

**DEPARTMENT OF HEALTH AND HUMAN SERVICES
CENTERS FOR DISEASE CONTROL AND PREVENTION**

and

**AGENCY FOR TOXIC
SUBSTANCES AND DISEASE REGISTRY**

convene the

OAK RIDGE RESERVATION HEALTH EFFECTS SUBCOMMITTEE

*Oak Ridge, Tennessee
October 21, 2003*

FINAL RECORD OF THE PROCEEDINGS

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October 21, 2003
*Oak Ridge, Tennessee***

Final Minutes of the Meeting

1 The Department of Health and Human Services (HHS), the Centers for Disease Control
2 and Prevention (CDC), and the Agency for Toxic Substances and Disease Registry
3 (ATSDR) convened a meeting of the Oak Ridge Reservation Health Effects
4 Subcommittee (ORRHES). The proceedings were held on October 21, 2003 at the U.S.
5 Department of Energy (DOE) Information Center, 475 Oak Ridge Turnpike in Oak
6 Ridge, Tennessee.

Opening Session and Introductions

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12 Dr. Kowetha Davidson, the ORRHES Chair, called the meeting to order at 12:20 p.m.
13 She welcomed the attendees to the proceedings and opened the floor for introductions.
14 The following individuals were present to contribute to the discussion.

15
16 **ORRHES Members**

17 Dr. Kowetha Davidson, Chair
18 Ms. Peggy Adkins
19 Mr. Don Box
20 Dr. Herman Cember
21 Ms. Karen Galloway
22 Mr. George Gartseff
23 Mr. Jeffrey Hill
24 Mr. David Johnson
25 Ms. Susan Kaplan
26 Mr. James Lewis
27 Dr. Anthony Malinauskas
28 Dr. Peter Malmquist

29 Mr. L.C. Manley
30 Ms. Donna Mosby
31 Ms. Barbara Sonnenburg
32 Mr. Charles Washington

33
34 **ORRHES Liaison Representatives**

35 Mr. Chudi Nwangwa (TDEC)
36 Ms. Brenda Vowell (TDOH)

37
38 **Designated Federal Official**

39 Ms. Lorine Spencer,
40 Executive Secretary

41

1 **ATSDR Representatives**
2 Ms. Subha Chandar
3 Dr. Paul Charp
4 Mr. Burt Cooper
5 Ms. Melissa Fish (OR Field Office)
6 Mr. Jack Hanley
7 Mr. Michael Hatcher
8 Ms. Marilyn Horton
9 Dr. Elizabeth Howze
10 Ms. Sandra Isaacs
11 Ms. Theresa NeSmith

12 Mr. Jerry Pereira
13 Dr. Terrie Sterling
14 Dr. William Taylor (OR Field Office)
15 Ms. Dhelia Williamson

16
17 **Point of Contact**
18 Dr. Timothy Joseph (DOE)

19
20 **Guests**
21 **Dr. Gordon Blaylock**
22 Ms. Faye Martin

Agenda Review, Correspondence and Announcements

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28 **Agenda Review.** In addition to the project management update, work group reports and
29 two public comment periods, Dr. Davidson announced that the following topics would be
30 presented and discussed during the meeting:

- 31
- 32 • Proposed plan to address the iodine-131 public health assessment (PHA)
33 by Dr. Paul Charp.
- 34 • Examples of health education and promotion projects at other sites by the
35 Division of Health Education and Promotion (DHEP).
- 36 • Description of the ORR cancer incidence assessment by Ms. Dhelia
37 Williamson.
- 38

39 **Correspondence.** No correspondence was noted for the record.
40

41 **Announcements.** Dr. Davidson distributed the current roster for each ORRHES work
42 group. She asked the members to indicate their interest in continuing to participate,
43 serving on another work group or resigning. Ms. Marilyn Horton, the ORRHES
44 Committee Management Specialist, will update the roster for each work group and
45 circulate a new list.
46

Review of August 2003 ORRHES Meeting Minutes

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51 Dr. Davidson entertained a motion to approve the previous meeting minutes. She
52 pointed out that revisions to the first draft were in bold print on pages 8, 12, 13, 17, 24
53 and 25. Mr. Lewis conveyed that several members of the Communications and
54 Outreach Work Group (COWG) stated the previous meeting minutes did not contain

1 sufficient detail, their voices were not heard and key comments were omitted. Although
2 the members did not submit written changes, he emphasized the need to note and
3 address these concerns.

4
5 Dr. Davidson clarified that members must submit revisions to the minutes to ATSDR in
6 writing to be incorporated. A motion to approve the minutes was properly made and
7 seconded by Mr. Hill and Mr. Manley, respectively. There being no abstentions,
8 opposition or further discussion, the August 26, 2003 ORRHES Meeting Minutes were
9 unanimously approved.

Review of Current ORRHES Action Items

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15 Ms. Lorine Spencer, the Designated Federal Official (DFO), provided a status report of
16 pending and ongoing action items.

- 17
18 1. Phase II of the ORR needs assessment will be changed from “pending” to
19 “ongoing” in the list of action items since these activities will be conducted
20 in conjunction with PHAs.
- 21 2. Periodic updates will be given on the briefing books for the media and key
22 community groups. This activity will be noted as “ongoing” in the list of
23 action items since briefing papers, fact sheets and other materials for
24 PHAs will be distributed to community groups on a continuous basis.
- 25 3. An update on the cross-index for the ORRHES web site will be given
26 during the meeting.
- 27 4. The *Public Health Assessment Guidance Manual* will be distributed to
28 ORRHES after approval is obtained to circulate the document.

29
30 Ms. Kaplan noted corrections to be made on the list of recommendations and action
31 items: change “pending” items color-coded as gray to yellow; change the spelling of the
32 name to Patrick “Lipford” on page 3; and change the spelling of the name to Senator
33 “Frist.” Ms. Spencer asked the members to submit additional changes to the list by e-
34 mail.

Project Management Update

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40 Mr. Jerry Pereira, the ORR Project Manager, reported that activities planned over the
41 next three to four months are on schedule. In November and December 2003, the
42 Public Health Assessment Work Group (PHAWG) will review the draft White Oak Creek
43 (WOC) PHA and make recommendations to ORRHES. ATSDR will provide assistance

1 to PHAWG since the review period is relatively short. Because ATSDR is scheduled to
2 present the public comment version of the draft PHA to ORRHES during the February 2,
3 2004 meeting, efforts will be made to convene this meeting in Kingston. Staff will scout
4 the area to identify potential locations.

5
6 ATSDR made adjustments to its DOE funding to complete COWG meeting minutes
7 under the ERG contract. For meeting minutes of other work groups, the DHEP Director,
8 the Division of Health Assessment and Consultation (DHAC) Director and other ATSDR
9 staff will meet and eventually request more funding from Dr. Henry Falk, Director of the
10 National Center for Environmental Health/ATSDR. ATSDR realizes that work group
11 minutes are extremely important in maintaining ORRHES's history.

Proposed Plan for the Iodine-131 PHA

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16
17 Dr. Paul Charp of ATSDR described a tentative plan for the iodine-131 PHA. ATSDR
18 learned that some data may not have been included in the Task 1 Report of the Oak
19 Ridge Dose Reconstruction Project (ORDRP). ATSDR outlined the process to PHAWG
20 on the previous evening and is now presenting the plan to the full ORRHES for
21 consideration. In step 1, ATSDR will continue to review the current literature published
22 after Chernobyl from 1986 to the present. Efforts will be made to locate environmental,
23 radio-epidemiological, dose-response and thyroid cancer studies related to iodine-131.
24 These data encompass more than 100,000 persons who lived in the area during the
25 Chernobyl event. ATSDR estimates a one-month time-line will be needed to complete
26 this task.

27
28 In step 2, ATSDR will collect new ORR data related to biota, air and soil concentrations
29 of iodine-131 and iodine-129. The data collection effort will include iodine-129 because
30 this isotope is a solid indicator of the presence of iodine-131 during the radioactive
31 lanthanum runs (RaLa) in the 1950s. During the RaLa process, lanthanum was pulled
32 from the Oak Ridge reactor and shipped to the Los Alamos site for weapons design.
33 ATSDR estimates a one-month time-line will be needed to complete this task. In step 3,
34 air data from the 1950s will be reviewed because these studies were not specifically
35 addressed in the ORDRP. In 1954, Oak Ridge officials moved the HP-8 monitoring
36 station from the confines of X-10 to Rogers Quarry. The purpose of this activity will be
37 to identify differences in the air dispersion of iodine from the HP-8 monitoring station
38 based on its placement at the two locations. ATSDR hopes the data will assist in
39 validating the model. ATSDR estimates a two-month time-line will be needed to
40 complete this task.

41
42 In step 4, ATSDR will validate existing data. Auxier & Associates located additional
43 data indicating that iodine-131 remained within the confines of X-10 and did not travel

1 offsite. ATSDR discussed these findings with SENES Oak Ridge because this
2 company completed the iodine dispersion component of the Task 1 Report. ATSDR will
3 continue to engage Auxier and SENES in discussions since the companies may take
4 different approaches in interpreting the data. ATSDR estimates a one-month time-line
5 will be needed to complete this task. If Auxier and SENES cannot reach agreement,
6 ATSDR will convene an expert panel to address the usefulness of the 1950s air data
7 and document its opinions in a report. ATSDR estimates a two-month time-line will be
8 needed to complete this task if needed.

