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Final Report on the Background Soil Characterization Project at the Oak Ridge Reservation, Oak Ridge, Tennessee

Volume 2—Data

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Final Report on the Background Soil Characterization Project at the Oak Ridge Reservation, Oak Ridge, Tennessee

Volume 2—Data

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managing the
Oak Ridge K-25 Site
Oak Ridge Y-12 Plant
Oak Ridge National Laboratory
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for the
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PREFACE TO VOLUME 2

This volume contains the data from the Background Soil Characterization Project. When available, the following validation qualifiers are used in the appendixes. When validation qualifiers are not available, the corresponding contract laboratory data qualifiers appearing on the next page are used.

Definitions of data validation qualifiers

Qualifier	Definition
U	The analyte was analyzed for but was not detected above the reported sample quantitation limit.
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a tentative identification.
JN	The analysis indicates the presence of an analyte that has been tentatively identified, and the associated numerical value represents its approximate concentration.
UJ	The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
R	The sample results are rejected because of serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.
UN	The laboratory did not register this compound, but there was presumptive evidence of a compound that was within the retention time window but was not reported. No other qualification of the data was made.
UJN	The laboratory did not report the compound, but there was presumptive evidence of a compound that was within the retention time window but was not reported. The data were qualified as estimated, J, because of other discrepancies with the data.
RN	The laboratory did not report the compound, but there was evidence of a compound that was within the retention time window but was not reported. The data were qualified as unusable, R, because of other discrepancies with the data.

Definitions of contract laboratory data qualifiers

Organic

Qualifier	Explanation
U	Indicates compound was analyzed for but not detected.
J	Indicates an estimated value.
N	Indicates presumptive evidence of a compound [used only for tentatively identified compounds (TICs)].
P	Used for pesticide/aroclor target analytes when there is greater than 25% difference for detected concentrations between the two gas chromatograph (GC) columns. The lower of the two is reported and flagged.
C	Used for pesticide results where the identification has been confirmed by GC/mass spectrograph (MS).
B	Used when the analyte is found in the associated blank as well as in the sample.
D	Identifies all compounds in an analyte at a secondary dilution factor.
A	Indicates that a TIC is a suspected aldol-condensation product.
X	Other specific flags may be used to properly define the results. If they are used they must be fully described and attached to the Sample Data Package.

Inorganic

Qualifier	Explanation
U	Indicates compound was analyzed for but not detected.
J	Indicates an estimated value.
N	Spiked sample recovery not within control limits.
E	Reported value estimated because of the presence of interference.
M	Duplicate injection precision not met.
B	Reported value was obtained from a reading that was less than the CRDL, but greater than or equal to the instrument detection limit (IDL).
S	Reported value was determined by the method of standard additions (MSA).
W	Post-digestion spike for furnace atomic absorption is out of control limits, while sample absorbance is less that 50% of spike absorbance.
*	Duplicate analysis not within control limits.
+	Correlation coefficient for the MSA is less than 0.995.

Abbreviations used for formation-locations

Abbreviation	Definition
DG-AND	Dismal Gap—Anderson County
DG-ROA	Dismal Gap—Roane County
DG-ORR	Dismal Gap—Oak Ridge Reservation
NL-ORR	Nolichucky—Oak Ridge Reservation
CHI-BV	Chickamauga—Bethel Valley
CHI-K25	Chickamauga—K-25 Area
CHE-ORR	Chepultepec—Oak Ridge Reservation
CR-ORR	Copper Ridge—Oak Ridge Reservation
CR-AND	Copper Ridge—Anderson County
CR-ROA	Copper Ridge—Roane County

Appendix A

SITE DESCRIPTIONS, SOIL PROFILE DESCRIPTIONS, AND GENERAL ANALYSIS OF SITES

A.1 OAK RIDGE RESERVATION SITE DESCRIPTIONS

ORR Site 2. This site is located off Bear Creek Road close to the Clinch River, grid location N29300, E10300. The actual site is located northeast of the K-25 water treatment plant. Follow the road to where the power line right-of-way (ROW) crosses it. Then turn right, go up hill for about 200 ft, then left into the woods about 50 ft. The site is located in a stand of large oak, red maple, sweet gum and white pine that was probably cleared and pastured at one time but evidently never plowed. The underlying geology is the Dismal Gap Formation. The soils are typical of the soils of largest extent that were mapped on this formation. The soils are very heterogeneous. The geologic dip in the C horizon varies from about 30° to nearly vertical. Differential weathering of thin strata gives rise to very abrupt and irregular degrees of weathering with some strata being very highly weathered and other strata still hard and dense.

ORR Site 3. This site is located across Bear Creek Road from the Scientific Ecology Group plant, Grid N 29300, E11200. The actual site is located about 50 ft north of the cut bank on the north side of the road. The vegetation on this site consists of old-field successional forest that has not been disturbed since the field was abandoned. Most of the old pines have died and fallen over. The present regrowth consists of young pine,oak, hickory, sassafras, and cedar with a sparse ground cover of honeysuckle and poison ivy. The underlying geology is the Nolichucky Shale. Because this site is on a stable landform, the soils were not badly eroded before abandonment.

ORR Site 5. This site is located on the south side of Bear Creek Road about 300 ft west of the main entrance to the Central Training Facility and about 25 ft south of the security fence, grid N29300, E15300. The site is located in an old field that was severely eroded before or after abandonment. Shallow gullies are on either side of this site. Vegetation is old-field successional forest. Most of the old pines have died and fallen over. Present vegetation consists of a dense stand of young pines along with cedar, oak, dogwood, and sweet gum along with a generous stand of honeysuckle and greenbriar. This site is the only ORR site that has a thick organic layer consisting primarily of mosses. The soils on this site are very similar to those of ORR Site 3, except that they are more eroded with the plow layer resting directly on the clayey subsoil beneath. The underlying geology is the Nolichucky Shale.

ORR Site 10. This site is located about 300 ft north of the Tennessee Valley Authority (TVA) power line ROW that parallels Bear Creek Road on the north side of the road, Grid N30200, E21460. This site is located in an old field that had been severely eroded some time before abandonment. Vegetation is old-field successional forest that is now mostly hardwoods consisting of white oak, hickory cedar, and ash. The pine have disappeared. This site, being fairly open, has a dense ground cover of honeysuckle, Virginia creeper and poison ivy. The soils on this site are more typical of soils on steeper slopes. In fact, this site is the steepest of the ORR Phase 1 sites. The underlying geology is the lower Dismal Gap Formation, with strata in the C and Cr horizons nearly vertical.

ORR Site 11. This site is located about 50 ft north of the TVA power line ROW that parallels Bear Creek Road on the north side of the road, ORR Site 10 is located about 250 ft upslope. This site is located in an old field that had been severely eroded prior to or after abandonment. Vegetation is old-field successional forest. Many pines have died and fallen over. There is considerable young brush and sprouts of dogwood, sassafras, cherry, red maple,

and sweet gum along with an abundant ground cover of poison ivy and honeysuckle. The soils are typical of stable uplands underlain by the upper Dismal Gap Formation.

ORR Site 13. This site is located south of the TVA power line ROW that parallels Bear Creek Road on the north side. The actual site, Grid N29480, E23220, is located about 100 ft south of the ROW in forest. The site is located in an old farmyard. The remains of the chimney are located about 200 ft east. Present vegetation consists of sugar maple and tulip poplar. The surface soil should have a higher pH and higher fertility. There is much evidence of worm activity on this site The only ground cover is a thick stand of poison ivy. The actual soil pit is situated within a brecciated zone of the Nolichucky Shale. Because of the past tectonic brecciation the soil is deeply weathered.

ORR Site 15. This site is located close to the intersection of the natural gas line ROW and the TVA power line ROW, Grid N29700, E25720. The route into this site and ORR Site 16 is through the first gate west of the Bear Creek and Route 95 intersection on the north side of the road. This field road is followed until the intersection of the TVA power line and the gas line ROW is crossed, then about 25 ft north of the gas line ROW. The site is located in a severely eroded old field which was planted to loblolly pines. The trees are about 40 to 50 y old and nearly ready for harvesting for poles. There is a hardwood understory consisting of oak, red maple, dogwood and a sparse ground cover of honeysuckle and grasses. The underlying geology is the lower Nolichucky Shale, which in this area, is fairly permeable as the saprolite fragments are mostly coated with red iron oxides.

ORR Site 16. This site is located close to the intersection of the gas line ROW and the TVA power line ROW, Grid N29700, E25928. The route into this site and ORR Site 16 is through the first gate west of the Bear Creek and Route 95 intersection on the north side of the road. This field road is followed until the intersection of the TVA power line and the gas line ROW is crossed, then along the power line ROW. The site is located on a sideslope of a severely eroded old field which was planted to loblolly pines. The trees are about 40 to 50 y old and nearly ready for harvesting for poles. There is a hardwood understory consisting of oak, red maple, dogwood and a sparse ground cover of honeysuckle and grasses. The soils are typical that are underlain by the middle to lower Nolichucky Shale, which in this area, is less permeable than at ORR Site 15, as the saprolite fragments are mostly coated with black manganese oxides and clay plugged.

ORR Site 19. This site is located east of the Bear Creek and Route 95 intersection within the area known as the Bear Creek Low-level Waste Disposal Development and Demonstration (LLWDDD) Site. The route to this site starts at the intersection of Bear Creek Road and Gum Hollow Road. Follow Gum Hollow Road to the intersection with the TVA power line ROW. Turn left and follow this road to the intersection with the telegraph ROW. Turn right onto the telegraph ROW road for about 400 ft. The site is about 60 ft east into the woods. The site is located in an old field. Vegetation is old-field successional forest. Most of the old pines have died and fallen over. Present vegetation is mostly young hardwoods of cherry, sweet gum, cedar, poplar, dogwood, and Virginia pine. The ground surface is leaf covered with only scattered honeysuckle and poison ivy. The soils are typical of stable land surfaces that are underlain by the steeply dipping lower Dismal Gap Formation. This site has thin very fine grained sandstone strata in the C horizon. The original location of this site was in a stand of young recently replanted pines and was moved about 300 ft to the present location.

ORR Site 21. This site is located in the area known as the Bear Creek LLWDDD. The route to this site starts at the intersection of Bear Creek Road and Gum Hollow Road. Follow Gum Hollow Road to the intersection with the TVA power line ROW. Turn left and follow this road for about 1,600 ft. The site is in the woods on the south side of the ROW, Grid N29700, E30940. The site is located in an old field that had been severely eroded before abandonment. Vegetation is old-field successional forest and some planted loblolly pines. Some pines have been harvested or have died and fallen over. Present vegetation consists of cedar, poplar, dense sourwood, oak, and red maple. Some grape vines and some prairie flowering plants are on the site. In addition to leaves, mosses and lichens cover part of the ground surface. The soils are typical for moderate slopes that are underlain by the Nolichucky Shale. Note that this site was moved a considerable distance from its original location. The original location was underlain by a deeply weathered section of the lower Maynardville Limestone which interbeds with the uppermost Nolichucky. When soil mapping was done in the Bear Creek LLWDDD site, this particular area was thought to be part of the Nolichucky, since the Maynardville was supposed to be high-grade limestone which gives rise to much different soils. Subsequent mapping and study finally put this shale-limestone interbedded area into the Maynardville which necessitated moving the site onto about the middle of the Nolichucky.

ORR Site 22. This site is located within the area known as the Bear Creek LLWDDD. The route to this site starts at the intersection of Bear Creek Road and Gum Hollow Road. Follow Gum Hollow Road to the intersection with the TVA power line ROW. Turn left and follow this road for about 800 ft. There is a cluster of wells on the north side of the ROW. Turn right onto a rough track and go to the top of the ridge then turn left and go down to where a large windthrow blocks the track. The site is about 100 ft beyond the windthrow then about 50 ft south into the woods, Grid N30520, E31250. Vegetation at this site is old-field successional forest of Virginia pine, shortleaf pine, dogwood, and cedar. The surface is leaf covered and there is a sparse stand of honeysuckle. This site is located in the transition zone between the Dismal Gap Formation and the Rogersville Shale. The saprolite in the sampling pit was mostly Rogersville with a very steep dip.

ORR Site 23. This site is located within the area known as the Bear Creek LLWDDD. The route to this site starts at the intersection of Bear Creek Road and Gum Hollow Road. Follow Gum Hollow Road to the intersection with the TVA power line ROW. Turn left and follow this road for about 800 ft. There is a cluster of wells on the north side of the ROW. Turn right onto a rough track for about 50 ft. The site is in the woods about 20 ft to the east, Grid N29800, E31830. Vegetation at this site is old-field successional forest. Most of the pines have died and fallen over. Present vegetation is red maple, sourwood and dogwoods, plus a ground cover of honeysuckle and poison ivy. The soils are typical examples of the Dismal Gap Formation. The C horizon at this site contained glauconitic strata that were sampled.

ORR Site 24. This site is located within the area known as the Bear Creek LLWDDD. The route to this site starts at the intersection of Bear Creek Road and Gum Hollow Road. Follow Gum Hollow Road to the intersection with the TVA power line ROW. Turn left and follow this road for about 600 ft. The site is on the south side of the ROW then into the woods about 100 ft, Grid, N29900, E31980. The vegetation at this site is old-field successional forest with some planted loblolly pine about 30 y old. Present vegetation is a dense stand of poplar, dogwood, cedar, pine, and red maple with a sparse ground cover of poison ivy and honeysuckle. The soils are typical examples of the Nolichucky Shale. Of interest were the

thick manganese oxide coatings on fragment surfaces in the C&Cr horizons that were covered by translocated clay.

ORR Site 25. This site is located within the area known as the Bear Creek LLWDDD. The route to this site starts at the intersection of Bear Creek Road and Gum Hollow Road. Follow Gum Hollow Road to the intersection with the TVA power line ROW. Turn left and follow this road for about 400 ft. The site is on the south side of the ROW then into the woods about 100 ft, Grid, N29800, E32290. Present vegetation on this site is planted loblolly pines that are about 40 to 50 y old. There is an understory of red maple, dogwood, and sweet gum. The ground surface is covered by a thick layer of pine needles and there is a moderate ground cover of poison ivy and honeysuckle. The soils are typical examples of the Nolichucky Shale.

ORR Site 26. This site is located east of the ORR area known as the Bear Creek LLWDDD. The route to this site starts at the intersection of Bear Creek Road and Gum Hollow Branch Road. Turn off Bear Creek onto Gum Hollow. Go to where the TVA power line ROW crosses. Turn right down the ROW track for about 1400 ft. The site is about 75 to 80 ft north of the ROW in the woods, Grid N30000, E34370. The site is in a severely eroded old field that was abandoned well before 1942. Vegetation is old-field successional forest where hardwoods have supplanted the early pine stage. Present forest vegetation consists of red maple, oak, hickory, and a few cedar. The forest canopy is sufficiently dense that there is very little vegetative ground cover. The ground surface is covered with leaves. The soils are typical examples of the Dismal Gap Formation.

ORR Site 27. This site is located east of the ORR area known as the Bear Creek LLWDDD. The route to this site starts at the intersection of Bear Creek Road and Gum Hollow Branch Road. Turn off Bear Creek onto Gum Hollow. Go to where the TVA power line ROW crosses. Turn right down the ROW track for about 1800 ft. The site is about 100 ft north of the ROW in the woods, Grid N30100, E34990. ORR Site 27 is separated from ORR Site 26 by a drainageway. The site is in an eroded old field that was abandoned well before 1942. Vegetation is old-field successional forest where hardwoods have supplanted the early pine stage. Present forest vegetation consists of red and black oak, white oak, a few Virginia pine and some dead cedars. The understory consists of beech, red maple, dogwood. Scattered ferns occur under the dense forest canopy, otherwise the ground surface is covered by leaves. This site and ORR Site 2 have the oldest forest vegetation for any of the ORR Phase 1 sites. The soils on this site are typical examples of the Dismal Gap Formation.

ORR Site 28. This site occurs along the new haul road that was constructed a few years ago to transport cover materials from the Chestnut Ridge borrow area to the Y-12 burial grounds. The route to this site starts at the intersection of Bear Creek Road and the new haul road. Turn onto the new haul road. The site is about 300 ft beyond the gate on Bear Creek into the woods about 20 ft from the edge of the TVA north-south power line ROW, Grid N29500, E34580. The site is in a very severely eroded old field when it was abandoned. Vegetation is old-field successional forest. Most of the older pines have either been harvested or died and fallen over. Present vegetation consists of a dense stand of young Virginia pine along with cedar and poplar. There is a sparse ground cover of honeysuckle, mosses, and ferns. The soils are typical examples of the Nolichucky Shale.

ORR Site 31. This site occurs along the new haul road that was constructed a few years ago to transport cover materials from the Chestnut Ridge borrow area to the Y-12 burial

grounds. The route to this site starts at the intersection of Bear Creek Road and the new haul road. Turn onto the new haul road. The site is about 3400 ft from the intersection. The site is on the south side of the haul road and approximately 200 ft into cutover woods, Grid N29900, E35820. The site is in a very severely eroded old field when it was abandoned. Vegetation is old-field successional forest. The pines were harvested 10 to 15 y ago. Present vegetation consists of a dense stand of sweet gum, dogwood, cedar, hickory, poplar, and ash. There is a sparse ground cover of honeysuckle and poison ivy. Even though there had been some tree harvesting, the actual site showed little, if any, disturbance from the harvest. This site occurs low on a long sideslope. Initial soil investigations indicated that there might be some alluvial or colluvial capping. However, when the soil pit was opened the soil morphology indicated that the upper 61 cm of the soil formed in late Pleistocene Age or early Holocene Age slope wash that was derived from the Nolichucky Shale. The clay enriched subsoil has a clayey texture, but the substratum beneath did not contain any relic rock structure.

ORR Site 32. This site occurs along the new haul road that was constructed a few years ago to transport cover materials from the Chestnut Ridge borrow area to the Y-12 burial grounds. The route to this site starts at the intersection of Bear Creek Road and the new haul road. Turn onto the new haul road. The site is about 5400 ft from the intersection and about 100 ft Grid north into the woods from the edge of the TVA power line ROW, Grid N30200, E36760. Vegetation is old-field successional forest. Most of the pine trees were harvested or have died and fallen over. Present vegetation consists of a dense stand of hardwood underbrush plus abundant honeysuckle and some greenbriar. The soils on this site are typical examples of the upper Dismal Gap Formation.

ORR Site 33. This site occurs along the new haul road that was constructed a few years ago to transport cover materials from the Chestnut Ridge borrow area to the Y-12 burial grounds. The route to this site starts at the intersection of Bear Creek Road and the new haul road. Turn onto the new haul road. The site is about 5700 ft from the intersection and about 75 to 100 ft Grid north into the woods from the edge of the TVA power line ROW, Grid N30000, E36970. This site is about 250–300 ft east of site 32. Vegetation is old-field successional forest. Most of the pine trees were harvested or have died and fallen over. Present vegetation consists of a dense stand of hardwood underbrush plus abundant honeysuckle and some greenbriar. The soils on this site are typical examples of the middle Dismal Gap Formation.

ORR Site 35. This site occurs along the new haul road that was constructed a few years ago to transport cover materials from the Chestnut Ridge borrow area to the Y-12 burial grounds. The route to this site starts at the intersection of Bear Creek Road and the new haul road. Turn onto the new haul road. The site is about 6000 ft from the intersection and about 150 ft Grid north into the woods from the edge of the TVA power line ROW, Grid N30000, E37280. This site is about 250–300 ft east of site 33. Vegetation is old-field successional forest. Most of the pine trees were harvested or have died and fallen over. Present vegetation consists of a dense stand of sweet gum, dogwood, haw, sourwood and some poplar. About 90% of the ground surface is leaf covered with the remainder covered by honeysuckle, mosses and other forbes (weeds). The soils on this site are typical examples of the lower Dismal Gap Formation.

ORR Site 41. This site occurs along the new haul road that was constructed a few years ago to transport cover materials from the Chestnut Ridge borrow area to the Y-12 burial grounds. The route to this site starts at the intersection of Bear Creek Road and the new

haul road. Turn onto the new haul road. The site is about 7400 ft from the intersection and about 400 ft Grid north into the woods from the edge of the TVA power line ROW, Grid N30200, E39570. This site occurs in an old field that was severely eroded prior to or after abandonment. Vegetation is old-field successional forest. Most older pines have died and fallen over. The present vegetation is a fairly dense regrowth of pine, red maple, beech, and poplar. The ground surface is covered with leaves. The soils are typical examples of the Middle Dismal Gap Formation.

ORR Site 42. This site occurs on the new haul road that was constructed a few years ago to transport cover materials from the Chestnut Ridge borrow area to the Y-12 burial grounds. The route to this site starts at the intersection of Bear Creek Road and the new haul road. Turn onto the new haul road. The site is about 8100 ft from the intersection and about 30 ft Grid north into the woods from the edge of the TVA power line ROW, Grid N30000, E40500. This site is in an old field that was severely eroded prior to or after abandonment. Vegetation is old-field successional forest. Most of the old pine trees have died and fallen over or were harvested. Present vegetation is a dense regrowth of poplar, sweet gum, cedar, oak, dogwood, and beech. There is a sparse ground cover of honeysuckle and poison ivy. The soils on this site are fairly typical examples of the middle to upper Nolichucky Shale.

ORR Site 43. This site is the easternmost site on the ORR. It is fairly close to west end of the Y-12 burial grounds. This site occurs on the new haul road that was constructed a few years ago to transport cover materials from the Chestnut Ridge borrow area to the Y-12 burial grounds. The route to this site starts at the intersection of Bear Creek Road and the new haul road. Turn onto the new haul road. The site is about 9100 ft from the intersection and about 200 ft Grid north into the woods from the edge of the TVA power line ROW, Grid N30400, E41460. This site occurs in an old field that was severely eroded prior to or after abandonment. Vegetation is old-field successional forest. Present vegetation is red maple, poplar, abundant dogwood along with a dense ground cover of honeysuckle and poison ivy. The soils on this site are typical of stable upland positions that are underlain by the lower Dismal Gap Formation. This site is very close to the Rogersville Shale boundary.

ORR Site 45. This site is situated on Chestnut Ridge and is underlain by the Copper Ridge Formation. The landform is convex with a slope gradient of about 25%. The forest consists of older trees, but trees have been removed periodically. From the stumps present and their state of decay, it appears that the last logging was done 15 to 20 years ago. A recent woods road was cut to within 100–150 ft of this site to allow access for drilling wells. The soil on this site is a typical residual soil, and there is no evidence of any accelerated erosion.

ORR Site 50. This site on Chestnut Ridge is underlain by residuum of the Chepultepec Formation. The landform is a long, gently sloping spur ridge with a 8% slope gradient. Present forest is old-field successional that is presently dominated by oaks, but there are still some red cedars along with white pine seedlings and red maple sprouts. The ground surface is leaf covered and there is no evidence of recent disturbance. The soil is representative of Chepultepec soils except for a thicker surface organic horizon.

ORR Site 51. This site is located on Chestnut Ridge and underlain by residuum of the Copper Ridge Formation. The landform is a convex sideslope with a slope gradient of about 15%. Present forest is old-field successional but most of the original pines have died and fallen over. Present trees are mostly tulip poplar, red maple and sugar maple. This site is within 75 to 80 ft of a recent clear cut that was replanted to loblolly pine is the past 15 to

20 years. This site is also within 80 ft of a recent woods road that provided access to well drilling sites. The soil is typical of Copper Ridge soils.

ORR Site 52. This site is located on Chestnut Ridge and is underlain by residuum of the Chepultepec Formation. The landform is a doubly convex shoulder of a sideslope. The slope gradient is about 12%. Present forest is old-field successional but most of the original pines have died and fallen over releasing the present hardwoods that are dominated by red maple, along with a few cedars and tulip poplar. The mostly leaf covered ground surface also has ferns and honeysuckle. The soil is typical of Chepultepec soils.

ORR Site 53. This site is situated on Chestnut Ridge and is underlain by residuum of the Chepultepec Formation, but the upper 36 cm of the soil consists of colluvium. The landform is a convex sideslope about a third of the way below a doubly convex shoulder with a slope gradient of about 20%. Present forest is old-field successional, but the old field had been abandoned well before 1940. Present trees consist of white oak with an understory of dogwood, sourwood, and black gum. The actual soil pit revealed a complicated situation. The upper 36 cm of the sampled face had colluvium to a depth of 36 cm, but colluvium extended to a depth of 70 cm on the left half of the pit face while the right half of the pit had clayey residuum at a depth of 36 cm.

ORR Site 54. This site is situated on Chestnut Ridge and is underlain by residuum of the Copper Ridge Formation. The landform is a convex sideslope with a slope gradient of about 30%. Present forest vegetation consists of older cutover trees that are presently dominated by chestnut oak with an understory of red maple. The forest at this site is very open. The soil is typical of Copper Ridge Soils.

ORR Site 55. This site is situated on Chestnut Ridge and is underlain by residuum of the Copper Ridge Formation. This site is located on a middle part of a convex sideslope between old alluvium above and colluvium below. Slope gradient is about 26% with a northeast aspect. Present vegetation is cutover forest dominated by chestnut oak, and with sugar maple and tulip poplar understory and a lower level of dogwood and black gum and oak seedlings. This site does not ever appear to have been plowed in the past due to the very high surficial chert content.The upper 27 cm of the soil consisted of colluvium. The shaded aspect has resulted in a darker than typical surface layer and there is considerable evidence of worm activity.

ORR Site 58. This site is situated on Chestnut Ridge and is underlain by residuum of the Copper Ridge Formation. The site is on the edge of a large, slightly convex ridgetop with a 6% slope gradient. Present forest is dominated by older hardwoods of red oak, sugar maple and some tulip poplar and an understory of sprouts and seedlings. The soil is a very typical Copper Ridge soil.

ORR Site 59. This site is situated on Chestnut Ridge and close to Route 95. It is underlain by residuum of the Copper Ridge Formation. The landform is a broad, convex, lower middle sideslope with a slope gradient of about 20%. This site was a pasture field before abandonment and does not appear to have been plowed nor badly eroded. Present forest is old-field successional with some mature shortleaf pine, mature white oak and an understory of dogwood, beech, red maple and sassafras.The soil is a typical example of a Copper Ridge soil.

ORR Site 60. This site is situated on Chestnut Ridge and is underlain by residuum of the Copper Ridge Formation. The landform is a doubly convex shoulder that steepens off into a drainageway. Slope gradient at the pit site is about 25%. Forest on this site is old-field successional. The original pines have either died and fallen over or were harvested. Present trees are red maple and oak, along with a few white pine and Virginia pine. There is an old field road about 20 ft uphill. The soil at this site was eroded in the past but otherwise is a typical example of a Copper Ridge soil.

ORR Site 62. This site is situated on Chestnut Ridge and is underlain by residuum of the Copper Ridge Formation. The landform is a broad, slightly convex, ridgetop with a slope gradient of about 4%. Forest is old-field successional. The original pines have all died and fallen over. Present canopy trees are oak and hickory with a red maple and dogwood understory and seedlings of red maple and sassafras. This site is about 80 ft east of a recent clearcut that was replanted to loblolly pine. The soil is a typical example of Copper Ridge soils.

ORR Site 64. This site is situated on Chestnut Ridge and is underlain by residuum of the Copper Ridge Formation. The landform is the top of a slightly convex ridge with a slope gradient of about 3 to 5%. The forest is old-field successional. The early pines haver all died and fallen over or else were harvested. Present trees consist of a few large oaks and tulip poplar, and a thick sapling stand of red maple. There was no evidence of any recent disturbance.The soil is a typical example of a Copper Ridge soil.

ORR Site 66. This site is situated on Chestnut Ridge and is underlain by residuum of the Chepultepec Formation. This landform is a doubly convex spur below a higher bench landform and there is a slope gradient of about 15%. The forest at this site is a severely eroded old-field successional type that was dominated by Virginia pine. Most pines are still alive and standing. Some poplar, red maple trees are growing into the canopy and there is a thick understory of red maple saplings and dogwood. The pit site is in a thick stand of ferns. The soil at this site is a typical example of a Chepultepec soil.

ORR Site 68. This site is situated on Chestnut Ridge and is underlain by residuum of the Chepultepec residuum. This site has a surficial layer of colluvium 40 to 50 cm thick. The landform is a convex sideslope below a colluvial bench and close to a recent tree throw mound. The actual pit has a colluvial layer of variable thickness that may be an older tree throw site. Present forest consists of older trees. There was a partial cutting about 15 to 20 years ago. Present tall trees are oaks, hickories and subcanopy trees of red maple and tulip poplar with a good stand of sprouts and saplings.

ORR Site 73. This site is situated on Chestnut Ridge and is underlain by residuum of the Chepultepec Formation. The landform is a doubly convex spur just below a topographic bench landform. Slope gradient is about 15%. The forest consists of older trees and there has been harvesting from time to time. Stumps are near the pit. Present canopy trees are tulip poplar, oak and red maple. There is a thick sapling stand of oak, cherry, dogwood, and red maple. The soil is a typical example of a Chepultepec soil. The pit sampling face cut through an old stump hole, but this section was not sampled.

ORR Site 74. This site is situated on Chestnut Ridge and is underlain by residuum of the Chepultepec Formation. The landform is a convex shoulder on the lower part of a long spur ridge. Slope gradient is about 14%. The forest is old-field successional, but the site is located

close to an old fence row where old trees have barbed wire in them. The site was probably a pasture field at one time but it does not appear to have been plowed. The soil has a slightly higher sand content in the surface layer, but otherwise is a typical example of a Chepultepec soil.

ORR Site 75. This site is situated on Chestnut Ridge and is underlain by residuum of the Copper Ridge Formation. The landform is a broad, doubly convex, ridgetop with a slope gradient of about 13% and a shady northeast aspect. Forest is old-field successional. The original pines are being replaced by a thick stand of young pines, tulip poplar, black gum, sourwood and dogwood. The soil at this site has a thicker and darker surface than is otherwise typical of Chepultepec soils, but this soil is typical on this shaded aspect for Chepultepec soils.

ORR Site 77. This site is situated on Chestnut Ridge and is underlain by residuum of the Chepultepec Formation. The landform is a broad, slightly convex ridgetop with a slope gradient of 2 to 3%. Forest is old-field successional. A few of the original pines are still standing along with taller red cedars. Most of the present canopy trees are now oaks, hickories, red maple and cherry. The ground surface is leaf covered. The soil is a typical example of a Chepultepec soil.

