\_\_\_\_ section 12 = White Salmon/ Cascade Locks  
 228s. \_\_\_\_\_ section 13 = Lower Columbia River  
 228t. \_\_\_\_\_ section 145 = Willapa Bay  
 228u. \_\_\_\_\_ Source totally unknown

229. On average, about how many servings of STORED shellfish or crawfish did you eat per week during:

- 229a. \_\_\_\_\_ Winter January - March  
 229b. \_\_\_\_\_ Spring April - June  
 229c. \_\_\_\_\_ Summer July - September  
 229d. \_\_\_\_\_ Fall October-December

230. How was the shellfish or crawfish prepared for storage?

---

231. In general, where was this shellfish or crawfish obtained?  
 (CHECK ANY THAT APPLY)

**USE STUDY AREA MAP:**

- 231a. \_\_\_\_\_ section 1 = Hanford Reservation above Ringold  
 231b. \_\_\_\_\_ section 2 = Ringold  
 231c. \_\_\_\_\_ section 3 = Richland and mouth of Yakima River  
 231d. \_\_\_\_\_ section 3u = Yakima River, upstream from mouth at Columbia  
 231e. \_\_\_\_\_ section 4 = Kennewick Pasco  
 231f. \_\_\_\_\_ section 5 = Mouths of Snake/Walla Walla Rivers  
 231g. \_\_\_\_\_ section 5u = Snake or Walla Walla Rivers, upstream from mouth at Columbia  
 231h. \_\_\_\_\_ section 6 = Umatilla/Boardman, mouth of Umatilla River  
 231i. \_\_\_\_\_ section 6u = Umatilla River, upstream from mouth at Columbia  
 231j. \_\_\_\_\_ section 7 = Arlington  
 231k. \_\_\_\_\_ section 8 = John Day/Biggs, mouth of John Day River  
 231l. \_\_\_\_\_ section 8u = John Day River, upstream from mouth at Columbia  
 231m. \_\_\_\_\_ section 9 = Mouth of Deschutes River  
 231n. \_\_\_\_\_ section 9u = Deschutes River, upstream from mouth at Columbia  
 231o. \_\_\_\_\_ section 10 = The Dalles/Celilo  
 231p. \_\_\_\_\_ section 11 = Mouth of Klickitat River  
 231q. \_\_\_\_\_ section 11u = Klickitat River, upstream from mouth at Columbia  
 231r. \_\_\_\_\_ section 12 = White Salmon/ Cascade Locks  
 231s. \_\_\_\_\_ section 13 = Lower Columbia River  
 231t. \_\_\_\_\_ section 14 = Willapa Bay  
 231u. \_\_\_\_\_ Source totally unknown

## SECTION XI: COLUMBIA RIVER WATER EXPOSURE

I would like to ask you about your use of water from the Columbia River from Hanford to the mouth of the river at the Pacific Ocean. This would include drinking water, bathing, recreation, and work.

Please turn to page \_\_\_\_ of the Instruction Booklet.

DATA ENTRY NOTE: Respondent's year of birth \_\_\_\_ (MUST ENTER)

IF RESPONDENT WAS BORN AFTER 1947: GO TO (1964-66) ON PAGE 57

HAVE AVAILABLE AN 8 OUNCE CUP FOR DEMONSTRATION.

Let's begin with the years 1944 through 1947.

232. On average, about how many 8 ounce cups of untreated Columbia River water did you drink per week during:

|             |        |                  |
|-------------|--------|------------------|
| 232a. _____ | Winter | January - March  |
| 232b. _____ | Spring | April - June     |
| 232c. _____ | Summer | July - September |
| 232d. _____ | Fall   | October-December |

233. Where along the Columbia River did you get this water?  
(CHECK ANY THAT APPLY)

### USE STUDY AREA MAP:

|             |                                                 |
|-------------|-------------------------------------------------|
| 233a. _____ | section 1 = Hanford Reservation above Ringold   |
| 233b. _____ | section 2 = Ringold                             |
| 233c. _____ | section 3 = Richland                            |
| 233d. _____ | section 4 = Kennewick/Pasco                     |
| 233e. _____ | section 5 = Mouth of Snake to Walla Walla River |
| 233f. _____ | section 6 = Umatilla/Boardman                   |
| 233g. _____ | section 7 = Arlington                           |
| 233h. _____ | section 8 = John Day/Biggs                      |
| 233i. _____ | section 9 = Deschutes River                     |
| 233j. _____ | section 10 = The Dalles/Celilo                  |
| 233k. _____ | section 11 = Klickitat River                    |
| 233l. _____ | section 12 = White Salmon/Cascade Locks         |
| 233m. _____ | section 13 = lower river                        |
| 233n. _____ | section 14 = Willapa Bay                        |
| 233o. _____ | unknown                                         |

234. On average, about how many 8 ounce cups of treated municipal water did you drink per week during:

|       |       |        |                  |
|-------|-------|--------|------------------|
| 234a. | _____ | Winter | January - March  |
| 234b. | _____ | Spring | April - June     |
| 234c. | _____ | Summer | July - September |
| 234d. | _____ | Fall   | October-December |

235. On average, about how many hours did you bathe or swim in the Columbia River per week during:

|       |       |        |                  |
|-------|-------|--------|------------------|
| 235a. | _____ | Winter | January - March  |
| 235b. | _____ | Spring | April - June     |
| 235c. | _____ | Summer | July - September |
| 235d. | _____ | Fall   | October-December |

236. Where along the river did this bathing and swimming take place? (CHECK ANY THAT APPLY)

**USE STUDY AREA MAP:**

|       |       |                                                 |
|-------|-------|-------------------------------------------------|
| 236a. | _____ | section 1 = Hanford Reservation above Ringold   |
| 236b. | _____ | section 2 = Ringold                             |
| 236c. | _____ | section 3 = Richland                            |
| 236d. | _____ | section 4 = Kennewick/Pasco                     |
| 236e. | _____ | section 5 = Mouth of Snake to Walla Walla River |
| 236f. | _____ | section 6 = Umatilla/Boardman                   |
| 236g. | _____ | section 7 = Arlington                           |
| 236h. | _____ | section 8 = John Day/Biggs                      |
| 236i. | _____ | section 9 = Deschutes River                     |
| 236j. | _____ | section 10 = The Dalles/Celilo                  |
| 236k. | _____ | section 11 = Klickitat River                    |
| 236l. | _____ | section 12 = White Salmon/Cascade Locks         |
| 236m. | _____ | section 13 = lower river                        |
| 236n. | _____ | section 14 = Willapa Bay                        |
| 236o. | _____ | unknown                                         |

237. On average, about how many hours did you spend boating, canoeing, setting fish nets on the river per week during:

|       |       |        |                  |
|-------|-------|--------|------------------|
| 237a. | _____ | Winter | January - March  |
| 237b. | _____ | Spring | April - June     |
| 237c. | _____ | Summer | July - September |
| 237d. | _____ | Fall   | October-December |

238. Where on the river did this take place? (CHECK ANY THAT APPLY)

**USE STUDY AREA MAP:**

|       |       |                                                 |
|-------|-------|-------------------------------------------------|
| 238a. | _____ | section 1 = Hanford Reservation above Ringold   |
| 238b. | _____ | section 2 = Ringold                             |
| 238c. | _____ | section 3 = Richland                            |
| 238d. | _____ | section 4 = Kennewick/Pasco                     |
| 238e. | _____ | section 5 = Mouth of Snake to Walla Walla River |
| 238f. | _____ | section 6 = Umatilla/Boardman                   |

- 238g. \_\_\_\_\_ section 7 = Arlington  
 238h. \_\_\_\_\_ section 8 = John Day/Biggs  
 238i. \_\_\_\_\_ section 9 = Deschutes River  
 238j. \_\_\_\_\_ section 10 = The Dalles/Celilo  
 238k. \_\_\_\_\_ section 11 = Klickitat River  
 238l. \_\_\_\_\_ section 12 = White Salmon/Cascade Locks  
 238m. \_\_\_\_\_ section 13 = lower river  
 238n. \_\_\_\_\_ section 14 = Willapa Bay  
 238o. \_\_\_\_\_ unknown

## **Lets talk about the years 1964 through 1966**

**Let's talk about your use of water during the years 1964 through 1966. Remember, we are interested only in exposure to the Columbia River from Hanford downstream to the the mouth of the river.**

239. On average, about how many 8 ounce cups of untreated Columbia River water did you drink per week during:

- 239a. \_\_\_\_\_ Winter      January - March  
 239b. \_\_\_\_\_ Spring      April - June  
 239c. \_\_\_\_\_ Summer      July - September  
 239d. \_\_\_\_\_ Fall      October-December

240. Where along the Columbia River did you get this water?  
 (CHECK ANY THAT APPLY)

### **USE THE STUDY AREA MAP:**

- 240a. \_\_\_\_\_ section 1 = Hanford Reservation above Ringold  
 240b. \_\_\_\_\_ section 2 = Ringold  
 240c. \_\_\_\_\_ section 3 = Richland  
 240d. \_\_\_\_\_ section 4 = Kennewick/Pasco  
 240e. \_\_\_\_\_ section 5 = Mouth of Snake to Walla Walla River  
 240f. \_\_\_\_\_ section 6 = Umatilla/Boardman  
 240g. \_\_\_\_\_ section 7 = Arlington  
 240h. \_\_\_\_\_ section 8 = John Day/Biggs  
 240i. \_\_\_\_\_ section 9 = Deschutes River  
 240j. \_\_\_\_\_ section 10 = The Dalles/Celilo  
 240k. \_\_\_\_\_ section 11 = Klickitat River  
 240l. \_\_\_\_\_ section 12 = White Salmon/Cascade Locks  
 240m. \_\_\_\_\_ section 13 = lower river  
 240n. \_\_\_\_\_ section 14 = Willapa Bay  
 240o. \_\_\_\_\_ unknown

241. On average, about how many 8 ounce cups of treated municipal water did you drink per week during:

- 241a. \_\_\_\_\_ Winter      January - March  
 241b. \_\_\_\_\_ Spring      April - June  
 241c. \_\_\_\_\_ Summer      July - September  
 241d. \_\_\_\_\_ Fall      October-December

242. On average, about how many hours did you bathe or swim in the Columbia River per week during:

|       |       |        |                  |
|-------|-------|--------|------------------|
| 242a. | _____ | Winter | January - March  |
| 242b. | _____ | Spring | April - June     |
| 242c. | _____ | Summer | July - September |
| 242d. | _____ | Fall   | October-December |

243. Where along the river did this bathing and swimming take place? (CHECK ANY THAT APPLY)

USE THE STUDY AREA MAP:

|       |       |                                                 |
|-------|-------|-------------------------------------------------|
| 243a. | _____ | section 1 = Hanford Reservation above Ringold   |
| 243b. | _____ | section 2 = Ringold                             |
| 243c. | _____ | section 3 = Richland                            |
| 243d. | _____ | section 4 = Kennewick/Pasco                     |
| 243e. | _____ | section 5 = Mouth of Snake to Walla Walla River |
| 243f. | _____ | section 6 = Umatilla/Boardman                   |
| 243g. | _____ | section 7 = Arlington                           |
| 243h. | _____ | section 8 = John Day/Biggs                      |
| 243i. | _____ | section 9 = Deschutes River                     |
| 243j. | _____ | section 10 = The Dalles/Celilo                  |
| 243k. | _____ | section 11 = Klickitat River                    |
| 243l. | _____ | section 12 = White Salmon/Cascade Locks         |
| 243m. | _____ | section 13 = lower river                        |
| 243n. | _____ | section 14 = Willapa Bay                        |
| 243o. | _____ | unknown                                         |

244. On average, about how many hours did you spend boating, canoeing, setting fish nets on the river per week during:

|       |       |        |                  |
|-------|-------|--------|------------------|
| 244a. | _____ | Winter | January - March  |
| 244b. | _____ | Spring | April - June     |
| 244c. | _____ | Summer | July - September |
| 244d. | _____ | Fall   | October-December |