9
10 In step 5, ATSDR will develop an iodine-131 decision tree with potential doses and
11 public health actions based on the literature review and usefulness of the existing
12 iodine-131 data. ATSDR hopes to obtain input and approval of this activity from a
13 qualified and nationally or internationally recognized radio-epidemiologist. Dr. **Jerome**
14 **Hershman** will be asked to provide feedback as well. In step 6, ATSDR will combine
15 the information in the PHA based on the conclusions of these tasks. Although the data
16 acquisition, literature review and data analysis are incomplete, ATSDR has already
17 drafted the introduction and background of the iodine-131 PHA. ATSDR may possibly
18 have a draft of the iodine-131 PHA available for ORRHES to review in four to six
19 months.

20
21 Dr. Malinauskas questioned whether the ORDRP addressed physicochemical forms of
22 iodine, such as elemental versus particulate. He recalled that the Chernobyl iodine
23 releases were emitted as cesium and in several other forms as well. Dr. Cember asked
24 if ATSDR's literature review will include thyroid uptake studies of persons who had
25 iodine administered for medical diagnostic purposes. Because these data encompass a
26 large population of individuals who received high iodine doses, the information would be
27 relevant to ORR activities. Dr. Charp replied to the questions as follows. Particulate,
28 organic and elemental forms of iodine are all addressed in the ORDRP. The report
29 shows that materials released from the stack were in elemental form, but were
30 converted to a methyl or particulate form after migrating to monitoring stations.

31
32 The iodine-131 PHA will also include a discussion of studies that have been conducted
33 on radio-therapeutic administration of iodine. In response to Mr. Manley, Dr. Charp
34 confirmed that the potential for Rogers Quarry to be downwind from X-10 will be
35 addressed in the PHA. ATSDR will obtain wind rose data from the National Oceanic
36 and Atmospheric Administration and other sources. Dr. Charles Miller, Chief of the
37 CDC Radiation Studies Branch, is an expert in meteorology and will review the ORR air
38 dispersion data. Mr. Lewis recalled that concerns were previously raised about the
39 possibility of some ORR data being shredded. During the ORDRP, a massive effort
40 was undertaken to locate missing records and interview persons with knowledge of site
41 activities. He advised ATSDR to highlight these attempts in the iodine-131 PHA.

1 Ms. Kaplan reiterated the need for ATSDR to act on Mr. Lewis's suggestion. For
2 example, ATSDR found gum filter data in a box that had previously been searched
3 during the ORDRP. Dr. Charp and Mr. Jack Hanley of ATSDR provided details about
4 actions that will be taken to address missing data in the iodine-131 PHA. ATSDR has
5 collected weekly reports from 1953, 1955 and 1956, but the 1954 quarterly reports are
6 averaged over a three-month period and contain less information. **ATSDR does not**
7 **have the 1954 weekly reports.** ATSDR also has over 20 searchable CD-ROMs of
8 interviews; some of these records relate to iodine. Efforts are currently being made to
9 locate missing data on the HP-8 monitoring station.

10
11 ATSDR will act on Mr. Lewis's suggestion by describing efforts that were made to locate
12 data and explicitly stating if information was not found. Document reference numbers
13 for iodine data on the CD-ROMs will be included in the PHA as well. Additionally, the
14 gum filter data were not newly discovered by ATSDR; the information was actually
15 reported prior to the initiation of the ORDRP. Overall, the missing data will undoubtedly
16 fill some gaps, but the absence of the information will not adversely impact the iodine-
17 131 PHA to a significant degree. Even if the data are not located, ATSDR will still be
18 able to draw conclusions in the PHA. Most notably, the thyroid studies on deer can be
19 used to quasi-validate the model.

20
21 Ms. Sonnenburg recalled that at a previous ORRHES meeting, an individual made a
22 public comment about his knowledge of unrecorded discharges at ORR. She raised the
23 possibility of ATSDR contacting this individual to clarify his comments. Ms. Adkins
24 mentioned that this individual may be Mr. Harry Williams who was directed to place a
25 large canister of toxic materials into the creek and shoot a hole in the canister for it to
26 sink. Mr. Hanley clarified that Mr. Williams has made public comments about uranium
27 in K-25 and fluoride in nighttime releases. ATSDR noted the concerns and will address
28 these issues in the K-25 PHA. Dr. Malinauskas asked if the iodine releases will also
29 include emissions from K-25 and Y-12. Dr. Charp responded that the primary focus will
30 be on RaLa releases from X-10. The current data do not mention releases from K-25 or
31 Y-12, but the monitoring data will capture all sources.

Community Assessments At Other Sites

32
33
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35
36
37 Dr. Elizabeth Howze, the DHEP Director, described several health education and
38 promotion projects ATSDR has completed at other sites. The Isle de Vieques in Puerto
39 Rico was used as a bombing range by the U.S. Navy. The site has been a source of
40 controversy for quite some time due to the close proximity of a residential community,
41 weapons storage facility and bombing range. ATSDR completed a focused PHA to
42 identify public health hazards of persons on the bombing range and an informal
43 community needs assessment to document specific concerns of residents about

1 chemicals in the air and water. ATSDR identified health education needs for children,
2 health care providers and the general community. Asthma, cancer and vibroacoustics
3 were the primary community concerns in Vieques.

4
5 Residents adjacent to the bombing range were experiencing a thickening of coronary
6 arteries or heart muscles. ATSDR reviewed the literature on potential health effects
7 from bombing vibrations, but found no causal relationship. ATSDR also found no
8 association between the bombing range and concerns about elevated levels of asthma
9 and heart disease. Due to the controversy, strong activism, public protests and threats
10 at the site, ATSDR could not convene public meetings. Information was informally
11 gathered by speaking to residents in their homes and engaging day care center workers
12 in dialogue.

13
14 ATSDR also used its environmental medicine case studies to convene training sessions
15 for physicians and nurses and provide continuing medical education credits on Vieques.
16 ATSDR's other activities on Vieques included assistance with a summer environmental
17 camp for children; implementation of a Spanish environmental curriculum in schools;
18 development of a monthly community newsletter; and participation in establishing an
19 environmental health resource center with books and other relevant materials targeted
20 to children.

21
22 At the Vasquez Boulevard/Interstate 70 (VBI-70) site in Denver Colorado, ATSDR
23 identified arsenic and lead in soil. The site is adjacent to three lead smelters and
24 arsenic was previously used in residential yards to control pests. However, the actual
25 source of contamination could not be determined. Interstates that cut through the
26 community and industrial activities also impact the community. Most of the ~4,000
27 residents are persons of color and low-income. In the VBI-70 PHA, ATSDR found an
28 urgent public health threat for children with soil pica behavior. ATSDR convened a site
29 team of health officials and community representatives; conducted a community
30 assessment in close collaboration with residents; held public availability sessions; and
31 trained community representatives in the PHA process.

32
33 ATSDR also developed three activities to address more specific issues. The
34 Community Education Program focused on community concerns, community
35 assessment data and children's health. The Gardening Education Program was created
36 in collaboration with the Cooperative Extension Service and implemented door-to-door
37 in neighborhoods to answer gardening questions. Program materials were developed
38 and distributed and small community meetings were held. The Health Care Provider
39 Education Program was designed as grand rounds in local hospitals. Physician
40 toxicologists and other providers facilitated the courses and also held small meetings in
41 the homes of community residents.

1 In Fallon, Nevada, ATSDR responded to childhood leukemia cases by conducting a
2 community health education assessment. The site is a small agricultural community
3 located near Reno and a naval air station; the population is primarily Native American
4 and Hispanic. The source of the 20 childhood leukemia cases has not been determined
5 to date, but jet fuel, tungsten mining, excess arsenic levels in drinking water, and
6 agricultural spraying of herbicides and pesticides have been considered as possible
7 exposure sources.

8
9 The community also suffers from a great deal of stigma because many Reno grocery
10 stores place “not from Fallon” stickers on produce. In an effort to cohesively,
11 systematically and effectively address the high level of concern among parents and
12 respond to the childhood leukemia cancer cases, community leaders were identified,
13 trained and formed an organizational infrastructure. The Community United Response
14 Team (CURT) attended ATSDR's community stress workshops; participated in training
15 sessions to lead focus groups and communicate risk; and collaborated with ATSDR, the
16 U.S. Environmental Protection Agency (EPA) and agencies at state and regional levels.

17
18 ATSDR partnered with CURT to conduct a community assessment that included a
19 series of focus groups. This activity was designed to address large Hispanic and Native
20 American populations that were not receiving information; parents who requested
21 additional information about leukemia; other health concerns of the community; and
22 information about children. ATSDR introduced an environmental curriculum into the
23 Fallon school system and ensured that Hispanic and Native American schools were
24 included.

25
26 At the Herculaneum, Missouri site, ATSDR detected lead contamination throughout the
27 community in soil, air and street dust. ATSDR learned about concerns at the site from
28 the Community Assistance Group (CAG) and data from the census outreach and
29 education initiative. The small community has contained an active lead smelter since
30 1892; the site has been continuously contaminated and cleaned since that time. The
31 smelter was conclusively identified as the source of exposure at the site. ATSDR used
32 materials from effective local lead programs to develop community education activities.
33 ATSDR also provided technical assistance to the state health department by reviewing
34 fact sheets and the health education plan; participating in weekly conference calls; and
35 implementing onsite health education activities.