ORR Site 78. This site is situated on Chestnut Ridge and is underlain by residuum of the Chepultepec residuum. The landform is a broad, slightly convex ridgetop with a slope gradient of 4 to 5%. The forest here is old-field successional. Most of the original pines have died and fallen. Present canopy tree are oaks and tulip poplar and a lower story of red maple, sassafras and cherry. The ground surface is leaf covered. This soil at this site has a surficial capping of ancient colluvium that is about 36 cm thick.

ORR Site 83. This site is situated on Chestnut Ridge and is underlain by residuum of the Copper Ridge Formation. The landform here is an elongated, doubly convex ridgetop, with a slope gradient of about 5%. The forest is old-field successional. Most of the original pines have died and fallen over. The present trees are red maple, a few pines, poplars, dogwoods, cherry and sourwood along with some cedars. The ground surface is leaf covered. The soil is a typical example of a Copper Ridge soil.

ORR Site 85. This site is situated on Chestnut Ridge and is underlain by residuum of the uppermost Chepultepec Formation. The landform is a lower third of a long convex sideslope. The slope gradient here is about 48% and the site is on a shaded north-northeast aspect. Forest here is older growth that has been cutover from time to time. Present canopy trees are red oak, sugar maple, white pine and magnolia. There is abundant poison ivy and ferns. The ground surface is leaf covered. The upper 42 cm of the soil consists of creep materials.

ORR Site 86. This site is situated on Chestnut Ridge and is underlain by residuum of the uppermost Chepultepec Formation and perhaps some of the Longview Formation. The landform is a doubly convex, steep sideslope about halfway between the road and the creek. Slope gradient is about 45%. Forest here is old-growth, but which has been cutover from time to time. Canopy trees are Chestnut oak and a few hickories along with some smaller red maples and sassafras. The entire soil has a very high chert content and that makes this soil different from a typical Chepultepec soil.

ORR Site 90. This site is on Chestnut Ridge and close to Chestnut Ridge road. It is underlain by residuum of the Chepultepec Formation. The landform is a small, doubly convex spur that is surrounded by old alluvium. Slope gradient is about 6%.
Present vegetation is a 30 to 40 year old stand of planted loblolly pine. There is a thick understory of red maple, roses, honeysuckle and blackberry briars. The soil is typical of lower Chepultepec soils that have sandstone fragments and a slightly higher sand content in the surface layer. This site is about 60 ft north of Chestnut Ridge Road and has received road dust additions and perhaps other contaminants.

ORR Site 91. This site is situated on Chestnut Ridge and is underlain by residuum of the Copper Ridge Formation. The landform is a long convex sideslope spur. Slope gradient is about 7% and on a shaded north aspect. The forest is an older one as there were several chestnut stumps near the pit. Present trees are tulip poplar, cherry, post oak,white oak plus one chestnut sprout about 15 ft tall with a 1 inch dbh. The ground is leaf covered. Except for a darker and thicker surface layer this soil is a typical example of a Copper Ridge soil.

ORR Site 93. This site is located in Bethel Valley east of Building 1505, very close to SWSA-1 and about 200 ft into the woods south of the intersection of the blacktop road and the dirt road. This site is underlain by residuum of the Chickamauga Group Unit G. The landform is a broad convex spur that extends to the north from Haw Ridge. The slope gradient is about 7%. Present forest is dominated by hardwoods but there are pines, a few large cedars, oaks and ash. The ground is leaf covered and there is also abundant poison ivy. The initial rad scan gave a higher than normal ground level reading of 70 CPM. The soil at this site was fairly typical of deeper Chickamauga soils. Depth to rock was highly variable below 85 cm.

ORR Site 99. This site is located east of Building 1505 along the blacktop road that goes west to SWSA-1. This site is on the north side of the road and about 50 ft into the woods. The site is underlain by residuum of the Chickamauga Group-Unit G. The landform is a lower convex sideslope with numerous gullies. The pit was dug between gullies. Slope gradient was about 5%. Forest consists of old-field successional Virginia pine and shortleaf pine. There is a thick sapling stand of red maple and dogwood along with honeysuckle and poison ivy. The ground surface is about 70% covered with mosses and lichens and the remainder covered with pine needles and leaves. The soil at this site was deeply weathered and no rock was encountered to a depth of about 8 ft.

ORR Site 100. This site is located just west of Building 1505, about 300 ft south of the blacktop road that goes to SWSA-1. This site is underlain by residuum of the Chickamauga Group Unit G. The landform is on a fairly broad convex spur that drops off of Haw Ridge. Slope gradient is about 12%. This site is in a severely eroded woods pasture. The open forest is dominated by large oaks, some white pine and sugar maple along with beech and maple saplings. There were blueberry bushes on the site. The ground surface was leaf covered. This site was unusual for Chickamauga soils in that there were blueberries and a surface organic horizon, an indication of deep weathering and acid soils. No hard rock was encountered in the soil pit but a Cr (paralithic) horizon was encountered at a depth of 84 cm.

ORR Site 101. This site is located in the edge of the woods immediately east of the new water treatment plant and about 50 ft into the woods. The landform is a convex spur coming off of Haw Ridge. The soils had been severely eroded before abandonment. Slope gradient was about 25%. Present forest is dominated by mature cedar, oak and beech along with

saplings of sugar maple, beech and dogwood. The ground surface was leaf covered and there was no evidence of any recent disturbance. The soil at this site was typical of Unit G Chickamauga soils where rock is commonly encountered below a depth of about 50 cm.

ORR Site 102. This site is located east of Building 4500 and about 300 ft south of the road. The site is located in an old farm house yard or a barnyard. It is underlain by residuum of the Chickamauga Group. The landform is a broad, slightly convex sideslope with a slope gradient of about 3%. The present vegetation consists of an open stand of mature oaks and Virginia pine. The ground surface has considerable grass, honeysuckle and poison ivy. There was no evidence of any recent disturbance. The soils were typical Chickamauga soils with rock encountered at a depth of 101 cm.

ORR Site 103. This site is located about 100 ft east of the paved road that goes south to the old Health Physics Reactor and across the road from a group of trailers. The site is underlain by residuum of the Chickamauga Group. The landform is the mid part of a doubly convex sideslope with a slope gradient of about 24%. The forest is old-field successional. Some of the original pines remain along with a few older oaks. Small trees are beech, dogwood, gum and cedar. This site had been severely eroded prior to abandonment. The soils were deeply weathered at this site with no rock encountered within 105 cm.

ORR Site 104. This site is located east of the X-10 complex, and about 300 ft south of the powerline ROW. The site is underlain by deeply weathered residuum of the Chickamauga Group. The landform is a doubly convex sideslope with a slope gradient of about 13%. Present vegetation is old-field successional forest. Most of the original pines and cedars have disappeared. Present trees consist of oaks, red maple and hickories. There are some lowbush blueberries and the ground surface is leaf covered.

ORR Site 108. This site is located in Bethel Valley east of the X-10 complex. It is underlain by shallow residuum of the Chickamauga Group with depth to rock varying from 53 to 95 cm in the soil pit. The landform is a doubly convex sideslope with a slope gradient of about 9%. Present vegetation is old-field successional forest with some large pines, more smaller pines and an understory of hardwoods. There is also fairly thick brush along with honeysuckle and poison ivy on the forest floor. The forest floor is mostly leaf covered but there are small patches of mosses.

ORR Site 110. This site is located east of ORR Site 108 and farther east of the X-10 complex. This site is underlain by residuum of the Chickamauga Group. The landform is a convex, elongated ridgetop with a slope gradient at the soil pit of about 2%. This site is in an area where experiments had been located in the past. Present vegetation is old-field successional forest with pines, cedars and oaks as canopy trees. There are also smaller beech and dogwood along with weeds and honeysuckle. This site had been severely eroded prior to abandonment. The soil had thin rock ledges at several depths in the pit face that was sampled.

ORR Site 115. This site is located in Bethel Valley, east of ORR Site 110 but in the same vicinity, and close to the Walker Branch embayment of Melton Hill Lake. This site is underlain by shallow residuum of the Chickamauga Group Unit E. Depth to rock on the site ranged from above the ground surface to a maximum depth of 75 cm. The landform is a convex ridgetop with a slope gradient of about 3%. Present vegetation is old-field successional forest of Virginia pine, red cedar, oaks, hickories, ash and dogwood. Poison ivy was abundant. The site does not appear to have been plowed in the past, but was probably a woods pasture.

Depth to rock in the soil pit was between 25 and 45 cm except for one corner that was 75 cm deep.

ORR Site 116. This site is located on a peninsula of the Walker Branch Embayment and about 500 ft south of Bethel Valley road. This site is underlain by deeply weathered residuum of the Chickamauga Group Unit F. There were some rounded gravels on the surface, an indication that this site was covered with alluvium sometime in the past. A flint chip was found in the old Ap horizon, an indication that this area has been used for quite some time in the past. The landform is a slightly elongated, slightly convex ridgetop with a slope gradient of about 3%. Present vegetation is a planted stand of loblolly pine with an estimated age of about 40 years. There are a few hardwoods in the understory and there is abundant honeysuckle. This site is located fairly close to an old house or barn.

ORR Site 117. This site is located on a peninsula located in the Walker Branch embayment and about 300 ft south of ORR Site 116. This site is underlain by residuum of the Chickamauga Group Unit G. Rock was encountered in the soil pit at a depth of 105 cm. The landform is a slightly convex spur that was once covered with old alluvium. Slope gradient on the site was about 2%. Present vegetation is a planted loblolly pine plantation with approximately 40 year old trees. Landform is a slightly convex spur that extends out into the lake and the slope gradient at the site is about 2%. This site was farmed in the past.

ORR Site 118. This site is located in the K-25 section of the ORR. This site along with sites ORR Site 119 and ORR Site 120 occur in the only, almost undisturbed, stand of native hardwoods left in the East Fork area of Poplar Creek. The site is underlain by deeply weathered residuum of the East Fork section of the Chickamauga Group. The landform is a doubly convex spur between two small drainageways. Slope gradient is about 6%, This site is underlain by deeply weathered residuum of the East Fork Chickamauga Group. Present vegetation is old growth hardwoods of white oak, American beech, cherry and sugar maple. This part of the forest does not appear to have been plowed but the site has been eroded, probably the results of cattle pasturing or burning off the ground cover. The soil is typical of most deep Chickamauga soils.

ORR Site 119. This site is located in the K-25 section of the ORR, and within the only area of old growth hardwoods in the area. The site is underlain by residuum of the East Fork section of the Chickamauga Group. The landform is a narrow convex ridge with a slope gradient of about 3%. Vegetation at this site is cutover woods. Present trees are cedars along with oaks, ash and hardwood saplings. Depth to rock varied from 30 cm to more than 100 cm in the soil pit.

ORR Site 120. This site is located in the K-25 section of the ORR. It is underlain by deeply weathered residuum of the East Fork section of the Chickamauga Group. The landform is a sideslope with slight convexity and a slope gradient of about 4%. Present vegetation is old growth hardwoods dominated by beech. This does not appear to have aver been plowed but was probably a woods pasture. The soil on this site had a surficial layer of old alluvium that was about 27 cm thick.

ORR Site 121. This site is located in the K-25 section of the ORR and about 200 ft south of the old county road. This site is also about 200 ft north of an old cemetery. The landform is a convex shoulder of a broad, slightly convex ridgetop. Slope gradient is about 5%. Present vegetation is a mature stand of old-field successional forest. Dominant canopy trees are

Virginia pine with an understory of hardwoods. The forest floor is open but covered with pine needles. This site had been plowed and was severely eroded at abandonment.

ORR Site 122. This site is located in the K-25 section of the ORR. This site is underlain by deeply weathered residuum of the East Fork section of the Chickamauga Group. The landform at this site is an elongated but narrow ridgetop with a slope gradient of about 6%. Present vegetation is a planted loblolly pine plantation with trees about 40 years old. There are abundant briars and honeysuckle. This site is located close to an old farm building site. This site has been subjected to some erosion.

ORR Site 123. This site is located in the K-25 section of the ORR. This site is underlain by deeply weathered residuum of the East Fork section of the Chickamauga Group. The landform is a convex sideslope below a prominent cherty ridge. Present vegetation is a loblolly pine plantation with trees about 40 years old. This site had been severely eroded prior to abandonment.

ORR Site 124. This site is located in the K-25 section of the ORR. And just west of a rock bluff overlooking the East Fork of Poplar Creek. This site is underlain at shallow depth by rocks of the East Fork section of the Chickamauga Group. Landform is a broad but slightly convex ridgetop with a slope gradient of about 2% at the pit site. The site is located near the edge of a loblolly pine plantation. The soil surface is leaf covered and there has been no recent disturbance, but there had been disturbance when the pines were planted.

ORR Site 125. This site is located in the K-25 section of the ORR, and close to ORR Site 123 and ORR Site 124. The site is underlain by deeply weathered residuum of the East Fork section of the Chickamauga Group. The landform is a very gently sloping, slightly convex ridge with a slope gradient of about 3% at the site. Present vegetation is loblolly pine about 40 years old. This site had been severely eroded before abandonment.

ORR Site 126. This site is located in the K-25 section of the ORR. and on the south side of the Oak Ridge Turnpike about 500 ft. This site is underlain by deeply weathered residuum of the East Fork section of the Chickamauga Group. The actual soil pit was in a brecciated zone. Several sandstone fragments from the Rockwood sandstone of East Fork Ridge were in the subsoil. The landform is the convex top of a narrow spur ridge with a slope gradient of about 5%. Present vegetation is old-field successional forest, presently a mix of pines and hardwoods. There is abundant poison ivy ground cover and considerable mosses. The soils were severely eroded prior to abandonment.

ORR Site 127. This site is located in the K-25 section of the ORR, and on the south side of the Oak Ridge Turnpike about 300 ft. The site is underlain by deeply weathered residuum of the East Fork Chickamauga Group. The landform is a broad convex ridgetop with a slope gradient of about 2%. Present vegetation is old-field successional forest of Virginia pine, red cedar, ash, some tulip poplar along with abundant ground cover of poison ivy and honeysuckle. The soil was severely eroded prior to abandonment.

ORR Site 128. This site is located in the K-25 section of the ORR, and on the south side of the Oak Ridge Turnpike about 400 ft. The site is underlain by deeply weathered residuum of the East Fork section of the Chickamauga Group. The landform is an interfluve between the heads of two gullies and with a slope gradient of about 4%. Present vegetation is old-field successional forest that is dominated by Virginia pine, red cedar along with dogwood and red

maple. There is abundant poison ivy and honeysuckle. The soil at this site was severely eroded prior to abandonment.

ORR Site 129. This site is located in the K-25 section of the ORR. IT is located on the old county road as shown on the site location map. The actual site is about 250 ft east of the gravel road. This site is underlain by deeply weathered residuum of the East Fork section of the Chickamauga Group, and also very close to the Whiteoak Mountain Fault. The landform is the lower convex sideslope with a slope gradient of about 11%. Present vegetation is old-field successional forest. This site was probably a pasture and was not severely eroded before abandonment. Present trees are white pine, and a few large oaks. There are also some holly trees, plus red maple and oak sprouts.

A.2 ROANE COUNTY SITE DESCRIPTIONS

ROANE Site 3. On the Pattie Gap quadrangle, go south on Dry Fork Valley Road. This property lies west from Salem Baptist Church. The site is in the hardwood forest 550 ft west of the church, 350 ft southwest of Stamp Creek, and 200 ft southeast of the power lines. The present vegetation is oak, sweetgum, red maple, dogwood, and poison ivy. There was no evidence of a plow layer. The underlying geology is the Dismal Gap Formation. The site lies between several rills and gullies in a convex toeslope position.

ROANE Site 7. On the Pattie Gap quadrangle, go south on Dry Fork Valley Road. After passing Blue Springs Road, the power lines will cross the road. The site is in the hardwood thicket 1500 ft southwest of the intersection of Blue Springs Road and Dry Fork Valley Road. It is 750 ft west of the intersection of the power lines and Dry Fork Valley Road. It is 600 ft west of Dry Fork Creek. This site has been cleared at one time. The present vegetation is tulip poplar, dogwood, red maple, and some Virginia pine. Age of the deciduous trees indicated they had been established at least 40 years. There was evidence of a plow layer. There are many spots where rills are beginning to develop. The underlying geology is the Dismal Gap Formation. There is evidence of colluvium on this site. Oddly, in several places sandstone fragments can be seen laying on the surface. Presently, this area is occupied by cattle for pasture.

ROANE Site 8. On the Pattie Gap quadrangle, go south on Dry Fork Valley Road. After passing Blue Spring Road, the power lines will cross the road. The site is in the hardwood thicket 1800 ft southwest of the intersection of Blue Spring Road and Dry Fork Valley. It is 500 ft west of the intersection of the power lines and Dry Fork Valley Road. It is 300 ft east of Roane Site 7. This site has been cleared at one time. The present vegetation is tulip poplar, dogwood, red maple, and some Virginia pine. Age of the deciduous trees indicated they had been established at least 40 years. There was evidence of a plow layer. There are many spots where rills are beginning to develop. The underlying geology is the Dismal Gap Formation. There is evidence of colluvium on this site. Oddly, in several places sandstone fragments can be seen laying on the surface. Presently, this area is occupied by cattle for pasture.

ROANE Site 9. On the Pattie Gap quadrangle, go south on Dry Fork Valley Road. This property lies west from Salem Baptist Church. The site is in the hardwood forest 500 ft west of the church, 500 ft southwest of Stamp Creek, and 200 ft southeast of the power lines. The present vegetation is oak hardwoods mixed with Virginia pine. There was no evidence of a plow layer. The underlying geology is the Dismal Gap Formation. The site lies between several rills and gullies in a convex toeslope position.

ROANE Site 10. On the Pattie Gap quadrangle, go south on Dry Fork Valley Road. Turn west on to Gage Road. After crossing Stamp Creek, the site is on a small knob 300 ft northeast from Gage Road and 350 ft northwest of Dry Fork Valley Road. It lies 100 ft west from the creek. This site has been cleared at one time. The present vegetation is shortleaf pine, red maple, and oak. Age of the deciduous trees indicated they had been established at least 40 years. There was evidence of a plow layer. The underlying geology is the Dismal Gap Formation. There is evidence of alluvium on this site. Several large rounded rocks were on site and in the profile. The area north of this site was a sagegrass field with multiple gullies and rills. Presently, this area is occupied by cattle for pasture.

ROANE Site 13. On the Pattie Gap quadrangle, go south on Dry Fork Valley Road. Go past Gage Road. The site is in the forest 3000 ft south from Gage Road and 500 ft west from Dry Fork Valley Road. It is 250 ft west from the creek. The present vegetation is Virginia pine, red maple, dogwood, poison ivy, and chestnut oak. Age of the deciduous trees indicated they had been established at least 40 years. There was evidence of a plow layer. The underlying geology is the Dismal Gap Formation. The site is at the bottom of a long slope in a bench position. There is evidence of alluvium in the area but none was seen in this profile.

ROANE Site 14. On the Pattie Gap quadrangle, go south on Dry Fork Valley Road. Go past Gage Road. The site is in the forest 3200 ft south from Gage Road and 600 ft west from Dry Fork Valley Road. It is 250 ft west from the creek. This site is on a rise 200 ft south of Roane 13. The present vegetation is tulip poplar, red maple, dogwood, poison ivy, and chestnut oak. The understory vegetation is thick. Age of the deciduous trees indicated they had been established at least 40 years. There was evidence of a plow layer. The underlying geology is the Dismal Gap Formation. However, this formation is very thin and in digging the soil pit the Rogersville Formation was also exposed. The site is in a midslope position. The slope rapidly drops into a drain below the site.

ROANE Site 17. On the Pattie Gap quadrangle, go south on Dry Fork Valley Road. The site is in the pine thicket 1000 ft west of Dry Fork Valley Road and 3000 ft north of Waterford Lane. The present vegetation is Virginia pine, eastern red cedar, and sweetgum. This land has not been cleared in the last 40 years. There was no evidence of a plow layer. The underlying geology is the Dismal Gap Formation. The site lies between the convergence of two drains on a convex slope.

ROANE Site 19. On the Pattie Gap quadrangle, go south on Dry Fork Valley Road. This property lies west of Salem Baptist Church. The site is in the hardwood forest 750 ft west of the church, 750 ft southwest of the creek, and 200 ft southeast of the power lines. The present vegetation is oak, red maple, hickory, eastern red cedar, and dogwood. There was evidence of a plow layer. The underlying geology is the Dismal Gap Formation. The site lies between several rills and gullies on a convex toeslope.

ROANE Site 20. On the Pattie Gap quadrangle, go south on Dry Fork Valley Road. This property lies west of Salem Baptist Church. The site is in the hardwood forest 950 ft northwest of the church, 1000 ft southwest of Stamp Creek, and 200 ft southeast of the power lines. The present vegetation is chestnut oak, sweetgum, and dogwood. There was evidence of a plow layer. The underlying geology is the Dismal Gap Formation. The site lies between several rills and gullies in a toeslope position. Highly eroded.

ROANE Site 21. On the Pattie Gap quadrangle, go south on Dry Fork Valley Road. This property lies west of Salem Baptist Church. The site is in the hardwood forest 1100 ft west of the church, 1200 ft southwest of Stamp Creek, and 200 ft southeast of the power lines. The present vegetation is oak, red maple, tulip poplar, sweetgum, and ground pine. There was evidence of a plow layer. The underlying geology is the Dismal Gap Formation. The site lies between several rills and gullies in a midslope position.

ROANE Site 22. On the Pattie Gap quadrangle, go south on Dry Fork Valley Road. This property lies west of Salem Baptist Church. The site is in the hardwood forest 1400 ft west of the church, 1500 ft southwest of Stamp Creek, and 200 ft southeast of the power lines. The

present vegetation is oak, Virginia pine, tulip poplar, eastern red cedar, and ground pine. There was evidence of a plow layer. The underlying geology is the Dismal Gap Formation. The site lies between several rills and gullies in a midslope position on a bench.

ROANE Site 33. This site is on the Pattie Gap Quadrangle. The site is 500 ft east from Dry Fork Valley Road, 500 ft north from Gage Road, and 400 ft northeast from an old limestone quarry that is marked on the topo map. This area has been under hardwood forest for the last 40 years. The primary constituents are redbuds, scarlet oak, hickory, dogwood, and blackjack oak. The area has been burned over at some time in the past. Scars on the trunks of the older trees were very evident. The underlying geology is the Copper Ridge Formation.

ROANE Site 34. This site is on the Pattie Gap Quadrangle. The site is 1000 ft southeast from Dry Fork Valley Road, 1200 ft northeast from Gage Road, and 1000 ft northeast from an old limestone quarry that is marked on the topo map. This area has been under hardwood forest for the last 40 years. The primary constituents are scarlet oak, black oak, Virginia pine, and blackjack oak. The area has been burned over at some time in the past. Scars on the trunks of the older trees were very evident. The underlying geology is the Copper Ridge Formation.

ROANE Site 35. This site is on the Pattie Gap Quadrangle. The site is 1000 ft southeast from Dry Fork Valley Road, 1000 ft northeast from Gage Road, and 100 ft west from an old logging road. This area has been under hardwood forest for the last 40 years. The primary constituents are scarlet oak, chestnut oak, hickory, dogwood, sassafras and blackjack oak. The area has been burned over at some time in the past. Scars on the trunks of the older trees were very evident. The underlying geology is the Copper Ridge Formation.

ROANE Site 39. Located on the Pattie Gap Quadrangle, this site lies 500 ft north from Williams Road and 1000 ft southeast from the intersection of Williams Road and Dry Fork Valley Road. This area been forested for the last 50 years. The primary forest species were chestnut oak, scarlet oak, blackjack oak, and dogwood. The underlying geology is the Copper Ridge Formation.

ROANE Site 40. Located on the Pattie Gap Quadrangle, Roane 40 lies 900 ft north from Williams Road and 1500 ft southeast from Dry Fork Valley Road. This area been forested for the last 50 years. The primary forest species were chestnut oak, white oak, hickory, and Virginia pine. The underlying geology is the Copper Ridge Formation.

ROANE Site 41. On the Pattie Gap quadrangle, this site is 1200 ft northeast from Williams Road 1800 ft southeast from Dry Fork Valley Road. This area been forested for the last 50 years. The primary forest species were chestnut oak, scarlet oak, and white oak. The underlying geology is the Copper Ridge Formation.

ROANE Site 42. This site is located on the Pattie Gap quadrangle 1500 ft southeast from Dry Fork Valley Road and 50 ft northeast of an old logging road. It is 1000 ft south of the powerlines. This area was under deciduous forest, primarily red maple, blackjack oak, chestnut oak, and red sumac. The area has not been cleared in the last 40 years. The underlying geology is the Copper Ridge Formation.

ROANE Site 43. The site is on the Pattie Gap Quadrangle. Located 1300 ft southeast from Dry Fork Valley Road, this site is 100 ft northeast of an old logging road and 1200 ft

south from the power lines. This area was under deciduous forest, primarily sassafras, dogwood, chestnut oak, and red sumac. The area has not been cleared in the last 40 years. The underlying geology is the Copper Ridge Formation.

ROANE Site 44. The site is on the Pattie Gap Quadrangle and located 1000 ft southeast from Dry Fork Valley Road and 1400 ft south from the power lines. This area was under deciduous forest, primarily dogwood, maple, blackjack oak, chestnut oak, and tulip poplar. The area has not been cleared in the last 40 years. The underlying geology is the Copper Ridge Formation.

ROANE Site 45. The site is on the Pattie Gap Quadrangle. Roane 45 is located 1500 ft southeast from Dry Fork Valley Road, 100 ft west of an old logging road, and 1600 ft south from the power lines. This area was under deciduous forest, primarily sassafras, dogwood, chestnut oak, and hickory. The area has not been cleared in the last 40 years. The underlying geology is the Copper Ridge Formation.

ROANE Site 46. The site is on the Pattie Gap Quadrangle. Located 1500 ft southeast from Dry Fork Valley Road, this site is 100 ft west of an old logging road and 1800 ft south from the power lines. This area was under deciduous forest, primarily sassafras, dogwood, chestnut oak, and red maple. The area has not been cleared in the last 40 years. The underlying geology is the Copper Ridge Formation.

ROANE Site 47. The site is on the Pattie Gap Quadrangle. This site is located 1400 ft southeast from Dry Fork Valley Road. It is 200 ft west of an old logging road and 2100 ft south from the power lines. This area was under deciduous forest, primarily tulip poplar, dogwood, oak, and red maple. The area has not been cleared in the last 40 years. The underlying geology is the Copper Ridge Formation.

A.3 ANDERSON COUNTY SITE DESCRIPTIONS

ANDERSON Site 1. The site is in a hardwood thicket adjacent to the Old Andersonville Pike between Hinds Creek Valley Road and US 441. Located in the Norris Quadrangle, this site is approximately 1400 ft northeast of Old Anderson Pike and 1000 ft west from Hinds Creek Road. This site is 200 ft northeast of Anderson Site 10. The site had been cleared at one time. The present vegetation is tulip poplar, dogwood, red maple, and some Virginia pine. Age of the deciduous trees indicated they had been established at least 50 years. The underlying geology is the Dismal Gap Formation. There was a water seep at approximately 40 centimeters. The slope dips strongly (30%) approximately 50 ft from the site. Presently, this area is occupied by cattle for pasture.

ANDERSON Site 3. This site is located on the Big Ridge Park quadrangle. Take Highway 441 north. Turn right on to Hinds Creek Road. After several miles, the road forks. Take the road on the left, which is Judson Road. The site is in a hardwood forest 100 ft northwest of Judson Road and 0.4 miles south from the intersection of Judson Road and Moore Valley Road (Cooper's Gap). The present vegetation is moss, poison ivy, dogwood, red maple, and Virginia pine. Age of the deciduous trees indicated they had been established at least 50 years. The underlying geology is the Dismal Gap Formation. The site is on a wide slope. The surface drops to a drainage way approximately 150 ft to the northwest. There are no houses near this site, although there are indications of an old home site approximately 300 ft southwest of the site near Judson Road.

ANDERSON Site 4. Located on the Big Ridge Park quadrangle, this site is in a hardwood forest 300 ft northwest of Judson Road and 0.6 miles south from the intersection of Judson Road and Moore Valley Road (Cooper's Gap). The present vegetation is poison ivy, dogwood, elm, cherry, sourwood, red maple, and Virginia pine. Age of the deciduous trees indicated they had been established at least 50 years. The underlying geology is the Dismal Gap Formation. The site is in the middle of a steep slope. It was difficult to find a good level position in which to dig.

ANDERSON Site 5. Located on the Big Ridge Park quadrangle, this site is in a hardwood forest 300 ft northwest of Judson Road and 0.6 miles south from the intersection of Judson Road and Moore Valley Road (Cooper's Gap). This site is 300 ft south from Anderson Site 4, but slightly higher on the slope. The present vegetation is poison ivy, dogwood, oak, and Virginia pine. Age of the deciduous trees indicated they had been established at least 50 years. The underlying geology is the Dismal Gap Formation. The site is in the middle of a steep slope. It was difficult to find a good level position in which to dig.

ANDERSON Site 9. This site is on the Powell quadrangle. Take Highway 441 north. Turn left onto East Wolf Valley Road. Go past Nolan Lane. The site is approximately 1300 ft north of East Wolf Valley Road and 0.25 miles west from Nolan Lane. It lies in a hardwood forest about 100 ft south of an old logging road downslope toward East Wolf Valley Road. The surrounding forest shows evidence of having been logged in the last 40 years. The site in a midslope position on a convex slope. The trees on this site are older and probably not logged as recently as those closer to the logging road. The present vegetation is tulip poplar, dogwood, red maple, and some Virginia pine. The underlying geology is the Dismal Gap Formation. This site is 300 ft north of Anderson Site 19.

ANDERSON Site 10. This site is in a hardwood thicket adjacent to the Old Andersonville Pike between Hinds Creek Valley Road and US 441. Located in the Norris Quadrangle, this site is approximately 1200 ft northeast of Old Anderson Pike and 1000 ft west from Hinds Creek Road. This site had been cleared at one time. The present vegetation is tulip poplar, dogwood, red maple, and some Virginia pine. Age of the deciduous trees indicated they had been established at least 50 years. The underlying geology is the Dismal Gap Formation. The site is in a level upland position. Presently, this area is occupied by cattle for pasture.

ANDERSON Site 11. Site is located on the Norris Quadrangle. Take Highway 441 north. Turn right on to Hinds Creek Road. Drive several miles until two signs saying Hidden Drive are passed. This site is located 600 ft northwest from Hinds Creek Road and 1000 ft northwest from the Hidden Drive sign. It is 700 ft south of a small creek. The present forest vegetation is tulip poplar, may apple, beech, red maple, and hickory. The understory vegetation is very thick. This site has probably been cleared at some time. Age of the deciduous trees indicated they had been established at least 50 years. The underlying geology is the Dismal Gap Formation.