245. Where on the river did this take place? (CHECK ANY THAT APPLY)

USE THE STUDY AREA MAP:

|       |       |                                                 |
|-------|-------|-------------------------------------------------|
| 245a. | _____ | section 1 = Hanford Reservation above Ringold   |
| 245b. | _____ | section 2 = Ringold                             |
| 245c. | _____ | section 3 = Richland                            |
| 245d. | _____ | section 4 = Kennewick/Pasco                     |
| 245e. | _____ | section 5 = Mouth of Snake to Walla Walla River |
| 245f. | _____ | section 6 = Umatilla/Boardman                   |
| 245g. | _____ | section 7 = Arlington                           |
| 245h. | _____ | section 8 = John Day/Biggs                      |
| 245i. | _____ | section 9 = Deschutes River                     |
| 245j. | _____ | section 10 = The Dalles/Celilo                  |
| 245k. | _____ | section 11 = Klickitat River                    |
| 245l. | _____ | section 12 = White Salmon/Cascade Locks         |
| 245m. | _____ | section 13 = lower river                        |
| 245n. | _____ | section 14 = Willapa Bay                        |
| 245o. | _____ | unknown                                         |

## SECTION XII: RESPONDENT'S BELIEFS/KNOWLEDGE AND INTERVIEWER ASSESSMENT OF INTERVIEW

**In this section, I am interested in learning what you believe about the Hanford Nuclear facility.**

246. Please tell me what health problems you believe may be caused by radiation released from Hanford?

**DO NOT READ THIS LIST TO RESPONDENT. JUST CHECK ANY THAT THE RESPONDENT MAY MENTION.**

- 246a. ☐ Underactive thyroid
- 246b. ☐ Overactive thyroid
- 246c. ☐ Thyroid cancer
- 246d. ☐ Goiter
- 246e. ☐ Leukemia
- 246f. ☐ Breast cancer
- 246g. ☐ Lung cancer
- 246h. ☐ Colon cancer
- 246i. ☐ Skin diseases, other than cancer
- 246j. ☐ Other cancers ( \_\_\_\_\_ )
- 246k. ☐ Miscarriage
- 246l. ☐ Infertility
- 246m. ☐ Birth defects ( \_\_\_\_\_ )
- 246n. ☐ Multiple Sclerosis (MS)
- 246o. ☐ Immune system diseases
- 246p. ☐ Allergies
- 246q. ☐ Mental retardation
- 246r. ☐ Genetic defects passed on to offspring
- 246s. ☐ Other ( \_\_\_\_\_ )
- 246t. ☐ Did not know

247. How knowledgeable do you feel you are about radiation released from Hanford?

- \_\_\_\_\_ (FILL IN CODE NUMBER)
- 1 = Very
  - 2 = Somewhat
  - 3 = Average
  - 4 = Not very
  - 5 = Not knowledgeable
  - 6 = Don't know

**IF QUESTION #247 = 5 OR 6, ASK QUESTION #248, OTHERWISE SKIP TO CONCLUSION OF INTERVIEW.**

248. Why do you believe the respondent was not very knowledgeable about radiation released from Hanford? (Check all that apply)

- 248a. ☐ Not interested
- 248b. ☐ Interested, but didn't try to get information
- 248c. ☐ Information not available
- 248d. ☐ Tried to get information, but was refused
- 248e. ☐ Other reason (\_\_\_\_\_)
- 248f. ☐ No reason

**This concludes the interview. Thank you very much for taking the time to provide this very important information for the Hanford study.**

## SUMMARY:

This last section refers to the interviewer's overall assessment of the interview just concluded .

This section is to be completed by the interviewer only after completion of the interview. It should be completed as soon as possible after the interview. None of the information should be solicited from the respondent.

249. What was the quality of this subject's responses? (indicate one only)

\_\_\_\_\_ (FILL IN CODE NUMBER)

- 1 = High Quality (SKIP TO QUESTION 251)
- 2 = Generally Reliable (SKIP TO QUESTION 251)
- 3 = Questionable
- 4 = Unreliable

250. What is the main reason for the unreliable or questionable quality of this interview? (indicate one only)

\_\_\_\_\_ (FILL IN CODE NUMBER)

- 1 = Unclear memory of events
- 2 = Uncertain understanding of questions
- 3 = Hurried responses
- 4 = Other, specify

251. How often was explanation of the text repeated? (indicate one)

\_\_\_\_\_ (FILL IN CODE NUMBER)

- 1 = not often
- 2 = often
- 3 = very often
- 4 = Not applicable

252. COMPLETION TIME: \_\_\_\_\_ : \_\_\_\_\_ A.M. / P.M.

253. Interviewer \_\_\_\_\_ Signature



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## APPENDIX I

---

NATIVE AMERICAN LIFESTYLE and DEMOGRAPHY

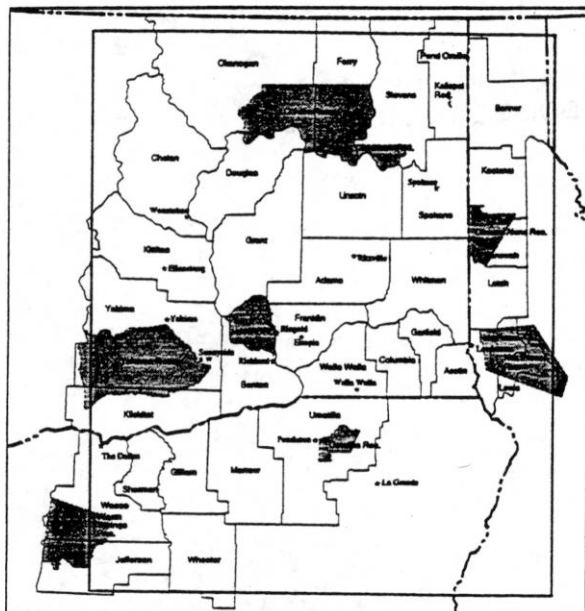
DATA COLLECTION / VOLUMES 1 and 2

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Hanford Environmental Dose Reconstruction Project  
Native American Lifestyle and Demography Data Collection

**Technical Document For The NALD 2.0 Database**

*Prepared for:*  
U.S. Public Health Service  
Centers For Disease Control  
National Center For Environmental Health  
Radiation Studies Branch



*Prepared by:*  
Marcus Lester  
Edward Liebow

Battelle Pacific Northwest Laboratories  
Contract No. 200-92-0534

May, 1995

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BSRC-700/95/004V1

Hanford Environmental Dose Reconstruction Project  
Native American Lifestyle and Demography Data Collection

**Technical Document For The NALD 2.0 Database**

## **Volume 1: User's Guide**

*Prepared for:*  
U.S. Public Health Service  
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# Introduction

The Native American lifestyle and demography data collection for the Hanford Environmental Dose Reconstruction Project (HEDR) has generated some very large data sets. The affected Tribes have done hundreds of interviews, and each interview has about 1,300 items of data to be analyzed. In cooperation with the Centers for Disease Control and the members of the Intertribal Council on Hanford Health Projects, Battelle Seattle Research Center has developed the Native American Lifestyle and Demography (NALD 2.0) database system to aid the Tribes in managing, analyzing, and reporting the large data sets.

NALD 2.0 takes advantage of the Microsoft Access (2.0) database management software for analysis and reporting. The database contains all the procedures necessary to import data from an existing EPI-Info database, to enter new data from interview forms, to check and edit data at any time, to select the data for reporting, and to print reports. All of these procedures may be run from a simple menu, and the person doing the work needs only a brief familiarity with Microsoft Access to get started.

The following instructions will show the user how to:

- Set up your new Access database on your computer,
- Import data that you may have already entered in EPI-Info,
- Input new data and check all data,
- Select the data for reporting,
- Print reports.

## System Requirements

NALD is a Microsoft Access database that is designed to run on a PC compatible microcomputer. You will need the following equipment and software installed on your computer to run NALD:

- Color monitor;
- 3.5 inch floppy disk drive;
- Hard disk drive with about five megabytes (5 MB) of available space;
- Mouse;
- 12 megabytes of memory (This is the minimum recommended. More is better.);
- Microsoft Windows (version 3.1) operating system;
- Microsoft Access (version 2.0);
- Installed type fonts - Arial and Times New Roman.

If you are not sure if your computer meets these requirements, see your system administrator for help. Please note that NALD will not run under the old version (1.0) of Microsoft Access.

## Setting Up Your New NALD 2.0 Database

The structure for the NALD 2.0 database and all functions for data import, data entry, queries, and reports have been built into a *template database*. This is an empty database that is supplied on a floppy disk as the files **naldtmp1.mdb** and **naldtmp1.ldb**.

- Make sure that you have Microsoft Access version 2.0 installed on your computer. NALD 2.0 will not run with earlier versions of Microsoft Access.
- Start Microsoft Windows.
- Use File Manager to create a working directory for your new NALD 2.0 database.
- Write-protect the disk with the template database files, and insert it into your computer. (Keep this locked disk as an ultimate backup.)
- Copy the **naldtmp1.mdb** and **naldtmp1.ldb** files to the working directory on your hard disk.
- Rename the template database files (on your hard disk) with a new name (**food1.mdb**, for example).

Now you're ready to go to work.

## Running The NALD 2.0 Database

To run NALD 2.0, start MSWindows and click on the MSAccess icon. When Access is running, select **Open** from the **File** menu or click on the open folder icon on the toolbar. Use the **Open** menu to select your database (e.g., **food1.mdb**). The program will start and you will see the Main Menu (Figure 1.). Use this window to run all the automated functions of NALD 2.0. You may also click on the button "Close this window" to use all the other functions available in Microsoft Access.