36
37 Health education activities by the state include door-to-door delivery of educational
38 packets and monthly presentations to CAG members, K-12 schoolteachers and a local
39 church group. The presentations are given by physicians with expertise in lead
40 poisoning. One-on-one conversations are also held with the community and politicians
41 at local, state and federal levels. The Herculaneum site has received a great deal of
42 attention and interest from federal politicians. Articles are written for a multi-

1 governmental agency newsletter, while health consultations are implemented through
2 the state health department web site and direct mailings to CAG leaders and other
3 community members.

4
5 At the Orote Landfill in Guam, the community was concerned about PCB contamination
6 in water and fish. ATSDR conducted health care provider education courses for nurses,
7 environmental public health staff, physicians and other providers. ATSDR also
8 developed a "Safe Cooking" brochure and plans to implement an environmental
9 curriculum in schools and throughout the community.

10
11 At the Anniston, Alabama site, the community was concerned about lead exposure and
12 health effects from PCB contamination. However, ATSDR has not determined adverse
13 impacts from PCBs to date. A Gardening Education Program was designed with
14 community meetings, a calendar and other specific materials. ATSDR also developed
15 documents on PCBs, screened children for lead, and convened public availability
16 sessions on lead. ATSDR's Pediatric Environmental Health Specialty Unit and a
17 community-based work group jointly address lead concerns and developmental
18 disabilities at health fairs.

19
20 The West Anniston Foundation was established as a non-profit organization to evaluate
21 access to health services and ensure children in the community have the best
22 education, health care and remedial services. Overall, ATSDR conducts both site- and
23 non-site-specific community assessments. Strong efforts are always made to closely
24 collaborate with communities and other partners as well as to tailor activities to specific
25 community concerns and needs.

26
27 Ms. Sandra Isaacs and Ms. Theresa NeSmith of ATSDR provided additional details
28 about some of the sites in response to ORRHES's questions. Because the
29 infrastructure of the Vieques cancer registry was extremely weak, ATSDR and CDC
30 signed a cooperative agreement with government officials to gather data for the cancer
31 registry. Information is still being entered into the system, but a preliminary report from
32 the local health clinic showed a 25% higher rate of cancer on Vieques compared to
33 Puerto Rico. The community is ~7 miles from the bombing range, but ATSDR found no
34 completed exposure pathways through groundwater or air. The environmental
35 curriculum developed for Vieques school children can be replicated for ORR and other
36 sites.

37
38 ATSDR did not consider coal-burning stoves in VBI-70 homes as a source of arsenic in
39 the community. The lead smelters were analyzed as the source for low arsenic levels,
40 but neither ATSDR nor EPA could identify the source for high arsenic levels. Mr. Hill
41 noted a similarity between the ORR and VBI-70 sites. On the one hand, ORR residents
42 have been informed that coal-burning furnaces and steam plants in the community are

1 not sources of arsenic. VBI-70 residents used coal-burning stoves and arsenic was
2 also found to be a problem in this community. On the other hand, ATSDR did not relate
3 coal usage in either site to arsenic levels.

4
5 Mr. Lewis pointed out a difference in ATSDR's site activities. On the one hand,
6 members of the clergy, nurses and other community residents in Fallon were convened
7 to describe specific issues and concerns. On the other hand, generic comments were
8 captured during the ORR needs assessment. He remarked that the ORR community
9 would benefit more from ATSDR's strategy used at the Fallon site. Dr. Malmquist
10 advised ATSDR to appropriately design educational activities and dissemination
11 strategies for the specific needs of ORR. Most notably, ORR covers a large geographic
12 area and multiple school systems.

13
14 Ms. NeSmith clarified that ATSDR's Tox Rap environmental curriculum is designed for
15 large geographic areas. For example, ORRHES could recruit a small group of teachers
16 to attend train-the-trainer sessions. ATSDR would train the teachers in implementing
17 the curriculum in classrooms; the teachers would then train other community residents
18 in conducting the course on a broader scale. Ms. Adkins mentioned that environmental
19 education is a priority for extensions of the University of Tennessee as well as those in
20 each county. This initiative is targeted to nearly all fifth and sixth grade students in the
21 state. She raised the possibility of ATSDR integrating its Tox Rap environmental
22 curriculum into existing activities being conducted by the academic extensions.

23
24 Dr. Howze confirmed that ATSDR will explore the academic extensions in Tennessee
25 as potential sources to implement the Tox Rap environmental curriculum. Feedback
26 from students in areas where ATSDR has introduced the curriculum has been
27 overwhelmingly positive to date. Dr. Cember explained that low blood lead levels
28 (BLLs) have been associated with learning deficiencies. He questioned whether this
29 health effect was measured in Herculaneum children.

30
31 Dr. Davidson added that 10 µg/dL is the level of concern among children, but no "safe"
32 threshold for lead has been detected. To date, no beneficial effects from lead in the
33 human body have been found. She pointed out that health effects from low BLLs are
34 extremely subtle; high BLLs will cause illness and indicate to EPA the need to clean a
35 site; and acute lead exposures result in death. Although children and adults can have
36 the same BLLs, effects between the two groups will be different since children are a
37 much more sensitive population. Mr. Washington mentioned that rates of mental
38 retardation, kidney problems and other adverse health effects should be high in the
39 Herculaneum community since the lead smelter has been active since 1892.

40
41 Dr. Howze provided additional details about the Herculaneum site. Test results show
42 that BLLs have declined in the community because children in the area are periodically

1 screened for lead. A community group is undertaking a major effort to ensure that the
2 polluter complies with regulations on air emissions from the stacks. Dr. Howze
3 committed to locating and distributing to ORRHES results of BLL studies conducted at
4 the site. At the national level, a movement is underway to decrease the level of concern
5 from 10 µg/dL because lower BLLs have been shown to adversely impact learning,
6 behavior and neurological development.

7
8 Ms. Sonnenburg noted that ATSDR was unable to make an association between
9 adverse health effects and sources at most of the sites. She asked if ATSDR has ever
10 made a causal relationship. Dr. Howze replied that in the Anniston community, Solutia
11 was releasing PCBs during the electro-generation process and contaminating the site.
12 ATSDR and EPA definitively concluded that the plant was the source of health effects in
13 the community. A lawsuit was recently settled with local property owners. ATSDR also
14 found a causal relationship at the Libby, Montana site. The W.R. Grace Company
15 mined and processed vermiculite ore and also gave the material to residents to use as
16 insulation and for other purposes. ATSDR found that asbestos in vermiculite ore was a
17 direct cause of deaths and illnesses from asbestosis, mesothelioma and other lung
18 diseases in the Libby community. W.R. Grace has declared bankruptcy and no longer
19 produces vermiculite ore.

20
21 Mr. Lewis recalled that a group of Anniston residents was invited to visit ORR residents.
22 The community described steps that are needed for a site to obtain an evaluation,
23 compensation or other type of remedial action. He urged ATSDR to educate
24 communities about situations that will trigger a PHA category, such as “no public health
25 hazard,” “apparent public health hazard” or “public health hazard.” He also asked
26 ATSDR to present its conclusions from the Anniston PHA to determine if these findings
27 can be applied to the ORR PHAs. Dr. Howze confirmed that ATSDR looks forward to
28 exploring this issue with ORRHES in the future. Dr. Davidson questioned whether a
29 disease registry has been initiated at the Anniston site. If efforts are now taken to
30 monitor PCB levels of residents, a causal relationship could be identified in the future.
31 Dr. Howze replied that a health study will be implemented in Anniston, but no plans
32 have been made to develop a disease registry at this time.

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***Public Comment Period***

38 The Chair called for public comments; no attendees responded.

Work Group Reports

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3
4 Guidelines and Procedures Work Group (GPWG). Ms. Galloway, the GPWG Chair,
5 reported that the members held a joint meeting with COWG to discuss the development
6 and revision of work group minutes. The former PHAWG Chair created a procedure to
7 develop meeting minutes, but no formal process was established for the other work
8 groups. After ATSDR and work group members discussed the best strategy to revise
9 meeting minutes, GPWG integrated comments from these deliberations and the original
10 PHAWG procedure to create a new process to develop meeting minutes for all work
11 groups.

12
13 GPWG's plan proposes to expand work group minutes from a minimal listing of
14 discussion topics, resolutions, action items and recommendations. Additional details
15 are extremely important, particularly since public comments and concerns are captured
16 during work group meetings. The minutes are not intended to be verbatim transcripts;
17 instead, abbreviated records of discussion should be developed. The minutes should
18 accurately and objectively capture issues discussed at meetings. Effective minutes can
19 be used in many settings by a variety of audiences to review previous activities and
20 actions; document issues and concerns previously addressed; measure productivity and
21 participation; assess leadership; identify individual efforts; and obtain insight.

22
23 Completeness of the minutes should be the primary objective rather than the length of
24 the document. Work group members have a responsibility to review the minutes for
25 accuracy. GPWG's proposed plan also discusses revisions to minutes. Typographical
26 errors should be made on draft versions with no further action. Amendments to correct
27 the content of minutes should be submitted and incorporated into the revised document
28 as footnotes or attachments to preserve the original text. Short additions to clarify the
29 content of the minutes should be incorporated into the text; lengthy text should be
30 referenced with a footnote and attached to the minutes. Both amendments and
31 additions should be made to the minutes of the actual meeting for which the document
32 was prepared. At the next work group meeting, the chair will entertain a motion to
33 approve the draft minutes, open the floor for discussion of any revisions and call for a
34 vote. GPWG's proposed process and a recommendation were distributed to ORRHES
35 for consideration and approval.