ANDERSON Site 12. This site is on the Big Ridge Park Quadrangle. Take Highway 441 north. Turn right on to Hinds Creek Road. Drive several miles until Hill Road enters on the right. This site is located 500 ft northwest from the intersection of Hill Road and Hinds Creek Road and 100 ft west of the power lines. It is 200 ft west from Anderson Site 22 on a wide slope. A drain lies between sites 12 and 22. The present forest vegetation is dogwood, sweetgum, hickory, and Virginia pine. A thick carpet of grass underlies the trees. This site has probably been cleared at some time. Age of the deciduous trees indicated they had been established at least 50 years. The underlying geology is the Dismal Gap Formation. The site presently is used as pasture for cattle.

ANDERSON Site 19. This site is on the Powell quadrangle. Take Highway 441 north. Turn left onto East Wolf Valley Road. Pass Nolan Lane. The site is in a hardwood forest on the 300 ft south of an old logging road downslope toward East Wolf Valley Road. It is approximately 1000 ft north of East Wolf Valley Road and 0.25 miles west from Nolan Lane. The surrounding forest shows evidence of having been logged in the last 40 years. The site in a midslope position on a convex slope. The trees on this site are older and probably not logged as recently as those closer to the logging road. The present vegetation is tulip poplar, sassafras, red maple, moss, and some Virginia pine. The underlying geology is the Dismal Gap Formation. This site is 300 ft south of Anderson Site 9.

ANDERSON Site 20. Located on the Big Ridge Park quadrangle, the site is in a hardwood forest 100 ft northwest of Judson Road and 0.3 miles south from the intersection of Judson Road and Moore Valley Road (Cooper's Gap). The present vegetation is moss, poison ivy, dogwood, red maple, and Virginia pine. Age of the deciduous trees indicated they had been established at least 50 years. The underlying geology is the Dismal Gap Formation. The site is on a wide slope. There are several areas in which rills have developed and erosion is evident. There are no houses near this site, although there are indications of an old home site approximately 500 ft southwest of the site near Judson Road.

ANDERSON Site 21. Located on the Big Ridge Park Quadrangle, this site is located 700 ft northwest from the intersection of Hill Road and Hinds Creek Road and 150 ft west of the power lines. It is 200 ft northeast from Anderson Site 12. The site is located in a saddle between two slopes at the head of a drain. The present forest vegetation is dogwood,

sweetgum, hickory, and Virginia pine. A thick carpet of grass underlies the trees. This site has probably been cleared at some time. Age of the deciduous trees indicated they had been established at least 50 years. The underlying geology is the Dismal Gap Formation. The site presently is used for pasture for cattle.

ANDERSON Site 22. This site is located on the Big Ridge Park Quadrangle. It lies 500 ft northwest from the intersection of Hinds Creek Road and Hill Road and 300 ft west of the power lines. It is 200 ft east from Anderson Site 12 on a convex slope. A drain lies between sites 12 and 22. The present forest vegetation is dogwood, tulip poplar, eastern red cedar, and Virginia pine. A thick carpet of grass underlies the trees. This site has probably been cleared at some time. Age of the deciduous trees indicated they had been established at least 50 years. The underlying geology is the Dismal Gap Formation. The site presently is used as pasture for cattle.

ANDERSON Site 31. Anderson 31 is located on the Powell Quadrangle. Situated on top of a large knob, this site is 1000 ft west of the Powell/Knox water tank, 300 ft south of the dirt road leading to the water tank, and 800 ft northeast from Heiskell Road. This area has been undisturbed for the last 50 years. Vegetation is primarily hardwoods-sassafras, red oak, chestnut oak, and some Virginia pines. The underlying geology is the Copper Ridge Formation.

ANDERSON Site 32. This site is on the Powell Quadrangle. Located 200 ft north of Anderson 31, the site is 1200 ft southwest of the water tank, 100 ft south of the dirt road, 800 ft northeast from Heiskell Road. This area has been undisturbed for the last 50 years. Vegetation is primarily hardwoods-sassafras, hickory, red oak, and chestnut oak. The underlying geology is the Copper Ridge Formation.

ANDERSON Site 33. This site is located on the Powell Quadrangle. Located 500 ft southwest from Anderson 32, this site is 700 ft southwest of the water tank, 600 ft south of the dirt road, 900 ft northeast from Heiskell Road. This area has been undisturbed for the last 50 years. Vegetation is primarily hardwoods-sassafras, dogwood, hickory, red oak, and chestnut oak. The underlying geology is the Copper Ridge Formation.

ANDERSON Site 34. On the Powell Quadrangle, Anderson 34 is located across the dirt access road 500 ft north from Anderson 33. It is 500 ft northwest of the water tank, 100 ft north of the dirt road, 1400 ft northeast from Heiskell Road. This area has been undisturbed for the last 50 years. Vegetation is primarily hardwoods-sassafras, dogwood, red oak, and chestnut oak. The underlying geology is the Copper Ridge Formation.

ANDERSON Site 35. Located on the Powell Quadrangle, Anderson 35 is 200 ft northeast from Anderson 34. This site is 700 ft northwest of the water tank, 150 ft north of the dirt road, 1500 ft northeast from Heiskell Road. This area has been undisturbed for the last 50 years. Vegetation is primarily hardwoods-sassafras, dogwood, red oak, and chestnut oak. The underlying geology is the Copper Ridge Formation.

ANDERSON Site 36. Located on the Powell Quadrangle, this site is 700 ft northwest of the water tank, 200 ft north of the dirt road, 1600 ft northeast from Heiskell Road. This area has been undisturbed for the last 50 years. Vegetation is primarily hardwoods-red oak, yellow poplar, hickory, and white oak. The underlying geology is the Copper Ridge Formation.

ANDERSON Site 37. Located on the Big Ridge Park Quadrangle, the site is 800 ft west of Mt. Hebron church and 700 ft southeast from Hinds Creek Road. The area has been under forest for the last 40 years with vegetation primarily red cedar, red maple, and oaks. The underlying geology is the Copper Ridge Formation.

ANDERSON Site 38. The site is located on the Big Ridge Park Quadrangle. The site is 550 ft west of Mt. Hebron church and 650 ft southeast from Hinds Creek Road. The area has been under forest for the last 40 years with vegetation primarily red cedar, red maple, and red/black oaks. The underlying geology is the Copper Ridge Formation.

ANDERSON Site 39. Located on the Big Ridge Park Quadrangle, this site is 1000 ft south from Mount Zion Church and 1000 ft southeast from Hinds Creek Valley Road. Site has been under forest for the last 40 years with vegetation primarily red oak, hickory, and red maple. The underlying geology is the Copper Ridge Formation.

ANDERSON Site 40. Located on the Big Ridge Park Quadrangle, this site is 1200 ft south from Mount Zion Church and 1500 ft southeast from Hinds Creek Valley Road. It is 500 ft west from Anderson Site 42. Site has been under forest for the last 40 years with vegetation primarily Virginia pine, ferns, and red maple.

ANDERSON Site 41. This site is located on the Big Ridge Park Quadrangle. It is 1500 ft south from Mount Zion Church and 1700 ft southeast from Hinds Creek Valley Road. It is 200 ft west from Anderson Site 42. Site has been under forest for the last 40 years with vegetation primarily Virginia pine, ferns, dogwood, and red maple.

ANDERSON Site 42. Located on the Big Ridge Park Quadrangle. This site is located 1200 ft south from Mount Zion Church and 1800 ft southeast from Hinds Creek Valley Road. It is 800 ft southeast from Anderson Site 39. Site has been under forest for the last 40 years with vegetation primarily Virginia pine, ferns, and red maple.

A.4 OAK RIDGE RESERVATION SOIL PROFILES

ORR Site 2

(See pp. 20, 66, 67, 70, 71, 91 in Phase I Field Book 1)

Location:	Oak Ridge Reservation, Grid N29300, E10300.
Classification:	Ruptic Ultic Dystrochrepts; clayey Bt, loamy-skeletal Bw, C, and Cr, mixed, thermic
Geomorphic Position:	Middle of convex sideslope
Slope and Aspect:	16% west-northwest
Parent Material(s):	Middle Dismal Gap Formation
Vegetation:	Oaks, few red maple, sweet gum, and white pine. This site was probably cleared and probably pastured but never plowed
Described By:	D. A. Lietzke
Sampling Crew:	Lietzke, Wilson
Rad. Scan:	Air 25; ground level, 45
Weather Yesterday:	Partly cloudy, cool, scattered showers
Present Weather:	Partly cloudy, cool
Date:	May 6, 1992

Soil Description:

Oi	4 to 0 cm; leaf litter, 100% coverage, few tree sprouts
A	0 to 5 cm; dark brown (10YR 3/3) silt loam; strong fine granular structure; very friable; abrupt wavy boundary
E	5 to 14 cm; yellowish-brown (10YR 5/4) silt loam; weak fine subangular blocky structure; very friable; clear wavy boundary
BE	14 to 20 cm; yellowish-brown (10YR 5/6) shaly silty clay loam; weak fine subangular blocky structure; friable; clear wavy boundary
Bt	20 to 32 cm; yellowish-red (5YR 5/6) shaly clay; strong medium subangular blocky structure; firm; all peds coated with yellowish-brown (10YR 5/6) materials; abrupt irregular boundary
BC&Cr	32 to 74 cm; strong brown (7.5YR 5/6) fragment interiors in BC materials and light yellowish-brown (2.5Y 6/4) fragment interiors in C and Cr materials. Fine earth and clay flows are strong brown (7.5YR 4/6); nearly all rock controlled structure; firm; much glauconite in BC materials; abrupt irregular boundary
Cr	74 to 80 cm; Not described

Notes: The ESD composite samples were collected from a pit face oriented with strike. There was less variability than the field duplicate samples that were collected from a pit face oriented across the strike. See pp. 66 and 67 in the field log book for sketches. The field duplicate samples were collected from the appropriate inclined soil horizon as shown in the sketch on p. 67. Depths of sampling are: A, 0 to 14 cm; B, 20 to 32 cm; C, 32 to 50 cm.

ORR Site 3

(See pp. 94, 109 and 128 in Phase I Field Book 1 and pp. 4 and 5 in Phase I Field Book 2)

Location:	Oak Ridge Reservation, Grid N29300, E11200. This site is within 50 ft of the top edge of Bear Creek road embankment.
Classification:	Typic hapludults; clayey, mixed, thermic
Geomorphic Position:	Broad slightly convex sideslope
Slope and Aspect:	5% south
Parent Material(s):	Middle Nolichucky Shale
Vegetation:	Old field successional forest. Most old pines have died and fallen over. Present regrowth is V. pine, W. pine, oak, hickory, sassafras. cedar, with a sparse poison ivy ground cover.
Described By:	D. A. Lietzke
Sampling Crew:	Lietzke, Burgoa
Rad. Scan:	Air 50 ; ground level, 40
Weather Yesterday:	Clear, very warm, with an evening shower
Present Weather:	Partly cloudy, very warm, and humid
Date:	July 22, 1992

Soil Description:

Oi	3 to 0 cm; leaf litter and pine needles
A	0 to 5 cm; dark brown (10YR 3/3) silt loam; strong fine granular structure; very friable; abrupt wavy boundary
Ap	5 to 15 cm; yellowish-brown (10YR 5/4) silt loam; moderate medium granular structure; friable; abrupt wavy boundary
B&E	15 to 18 cm; dark yellowish-brown (10YR 4/6) B part, and yellowish-brown (10YR 5/6) E part; silty clay loam; weak medium subangular blocky structure; friable; abrupt wavy boundary
Bt	18 to 40 cm; strong brown (7.5YR 4/6) clay; moderate medium subangular blocky structure; firm; strong brown (7.5YR 4/4) ped coatings; abrupt irregular boundary
C	40 to 51 cm; light olive brown (2.5Y 5/4) fragment interiors; plugged with strong brown (7.5YR 5/4) clay; all rock structure; abrupt irregular boundary
Cr	51 to 60 cm; brown (7.5YR 5/2) fragment interiors with most surfaces coated with dark red (2.5YR 3/6) iron-clay complexes

Notes: Sampling depths for ESD composites are: A, 0 to 15 cm; B, 18 to 40 cm; C, 40 to 51 cm.

ORR Site 5

(See pp. 95, 109, and 133 in Phase I Field Book 1 and pp. 1 and 2 in Phase I Field Book 2)

Location:	Oak Ridge Reservation, Grid N29300, E15300, about 300 ft west of Central Training facility main entrance and 25 ft south of the boundary fence
Classification:	Typic hapludults; clayey, mixed, thermic
Geomorphic Position:	Broad bench landform on a convex spur
Slope and Aspect:	1%
Parent Material(s):	Middle Nolichucky Shale with several carbonate strata
Vegetation:	Old field successional forest. Most old pines have died and fallen over. Present regrowth is a dense stand of young pines, cedar, oak, dogwood, and sweet gum along with a generous stand of honeysuckle and greenbriar.
Described By:	D. A. Lietzke
Sampling Crew:	Lietzke, Burgoa
Rad. Scan:	Air 40, ground level, 50
Weather Yesterday:	Clear and very warm with showers during the past evening
Present Weather:	Cloudy and cooler
Date:	July 22, 1992

Soil Description:

Oi	5 to 3 cm; mosses and pine needles
Oe	3 to 0 cm; hemic materials, sapric materials and a dense root mat
Ap	0 to 10 cm; yellowish-brown (10YR 5/4) silt loam; moderate fine granular structure; very friable; abrupt wavy boundary
Bt	10 to 40 cm; strong brown (7.5YR 4/6) clay or silty clay; moderate medium subangular blocky structure; firm; strong brown (7.5YR 4/4) ped coatings; abrupt irregular boundary
C&Cr	40 to 60 cm; olive brown (2.5Y 4/3) fragment interiors with red and black surface coatings; strong brown (7.5YR 5/4) clay coatings on some surfaces and also as plugged zones

Notes: This is the only ORR Phase I site that has a thick moss layer. Sampling depths are: A, 0 to 10 cm; B, 10 to 40 cm; C, 40 to 55 cm.

A-28

ORR Site 10

(See pp. 21, 39, 54, 55, and 91 in Phase I Field Book 1)

Location:	Oak Ridge Reservation, Grid N30200, E21460
Classification:	Typic dystrochrepts; loamy-skeletal, mixed, thermic
Geomorphic Position:	Upper convex sideslope just below ridge crest
Slope and Aspect:	20% south southwest
Parent Material(s):	Lower Dismal Gap Formation
Vegetation:	Hardwood forest that regenerated from older severely eroded old-field forest succession. Present trees are white oak, hickory, cedar, ash. Ground cover of leaves and thick stand of poison ivy, five-leaf ivy and honeysuckle.
Described By:	D. A. Lietzke
Sampling Crew:	Lietzke, Wilson, Farmer
Rad. Scan:	Air, 20; ground level, 20
Weather Yesterday:	Cool, widely scattered showers in the morning with clearing and warmer in the PM as the front went through
Present Weather:	Clear and warm
Date:	May 1, 1992

Soil Description:

Oi	4 to 0 cm; leaf litter
Oa	0 to 1 cm; sapric and hemic materials with a root mat
A	1 to 12 cm; brown (10YR 4/3) shaly silt loam; strong fine granular structure; very friable; clear wavy boundary
Bw	12 to 24 cm; yellowish-brown (10YR 5/6) shaly or very shaly silt loam or silty clay loam; moderate medium subangular blocky structure; very friable; some peds coated with darker materials; abrupt irregular boundary. (An intermittent Bt horizon, formed in a carbonate stratum was dug out before sampling for ESD composites started.)
C	24 to 46 cm; light olive brown (2.5Y 5/6) fragment interiors; most fragment surfaces thickly coated with yellowish-brown (10YR 5/4) silty materials. There are thin seams of red (2.5YR 4/8) clay originally derived from carbonate seams in the rock; 60 to 90% geologic structure; interbedded with harder Cr materials at lower depths
Cr	46 to 80 cm; light olive brown (2.5Y 5/6) fragment interiors; surface coatings of dark red (2.5YR 3/6) and yellowish-brown (10YR 5/4)

Notes: Three sides of the pit were Typic Dystrochrepts. The fourth side had a Bt horizon but it was confined to a thin carbonate stratum and it had disappeared when the pit was enlarged to sample for ESD composites. The Oa horizon was not sampled. Sample depths are: A, 1 to 12 cm: B, 12 to 24 cm; C, 24 to 46 cm.

ORR Site 11

(See pp. 16, 17, 32, and 91 in Phase I Field Book 1)

Location:	Oak Ridge Reservation, about 50 ft grid north of TVA power line ROW; Grid N29800, E21460
Classification:	Typic Hapludults; clayey, mixed, thermic
Geomorphic Position:	Lower slightly convex sideslope; severely eroded before or after abandonment
Slope and Aspect:	13% southwest
Parent Material(s):	Upper Dismal Gap Formation and transition zone to lower Nolichucky
Vegetation:	Old field regrowth. Most pines have died and have fallen over. Young brush and sprouts of dogwood, sassafras, cherry, red maple and sweet gum, with an abundant ground cover of poison ivy and honeysuckle
Described By:	D. A. Lietzke
Sampling Crew:	Lietzke, Wilson, Phillips, Farmer
Rad. Scan:	Air, 15; ground level, 70
Weather Yesterday:	Partly cloudy and cool
Present Weather:	Clear and warmer
Date:	March 17, 1992

Soil Description:

Oi	4 to 0 cm; leaves and pine needles
Oa	0 to 1 cm; black (10YR 2/1) organic matter and root mat
Ap	1 to 18 cm; brown (10YR 4/3) silty clay loam with fresh shale fragments; moderate fine granular structure; friable; common fine roots; abrupt wavy boundary
Bt	18 to 36 cm; yellowish-red (5YR 5/6) silty clay or clay; moderate medium subangular blocky structure; friable; few fine roots and few medium roots; strong brown (7.5YR 4/6) clay coats on all ped faces; gradual wavy boundary
BC	36 to 48 cm; strong brown (7.5YR 4/6) shaly silty clay or shaly clay; moderate coarse prismatic parting to moderate medium to coarse subangular blocky structure; firm; many fragments oriented with respect to the geologic strike and dip; yellowish and reddish parent materials saprolitic colors also present
C	48 to 85 cm; red (2.5YR 4/8) and yellowish-red (5YR 5/8 fragment interiors; material easily crushes to shaly or very shaly silty clay loam; 70 to 90% rock structure; yellowish-red (5YR 4/6) coatings on many fragment faces
Cr	85 to 132 cm; fragment interiors range from red to olive; some fragment faces are coated with dark red (10R 3/6) while other fragment surfaces coated with yellowish-brown (10YR 5/4) clay; some fragments with light olive gray (5Y 6/2) fringes indicating wetness conditions; light brownish-gray (2.5Y 6/2) flow zones also occur in this horizon; fine roots in flow zones

Notes: Sampling depths are: A, 1 to 18 cm; B, 23 to 36 cm; C, 51 to 62 cm.

ORR Site 13

(See pp. 95, 109, 135 in Phase I Field Book 1 and pp. 12 and 13 of Phase I Field Book 2)

Location:	Oak Ridge Reservation, Grid N29480, E23220
Classification:	Typic hapludults; clayey, mixed, thermic
Geomorphic Position:	Broad convex ridgetop
Slope and Aspect:	3% northwest
Parent Material(s):	Middle Nolichucky Shale
Vegetation:	Old house site, probably a yard at one time. Present vegetation is maple and poplar with a dense ground cover of poison ivy.
Described By:	D. A. Lietzke
Sampling Crew:	Lietzke, Burgoa
Rad. Scan:	Air, 50; ground level, 60
Weather Yesterday:	Partly cloudy, very warm
Present Weather:	Cloudy, very humid
Date:	July 22, 1992

Soil Description:

Oi	2 to 0 cm; leaf litter
Ap	0 to 23 cm; brown (10YR 4/3) silt loam or shaly silt loam; strong fine granular structure; very friable; abrupt wavy boundary
Bt	23 to 46 cm; strong brown (7.5YR 4/4) clay or shaly clay; moderate medium subangular blocky structure; friable; brown (10YR 4/4) ped coatings; clear wavy boundary
C	46 to 69 cm; brecciated zone with many disoriented small fragments with olive yellow (2.5Y 6/6) interiors; rock controlled structure; friable; crushes easily to a shaly or very shaly silty clay loam or silty clay

Notes: This site is in a brecciated zone that is deeply weathered. Sampling depths for ESD composites are: A, 0 to 23 cm; B, 23 to 46 cm; C, 46 to 56 cm.

ORR Site 15

(See pp. 95, 111, 116, and 117 in Phase I Field Book 1)

Location:	Oak Ridge Reservation, Grid N29700, E25720, about 25 ft north of gas line ROW
Classification:	Typic hapludults; clayey, mixed, thermic
Geomorphic Position:	Broad, slightly convex, ridgetop
Slope and Aspect:	2–3% south southwest
Parent Material(s):	Lower Nolichucky Shale
Vegetation:	Stand of 40 to 50-year-old loblolly pines, with an understory of oaks, red maple, dogwood, and a ground cover of honeysuckle and grasses
Described By:	D. A. Lietzke
Sampling Crew:	Lietzke, Wilson
Rad. Scan:	Air, 30; ground level, 40
Weather Yesterday:	Cloudy with scattered showers, cool
Present Weather:	Partly cloudy and cool
Date:	May 27, 1992

Soil Description:

Oi	2 to 0 cm; pine needles and a few leaves
A	0 to 2 cm; brown (10YR 4/3) silt loam; moderate fine granular structure; very friable; abrupt wavy boundary
Ap	2 to 16 cm; yellowish-brown (10YR 5/6) silt loam or silty clay loam; weak medium granular structure; friable; abrupt wavy boundary
Bt	16 to 36 cm; yellowish-red (5YR 5/6) clay; moderate medium subangular blocky structure; firm; strong brown (7.5YR 4/6) clay films on all ped surfaces; few parent material reds and yellows in some ped interiors in the lower part; abrupt irregular boundary
C/Cr	36 to 60 cm; olive yellow (2.5Y 6/8) fragment interiors and thin strong brown (7.5YR 4/6) clay seams; yellowish-red (5YR 5/6) clay flows coating C horizon material; most Cr horizon fragments coated with red iron oxides; all rock controlled structure; C and Cr materials occur in thin strata that had weathered differentially with respect to each other
Cr	60 to 70 cm; brown (7.5YR 4/4) fragment interiors of less weathered strata and yellowish-red (5YR 4/6) fragment interiors of more highly weathered strata; dark red (2.5YR 3/6–3/4) iron oxides on many fragment surfaces

Notes: Sampling depths are: A, 0 to 16 cm; B, 16 to 36 cm; C, 36 to 60 cm.

ORR Site 16

(See pp. 98, 11, and 113 in Phase I Field Book 1)

Location:	Oak Ridge Reservation, Grid N29700; E25928
Classification:	Typic hapludults; clayey, mixed, thermic
Geomorphic Position:	Sideslope, slight convexity
Slope and Aspect:	10% southeast; severely eroded before abandonment
Parent Material(s):	Middle Nolichucky Shale
Vegetation:	Loblolly Pine plantation with approximately 40-year-old trees; understory of dogwoods, oaks, sweetgum. Sparse ground cover of honeysuckle and poison ivy
Described By:	D. A. Lietzke
Sampling Crew:	Lietzke, Burgoa
Rad. Scan:	Air, 45; ground level, 60
Weather Yesterday:	Clear and warm
Present Weather:	Clear and warm
Date:	July 20, 1992

Soil Description:

Oi	3 to 0 cm; pine needles and some leaves
A	0 to 7 cm; dark yellowish-brown (10YR 4/4) shaly silt loam; moderate fine granular structure; very friable; abrupt wavy boundary
Ap	7 to 20 cm; yellowish-brown (10YR 5/4) shaly silty clay loam; moderate medium granular structure; very friable; clear wavy boundary
Bt	20 to 33 cm; strong brown (7.5YR 4/6) clay or shaly clay; moderate medium subangular blocky structure; friable; all peds coated; clear wavy boundary
BC	33 to 43 cm; strong brown (7.5YR 5/4) very shaly silty clay loam; weak medium subangular blocky structure and areas of rock controlled structure; firm; strong brown (7.5YR 5/4) clay coatings on most fragment surfaces, with the clay covering a thick layer of black manganese oxides; abrupt irregular boundary
C	43 to 88 cm; yellowish-brown (10YR 5/6) fragment interiors; crushes to shaly silty clay or very shaly silty clay loam; 90% rock controlled structure; clay plugged; some black coatings; firm; abrupt irregular boundary

Notes: Sampling depths for ESD composites are: A, 0 to 20 cm; B, 20 to 33 cm; C, 43 to 63 cm.

ORR Site 19

(See pp. 21, 33, 35, 37, 42, 43, and 91 in Phase I Field Book 1)

Location:	Oak Ridge Reservation, 60 ft east of telegraph ROW within the Bear Creek LLWDDD; Grid N33000, E28530
Classification:	Typic hapludults; clayey, mixed, thermic
Geomorphic Position:	Top of broad spur ridge
Slope and Aspect:	4% west
Parent Material(s):	Lower Dismal Gap Formation
Vegetation:	Old-field forest. Most pines have fallen. Young hardwoods of cherry, sweet gum, cedar, poplar, dogwood and virginia pine. Sparse ground cover of honeysuckle. Ground surface, 100% leaf covered.
Described By:	D. A. Lietzke
Sampling Crew:	Lietzke, Wilson, Farmer
Rad. Scan:	Air, 30; ground level, 40
Weather Yesterday:	Cool, cloudy, light showers
Present Weather:	Cool, cloudy with cold front moving through
Date:	April 27, 1992

Soil Description:

Oi	5 to 0 cm; leaf litter
oa	0 to 1 cm; sapric and hemic materials and dense root mat
A	1 to 6 cm; dark brown (10YR 3/3) silt loam; moderate fine granular structure; very friable; clear wavy boundary
Ap	6 to 16 cm; yellowish-brown (10YR 5/4) shaly silt loam; moderate fine granular structure; very friable; abrupt wavy boundary
BE	16 to 25 cm; strong brown (7.5YR 5/6) shaly silty clay loam; weak medium subangular blocky structure; friable; clear wavy boundary
Bt	25 to 51 cm; yellowish-red (5YR 4/6) silty clay or clay; moderate medium subangular blocky structure; friable; strong brown (7.5YR 5/6) clay on all ped faces; clear wavy boundary
BC	51 to 54 cm; transition to C horizon with loss of soil structure and start of geologic strike and dip controlled rock structure
C	54 to 84 cm; alternating strata of brown (7.5YR 4/3) very fine grained sandstone saprolite and shale-siltstone saprolite. Saprolite is plugged with yellowish-red (5YR 4/6) clay
Cr	84 to 90 cm; Harder shale strata. Fragment interiors are olive brown (2.5Y 4/4). Most surface are coated with black manganese oxides and some yellowish-red (5YR 4/6) clay

Notes: The Bt horizon is continuous around the pit. The Cr horizon in shale starts at 60 cm depth while the Cr in the sandstone strata occurs at a depth of 80 to 84 cm below the surface. Sampling depths are: A, 0 to 16 cm; B, 25 to 51 cm; C, 54 to 74 cm. This site was moved from its original location, which was in a young stand of planted pines, to a location in an old field successional forest.

ORR Site 21

(See pp. 99, 107, 139, 158, and 159 in Phase I Field Book 1)

Location:	Oak Ridge Reservation, Grid N29700, E30940. Site in old field, grown up to pines
Classification:	Ruptic Ultic Dystrochrepts; clayey Bt, loamy-skeletal Bw, C and Cr, mixed, thermic
Geomorphic Position:	Nearly level bench-like area on a convex sideslope
Slope and Aspect:	9% south, severely eroded
Parent Material(s):	Middle Nolichucky Shale
Vegetation:	Old field successional forest with a few tall pines remaining along with cedar, poplar, dense stands of sourwood, oak and red maple. Some grape vines and some mosses and lichen groundcover
Described By:	D. A. Lietzke
Sampling Crew:	Lietzke, Burgoa
Rad. Scan:	Air, 35; ground level, 80
Weather Yesterday:	Clear and warm
Present Weather:	Partly cloudy and very warm
Date:	July 21, 1992

Soil Description:

Oi	2 to 0 cm; leaf litter
Ap	0 to 10 cm; dark yellowish-brown (10YR 4/6) shaly silty clay loam; moderate medium granular structure; friable, abrupt wavy boundary
Bt	10 to 26 cm; yellowish-red (5YR 5/6) shaly clay; strong medium subangular blocky structure; firm; strong brown (7.5YR 4/4) ped coatings; abrupt irregular boundary
Cr	26 to 48 cm; inclined shaly strata with brown (7.5YR 4/2) fragment interiors; red (10YR 4/6) surface coatings of iron-clay complex; abrupt irregular boundary
2C	48 to 63 cm; yellowish-brown and yellowish-red saprolitic materials that crushes to silty clay loam; this stratum impregnated with red iron compounds and black manganese oxides
3Cr	63 to 65 cm; harder shale saprolite

Notes: This site was moved from its original location. The original location was on the Maynardville Formation. See the Phase 1 map for the original and moved locations. Sampling depths are: A, 0 to 10 cm; B, 10 to 26 cm; C, 26 to 48 cm.

ORR Site 22

(See pp. 24, 35, 37, 46, 47, and 91 in Phase I Field Book 1)

Location:	Oak Ridge Reservation, within Bear Creek LLWDDD site; Grid N30520, E31250
Classification:	Ruptic Ultic Dystrochrepts; clayey Bt, loamy-skeletal C and Cr horizons; mixed, thermic
Geomorphic Position:	Broad convex ridge crest
Slope and Aspect:	3% southwest
Parent Material(s):	Lower Dismal Gap Formation and transition to Rogersville shale. The pit was in mostly Rogersville saprolite.
Vegetation:	Old-field woods of virginia pine, shortleaf pine, dogwoods, cedars. Surface was 100% leaf covered and with a sparse groundcover of honeysuckle.
Described By:	D. A. Lietzke
Sampling Crew:	Lietzke, Wilson, Farmer
Rad. Scan:	Air, 40; ground level, 40
Weather Yesterday:	Cloudy with scattered showers
Present Weather:	Cloudy, cool, with scattered showers
Date:	April 28, 1992

Soil Description:

Oi&Oa	2 to 0 cm; leaf litter, litter fragments and root mat
A	0 to 5 cm; dark grayish-brown (10YR 4/2) silt loam; moderate fine granular structure; very friable; clear wavy boundary
Ap	5 to 15 cm; brown (10YR 5/3) shaly silt loam; weak medium granular structure; friable; abrupt wavy boundary
Bt	15 to 27 cm; yellowish-red (5YR 4/6) clay; moderate medium subangular blocky structure; firm; brown (7.5YR 4/4) clay on all ped faces; abrupt irregular boundary
C&Cr1	27 to 46 cm; Alternating thin strata of soft and hard shale-siltstone saprolite with light olive brown (2.5Y 5/4) fragment interiors; plugged with brown (7.5YR 4/4) clay
Cr2	46 to 54 cm; harder shale saprolite with most fragment surfaces coated with dark red (2.5YR 3/4–3/6) iron oxides

Notes: Sampling depths are: A, 0 to 15 cm; B, 15 to 27 cm; C, 27 to 46 cm.