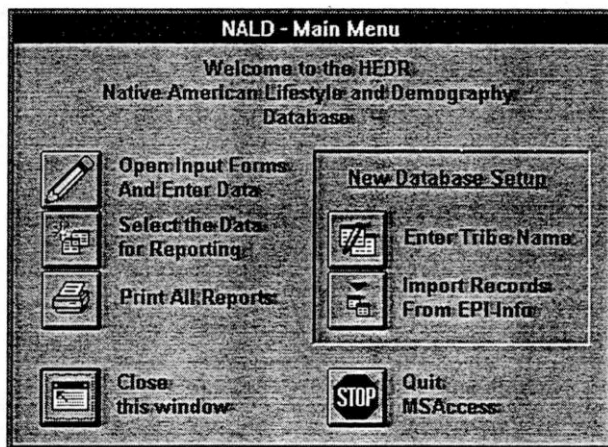
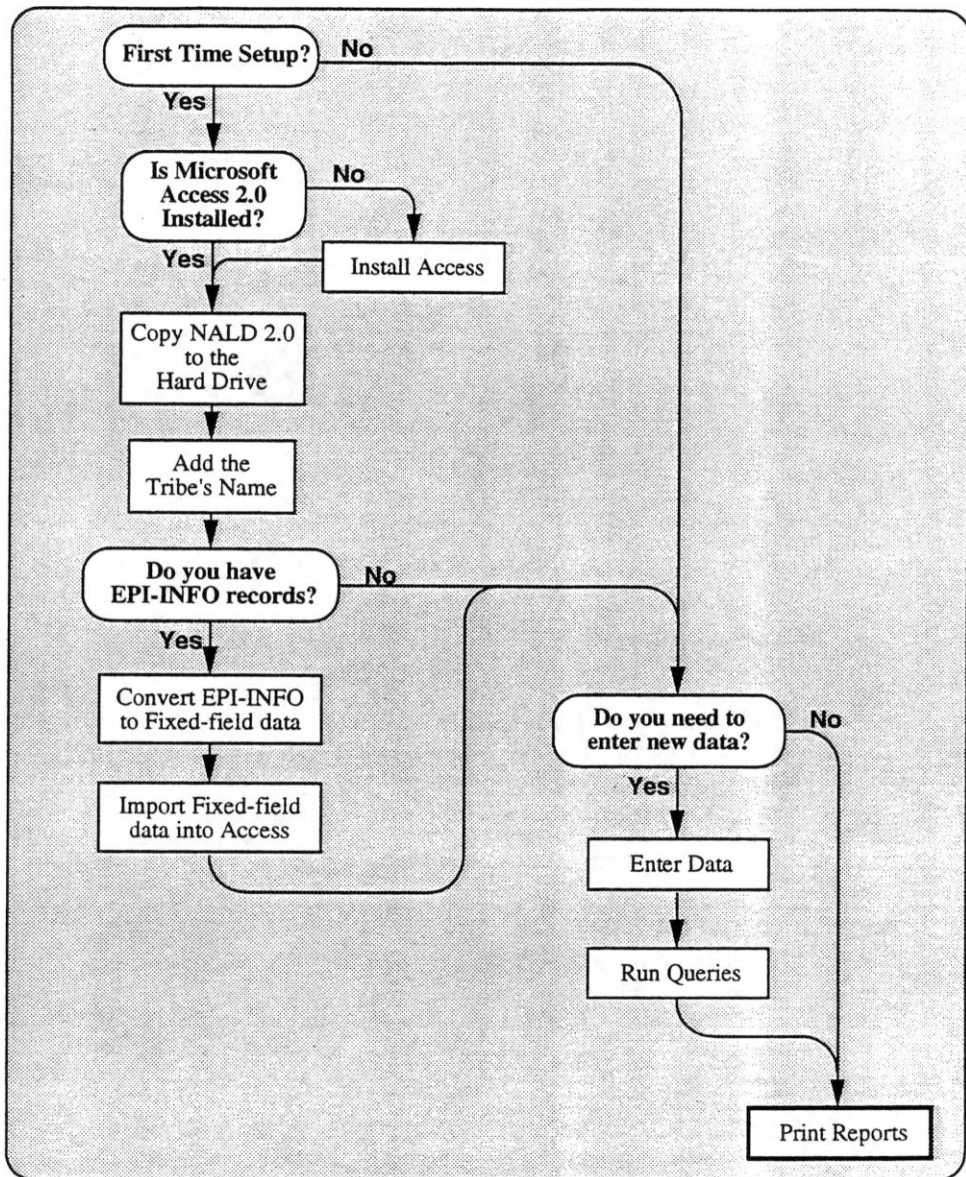


Figure 1. Main Menu



Running the Native American Lifestyle and Demography Database

## Customizing NALD 2.0 For Your Tribe

NALD 2.0 will automatically print reports of all your data, and each report will show the Tribe's name that is entered in the General Info table. To enter your Tribe's name, click on the button labeled "Enter Tribe Name." This will bring up a form (Figure 2) where you can enter the correct name to be shown on all reports.

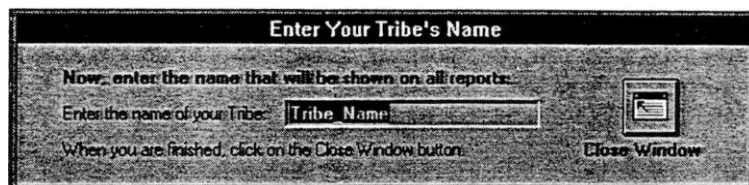


Figure 2. Enter your Tribe's name.

## Importing Data From EPI-Info

If you have already entered some of your data in EPI-Info, it is a simple matter to get them into NALD 2.0. First, use EPI-Info to export the data in "Fixed Field" format, then NALD 2.0 will automatically import all the data when you click on the button "Import Records From EPI-Info." The NALD 2.0 database contains *import specifications* for the HEDR data. These specifications match the data as they are exported by EPI-Info with the "Fixed Field" option, and they let NALD 2.0 know what the data look like so that they are imported correctly.

This process destroys any data that you may have in your database, so import EPI-Info records before you enter any data from questionnaires.

### Export EPI-Info records.

First, export your EPI-Info data. Use EPI-Info to **CONVERT** each record file using the "Fixed Field" option. This will produce files with the suffix **.car**. These are the raw files that will be imported by the Access database. The additional files (**.dir**) are not needed for further processing, because this information has already been brought into Access, *but you may wish to keep them with the .car files for reference*. Copy all the **.car** files that you have produced to the subdirectory on your hard disk where you have installed your NALD 2.0 database (**food1.mdb**).

When you convert your files, use Option 12: Fixed Field.

It is important that the export files are in the same directory as your NALD 2.0 database, because this is where NALD will look for them.

### Import records into NALD 2.0.

At this point you should have in your working directory the new, empty Access database and the five **.car** files with your EPI-Info data. Now you're ready to run Access and import your data from the export (**.car**) files. Start NALD 2.0 as before, and on the Main Menu, click on the "Import Records From EPI-Info" button.

NALD 2.0 automatically imports all records from the **.car** files that you produced. If Access encounters any errors, it will inform you with a message window, and the errors will be recorded in a table. Later, you can open this table to check on the errors found. If there are only a few errors, correct them with the input forms, described below. If there are many errors, correct them with EPI-Info, and rerun the Export process, described above, to get a clean set of data to import.

## Entering and Checking Data with Input Forms

NALD 2.0 has input forms for all the data in the questionnaire. Use these forms to look at your data, to make any corrections or additions, and to add new records. Click on the "Open Input Forms" button to view the first form.

### Entering Data.

There are three ways to enter data on the input forms (Figure 3):

- Select a value from a *pull-down list*,
- Click on a *check-box* (Yes/No answers).
- Type the information into a *box* on the form.

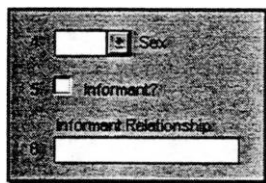


Figure 3. Data Input

To use the pull-down list, click once on the arrow button at the side of the list. The list will open, and you can select any of the items in the list by clicking on it.

When you click on a check-box, an **X** fills the box. This means YES. If you want to change it, just click on it again, and it will turn off (NO).

Type your data into any box. When you have finished entering the data, press **Enter**, and NALD 2.0 will automatically move to the next data element in the order that it appears on the questionnaire. You may also press the **Tab** key to skip to the next data item. If you want to skip over many, then use the mouse to move the cursor to the item you want, and click once with the left mouse button.

When you press return for the last data item on a form, the entire record is saved, and the focus moves to the first item of the next record.

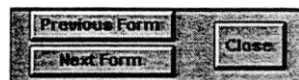
### Changing Records.

Use the record selectors, located in the lower left-hand corner of the form to move from one record to the next. The left button will move you to the first record, the next button (left pointing triangle) will move you to the previous record, the next button (right pointing triangle) will move you to the next record, and the right button will move you to the last record. To add a new record, move to the last record (right button), then click once on the next-record button.



### Changing Forms.

Use the buttons at the top of each form to move from one form to another. Move the cursor to the button you want and click with the left mouse button. When you are finished, click on the **Close** button, and you will return to the Main Menu.



### Checking and Editing Data.

Use the input forms to view your data one record at a time. You can select the record you want with the record selector buttons, and then change any item. When you go to the next record or close the form, your changes will automatically be saved.

**Hint:** Everybody makes mistakes. It is a very good idea to make a backup, to recover past work without redoing everything.

Before you start to edit your data, quit NALD 2.0 and make a copy of your database. For example, if your files are called `food1.ldb` and `food1.mdb`, then copy these files to `food2.ldb` and `food2.mdb`. Now start NALD 2.0 again and edit food2. This way you can go back to food1 any time.

### Deleting A Record.

It is easy to delete an entire record. Use the Record Selector to display the record that you want to delete. Click once on **Edit** on the Menu Bar to open the Edit Menu, and choose **Select Record**. To delete this selected record, press the **Delete** button on your keyboard or select **Delete** from the Edit Menu.

## Selecting Data and Printing Reports

Not all data from the questionnaires are used for the final reports. To select the data for reporting click on the Main Menu button marked "Select the Data for Reporting." NALD 2.0 will automatically select and sort the data. To print the reports, click on the button marked "Print All Reports."

## The Structure of NALD 2.0

While NALD 2.0 will perform all its operations automatically, these operations are not hidden from the users. They may be looked over and modified by anyone who can operate Microsoft Access. The data are contained in *tables*, they are selected and sorted with *queries*, and they are output with *reports*. The following three lists show all the tables, queries, and reports that are supplied with the NALD 2.0 database `naldtmp1`.

For a complete listing of all elements of the NALD 2.0 database, please refer to the *Technical Reference Manual*.

### Tables

This is a list of the predefined tables that NALD 2.0 uses:

| Table        | Questionnaire<br>Section | Questions  | Description                     |
|--------------|--------------------------|------------|---------------------------------|
| T01          | 1                        | 1 to 7     | Interview information           |
| T02          | 2                        | 8 to 24    | Residence                       |
| T03          | 3                        | 25 to 52   | Milk                            |
| T04          | 4,5,6                    | 53 to 82   | Vegetables, fruit               |
| T05          | 7,8                      | 83 to 116  | Eggs, meat                      |
| T06          | 9                        | 117 to 144 | Fowl                            |
| T07          | 10                       | 145 to 157 | Salmon, steelhead, etc. (44-47) |
| T08          | 10                       | 158 to 169 | Eel, bullhead, etc. (44-47)     |
| T09          | 10                       | 170 to 181 | Perch, bass, etc. (44-47)       |
| T10          | 10                       | 182 to 187 | Shellfish (44-47)               |
| T11          | 10                       | 188 to 200 | Salmon, steelhead, etc. (64-66) |
| T12          | 10                       | 201 to 213 | Eel, bullhead, etc. (64-66)     |
| T13          | 10                       | 214 to 225 | Perch, bass, etc. (64-66)       |
| T14          | 10                       | 226 to 231 | Shellfish (64-66)               |
| T15          | 11                       | 232 to 245 | Water, bathing                  |
| T16          | 12                       | 246 to 252 | Beliefs, summary                |
| General Info |                          |            | Tribe name                      |
| Milk_45      |                          |            | Compiled Milk data (44-47)      |
| Milk_65      |                          |            | Compiled Milk data (64-66)      |



## Queries

The following are the queries that NALD 2.0 uses to select the data for reporting. Note that NALD 2.0 produces sixteen additional tables ("VegMeat" and "Fish"). The underlined names are the tables and queries from which the reports are taken.