36
37 Mr. Lewis provided additional details about the rationale for GPWG's proposed process.
38 Meeting minutes are an effective communications tool for new members and persons
39 who cannot attend meetings. Discussions about the length and content of work group
40 minutes have been ongoing for over two years. The work groups have also been
41 challenged about the minutes. A formal process to develop and revise work group
42 minutes is necessary to meet the needs of the public, accurately document public
43 concerns and issues, and allow members to interact with ATSDR senior management.

1 Concerns have been raised about the length of work group minutes, but the text can be
2 decreased with well-prepared chairs and an organized and structured meeting.

3
4 Mr. Lewis conveyed that detailed work group minutes have been extremely beneficial to
5 several persons. He hoped ORRHES would make a motion to approve GPWG's
6 proposed plan. The process will allow work groups to strike a balance between minimal
7 minutes and documents with too much detail. A formal process will also give direction
8 to scribes in developing and revising minutes. Ms. Mosby was uncertain about the
9 ability of GPWG's proposed process to change the operation and practice of work
10 groups. Based on her attendance and participation in work groups, the meetings are
11 confrontational with limited public comment. GPWG's proposed plan will be filed, but
12 will not actually improve the effectiveness of meeting minutes. Ms. Mosby's position
13 was that minutes should capture the members' discussion and public comments rather
14 than comments made by each individual participant and follow-up remarks.

15
16 Ms. Kaplan conveyed that specific comments attributed to speakers have been a source
17 of controversy since ORRHES was established. Many persons are reluctant to attend
18 work group meetings for fear their remarks will be captured out of context. Without a
19 formal process, no official record is prepared that accurately documents the
20 discussions. Directing members to listen to audiotapes of meetings to accomplish this
21 task is inappropriate. She pointed out that this problem can be confirmed by reviewing
22 previous communications between ORRHES and members of the public. Ms. Kaplan
23 added that she found the detailed minutes to be extremely helpful in filling gaps during
24 her absence from meetings due to health problems. The minutes allowed her to keep
25 up with the activities of ORRHES and the work groups.

26
27 Dr. Davidson mentioned that some work group minutes contain too much detail and are
28 too extensive for an "abbreviated record of discussion" as described in GPWG's
29 proposed plan. She advised the members to reach agreement on this term. She
30 reiterated the need to balance the minutes with an appropriate amount of detail and an
31 accurate accounting of public concerns. Ms. Adkins remarked that in developing work
32 group minutes, the goal should be to aim for accurately documenting as much solid
33 information as possible. Mr. Lewis returned to Ms. Mosby's comments about the
34 confrontational environment of work group meetings. The minutes are not intended to
35 attack any individual; instead, the documents reflect the discussions and thought
36 processes of members. The minutes should be used as a tool to examine weaknesses
37 and take corrective actions. This approach will result in more effective meetings.

38
39 Ms. Galloway acknowledged that the quality of minutes depends on the scribe. She
40 realized the difficulty in accurately integrating heated and lengthy discussions into one
41 overarching message, particularly when work group meetings are poorly managed. She
42 found the work group minutes to be effective at this point. Ms. Galloway commended

1 Dr. William Taylor and Ms. Melissa Fish of the Oak Ridge Field Office for their
2 outstanding efforts in translating contentious meetings into manageable documents. Dr.
3 Malmquist pointed out that scribes should not bear the burden of identifying items to
4 include in or omit from minutes. The documents should not be sanitized and should be
5 fairly detailed to accurately reflect the deliberations. Regardless of whether work group
6 discussions are disagreeable and contentious, detailed minutes will allow future readers
7 to learn about ORRHES's true history.

8
9 Dr. Malmquist conveyed that an accounting of important activities undertaken by work
10 groups is another reason to develop and maintain detailed minutes. Mr. Washington
11 explained that based on his involvement with other committees, minutes reflect
12 recommendations and other actions taken by members; the minutiae are omitted. For
13 example, the "feelings" of members during meetings are inappropriate to be captured in
14 a formal record. Mr. Lewis gave an example of the usefulness of detailed minutes. At a
15 previous meeting, Mr. Washington expressed his concern about activities ATSDR
16 conducted in the **Scarboro** community. Mr. Lewis extracted these comments from the
17 minutes and presented the issues to Dr. Falk. ATSDR may take actions to address Mr.
18 Washington's concerns.

19
20 Dr. Malinauskas found PHAWG meetings to be collegial rather than contentious.
21 Although discussions are adequately captured by scribes, work group members still
22 have an opportunity to submit corrections. He noted that the quality of minutes is the
23 responsibility of participants rather than scribes. Mr. Pereira clarified that GPWG's
24 proposed plan is focused on a mechanical process rather than the operation of work
25 group meetings. He encouraged the full ORRHES to agree on the expectations and
26 format of work group minutes because this issue will continue to be revisited if
27 consensus is not reached. For example, work group minutes could contain bulleted lists
28 outlining the "points of interest" and "citizen concerns." Dr. Davidson announced that
29 she would call for a vote to adopt GPWG's proposed process for work group minutes
30 later in the meeting.

31
32 COWG. Mr. Lewis, the COWG Chair, reported that the members discussed four major
33 topics. First, the process of developing and revising work group minutes was covered in
34 GPWG's report. Second, Ms. Spencer will provide an update on the web site index
35 later in the meeting. Third, the possibility of combining COWG and the Health Education
36 Needs Assessment Work Group (HENAWG) was considered since the two work groups
37 address overlapping issues. A combined work group will also reduce the burden on
38 members in attending multiple meetings. Fourth, the interaction between Mr. Lewis and
39 the ORRHES Chair stems from different views and values. Dr. Davidson's style is not
40 to publicly criticize ATSDR, while Mr. Lewis's approach is to provide written or verbal
41 comments on an inefficient or ineffective process. Overall, members should receive
42 support from the ORRHES Chair and responses from ATSDR.

1 Dr. Davidson clarified her remarks to Mr. Lewis. She views ATSDR as ORRHES's
2 partner rather than its adversary. As the ORRHES Chair, she does not openly criticize
3 ATSDR or ORRHES during public meetings because this approach will increase rather
4 than resolve conflicts. Her style is to express concerns to ATSDR in direct
5 conversations. She encouraged the members to convey issues to her to relay to
6 ATSDR. Dr. Davidson makes strong efforts to protect the authority of ORRHES during
7 full meetings, work group meetings and interactions with ATSDR. She acknowledged
8 that some ORRHES members are questioning her integrity.

9
10 Mr. Pereira was not aware of the full ORRHES or any work group verbally abusing
11 ATSDR. His view was that ORRHES members and ATSDR have been mutually
12 respectful. Regardless of personal styles, each member has a personal responsibility to
13 ORRHES and their respective communities to question ATSDR's activities and obtain
14 satisfactory responses. He was pleased that ORRHES and ATSDR are conducting
15 business in a collaborative effort. Ms. Kaplan placed two recommendations on the floor
16 for ORRHES to consider. She pointed out that the proposals are based on the joint
17 COWG/GPWG meeting; no members who attended the meeting opposed Ms. Kaplan's
18 plan to present the recommendations.

19
20 First, ATSDR's policy on ORRHES votes should be clarified and the bylaws should be
21 changed to eliminate the two-thirds vote requirement. The requirement allows ideas
22 accepted by a majority of ORRHES members to be easily dismissed by ATSDR.
23 However, situations occur in which a minority opinion still has merit and should be
24 followed up on by ATSDR, particularly when the vote is closed and less than two-thirds.
25 Second, ORRHES and work group minutes, responses to public comments and other
26 documents should be made available to ORRHES and members of the public in a
27 searchable format. Alternatively, the minutes and other materials should be placed on a
28 CD-ROM and distributed for individual members to search documents or conduct
29 research.

30
31 In terms of the first recommendation, Dr. Davidson clarified that the ORRHES bylaws
32 allow minority opinions to be submitted to ATSDR. The two-thirds vote requirement is
33 considered as a surrogate for consensus. If the bylaws were changed to require
34 consensus, each member would need to approve or not object to a recommendation.
35 Mr. Hanley noted that agreement was previously reached for ORRHES to have a two-
36 thirds vote requirement. This approach allows more than 51% of members to obtain the
37 broadest consensus possible before recommendations are forwarded to ATSDR for
38 action. The process is not intended to exclude minority opinions.

39
40 Ms. Kaplan specified that the bylaws were developed when ORRHES was established.
41 At that time, the members were asked to vote on the bylaws with no knowledge of the
42 meeting process. She reiterated the need to reconsider the requirement due to

1 problems that have surfaced related to this process. Ms. Sonnenburg indicated that the
2 bylaws invoke the two-thirds vote requirement for “major recommendations.” She
3 conveyed that this term should be clearly defined. With respect to the second
4 recommendation, Ms. Spencer announced that work group minutes are posted on the
5 ORRHES web site four to six weeks after being approved. The documents can only be
6 searched by using the search engine for the entire ATSDR web site.

7 Dr. Davidson closed the discussion on Ms. Kaplan’s recommendations with the
8 following actions. GPWG will address ORRHES’s two-thirds vote requirement. GPWG
9 will also review the bylaws to determine whether the section that defines the specific
10 names of work groups should be deleted. Meeting and work group minutes as well as
11 other ORRHES documents can be easily moved into separate subdirectories, copied on
12 a CD-ROM and distributed to members upon request.