ORR Site 23

(See pp. 101, 107, 120, and 121 in Phase I Field Book 1)

Location:	Oak Ridge Reservation, Grid N 29800, E 31830; about 50 ft north of TVA power line ROW and about 20 ft east of road that goes to ORR-22
Classification:	Ruptic Ultic Dystrochrepts; clayey Bt, loamy-skeletal Bw, C, and Cr, mixed, thermic
Geomorphic Position:	Interfluve between two drainageways
Slope and Aspect:	2% to 3% south
Parent Material(s):	Lower Nolichucky Shale
Vegetation:	Old-field pines; most have died and fallen over. Present canopy vegetation is red maple, sourwood and dogwoods. Groundcover of honeysuckle and poison ivy.
Described By:	D. A. Lietzke
Sampling Crew:	Lietzke, Wilson, Burgoa
Rad. Scan:	Air, 30; ground level, 70
Weather Yesterday:	Partly cloudy and cool
Present Weather:	Cloudy with showers
Date:	May 28, 1992

Soil Description:

Oi	4 to 2 cm; pine needles and leaves
Oa	2 to 0 cm; hemic materials, sapric organic materials, many fine roots, and a root mat at the mineral soil surface. (The Oa has variable thickness ranging from 0 cm to about 2 cm in the area that was cleared of organic materials for sampling the mineral soil.)
A	0 to 1 cm; dark yellowish-brown (10YR 4/4) shaly silt loam; moderate fine granular structure; very friable; abrupt wavy boundary
Ap	1 to 12 cm; dark yellowish-brown (10YR 4/6) shaly silty clay loam; weak medium granular structure; friable; abrupt wavy boundary
Bt	12 to 30 cm; yellowish-red (5YR 4/6) shaly clay; moderate fine subangular blocky structure; firm; strong brown (7.5YR 4/4) coatings on all ped surfaces; abrupt irregular boundary
C&Cr	30 to 50 cm; strong brown (7.5YR 5/8) glauconitic fragment interiors and reddish-brown (5YR 4/4) clay flows; rock-oriented strike and dip structure
Cr&C	50 to 60 cm; Thin strata of both C and Cr siltstone saprolite materials. In addition to the siltstone stratum, there is a red (10R 4/6) glauconitic stratum and a confined flow zone stratum dominated by light brownish-gray (10YR 6/2) wetness mottles; some fragments in the C horizon are coated with reddish-brown (5YR 4/4) clay. Siltstone fragment interiors are yellowish-brown (10YR 5/6).

Notes: This pit was dug and sampled for ESD composites and gamma scan samples in a light rain. The profile was not described until June 1, 1992. Sampling depths are: A, 0 to 12 cm; B, 12 to 30 cm; C, 30 to 50 cm.

ORR Site 24

(See pp. 101, 107 and 108 in Phase I Field Book 1 and pp. 8 and 9 in Phase I Field Book 2)

Location:	Oak Ridge Reservation, Grid N29900, E31980
Classification:	Ruptic Ultic Dystrochrepts; clayey Bt, loamy-skeletal, Bw, C and Cr, mixed, thermic
Geomorphic Position:	Convex sideslope
Slope and Aspect:	8% North
Parent Material(s):	Middle Nolichucky Shale
Vegetation:	Old field successional forest with some planted loblolly pine about 30 y old; dense undergrowth of poplar, dogwood, cedar, pine, red maple; sparse ground cover of poison ivy and honeysuckle
Described By:	D. A. Lietzke
Sampling Crew:	Lietzke, Burgoa
Rad. Scan:	Air, 50; ground level, 70
Weather Yesterday:	Clear to partly cloudy, very warm with a shower in the evening
Present Weather:	Partly cloudy, very warm, very humid
Date:	July 22, 1992

Soil Description:

Oi	4 to 1 cm; pine needles and some leaves
Oa&Oe	1 to 0 cm; hemic materials, sapric materials and a root mat
A	0 to 5 cm; dark brown (10YR 3/3) silt loam; strong fine granular structure; very friable; abrupt wavy boundary
Ap	5 to 19 cm; dark yellowish-brown (10YR 4/4) shaly silt loam; moderate fine granular structure; very friable; abrupt wavy boundary
Bw&Bt	19 to 26 cm; dark yellowish-brown (10YR 4/4) shaly or very shaly silty clay loam; weak medium subangular blocky structure; friable; abrupt wavy boundary
C&Cr	26 to 49 cm; light olive brown (2.5Y 5/3) fragment interiors; rock controlled structure; yellowish-brown (10YR 5/4) coatings on most fragment surfaces. These coatings cover thick black manganese oxide coatings
Cr&C	49 to 60 cm; highly weathered shale and siltstone saprolite

Notes: Sampling depths for ESD composites are: A, 0 to 19 cm; B, 19 to 26 cm; C, 26 to 49 cm.

ORR Site 25

(See pp. 95, 107, 124, 125 in Phase I Field Book 1)

Location:	Oak Ridge Reservation, Grid N 29800, E 32290; site about 50 ft south of TVA electric power line ROW
Classification:	Ruptic Ultic Dystrochrepts; clayey Bt, loamy-skeletal Bw, C and Cr, mixed, thermic
Geomorphic Position:	Upland summit, slightly convex
Slope and Aspect:	2 to 3% southeast
Parent Material(s):	Middle Nolichucky Shale
Vegetation:	Loblolly pine plantation, 40 to 50 y old. Lower story of red maple, dogwood, and sweet gum; thick layer of pine needles on the ground surface along with moderate poison ivy and honeysuckle
Described By:	D. A. Lietzke
Sampling Crew:	Lietzke, Wilson, Burgoa
Rad. Scan:	Air, 45; ground level, 60
Weather Yesterday:	Partly cloudy and cool
Present Weather:	Overcast with showers
Date:	May 28, 1992

Soil Description:

Oi	4 to 2 cm; pine needles and leaves
Oe&Oa	2 to 0 cm; sapric materials, hemic materials and root mat
A	0 to 1 cm; yellowish-brown (10YR 5/4) shaly silt loam; moderate fine granular structure; very friable; abrupt wavy boundary
Ap	1 to 17 cm; yellowish-brown (10YR 5/4) shaly silty clay loam; weak medium granular structure; friable; abrupt wavy boundary
Bt&Bw	17 to 34 cm; brown (7.5YR 4/4) shaly clay; about 50% moderate medium subangular blocky structure in Bt strata and rock controlled strike and dip structure in Bw; Fragment interiors are light yellowish-brown (2.5Y 6/4); firm; abrupt irregular boundary.
C&Cr	34 to 50 cm; strong brown (7.5YR 5/4) very shaly clay; strike and dip controlled orientation of shale fragments; light olive brown shale fragment interiors; abrupt irregular boundary
Cr	50 to 60 cm; light olive brown (2.5Y 5/4) fragment interiors; red and black coatings on fragment surfaces; thin carbonate seams are red (2.5YR 4/8) clay; larger cracks contain strong brown (7.5YR 5/4) translocated clay

Notes: ESD composite samples were collected in a light rain. The ESD gamma scan samples were collected and the profile described on the 1st of June, 1992 when the weather was partly cloudy. Sampling depths are: A, 0 to 17 cm; B, 17 to 34 cm; C, 34 to 50 cm.

ORR Site 26

(See pp. 24, 74, 75, 78, 79, 91 in Phase I Field Book 1)

Location:	Oak Ridge Reservation, Grid N 30000, E34370. The site is 75 to 80 ft north of the TVA power line ROW
Classification:	Ruptic Ultic Dystrochrepts; clayey Bt, loamy-skeletal Bw, C, Cr, mixed, thermic
Geomorphic Position:	Lower convex sideslope
Slope and Aspect:	14% south southeast
Parent Material(s):	Middle Dismal Gap Formation
Vegetation:	This site has been plowed but was abandoned before the Atomic Energy Commission (AEC) takeover in 1942. Present forest is hardwoods of red maple, oaks, hickories, and a few cedars.
Described By:	D. A. Lietzke
Sampling Crew:	Lietzke, Wilson
Rad. Scan:	Air, 15; ground level, 25
Weather Yesterday:	Partly cloudy in the morning with afternoon scattered showers
Present Weather:	Cloudy, scattered showers, cool. Got rained out before completing sampling and soil description.
Date:	May 11, 1992

Soil Description:

Oi	4 to 0 cm; leaf litter and root mat
A	0 to 6 cm; very dark grayish-brown (10YR 3/2) shaly silt loam; strong fine granular structure; very friable; abrupt wavy boundary
Ap	6 to 15 cm; dark yellowish-brown (10YR 4/4) shaly silt loam; moderate fine granular structure; very friable; abrupt wavy boundary
Bt	15 to 30 cm; red (2.5YR 4/6) shaly clay or shaly silty clay; moderate medium subangular blocky structure; friable; strong brown (7.5YR) coatings on all ped faces; abrupt irregular boundary
BC&C	30 to 50 cm; light olive brown (2.5Y 5/4) fragment interiors; soil matrix is yellowish-red (5YR 4/6) very shaly clay. BC has some weak soil structure. the C has all rock structure; abrupt irregular boundary.
C&Cr	50 to 80 cm; olive brown (2.5Y 4/4) fragment interiors; Cr fragments coated with black manganese oxides; C horizon fragments coated with yellowish-red (5YR 4/6) and strong brown (7.5YR 5/6) materials

Notes: The BC&C and C&Cr horizons occur in thin strata that have geologic strike and dip. It was not feasible to describe each separately, nor could they be individually sampled. Sampling depths: A, 0 to 15 cm; B, 15 to 30 cm; C, 30 to 60 cm. The field duplicate samples, because they were sampled from another side of the pit have different depths as follows: A, 0 to 15 cm; B, 18 to 36 cm; and C, 20 to 40 cm.

ORR Site 27

(See pp. 8, 9, 25, 32, 91 in Phase I Field Book 1)

Location:	Oak Ridge Reservation, Bear Creek area; 100 ft north of TVA power line right-of-way; Grid N30100, E34990
Classification:	Ruptic Ultic Dystrochrepts; clayey Bt and loamy-skeletal Bw, C, and Cr horizons; mixed, thermic
Geomorphic Position:	Mid side slope with slight convexity
Slope and Aspect:	7% southwest
Parent Material(s):	Upper Dismal Gap Formation
Vegetation:	Old-field regrowth of red and black oak, chestnut oak, white oak, a few virginia pine, some dead cedars; understory of beech, oak, red maple, dogwood, and a few green herbs; ground covered 100% by leaves
Described By:	D. A. Lietzke
Sampling Crew:	Lietzke, Wilson, Phillips, Farmer
Rad. Scan:	Air, 10; ground level, 15
Previous Weather:	Rain and snow showers on March 14th and 15th
Weather Today:	Clear, 18° F to 20° F in morning
Date:	March 16, 1992

Soil Description:

Oi	4 to 0 cm; leaf litter
A1	0 to 5 cm; very dark grayish-brown (10YR 3/2) silt loam; strong fine granular structure; very friable; many fine roots; abrupt wavy boundary
Ap	5 to 10 cm; dark brown (10YR 3/3) silt loam; moderate fine granular structure; very friable; common fine roots; abrupt wavy boundary
AB	10 to 23 cm; yellowish-brown (10YR 5/4) silt loam; weak fine subangular blocky structure; few medium roots; clear wavy boundary
Bt	23 to 34 cm; strong brown (7.5YR 4/6) silty clay loam; moderate medium subangular blocky structure; few roots; abrupt irregular boundary
C	34 to 74 cm; olive brown (2.5Y 4/4–5/4) fragment interiors; material crushes to a shaly or very shaly silty clay loam; yellowish-red (5YR 4/6) clay coatings on some fragment faces while other fragment faces coated with black manganese oxides in the lower part of the horizon; more than 70% rock controlled structure; abrupt irregular boundary
Cr	74 to 80 cm; olive brown (2.5Y 4/4) fragment interiors; dark red (2.5YR 3/6) and black coatings on most fragment faces

Notes: Depth to the Cr varied from 45 to 74 cm across the face that was sampled. Only the Argillic part of the soil was described and sampled. One side of the pit had Cr materials coming to within 20 cm of the surface. This old-field site was abandoned some time before the AEC takeover and had already reverted to hardwoods. Depths of sampling for ESD composites are: A, 0 to 10 cm; B, 23 to 34 cm; C, 34 to 53 cm.

ORR Site 28

(See pp. 103, 107, 129 in Phase I Field Book 1 and pp. 152 and 153 in Phase I Field Book 2)

Location:	Oak Ridge Reservation, Grid N29500, E34580, about 20 ft grid west of edge of power line ROW
Classification:	Ruptic Ultic Dystrochrepts; clayey Bt, loamy-skeletal Bw, C and Cr horizons; mixed, thermic
Geomorphic Position:	Mid sideslope with convexity. Severely eroded before abandonment
Slope and Aspect:	5% southeast
Parent Material(s):	Middle Nolichucky Shale
Vegetation:	Old field successional forest where older pines have been harvested; present vegetation of young pines, cedars and poplar; sparse ground cover of honeysuckle, mosses and ferns
Described By:	D. A. Lietzke
Sampling Crew:	Lietzke, Burgoa
Rad. Scan:	Air, 45; ground level, 60
Weather Yesterday:	Clear and warm
Present Weather:	Clear and warm
Date:	July 21, 1992

Soil Description:

Oi	2 to 0 cm; mosses, pine needles, leaves and root mat
A	0 to 2 cm; brown (10YR 4/3) silt loam or shaly silt loam; strong fine granular structure; very friable; abrupt wavy boundary
Ap	2 to 16 cm; yellowish-brown (10YR 5/4) silt loam or shaly silt loam; moderate fine granular structure; very friable; abrupt wavy boundary
Bt	16 to 25 cm; yellowish-brown (10YR 5/8) shaly clay; moderate medium subangular blocky structure; friable; strong brown (7.5YR 5/6) ped coatings; abrupt irregular boundary
C	25 to 35 cm; light olive brown (2.5Y 5/4) fragment interiors; red (2.5YR 4/6) iron-clay coatings on some fragment surfaces; other areas plugged with yellowish-red (5YR 5/4) clay; abrupt irregular boundary
Cr	35 to 52 cm; brown (10YR 4/3) fragment interiors; most surface coated with red and yellowish-red clay and iron oxides

Notes: If the Bt horizon is continuous around all four sides of the pit the soil is classified as a Typic Hapludult. If the Bt horizon is interrupted by a Bw, C or Cr horizon then the soil is classified as a Ruptic Ultic Dystrochrept. Sampling depths are: A, 0 to 16 cm; B, 16 to 25 cm; C, 26 to 35 cm. Depths of sampling for ESD composites are: A, 0 to 10 cm; B, 23 to 34 cm; C, 34 to 53 cm.

ORR Site 31

(See pp. 103, 113, 114, 156, 157 in Phase I Field Book 1)

Location:	Oak Ridge Reservation, Grid N29900, E35820
Classification:	Typic Hapludults; clayey, mixed, thermic
Geomorphic Position:	Lower part of long slightly convex sideslope
Slope and Aspect:	3% southeast
Parent Material(s):	Upper Nolichucky Shale
Vegetation:	Old field successional forest. The older pines have been harvested in the past 10 to 15 y. Dense regrowth of sweet gum, dogwood, cedar, hickory, poplar, and ash. Sparse ground cover of honeysuckle and poison ivy.
Described By:	D. A. Lietzke
Sampling Crew:	Lietzke, Burgoa
Rad. Scan:	Air, 35 ; ground level, 60
Weather Yesterday:	Clear and warm
Present Weather:	Partly cloudy, very warm and humid
Date:	July 21, 1992

Soil Description:

Oi	2 to 0 cm; leaf litter
A	0 to 8 cm; brown (10YR 4/3) silt loam; strong fine granular structure; very friable; abrupt wavy boundary
Ap	8 to 19 cm; yellowish-brown (10YR 5/4) silt loam; moderate fine granular structure; friable; abrupt wavy boundary
Bt	19 to 40 cm; dark yellowish-brown (10YR 4/6) silty clay; moderate medium subangular blocky structure; friable; dark yellowish-brown (10YR 4/4) ped coatings; clear wavy boundary
C	40 to 61 cm; yellowish-brown (10YR 5/4) silt loam or silty clay loam; weak coarse subangular blocky structure; firm; light brownish-gray (10YR 6/2) wetness mottles; strong brown (7.5YR 4/4) ped zones, but most peds are not coated; abrupt irregular boundary
2Cr	61 to 70 cm; dark reddish-gray (5YR 4/2) fragment interiors, with surfaces coated with black manganese oxides

Notes: The upper 61 cm appears to be colluvium of entirely Nolichucky origins and of early Holocene age. Sampling depths are: A, 0 to 19 cm; B, 19 to 40 cm; C, 40 to 55 cm.

ORR Site 32

(See pp. 25, 33, 35, 37, 50, 51, 91 in Phase I Field Book 1)

Location:	Oak Ridge Reservation, about 100 ft grid north of TVA power line ROW; Grid N30200, E36760
Classification:	Ruptic Ultic Dystrochrepts; clayey Bt and loamy-skeletal, Bw, C and Cr horizons; mixed, thermic
Geomorphic Position:	Mid-point of long convex sideslope
Slope and Aspect:	12% south
Parent Material(s):	Upper Dismal Gap Formation
Vegetation:	Old-field. Pines have almost all died and fallen over. Present vegetation is thick hardwood underbrush and abundant honeysuckle.
Described By:	D. A. Lietzke
Sampling Crew:	Lietzke, Wilson, Farmer
Rad. Scan:	Air, 15; ground level, 40
Weather Yesterday:	Cloudy, cool, widely scattered showers
Present Weather:	Cloudy, cooler with clearing in the afternoon
Date:	April 28, 1992

Soil Description:

Oi	4 to 0 cm; leaf litter and root mat
A	0 to 5 cm; dark brown (10YR 3/3) silt loam; strong fine granular structure; very friable; abrupt wavy boundary
Ap	5 to 20 cm; dark yellowish-brown (10YR 4/4) silt loam or shaly silt loam; moderate fine granular structure; very friable; abrupt wavy boundary
Bt	20 to 32 cm; yellowish-red (5YR 4/6) silty clay or clay; moderate medium subangular blocky structure; strong brown (7.5YR 5/4) clay coatings on all ped surfaces; clear irregular boundary
C	32 to 53 cm; light olive brown (2.5Y 5/6) fragment interiors coated with brown (7.5YR 4/4) clay; 60 to 80% rock controlled structure; clay plugged; abrupt irregular boundary
Cr	53 to 64 cm; light olive brown (2.5Y 5/6) fragment interiors; many fragment faces coated with black manganese oxides; some fragment faces coated with red (2.5YR 4/6) iron-clay materials; some strong brown (7.5YR 4/6) clay in thin flow zone seams

Notes: Sampling depths: A, 0 to 20 cm; B, 20 to 32 cm; C, 32 to 53 cm.

ORR Site 33

(See pp. 25, 35, 37, 62, 63, 91 in Phase I Field Book 1)

Location:	Oak Ridge Reservation, Grid N30000, E36970
Classification:	Ruptic Ultic Dystrochrepts; Clayey Bt, loamy-skeletal Bw, C, and Cr horizons, mixed, thermic
Geomorphic Position:	Middle of slightly convex lower sideslope
Slope and Aspect:	13% south-southwest
Parent Material(s):	Middle Dismal Gap Formation
Vegetation:	Original old-field successional forest of pines has died and fallen over. Present vegetation consists of dogwood, beech, sweet gum, poplar, red maple, pine, with a thick ground cover of honeysuckle.
Described By:	D. A. Lietzke
Sampling Crew:	Lietzke, Wilson
Rad. Scan:	Air, 25; ground level, 40
Weather Yesterday:	Early morning showers, then clearing and very windy
Present Weather:	Clear, sunny afternoon with a light breeze
Date:	May 4, 1992

Soil Description:

Oi	7 to 0 cm; leaf litter, twigs and small branches, and a dense root mat
A	0 to 5 cm; dark yellowish-brown (10YR 4/4) silt loam; strong fine granular structure; very friable; abrupt wavy boundary
Ap	5 to 12 cm; yellowish-brown (10YR 5/6) shaly silt loam; moderate fine granular structure; friable; abrupt wavy boundary
Bt	12 to 27 cm; yellowish-red (5YR 5/6) clay; moderate medium subangular blocky structure; firm; strong brown (7.5YR 5/6) clay films on all ped faces; clear wavy boundary
BC	27 to 53 cm; strong brown (7.5YR 5/6) shaly or very shaly silty clay loam; weak coarse subangular blocky structure; firm; 10 to 50% rock structure in thin harder strata; abrupt irregular boundary
C	53 to 63 cm; olive brown (2.5Y 4/4) fragment interiors; thick strong brown (7.5YR 5/6) coatings on most fragment surfaces and plugging cracks and fractures; abrupt irregular boundary
Cr	63 to 80 cm; light olive brown (2.5Y 5/6) fragment interiors; surfaces coated with black manganese oxides or yellowish-brown (10YR 5/8) iron hydroxides

Notes: Sampling depths are: A, 0 to 12 cm; B, 12 to 27 cm; C, 53 to 63 cm.

ORR Site 35

(See pp. 28, 37, 39, 58, 59, 91 in Phase I Field Book 1)

Location:	Oak Ridge Reservation, Grid N30000, E37280. Site is located about 150 ft north of cleared edge of ROW.
Classification:	Typic Hapludults; clayey, mixed, thermic
Geomorphic Position:	Convex area just below rest of ridge
Slope and Aspect:	13% south southwest
Parent Material(s):	Lower Dismal Gap Formation
Vegetation:	Old field successional forest where most pines have died and fallen or were harvested. Present vegetation is sweet gum, dogwood, haw, sourwood with some poplar. About 90% of ground surface is leaf covered the remainder is covered by honeysuckle, mosses and other forbes.
Described By:	D. A. Lietzke
Sampling Crew:	Lietzke, Wilson, Farmer
Rad. Scan:	Air, 15; ground level, 35
Weather Yesterday:	Cloudy with early morning showers, then clearing and windy in the afternoon
Present Weather:	Clear and windy
Date:	May 4, 1992

Soil Description:

Oi	2 to 0 cm; leaf litter
A	0 to 8 cm; dark brown (10YR 3/3) silt loam; strong fine granular structure; very friable; abrupt wavy boundary
Ap	8 to 19 cm; brown (10YR 5/3) silt loam; weak fine granular structure; very friable; abrupt wavy boundary
E&B	19 to 31 cm; yellowish-brown (10YR 5/4) silt loam, E-part, and strong brown (7.5YR 5/6) silty clay loam, B-part; weak medium subangular blocky structure; very friable; abrupt irregular boundary
Bt	31 to 52 cm; strong brown (7.5YR 4/6) clay; moderate medium subangular blocky structure; friable; peds coated with yellowish-red (5YR 4/6) clay; abrupt irregular boundary
BC	52 to 63 cm; strong brown (7.5YR 4/6) shaly clay; weak medium subangular blocky structure; with about 10 to 25% rock structure remaining; highly clay plugged. Abrupt irregular boundary
C&Cr	63 to 80 cm; dark yellowish-brown (10YR 4/6) fragment interiors; some fragment surface coated with yellowish-red (5YR 4/6) clay and others coated with red (2.5YR 4/6) iron-clay materials

Notes: Sampling depths are: A, 0 to 19 cm; B, 31 to 52 cm; C, 63 to 80 cm.

ORR Site 41

(See pp. 12, 13, 28, 29, 91 in Phase I Field Book 1)

Location:	Oak Ridge Reservation, about 400 ft north of the TVA ROW; Grid N30200, E39570
Classification:	Typic Hapludults; clayey, mixed, thermic
Geomorphic Position:	Convex summit of small ridge. Soils were severely eroded prior to or after abandonment.
Slope and Aspect:	2–3%
Parent Material(s):	Middle Dismal Gap Formation
Vegetation:	Old-field successional forest. Most older pines have died and fallen over. Present regrowth of pines red maple, beech and poplar. Ground surface covered with leaves.
Described By:	D. A. Lietzke
Sampling Crew:	Lietzke, Wilson, Phillips, Farmer
Rad. Scan:	Air, 10; ground level, 50
Weather Yesterday:	Partly cloudy
Present Weather:	Clear and warmer
Date:	March 17, 1992

Soil Description:

Oi	4 to 0 cm; leaf litter
A	0 to 5 cm; very dark grayish-brown (10YR 3/2) silt loam; moderate fine granular structure; very friable; many fine roots; abrupt wavy boundary
Ap	5 to 12 cm; dark yellowish-brown (10YR 4/4) heavy silt loam; weak fine granular structure; very friable; common fine roots; abrupt wavy boundary
Bt	12 to 28 cm; strong brown (7.5YR 4/6) silty clay loam or silty clay; moderate medium subangular blocky structure; friable; common medium roots and common fine roots; strong brown (7.5YR 5/6) clay flows on ped faces; clear wavy boundary
BC	28 to 40 cm; strong brown (7.5YR 5/6) shaly silty clay or shaly clay; weak coarse subangular blocky structure; some areas without soil structure; firm; few fine roots; clay plugged with abrupt irregular boundary
C	40 to 64 cm; strong brown (7.5YR 4/6) and yellowish-brown (10YR 5/8) fragment interiors; material crushes easily to a shaly or very shaly silty clay loam; 60 to 80% rock controlled structure; friable; few fine roots; considerable strong brown (7.5YR 4/6) clay on fragment surfaces; abrupt irregular boundary
Cr1	64 to 80 cm; harder fragment interiors of strong brown (7.5YR 4/6) and yellowish-brown (10YR 5/8); most fragments coated with dark red (10R 3/6) iron oxides
Cr2	80 to 90 cm; harder fragment interiors of light olive gray(5Y 6/2) and yellowish-brown (10YR 5/8) with a few red coatings; most fragments are wet and this horizon is at the top of a perched water zone.

Notes: Sampling depths for ESD composites are: A, 0 to 12 cm; B, 14 to 28 cm; C, 50 to 60 cm.

ORR Site 42

(See pp. 105, 111, 143, 154, 155 in Phase I Field Book 1)

Location:	Oak Ridge Reservation, Grid N30000, E40500. The site is in woods about 30 ft from edge of power line ROW.
Classification:	Ruptic Ultic Dystrochrepts; clayey Bt, loamy-skeletal Bw, C, Cr horizon; mixed, thermic
Geomorphic Position:	Long, gentle, convex side slope
Slope and Aspect:	3% south
Parent Material(s):	Middle to upper Nolichucky Shale
Vegetation:	Old field successional where most older pines have died and fallen over or were harvested; dense regrowth of poplar, sweet gum, cedar, oak, dogwood, and beech. Sparse honeysuckle and poison ivy groundcover
Described By:	D. A. Lietzke
Sampling Crew:	Lietzke, Burgoa
Rad. Scan:	Air, 30; ground level, 90
Weather Yesterday:	Clear and warm
Present Weather:	Clear and warm
Date:	July 21, 1992

Soil Description:

Oi	2 to 0 cm; leaves
Oa	0 to 1 cm; hemic materials, sapric materials and root mat
Ap	1 to 15 cm; yellowish-brown (10YR 5/4) silt loam or shaly silt loam; moderate fine granular structure; very friable; abrupt wavy boundary
Bt	15 to 33 cm; dark yellowish-brown (10YR 4/4) shaly clay; moderate medium subangular blocky structure; firm; all peds coated with brown (10YR 5/3) material; abrupt irregular boundary
C	33 to 47 cm; mottled dark yellowish-brown (10YR 4/4), brown (10YR 5/3) and grayish-brown (10YR 5/2) wetness streaks; extremely shaly clay; all rock controlled structure; abrupt irregular boundary
Cr	47 to 56 cm; brown (10YR 4/3) fragment interiors; red (10R 4/6) and black coatings on most fragment surfaces; some grayish-brown (10YR 5/2) in flow zones

Notes: The Bw and Bt were sampled together. The Bw had similar morphology but higher fragment content. This site has limestone seams 2- to 5-cm-thick that have weathered out to a yellowish-brown clay. Some of this clayey material was included in the very shaly C horizon sample. Sampling depths are: A, 1 to 15 cm; VB, 15 to 33 cm; C, 33 to 47 cm.

ORR Site 43

(See pp. 28, 82, 83, 86, 87, 91 in Phase I Field Book 1)

Location:	Oak Ridge Reservation, Grid N30400, E41460, about 200 ft grid north of edge of ROW
Classification:	Typic Hapludults; clayey, mixed, thermic
Geomorphic Position:	Broad, slightly convex sideslope
Slope and Aspect:	2–3% south-southwest
Parent Material(s):	Lower Dismal Gap Formation within transition zone to Rogersville Shale
Vegetation:	Old field hardwoods of red maple, poplar, abundant dogwood, beech, with thick honeysuckle, and poison ivy groundcover
Described By:	D. A. Lietzke
Sampling Crew:	Lietzke, Wilson
Rad. Scan:	Air, 20; ground level, 55
Weather Yesterday:	Clear, warmer, last rain on May 9th
Present Weather:	Clear and warm
Date:	May 11, 1992

Soil Description:

Oi	4 to 0 cm; leaf litter
A	0 to 6 cm; dark brown (10YR 3/3) silt loam; strong fine granular structure; very friable; abrupt wavy boundary
Ap	6 to 15 cm; brown (10YR 5/3) silt loam or shaly silt loam; moderate fine granular structure; very friable; abrupt wavy boundary
Bt1	15 to 37 cm; strong brown (7.5YR 4/6) clay or silty clay; moderate medium subangular blocky structure; firm; clear wavy boundary
Bt2	37 to 51 cm; strong brown (7.5 YR 4/6) shaly silty clay; moderate medium and coarse subangular blocky structure; firm; Manganese oxide plugged at base of horizon; abrupt irregular boundary
C	51 to 70 cm; light olive brown fragment interiors; very soft saprolite with yellowish-red (2.5 YR 4/6) clay streaks and yellowish-red (5YR 4/6) soil material coating some fragment surfaces and filling spaces

Notes: Sampling depths: A, 0 to 15 cm; B, 15 to 37 cm; C, 51 to 70 cm. Sampling depths for ORR-43 field duplicates are: A, 0 to 15 cm; B, 15 to 40 cm; C, 53 to 70 cm. The reason for the different depths is that strike and dip oriented subsoil and substratum horizons vary around the sides of a pit.