Note - this is the sequence of operations that is performed when you select the Main Menu button labeled "Select the Data for Reporting."

| Query                         | Action | From      | To Table                     |
|-------------------------------|--------|-----------|------------------------------|
| Milk: Commercial in '45       | Append | T03       | Milk 45                      |
| Milk: Family Cow in '45       | Append | T03       | Milk 45                      |
| Milk: Commercial in '65       | Append | T03       | Milk 65                      |
| Milk: Family Cow in '65       | Append | T03       | Milk 65                      |
| VegMeat 45 age under 5        | Select | T04 - T06 | <u>VegMeat 45 - under 5</u>  |
| VegMeat 45 age 5 to 14        | Select | T04 - T06 | <u>VegMeat 45 - 5 to 14</u>  |
| VegMeat 45 female over 15     | Select | T04 - T06 | <u>VegMeat 45 - fem 15+</u>  |
| VegMeat 45 male over 15       | Select | T04 - T06 | <u>VegMeat 45 - male 15+</u> |
| VegMeat 65 age under 5        | Select | T04 - T06 | <u>VegMeat 65 - under 5</u>  |
| VegMeat 65 age 5 to 14        | Select | T04 - T06 | <u>VegMeat 65 - 5 to 14</u>  |
| VegMeat 65 female over 15     | Select | T04 - T06 | <u>VegMeat 65 - fem 15+</u>  |
| VegMeat 65 male over 15       | Select | T04 - T06 | <u>VegMeat 65 - male 15+</u> |
| Fish 45 age under 5           | Select | T07 - T10 | <u>Fish 45 - under 5</u>     |
| Fish 45 age 5 to 14           | Select | T07 - T10 | <u>Fish 45 - 5 to 14</u>     |
| Fish 45 female over 15        | Select | T07 - T10 | <u>Fish 45 - fem 15+</u>     |
| Fish 45 male over 15          | Select | T07 - T10 | <u>Fish 45 - male 15+</u>    |
| Fish 65 age under 5           | Select | T11 - T14 | <u>Fish 65 - under 5</u>     |
| Fish 65 age 5 to 14           | Select | T11 - T14 | <u>Fish 65 - 5 to 14</u>     |
| Fish 65 female over 15        | Select | T11 - T14 | <u>Fish 65 - fem 15+</u>     |
| Fish 65 male over 15          | Select | T11 - T14 | <u>Fish 65 - male 15+</u>    |
| <u>Milk 45 age under 5</u>    | Select | Milk_45   |                              |
| <u>Milk 45 age 5 to 14</u>    | Select | Milk_45   |                              |
| <u>Milk 45 female over 15</u> | Select | Milk_45   |                              |
| <u>Milk 45 male over 15</u>   | Select | Milk_45   |                              |
| <u>Milk 65 age under 5</u>    | Select | Milk_65   |                              |
| <u>Milk 65 age 5 to 14</u>    | Select | Milk_65   |                              |
| <u>Milk 65 female over 15</u> | Select | Milk_65   |                              |
| <u>Milk 65 male over 15</u>   | Select | Milk_65   |                              |

## Reports

These are the reports that are printed by NALD 2.0:

| Report                 | Year | Age    | Sex    |
|------------------------|------|--------|--------|
| REP Milk 45 - under 5  | 1945 | <5     | Both   |
| REP Veg 45 - under 5   | 1945 | <5     | Both   |
| REP Meat 45 - under 5  | 1945 | <5     | Both   |
| REP Fish 45 - under 5  | 1945 | <5     | Both   |
| REP Milk 45 - 5 to 14  | 1945 | 5 - 14 | Both   |
| REP Veg 45 - 5 to 14   | 1945 | 5 - 14 | Both   |
| REP Meat 45 - 5 to 14  | 1945 | 5 - 14 | Both   |
| REP Fish 45 - 5 to 14  | 1945 | 5 - 14 | Both   |
| REP Milk 45 - fem 15+  | 1945 | 15+    | Female |
| REP Veg 45 - fem 15+   | 1945 | 15+    | Female |
| REP Meat 45 - fem 15+  | 1945 | 15+    | Female |
| REP Fish 45 - fem 15+  | 1945 | 15+    | Female |
| REP Milk 45 - male 15+ | 1945 | 15+    | Male   |
| REP Veg 45 - male 15+  | 1945 | 15+    | Male   |
| REP Meat 45 - male 15+ | 1945 | 15+    | Male   |
| REP Fish 45 - male 15+ | 1945 | 15+    | Male   |
| REP Milk 65 - under 5  | 1965 | <5     | Both   |
| REP Veg 65 - under 5   | 1965 | <5     | Both   |
| REP Meat 65 - under 5  | 1965 | <5     | Both   |
| REP Fish 65 - under 5  | 1965 | <5     | Both   |
| REP Milk 65 - 5 to 14  | 1965 | 5 - 14 | Both   |
| REP Veg 65 - 5 to 14   | 1965 | 5 - 14 | Both   |
| REP Meat 65 - 5 to 14  | 1965 | 5 - 14 | Both   |
| REP Fish 65 - 5 to 14  | 1965 | 5 - 14 | Both   |
| REP Milk 65 - fem 15+  | 1965 | 15+    | Female |
| REP Veg 65 - fem 15+   | 1965 | 15+    | Female |
| REP Meat 65 - fem 15+  | 1965 | 15+    | Female |
| REP Fish 65 - fem 15+  | 1965 | 15+    | Female |
| REP Milk 65 - male 15+ | 1965 | 15+    | Male   |
| REP Veg 65 - male 15+  | 1965 | 15+    | Male   |
| REP Meat 65 - male 15+ | 1965 | 15+    | Male   |
| REP Fish 65 - male 15+ | 1965 | 15+    | Male   |

## **Input Forms**

The following pages illustrate the sixteen Input Forms used by NALD 2.0. They are included here so that you may familiarize yourself with the forms that you will be using.

These illustrations were made from a sample data set of one fictitious record, and the values shown are for illustration only. They do not represent any data actually gathered for this study.

# HEDR: Native American Food Consumption

## Section 1: General Information

[Next Form](#)[Close](#)

Enter the ID of the interview subject.

ID  Write this number on the interview form.

|          | Date                 |                                                                       | Time                           |                                | Interviewer          | Result Code          |
|----------|----------------------|-----------------------------------------------------------------------|--------------------------------|--------------------------------|----------------------|----------------------|
| ATTEMPT1 | <input type="text"/> |                                                                       | <input type="text" value="0"/> |                                | <input type="text"/> | <input type="text"/> |
| ATTEMPT2 | <input type="text"/> | <div>Enter times as NUMBERS.<br/>For example, enter 5:30 as 530</div> | <input type="text" value="0"/> |                                | <input type="text"/> | <input type="text"/> |
| ATTEMPT3 | <input type="text"/> |                                                                       | <input type="text" value="0"/> |                                | <input type="text"/> | <input type="text"/> |
| ATTEMPT4 | <input type="text"/> |                                                                       | <input type="text" value="0"/> |                                | <input type="text"/> | <input type="text"/> |
| ATTEMPT5 | <input type="text"/> |                                                                       | <input type="text" value="0"/> |                                | <input type="text"/> | <input type="text"/> |
| DATE1    | <input type="text"/> |                                                                       | STARTTIME                      | <input type="text" value="0"/> | INTER                | <input type="text"/> |

### Person interviewed:

4  Sex5 ☐ Informant?

Informant Relationship

6 

### Birthday

7A  Month (mm)7B  Day (dd)7C  Year (yy)7D  Birthyear (19yy)

# HEDR: Native American Food Consumption

## Section 2: Residence Information

[Previous Form](#)[Next Form](#)[Close](#)ID: Location 1: From  To 

Address   
City  State  County   
Grid

Location 2: From  To 

Address   
City  State  County   
Grid

Location 3: From  To 

Address   
City  State  County   
Grid

Location 4: From  To 

Address   
City  State  County   
Grid

Location 5: From  To 

Address   
City  State  County   
Grid

Location 6: From  To 

Address   
City  State  County   
Grid

Location 7: From  To 

Address   
City  State  County   
Grid

Location 8: From  To 

Address   
City  State  County   
Grid

Location 9: From  To 

Address   
City  State  County   
Grid

Location 10: From  To   
Address   
City  State  County   
Grid

---

Location 11: From  To   
Address   
City  State  County   
Grid

---

Location 12: From  To   
Address   
City  State  County   
Grid

---

Location 13: From  To   
Address   
City  State  County   
Grid

---

Location 14: From  To   
Address   
City  State  County   
Grid

---

Location 15: From  To   
Address   
City  State  County   
Grid

---

Location 16: From  To   
Address   
City  State  County   
Grid  3

# HEDR: Native American Food Consumption

## Section 3: Milk and Dairy Products

[Previous Form](#)
[Close](#)
[Next Form](#)

 Subject ID 

 Born:  YearA

1944 - 1947

**NURSING** 25  Ever?

 26  Age (mos.) nursing began.  
 27A  Month  
 27B  Year

 28  Age (mos.) nursing stopped.  
 29A  Month  
 29B  Year

Milk other than breast milk
Food other than milk

 30  Age (mos.) first milk.  
 31A  Month  
 31B  Year

 32  Age (mos.) first ate food.  
 33A  Month  
 33B  Year

**MILK**

 34  Ever?  
 35A  Jan - Mar  
 35B  Apr - Jun  
 35C  Jul - Sep  
 35D  Oct - Dec

 36A ☐ Store Bought  
 36C ☐ Home Delivered  
 36E ☐ Family cow/goat  
 36F ☐ Other  
 36G ☐ Unknown

 36B  Brand  
 36D  Brand  
 36F  Descr.

**MILK PRODUCT**

 37A  Jan - Mar  
 37B  Apr - Jun  
 37C  Jul - Sep  
 37D  Oct - Dec

 38A ☐ Store Bought  
 38C ☐ Home Delivered  
 38E ☐ Family cow/goat  
 38F ☐ Other  
 38G ☐ Unknown

 38B  Brand  
 38D  Brand  
 38F  Descr.

**NURSING** 39  Ever?

 YearB 

1964 - 1966

 40  Age began.  
 41A  Month  
 41B  Year

 42  Age stopped.  
 43A  Month  
 43B  Year

Milk other than breast milk
Food other than milk

 44  Age first milk.  
 45A  Month  
 45B  Year

 46  Age first food.  
 47A  Month  
 47B  Year

**MILK**

 48  Ever?  
 49A  Jan - Mar  
 49B  Apr - Jun  
 49C  Jul - Sep  
 49D  Oct - Dec

 50A ☐ Store Bought  
 50C ☐ Home Delivered  
 50E ☐ Family cow/goat  
 50F ☐ Other  
 50G ☐ Unknown

 50B  Brand  
 50D  Brand  
 50F  Descr.

**MILK PRODUCT**

 51A  Jan - Mar  
 51B  Apr - Jun  
 51C  Jul - Sep  
 51D  Oct - Dec

 52A ☐ Store Bought  
 52C ☐ Home Delivered  
 52E ☐ Family cow/goat  
 52F ☐ Other  
 52G ☐ Unknown

 52B  Brand  
 52D  Brand  
 52F  Descr.

# HEDR: Native American Food Consumption

## Sections 4,5,6: Vegetables and Fruits

[Previous Form](#)
[Close](#)
[Next Form](#)

 ID 

 Birth Year:  YEARC

### Leafy Vegetables (Section 4)

 53  Ever In 1944-47?

|           |     | FRESH                          |     | STORED                         |
|-----------|-----|--------------------------------|-----|--------------------------------|
| Jan - Mar | 54A | <input type="text" value="0"/> | 56A | <input type="text" value="0"/> |
| Apr - Jun | 54B | <input type="text" value="0"/> | 56B | <input type="text" value="0"/> |
| Jul - Sep | 54C | <input type="text" value="0"/> | 56C | <input type="text" value="0"/> |
| Oct - Dec | 54D | <input type="text" value="0"/> | 56D | <input type="text" value="0"/> |
| Washed?   | 55  | <input type="text"/>           | 57  | <input type="text"/>           |

 58  Ever In 1964-66?

|     |                                | FRESH |                                | STORED |
|-----|--------------------------------|-------|--------------------------------|--------|
| 59A | <input type="text" value="0"/> | 61A   | <input type="text" value="0"/> |        |
| 59B | <input type="text" value="0"/> | 61B   | <input type="text" value="0"/> |        |
| 59C | <input type="text" value="0"/> | 61C   | <input type="text" value="0"/> |        |
| 59D | <input type="text" value="0"/> | 61D   | <input type="text" value="0"/> |        |
| 60  | <input type="text"/>           | 62    | <input type="text"/>           |        |

### Other Vegetables (Section 5)

 YEARC  Birth Year

 63  Ever In 1944-47?

|           |     | FRESH                          |     | STORED                         |
|-----------|-----|--------------------------------|-----|--------------------------------|
| Jan - Mar | 64A | <input type="text" value="0"/> | 66A | <input type="text" value="0"/> |
| Apr - Jun | 64B | <input type="text" value="0"/> | 66B | <input type="text" value="0"/> |
| Jul - Sep | 64C | <input type="text" value="0"/> | 66C | <input type="text" value="0"/> |
| Oct - Dec | 64D | <input type="text" value="0"/> | 66D | <input type="text" value="0"/> |
| Washed?   | 65  | <input type="text"/>           | 67  | <input type="text"/>           |