13
14 Agenda Work Group (AWG). Ms. Sonnenburg, the AWG Chair, encouraged ORRHES
15 to provide feedback to her about problems with the agenda or suggestions for
16 improvement. She will then raise these issues during AWG meetings. AWG has been
17 operating well and has no specific issues to report.

18
19 HENAWG. Mr. Lewis, the HENAWG co-Chair, was pleased to report that the meeting
20 was extremely positive. The members focused on the weaknesses of the ORR needs
21 assessment and made suggestions to improve these areas. For example, information
22 previously gathered during other ORR activities could be extracted and used to
23 strengthen the telephone survey. This strategy would prevent ATSDR from repeating
24 the activity. Focus groups should be convened for issues that are important to the
25 public. To increase citizen interest and participation, consideration should be given to a
26 town-hall meeting format that is appropriately advertised. Issues of concern can be
27 identified by conducting an informal survey in the community. During the HENAWG
28 meeting, Dr. Howze agreed to document suggestions made by the members and
29 distribute the items for further discussion and refinement.

30
31 Dr. Howze provided additional details about the key outcomes of the HENAWG
32 meeting. The need to connect with and listen to individuals and communities was
33 emphasized. ATSDR should respond to community concerns, even if the issues are not
34 directly related to ORR PHAs. The community assessment should be designed to
35 serve as the basis for education, communication and other activities. ATSDR and
36 HENAWG agreed that the community assessment must be inclusive of voices,
37 networks, resources and other strengths within the community. Several suggestions
38 were made to obtain information for this activity.

39
40 ORR residents will probably be more receptive to discussing concerns and issues with
41 key community members rather than ATSDR staff. These persons could serve as
42 community data collectors after attending a meeting with ATSDR and HENAWG to

1 obtain more information about the community assessment, particularly the purpose and
2 expected outcomes of the initiative. Students and other young persons could interview
3 older family members and other community residents to obtain a history of
4 environmental issues at the ORR site. Incentives could be given to the interviewers to
5 undertake this effort. ATSDR and HENAWG will also conduct other activities while the
6 community assessment is underway, such as reviewing existing information, identifying
7 new data sources, improving work group minutes, refining the ORRHES web site and
8 defining next steps. An action plan will be developed to clearly outline these strategies.

9
10 ATSDR and HENAWG identified several ground rules to develop and implement the
11 community assessment. Activities should be conducted in parallel to the release of the
12 iodine-131 and uranium PHAs. All initiatives should be designed as user-friendly tools.
13 No activities should be proposed that cannot be accomplished. ATSDR's abilities and
14 limitations should be clearly defined to the community before the project is initiated.
15 Agreement was reached to table the issue of changing the work group's name at this
16 time since the possibility of merging COWG and HENAWG is being considered.
17 ATSDR and HENAWG concluded the meeting by proposing several initiatives to include
18 in the action plan:

- 19
- 20 • Review key documents.
- 21 • Build relationships with the community to identify issues.
- 22 • Identify existing organizations or coalitions in the community to serve as
23 partners in the assessment.
- 24 • Link with the community and follow up with suggestions to transform
25 problems into solutions.
- 26 • Develop a framework or core set of questions that can be used to trigger
27 dialogue about community issues or concerns and identify existing
28 knowledge of residents.
- 29 • Design an education and communication process for the PHA results,
30 such as compiling questions the community may ask, developing
31 responses in appropriate laymen's terms, and pilot testing the answers in
32 the community.
- 33

34 During the HENAWG meeting, Dr. Timothy Joseph of DOE described a community
35 project he conducted in **Michigan** as a contractor. Because activities by Reserve Mine
36 were related to asbestos in drinking water, the state of **Michigan** requested that nine
37 impacted communities be actively engaged in the project. The contractors placed an
38 article in the local newspaper with telephone numbers and a mailing address for
39 residents to provide input. Since many community members were Reserve Mine
40 employees and the project was funded by the state, the contractors gave assurances
41 for complete anonymity and confidentiality of respondents. The contractors also visited

1 the communities and held one-on-one conversations to allow residents to describe
2 concerns about Reserve Mine activities.

3
4 A list of potential concerns was presented during the community visits to assist
5 residents as well. The contractors also solicited public input by making presentations
6 about the state's activities and describing the purpose of the project to community
7 organizations within the nine neighborhoods. A well-attended public meeting was held
8 to review and discuss community concerns. The event was extremely productive and
9 resulted in additional concerns being voiced, particularly from persons who were
10 previously afraid of reprisal or had no interest in becoming involved. The two-hour
11 meeting was expanded to six hours and continued the following day. A collaborative
12 effort was undertaken to address the community concerns and resolve problems.
13 Several HENAWG members suggested that the model described by Dr. Joseph be
14 replicated for the ORR community assessment.

15
16 Dr. Davidson agreed that a communication system should be developed to publicize
17 ORRHES's role, function, purpose, ongoing activities and accomplishments. These
18 messages must be broadly disseminated both within and outside Oak Ridge. Ms.
19 Brenda Vowell, the Tennessee Department of Health liaison, proposed a plan to
20 increase ORRHES's visibility in the community. Each county in the East Tennessee
21 Region has a health council that holds monthly meetings; key community leaders serve
22 as members. ORRHES could develop and present an introductory presentation at each
23 health council meeting.

24
25 This activity would be extremely timely because all of the health councils are now
26 focusing on mobilizing community stakeholders in a collaborative effort and refining the
27 goals of the 1998 community assessments. Ms. Vowell added that ORRHES could also
28 be placed on the agenda of the bimonthly Regional Health Council meeting. During
29 these events, leaders of each health council convene to discuss health issues in the
30 community. Dr. Howze confirmed that DHEP would be happy to collaborate with DHAC
31 and ORRHES in developing presentations for the health councils.

32
33 Dr. Malmquist confirmed that the public is interested in ORRHES, but stronger efforts
34 must be made to communicate and publicize activities. After he informed the Roane
35 County Board of Health about ORRHES, the group requested future updates. The
36 Rotary Club was **also** receptive to the presentation. Dr. Malmquist emphasized the
37 need to tailor presentations to the specific needs and interests of the audience. He and
38 ATSDR staff will meet with the editor of the *Roane County News* on the following day to
39 discuss a newspaper article on the cancer incidence assessment. Ms. Galloway
40 remarked that many persons in outlying communities have no knowledge of potential
41 health risks from Oak Ridge. ATSDR should be mindful of this fact, particularly when
42 communicating the PHA results.

1 Mr. Hill underscored the need to take specific actions to increase public input and
2 interest in the meeting that will be held in Kingston. A notice should now be placed in
3 the newspaper with a telephone number and mailing address for the public to provide
4 feedback. AWG should revise the agenda for this meeting by placing important
5 presentations first and ORRHES business last. The Kingston meeting should be
6 conducted with a facilitator to generate effective interaction between ORRHES and the
7 community. Ms. Sonnenburg remarked that AWG will need to review the advantages
8 and disadvantages of this format. For example, suggestions were made at previous
9 meetings to place the most important issues on the agenda after 4:00 p.m. because
10 more members of the public are able to attend at this time. She asked ORRHES to
11 provide input on the best agenda format for the Kingston meeting.

12
13 Mr. Gartseff noted that ORRHES received excellent publicity in the *Oak Ridger* on the
14 previous day. Unfortunately, the front-page article describing the cancer incidence
15 assessment cited October 22, 2003 as the date of the presentation rather than October
16 21, 2003. He emphasized that media articles must be checked for accuracy in future
17 outreach efforts. Dr. Davidson raised the possibility of convening a public meeting
18 before the ORRHES meeting is held in Kingston in December 2003. ATSDR staff
19 clarified that ORRHES will actually convene its meeting in Kingston in February 2004.
20 Dr. Howze announced that DHEP staff will be unable to attend the ORRHES meeting in
21 December 2003 due to a conflicting schedule.

22
23 PHAWG. Dr. Davidson gave the report on behalf of Dr. Robert Craig, the PHAWG
24 Chair, who was absent from the meeting. The members discussed ATSDR's responses
25 to eight major areas of comments EPA submitted on the uranium Y-12 PHA. The
26 responses were distributed to ORRHES. Due to time constraints, PHAWG was unable
27 to discuss ORRHES's position on ATSDR's responses in terms of whether additional
28 modifications are needed. At this point, only two ORRHES members have submitted
29 comments on the PHA. During the next PHAWG meeting, the members will discuss a
30 mechanism to obtain additional feedback from more ORRHES members and submit the
31 comments to ATSDR. However, several members were concerned about this process
32 because ATSDR plans to present the final draft of the uranium Y-12 PHA during the
33 next ORRHES meeting. This time-line will not allow the full ORRHES to weigh in before
34 ATSDR finalizes the document.

35
36 Mr. Hanley resolved this issue by encouraging ORRHES members to submit comments
37 on the uranium Y-12 PHA before the next PHAWG meeting is held on November 6,
38 2003. If a sufficient number of ORRHES members attend the PHAWG meeting, a
39 resolution can be reached to address the feedback. If only a minimal number of
40 ORRHES members attend the PHAWG meeting, ATSDR can distribute the comments
41 to the full ORRHES by e-mail and convene a conference call to obtain resolution. Mr.
42 Lewis noted that uncertainties with this approach emphasize the need to develop a

1 process for ORRHES to collectively address PHA comments and concerns. Ms.
2 Sonnenburg requested that at a future meeting, EPA inform ORRHES of its position on
3 whether ATSDR did or did not adequately respond to the comments.