ORR Site 45

(See pp. 28, 29, and 42 in Phase II Field Book 2)

Location:	Oak Ridge Reservation, Chestnut Ridge, Grid N27600, E18400
Classification:	Typic Hapludults; clayey, mixed, thermic
Geomorphic position:	Convex sideslope just above a slope break into a deeply incised, but stable, head of a drainageway
Slope and aspect:	25% northwest
Parent material(s):	Copper Ridge Residuum
Vegetation:	Older woods that have been cut over several times. Oak and chestnut stumps are still present. Some logging was done 15 to 20 years ago. Present vegetation consists of red oak, black oak, post oak, with a lower story of gum, sourwood, sugar maple and some sassafras sprouts. The ground surface is leaf covered. A woods road about 100–150 ft away was bulldozed a few years ago to allow access for the drilling of wells.
Described by:	D. A. Lietzke
Sampling crew:	Lietzke and Wilson
Rad scan:	Air, 30; ground level, 60
Weather yesterday:	Clear, breezy and cooler
Present weather:	Clear, brisk, breezy
Date:	September 30, 1992

Soil Description:

Oi	3 to 0 cm; leaf litter
A	0 to 5 cm; dark grayish-brown (10YR 4/2) cherty silt loam; strong fine granular structure; very friable; clear wavy boundary
E1	5 to 17 cm; pale brown (2.5Y 6/3) cherty silt loam; moderate fine granular structure; very friable; gradual wavy boundary
E2	17 to 30 cm; light yellowish-brown (10YR 6/4) cherty silt loam; moderate fine granular structure; very friable; gradual irregular boundary
B&E	30 to 48 cm; strong brown (7.5YR 5/6) cherty silty clay loam B part, and yellowish-brown (10YR 5/6) cherty silt loam E part; moderate fine subangular blocky structure; very friable; abrupt irregular boundary
Bt1	48 to 70 cm; red (2.5YR 4/6) cherty clay;(40% clay content) moderate medium subangular blocky structure; friable; gradual wavy boundary
Bt2	70 to 120 cm; red clay (60–70% clay content); augered
BC	120 to 170 cm; red clayey saprolitic materials with high chroma yellowish saprolite colors

Notes: Sampling depths: A horizon, 0 to 17 cm; B horizon, 48 to 60 cm; C horizon, 150 to 170 cm.

ORR Site 50

(See pp. 31, 81, 82, and 87 in Phase II Field Book 2)

Location:	Oak Ridge Reservation, Chestnut Ridge, Grid N26600, E19800
Classification:	Typic Paleudults; clayey, kaolinitic, thermic
Geomorphic position:	Long, gently sloping, spur ridge
Slope and aspect:	8% southeast
Parent material(s):	Chepultepec Residuum
Vegetation:	Old-field successional forest. Present vegetation consists of an overstory of oaks along with a few red cedars, white pine seedlings and red maple sprouts. The ground surface is leaf covered.
Described by:	D. A. Lietzke
Sampling crew:	Lietzke, Farmer, Wilson, Massengale, Burgoa
Rad scan:	Air, 40; ground level, 55
Weather yesterday:	Rain, heavy at times
Present weather:	Clear and getting warmer
Date:	November 3, 1992

Soil Description:

Oi	3 to 0 cm; leaf litter
Oa	0 to 2 cm; sapric materials and a root mat
A	0 to 12 cm; dark grayish-brown (10YR 4/2) cherty loam; strong fine granular structure; very friable; clear wavy boundary
E	12 to 25 cm; pale brown (10YR 6/3) cherty loam; weak fine granular structure; very friable; abrupt irregular boundary
B&E	25 to 34 cm; yellowis-red (5YR 5/6) B part and strong brown (7.5YR 5/6) E part; cherty or non-cherty clay loam; weak fine subangular blocky structure; friable; abrupt irregular boundary
Bt1	34 to 50 cm; red (2.5YR 4/6) clay or cherty clay; moderate fine and medium subangular blocky structure; firm; gradual wavy boundary
Bt2	50 to 80 cm; red very cherty clay with yellowish-brown mottles (augered)
Bt3	80 to 160 cm; mottled red, yellowish-red and yellowish-brown cherty clay (augered)

Notes: Sampling depths for primary samples: A horizon, 0 to 16 cm; B horizon, 40 to 50 cm; C horizon, 140 to 160 cm. Sampling depths for field duplicates: A horizon, 0 to 10 cm; B horizon, 34 to 50 cm; C horizon, 140 to 160 cm.

ORR Site 51

(See pp. 25, 26, 30, and 36 in Phase II Field Book 2)

Location:	Oak Ridge Reservation, Chestnut Ridge, Grid N28400, E21600
Classification:	Typic Paleudults; clayey, kaolinitic, thermic
Geomorphic position:	Convex sideslope
Slope and aspect:	15% northwest
Parent material(s):	Copper Ridge Residuum
Vegetation:	Old field successional forest with most of the original pines having died and fallen over releasing poplar, red maple and sugar maple. This site is within 75 to 80 ft of a previously cleared area that has been planted to loblolly pine in the past 15 to 20 years. This site is also within 80 ft of a recently bulldozed woods road to get access to drill wells.
Described by:	D. A. Lietzke
Sampling crew:	Lietzke and Wilson
Rad scan:	Air, 30; ground level, 45
Weather yesterday:	Cloudy and rainy
Present weather:	Clearing, partly cloudy
Date:	September 28, 1992

Soil Description:

Oi	3 to 0 cm; leaf litter
A	0 to 10 cm; brown (10YR 4/3) cherty silt loam;strong fine granular structure; very friable; clear wavy boundary
Ap	10 to 20 cm; brown (10YR 4/3) cherty silt loam; moderate fine granular structure; very friable; clear wavy boundary
B&E	20 to 35 cm; yellowish-red (5YR 5/6) B part, and pale brown (10YR 6/3) E part; cherty silt loam; moderate fine subangular blocky structure; very friable; abrupt irregular boundary
Bt1	35 to 75 cm; red (2.5YR 4/6) cherty clay; moderate medium subangular blocky structure; firm; gradual wavy boundary, base of pit
Bt2	75 to 165 cm; red cherty clay with yellowish-brown mottles

Notes: Sampling depths: A horizon, 0 to 20 cm; B horizon, 40 to 60 cm; C horizon, 140 to 170 cm.

ORR Site 52

(See pp. 32, 57, and 58 in Phase II Field Book 2)

Location:	Oak Ridge Reservation, Chestnut Ridge, Grid N26600, E20200
Classification:	Typic Hapludults; clayey, mixed, thermic
Geomorphic position:	Doubly convex sideslope shoulder
Slope and aspect:	12% south
Parent material(s):	Chepultepec residuum
Vegetation:	Old field successional forest. Most pines have fallen. Present vegetation is red maple, few red cedars and poplar. There is a fairly thick understory of red maple and oak seedlings. There are scattered ferns and honeysuckle of the leaf covered ground surface.
Described by:	D. A. Lietzke
Sampling crew:	Lietzke, Farmer, and Massengale
Rad scan:	Air, 20; ground level, 55
Weather yesterday:	Clear
Present weather:	Clear and warmer
Date:	October 14, 1992

Soil Description:

Oi	4 to 0 cm; leaf litter
A	0 to 7 cm; dark grayish-brown (10YR 4/2) cherty or very cherty silt loam; strong fine granular structure; very friable; clear wavy boundary
Ap	7 to 18 cm; brown (10YR 4/3) cherty silt loam; moderate fine granular structure; very friable; abrupt wavy boundary
E&B	18 to 27 cm; brown (10YR 5/3) E part and strong brown (7.5YR 5/6) B part; silt loam or silty clay loam; weak fine subangular blocky structure; very friable; abrupt irregular boundary
B&E	27 to 45 cm; yellowish-red (5YR 5/6) B part and strong brown (7.5YR 5/6) E part; silty clay loam; moderate fine and medium subangular blocky structure; friable; gradual irregular boundary
Bt1	45 to 63 cm; yellowish-red (5YR 5/6) clay; moderate to strong fine and medium subangular blocky structure; friable; gradual wavy boundary
Bt2	63 to 100 cm; mottled, red, yellowish-red with yellowish-brown drainage mottles; augered
BC	100 to 170 cm; mottled clay plugged saprolitic materials

Notes: Sampling depths: A horizon, 0 to 18 cm; B horizon, 45 to 60 cm; C horizon, 140 to 170 cm.

ORR Site 53

(See pp. 33, 55, and 56 in Phase II Field Book 2)

Location:	Oak Ridge Reservation, Chestnut Ridge, N26200, E22400
Classification:	Typic Hapludults; clayey, mixed, thermic
Geomorphic position:	About a third of the way below a doubly convex shoulder
Slope and aspect:	20% south-southeast
Parent material(s):	Chepultepec Residuum with a 36 cm thick capping of colluvium
Vegetation:	Old field abandoned well before 1940. Present vegetation is white oak, with and understory of dogwood, sourwood, black gum and a sparse ground cover of oak and maple sprouts and considerable chert cobbles.
Described by:	D. A. Lietzke
Sampling crew:	Lietzke, Farmer, and Massengale
Rad scan:	Air, 30; ground level, 60
Weather yesterday:	Clear, cool
Present weather:	Clear and warmer
Date:	October 13, 1992

Soil Description:

Oi	3 to 0 cm; leaf litter
A	0 to 9 cm; dark grayish-brown (10YR 4/2) cherty or very cherty silt loam; strong fine granular structure; very friable; clear wavy boundary
Ap	9 to 16 cm; brown (10YR 4/3) cherty silt loam; moderate fine granular structure; very friable; clear wavy boundary
Bt1	16 to 36 cm; yellowish-brown (10YR 5/6) cherty silt loam or cherty loam; weak fine subangular blocky structure; very friable; abrupt irregular boundary (base of colluvium)
2Bt2	36 to 59 cm; yellowish-red (5YR 5/6) cherty or very cherty clay; moderate fine and medium subangular blocky structure; firm; gradual wavy boundary
2Bt3	59 to 101 cm; mottled reds and yellows clay (augered)
2BC	101 to 160 cm; clay plugged saprolitic materials

Notes: The upper 36 cm of the soil is colluvium. The left half of the pit had colluvium to a depth of 70 cm. The ESD composite sampled the B horizon of the residuum while the gamma samples extended almost through the colluvium. Sampling depths: A horizon, 0 to 16 cm; B horizon, 36 to 59 cm; C horizon, 140 to 160 cm.

ORR Site 54

(See pp. 9, 47, 48, 53 in Phase II Field Book 2)

Location:	Oak Ridge Reservation, Chestnut Ridge, Grid N28200, E22500
Classification:	Typic Hapludults; clayey, mixed, thermic
Geomorphic position:	Middle of convex sideslope
Slope and aspect:	30% northwest
Parent material(s):	Copper Ridge Residuum
Vegetation:	Older, cutover, forest. Present canopy trees of chestnut oak with smaller red maples. The forest floor is covered with leaves along with a few dogwood sprouts. The forest is very open here.
Described by:	D. A. Lietzke
Sampling crew:	Lietzke, Farmer, and Harris
Rad scan:	Air, 40; ground level, 60
Weather yesterday:	Clear
Present weather:	Clear and cool
Date:	October 12, 1992

Soil Description:

Oi	3 to 0 cm; leaf litter
A	0 to 6 cm; brown (10YR 5/3) cherty silt loam; strong fine granular structure; very friable; clear wavy boundary
E	6 to 19 cm; light yellowish-brown (10YR 6/4) cherty silt loam; moderate fine granular structure; friable; gradual irregular boundary (includes E&B horizon)
B&E	19 to 29 cm; strong brown (7.5YR 5/6) B part and light yellowish-brown (10YR 6/4) E part, cherty silty clay loam; moderate fine subangular blocky structure; friable; gradual irregular boundary
Bt1	29 to 51 cm; red (2.5YR 4/6) cherty clay; strong fine and medium subangular blocky structure; firm; gradual wavy boundary
Bt2	51 to 130 cm; red (2.5YR 4/6) cherty clay with some high chroma yellowish saprolite mottles; moderate medium and coarse subangular blocky structure; firm; gradual wavy boundary
BC	130 to 165 cm; red and yellow clay saprolitic materials that are clay plugged

Notes: Sampling depths: A horizon, 0 to 12 cm; B horizon, 29 to 51 cm C horizon, 155 to 165 cm.

ORR Site 55

(See pp. 8, 23, 24, and 35 in Phase II Field Book 2)

Location:	Oak Ridge Reservation, Chestnut Ridge, Grid N28400, E23400
Classification:	Typic Paleudults; clayey, kaolinitic, thermic
Geomorphic position:	Mid, convex, sideslope between old alluvium above and colluvium below. This pit has about 27 cm of colluvium over residuum.
Slope and aspect:	26% northeast
Parent material(s):	Copper Ridge Residuum
Vegetation:	Cut over forest. Soil does not appear to have been plowed due to the very high surficial chert content, but was probably a woods pasture with some past soil disturbance. Present vegetation consists of chestnut oaks in the canopy along with a few poplar, a few midlevel sugar maples and lower level dogwood and black gum and sprouts of sugar maple and oak. The ground surface is leaf covered.
Described by:	D. A. Lietzke
Sampling crew:	Lietzke and Wilson
Rad scan:	Air, 40; ground level, 60
Weather yesterday:	Cloudy with showers
Present weather:	Clearing
Date:	September 28,1992

Soil Description:

Oi	4 to 0 cm; leaf litter
A	0 to 9 cm; dark brown (10YR 3/3) very cherty silt loam; strong fine granular structure; very friable; clear irregular boundary
E&A	9 to 13 cm; Yellowish-brown (10YR 5/4) E part and dark brown (10YR 3/3) A Part (worm activity); moderate fine granular structure; very friable; clear wavy boundary
Bt	13 to 27 cm; yellowish-brown (10YR 5/6) cherty silty clay loam; weak fine subangular blocky structure; very friable; clear wavy boundary, base of colluvium
2E&B	27 to 45 cm; yellowish-brown (10YR 5/6) and strong brown (7.5YR 5/6) cherty silty clay loam; weak fine subangular blocky structure; very friable; gradual irregular boundary
2Bt1	45 to 71 cm; yellowish-red (5YR 5/6) cherty clay; moderate medium subangular blocky structure; friable; gradual wavy boundary
2Bt2	71 to 165 cm; red (2.5YR 4/8) cherty clay; moderate coarse and medium subangular blocky structure; firm

Notes: Sampling depths: A horizon, 0 to 13 cm; B horizon, 45 to 60 cm; C horizon, 140 to 165 cm.

ORR Site 58

(See pp. 16, 17, 19, and 27 in Phase II Field Book 2)

Location:	Oak Ridge Reservation, Chestnut Ridge, Grid N28000, E25000
Classification:	Typic Paleudults; clayey, kaolinitic, thermic
Geomorphic position:	Edge of large, slightly convex, hilltop
Slope and aspect:	6% southeast
Parent material(s):	Copper Ridge
Vegetation:	Old field successional. Present vegetation consists of older growth hardwoods of red oak, sugar maple and some poplar, dogwood and hickory understory, and red maple,oak, sassafras, black gum, and dogwood sprouts. Ground surface is leaf covered and there are some boulder-sized chert blocks nearby.
Described by:	D. A. Lietzke
Sampling crew:	Lietzke and Burgoa
Rad scan:	Air, 25; ground level, 50
Weather yesterday:	Partly cloudy with an evening shower
Present weather:	Partly cloudy, warm, very humid with a shower during the pit digging
Date:	September 21, 1992

Soil Description:

Oi	4 to 0 cm; leaf litter
A	0 to 5 cm; brown (10YR 4/3) very cherty silt loam; moderate fine granular structure; very friable; clear wavy boundary
Ap	5 to 17 cm; dark yellowish-brown (10YR 4/4) very cherty silt loam or silty clay loam; moderate fine granular structure; very friable; abrupt wavy boundary
B&E	17 to 30 cm; yellowish-red (5/YR 5/8) B part and strong brown (7.5YR 5/6) E Part, cherty silty clay loam; moderate fine subangular blocky structure; friable; clear wavy boundary
Bt1	30 to 36 cm; red (2.5YR 4/8) cherty silty clay loam; moderate fine subangular blocky structure; friable; clear wavy boundary
Bt2	36 to 120 cm; red (2.5YR 4/6) cherty or very cherty clay; moderate fine and medium subangular blocky structure; firm; gradual wavy boundary
Bt3	120 to 173 cm; red cherty clay or clay with some yellowish mottles

Notes: Sampling depths: A horizon, 0 to 127 cm; B horizon, 36 to 50 cm; C horizon, 140 to 173 cm.

ORR Site 59

(See pp. 6, 14, 15, and 18 in Phase II Field Book 2)

Location:	Oak Ridge Reservation, Chestnut Ridge, Grid N28000, E26600
Classification:	Typic Paleudults; clayey, kaolinitic, thermic
Geomorphic position:	Broad, convex, lower middle sideslope
Slope and aspect:	20% northwest
Parent material(s):	Copper Ridge residuum
Vegetation:	This site appears to have been in an old field or pasture that was not badly eroded prior to abandonment. The soil does not appear to have been plowed. Present forest is old field-successional. with some mature shortleaf pine, mature white oak, and an understory of dogwood, beech, red maple and sassafras sprouts, some blueberry plants and a few hickory sprouts. The forest floor is covered with leaves.
Described by:	Lietzke
Sampling crew:	Lietzke and Burgoa
Rad scan:	Air, 45; ground level 50
Weather yesterday:	Partly cloudy with a shower during the evening
Present weather:	Cloudy
Date:	September 21, 1992

Soil Description:

Oi	4 to 0 cm; leaf litter
A	0 to 5 cm; dark brown (10YR 3/3) very cherty silt loam; moderate fine granular structure; very friable; clear wavy boundary
E	5 to 17 cm; yellowish-brown (10YR 5/4) very cherty silt loam; weak fine granular structure; very friable; clear wavy boundary
E&B	17 to 29 cm; yellowish-brown (10YR 5/4) E part, and strong brown (7.5YR 5/6) B part, cherty silty clay loam; weak fine subangular blocky structure; very friable; clear irregular boundary
B&E	29 to 43 cm; red (2.5YR 4/6) B part and strong brown (7.5YR 5/8) E part, cherty silty clay loam or cherty clay; moderate fine subangular blocky structure; friable; gradual irregular boundary
Bt1	43 to 100 cm; red (2.5YR 4/6) cherty clay; moderate medium subangular blocky structure; firm; gradual wavy boundary
Bt2	100 to 140 cm; red (2.5YR 4.6 clay) augered
Bt3/BC	140 to 165 cm; red cherty or very cherty clay with yellowish-brown, high chroma, parent material mottles

Notes: Sampling depths: A horizon, 0 to 17 cm; B horizon, 43 to 68 cm; C horizon, 140 to 165 cm.

ORR Site 60

(See pp. 7, 37, 38, and 39 in Phase II Field Book 2)

Location:	Oak Ridge Reservation, Chestnut Ridge, Grid N27800, E27400
Classification:	Typic hapludults; clayey, mixed, thermic
Geomorphic position:	Doubly convex shoulder that breaks off into a drainageway
Slope and aspect:	25% southwest
Parent material(s):	Copper Ridge Residuum
Vegetation:	Old field successional forest. Pines have either been harvested,or died and fallen over. Present canopy trees are oaks, red maple along with a few white pine and Virginia pine. There is an old field road about 20 ft uphill of this site. The ground surface is leaf covered along with sprouts of blueberry, sassafras, red maple and oak along with greenbriar and a few young cedars.
Described by:	D. A. Lietzke
Sampling crew:	Lietzke, Farmer and Harris
Rad scan:	Air, 45; ground level, 60
Weather yesterday:	Rainy all day
Present weather:	Cloudy with a few sprinkles
Date:	October 5, 1992

Soil Description:

Oi	3 to 0 cm; leaf litter
A	0 to 4 cm; dark yellowish-brown (10YR 4/4) very cherty silt loam; moderate fine granular structure; very friable; clear wavy boundary
Ap	4 to 11 cm; brown (7.5YR 5/4) cherty or very cherty silty clay loam; moderate fine granular structure; very friable; abrupt wavy boundary
Bt1	11 to 30 cm; red (2.5YR 4/6) cherty clay; moderate fine subangular blocky structure; friable; gradual wavy boundary
Bt2	30 to 70 cm; red (2.5YR 4/6) cherty or very cherty clay; moderate medium subangular blocky structure; firm; a few vertical streaks of strong brown (7.5YR 5/6) silty clay loam; gradual wavy boundary
Bt3	70 to 140 cm; red (2.5YR 4/6) cherty clay; moderate coarse subangular blocky structure; very firm; gradual wavy boundary
BC	140 to 175 cm; red cherty clay with high chroma yellowish saprolite colors

Notes: Sampling depths: A horizon, 0 to 11 cm; B horizon, 20 to 40 cm; C horizon, 145 to 175 cm.

ORR Site 62

(See pp. 4, 21, 22, and 34 in Phase II Field Book 2)

Location:	Oak Ridge Reservation, Chestnut Ridge, Grid 27900, E29700
Classification:	Typic paleudults; clayey, kaolinitic, thermic
Geomorphic position:	Broad, slightly convex, ridgetop
Slope and aspect:	3–4% south
Parent material(s):	Copper Ridge residuum
Vegetation:	Old field successional forest where original pines have all died and fallen over. Present vegetation consists of oaks and hickories with red maple and dogwood understory and seedlings of red maple and sassafras. The forest floor is leaf covered. This site is located about 75 to 80 ft east of an area that was cut over and replanted to loblolly pine.
Described by:	D. A. Lietzke
Sampling crew:	Lietzke and Wilson
Rad scan:	Air, 20; ground level, 50; reading at a depth of 20 cm in the pit, 65
Weather yesterday:	Cloudy with showers
Present weather:	Cloudy
Date:	September 28, 1992

Soil Description:

Oi	3 to 0 cm; leaf litter
A	0 to 5 cm; dark brown (10YR 3/3) cherty silt loam; strong fine granular structure; very friable; clear wavy boundary
Ap	5 to 15 cm; brown (10YR 4/3) cherty silt loam; moderate fine granular structure; very friable; clear wavy boundary
E	15 to 23 cm; yellowish-brown (10YR 5/4) cherty silt loam; weak fine granular structure; very friable; clear irregular boundary (includes E&B horizon in the lower part)
B&E	23 to 36 cm; yellowish-red (5YR 5/8) silty clay loam B part and light yellowish-brown (10YR 6/4) silt loam E part; weak fine subangular blocky structure; very friable; clear irregular boundary
Bt1	36 to 55 cm; red (2.5YR 4/8) cherty clay; moderate medium subangular blocky structure; firm; gradual wavy boundary
Bt2	55 to 140 cm; red (2.5YR 4/6) cherty clay with yellowish-brown mottles
Bt3	140 to 163 cm; highly mottled red and yellowish-brown clay with a 2-chroma wetness streak in the auger samples

Notes: Sampling depths: A horizon, 0 to 15 cm; B horizon, 36 to 50 cm; C horizon, 140 to 163 cm.

ORR Site 64

(See pp. 5, 51, and 52 in Phase II Field Book 2)

Location:	Oak Ridge Reservation, Chestnut Ridge, Grid N27200, E30000
Classification:	Typic Hapludults; clayey, mixed, thermic
Geomorphic position:	Top of broad, slightly convex ridge
Slope and aspect:	3–5% north-northeast
Parent material(s):	Copper Ridge Residuum
Vegetation:	Old field successional forest. The early pines have all disappeared. There are a few taller oaks and poplar. There is a thick sapling stand of red maple along with sprouts of red maple, beech, ash, along with a few ferns and a few white pine sprouts.
Described by:	D. A. Lietzke
Sampling crew:	Lietzke, Farmer and Harris
Rad scan:	Air, 30; ground level, 50
Weather yesterday:	Clear
Present weather:	Clear
Date:	October 12, 1992

Soil Description:

Oi	4 to 0 cm; leaf litter
A	0 to 8 cm; dark brown (10YR 3/3) silt loam; strong fine and medium granular structure; very friable; clear wavy boundary
Ap	8 to 19 cm; dark yellowish-brown (10YR 4/4) silt loam; moderate fine granular structure; very friable; clear wavy boundary
BE	19 to 26 cm; not described
Bt1	26 to 58 cm; red (2.5YR 4/8) clay; strong fine and medium subangular blocky structure; firm; gradual wavy boundary
BC	58 to 64 cm; yellow (10YR 7/8) and yellowish-red (5YR 5/8) saprolite that easily crushes to silt loam or silty clay loam. There are also vertical clay flows throughout.
CB	64 to 165 cm; yellow (10YR 7/8) and yellowish-red (5YR 5/8) saprolite that crushes to silt loam or silty clay loam (augered)

Notes: Sampling depths are: A horizon, 0 to 19 cm; B horizon, 26 to 50 cm; C horizon, 150 to 160 cm.

ORR Site 66

(See pp. 69, 83, and 84 in Phase II Field Book 2)

Location:	Oak Ridge Reservation, Chestnut Ridge, Grid N27000, E31000
Classification:	Typic hapludults; clayey, mixed, thermic
Geomorphic position:	Doubly convex spur below a bench landform
Slope and aspect:	15% southeast
Parent material(s):	Chepultepec Residuum
Vegetation:	Severely eroded old-field successional forest. Many pines are still standing. There are a few poplar, some red maple and many red maple saplings and dogwood. Pit is in a dense stand of ferns.
Described by:	D. A. Lietzke
Sampling crew:	Lietzke, Farmer, Harris, Massengale
Rad scan:	Air, 35; ground level, 55
Weather yesterday:	Rain ending
Present weather:	Clear with high cirrus moving in for the next storm.
Date:	November 3, 1992

Soil Description:

Oi	2 to 0 cm; leaf litter
Ap	0 to 13 cm; brown (10YR 4/3) cherty silty clay loam; moderate fine granular structure; very friable; abrupt wavy boundary
B&E	13 to 21 cm; yellowish-red (5YR 5/8) B part and yellowish-brown (10YR 5/4) E part; silty clay loam or cherty silty clay loam; moderate fine subangular blocky structure; friable; abrupt irregular boundary
Bt1	21 to 57 cm; red (2.5YR 4/6) cherty clay; moderate fine and medium subangular blocky structure; firm; gradual wavy boundary
Bt2	57 to 120 cm; yellowish-red (5YR 5/8) and yellow (2.5Y 7/8) cherty clay. A 10YR 7/1) flow zone was also observed in the auger cuttings
BC	120 to 160; highly mottled clay plugged saprolitic materials that are very cherty

Notes: Sampling depths for primary samples: A horizon, 0 to 12 cm; B horizon, 16 to 30 cm; C horizon, 140 to 165 cm. Sampling depths for field duplicates: A horizon, 0 to 14 cm; B horizon, 30 to 45 cm; C horizon, 150 to 173 cm.

ORR Site 68

(See pp. 70, 78, and 79 in Phase II Field Book 2)

Location:	Oak Ridge Reservation, Chestnut Ridge, Grid N26800, E31700
Classification:	Typic paleudults; clayey, kaolinitic, thermic
Geomorphic position:	Convex sideslope below a colluvial bench. The pit has a colluvial capping of variable depth. An old tree throw nearby may be the agent responsible for the surface mixing.
Slope and aspect:	25% northwest
Parent material(s):	Chepultepec Residuum with a surficial colluvial capping of 40 to 50 cm
Vegetation:	Older forest from which trees have been periodically harvested. The most recent cutting was done approximately 15 to 25 years ago. The taller trees are oaks and hickories with subcanopy trees of red maple and poplar and younger saplings and sprouts of cherry, hickory, sourwood, oak and sassafras. The forest floor is leaf covered.
Described by:	D. A. Lietzke
Sampling crew:	Lietzke
Rad scan:	Air, 20; ground level, 45
Weather yesterday:	Cloudy with occasional drizzle
Present weather:	Rain earlier then clearing
Date:	October 28, 1992

Soil Description:

Oi	4 to 0 cm; leaf litter
A	0 to 10 cm; dark grayish-brown (10YR 4/2) cherty silt loam; moderate fine granular structure; very friable; abrupt irregular boundary (ant burrow or termite burrow fillings into the E beneath)
E	10 to 32 cm; light yellowish-brown (10YR 6/4) cherty silt loam; weak fine granular structure; very friable; gradual wavy boundary
Bt	32 to 50 cm; yellowish-brown (10YR 5/6) very cherty silty clay loam; weak fine subangular blocky structure; friable to firm with some brittleness; abrupt irregular boundary
2E&B	50 to 68 cm; light yellowish-brown (10YR 6/4) E part and strong brown (7.5YR 5/8) B part; very cherty to extremely cherty silty clay loam; weak coarse subangular blocky structure; friable with some brittle areas; abrupt irregular boundary (includes 2B&E horizon)
2Bt1	68 to 90 cm; yellowish-red (5YR 5/8) cherty clay; moderate fine and medium subangular blocky structure; firm; gradual wavy boundary
2Bt2	90 to 170 cm; highly mottled red, yellowish-red, and yellowish-brown clay or cherty clay. There are some 2 chroma wetness streaks.