 68  Ever In 1964-66?

|     |                                | FRESH |                                | STORED |
|-----|--------------------------------|-------|--------------------------------|--------|
| 69A | <input type="text" value="0"/> | 71A   | <input type="text" value="0"/> |        |
| 69B | <input type="text" value="0"/> | 71B   | <input type="text" value="0"/> |        |
| 69C | <input type="text" value="0"/> | 71C   | <input type="text" value="0"/> |        |
| 69D | <input type="text" value="0"/> | 71D   | <input type="text" value="0"/> |        |
| 70  | <input type="text"/>           | 72    | <input type="text"/>           |        |

### Fruits and Berries (Section 6)

 YEARC  Birth Year

 73  Ever In 1944-47?

|           |     | FRESH                          |     | STORED                         |
|-----------|-----|--------------------------------|-----|--------------------------------|
| Jan - Mar | 74A | <input type="text" value="0"/> | 76A | <input type="text" value="0"/> |
| Apr - Jun | 74B | <input type="text" value="0"/> | 76B | <input type="text" value="0"/> |
| Jul - Sep | 74C | <input type="text" value="0"/> | 76C | <input type="text" value="0"/> |
| Oct - Dec | 74D | <input type="text" value="0"/> | 76D | <input type="text" value="0"/> |
| Washed?   | 75  | <input type="text"/>           | 77  | <input type="text"/>           |

 78  Ever In 1964-66?

|     |                                | FRESH |                                | STORED |
|-----|--------------------------------|-------|--------------------------------|--------|
| 79A | <input type="text" value="0"/> | 81A   | <input type="text" value="0"/> |        |
| 79B | <input type="text" value="0"/> | 81B   | <input type="text" value="0"/> |        |
| 79C | <input type="text" value="0"/> | 81C   | <input type="text" value="0"/> |        |
| 79D | <input type="text" value="0"/> | 81D   | <input type="text" value="0"/> |        |
| 80  | <input type="text"/>           | 82    | <input type="text"/>           |        |



# HEDR: Native American Food Consumption

## Sections 7,8: Eggs and Meat

[Previous Form](#)
[Close](#)
[Next Form](#)

 ID 

 Birth Year:  YEARF

### Eggs (Section 7)

1944-1947

Domestic

 83  Ever in 44-47?

 84A  Jan - Mar

 84B  Apr - Jun

 84C  Jul - Sep

 84D  Oct - Dec

Wild

 85  Ever in 44-47?

 86A  Jan - Mar

 86B  Apr - Jun

 86C  Jul - Sep

 86D  Oct - Dec

1964-1966

Domestic

 87  Ever in 64-66?

 88A  Jan - Mar

 88B  Apr - Jun

 88C  Jul - Sep

 88D  Oct - Dec

Wild

 89  Ever in 64-66?

 90A  Jan - Mar

 90B  Apr - Jun

 90C  Jul - Sep

 90D  Oct - Dec

### Meat and Game (Section 8)

 Birth Year:  YEARF

1944-1947

 91  Domestic or wild meat - Ever in 1944-47?

#### DOMESTIC MEAT

Domestic - Fresh

 92A  Jan - Mar

 92B  Apr - Jun

 92C  Jul - Sep

 92D  Oct - Dec

 93  How Prepared

 94A ☐ Store bought

 94B ☐ Home raised

 94C ☐ Neighbor/friend

 94D ☐ Other 

 94E ☐ Unknown

Domestic - Stored

 95A  Jan - Mar

 95B  Apr - Jun

 95C  Jul - Sep

 95D  Oct - Dec

 96  How Prepared

 97A ☐ Store bought

 97B ☐ Home raised

 97C ☐ Neighbor/friend

 97D ☐ Other 

 97E ☐ Unknown

#### WILD MEAT

Wild - Fresh

 98A  Jan - Mar

 98B  Apr - Jun

 98C  Jul - Sep

 98D  Oct - Dec

 99  How Prepared

 100  Where Hunt

Wild - Stored

 101A  Jan - Mar

 101B  Apr - Jun

 101C  Jul - Sep

 101D  Oct - Dec

 102  How Prepared

 103  Where Hunt

1964-1966

104  Domestic or wild meat - Ever in 1964-66?

## DOMESTIC MEAT

## Domestic - Fresh

105A  0 Jan - Mar  
 105B  0 Apr - Jun  
 105C  0 Jul - Sep  
 105D  0 Oct - Dec

106  How Prepared107A ☐ Store bought107B ☐ Home raised107C ☐ Neighbor/friend107D ☐ Other 107E ☐ Unknown

## Domestic - Stored

108A  0 Jan - Mar  
 108B  0 Apr - Jun  
 108C  0 Jul - Sep  
 108D  0 Oct - Dec

109  How Prepared110A ☐ Store bought110B ☐ Home raised110C ☐ Neighbor/friend110D ☐ Other 110E ☐ Unknown

## WILD MEAT

## Wild - Fresh

111A  0 Jan - Mar  
 111B  0 Apr - Jun  
 111C  0 Jul - Sep  
 111D  0 Oct - Dec

112  How Prepared113  Where Hunt

## Wild - Stored

114A  0 Jan - Mar  
 114B  0 Apr - Jun  
 114C  0 Jul - Sep  
 114D  0 Oct - Dec

115  How Prepared116  Where Hunt

## HEDR: Native American Food Consumption

## Section 9: Fowl

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ID  20Birth Year:  1901 YEARH

## 1944-1947

117  Local Poultry - Ever?

## Fresh

118A  0 Jan - Mar  
 118B  0 Apr - Jun  
 118C  0 Jul - Sep  
 118D  0 Oct - Dec

## Stored

121A  0 Jan - Mar  
 121B  0 Apr - Jun  
 121C  0 Jul - Sep  
 121D  0 Oct - Dec

119  How Prepared122  How Prepared

120A ☐ Store bought  
 120B ☐ Home raised  
 120C ☐ Neighbor/friend  
 120D ☐ Other   
 120E ☐ Unknown

123A ☐ Store bought  
 123B ☐ Home raised  
 123C ☐ Neighbor/friend  
 123D ☐ Other   
 123E ☐ Unknown

124  0 Wild Birds - Ever?

## Fresh

125A  0 Jan - Mar  
 125B  0 Apr - Jun  
 125C  0 Jul - Sep  
 125D  0 Oct - Dec

## Stored

128A  0 Jan - Mar  
 128B  0 Apr - Jun  
 128C  0 Jul - Sep  
 128D  0 Oct - Dec

126  How Prepared129  How Prepared127  Where Hunt130  Where Hunt

## 1964-1966

131  Local Poultry - Ever?

## Fresh

132A  0 Jan - Mar  
 132B  0 Apr - Jun  
 132C  0 Jul - Sep  
 132D  0 Oct - Dec

## Stored

135A  0 Jan - Mar  
 135B  0 Apr - Jun  
 135C  0 Jul - Sep  
 135D  0 Oct - Dec

133  How Prepared136  How Prepared

134A ☐ Store bought  
 134B ☐ Home raised  
 134C ☐ Neighbor/friend  
 134D ☐ Other   
 134E ☐ Unknown

137A ☐ Store bought  
 137B ☐ Home raised  
 137C ☐ Neighbor/friend  
 137D ☐ Other   
 137E ☐ Unknown

138  0 Wild Birds - Ever?

## Fresh

139A  0 Jan - Mar  
 139B  0 Apr - Jun  
 139C  0 Jul - Sep  
 139D  0 Oct - Dec

## Stored

142A  0 Jan - Mar  
 142B  0 Apr - Jun  
 142C  0 Jul - Sep  
 142D  0 Oct - Dec

140  How Prepared143  How Prepared141  Where Hunt144  Where Hunt

# HEDR: Native American Food Consumption

## Section 10: Fish - Salmon and Steelhead 1944-47

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 ID 

 Birth Year:  YEAR1

1944-1947

145

 Any Fish 1944-47?

### Fresh Salmon

 146A  Jan - Mar  
 146B  Apr - Jun  
 146C  Jul - Sep  
 146D  Oct - Dec

147

|                               |                               |                               |
|-------------------------------|-------------------------------|-------------------------------|
| 148A <input type="checkbox"/> | 148F <input type="checkbox"/> | 148K <input type="checkbox"/> |
| 148B <input type="checkbox"/> | 148G <input type="checkbox"/> | 148L <input type="checkbox"/> |
| 148C <input type="checkbox"/> | 148H <input type="checkbox"/> | 148M <input type="checkbox"/> |
| 148D <input type="checkbox"/> | 148I <input type="checkbox"/> | 148N <input type="checkbox"/> |
| 148E <input type="checkbox"/> | 148J <input type="checkbox"/> | 148O <input type="checkbox"/> |
|                               |                               | 148P <input type="checkbox"/> |

### Stored Salmon

 149A  Jan - Mar  
 149B  Apr - Jun  
 149C  Jul - Sep  
 149D  Oct - Dec

150

|                               |                               |                               |
|-------------------------------|-------------------------------|-------------------------------|
| 151A <input type="checkbox"/> | 151F <input type="checkbox"/> | 151K <input type="checkbox"/> |
| 151B <input type="checkbox"/> | 151G <input type="checkbox"/> | 151L <input type="checkbox"/> |
| 151C <input type="checkbox"/> | 151H <input type="checkbox"/> | 151M <input type="checkbox"/> |
| 151D <input type="checkbox"/> | 151I <input type="checkbox"/> | 151N <input type="checkbox"/> |
| 151E <input type="checkbox"/> | 151J <input type="checkbox"/> | 151O <input type="checkbox"/> |
|                               |                               | 151P <input type="checkbox"/> |

### Fresh Steelhead

 152A   
 152B   
 152C   
 152D 

153

|                               |                               |                               |
|-------------------------------|-------------------------------|-------------------------------|
| 154A <input type="checkbox"/> | 154F <input type="checkbox"/> | 154K <input type="checkbox"/> |
| 154B <input type="checkbox"/> | 154G <input type="checkbox"/> | 154L <input type="checkbox"/> |
| 154C <input type="checkbox"/> | 154H <input type="checkbox"/> | 154M <input type="checkbox"/> |
| 154D <input type="checkbox"/> | 154I <input type="checkbox"/> | 154N <input type="checkbox"/> |
| 154E <input type="checkbox"/> | 154J <input type="checkbox"/> | 154O <input type="checkbox"/> |
|                               |                               | 154P <input type="checkbox"/> |

### Stored Steelhead

 155A   
 155B   
 155C   
 155D 

156

|                               |                               |                               |
|-------------------------------|-------------------------------|-------------------------------|
| 157A <input type="checkbox"/> | 157F <input type="checkbox"/> | 157K <input type="checkbox"/> |
| 157B <input type="checkbox"/> | 157G <input type="checkbox"/> | 157L <input type="checkbox"/> |
| 157C <input type="checkbox"/> | 157H <input type="checkbox"/> | 157M <input type="checkbox"/> |
| 157D <input type="checkbox"/> | 157I <input type="checkbox"/> | 157N <input type="checkbox"/> |
| 157E <input type="checkbox"/> | 157J <input type="checkbox"/> | 157O <input type="checkbox"/> |
|                               |                               | 157P <input type="checkbox"/> |

# HEDR: Native American Food Consumption

## Section 10: Fish - Eel, Bullhead, etc. 1944-47

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1944-1947

ID 20

### Fresh Eel

|      |                          |   |           |
|------|--------------------------|---|-----------|
| 158A | <input type="checkbox"/> | 0 | Jan - Mar |
| 158B | <input type="checkbox"/> | 0 | Apr - Jun |
| 158C | <input type="checkbox"/> | 0 | Jul - Sep |
| 158D | <input type="checkbox"/> | 0 | Oct - Dec |