4
5 Ms. Spencer announced that Mr. Jon Richards, the EPA liaison, was unable to attend
6 the current ORRHES meeting. Since he also has a conflict for the December 2003
7 ORRHES meeting, she asked Mr. Richards to identify an EPA representative who can
8 attend. Both Ms. Spencer and Mr. Hanley have requested that EPA provide feedback in
9 an e-mail or letter about its position on ATSDR's responses to the comments. Ms.
10 Kaplan called ORRHES's attention to recommendations she distributed about the
11 uranium Y-12 PHA. She is asking that ORRHES officially request placing EPA
12 Headquarters and Region IV on a future agenda. During this presentation, EPA should
13 discuss ATSDR's responses to its comments and whether EPA believes ATSDR
14 adequately addressed the concerns.

15
16 Ms. Kaplan's position was that EPA may be more willing to make the presentation with
17 an official ORRHES recommendation. Dr. Malinauskas clarified that ORRHES's role
18 does not extend to evaluating policy issues between EPA Headquarters and Region IV.
19 ATSDR and EPA should settle outstanding concerns about ATSDR's responses to EPA
20 comments without ORRHES's involvement. Dr. Davidson charged PHAWG with
21 discussing and addressing Ms. Kaplan's recommendations during its next meeting.

Cancer Incidence Assessment (CIA)

22
23
24
25
26
27 Dr. Malmquist provided a brief background of this activity before the floor was opened
28 for the presentation. The concept of the CIA was developed in response to community
29 concerns and negative media coverage about cancer at the ORR site. PHAWG formed
30 an ad hoc group to more closely focus on this issue. The goal of the initiative is to
31 minimize community concerns about cancer incidence in the ORR area. However, the
32 CIA will not be designed to provide information about a causal relationship between
33 cancer and ORR sources. Dr. Malmquist commended Ms. Dhelia Williamson, of the
34 ATSDR Division of Health Studies, for her outstanding effort in expanding the initiative
35 from a vague concept to a concrete activity.

36
37 Ms. Williamson described actions that will be taken to implement the CIA after the data
38 are reviewed. The purposes of the activity are to evaluate cancer rates in the Oak
39 Ridge area and determine whether cancer rates are higher in 49 Oak Ridge census
40 tracts and eight target counties: Anderson, Blount, Knox, Loudon, Meigs, Morgan,
41 Rhea and Road. Since state law requires every diagnosed cancer case to be reported
42 to the Tennessee Cancer Registry (TCR), the CIA data will also include newly-
43 diagnosed cases.

1 Information reported to TCR is limited, but demographics and medical data for each
2 individual cancer patient include name, address and age at time of diagnosis, race, sex,
3 census tract code, primary cancer site and histology type. Physicians and hospitals are
4 both responsible for reporting cancer cases, but TCR also reviews medical records at
5 hospitals to ensure all cases are being captured. The state of Tennessee instituted
6 mandatory cancer reporting in the 1980s, but TCR cancer incidence data reports are
7 only complete for 1990-1996 at this time. ATSDR will be able to incorporate data from
8 1996-2000 in the CIA after these records are complete.

9
10 In this activity, ATSDR will examine all cancers except those labeled as "other." These
11 types of cancer include bladder, bone, central, nervous system, cervix, colon, corpus
12 uteri, esophagus, female breast, Hodgkin's disease, kidney, leukemia, liver, lung,
13 melanoma, myeloma, non-Hodgkin's, lymphoma, oral cavity, ovary, pancreatic,
14 prostate, rectum, stomach and testis. The "other" category also includes situations in
15 which the primary cancer site cannot be identified. ATSDR's process to identify, review
16 and interpret data for the CIA is consistent with the TCR methodology. The statistical
17 method will be based on standardized incidence ratios (SIRs) that compare the
18 observed and expected number of cases.

19
20 The expected number is based on the occurrence of cases observed in the state of
21 Tennessee. SIRs will be controlled for differences in age, race and gender since these
22 characteristics can influence health outcome. For example, older persons are more
23 likely to have cancer than younger individuals and black males have a higher probability
24 of developing prostate cancer than white males. Cancer rates for females and males
25 will be evaluated separately as well. SIRs will be obtained by dividing observed cases
26 by the number of expected cases. If a SIR equals 1.0, observed and expected cases
27 are equal. If a SIR is greater than 1.0, observed cases are more than expected cases.
28 If a SIR is less than 1.0, observed cases are less than expected cases.

29
30 A strong focus will be placed on several issues during the CIA to obtain information in
31 addition to statistical significance: whether the SIR is greater than 1.5 or less than 0.5;
32 the number of observed cases; whether 1 is in the confidence interval; and the precision
33 of the confidence interval. The confidence interval would not be statistically significant if
34 1 is present, but the figure could be clinically relevant. A confidence interval is the
35 amount of certainty for an estimate. For example, with a 95% confidence interval and
36 an estimate of 1.5, ATSDR would be 95% certain that its estimate falls within the range
37 of 1.5.

38
39 ATSDR will provide several examples to clearly explain to the community the process of
40 calculating CIA data. In the first scenario, the observed number of female breast cancer
41 cases is 397 and the expected number is 254. The SIR would be equal to 1.56 based
42 on dividing the 397 observed cases by the 254 expected cases. The SIR indicates that

1 1.5 times as many cases would be expected **with a 95% confidence interval of 1.2 to**
2 **2.3.** In this example, the number of female breast cancer cases in the area would be
3 elevated compared to the state of Tennessee.

4
5 In the second scenario, the observed number of male lung cancer cases is 573 and the
6 expected number is 550. The SIR would be equal to 1.0 based on dividing the 573
7 observed cases by the 550 expected cases. The SIR indicates the number of observed
8 and expected cases is equal **with a precise 95% confidence interval of 0.8 to 1.2. This**
9 **estimate is not statistically significant since 1** is included in the confidence interval.
10 In this example, the number of male lung cancer cases would not be elevated in the
11 area compared to the state of Tennessee.

12
13 In the third scenario, the observed number of cervical cancer cases is 5 and the
14 expected number is 1. The SIR would be equal to 5.0 based on dividing the 5 observed
15 cases by the 1 expected case. The SIR indicates 5 times as many cases as would be
16 expected. In this example, an estimate of cervical cancer would be unstable due to
17 small numbers **and** an imprecise 95% confidence interval **of 0.3 to 7.4.** ATSDR
18 expects to see unstable rates in the CIA due to small observed numbers from rare
19 cancers.

20
21 The conclusions of the CIA will be based on elevated or reduced rates with stable
22 estimates. Information about known risk factors will be obtained from the American
23 Cancer Society and National Cancer Institute and provided for elevated cancers.
24 Resources to obtain additional information about specific types of cancer will be listed in
25 the CIA report as well. **Strengths of a CIA include examining** specific information on
26 the health status of a community for the time period the data were collected. The TCR
27 is an existing data source that will be used to conduct the CIA. The CIA is also useful
28 because geographic areas to be examined and disease outcomes to analyze can be
29 specified. Methods to conduct the CIA have been established as well.

30
31 **Limitations of a CIA include the inability to ever establish** a cause/effect
32 relationship **and the lack of information regarding** other risk factors that could be
33 associated with the disease. The latency of cancer is 10-30 years and a small number
34 of cases results in unstable estimates. Information regarding length of residence or
35 occupational exposure cannot be applied in the analysis. The CIA will serve as a
36 descriptive epidemiologic analysis of a population rather than individuals. ATSDR
37 hopes to present a draft CIA report to **PHAWG** in December 2003.

38
39 Ms. Sonnenburg was concerned that the "other" cancer category will exclude many
40 ORR residents. She pointed out that cases in this group may be significant. Ms.
41 Williamson clarified that ATSDR will be able to identify the number of other cancer
42 cases, but an analysis of these data would be uncertain. However, the number of other

1 cancer cases can be presented to ORRHES for review and discussion and also
2 compared to the entire state of Tennessee. Mr. Lewis did not understand the rationale
3 for TCR's incomplete data from 1996-2000. He advised ATSDR to clearly explain the
4 reasons for omitting these data. An explicit statement about this issue may assist in
5 minimizing public skepticism about the CIA.

6
7 Ms. Williamson remarked that cancer registry data must meet certain CDC criteria
8 before being labeled as "complete." TCR's 1996-2000 data have not yet met these
9 standards, but the records are expected to be completed in the near future. Ms.
10 Williamson committed to obtaining more concrete answers about the incomplete data
11 from Dr. Toni Bounds, the TCR Director, and including this information in the
12 introduction of the CIA report. Ms. Kaplan realized that ATSDR does not plan to
13 address other cancers in the CIA, but she saw a benefit to analyzing these cancers by
14 age, race and gender. Ms. Williamson agreed that this issue should be discussed in
15 more detail with Dr. Bounds.

16
17 Ms. Adkins pointed out that "address at time of cancer diagnosis" is much less important
18 than the location where an ORR resident was raised. Many community members have
19 died of cancer or moved away from the area. She raised the possibility of conducting a
20 focused search of previous ORR residents by tracking elementary school students in
21 the 1950s and 1960s. Ms. Sonnenburg questioned whether ATSDR could modify the
22 CIA methodology to include ORR residents who died of cancer during the time period of
23 1990-1996. Ms. Williamson agreed that this area is a major limitation of the CIA. The
24 activity is only designed to obtain information about cancer rates in a specific target
25 area for a particular time period.