Notes: Sampling depths; A horizon, 0 to 10 cm; B horizon, 68 to 90 cm; C horizon, 150 to 175 cm

ORR Site 73

(See pp. 72, 85, and 86 in Phase II Field Book 2)

Location:	Oak Ridge Reservation, Chestnut Ridge, Grid N26800, E34000
Classification:	Typic hapludults; clayey, mixed, thermic
Geomorphic position:	Doubly convex spur just below a topographic bench landform
Slope and aspect:	15% northwest
Parent material(s):	Chepultepec Residuum
Vegetation:	Old woods that has been logged from time to time. Stumps are near the pit. Present canopy trees are poplar, oak and red maple. There is a thick sapling stand of oak, cherry, dogwood and red maple. There are a few ferns and sprouts of oak, cedar and cherry. The ground surface is leaf covered.
Described by:	D. A. Lietzke
Sampling crew:	Lietzke, Farmer, Harris, Massengale, Justice
Rad scan:	Air, 15; ground level, 55
Weather yesterday:	Clearing
Present weather:	Clear but clouds moving in
Date:	November 3, 1992

Soil Description:

Oi	3 to 0 cm; leaf litter
A	0 to 10 cm; very dark grayish-brown (10YR 3/2) cherty silt loam; strong fine granular structure; very friable, clear wavy boundary
E	10 to 27 cm; pale brown (10YR 6/3) cherty silt loam; moderate fine granular structure; very friable; abrupt irregular boundary
B&E	27 to 46 cm; light yellowish-brown (10YR 6/4) E part and strong brown (7.5YR 5/6) B part; cherty silty clay loam; moderate fine subangular blocky structure; very friable; abrupt irregular boundary
Bt	46 to 60 cm; yellowish-red (5YR 5/6) clay or cherty clay; strong fine and medium subangular blocky structure; friable; gradual wavy boundary
BC	60 to 80 cm; yellowish-red and red clay plugged saprolitic materials with high chroma yellow mottles (augered)
CB	80 to 160 cm; yellow (10YR 7/6–7/8) saprolitic materials with red zones and clay plugs; also black manganese oxide zones

Notes: This pit cuts through an old stump hole. Sampling depths for primary samples: A horizon, 0 to 14 cm; B horizon, 33 to 55 cm; C horizon, 145 to 160 cm. Sampling depths for field duplicates: A horizon, 0 to 10 cm; B horizon, 30 to 50 cm; C horizon, 140 to 160 cm.

ORR Site 74

(See pp. 71, 76, and 77 in Phase II Field Book 2)

Location:	Oak Ridge Reservation, Chestnut Ridge, Grid N27200, E34000
Classification:	Typic Hapludults; clayey, mixed, thermic
Geomorphic position:	Convex shoulder on the lower end of a long spur ridge
Slope and aspect:	14% northwest
Parent material(s):	Chepultepec Residuum
Vegetation:	Old-field successional forest The site is next to an old fence row. There is barbed wire sticking out of a nearby tree. Older trees are red and white oak. The younger trees are black gum, sweet gum, oaks, red maple. Only one old pine remains standing. There are sprouts of red maple, beech, cherry, sourwood and some ferns. The ground surface is leaf covered. This site was probably a pasture. It does not appear to have been plowed.
Described by:	D. A. Lietzke
Sampling crew:	Lietzke, Farmer, Petrowski
Rad scan:	Air, 15; ground level, 60
Weather yesterday:	Clear and cool
Present weather:	Clear and cool
Date:	October 26, 1992

Soil Description:

Oi	4 to 0 cm; leaf litter
A	0 to 6 cm; dark grayish-brown (10YR 4/2) cherty loam; moderate fine granular structure; very friable; clear wavy boundary
E1	6 to 16 cm; brown (10YR 5/3) cherty loam; weak fine granular structure; very friable; clear wavy boundary
E2	16 to 29 cm; brownish-yellow (10YR 6/4) cherty loam or cherty fine sandy loam; weak fine granular structure; very friable; abrupt irregular boundary
B&E	29 to 41 cm; strong brown (7.5YR 5/8) and brownish-yellow (10YR 6/4) sandy clay loam or clay loam; weak fine subangular blocky structure; friable; abrupt irregular boundary
Bt	69 to 120 cm; yellowish-red (5YR 5/8) clay; moderate fine and medium subangular blocky structure; firm; gradual wavy boundary
BC1	69 to 120 cm; yellowish-red (5YR 5/8) with high chroma yellow mottles, highly clay plugged saprolitic materials along with chert blocks
BC2	120 to 160 cm; very cherty saprolitic materials. (It took more than 2 h to penetrate from 69 to 160 cm.)

Notes: Sampling depths: A horizon, 0 to 12 cm; B horizon, 41 to 61 cm; C horizon, 140 to 160 cm

ORR Site 75

(See pp. 3, 40, and 41 in Phase II Field Book 2)

Location:	Oak Ridge Reservation, Chestnut Ridge, Grid N27200, E35400
Classification:	Typic Paleudults; clayey, kaolinitic, thermic, (dark surface phase).
Geomorphic position:	Broad, doubly convex, ridgetop
Slope and aspect:	13% northeast
Parent material(s):	Copper Ridge Residuum
Vegetation:	Old field successional forest. Original pines are being replaced by a thick stand of young pines, poplar, black gum, sourwood and dogwood with some sprouts plus honeysuckle on the forest floor. The ground surface is covered with leaves and fallen pines.
Described by:	D. A. Lietzke
Sampling crew:	Lietzke and Harris
Rad scan:	Air, 20; ground level, 50
Weather yesterday:	Cloudy
Present weather:	Clear, cool and breezy
Date:	October 6, 1992

Soil Description:

Oi	2 to 0 cm; leaf litter
A	0 to 4 cm; very dark grayish-brown (10YR 3/2) cherty silt loam; strong medium granular structure; very friable; abrupt wavy boundary
Ap	4 to 11 cm; dark brown (10YR 3/3) cherty silt loam; strong fine granular structure; very friable; clear wavy boundary
EB	11 to 20 cm; strong brown &.5YR 4/6) cherty silt loam; strong fine subangular blocky structure; very friable; gradual wavy boundary
BE	20 to 30 cm; yellowish-red (5YR 5/6) cherty or very cherty silty clay loam; moderate fine subangular blocky structure; very friable; clear wavy boundary
Bt1	30 to 49 cm; red (2.5YR 4/6) cherty clay; strong fine and medium subangular blocky structure; firm; gradual wavy boundary
Bt2	49 to 78 cm; red (2.5YR 4/6) cherty or very cherty clay; moderate medum subangular blocky structure; firm; gradual wavy boundary
Bt3	78 to 165 cm; red cherty or very cherty clay (augered)

Notes: Sampling depths: A horizon, 0 to 11 cm; B horizon, 30 to 49 cm, C horizon, 150 to 165 cm

ORR Site 77

(See pp. 43, 61, 62, and 63 in Phase II Field Book 2)

Location:	Oak Ridge Reservation, Chestnut Ridge, Grid N26600, E35200
Classification:	Typic Hapludults; clayey, kaolinitic, thermic
Geomorphic position:	Broad, slightly convex, ridgetop
Slope and aspect:	2–3% south-southeast
Parent material(s):	Chepultepec Residuum
Vegetation:	Old field successional forest with a few of the original pines still standing along with a few cedars. Present canopy trees are oaks, hickories, red maple and cherry. There are sprouts of oak, sassafras, maple, and poplar. The ground surface is leaf covered.
Described by:	D. A. Lietzke
Sampling crew:	Lietzke, Harris
Rad scan:	Air, 25; ground level, 45
Weather yesterday:	Cloudy with showers then clearing in the afternoon
Present weather:	Clear morning with frost in the low places
Date:	October 19, 1992

Soil Description:

Oi	4 to 0 cm; leaf litter and a root mat
A	0 to 5 cm; dark brown (10YR 3/3 –3/2) cherty loam; strong fine granular structure; very friable; clear wavy boundary
Ap	5 to 14 cm; dark brown (10YR 3/3) cherty loam; moderate fine and medium granular structure; very friable; abrupt wavy boundary
E	14 to 24 cm; yellowish-brown (10YR 5/4) cherty loam or cherty silt loam; weak fine granular structure; very friable; abrupt irregular boundary. (The lower part of the E horizon contains thin E&B, and B&E horizons.)
Bt1	24 to 40 cm; yellowish-red (5YR 5/8) cherty clay loam or cherty sandy clay loam; moderate medium subangular blocky structure; friable; gradual wavy boundary
Bt2	40 to 75 cm; mottled yellowish-red and yellowish-brown clay (augered)
Bt3	75 to 130; yellowish-red clay
BC/CB	130 to 160 cm; saprolitic materials in hues of reds and yellows; partially plugged with soft manganese oxides

Notes: Sampling depths: A horizon, 0 to 14 cm; B horizon, 40 to 60 cm; C horizon, 140 to 160 cm; field duplicate depths: A horizon, 0 to 14 cm; B horizon, 45 to 60 cm; C horizon, 140 to 160 cm

ORR Site 78

(See pp. 44, 59, and 60 in Phase II Field Book 2)

Location:	Oak Ridge Reservation, Chestnut Ridge, Grid N26700, E35600
Classification:	Typic Hapludults; clayey, kaolinitic, thermic
Geomorphic position:	Broad, slightly convex ridgetop
Slope and aspect:	4–5% southeast
Parent material(s):	Chepultepec Residuum that is covered by about 36 cm of ancient colluvium
Vegetation:	Old field successional forest. Most of the original pines have died and fallen over. Present vegetation consists of oaks and some poplars in the canopy and a few lower story red maples. There are sprouts of red maple, sassafras, and cherry. There is some honeysuckle. The ground surface is leaf covered.
Described by:	D. A. Lietzke
Sampling crew:	Lietzke, Farmer, G.Lee
Rad scan:	Air, 30; ground level, 65
Weather yesterday:	Clear and warm
Present weather:	Clear and warmer
Date:	October 15, 1992

Soil Description:

Oi	4 to 0 cm; leaf litter
A	0 to 5 cm; very dark grayish-brown (10YR 3/2) cherty loam; strong medium granular structure; very friable; clear wavy boundary
Ap	5 to 15 cm; dark grayish-brown (10YR 4/2) cherty loam or cherty silt loam; strong fine granular structure; very friable; abrupt wavy boundary
E	15 to 36 cm; light yellowish-brown (10YR 6/4) very cherty loam; moderate fine granular structure; very friable; abrupt wavy boundary. (A thin Bt horizon (7.5YR 5/6) is included at the base.)
2B&E	36 to 48 cm; strong brown (7.5YR 5/6) B part and pale brown (10YR 6/3) E part cherty clay loam; moderate fine subangular blocky structure; friable; abrupt irregular boundary
2Bt1	48 to 60 cm; yellowish-red (5YR 5/8) clay; moderate to strong fine and medium subangular blocky structure; firm; gradual wavy boundary
2Bt2	60 to 120 cm; yellowish-red and red clay with yellowish-brown drainage mottles (augered)
2BC	120 to 160 cm; highly clay plugged, very cherty, saprolitic materials of reds and yellows

Notes: Sampling depths: A horizon, 0 to 15 cm; B horizon, 48 to 60 cm; C horizon, 140 to 150 cm

ORR Site 83

(See pp. 2, 49, 50, and 54 in Phase II Field Book 2)

Location:	Oak Ridge Reservation, Chestnut Ridge, Grid N27800, E37600
Classification:	Typic Hapludults; clayey, mixed, thermic
Geomorphic position:	Elongated, doubly convex, ridgetop
Slope and aspect:	5% south-southwest
Parent material(s):	Copper Ridge Residuum
Vegetation:	Old field successional forest. The early pines have nearly all died and fallen over. Present forest consists of red maple, a few pines, poplars. cherry, sourwood along with some cedars and dogwood. The ground surface is leaf covered.
Described by:	D. A. Lietzke
Sampling crew:	Lietzke, Farmer and Harris
Rad scan:	Air, 20; ground level, 50
Weather yesterday:	Clear, breezy and cool
Present weather:	Clear and cool
Date:	October 12, 1992

Soil Description:

Oi	3 to 0 cm; leaf litter
A	0 to 6 cm; very dark grayish-brown (10YR 3/2) cherty silt loam; strong fine and medium granular structure; very friable; clear wavy boundary
Ap	6 to 16 cm; dark brown (10YR 3/3) cherty silt loam; strong fine granular structure; very friable; clear wavy boundary
B&E	16 to 24 cm; yellowish-red (5YR 5/6) B part and strong brown (7.5YR 4/6) E part; silty clay loam or cherty silty clay loam; moderate fine subangular blocky structure; very friable; clear wavy boundary
Bt1	24 to 53 cm; red (2.5YR 4/6) clay or cherty clay; strong fine and medium subangular blocky structure; friable; gradual wavy boundary
Bt2	53 to 90 cm; red (2.5YR 4/8) clay or cherty clay; moderate medium subangular blocky structure; firm; gradual wavy boundary
BC	90 to 160 cm; mottled red and yellow clay-plugged saprolitic materials (augered)

Notes: Sampling depths: A horizon, 0 to 15 cm; B horizon, 24 to 53 cm; C horizon, 100 to 170 cm. (Because of the chert content, two auger holes were required to collect enough sample. The first auger hole penetrated from 150 to 170 cm with only sporadic recovery. The second hole was sampled from 100 to 140 cm depth. Penetration ceased in this hole at 140 cm.)

ORR Site 85

(See pp. 46, 66, and 67 in Phase II Field Book 2)

Location:	Oak Ridge Reservation, Chestnut Ridge, Grid N26000, E37800
Classification:	Typic or Humic Hapludults; clayey, kaolinitic, thermic
Geomorphic position:	Lower third of long convex sideslope that goes all the way to the creek
Slope and aspect:	48% east-northeast
Parent material(s):	Chepultepec Residuum with a capping of creep materials 42 cm thick. This site is very close to the Longview Formation.
Vegetation:	Cut over forest probably never plowed because of the steepness, but probably pastured. Present trees are red oak, sugar maple, white pine and umbrella magnolia. There is abundant poison ivy ground cover along with some ferns. The ground surface is leaf covered.
Described by:	D. A. Lietzke
Sampling crew:	Lietzke, Harris
Rad scan:	Air, 25; ground level, 55
Weather yesterday:	Clear
Present weather:	Partly cloudy
Date:	October 20, 1992

Soil Description:

Oi	4 to 0 cm; leaf litter
A1	0 to 16 cm; dark brown (10YR 3/3) cherty silt loam; strong medium granular structure; very friable; clear wavy boundary
A	16 to 23 cm; dark yellowish-brown (10YR 3/4) cherty silt loam; strong fine granular structure; very friable; abrupt irregular boundary
E&A	23 to 31 cm; yellowish-brown (10YR 5/8) E part and dark yellowish-brown (10YR 4/4) A part; cherty silt loam; moderate fine granular structure; very friable; abrupt irregular boundary (worm activity?)
B&E	31 to 42 cm; strong brown (7.5YR 4/4) B part, and dark yellowish-brown (10YR 4/4) E part; cherty silty clay loam; weak fine subangular blocky structure; friable; abrupt irregular boundary
Bt	42 to 80 cm; red (2.5YR 4/6) clay or cherty clay with yellowish-brown clay flows on ped faces; strong medium subangular blocky structure; firm; gradual wavy boundary
BC	80 to 160 cm; red saprolitic materials with high chroma yellowish mottles; clay; some manganese oxides in discrete zones

Notes: Sampling depths for primary samples: A horizon, 0 to 15 cm; B horizon, 42 to 60 cm; C horizon, 140 to 160 cm. Field duplicate sampling depths are the same.

ORR Site 86

(See pp. 45, 64, and 65 in Phase II Field Book 2)

Location:	Oak Ridge Reservation, Chestnut Ridge, Grid N26000, E38200
Classification:	Typic Hapludults; clayey skeletal, kaolinitic, thermic
Geomorphic position:	Steep doubly convex sideslope between Chestnut Ridge Road and the creek
Slope and aspect:	45% southwest
Parent material(s):	Uppermost Chepultepec Residuum, but may be in the Longview
Vegetation:	Old growth forest but which has been periodically logged. Present trees are chestnut oaks and some hickories along with some smaller red maple and small sassafras, oak and maple sprouts.
Described by:	D. A. Lietzke
Sampling crew:	Lietzke, Harris
Rad scan:	Air, 25; ground level, 50
Weather yesterday:	Clear and frosty
Present weather:	Cloudy
Date:	October 20, 1992

Soil Description:

Oi	3 to 0 cm; leaf litter and root mat
A	0 to 3 cm; very dark grayish-brown (10YR 3/2) extremely cherty silt loam; strong medium granular structure; very friable; abrupt wavy boundary
E	3 to 18 cm; pale brown (2.5Y 6/3) extremely cherty silt loam; moderate fine granular structure; very friable; clear wavy boundary
EB	18 to 40 cm; yellowish-brown (10YR 5/6) extremely cherty silty clay loam; weak fine subangular blocky structure; very friable; gradual wavy boundary
BE	40 to 56 cm; strong brown (7.5YR 5/6) extremely cherty silty clay loam; moderate fine subangular blocky structure; very friable; gradual wavy boundary
Bt	56 to 95 cm; strong brown (7.5YR 5/6-5/8) extremely cherty clay or very cherty clay; moderate medium subangular blocky structure; friable; gradual wavy boundary
BC	95 to 160 cm; mottled red and yellow clayey saprolitic materials (augered)

Notes: Sampling depths for primary samples: A horizon, 0 to 15 cm; B horizon, 32 to 50 cm; C horizon, 140 to 155 cm. Field duplicate sampling depths: A horizon, 0 to 18 cm; B horizon, 56 to 70 cm; C horizon, 140 to 155 cm.

ORR Site 90

(See pp. 73, 74, and 75 in Phase II Field Book 2)

Location:	Oak Ridge Reservation, Chestnut Ridge, Grid N28000, E40800
Classification:	Typic Hapludults; clayey, mixed, thermic
Geomorphic position:	Small, doubly convex, spur ridge that is surrounded by old alluvium
Slope and aspect:	6% southeast
Parent material(s):	Chepultepec Residuum
Vegetation:	Present vegetation consists of a 30- to 40-year-old stand of planted loblolly pine. The understory is red maple, poplar and seedling pines. Groundcover is honeysuckle, roses, and blackberry briars.
Described by:	D. A. Lietzke
Sampling crew:	Lietzke, Farmer, Petrowski
Rad scan:	Air, 15; ground level, 55
Weather yesterday:	Clear and cool with some fog
Present weather:	Clear and cool but with a warming trend
Date:	October 26, 1992

Soil Description:

Oi	4 to 0 cm; leaf litter, pine needles and honeysuckle roots and stems
Ap	0 to 12 cm; brown (10YR 4/3) cherty loam; moderate fine granular structure; friable; abrupt wavy boundary
E&B	12 to 27 cm; light yellowish-brown (10YR 6/4) E part, and brown (7.5YR 5/4) B part; cherty loam or cherty sandy clay loam; weak fine granular structure; friable; abrupt irregular boundary. (This horizon also includes a B&E horizon in the lower part.)
Bt1	27 to 59 cm; yellowish-red (5YR 5/8) clay or cherty clay; moderate medium and coarse subangular blocky structure; firm; gradual wavy boundary
Bt2	95 to 120 cm; yellowish-red and red clay with yellowish-brown mottles. (augered
BC	120 to 160 cm; mottled reds and high chroma yellows; clay-plugged saprolitic materials

Notes: Many fragments are sandstone. This site is about 60 ft north of Chestnut Ridge Road with a gravel surface. The soil surface probably has received dust additions and perhaps other contaminants. Sampling depths: A horizon, 0 to 12 cm; B horizon, 27 to 40 cm; C horizon, 140 to 160 cm.

ORR Site 91

(See pp. 1, 10, 11, 12, 13, and 20 in Phase II Field Book 2)

Location:	Oak Ridge Reservation, Chestnut Ridge near Roane-Anderson County line, Grid N27000, E41000
Classification:	Typic Paleudults; clayey, kaolinitic, thermic
Geomorphic position:	Long convex sideslope spur with some shallow dolines nearby and some boulder-sized chert on the surface
Slope and aspect:	7% north
Parent material(s):	Copper Ridge Residuum
Vegetation:	Old woodlot with remains of chestnut stumps and barbed wire imbedded in a tree about 3 ft from the pit. Present trees are poplar, cherry, post and white oak, one chestnut sprout about 15-ft-tall and 1-in. dbh plus red maple and dogwood. Leaf covered ground and sprouts of sassafras, red maple and hickory.
Described by:	D. A. Lietzke
Sampling crew:	Lietzke and Burgoa
Rad. Scan:	Air, 50; ground level 65
Weather yesterday:	Partly cloudy and warm with a shower during the night
Present weather:	Cloudy and damp
Date:	September 21, 1992

Soil Description:

Oi	4 to 0 cm; leaf litter
A	0 to 5 cm; dark brown (10YR 3/3) cherty or very cherty silt loam; strong fine granular structure; very friable; abrupt wavy boundary
E	5 to 18 cm; yellowish-brown (10YR 5/4) cherty or very cherty silt loam; moderate fine granular structure; very friable; clear wavy boundary
B&E	18 to 30 cm; yellowish-red (5YR 5/6) B part, and strong brown (7.5YR 5/6) E part; silt loam or silty clay loam; weak fine subangular blocky structure; very friable; clear wavy boundary
Bt1	30 to 52 cm; red (2.5YR 4/8), cherty clay; moderate medium subangular blocky structure; firm; gradual wavy boundary
Bt2	52 to 79 cm; red (2.5YR 4/6) clay or cherty clay; moderate medium subangular blocky structure and angular blocky structure; firm; gradual wavy boundary
Bt3	79 to 155 cm; red (2.5YR 4/6) cherty clay with strong brown and yellowish-brown mottles

Notes: Sampling depths: A Horizon, 0 to 18 cm; B horizon, 30 to 52 cm; C horizon, 135 to 155 cm

ORR Site 93

(See pp. 1, 5, and 6 in Phase II Field Book 3)

Location:	Oak Ridge Reservation, Bethel Valley, Grid N21600, E26500
Classification:	Typic Hapludalfs; fine, mixed, thermic
Geomorphic position:	Broad, convex spur extending to the north from Haw Ridge
Slope and aspect:	7% northwest
Parent material(s):	Unit G Chickamauga-Bethel Valley Section
Vegetation:	Old field successional forest in a severely eroded old field. Present vegetation is dominated by hardwoods but there are still pines and a few large cedars. a few large oaks and ash along with sprouts of maple, dogwood and ash. There is abundant poison ivy. The ground surface is leaf-covered.
Described by:	D. A. Lietzke
Sampling crew:	Lietzke, Burgoa
Rad scan:	Air, 50; ground level, 70
Weather yesterday:	Clear and cool with frost at night
Present weather:	Clear and cool with frost at night
Date:	November 16, 1992

Soil Description:

Oi	4 to 0 cm; leaf litter
A	0 to 2 cm; very dark grayish-brown (10YR 3/2), silty clay loam; strong medium granular structure; friable; abrupt wavy boundary
Ap	2 to 11 cm; dark yellowish-brown (10YR 4/4), silty clay loam; weak fine granular structure;firm; abrupt wavy boundary
Bt1	11 to 22 cm; yellowish-red (5YR 4/6) clay; strong fine and medium angular and subangular blocky structure; very firm; yellowish-brown (10YR 5/6) coatings on all ped surfaces; clear wavy boundary
Bt2	22 to 45 cm; yellowish-red (5YR 5/6) and red (2.5YR 5/6) clay; weak coarse prismatic structure parting to strong fine and medium angular blocky structure; pale brown (2.5Y 6/3) ped coatings; very firm; clear wavy boundary
BC	45 to 85 cm; yellowish-brown (10YR 5/4) clay; massive; abrupt irregular boundary
R	85 cm limestone rock ledge. Depth to rock is highly variable below a depth of 85 cm

Notes: Sampling depths; A horizon, 0 to 11 cm; B horizon, 12 to 22 cm; C horizon, 65 to 80 cm

ORR Site 99

(See pp. 1, 7, and 8 in Phase II Field Book 3)

Location:	Oak Ridge Reservation, Bethel Valley, Grid 22000, E27750
Classification:	Typic Hapludults; clayey, mixed, thermic
Geomorphic position:	Lower convex sideslope, very severely eroded landform. The pit is located on an narrow spur ridge between two gullies.
Slope and aspect:	5% northwest
Parent material(s):	Unit G Chickamauga Residuum. Bethel Valley section
Vegetation:	Old-field successional pines with most Virginia and shortleaf pines still in place. There is a thick sapling stand of red maple and dogwood along with honey suckle and poison ivy. The ground surface is about 70% covered with mosses and lichens with the remainder covered by needles and leaves.
Described by:	D. A. Lietzke
Sampling crew:	Lietzke, Burgoa
Rad scan:	Air, 40; ground level, 60
Weather yesterday:	Clear and cool with frost at night
Present weather:	Clear and cool with frost at night
Date:	November 16, 1992

Soil Description:

Oi	4 to 0 cm; needles, leaves, mosses, and lichens
A	0 to 2 cm; dark brown (10YR 3/3) silt loam; moderate fine granular structure; very friable; abrupt wavy boundary
Ap	2 to 15 cm; brown (7.5YR 4/4) silty clay loam; weak fine granular structure; friable; abrupt wavy boundary
Bt1	15 to 32 cm; yellowish-red (5YR 4/6) clay or silty clay; moderate fine and medium subangular blocky structure; friable; gradual wavy boundary
Bt2	32 to 87 cm; brown (7.5YR 4/4) clay or silty clay; moderate fine subangular blocky structure; friable; many soft manganese oxide bodies throughout; gradual wavy boundary
BC	87 to 180 cm; brown (7.5YR 4/4) clay (augered)
CB	180 to 200 cm; yellowish-brown (10YR 5/4) clay with many soft black manganese oxide bodies throughout

Notes: Sampling depths: A horizon, 0 to 15 cm; B horizon, 18 to 32 cm; C horizon, 98 to 113 cm

ORR Site 100

(See pp. 1, 9, and 10 in Phase II Field Book 3)

Location:	Oak Ridge Reservation, Bethel Valley, Grid N21600, E28000
Classification:	Typic Hapludults clayey, mixed, thermic
Geomorphic position:	Doubly convex spur off of Haw Ridge
Slope and aspect:	12% northwest
Parent material(s):	Unit G Chickamauga Residuum of Bethel Valley section
Vegetation:	Severely eroded old woods pasture field vegetation. The open forest stand is dominated by large oaks, some white pine and sugar maple. There are beech and maple saplings and oak sprouts along with some lowbush blueberry. The ground surface is leaf covered.
Described by:	D. A. Lietzke
Sampling crew:	Lietzke, Burgoa
Rad scan:	Air, 50; ground level, 70
Weather yesterday:	Clear and cool
Present weather:	Clear and cool
Date:	November 16, 1992

Soil Description:

Oi	4 to 0 cm; leaves
Oa	0 to 3 cm; sapric materials, hemic materials and a root mat
Ap	3 to 6 cm; brown (10YR 4/3) silty clay loam; moderate fine granular structure; friable; abrupt wavy boundary
Bt1	6 to 25 cm; strong brown (7.5YR 5/8) clay; moderate medium prismatic structure parting to moderate fine subangular blocky structure; firm; thick yellowish-brown (10YR 5/4) coatings on prism faces; clear wavy boundary
Bt2	25 to 48 cm; strong brown (7.5YR 5/8) clay with some brownish-yellow (10YR 6/6) ped interiors; moderate coarse prismatic structure parting to moderate fine angular blocky structure; very firm; thick yellowish-brown (10YR 5/4) coatings on prism faces; clear wavy boundary
C	48 to 84 cm; brownish-yellow (10YR 6/6) saprolitic materials that easily crush to clay; some ped faces in the upper part that are coated with strong brown (7.5YR 5/8) clay
Cr	84 to 100 cm; olive yellow (2.5Y 6/6) saprolite with red and black coatings in larger cracks and on joint surfaces

Notes: Sampling depths: A horizon, 0 to 6 cm; B horizon, 10 to 25 cm; C horizon, 55 to 70 cm

ORR Site 101

(See pp. 2, 13, 14, and 15 in Phase II Field Book 3)

Location:	Oak Ridge Reservation, Bethel Valley, Grid N21250, E31550
Classification:	Typic Hapludalfs; fine, mixed, thermic
Geomorphic position:	Doubly convex sideslope off of Haw Ridge
Slope and aspect:	25% northwest
Parent material(s):	Unit G Chickamauga Residuum of Bethel Valley Section
Vegetation:	Mature cedars, oaks and beech along with sugar maple, beech and dogwood saplings and sprouts. This site was evidently never plowed but was probably a woods pasture
Described by:	D. A. Lietzke
Sampling crew:	Lietzke, Farmer, Harris
Rad scan:	Air, 60; ground level, 80
Weather yesterday:	Clear
Present weather:	Clear
Date:	November 19, 1992

Soil Description:

Oi	5 to 0 cm; leaves
A	0 to 13 cm; very dark grayish-brown (10YR 3/2) clay or silty clay; strong coarse granular structure; firm or very firm; clear wavy boundary
AB	13 to 23 cm; brown (10YR 4/3) clay; strong medium and coarse subangular and angular blocky structure; very firm; peds coated with dark grayish-brown (10YR 4/2) materials; gradual wavy boundary
Bt	23 to 50 cm; yellowish-brown (10YR 5/4) clay; moderate medium and coarse prismatic parting to strong medium angular blocky structure; very firm; ped coatings of dark grayish-brown (10YR 4/2); gradual wavy boundary
C	50 to 70 cm; light yellowish-brown (2.5Y 6/4) clay; weak coarse prismatic structure in the upper part to massive in the lower part; abrupt irregular boundary. Some thin limestone ledges were in this horizon and were removed from the pit.
R	70 cm; limestone rock ledge at strike and dip

Notes: Sampling depths: A horizon, 0 to 12 cm; B horizon, 23 to 50 cm; C horizon, 60 to 70 cm

ORR Site 102

(See pp. 2, 13, 14, and 17 in Phase II Field Book 3)

Location:	Oak Ridge Reservation, Bethel Valley, Grid N21300, E34900
Classification:	Typic Hapludalfs; fine, mixed, thermic
Geomorphic position:	Broad, slightly convex ridge
Slope and aspect:	3% northwest
Parent material(s):	Chickamauga Residuum of the Bethel Valley Section
Vegetation:	This site is probably in the front yard of an old house site. Present vegetation consists of scattered large oaks and large Virginia pines. Poison ivy ground cover is very abundant. This site was relatively uneroded before abandonment.
Described by:	D. A. Lietzke
Sampling crew:	Lietzke, Farmer, and Harris
Rad scan:	Air, 40; ground level, 60: In top of auger hole, 70
Weather yesterday:	Clear and warm
Present weather:	Clear but clouding in
Date:	November 19, 1992

Soil Description:

Oi	5 to 0 cm; leaves, needles and leaf litter
A	0 to 10 cm; dark yellowish-brown (10YR 3/4) silty clay loam; strong coarse granular structure; friable; clear wavy boundary
BA	10 to 20 cm; dark brown (7.5YR 3/4) silty clay loam; moderate fine subangular blocky structure; firm; clear wavy boundary
Bt	20 to 34 cm; yellowish-red (5YR 4/6) clay; weak coarse prismatic parting to strong medium and coarse angular and subangular blocky structure; very firm; strong brown (7.5YR 5/4) clay flows on most ped surfaces and especially heavy on prism surfaces; gradual wavy boundary
BC	34 to 101 cm; saprolitic materials with ped in the upper part decreasing with depth; colors are red (2.5YR 5/6), strong brown (7.5YR 5/6) and light yellowish-brown (2.5Y 6/4) clay; weak coarse prismatic structure; very firm; abrupt irregular boundary
R	101 cm; limestone ledge. Depth to rock in this pit ranges from 34 to 101 cm and perhaps deeper in a few places. Other small slabs of limestone were removed when digging the pit.