159

|      |                          |      |                          |
|------|--------------------------|------|--------------------------|
| 160A | <input type="checkbox"/> | 160I | <input type="checkbox"/> |
| 160B | <input type="checkbox"/> | 160J | <input type="checkbox"/> |
| 160C | <input type="checkbox"/> | 160K | <input type="checkbox"/> |
| 160D | <input type="checkbox"/> | 160L | <input type="checkbox"/> |
| 160E | <input type="checkbox"/> | 160M | <input type="checkbox"/> |
| 160F | <input type="checkbox"/> | 160N | <input type="checkbox"/> |
| 160G | <input type="checkbox"/> | 160O | <input type="checkbox"/> |
| 160H | <input type="checkbox"/> | 160P | <input type="checkbox"/> |

### Stored Eel

|      |                          |   |           |
|------|--------------------------|---|-----------|
| 161A | <input type="checkbox"/> | 0 | Jan - Mar |
| 161B | <input type="checkbox"/> | 0 | Apr - Jun |
| 161C | <input type="checkbox"/> | 0 | Jul - Sep |
| 161D | <input type="checkbox"/> | 0 | Oct - Dec |

162

|      |                          |      |                          |
|------|--------------------------|------|--------------------------|
| 163A | <input type="checkbox"/> | 163I | <input type="checkbox"/> |
| 163B | <input type="checkbox"/> | 163J | <input type="checkbox"/> |
| 163C | <input type="checkbox"/> | 163K | <input type="checkbox"/> |
| 163D | <input type="checkbox"/> | 163L | <input type="checkbox"/> |
| 163E | <input type="checkbox"/> | 163M | <input type="checkbox"/> |
| 163F | <input type="checkbox"/> | 163N | <input type="checkbox"/> |
| 163G | <input type="checkbox"/> | 163O | <input type="checkbox"/> |
| 163H | <input type="checkbox"/> | 163P | <input type="checkbox"/> |

### Fresh Bullhead

|      |                          |   |           |
|------|--------------------------|---|-----------|
| 164A | <input type="checkbox"/> | 0 | Jan - Mar |
| 164B | <input type="checkbox"/> | 0 | Apr - Jun |
| 164C | <input type="checkbox"/> | 0 | Jul - Sep |
| 164D | <input type="checkbox"/> | 0 | Oct - Dec |

165

|      |                          |      |                          |      |                          |
|------|--------------------------|------|--------------------------|------|--------------------------|
| 166A | <input type="checkbox"/> | 166H | <input type="checkbox"/> | 166O | <input type="checkbox"/> |
| 166B | <input type="checkbox"/> | 166I | <input type="checkbox"/> | 166P | <input type="checkbox"/> |
| 166C | <input type="checkbox"/> | 166J | <input type="checkbox"/> | 166Q | <input type="checkbox"/> |
| 166D | <input type="checkbox"/> | 166K | <input type="checkbox"/> | 166R | <input type="checkbox"/> |
| 166E | <input type="checkbox"/> | 166L | <input type="checkbox"/> | 166S | <input type="checkbox"/> |
| 166F | <input type="checkbox"/> | 166M | <input type="checkbox"/> | 166T | <input type="checkbox"/> |
| 166G | <input type="checkbox"/> | 166N | <input type="checkbox"/> | 166U | <input type="checkbox"/> |

### Stored Bullhead

|      |                          |   |           |
|------|--------------------------|---|-----------|
| 167A | <input type="checkbox"/> | 0 | Jan - Mar |
| 167B | <input type="checkbox"/> | 0 | Apr - Jun |
| 167C | <input type="checkbox"/> | 0 | Jul - Sep |
| 167D | <input type="checkbox"/> | 0 | Oct - Dec |

168

|      |                          |      |                          |      |                          |
|------|--------------------------|------|--------------------------|------|--------------------------|
| 169A | <input type="checkbox"/> | 169H | <input type="checkbox"/> | 169O | <input type="checkbox"/> |
| 169B | <input type="checkbox"/> | 169I | <input type="checkbox"/> | 169P | <input type="checkbox"/> |
| 169C | <input type="checkbox"/> | 169J | <input type="checkbox"/> | 169Q | <input type="checkbox"/> |
| 169D | <input type="checkbox"/> | 169K | <input type="checkbox"/> | 169R | <input type="checkbox"/> |
| 169E | <input type="checkbox"/> | 169L | <input type="checkbox"/> | 169S | <input type="checkbox"/> |
| 169F | <input type="checkbox"/> | 169M | <input type="checkbox"/> | 169T | <input type="checkbox"/> |
| 169G | <input type="checkbox"/> | 169N | <input type="checkbox"/> | 169U | <input type="checkbox"/> |

# HEDR: Native American Food Consumption

## Section 10: Fish - Perch, Bass, etc. 1944-47

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1944-1947

 ID 

### Fresh Perch

170A  Jan - Mar  
 170B  Apr - Jun  
 170C  Jul - Sep  
 170D  Oct - Dec

 171 

|                               |                               |                               |
|-------------------------------|-------------------------------|-------------------------------|
| 172A <input type="checkbox"/> | 172H <input type="checkbox"/> | 172O <input type="checkbox"/> |
| 172B <input type="checkbox"/> | 172I <input type="checkbox"/> | 172P <input type="checkbox"/> |
| 172C <input type="checkbox"/> | 172J <input type="checkbox"/> | 172Q <input type="checkbox"/> |
| 172D <input type="checkbox"/> | 172K <input type="checkbox"/> | 172R <input type="checkbox"/> |
| 172E <input type="checkbox"/> | 172L <input type="checkbox"/> | 172S <input type="checkbox"/> |
| 172F <input type="checkbox"/> | 172M <input type="checkbox"/> | 172T <input type="checkbox"/> |
| 172G <input type="checkbox"/> | 172N <input type="checkbox"/> | 172U <input type="checkbox"/> |

### Stored Perch

173A  Jan - Mar  
 173B  Apr - Jun  
 173C  Jul - Sep  
 173D  Oct - Dec

 174 

|                               |                               |                               |
|-------------------------------|-------------------------------|-------------------------------|
| 175A <input type="checkbox"/> | 175H <input type="checkbox"/> | 175O <input type="checkbox"/> |
| 175B <input type="checkbox"/> | 175I <input type="checkbox"/> | 175P <input type="checkbox"/> |
| 175C <input type="checkbox"/> | 175J <input type="checkbox"/> | 175Q <input type="checkbox"/> |
| 175D <input type="checkbox"/> | 175K <input type="checkbox"/> | 175R <input type="checkbox"/> |
| 175E <input type="checkbox"/> | 175L <input type="checkbox"/> | 175S <input type="checkbox"/> |
| 175F <input type="checkbox"/> | 175M <input type="checkbox"/> | 175T <input type="checkbox"/> |
| 175G <input type="checkbox"/> | 175N <input type="checkbox"/> | 175U <input type="checkbox"/> |

### Fresh Bass

176A  Jan - Mar  
 176B  Apr - Jun  
 176C  Jul - Sep  
 176D  Oct - Dec

 177 

|                               |                               |                               |
|-------------------------------|-------------------------------|-------------------------------|
| 178A <input type="checkbox"/> | 178H <input type="checkbox"/> | 178O <input type="checkbox"/> |
| 178B <input type="checkbox"/> | 178I <input type="checkbox"/> | 178P <input type="checkbox"/> |
| 178C <input type="checkbox"/> | 178J <input type="checkbox"/> | 178Q <input type="checkbox"/> |
| 178D <input type="checkbox"/> | 178K <input type="checkbox"/> | 178R <input type="checkbox"/> |
| 178E <input type="checkbox"/> | 178L <input type="checkbox"/> | 178S <input type="checkbox"/> |
| 178F <input type="checkbox"/> | 178M <input type="checkbox"/> | 178T <input type="checkbox"/> |
| 178G <input type="checkbox"/> | 178N <input type="checkbox"/> | 178U <input type="checkbox"/> |

### Stored Bass

179A  Jan - Mar  
 179B  Apr - Jun  
 179C  Jul - Sep  
 179D  Oct - Dec

 180 

|                               |                               |                               |
|-------------------------------|-------------------------------|-------------------------------|
| 181A <input type="checkbox"/> | 181H <input type="checkbox"/> | 181O <input type="checkbox"/> |
| 181B <input type="checkbox"/> | 181I <input type="checkbox"/> | 181P <input type="checkbox"/> |
| 181C <input type="checkbox"/> | 181J <input type="checkbox"/> | 181Q <input type="checkbox"/> |
| 181D <input type="checkbox"/> | 181K <input type="checkbox"/> | 181R <input type="checkbox"/> |
| 181E <input type="checkbox"/> | 181L <input type="checkbox"/> | 181S <input type="checkbox"/> |
| 181F <input type="checkbox"/> | 181M <input type="checkbox"/> | 181T <input type="checkbox"/> |
| 181G <input type="checkbox"/> | 181N <input type="checkbox"/> | 181U <input type="checkbox"/> |

# HEDR: Native American Food Consumption

## Section 10: Fish - Shellfish 1944-47

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1944-1947

ID 20

### Fresh Perch

|      |                          |           |
|------|--------------------------|-----------|
| 182A | <input type="checkbox"/> | Jan - Mar |
| 182B | <input type="checkbox"/> | Apr - Jun |
| 182C | <input type="checkbox"/> | Jul - Sep |
| 182D | <input type="checkbox"/> | Oct - Dec |

183

|                               |                               |                               |
|-------------------------------|-------------------------------|-------------------------------|
| 184A <input type="checkbox"/> | 184H <input type="checkbox"/> | 184O <input type="checkbox"/> |
| 184B <input type="checkbox"/> | 184I <input type="checkbox"/> | 184P <input type="checkbox"/> |
| 184C <input type="checkbox"/> | 184J <input type="checkbox"/> | 184Q <input type="checkbox"/> |
| 184D <input type="checkbox"/> | 184K <input type="checkbox"/> | 184R <input type="checkbox"/> |
| 184E <input type="checkbox"/> | 184L <input type="checkbox"/> | 184S <input type="checkbox"/> |
| 184F <input type="checkbox"/> | 184M <input type="checkbox"/> | 184T <input type="checkbox"/> |
| 184G <input type="checkbox"/> | 184N <input type="checkbox"/> | 184U <input type="checkbox"/> |

### Stored Perch

|      |                          |           |
|------|--------------------------|-----------|
| 185A | <input type="checkbox"/> | Jan - Mar |
| 185B | <input type="checkbox"/> | Apr - Jun |
| 185C | <input type="checkbox"/> | Jul - Sep |
| 185D | <input type="checkbox"/> | Oct - Dec |

186

|                               |                               |                               |
|-------------------------------|-------------------------------|-------------------------------|
| 187A <input type="checkbox"/> | 187H <input type="checkbox"/> | 187O <input type="checkbox"/> |
| 187B <input type="checkbox"/> | 187I <input type="checkbox"/> | 187P <input type="checkbox"/> |
| 187C <input type="checkbox"/> | 187J <input type="checkbox"/> | 187Q <input type="checkbox"/> |
| 187D <input type="checkbox"/> | 187K <input type="checkbox"/> | 187R <input type="checkbox"/> |
| 187E <input type="checkbox"/> | 187L <input type="checkbox"/> | 187S <input type="checkbox"/> |
| 187F <input type="checkbox"/> | 187M <input type="checkbox"/> | 187T <input type="checkbox"/> |
| 187G <input type="checkbox"/> | 187N <input type="checkbox"/> | 187U <input type="checkbox"/> |

# HEDR: Native American Food Consumption

## Section 10: Eel, Bullhead 1964-66

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1964-1966

ID 20

### Fresh Eel

201A ☐ 0 Jan - Mar  
 201B ☐ 0 Apr - Jun  
 201C ☐ 0 Jul - Sep  
 201D ☐ 0 Oct - Dec

202

203A ☐ 203I ☐  
 203B ☐ 203J ☐  
 203C ☐ 203K ☐  
 203D ☐ 203L ☐  
 203E ☐ 203M ☐  
 203F ☐ 203N ☐  
 203G ☐ 203O ☐  
 203H ☐ 203P ☐

### Stored Eel

204A ☐ 0 Jan - Mar  
 204B ☐ 0 Apr - Jun  
 204C ☐ 0 Jul - Sep  
 204D ☐ 0 Oct - Dec

205

206A ☐ 206I ☐  
 206B ☐ 206J ☐  
 206C ☐ 206K ☐  
 206D ☐ 206L ☐  
 206E ☐ 206M ☐  
 206F ☐ 206N ☐  
 206G ☐ 206O ☐  
 206H ☐ 206P ☐

207

☐ Any bullhead, etc. in 64-66?