26
27 Vital statistics records would need to be reviewed to address cancer mortality earlier
28 than 1990; ATSDR will need to analyze data from the PHAs as well. These findings will
29 provide more information on past exposures, previously impacted residents and
30 appropriate public health actions. Ms. Williamson noted that this activity is more difficult
31 and cannot be conducted in the CIA, but the PHAWG ad hoc group has raised the
32 possibility of analyzing historical cancer deaths in the ORR area in the future. Dr.
33 Malmquist added that individual health records would need to be obtained to review
34 historical cancer deaths. However, this information cannot be accessed due to privacy
35 and confidentiality issues. Moreover, cancer mortality data would be inappropriate for
36 the CIA since death certificates do not identify the specific type, cause or length of
37 cancer of the deceased individual.

38
39 Dr. Davidson pointed out that mortality data are also flawed because only the obvious
40 cause of death is listed. For example, a heart attack would be listed as the cause of
41 death for an individual diagnosed with cancer who died of a heart attack. Mr. Hill was in
42 favor of comparing the CIA outcomes to the United States. For example, if cancer

1 incidence is found to be higher in the Oak Ridge area than the rest of the country, the
2 community would find this information to be extremely beneficial. Ms. Williamson was
3 uncertain that national data can be obtained. Although states report cancer morbidity
4 and mortality to CDC, these data may not be representative of the entire country.
5 Additionally, data are compared by similar geographic areas, such as county-to-county
6 or state-to-state.

7
8 To address Mr. Hill's concern, however, Ms. Williamson will discuss with CDC and
9 cancer experts the possibility of comparing unexpected or abnormal cancer elevations
10 in Oak Ridge to the rest of the country in the CIA report. Dr. Malinauskas urged ATSDR
11 to be extremely cautious in presenting and communicating the CIA data. Most notably,
12 the media may ignore qualifying factors and report sensational headlines only, such as
13 "Oak Ridge has five times as many cervical cancer cases than Tennessee."

14
15 Ms. Williamson confirmed that unexpected cancer rate elevations, caveats and other
16 disclaimers will be clearly explained in the CIA report before the document is
17 disseminated to the public. ATSDR's current efforts to develop a rapport with the local
18 media may also minimize inaccurate articles. With this relationship, journalists will be
19 more willing to report all aspects of the CIA instead of focusing on sensational
20 headlines. Ms. Sonnenburg recalled that TCR recently received a grade of "D" for data
21 quality. She questioned whether the rating will impact the CIA outcomes. Ms.
22 Williamson previously informed ORRHES that the grade was unfair because TCR was
23 compared to other state cancer registries with operational histories of 30 or more years.
24 TCR was established less than 20 years ago. TCR is confident about the completeness
25 and accuracy of the 1990-1996 data and inclusion of this information in the CIA.

26
27 Mr. Hanley clarified that the rating was not based on data quality; TCR received a "D"
28 because the data were not readily available. Mr. Lewis questioned whether previous
29 *Tennessean* articles on cancer in the Oak Ridge area should be reviewed for scientific
30 accuracy and impact on the community. Ms. Williamson noted that unlike media
31 articles, the CIA report will contain hard data for individuals to calculate cancer
32 incidence in Oak Ridge. ATSDR's conclusions based on the data and the specific
33 cancers, time period and target areas will be clearly defined as well. The CIA report will
34 also be released for public comment to allow ATSDR to clarify any misunderstanding or
35 inaccurate interpretation of the document.

36
37 Dr. Cember followed up on Mr. Lewis's comment because even hard data can be
38 skewed to influence public perception. For example, ATSDR could reach entirely
39 different conclusions if the time period of the CIA was changed to different years or the
40 target area was changed to different geographical locations. He encouraged ATSDR to
41 explicitly state that its findings are solely based on the factors selected for the CIA. Ms.
42 Adkins mentioned that the previous *Tennessean* articles described historical cancer

1 deaths. The CIA report cannot be compared to this information because the TCR data
2 will be limited to 1990-1996.

3
4 Other ORRHES members pointed out that the media articles contained anecdotal or
5 self-reported data, cannot be verified with hard data, and do not have sufficient
6 information for a formal critique. Ms. Adkins was upset that ORRHES's discussion and
7 the CIA design are biased. **She said** some members were laughing at the fact that
8 residents were harmed in the past from Oak Ridge exposures; this practice has been
9 ongoing during her entire tenure as an ORRHES member. Moreover, ATSDR's target
10 population for the CIA will not be significantly impacted. Mr. Hanley described the
11 historical context for the 1998 *Tennessean* articles. Tennessee Senator Frist asked the
12 former HHS Secretary to analyze the incidence of cancer in Oak Ridge. He also
13 inquired about the quality and usability of existing data.

14
15 Mr. Hanley offered to distribute to ORRHES HHS's multi-agency response to Senator
16 Frist about the abilities and limitations of the existing data. Ms. Kaplan explained that
17 exposures may be in the past, while incidence and illness may be in the present. She
18 advised ATSDR to refrain from discounting media articles because newspapers can
19 serve as a source of valuable information. For example, **the Tennessee Department**
20 **of Health and Environment** previously stated that the "Oak Ridge community's interest
21 has historically been economic over public health." Dr. Malmquist added that a
22 European company previously expressed a great deal of interest in building a plant in
23 the Oak Ridge area. After reading the *Tennessean* articles, company employees had
24 no desire to live in Oak Ridge and the plant was built in Nashville.

25
26 Dr. Taylor returned to Mr. Gartseff's earlier comment about the inaccurate date for the
27 CIA presentation printed in the *Oak Ridger*. **The incorrect dates were the fault of the**
28 **reporter. However, a well-done follow-up** article was printed in the October 21, 2003
29 edition based on a draft briefing paper of the CIA. In the event some members of the
30 public did not read the new article, Oak Ridge Field Office staff will leave a forwarding
31 telephone number or be available at the DOE Information Center on the following day to
32 respond to the community's questions about the CIA.

33
34
35
36 **Public Comment Period**
37

38 The Chair called for public comments; no attendees responded.
39

Update on the Community Health Concerns Database (CHCD)

Ms. Spencer provided details about this activity before the floor was opened for the presentation. The community health concerns form is available on the ORRHES web site and will also be displayed at each meeting. Sources for concerns include meetings and completed forms. For concerns that include contact information, ATSDR responds by letter, e-mail or telephone. The responses generally include a resource that can assist individuals in addressing their concerns. ATSDR will categorize and address other concerns as well.

Mr. Hanley reported that ATSDR developed the community health concerns component of the web-based Federal Facilities Information Management System in direct response to ORRHES's recommendation. The CHCD allows staff to systematically record, organize and track community health concerns and document ATSDR's responses. A formal process is needed at Oak Ridge for this effort due to the site's 50-year history, three facilities, and large number of ATSDR staff and community members involved with activities. The sources of community concerns captured in the CHCD include three public health work group meetings in 1999; letters and e-mail messages; 10 community health concern forms; and minutes from 15 ORRHES meetings, 27 PHAWG meetings, 13 HENAWG meetings and 18 COWG meetings. The CHCD currently contains 2,500 concerns and can be searched in a variety of methods.

For some work group meetings that were held when ORRHES was initially established, no minutes were prepared or the documents were too brief to be useful for the CHCD. The quality of ORRHES and work group minutes directly impacts the quality of data to be input in the CHCD. The community health concern forms are useful for ATSDR to obtain detailed information about concerns and provide more specific responses. General health currently comprises 46% of the CHCD. The 30 different subcategories include concerns about PHAs, exposure assessments, exposures, clinical issues, health care issues and compensation for exposures. Subcategories with less than 4% of concerns are grouped as one of 22 "other" subcategories.

Some specific concerns in the general health category focus on screening values, pathways, contaminants and causation. Many subcategories under general health will be addressed as PHAs are completed, but several concerns in the exposure subcategory have already been resolved unless and until an exposure is detected while PHAs are being conducted. Procedural health concerns are another major category of the CHCD. This category includes 51 subcategories, such as concerns about the community needs assessment, ATSDR program establishment, and operation of ORRHES and work groups. Of the 51 subcategories, 47 have less than 4% of concerns.

1 Many concerns related to the community needs assessment have been resolved since
2 DHEP will not use data collected by George Washington University. The majority of
3 outstanding concerns should be resolved by the plan of action DHEP and HENAWG will
4 develop in the future. Several concerns regarding ATSDR's program establishment
5 were addressed when ORRHES was formed and the program plan was created, but
6 ATSDR realizes that several issues in this subcategory still need to be improved.
7 Thyroid disease and cancer death are the largest areas of concern within the cancer
8 health effects category; thyroid disease is also the most significant issue in the non-
9 cancer health effects category.

10
11 In the CHCD, other cancers are grouped into a health outcome and epidemiology
12 subcategory under general health. Many cancer concerns will be addressed by the
13 CIA, but ATSDR acknowledges that concerns about historical cancer deaths will remain
14 an outstanding issue. ATSDR has used the CHCD to prepare for presentations,
15 evaluate clinical issues, document evaluations of concerns, write the WOC and Y-12
16 uranium PHAs, assess public health implications, and address community concerns.
17 The CHCD is a pilot project at this time, but ATSDR realizes that the data will have
18 more uses in the future, such as DHEP's health education and promotion activities.