Notes: Sampling depths: A horizon, 0 to 10 cm; B horizon, 20 to 34 cm; C horizon, 90 to 101 cm

ORR Site 103

(See pp. 2, 12, 13, and 16 in Phase II Field Book 3)

Location:	Oak Ridge Reservation, Bethel Valley, Grid N20800, E36400
Classification:	Typic Hapludults; clayey, mixed, thermic
Geomorphic position:	Middle section of a doubly convex sideslope
Slope and aspect:	24% northwest
Parent material(s):	Chickamauga Residuum from the Bethel Valley Section
Vegetation:	Old field successional forest. Some of the original pines remain along with a few larger oaks. Small trees are beech, dogwood, gum and cedar. This site was severely eroded before abandonment.
Described by:	D. A. Lietzke
Sampling crew:	Lietzke, Farmer and Harris
Rad scan:	Air, 60; ground level, 80; top of auger hole, 90
Weather yesterday:	Clear and dry
Present weather:	Clear and dry
Date:	November 19, 1992

Soil Description:

Oi	5 to 0 cm; leaf litter
A	0 to 4 cm (varies from 0 to 7 cm in an old stump hole); dark yellowish-brown (10YR 4/4) loam; moderate fine granular structure; very friable; abrupt wavy boundary. This A horizon consists largely of Rome materials that have moved down the slope.
2Bt	4 to 30 cm; yellowish-red (5YR 4/6) clay; strong medium and coarse subangular blocky structure; very firm; strong brown (7.5YR 5/4) ped coatings; gradual wavy boundary. The dominant structure is probably large prismatic.
2BC	30 to 77 cm; saprolitic materials but having ped structure; ped interiors are brownish-yellow (10YR 6/6) and yellowish-red (5YR 4/6) clay; weak coarse prismatic structure; very firm. Peds are coated with both yellowish-red and red clay; gradual wavy boundary.
2CB	77 to 105 cm; red and yellow saprolitic materials that easily crush to clay. No rock was exposed in the bottom of the pit.

Notes: Sampling depths: A Horizon, 0 to 4 cm; B Horizon, 4 to 15 cm; C horizon, 90 to 100 cm

ORR Site 104

(See pp. 3, 21, 22, 30, and 31 in Phase II Field Book 3)

Location:	Oak Ridge Reservation, Bethel Valley, Grid N21800, E44000
Classification:	Typic Hapludults; clayey, mixed, thermic
Geomorphic position:	Doubly convex sideslope
Slope and aspect:	13% northwest
Parent material(s):	Chickamauga Residuum of the Bethel Valley Section
Vegetation:	Old field successional forest. The original pines and cedars have mostly disappeared, but some remain. Present trees are all hardwoods consisting of oaks, red maple, and hickory. There are some lowbush blueberries on the forest floor. The ground surface is leaf covered.
Described by:	D. A. Lietzke
Sampling crew:	Lietzke, Burgoa
Rad scan:	Air, 40; ground level, 65; top of auger hole 85
Weather yesterday:	Cloudy and cold
Present weather:	Partly cloudy to mostly cloudy
Date:	November 30, 1992

Soil Description:

Oi	4 to 0 cm; leaves and leaf litter
Oa	0 to 1 cm; black organic matter and a root mat
E	1 to 4 cm; pale brown (2.5Y 5/3) silt loam; weak fine granular structure; very friable; clear wavy boundary. Contains some Rome pebbles.
Ap	4 to 11 cm; brown (10YR 4/3) silt loam; weak fine granular structure; very friable; abrupt wavy boundary. Contains some Rome pebbles.
Bt	11 to 47 cm; yellowish-red (5YR 5/8) clay; weak coarse prismatic parting to strong medium subangular blocky structure; very firm; gradual wavy boundary.
BC	47 to 100 cm; multi-colored saprolitic materials with clay texture; moderate medium and coarse angular blocky structure; peds have saprolitic interiors; peds are coated with reddish-brown (5YR 5/4) clay.

Sampling depths: A horizon, 0 to 11 cm; B horizon, 17 to 40 cm; C horizon, 75 to 95 cm.

A-80

ORR Site 108

(See pp. 3, 23, 24, 30, and 31 in Phase II Field Book 3)

Location:	Oak Ridge Reservation, Bethel Valley, Grid N22250, E45000
Classification:	Typic Hapludalfs; fine, mixed, thermic
Geomorphic position:	Doubly convex sideslope
Slope and aspect:	9% northwest
Parent material(s):	Chickamauga Residuum of the Bethel Valley Section
Vegetation:	Old field successional forest with some large pines and a more smaller pines and a lower story of hardwoods;. There is fairly thick brush along with honey suckle and poison ivy. The forest floor is mostly leaf covered but there are patches of moses.
Described by:	D. A. Lietzke
Sampling crew:	Lietzke, Burgoa
Rad scan:	Air, 50; ground level, 60; top of auger hole, 70
Weather yesterday:	Cloudy and cold
Present weather:	Mostly cloudy
Date:	November 30, 1992

Soil Description:

Oi	3 to 0 cm; leaf litter and pine needles
Oe	0 to 1 cm; partially decomposed litter
Ap	0 to 7 cm; dark yellowish-brown (10YR 4/4) silty clay loam; moderate fine granular structure; very friable; abrupt wavy boundary
Bt	7 to 38 cm; red (2.5/YR 4/6) clay; strong fine and medium angular blocky structure; firm; clear wavy boundary
BC	38 to 53 cm; collapsed saprolitic materials with clay texture; highly mottled yellowish-brown, yellowish-red along with 2 and 3 chroma wetness mottles; weak medium and coarse angular blocky structure; abrupt irregular boundary
R	53 cm; limestone rock with highly variable depth ranging from 53 to 95 cm

Notes: Sampling depths: A horizon, 0 to 7 cm; B horizon, 12 to 20 cm; C horizon, 80 to 90 cm. The BC horizon that was sampled at a depth of 80 to 90 cm is not underlain directly by limestone as is the BC horizon described above. Where the BC horizon is thicker and deeper to rock, it has a yellowish-red (5YR 4/6) color along with Chroma 3 wetness mottles and higher chroma parent material colors.

ORR Site 110

(See pp. 4, 25, 26, 30, and 38 in Phase II Field Book 3)

Location:	Oak Ridge Reservation, Bethel Valley, Grid N22400, E45800
Classification:	Typic Hapludalfs; fine, mixed, thermic
Geomorphic position:	Elongated convex ridge
Slope and aspect:	2%
Parent material(s):	Chickamauga Residuum of the Bethel Valley Section
Vegetation:	Old field successional forest with pines, oaks and cedars. There are also beech and hickory sprouts along with weeds and honeysuckle. This site was severely eroded before abandonment.
Described by:	D. A. Lietzke
Sampling crew:	Lietzke, Burgoa
Rad scan:	Air, 40; ground level, 50; top of auger hole, 90
Weather yesterday:	Cloudy and cold
Present weather:	Cloudy
Date:	November 30, 1992

Soil Description:

Oi	5 to 0 cm; leaves and leaf litter
A	0 to 3 cm; dark brown (10YR 3/3) silty clay loam; strong medium granular structure; very friable; abrupt wavy boundary
Bt	3 to 40 cm; yellowish-red (5YR 4/6) clay; strong fine, medium and coarse angular blocky structure; firm; dark yellowish-brown (10YR 4/4) ped coatings; gradual wavy boundary
BC	40 to 75 cm; brown (7.5YR 4/4) clay with yellowish-brown (10YR 5/4) drainage mottles; moderate coarse prismatic structure; gradual wavy boundary
CB	75 to 85 cm; light olive brown (2.5Y 5/6) and yellowish-brown (10YR 5/6) clay; strong fine angular blocky structure. There were rock ledges in several locations on all pit faces.

Notes: Sampling depths: A horizon, 0 to 3 cm; B horizon, 3 to 20 cm; C horizon, 75 to 85 cm.

ORR Site 115

(See pp. 11, 30, 36, and 37 in Phase II Field Book 3)

Location:	Oak Ridge Reservation, Bethel Valley, Grid N22500, E46700
Classification:	Typic Hapludalfs; fine, mixed, thermic
Geomorphic position:	Convex ridgetop
Slope and aspect:	3% southeast
Parent material(s):	Unit E Chickamauga, Bethel Valley Section Residuum
Vegetation:	Old field successional forest of Virginia pine, cedar, oaks, hickories, ash, dogwood, with a good stand of poison ivy and some honeysuckle. This site does not appear to have been plowed, but was probably a woods pasture.
Described by:	D. A. Lietzke
Sampling crew:	Lietzke, Farmer, Petrowski
Rad scan:	Air, 50; ground level, 70
Weather yesterday:	Cloudy to partly cloudy, less windy but still cold
Present weather:	Clouding in again
Date:	December 3, 1992

Soil Description:

Oi	4 to 0 cm; leaf litter
A	0 to 4 cm; dark brown (10YR 3/3) silt loam; strong fine and medium granular structure; very friable; abrupt wavy boundary
EB	4 to 8 cm; yellowish-brown (10YR 5/4) silt loam; moderate fine granular structure; very friable; clear wavy boundary
Bt	8 to 60 cm; yellowish-red (5YR 4/6) clay; moderate fine subangular blocky structure; firm; brown (7.5YR 5/3) ped coatings; gradual wavy boundary
BC	60 to 75 cm; dark yellowish-brown (10YR 4/4) clay; strong fine angular blocky structure; very firm; abrupt irregular boundary
R	75 cm; limestone. Depth to rock in the pit ranged from 25 to 45 cm except on the west side where this soil was described and sampled.

Notes: Sampling depths: A horizon 0, to 8 cm; B horizon, 10 to 30 cm; C horizon, 60 to 75 cm.

ORR Site 116

(See pp. 11, 31, 32, and 33 in Phase II Field Book 3)

Location:	Oak Ridge Reservation, Bethel Valley, Grid N22100, E49000
Classification:	Typic or Ultic Hapludalfs; fine, mixed, thermic
Geomorphic position:	Slightly convex elongated ridge
Slope and aspect:	3% northeast
Parent material(s):	Chickamauga Residuum of the Bethel Valley Section
Vegetation:	Loblolly Pine plantation. Pine are estimated to be about 40 years old. There are a few hardwoods in the understory. There is also abundant honeysuckle. The site is quite close to an old house or barn site
Described by:	D. A. Lietzke
Sampling crew:	Lietzke,Farmer, Petrowski
Rad scan:	Air, 50; ground level, 70; top of auger hole, 70
Weather yesterday:	Cloudy, cold with an early morning shower
Present weather:	Clear, frosty, but the clouds of the next storm are beginning to move overhead.
Date:	December 3, 1992

Soil Description:

Oi	4 to 0 cm; pine needles
A	0 to 5 cm; dark reddish-brown (5YR 3/2) silty clay loam; strong medium granular structure; friable; abrupt wavy boundary
Ap	5 to 12 cm; dark reddish-brown (5YR 3/4) silty clay loam or silty clay; moderate fine subangular blocky structure; firm; abrupt wavy boundary
Bt	12 to 38 cm; dark reddish-brown (2.5YR 3/4) clay; strong fine and medium prismatic parting to strong medium angular blocky structure; very firm; brown (7.5YR 4/3) ped coatings; gradual wavy boundary
BC	38 to 70 cm; clayey saprolitic materials in reds and yellows; moderate coarse prismatic parting to moderate coarse angular blocky structure; very firm;all ped surfaces coated with brown (7.5YR 4/3) clay; there are a few 2 chroma wetness mottles in old root channels; gradual irregular boundary
CB	70 to 85 cm; saprolitic materials that easily crush to clay; colors are mixed yellows and reds. There are a few 2 chroma wetness mottled in flow pathways.

Notes: Sampling depths: A horizon, 0 to 12 cm; B horizon, 16 to 30 cm; C horizon, 70 to 85 cm.

ORR Site 117

(See pp. 11, 31, 34, and 35 in Phase II Field Book 3)

Location:	Oak Ridge Reservation, Bethel Valley, Grid N22500, E49000
Classification:	Typic Hapludalfs; fine, mixed, thermic
Geomorphic position:	Slightly convex spur, once covered by alluvium. Some rounded fragments remain in the surface layer.
Slope and aspect:	2%
Parent material(s):	Unit G Chickamauga Residuum, Bethel Valley Section
Vegetation:	Loblolly Pine plantation
Described by:	D. A. Lietzke
Sampling crew:	Lietzke, Farmer, Petrowski
Rad scan:	Air, 40; ground level, 70; top of auger hole, 80
Weather yesterday:	Cloudy, cold, windy
Present weather:	Clear to partly cloudy, clouding in from the west for the next storm
Date:	December 3, 1992

Soil Description:

Oi	6 to 0 cm; pine needles
0a	0 to 2 cm; highly decomposed pine needles
A	2 to 7 cm; dark yellowish-brown (10YR 3/4) silt loam; strong medium granular structure; very friable; clear wavy boundary
Ap	7 to 15 cm; brown (7.5YR 4/4) clay loam; strong medium and coarse granular structure; friable; abrupt wavy boundary
Bt	15 to 34 cm; yellowish-red (5YR 5/8) clay; moderate coarse prismatic parting to weak medium and coarse angular blocky structure; very firm; strong brown (7.5YR 4/6) coatings on prism faces; gradual wavy boundary
BC	34 to 57 cm; mottled red, yellowish-red, strong brown, and yellowish-brown clay; moderate medium prismatic parting to weak coarse angular blocky structure; very firm; most ped interiors are saprolitic; gradual wavy boundary
CB	57 to 106 cm; highly mottled red, yellowish-red, strong brown, yellowish-brown and olive brown clayey saprolitic materials; moderate fine and medium prismatic structure; very firm; abrupt irregular boundary
R	106 cm; limestone rock

Notes: Sampling depths: A horizon, 0 to 15 cm; B horizon, 15 to 30 cm; C horizon, 85 to 95 cm.

ORR Site 118

(See pp. 19, 39, 46, 47, and 49 in Phase II Field Book 3)

Location:	Oak Ridge Reservation, K-25 area, Grid N39800, E23000
Classification:	Typic Hapludults; clayey, mixed, thermic
Geomorphic position:	Doubly convex spur ridge between two drainageways
Slope and aspect:	6% west
Parent material(s):	Residuum of East Fork Chickamauga Section
Vegetation:	Hardwood forest of large white oaks, beech, cherry, sugar maple. This forest does not appear to have been plowed or ever pastured.
Described by:	D. A. Lietzke
Sampling crew:	Lietzke, Burgoa
Rad scan:	Air, 50; ground level, 60; top of auger hole, 60
Weather yesterday:	Cloudy and cold
Present weather:	Cloudy and cold
Date:	December 8, 1992

Soil Description:

Oi	4 to 0 cm; leaves
A	0 to 5 cm; very dark grayish-brown (10YR 3/2) silty clay loam; strong medium and coarse granular structure; friable; abrupt wavy boundary
Bt	5 to 28 cm; yellowish-red (5YR 5/6) clay; moderate medium and coarse prismatic parting to moderate medium subangular blocky and angular blocky structure; very firm; yellowish-red (5YR 4/6) clay films on prism surfaces; gradual wavy boundary
BC	28 to 69 cm; yellowish-red with bright brownish-yellow saprolitic colors; clay; moderate coarse prismatic parting to moderate medium angular blocky structure; very firm; peds coated with yellowish-red (5YR 4/6) clay; gradual wavy boundary
CB	69 to 100 cm; brownish-yellow (10YR 6/6) saprolitic materials with clay texture; streaks of yellowish-red materials throughout; weak fine angular blocky structure; very firm

Notes: Sampling depths: A horizon, 0 to 5 cm; B horizon, 7 to 20 cm; C horizon, 70 to 80 cm.

ORR Site 119

(See pp. 19, 39, 51, 56, and 57 in Phase II Field Book 3)

Location:	Oak Ridge Reservation, K-25 area, Grid 40000, E23000
Classification:	Typic Hapludalfs; fine, mixed, thermic
Geomorphic position:	Narrow convex ridge
Slope and aspect:	3% west
Parent material(s):	Residuum of East Fork Chickamauga Section
Vegetation:	Cutover woods. Present trees consist of cedars, some oak, ash and hardwood saplings. Site was probably never plowed but was probably pastured.
Described by:	D. A. Lietzke
Sampling crew:	Lietzke, Burgoa and Farmer
Rad scan:	Air, 50; ground level, 70; top of auger hole, 70
Weather yesterday:	Mostly clear
Present weather:	Clear but with high cirrus overhead
Date:	January 4, 1993

Soil Description:

Oi	4 to 0 cm; leaf litter
A1	0 to 5 cm; dark brown (10YR 3/3) silt loam; strong medium granular structure; very friable; clear wavy boundary
A2	5 to 16 cm; brown (10YR 4/3) silt loam; moderate fine granular structure; very friable; clear wavy boundary
Bt	16 to 59 cm; yellowish-red (5YR 5/8) clay; strong fine to coarse angular blocky structure; very firm; gradual wavy boundary
BC	59 to 90 cm; mottled strong brown and yellowish-brown clay; strong fine angular blocky structure; very firm; several pressure faces
R	90 cm; limestone. Depth to rock varies from 30 cm to more than 100 cm.

Notes: Sampling depths: A horizon, 0 to 15 cm; B horizon, 20 to 30 cm; C horizon, 75 to 88 cm.

ORR Site 120

(See pp. 19, 39, 44, 45, and 48 in Phase II Field Book 3)

Location:	Oak Ridge Reservation, K-25 area, Grid N39800, E23250
Classification:	Typic Hapludults; clayey, mixed, thermic
Geomorphic position:	Sideslope with slight convexity, about 15 to 20 ft away from a recent subsidence
Slope and aspect:	4% west
Parent material(s):	Thin alluvium over residuum of East Fork Chickamauga Section
Vegetation:	Hardwoods, never pastured but cutover from time to time; large beech
Described by:	D. A. Lietzke
Sampling crew:	Lietzke, Burgoa
Rad scan:	Air, 45; ground level, 60; top of auger hole, 60
Weather yesterday:	Cloudy, cold with drizzle
Present weather:	Cloudy
Date:	December 7, 1992

Soil Description:

Oi	6 to 0 cm; leaves and other litter
A	0 to 10 cm; dark brown (7.5YR 3/4) loam; strong fine and medium granular structure; very friable; clear wavy boundary
AB	10 to 17 cm; reddish-brown (5YR 4/4) loam; moderate fine subangular blocky structure; very friable; clear wavy boundary
Bt1	17 to 27 cm; red (2.5YR 4/6) clay loam; moderate fine subangular blocky structure; friable; few sandstone pebbles and gravels; abrupt wavy boundary
2Bt2	27 to 74 cm; red (2.5YR 4/6) clay; strong fine and medium subangular blocky structure; friable to firm; few chert fragments; gradual wavy boundary
2BC	74 to 80 cm; red (2.5YR 4/8) clay; strong fine angular blocky structure; friable; has some yellow, high chroma saprolite colors; gradual wavy boundary
2CB	80 to 100 cm; red, yellowish-red and brownish-yellow clayey saprolitic materials with dull yellowish-brown wetness mottles; moderate medium angular blocky structure; very firm

Notes: Sampling depths: A horizon, 0 to 10 cm; B horizon, 26 to 40 cm; C horizon, 85 to 100 cm.

ORR Site 121

(See pp. 20, 39, 51, 58, and 59 in Phase II Field Book 3)

Location:	Oak Ridge Reservation, K-25 area, Grid N42100, E26200
Classification:	Typic Hapludults or Ultic Hapludalfs: clayey, mixed, thermic
Geomorphic position:	Shoulder of broad, slightly convex ridgetop
Slope and aspect:	5% northwest
Parent material(s):	Residuum of East Fork Chickamauga Section
Vegetation:	Old field successional forest of Virginia pine and an understory of gum, hickory, red maple and beech
Described by:	D. A. Lietzke
Sampling crew:	Lietzke, Burgoa and Farmer
Rad scan:	Air, 45; ground level, 55; top of auger hole, 55
Weather yesterday:	Cloudy
Present weather:	Mostly clear, but with high thin cirrus overhead
Date:	January 4, 1993

Soil Description:

Oi	4 to 0 cm; leaves and needles along with some mosses
A	0 to 3 cm; very dark brown (10YR 2/2) silt loam; strong medium granular structure; very friable; abrupt wavy boundary
Ap	3 to 20 cm; brown (10YR 4/3) silty clay loam; moderate fine granular structure; friable; abrupt wavy boundary
Bt	20 to 30 cm; brown (7.5YR 4/3–4/4) clay; moderate medium angular blocky structure; very firm; abrupt wavy boundary
BC1	30 to 51 cm; dark reddish-gray (5YR 4/2) clay; strong fine angular blocky structure; has red iron oxide streaks and 2 chroma wetness mottles and coatings on some ped surfaces; abrupt wavy boundary
BC2	51 to 70 cm; highly mottled yellowish-red, olive yellow and gray clay; strong fine angular blocky structure; very firm; abrupt wavy boundary
CB	70 to 100 cm; reddish-gray (10R 5/1) saprolitic material; very soft and crushes easily to clay; There are red iron oxide streaks throughout that are on cracks and along flow zones; massive.

Notes: Sampling depths: A horizon, 0 to 20 cm; B horizon, 23 to 30 cm; C horizon, 70 to 90 cm.

ORR Site 122

(See pp. 27, 39, 49, 66, and 67 in Phase II Field Book 3)

Location:	Oak Ridge Reservation, K-25 area, Grid N41300, E27250
Classification:	Typic Hapludults or Ochreptic Hapludults; clayey, mixed, thermic
Geomorphic position:	Elongated, convex, narrow ridgetop
Slope and aspect:	6% northwest
Parent material(s):	Residuum of East Fork Chickamauga Section (Pond Springs Siltstone)
Vegetation:	Loblolly pine plantation. There are abundant honeysuckle vines and briars.
Described by:	D. A. Lietzke
Sampling crew:	Lietzke, Burgoa and Farmer
Rad scan:	Air, 40; ground level, 50; top of auger hole, 50
Weather yesterday:	Mostly clear
Present weather:	Was clear earlier but now completely cloudy
Date:	January 4, 1993

Soil Description:

Oi	3 to 0 cm; pine needles and debris
Ap	0 to 10 cm; brown (10YR 4/3) cherty silty clay loam; moderate fine granular structure; friable; abrupt wavy boundary
Bt	10 to 21 cm; strong brown (7.5YR 5/6) clay; strong fine and medium subangular blocky structure; very firm; gradual wavy boundary. There is a layer of lag chert gravel about 2 cm thick at the top of this horizon.
BC	21 to 56 cm; brownish-yellow (10YR 6/6) silty clay saprolitic materials; moderate coarse prismatic parting to strong medium angular blocky structure, but most ped interiors are saprolitic; very firm. There are 2 chroma wetness mottles at a depth of 30 cm; prism faces are coated with brown (7.5YR 4/4) clay; gradual wavy boundary.
CB	56 to 80 cm; olive yellow (2.5Y 6/6) saprolite with silty clay texture; fracture faces coated with red iron oxides and yellowish-red clay

Notes: Sampling depths: A horizon, 0 to 12 cm; B horizon, 15 to 30 cm; C horizon, 70 to 80 cm.

A-90

ORR Site 123

(See pp. 27, 39, 51, 54, and 55 in Phase II Field Book 3)

Location:	Oak Ridge Reservation, K-25 area, Grid 41200, E29750
Classification:	Typic Hapludults; clayey, mixed, thermic
Geomorphic position:	Convex sideslope below prominent cherty ridge
Slope and aspect:	7% west
Parent material(s):	Residuum of East Fork Chickamauga Section
Vegetation:	Loblolly pine plantation. There is very little undergrowth except for young pines, honeysuckle and greenbriar.
Described by:	D. A. Lietzke
Sampling crew:	Lietzke, Burgoa
Rad scan:	Air, 45; ground level, 55; top of auger hole, 70
Weather yesterday:	Partly cloudy
Present weather:	Cloudy
Date:	January 4, 1993

Soil Description:

Oi	5 to 0 cm; pine needles
A	0 to 3 cm; dark brown (10YR 3/3) silty clay loam; moderate coarse granular structure; friable; clear wavy boundary
Ap	3 to 16 cm; brown (7.5YR 4/4) clay; weak medium subangular blocky structure; firm; abrupt wavy boundary
Bt	16 to 42 cm; red (2.5YR 4/6) clay; with a few fine yellowish-brown (10YR 5/6) mottles; moderate medium subangular blocky structure; very firm; gradual wavy boundary
BC	42 to 90 cm; highly mottled red and yellowish-brown saprolitic materials; clay; strong fine angular blocky structure; very firm

Notes: Sampling depths: A horizon, 0 to 5 cm; B horizon, 8 to 20 cm; C horizon, 80 to 90 cm.

ORR Site 124

(See pp. 27, 39, 50, 64, and 65 in Phase II Field Book 3)

Location:	Oak Ridge Reservation, K-25 area, Grid N40900, E30400
Classification:	Typic Hapludalfs; fine, mixed, thermic
Geomorphic position:	Broad, slightly convex landform. The site is located about 100 ft west of a bedrock escarpment to the creek and at the edge of a loblolly pine plantation.
Slope and aspect:	2%
Parent material(s):	Residuum of East Fork Chickamauga Section
Vegetation:	Loblolly pine plantation. About 30 ft in from the east edge in an old field.
Described by:	D. A. Lietzke
Sampling crew:	Lietzke, Burgoa and Farmer
Rad scan:	Air, 40; ground level, 45; top of auger hole, 50
Weather yesterday:	Partly cloudy
Present weather:	Cloudy
Date:	January 4, 1993

Soil Description:

Oi	5 to 0 cm; needles, some leaves and many poison ivy and honeysuckle stems
A	0 to 7 cm; dark brown (10YR 3/3) cherty silt loam; strong coarse granular structure; very friable; clear wavy boundary
Ap	7 to 18 cm; brown (10YR 4/3) cherty silty clay loam; moderate medium subangular blocky structure; friable; clear wavy boundary
Bt	18 to 64 cm; yellowish-red (5YR 4/6) clay; moderate coarse prismatic parting to moderate medium angular blocky structure; very firm; strong brown (7.5YR 5/4) clay flows on prism faces; gradual wavy boundary
BC	64 to 90 cm; red (2.5YR 4/6) clay; strong fine angular blocky structure; very firm; yellowish-brown flow streaks; abrupt irregular boundary
R	90 cm; limestone. Depth to rock in this pit varied from near the surface on one end to more than 100 cm on the side that was described and sampled.

Notes: Considerable charcoal and partially burned wood fragments were on the surface and in the A horizon. Sampling depths: A horizon, 0 to 10 cm; B horizon, 15 to 30 cm; C horizon, 80 to 90 cm.

ORR Site 125

(See pp. 28, 39, 51, 60, and 61 in Phase II Field Book 3)

Location:	Oak Ridge Reservation, K-25 area, Grid N40600, E29800
Classification:	Typic Hapludults; clayey, mixed, thermic
Geomorphic position:	Very gently sloping, slightly convex, elongated ridge
Slope and aspect:	3% west
Parent material(s):	Residuum of East Fork Chickamauga Section
Vegetation:	Loblolly pine plantation
Described by:	D. A. Lietzke
Sampling crew:	Lietzke, Burgoa and Farmer
Rad scan:	Air, 40; ground level, 50; top of auger hole, 45
Weather yesterday:	Partly to mostly cloudy
Present weather:	Warm front just went through with a few sprinkles. Now, it is cloudy and warmer.
Date:	January 4, 1993

Soil Description:

Oi	4 to 0 cm; pine needles
Oe	0 to 2 cm; partially decomposed organic materials and a dense root mat
A	2 to 4 cm; dark brown (10YR 3/3) cherty silty clay loam; moderate medium granular structure; friable; abrupt wavy boundary
Ap	4 to 12 cm; brown (7.5YR 4/4) cherty silty clay loam; weak fine subangular blocky structure; friable; abrupt wavy boundary
Bt	12 to 48 cm; red (2.5YR 5/8) clay; moderate very coarse prismatic parting to strong medium and coarse subangular blocky structure; very firm; gradual wavy boundary
BC	48 to 90 cm; yellowish-red (5YR 5/6) and brownish-yellow (10YR 6/8) clayey saprolitic materials; strong fine angular blocky structure; very firm; clay plugged

Notes: Sampling depths: A horizon, 0 to 6 cm; B horizon, 20 to 40 cm; C horizon, 70 to 90 cm.

ORR Site 126

(See pp. 28, 39, 42, 43, and 48 in Phase II Field Book 3)

Location:	Oak Ridge Reservation, K-25 area, Grid N38950, E28750
Classification:	Typic Hapludults; clayey, mixed, thermic
Geomorphic position:	Convex top of spur ridge
Slope and aspect:	5% north
Parent material(s):	Residuum of East Fork Chickamauga Section
Vegetation:	Old field successional forest. Presently a mix of pines and hardwoods along with a poison ivy, honeysuckle and moss ground cover.
Described by:	D. A. Lietzke
Sampling crew:	Lietzke, Burgoa
Rad scan:	Air, 40; ground level, 50; top of auger hole, 50
Weather yesterday:	Cloudy, cold, drizzle
Present weather:	Cloudy and becoming colder
Date:	December 7, 1992

Soil Description:

Oi	3 to 0 cm; leaves, pine needles and debris
A	0 to 5 cm; brown (7.5YR 4/4) silty clay loam; moderate fine granular structure; friable; clear wavy boundary
Ap	5 to 12 cm; strong brown (7.5YR 4/6) silty clay loam; moderate medium and coarse granular structure; friable; clear wavy boundary
Bt	12 to 30 cm; strong brown (7.5YR 5/6) clay; strong fine subangular blocky structure; firm; common Rockwood sandstone fragments; gradual wavy boundary
BC	30 to 70 cm; mottles red, yellowish-red, strong brown, and yellow saprolitic materials that easily crush to clay; strong fine angular blocky structure, but most ped interiors are saprolite; firm; contains Rockwood sandstone fragments; gradual wavy boundary.
CB	70 to 100 cm; strike and dip yellowish-brown, yellow, strong brown, and yellowish-red saprolitic materials

Notes: This pit is in a brecciated zone in the Chickamauga which may explain the Rockwood sandstone fragments. Sampling depths: A horizon, 0 to 11 cm; B horizon, 20 to 30 cm; C horizon, 80 to 90 cm.