### Fresh Bullhead

208A ☐ 0 Jan - Mar  
 208B ☐ 0 Apr - Jun  
 208C ☐ 0 Jul - Sep  
 208D ☐ 0 Oct - Dec

209

210A ☐ 210H ☐ 210O ☐  
 210B ☐ 210I ☐ 210P ☐  
 210C ☐ 210J ☐ 210Q ☐  
 210D ☐ 210K ☐ 210R ☐  
 210E ☐ 210L ☐ 210S ☐  
 210F ☐ 210M ☐ 210T ☐  
 210G ☐ 210N ☐ 210U ☐

### Stored Bullhead

211A ☐ 0 Jan - Mar  
 211B ☐ 0 Apr - Jun  
 211C ☐ 0 Jul - Sep  
 211D ☐ 0 Oct - Dec

212

213A ☐ 213H ☐ 213O ☐  
 213B ☐ 213I ☐ 213P ☐  
 213C ☐ 213J ☐ 213Q ☐  
 213D ☐ 213K ☐ 213R ☐  
 213E ☐ 213L ☐ 213S ☐  
 213F ☐ 213M ☐ 213T ☐  
 213G ☐ 213N ☐ 213U ☐



# HEDR: Native American Food Consumption

## Section 10: Fish - Salmon, Steelhead 1964-66

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 ID 

 188 

 Any Fish 1964-66? 

### 1964-1966

#### Fresh Salmon

189A  Jan - Mar  
 189B  Apr - Jun  
 189C  Jul - Sep  
 189D  Oct - Dec

 190 

191A ☐ 191I ☐  
 191B ☐ 191J ☐  
 191C ☐ 191K ☐  
 191D ☐ 191L ☐  
 191E ☐ 191M ☐  
 191F ☐ 191N ☐  
 191G ☐ 191O ☐  
 191H ☐ 191P ☐

#### Fresh Steelhead

195A  Jan - Mar  
 195B  Apr - Jun  
 195C  Jul - Sep  
 195D  Oct - Dec

 196 

197A ☐ 197I ☐  
 197B ☐ 197J ☐  
 197C ☐ 197K ☐  
 197D ☐ 197L ☐  
 197E ☐ 197M ☐  
 197F ☐ 197N ☐  
 197G ☐ 197O ☐  
 197H ☐ 197P ☐

#### Stored Salmon

192A  Jan - Mar  
 192B  Apr - Jun  
 192C  Jul - Sep  
 192D  Oct - Dec

 193 

194A ☐ 194I ☐  
 194B ☐ 194J ☐  
 194C ☐ 194K ☐  
 194D ☐ 194L ☐  
 194E ☐ 194M ☐  
 194F ☐ 194N ☐  
 194G ☐ 194O ☐  
 194H ☐ 194P ☐

#### Stored Steelhead

198A  Jan - Mar  
 198B  Apr - Jun  
 198C  Jul - Sep  
 198D  Oct - Dec

 199 

200A ☐ 200I ☐  
 200B ☐ 200J ☐  
 200C ☐ 200K ☐  
 200D ☐ 200L ☐  
 200E ☐ 200M ☐  
 200F ☐ 200N ☐  
 200G ☐ 200O ☐  
 200H ☐ 200P ☐

# HEDR: Native American Food Consumption

## Section 10: Perch, Bass 1964-66

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1964-1966

ID 20

### Fresh Perch

214A ☐ 0 Jan - Mar  
 214B ☐ 0 Apr - Jun  
 214C ☐ 0 Jul - Sep  
 214D ☐ 0 Oct - Dec

215

|                               |                               |                               |
|-------------------------------|-------------------------------|-------------------------------|
| 216A <input type="checkbox"/> | 216H <input type="checkbox"/> | 216O <input type="checkbox"/> |
| 216B <input type="checkbox"/> | 216I <input type="checkbox"/> | 216P <input type="checkbox"/> |
| 216C <input type="checkbox"/> | 216J <input type="checkbox"/> | 216Q <input type="checkbox"/> |
| 216D <input type="checkbox"/> | 216K <input type="checkbox"/> | 216R <input type="checkbox"/> |
| 216E <input type="checkbox"/> | 216L <input type="checkbox"/> | 216S <input type="checkbox"/> |
| 216F <input type="checkbox"/> | 216M <input type="checkbox"/> | 216T <input type="checkbox"/> |
| 216G <input type="checkbox"/> | 216N <input type="checkbox"/> | 216U <input type="checkbox"/> |

### Stored Perch

217A ☐ 0 Jan - Mar  
 217B ☐ 0 Apr - Jun  
 217C ☐ 0 Jul - Sep  
 217D ☐ 0 Oct - Dec

218

|                               |                               |                               |
|-------------------------------|-------------------------------|-------------------------------|
| 219A <input type="checkbox"/> | 219H <input type="checkbox"/> | 219O <input type="checkbox"/> |
| 219B <input type="checkbox"/> | 219I <input type="checkbox"/> | 219P <input type="checkbox"/> |
| 219C <input type="checkbox"/> | 219J <input type="checkbox"/> | 219Q <input type="checkbox"/> |
| 219D <input type="checkbox"/> | 219K <input type="checkbox"/> | 219R <input type="checkbox"/> |
| 219E <input type="checkbox"/> | 219L <input type="checkbox"/> | 219S <input type="checkbox"/> |
| 219F <input type="checkbox"/> | 219M <input type="checkbox"/> | 219T <input type="checkbox"/> |
| 219G <input type="checkbox"/> | 219N <input type="checkbox"/> | 219U <input type="checkbox"/> |

### Fresh Bass

220A ☐ 0 Jan - Mar  
 220B ☐ 0 Apr - Jun  
 220C ☐ 0 Jul - Sep  
 220D ☐ 0 Oct - Dec

221

|                               |                               |                               |
|-------------------------------|-------------------------------|-------------------------------|
| 222A <input type="checkbox"/> | 222H <input type="checkbox"/> | 222O <input type="checkbox"/> |
| 222B <input type="checkbox"/> | 222I <input type="checkbox"/> | 222P <input type="checkbox"/> |
| 222C <input type="checkbox"/> | 222J <input type="checkbox"/> | 222Q <input type="checkbox"/> |
| 222D <input type="checkbox"/> | 222K <input type="checkbox"/> | 222R <input type="checkbox"/> |
| 222E <input type="checkbox"/> | 222L <input type="checkbox"/> | 222S <input type="checkbox"/> |
| 222F <input type="checkbox"/> | 222M <input type="checkbox"/> | 222T <input type="checkbox"/> |
| 222G <input type="checkbox"/> | 222N <input type="checkbox"/> | 222U <input type="checkbox"/> |

### Stored Bass

223A ☐ 0 Jan - Mar  
 223B ☐ 0 Apr - Jun  
 223C ☐ 0 Jul - Sep  
 223D ☐ 0 Oct - Dec

224

|                               |                               |                               |
|-------------------------------|-------------------------------|-------------------------------|
| 225A <input type="checkbox"/> | 225H <input type="checkbox"/> | 225O <input type="checkbox"/> |
| 225B <input type="checkbox"/> | 225I <input type="checkbox"/> | 225P <input type="checkbox"/> |
| 225C <input type="checkbox"/> | 225J <input type="checkbox"/> | 225Q <input type="checkbox"/> |
| 225D <input type="checkbox"/> | 225K <input type="checkbox"/> | 225R <input type="checkbox"/> |
| 225E <input type="checkbox"/> | 225L <input type="checkbox"/> | 225S <input type="checkbox"/> |
| 225F <input type="checkbox"/> | 225M <input type="checkbox"/> | 225T <input type="checkbox"/> |
| 225G <input type="checkbox"/> | 225N <input type="checkbox"/> | 225U <input type="checkbox"/> |

# HEDR: Native American Food Consumption

## Section 10: Shellfish 1964-66

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1964-1966

ID 20

### Fresh Shellfish

226A ☐ 0 Jan - Mar  
 226B ☐ 0 Apr - Jun  
 226C ☐ 0 Jul - Sep  
 226D ☐ 0 Oct - Dec

227

|                               |                               |                               |
|-------------------------------|-------------------------------|-------------------------------|
| 228A <input type="checkbox"/> | 228H <input type="checkbox"/> | 228O <input type="checkbox"/> |
| 228B <input type="checkbox"/> | 228I <input type="checkbox"/> | 228P <input type="checkbox"/> |
| 228C <input type="checkbox"/> | 228J <input type="checkbox"/> | 228Q <input type="checkbox"/> |
| 228D <input type="checkbox"/> | 228K <input type="checkbox"/> | 228R <input type="checkbox"/> |
| 228E <input type="checkbox"/> | 228L <input type="checkbox"/> | 228S <input type="checkbox"/> |
| 228F <input type="checkbox"/> | 228M <input type="checkbox"/> | 228T <input type="checkbox"/> |
| 228G <input type="checkbox"/> | 228N <input type="checkbox"/> | 228U <input type="checkbox"/> |

### Stored Shellfish

229A ☐ 0 Jan - Mar  
 229B ☐ 0 Apr - Jun  
 229C ☐ 0 Jul - Sep  
 229 ☐ 0 Oct - Dec

230

|                               |                               |                               |
|-------------------------------|-------------------------------|-------------------------------|
| 231A <input type="checkbox"/> | 231H <input type="checkbox"/> | 231O <input type="checkbox"/> |
| 231B <input type="checkbox"/> | 231I <input type="checkbox"/> | 231P <input type="checkbox"/> |
| 231C <input type="checkbox"/> | 231J <input type="checkbox"/> | 231Q <input type="checkbox"/> |
| 231D <input type="checkbox"/> | 231K <input type="checkbox"/> | 231R <input type="checkbox"/> |
| 231E <input type="checkbox"/> | 231L <input type="checkbox"/> | 231S <input type="checkbox"/> |
| 231F <input type="checkbox"/> | 231M <input type="checkbox"/> | 231T <input type="checkbox"/> |
| 231G <input type="checkbox"/> | 231N <input type="checkbox"/> | 231U <input type="checkbox"/> |

# HEDR: Native American Food Consumption

## Section 11: Columbia River Water Exposure

[Previous Form](#)
[Close](#)
[Next Form](#)