19
20 Dr. Cember asked Mr. Hanley how birth defects are categorized. Dr. Cember stated
21 that in his experience, when people asked him questions about radiation, the number
22 one question had to do with birth defects. He then inquired about the rationale for
23 CHCD's stronger emphasis on thyroid disease rather than birth defects, particularly
24 since thyroid disease is manageable. Mr. Hanley replied that the CHCD contains a birth
25 defects category, but meeting minutes are the source for the majority of concerns.
26 Because ATSDR has given many more presentations on thyroid disease than birth
27 defects at meetings, this health effect obviously would be more of a concern to the
28 community than birth defects. Thyroid disease is also more important to the public due
29 to the presence of iodine at the ORR site. However, Mr. Hanley indicated that birth
30 defects and other health issues may become more significant to the community with
31 future outreach efforts by ATSDR and ORRHES.

32
33 Mr. Lewis strongly encouraged ATSDR to develop a process to identify and incorporate
34 information from these sources into the CHCD. An effective communications strategy to
35 clearly demonstrate to the public that issues were addressed should be designed as
36 well. His position was that the quality of the CHCD is solid, but ATSDR's limited
37 interaction with the community is the reason for the lack of public participation at
38 ORRHES meetings. Mr. Lewis said that it is important to know the historical data before
39 the ORRHES was created. The absence of concerns in the database about birth
40 defects is a hole that was created by the breakdown in the needs assessment. Birth
41 defects was one of the focus groups that was eliminated from the needs assessment.
42 The concerns database is reflecting that we are hearing from the same people over and

1 over. People are not going to come out to all of our meetings. In the community, you
2 get a whole different set of concerns. You have to go back and extract data from town
3 meetings and the newspapers. People pour their hearts out in the newspapers.
4 ATSDR should stop running from them: Get the concerns that are out there, write them
5 down, and deal with them. If you can't do that, you can go back to Atlanta. If you're not
6 going to deal with the public, take the public out of public health assessment. The
7 people are not showing up because you are not dealing with the public.

8
9 Ms. Galloway asked about ATSDR's process to communicate to the public that
10 concerns were addressed. Mr. Hanley conveyed that DHEP and the Community
11 Involvement Branch will assist in developing and delivering appropriate messages for
12 the community, but no formal outreach strategy has been designed to date. He noted
13 that newspaper announcements would be the most effective mechanism to reach the
14 broader public, but ATSDR can also make presentations to community groups on topics
15 of interest to communicate findings. Dr. Malinauskas did not share Mr. Lewis's view of
16 flaws in the CHCD; instead, he only saw a difference in methodologies. ATSDR is
17 developing the CHCD with a cause/effects approach, while Mr. Lewis supports an
18 effects/cause format.

Work Group Recommendations

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24 Ms. Galloway made a motion for ORRHES to adopt the process for developing and
25 revising work group meeting minutes as outlined in the GPWG report; Mr. Hill seconded
26 the motion. Dr. Davidson clarified that the recommendation will not need to be
27 forwarded to ATSDR because the item is limited to ORRHES's operation. Mr. Lewis
28 was in favor of submitting the recommendation to ATSDR to ensure ORRHES receives
29 support and resources for the new process. Dr. Davidson pointed out that ORRHES
30 would need to approve a separate recommendation for ATSDR to allocate resources to
31 support the process to develop work group minutes.

32
33 Mr. Pereira confirmed that ATSDR will support and endorse any functional process to
34 improve ORRHES's operations. He asked ORRHES to consider merging COWG and
35 HENAWG for the following reasons. First, the approach will facilitate cohesive and
36 creative ideas rather than fragmented thoughts because the work groups share some of
37 the same members and address overlapping issues. Second, the combined work group
38 will be a logical strategy in minimizing the burden of members to attend meetings for
39 two different groups.

40
41 Third, ATSDR's budget will be less constrained by developing minutes and paying
42 overhead expenses for one work group instead of two. Fourth, DHEP plans to conduct
43 communications and community assessment activities in parallel with the work group.

1 Mr. Pereira returned to Mr. Lewis's earlier comment that the lack of public participation
2 at ORRHES meetings stems from ATSDR's limited interaction with the community.
3 ORRHES meetings primarily focus on process rather than the impact of a certain
4 product on individual community residents.

5 Public availability sessions, easy-to-read fact sheets and similar tools would be more
6 effective than ORRHES meetings in increasing community interest. The lack of
7 concrete products that clearly demonstrate the relevance to the public is the reason for
8 limited public participation at ORRHES meetings. Mr. Pereira mentioned that ATSDR
9 will make improvements in this area with the upcoming release of the PHAs and
10 implementation of the community assessment. There being no abstentions, opposition
11 or further discussion, the process to develop and revise ORRHES work group meeting
12 minutes was formally adopted by a majority vote.

Unfinished/New Business and Outstanding Issues/Concerns

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14
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17
18 Ms. Spencer described several outstanding issues. First, the terms of the current
19 ORRHES members are scheduled to expire on December 31, 2004. ATSDR must
20 submit nomination packages to the CDC Committee Management Office (CMO) to be
21 forwarded to HHS. ATSDR and CMO are both required to submit packages at least five
22 months prior to the expiration of terms. For current ORRHES members who are
23 interested in continuing to serve, ATSDR will provide strong justification to CMO to
24 obtain **renewal of membership for another year**. Members who do not wish to renew
25 their terms should provide ATSDR with the names of potential candidates who can
26 make solid contributions to ORRHES.

27
28 In both of these cases, however, the final selection of continued or new ORRHES
29 members is beyond ATSDR's authority and control. A September 23, 2003
30 memorandum on the management of federal advisory committees and an attachment
31 outlining corrective measures to address these concerns were distributed to ORRHES.
32 These actions are being taken to dissolve unproductive or inactive committees and
33 ensure new voices and perspectives are reflected on committees. In December 2003,
34 ORRHES members will be given a list of items ATSDR will need to request the 180-day
35 extensions. These items must be submitted to ATSDR by the February 2004 ORRHES
36 meeting.

37
38 Second, ATSDR received funding to make the ORRHES web site more user-friendly.
39 ATSDR will present recommendations by the web site contractor to COWG or the new
40 work group if COWG and HENAWG are merged. ATSDR will then relay the work
41 group's input for the web site contractor to take action. Third, approved work group
42 meeting minutes are posted on the web site within a four- to six-week period after the

1 meeting. This time-line includes development of the draft minutes, revisions by ATSDR
2 and the work groups, and final approval by CMO.

3
4 ORRHES meeting minutes are usually posted on the web site within a six-week period
5 after **approval**. ATSDR receives the first draft two weeks after the meeting and
6 circulates the document to members by e-mail and regular mail. ORRHES is **usually**
7 given two weeks **to ten days** to submit written comments. The revised draft is then
8 distributed in pre-meeting packets to the members. Only written comments can be
9 incorporated into minutes. **This process takes approximately six to seven weeks;**
10 **ORRHES meetings are held every six to eight weeks. Minutes are submitted for**
11 **posting to the web site after approval by ORRHES. This process may take an**
12 **additional six weeks based on the workload and priority projects of information**
13 **services.** In response to Mr. Hill's question, Ms. Spencer explained that holding a
14 public availability session during the December 2003 ORRHES meeting will depend on
15 whether the draft WOC PHA is complete. According to the project plan, the ORRHES
16 meeting in Kingston is scheduled for February 2004.

Closing Session

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21
22 The next ORRHES meeting is scheduled for December 2, 2003. Because DHEP will be
23 unable to attend, consideration was given to changing the date to December 9 or 16,
24 2003. Due to conflicting schedules of other ATSDR staff on these dates and the
25 upcoming holiday season, agreement was reached to maintain the December 2, 2003
26 date. Potential dates for the 2004 meetings will be proposed during the February 2004
27 meeting.

28
29 There being no further business or discussion, Dr. Davidson adjourned the ORRHES
30 meeting at 7:21 p.m.

31
32 I hereby certify that to the best of my
33 knowledge, the foregoing Minutes of the
34 proceedings are accurate and complete.

35
36
37
38 _____
Date

39 _____
Kowetha A. Davidson, Ph.D., D.A.B.T.
ORRHES Chair

Glossary Key

ATSDR	—	Agency for Toxic Substances and Disease Registry
AWG	—	Agenda Work Group
BLLs	—	Blood Lead Levels
CAG	—	Community Assistance Group
CDC	—	Centers for Disease Control and Prevention
CHCD	—	Community Health Concerns Database
CIA	—	Cancer Incidence Assessment
CMO	—	Committee Management Office
COWG	—	Communications and Outreach Work Group
CURT	—	Community United Response Team
DFO	—	Designated Federal Official
DHAC	—	Division of Health Assessment and Consultation
DHEP	—	Division of Health Education and Promotion
DOE	—	U.S. Department of Energy
EPA	—	U.S. Environmental Protection Agency
GPWG	—	Guidelines and Procedures Work Group
HENAWG	—	Health Education Needs Assessment Work Group
HHS	—	Department of Health and Human Services
ORDRP	—	Oak Ridge Dose Reconstruction Project
ORRHES	—	Oak Ridge Reservation Health Effects Subcommittee
PHA	—	Public Health Assessment
PHAWG	—	Public Health Assessment Work Group
RaLa	—	Radioactive Lanthanum
SIRs	—	Standardized Incidence Ratios
TCR	—	Tennessee Cancer Registry
TDEC	—	Tennessee Department of Environment and Conservation
TDOH	—	Tennessee Department of Health
VBI-70	—	Vasquez Boulevard/Interstate 70
WOC	—	White Oak Creek