 ID 

 Born:  YearJ

### 1944-1947

#### Untreated Water

232A ☐ Jan - Mar  
 232B ☐ Apr - Jun  
 232C ☐ Jul - Sep  
 232D ☐ Oct - Dec

#### Where?

233A ☐ 233F ☐ 233K ☐  
 233B ☐ 233G ☐ 233L ☐  
 233C ☐ 233H ☐ 233M ☐  
 233D ☐ 233I ☐ 233N ☐  
 233E ☐ 233J ☐ 233O ☐

#### Municipal Water

234A ☐ Jan - Mar  
 234B ☐ Apr - Jun  
 234C ☐ Jul - Sep  
 234D ☐ Oct - Dec

#### Bathing and Swimming

235A ☐ Jan - Mar  
 235B ☐ Apr - Jun  
 235C ☐ Jul - Sep  
 235D ☐ Oct - Dec

#### Where?

236A ☐ 236F ☐ 236K ☐  
 236B ☐ 236G ☐ 236L ☐  
 236C ☐ 236H ☐ 236M ☐  
 236D ☐ 236I ☐ 236N ☐  
 236E ☐ 236J ☐ 236O ☐

#### Boating

237A ☐ Jan - Mar  
 237B ☐ Apr - Jun  
 237C ☐ Jul - Sep  
 237D ☐ Oct - Dec

#### Where?

238A ☐ 238F ☐ 238K ☐  
 238B ☐ 238G ☐ 238L ☐  
 238C ☐ 238H ☐ 238M ☐  
 238D ☐ 238I ☐ 238N ☐  
 238E ☐ 238J ☐ 238O ☐

### 1964-1966

#### Untreated Water

239A ☐ Jan - Mar  
 239B ☐ Apr - Jun  
 239C ☐ Jul - Sep  
 239D ☐ Oct - Dec

#### Where?

240A ☐ 240F ☐ 240K ☐  
 240B ☐ 240G ☐ 240L ☐  
 240C ☐ 240H ☐ 240M ☐  
 240D ☐ 240I ☐ 240N ☐  
 240E ☐ 240J ☐ 240O ☐

#### Municipal Water

241A ☐ Jan - Mar  
 241B ☐ Apr - Jun  
 241C ☐ Jul - Sep  
 241D ☐ Oct - Dec

#### Bathing and Swimming

242A ☐ Jan - Mar  
 242B ☐ Apr - Jun  
 242C ☐ Jul - Sep  
 242D ☐ Oct - Dec

#### Where?

243A ☐ 243F ☐ 243K ☐  
 243B ☐ 243G ☐ 243L ☐  
 243C ☐ 243H ☐ 243M ☐  
 243D ☐ 243I ☐ 243N ☐  
 243E ☐ 243J ☐ 243O ☐

#### Boating

244A ☐ Jan - Mar  
 244B ☐ Apr - Jun  
 244C ☐ Jul - Sep  
 244D ☐ Oct - Dec

#### Where?

245A ☐ 245F ☐ 245K ☐  
 245B ☐ 245G ☐ 245L ☐  
 245C ☐ 245H ☐ 245M ☐  
 245D ☐ 245I ☐ 245N ☐  
 245E ☐ 245J ☐ 245O ☐

# HEDR: Native American Food Consumption

## Section 12, Summary: Beliefs and Summary

Previous Form

Close

ID

Health Problems

- |      |                          |      |                          |
|------|--------------------------|------|--------------------------|
| 246A | <input type="checkbox"/> | 246J | <input type="checkbox"/> |
| 246B | <input type="checkbox"/> | 246K | <input type="checkbox"/> |
| 246C | <input type="checkbox"/> | 246L | <input type="checkbox"/> |
| 246D | <input type="checkbox"/> | 246M | <input type="checkbox"/> |
| 246E | <input type="checkbox"/> | 246N | <input type="checkbox"/> |
| 246F | <input type="checkbox"/> | 246O | <input type="checkbox"/> |
| 246G | <input type="checkbox"/> | 246P | <input type="checkbox"/> |
| 246H | <input type="checkbox"/> | 246Q | <input type="checkbox"/> |
| 246I | <input type="checkbox"/> | 246R | <input type="checkbox"/> |
|      |                          | 246S | <input type="checkbox"/> |
|      |                          | 246T | <input type="checkbox"/> |

Other Cancers

Birth Defects

Other

How knowledgeable?

247

- |      |                          |      |                          |
|------|--------------------------|------|--------------------------|
| 248A | <input type="checkbox"/> | 248D | <input type="checkbox"/> |
| 248B | <input type="checkbox"/> | 248E | <input type="checkbox"/> |
| 248C | <input type="checkbox"/> | 248F | <input type="checkbox"/> |

Other

Summary:

|     | Quality                        | Reason<br>bad qual.      | Repeated?                          | End time                                 |
|-----|--------------------------------|--------------------------|------------------------------------|------------------------------------------|
| 249 | <input type="text" value="1"/> | 250 <input type="text"/> | 251 <input type="text" value="1"/> | 252 <input type="text" value="3:20 PM"/> |

BSRC-700/95/004V2

Hanford Environmental Dose Reconstruction Project  
Native American Lifestyle and Demography Data Collection

Technical Document For The NALD 2.0 Database

## **Volume 2: Technical Reference**

*Prepared for:*  
U.S. Public Health Service  
Centers For Disease Control  
National Center For Environmental Health  
Radiation Studies Branch

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Contract No. 200-92-0534

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- TABLES AND FIELDS
- QUERY DEFINITIONS
- REPORT DEFINITIONS
- MACROS
- FORMS (including illustrations of Input Forms)
- IMPORT SPECIFICATIONS



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## Introduction

The Native American lifestyle and demography data collection for the Hanford Environmental Dose Reconstruction Project (HEDR) has generated some very large data sets. The affected Tribes have done hundreds of interviews, and each interview has about 1,300 items of data to be analyzed. In cooperation with the Centers for Disease Control and the members of the Intertribal Council on Hanford Health Projects, Battelle Seattle Research Center has developed the Native American Lifestyle and Demography (NALD 2.0) database system to aid the Tribes in managing, analyzing, and reporting the large data sets.

NALD 2.0 takes advantage of the Microsoft Access (2.0) database management software for analysis and reporting. The database contains all the procedures necessary to import data from an existing EPI-Info database, to enter new data from interview forms, to check and edit data at any time, to select the data for reporting, and to print reports. All of these procedures may be run from a simple menu, and the person doing the work needs only a brief familiarity with Microsoft Access to get started.

The *User's Guide* provides detailed instructions for:

- Setting up the new NALD 2.0 database on the computer,
- Importing data that is already entered in EPI-Info,
- Inputting new data and checking data,
- Selecting the data for reporting,
- Printing reports.

It also includes a complete set of illustrations of the Input Forms for the user's familiarization and reference.

This *Technical Reference* is a complete documentation of the NALD 2.0 database. Some elements of the *User's Guide* are recapitulated here, for clarity and completeness, but this volume does not cover user issues. It is intended to provide the knowledgeable user of Microsoft Access with complete information about the construction and operation of NALD 2.0.

In addition to this section, it has six appendices:

- Tables and Fields
- Query definitions
- Report definitions
- Macros
- Forms (including illustrations of Input Forms)
- Import Specifications

## System Requirements

NALD is a Microsoft Access database that is designed to run on a PC compatible microcomputer. You will need the following equipment and software installed on your computer to run NALD:

- Color monitor;
- 3.5 inch floppy disk drive;
- Hard disk drive with about five megabytes (5 MB) of available space;
- Mouse;
- 12 megabytes of memory (This is the minimum recommended. More is better.);
- Microsoft Windows (version 3.1) operating system;
- Microsoft Access (version 2.0);
- Installed type fonts - Arial and Times New Roman.

If you are not sure if your computer meets these requirements, see your system administrator for help. Please note that NALD will not run under the old version (1.0) of Microsoft Access.

## Running The NALD 2.0 Database

The NALD 2.0 database has a graphical user interface (Figure 1) that provides the ordinary user access to all input, editing, and reporting functions. The interface starts automatically when the database is opened. The functions are fully explained in Volume 1, the User's Guide.

The user has two options for turning off the graphical user interface. The Quit MSAccess button closes all open tables and forms, and the Access application terminates.

The Close this window button closes the Main Menu, but the remainder of the database is unaffected. At that point, the user has access to all the other functions of the Microsoft Access application.

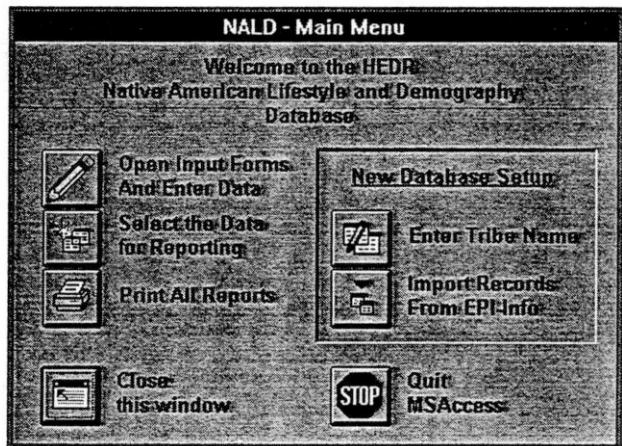


Figure 1. Main Menu

## Entering and Checking Data with Input Forms

NALD 2.0 has input forms for all the data in the questionnaire. These forms are available from the graphical user interface by clicking on the Open Input Forms button to view the first form.

### Entering Data.

There are three ways to enter data on the input forms (Figure 2):

- Select a value from a *pull-down list*,
- Click on a *check-box* (Yes/No answers).
- Type the information into a *box* on the form,

A screenshot of a data input form. It contains three rows of input fields. The first row is labeled 'Sex' and has a small square icon to its left. The second row is labeled 'Informant' and has a small square icon to its left. The third row is labeled 'Informant Relationship' and has a small square icon to its left. Each row has a text box for data entry.

Figure 2. Data Input

To use the pull-down list, click once on the arrow button at the side of the list. The list will open, and you can select any of the items in the list by clicking on it.

When you click on a check-box, an **X** fills the box. This means YES. If you want to change it, just click on it again, and it will turn off (NO).

Type your data into any box. When you have finished entering the data, press **Enter**, and NALD 2.0 will automatically move to the next data element in the order that it appears on the questionnaire. You may also press the **Tab** key to skip to the next data item. If you want to skip over many, then use the mouse to move the cursor to the item you want, and click once with the left mouse button.

When you press return for the last data item on a form, the entire record is saved, and the focus moves to the first item of the next record.

### Changing Records.

Use the record selectors, located in the lower left-hand corner of the form to move from one record to the next.

A horizontal bar with a small icon on the left, followed by the text 'Record: 1', then 'of 1', and a small icon on the right.

The left button will move you to the first record, the next button (left pointing triangle) will move you to the previous record, the next button (right pointing triangle) will move you to the next record, and the right button will move you to the last record. To add a new record, move to the last record (right button), then click once on the next-record button.

### Changing Forms.

A rectangular box containing three buttons. The top button is labeled 'Previous Form', the bottom button is labeled 'Next Form', and a third button labeled 'Close' is positioned to the right of the other two.

Use the buttons at the top of each form to move from one form to another. Move the cursor to the button you want and click with the left mouse button. When you are finished, click on the **Close** button, and you will return to the Main Menu.

## Checking and Editing Data.

Use the input forms to view your data one record at a time. You can select the record you want with the record selector buttons, and then change any item. When you go to the next record or close the form, your changes will automatically be saved.

**Hint:** Everybody makes mistakes. It is a very good idea to make a backup, to recover past work without redoing everything.

Before you start to edit your data, quit NALD 2.0 and make a copy of your database. For example, if your files are called `food1.ldb` and `food1.mdb`, then copy these files to `food2.ldb` and `food2.mdb`. Now start NALD 2.0 again and edit `food2`. This way you can go back to food1 any time.

## Selecting Data and Printing Reports

Not all data from the questionnaires are used for the final reports. To select the data for reporting click on the Main Menu button marked "Select the Data for Reporting." NALD 2.0 will automatically select and sort the data. To print the reports, click on the button marked "Print All Reports."

## The Structure of NALD 2.0

While NALD 2.0 will perform all its operations automatically, these operations are not hidden from the users. They may be looked over and modified by any knowledgeable user of Microsoft Access. The data are contained in *tables*, they are selected and sorted with *queries*, and they are output with *reports*.

The naming convention for field names established for the EPI-Info database has been preserved. For example: FOWL6139C

| | | \_\_\_\_\_ Question Number from the Questionnaire  
| | \_\_\_\_\_ Time Period: 4 = 1944-47; 6 = 1964-66  
| \_\_\_\_\_ Descriptive name

Three field names in EPI\_Info were found to vary from this convention, and these were changed as follows:

|           |    |           |
|-----------|----|-----------|
| OTHER6109 | to | OTHER6110 |
| FISH44150 | to | FISH4150  |
| FISH4212  | to | FISH6212  |

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