ORR Site 127

(See pp. 28, 39, 51, 52, and 53 in Phase II Field Book 3)

Location:	Oak Ridge Reservation, K-25 area, Grid N39500, E28650
Classification:	Typic Hapludults; clayey, mixed, thermic
Geomorphic position:	Convex ridgetop
Slope and aspect:	2%, nearly level
Parent material(s):	Residuum of East Fork Chickamauga Section
Vegetation:	Old field successional forest of Virginia pines, cedar, ash, poplar along with abundant poison ivy and honeysuckle
Described by:	D. A. Lietzke
Sampling crew:	Lietzke, Burgoa
Rad scan:	Air, 40; ground level, 65; top of auger hole, 65
Weather yesterday:	Cloudy
Present weather:	Partly cloudy but there was a shower earlier.
Date:	January 7, 1993

Soil Description:

Oi	5 to 0 cm; leaves, needles and many poison ivy and honeysuckle stems
A	0 to 5 cm; dark brown (10YR 3/3) silt loam; strong coarse granular structure; very friable; abrupt wavy boundary
Ap	5 to 14 cm; dark yellowish-brown (10YR 4/6) clay; moderate fine subangular blocky structure; firm; abrupt wavy boundary
Bt	14 to 28 cm; yellowish-brown (10YR 5/6) clay; strong fine and medium angular blocky structure; very firm; gradual wavy boundary
BC	28 to 75 cm; saprolitic materials with a clay texture, yellowish-brown (10YR 5/4–5/6) color; enriched black manganese oxide zones show the geologic strike and dip; red (2.5YR 4/8) iron oxide zones on some joint and fracture faces

Notes: Sampling depths: A horizon, 0 to 7 cm; B horizon, 12 to 20 cm; C horizon, 65 to 75 cm.

ORR Site 128

(See pp. 29, 39, 51, 62, and 63 in Phase II Field Book 3)

Location:	Oak Ridge Reservation, K-25 area, Grid N38900, E29600
Classification:	Typic Hapludults; clayey, mixed, thermic
Geomorphic position:	Interfluve between the heads of two drainageways. The area is very eroded and gullied, but the site is only moderately eroded.
Slope and aspect:	4% northwest
Parent material(s):	Residuum of East Fork Chickamauga Section
Vegetation:	Old Field successional forest. Present trees are Virginia pine, cedar, along with some dogwood and red maple. There is abundant poison ivy and honeysuckle.
Described by:	D. A. Lietzke
Sampling crew:	Lietzke, Farmer
Rad scan:	Air, 40; ground level, 60; top of auger hole, 65
Weather yesterday:	Cloudy
Present weather:	Mostly cloudy
Date:	January 7, 1993

Soil Description:

Oi	2 to 0 cm; needles and leaves
A	0 to 5 cm; dark brown (10YR 3/3) silt loam; strong medium granular structure; very friable; abrupt wavy boundary
Ap	5 to 17 cm; brown (7.5YR 4/4) silty clay loam with some chert fragments; moderate fine subangular blocky structure; friable; abrupt wavy boundary
Bt	17 to 43 cm; yellowish-red (5YR 5/6) clay; moderate medium prismatic parting to strong medium angular blocky structure; Very firm; prism faces coated with dark yellowish-brown (10YR 4/4) clay; gradual wavy boundary
BC	43 to 90 cm; mottled yellowish-red and yellowish-brown saprolitic materials with a clay texture; There are some 2 chroma wetness mottles and also some black manganese oxide enriched zones in the lower part. There are some ped faces in the upper part and there are some chert fragments throughout.

Notes: Sampling depths: A horizon, 0 to 21 cm; B horizon, 23 to 35 cm; C horizon, 70 to 90 cm.

ORR Site 129

(See pp. 29, 39, 40, 41, and 48 in Phase II Field Book 3)

Location:	Oak Ridge Reservation, K-25 area, Grid N36100, E26300
Classification:	Typic Hapludults; clayey, mixed, thermic
Geomorphic position:	Doubly convex sideslope
Slope and aspect:	11% northwest
Parent material(s):	Residuum of East Fork Chickamauga Section
Vegetation:	Old field successional forest. This site was probably a pasture. Present vegetation consists of a few large hardwoods. White pine is growing and reproducing. There are a few holly, red maple, and oak sprouts.
Described by:	D. A. Lietzke
Sampling crew:	Lietzke, Burgoa
Rad scan:	Air, 30; ground level, 45; top of auger hole, 60
Weather yesterday:	Cloudy and cold
Present weather:	Cloudy to partly cloudy and slightly warmer
Date:	December 7, 1992

Soil Description:

Oi	5 to 0 cm; leaf litter
A	0 to 5 cm; brown (10YR 4/3) loam; strong fine granular structure; very friable; has a few Rome pebbles and gravels and a higher sand content; clear wavy boundary
Ap	5 to 13 cm; dark yellowish-brown (10YR 4/4) loam; moderate fine granular structure; very friable; abrupt wavy boundary
Bt	13 to 47 cm; yellowish-red (5YR 4/6) clay; strong fine and medium subangular blocky structure; friable; gradual wavy boundary
BC	47 to 80 cm; mottled yellowish-red, red, strong brown and yellowish-brown clay; strong fine and medium angular blocky structure; friable; has some saprolitic character; gradual wavy boundary
CB	80 to 120 cm; mottled strong brown, yellowish-brown and brownish-yellow saprolitic materials with a clayey texture; weak fine and medium angular blocky structure; very firm

Notes: Sampling depths: A horizon, 0 to 13 cm; B horizon, 15 to 30 cm; C horizon, 100 to 116 cm.

A.5 ROANE COUNTY SOIL PROFILES

ROANE Site 3

Location:	Pattie Gap Quadrangle, 550 ft west from Salem Baptist Church, 200 ft southeast from power line, 350 ft west of Stamp Creek
Classification:	Typic Hapludults; fine-loamy, mixed, thermic
Control Section:	31 to 81 cm of the argillic horizon
Geomorphic position:	Convex toeslope position
Slope and aspect:	11% southeast
Parent material(s):	Thin colluvial mantle over Dismal Gap Formation
Vegetation:	Oak, red maple, sweetgum, dogwood, poison ivy
Described by:	J. L. Branson
Sampling crew:	Branson, Timpson, Morris
Time Since Last Rain:	0 days
Present weather:	75°F raining during sampling
Date:	May 7, 1992

Soil Description:

Oi	4 to 0 cm; leaves and pine needles
Ap	0 to 15 cm; dark yellowish-brown (10YR 4/4) loam; moderate medium granular structure; friable; clear wavy boundary
BE	15 to 31 cm; strong brown (7.5YR 5/6) and dark yellowish-brown (10YR 4/4) silt loam; moderate medium subangular blocky structure; friable; clear wavy boundary
Bt	131 to 53 cm; yellowish-brown (10YR 5/6) clay loam; weak coarse subangular blocky structure; firm; gradual wavy boundary
Bt	253 to 85 cm; mottled yellowish-brown (10YR 5/6), red (2.5YR 4/6), and light yellowish-brown (2.5Y 6/4) clay loam; moderate medium subangular blocky structure; firm; gradual smooth boundary
C	85+ cm; mottled yellowish-brown (10YR 5/6), dark red (2.5YR 3/6), and light brownish-gray (2.5Y 6/2) loam; rock controlled structure; firm

Notes: This site is on a footslope in an area that is highly dissected. The area around the site has numerous rills and gullies. This area shows no evidence of having been cleared or farmed within the last 50 y. The area 300 ft east of this site has been clearcut within the last 60 days.

ROANE Site 7

Location:	Pattie Gap Quadrangle, Hurricane Ridge; 1550 ft southwest from the intersection of Blue Springs Road and Dry Fork Valley Road, 750 ft west of the intersection of the power lines and Dry Fork Valley Road.
Classification:	Typic Hapludults; fine-loamy, mixed, thermic
Control Section:	16 to 56 cm of the argillic horizon
Geomorphic position:	Upland
Slope and aspect:	4% south
Parent material(s):	Colluvium over Dismal Gap Formation
Vegetation:	Virginia pine, red maple, dogwood, tulip poplar
Described by:	J. L. Branson
Sampling crew:	Branson, Livingston
Time Since Last Rain:	1 day
Present weather:	65°F cloudy, sprinkled during sampling
Date:	May 6, 1992

Soil Description:

A	0 to 6 cm; very dark grayish-brown (10YR 3/2) silt loam; moderate fine granular structure; friable; abrupt smooth boundary
Ap	6 to 16 cm; yellowish-brown (10YR 5/4) silt loam; weak fine subangular blocky structure; friable; clear smooth boundary
Bt	116 to 44 cm; yellowish-brown (10YR 5/6) silty clay loam; moderate medium subangular blocky structure; friable; clear smooth boundary
2Bt2	44 to 56 cm; mottled red (2.5YR 4/6), strong brown (7.5YR 4/6), and light brownish-gray (2.5Y 6/2) clay; weak medium subangular blocky structure; firm; gradual smooth boundary
2C	56 to 93 cm; mottled: red (2.5YR 4/6), strong brown (7.5YR 5/6), and light brownish-gray (2.5Y 6/2) clay; rock controlled structure; firm; clear wavy boundary
2Cr	93+ cm; soft red shale fragments with some olive and yellow shale

Notes: This site is in a group of deciduous trees surrounded by cattle pasture. Indications are that area that had been cleared at one time and plowed. This area has not been cleared or cropped in the last 50 y. There is evidence of erosion with small rills beginning to form and shallow surface horizons. Presently the land is open to cattle.

ROANE Site 8

Location:	Pattie Gap Quadrangle, Hurricane Ridge; 1800 ft southwest from the intersection of Blue Springs Road and Dry Fork Valley Road, 550 ft west of the intersection of the power lines and Dry Fork Valley Road, 300 ft east of Roane Site 7
Classification:	Typic Hapludults; fine-loamy, mixed, thermic
Control Section:	17 to 67 cm of the argillic horizon
Geomorphic position:	Upland
Slope and aspect:	6% south
Parent material(s):	Colluvium over Dismal Gap Formation
Vegetation:	Virginia pine, red maple, dogwood, sweetgum
Described by:	J. L. Branson
Sampling crew:	Branson, Livingston
Time Since Last Rain:	1 day
Present weather:	50°F cloudy, overcast
Date:	May 6, 1992

Soil Description:

A	0 to 5 cm; very dark grayish-brown (10YR 3/2) silt loam; strong fine granular structure; very friable; abrupt smooth boundary
Ap	5 to 17 cm; yellowish-brown (10YR 5/6) silt loam; moderate fine granular structure; very friable; clear smooth boundary
Bt1	17 to 44 cm; strong brown (7.5YR 5/6) silty clay loam; moderate medium subangular blocky structure; friable; gradual smooth boundary
2Bt2	44 to 80 cm; strong brown (7.5YR 5/6) clay; moderate medium angular blocky structure; firm; gradual smooth boundary
2C	80 to 95 cm; mottled red (2.5YR 4/6), yellowish-brown (5YR 4/6), and light reddish-brown (2.5YR 6/4) clay; rock controlled structure; very firm consistency

Notes: This site is in a group of deciduous trees surrounded by cattle pasture. Indications are that area that had been cleared at one time and plowed. This area has not been cleared or cropped in the last 50 y. There is evidence of erosion with small rills beginning to form and shallow surface horizons. Presently the land is open to cattle.

ROANE Site 9

Location:	Pattie Gap Quadrangle, Hurricane Ridge; 500 ft west from Salem Baptist Church, 200 ft southeast from power line, 500 ft southwest of Stamp Creek
Classification:	Ochreptic Hapludults; fine-loamy, mixed, thermic, shallow.
Control Section:	30 to 52 cm of the argillic horizon
Geomorphic position:	Colluvial footslope position
Slope and aspect:	12% southeast
Parent material(s):	Dismal Gap Formation
Vegetation:	Oak hardwoods mixed with Virginia pine
Described by:	J. L. Branson
Sampling crew:	Branson, Timpson
Time Since Last Rain:	3 days
Present weather:	76°F sunny
Date:	April 14, 1992

Soil Description:

Oi	2 to 0 cm; leaves and twigs
A	0 to 9 cm; dark grayish-brown (10YR 4/2) silt loam or loam; moderate medium subangular blocky structure; very friable; clear wavy boundary
E	9 to 16 cm; brown (10YR 5/3) silt loam or loam; moderate medium subangular blocky structure; friable; clear wavy boundary
BE	16 to 30 cm; yellowish-brown (10YR 5/6) silt loam; weak medium subangular blocky structure; friable; clear wavy boundary
Bt	30 to 52 cm; yellowish-red (5YR 5/6) silty clay loam; weak medium subangular blocky structure; friable consistency; clear wavy boundary
Cr	52+ cm; soft red shale with some olive and yellowish-brown strata

Notes: This site is on a footslope in an area that is highly dissected. The area around the site has numerous rills and gullies. This area shows no evidence of having been cleared or farmed within the last 50 years.

A-101

ROANE Site 10

Location:	Pattie Gap Quadrangle, Hurricane Ridge; 300 ft northeast from Gage Road, 350 ft northwest from Dry Fork Valley Road, 100 ft west of Stamp Creek
Classification:	Ochreptic Hapludults; fine-loamy, mixed, thermic, shallow
Control Section:	18 to 28 cm of the argillic horizon
Geomorphic position:	Upland bench
Slope and aspect:	3% southeast
Parent material(s):	Thin alluvial capping over Dismal Gap Formation
Vegetation:	shortleaf pine, red maple, oak
Described by:	J. L. Branson
Sampling crew:	Branson, Gallagher, Morris
Time Since Last Rain:	2 days
Present weather:	85°F sunny
Date:	May 15, 1992

Soil Description:

O	i7 to 5 cm; leaf litter
Oa	5 to 0 cm; decomposed plant material
Ap	0 to 18 cm; dark yellowish-brown (10YR 4/4) silt loam; weak medium granular structure; friable; clear irregular boundary
2Bt	18 to 28 cm; yellowish-brown (10YR 5/4) shaly clay loam; moderate fine subangular blocky structure; firm; clear smooth boundary
2BC	28 to 40 cm; yellowish-brown (10YR 5/4) shaly clay; moderate medium angular blocky structure; firm; clear smooth boundary
2CB	40 to 62 cm; strong brown (7.5YR 4/6) very shaly clay; moderate medium angular blocky structure; firm; clear smooth boundary
2Cr1	62 to 83 cm; soft red shale with yellow and olive shale fragments
2Cr2	83 to 108+ cm; soft green shale with a thick band of manganese stained material and concretions

Notes: This site is in a group of deciduous trees surrounded by cattle pasture. Indications were the area had been cleared at one time and plowed, but not within the last 50 years. The site area is at the bottom of a long slope. This looks to be a terrace remanent. There were rounded rock fragments in the profile and a large rock approximately 20 cm in diameter. There is evidence of erosion with small rills and gullies forming in the sagegrass field to the north of the site. Presently the land is open to cattle.

ROANE Site 13

Location:	Pattie Gap Quadrangle, Hurricane Ridge, 500 ft west from Dry Fork Valley Road, 3000 ft south from Gage Road, 250 ft west of Stamp Creek
Classification:	Typic Hapludults; fine-loamy, mixed, thermic
Control Section:	13 to 63 cm of the argillic horizon
Geomorphic position:	Upland bench
Slope and aspect:	3% east
Parent material(s):	Dismal Gap Formation
Vegetation:	Virginia pine, red maple, chestnut oak, dogwood, poison ivy
Described by:	J. L. Branson
Sampling crew:	Branson, Gallagher, Timpson
Time Since Last Rain:	1 day
Present weather:	75° F and sunny
Date:	May 14, 1992

Soil Description:

A	0 to 2.5 cm; very dark brown (10YR 2/2) loam; strong fine granular structure; friable; abrupt smooth boundary
Ap	2.5 to 13 cm; yellowish-brown (10YR 5/4) and brown (10YR 5/3) silt loam; weak fine and medium granular structure; friable; clear wavy boundary
Bt1	13 to 50 cm; strong brown (7.5YR 4/6) on clay skins and strong brown ped interiors (7.5YR 5/6); clay; moderate fine and medium subangular blocky structure; firm; clear wavy boundary
Bt2	50 to 78 cm; strong brown (7.5YR 4/6) clay; weak medium and fine subangular blocky structure; firm; clear wavy boundary
C	78 to 93+ cm; strong brown (7.5YR 4/6) clay; rock controlled structure; firm

Notes: This site is in a wooded area. The site area is at the bottom of a long slope. Because it is in a low position, the possibility of this being an area of terrace smears is likely. However, there were no indications in this profile to substantiate this point.

ROANE Site 14

Location:	Pattie Gap Quadrangle, Hurricane Ridge, 600 ft west from Dry Fork Valley Road, 3200 ft south of Gage Road, 250 ft west of Stamp Creek
Classification:	Typic Hapludults; fine-loamy, mixed, thermic
Control Section:	19 to 58 cm of the argillic horizon
Geomorphic position:	Upland on a convex sideslope
Slope and aspect:	13% east
Parent material(s):	Dismal Gap Formation and Rogersville Formation transition zone
Vegetation:	red maple, oak, tulip poplar, dogwood, poison ivy
Described by:	J. L. Branson
Sampling crew:	Branson, Gallagher, Timpson
Time Since Last Rain:	1 day
Present weather:	80° F and sunny
Date:	May 14, 1992

Soil Description:

A	0 to 8 cm; very dark brown (10YR 2/2) silt; moderate, medium granular structure; very friable; clear smooth boundary
Ap	8 to 19 cm; brown (10YR 4/3) loam; moderate medium granular structure; friable; clear wavy boundary
Bt	19 to 41 cm; strong brown (7.5YR 4/6) silty clay loam; weak medium subangular blocky structure; firm; clear wavy boundary
Bt&C	41 to 58 cm; mottled red (2.5YR 4/6), grayish-brown (10YR 5/2), and olive brown (2.5Y 4/4); channery silty clay; moderate medium subangular blocky structure; firm; gradual wavy boundary
Cr	58 to 104+ cm; primarily dark red and olive shale

Notes: This site is in a wooded area. The site area is in the middle of a short slope. The Dismal Gap is very thin and fluctuates in this area. The site showed some indications of having Dismal Gap residuum, but when the pit was opened there was more Rogersville shale than Dismal Gap. This area has a great deal of groundcover, primarily vines and poison ivy. The area from the site drops immediately into a drainageway.

ROANE Site 17

Location:	Pattie Gap Quadrangle, Hurricane Ridge, 1000 ft west from Dry Fork Valley Road, 3000 ft north from Waterford Lane
Classification:	Typic Hapludults; clayey, kaolinitic, thermic
Control Section:	28 to 78 cm of the argillic horizon
Geomorphic position:	Upland on the crown of a convex slope
Slope and aspect:	2% east
Parent material(s):	Dismal Gap Formation
Vegetation:	Virginia pine, eastern red cedar, sweetgum
Described by:	J. L. Branson
Sampling crew:	Branson, Timpson
Time Since Last Rain:	1 day
Present weather:	65° F cloudy, light rain
Date:	April 20, 1992

Soil Description:

Oi	2 to 0 cm; pine needles, leaves, and twigs
A	0 to 15 cm; yellowish-brown (10YR 5/4) silt loam; weak fine granular structure; friable; clear smooth boundary
AB	15 to 28 cm; dark yellowish-brown (10YR 4/6) silt loam; moderate fine subangular blocky structure; friable; clear smooth boundary
Bt1	28 to 60 cm; yellowish-red (5YR 4/6) clay; moderate medium subangular blocky structure; friable; gradual smooth boundary
Bt2	60 to 80 cm; yellowish-red (5YR 4/6) clay; moderate medium subangular blocky structure; friable; clear smooth boundary
C	80 to 104+ cm; mottled yellowish-red (5YR 4/6), strong brown (7.5YR 4/6), and light olive brown (2.5Y 5/4) clay loam; rock controlled structure; friable

Notes: This site lies between the convergence of two drains, both of which continually carry at least some flowing water. The site is on a convex slope in an area that had been cleared at one time. Presently the land is open to cattle.

ROANE Site 19

Location:	Pattie Gap Quadrangle, Hurricane Ridge; 750 ft west from Salem Baptist Church, 200 ft southeast from power lines, 750 ft southwest of Stamp Creek
Classification:	Typic Hapludults; fine-loamy, mixed, thermic
Control Section:	18 to 47 cm of the argillic horizon
Geomorphic position:	Convex toeslope position
Slope and aspect:	15% southeast
Parent material(s):	Dismal Gap Formation
Vegetation:	Oak, red maple, hickory, dogwood, red cedar
Described by:	J. L. Branson
Sampling crew:	Branson, Gallagher
Time Since Last Rain:	2 days
Present weather:	80° F and sunny
Date:	April 23, 1992

Soil Description:

Oe	2 to 0 cm; decomposing leaves
A	0 to 6 cm; very dark grayish-brown (10YR 3/2) silt loam; strong fine granular structure; very friable; abrupt smooth boundary
Ap	6 to 18 cm; dark yellowish-brown (10YR 4/4) silt loam; weak medium granular structure; very friable; clear smooth boundary
Bt	18 to 47 cm; strong brown (7.5YR 4/6) clay loam; moderate medium subangular blocky structure; friable; clear wavy boundary
Cr	47 to 98+ cm; soft red shale with yellow and green shale fragments

Notes: This site is on a toeslope in an area that is highly dissected. The area around the site has numerous rills and gullies. This area shows no evidence of having been cleared or farmed within the last 50 years.

ROANE Site 20

Location:	Pattie Gap Quadrangle, Hurricane Ridge; 950 ft northwest from Salem Baptist Church, 200 ft southeast from power lines, 1000 ft southwest of Stamp Creek
Classification:	Ochreptic Hapludults; fine-loamy, mixed, thermic, shallow
Geomorphic position:	Convex toeslope position
Slope and aspect:	12% southeast
Parent material(s):	Dismal Gap Formation
Vegetation:	Oak, sweetgum, dogwood, poison ivy
Described by:	J. L. Branson
Sampling crew:	Branson, Gallagher
Time Since Last Rain:	1 day
Present weather:	60° F and partly cloudy
Date:	May 5, 1992

Soil Description:

Oi	2 to 0 cm; leaves and pine needles
Ap	0 to 12 cm; yellowish-brown (10YR 5/4) silt loam; weak medium granular structure; very friable; clear smooth boundary
Bt	12 to 35 cm; yellowish-red (5YR 4/6) clay; strong medium subangular blocky structure; firm; gradual smooth boundary
C	35 to 52 cm; dark red (2.5YR 3/6) saprolite that crushes easily to clay; rock controlled structure; abrupt irregular boundary
Cr	52 to 72 cm; weathered reddish and olive shale

ROANE Site 21

Location:	Pattie Gap Quadrangle, Hurricane Ridge; 1100 ft west from Salem Baptist Church, 200 ft southeast from power line, 1200 ft southwest of creek
Classification:	Typic Hapludults; fine-loamy, mixed, thermic
Control Section:	18 to 64 cm of the argillic horizon
Geomorphic position:	Midslope
Slope and aspect:	13% southeast
Parent material(s):	Dismal Gap Formation
Vegetation:	Oak, tulip poplar, Virginia pine, sweetgum, red maple, club mosses
Described by:	J. L. Branson
Sampling crew:	Branson, Morris
Time Since Last Rain:	2 days
Present weather:	80° F and sunny
Date:	May 11, 1992

Soil Description:

Oi	3 to 0 cm; leaves, moss, and pine needles
A	0 to 5 cm; brown (10YR 4/3) shaly silty clay loam; moderate, medium granular structure; very friable; clear smooth boundary
Ap	5 to 18 cm; dark grayish-brown (10YR 4/2) silty clay loam; weak medium subangular blocky structure; friable; clear wavy boundary
Bt1	18 to 36 cm; strong brown (7.5YR 4/6) clay loam; moderate medium subangular blocky structure; firm; clear smooth boundary
Bt2	36 to 64 cm; strong brown (7.5YR 5/6) clay loam; moderate coarse subangular blocky structure; firm; clear smooth boundary
BC	64 to 74 cm; brown (7.5YR 5/4) silty clay loam; weak medium subangular blocky structure; friable; gradual smooth boundary
Cr	74+ cm; soft red shale with some olive and yellowish-brown thin strata

Notes: This site is on a convex slope in an area that is highly dissected. The area around the site has numerous rills and gullies. This area shows no evidence of having been cleared or farmed within the last 50 y. Surfaces nearby show evidence of extensive erosion and shallow depths.

ROANE Site 22

Location:	Pattie Gap Quadrangle, Hurricane Ridge, 1400 ft west from Salem Baptist Church, 200 ft southeast from power line, 1500 ft west of Stamp Creek
Classification:	Typic Hapludults; fine-loamy, mixed, thermic
Control Section:	19 to 56 cm of the argillic horizon
Geomorphic position:	Midslope bench
Slope and aspect:	13% southeast
Parent material(s):	Dismal Gap Formation
Vegetation:	Oak, tulip poplar, Virginia pine, red cedar, club mosses
Described by:	J. L. Branson
Sampling crew:	Branson, Gallagher
Time Since Last Rain:	1 day
Present weather:	60° F and overcast; sprinkled lightly during sampling
Date:	May 5, 1992

Soil Description:

Oi	3 to 0 cm; leaves and pine needles
Ap	0 to 19 cm; yellowish-brown (10YR 5/6) silt loam; moderate medium subangular blocky structure; friable; clear, smooth boundary
Bt1	19 to 29 cm; strong brown (7.5YR 5/8) clay loam; moderate medium subangular blocky structure; firm; clear smooth boundary
Bt2	29 to 45 cm; strong brown (7.5YR 4/6) clay loam; moderate medium subangular blocky structure; firm; clear smooth boundary
Bt&C	45 to 56 cm; red (2.5YR 4/6) and light olive brown (2.5Y 5/4) clay; weak coarse subangular blocky structure; firm; clear smooth boundary
C	56 to 100+ cm; mottled red (2.5YR 4/6), strong brown (7.5YR 5/8), and light yellowish-brown (2.5Y 6/4) clay loam; rock controlled structure

Notes: This site is on a slight bench in an area that is highly dissected. The area around the site has numerous rills and gullies. This area shows no evidence of having been cleared or farmed within the last 50 years. Surfaces nearby show evidence of extensive erosion and shallow depths.

ROANE Site 33

Location:	Pattie Gap Quadrangle, Gage Hill; 500 ft east from Dry Fork Valley Road, 500 ft northeast from Gage Road; 400 ft northeast from the old limestone quarry
Classification:	Typic Paleudults; clayey, mixed, thermic
Geomorphic position:	A double convex side slope approximately midway between the top of the ridge and the valley floor
Slope and aspect:	39%, 265 W
Parent material(s):	Copper Ridge (lower)
Vegetation:	Redbuds, scarlet oak, hickory, dogwood, black jack oak
Described by:	J.L. Branson
Sampling crew:	Janice Branson, Mike Timpson
Time since last rain:	2 days
Present weather:	85° F and sunny and humid
Date:	September 1, 1992

Soil Description:

Surface covered with 2–3 in.-diam (some, 20 in.-diam) limestone cobbles

Oi/Oa	5–0 cm; intermittent leaf litter, twigs, roots
Ap	0–10 cm; strong brown (7.5 YR 5/6) silt loam; weak coarse subangular blocky structure; firm; 15% chert fragments; clear smooth boundary
Bt1	10–20 cm; red (2.5 YR 4/8) clay; strong medium subangular blocky structure; firm to very firm; clear smooth boundary
Bt2	20–110 cm; red (2.5 YR 4/6) clay; moderate medium subangular blocky structure; firm; gradual smooth boundary
Bt3	110–147 cm; red (2.5 YR 4/6) clay; moderate medium subangular blocky structure; friable

ROANE Site 34

Location:	Pattie Gap Quadrangle, Gage Hill; 1000 ft southeast from Dry Fork Valley Road, 1200 ft northeast from Gage Road, 1000 ft northeast of the limestone quarry
Classification:	Typic Hapludults; clayey, mixed, thermic
Geomorphic position:	Upland just below the break of the ridge crest
Slope and aspect:	10% , 380° NW
Parent material(s):	Copper Ridge Formation
Vegetation:	Chestnut oak, blackjack oak, black oak, scarlet oak, Virginia pine
Described by:	J.L. Branson
Sampling crew:	Sonja Entrekin, Mike Timpson, and Janice Branson
Time since last rain:	5 days
Present weather:	60° F and cloudy and overcast
Date:	November 11, 1992

Soil Description:

Oi	5–0 cm; leaf litter, roots
A	0–4 cm; very dark grayish-brown (10YR 3/2) and very dark brown (10YR 2/2) very fine sandy loam; moderate fine granular structure; very friable; clear smooth boundary
Ap	4–16 cm; dark yellowish-brown (10YR 4/6) silt loam; fine medium subangular blocky structure; friable; 5% chert fragments; clear smooth boundary
Bt1	16–27 cm; yellowish-red (5YR 5/8) silty clay loam; fine medium subangular blocky structure; friable; clear smooth boundary
Bt2	27–48 cm; yellowish-red (5YR 5/8) clay; moderate medium subangular blocky structure; firm; clear smooth boundary
BC	48–75 cm; red (2.5YR 4/8) clay; moderate medium angular blocky structure; firm; gradual smooth boundary
C	75–105 cm; mottled red (2.5YR 5/8 and 10R 4/8) and yellow (2.5Y 7/6) saprolitic materials; clay; massive; firm

ROANE Site 35

Location:	Pattie Gap Quadrangle, Gage Hill; 100 ft west from an old logging road, 1000 ft southeast from Dry Fork Valley Road, 1800 ft northeast from Gage Road
Classification:	Typic Paleudults; clayey, mixed, thermic
Geomorphic position:	Upper side slope just below crest of the ridge
Slope and aspect:	19%, 340° N
Parent material(s):	Surficial colluvium and residuum of the Copper Ridge Formation
Vegetation:	Dogwood, chestnut oak, scarlet oak, blackjack oak, hickory, sassafras
Described by:	J.L. Branson
Sampling crew:	Rick Livingston, and Janice Branson
Time since last rain:	1 day
Present weather:	85° F and sunny
Date:	August 31, 1992

Soil Description:

Oi	5–0 cm; leaf litter, roots, twigs; 5% chert fragments
A	0–10 cm; brown (10YR 4/3) silt loam; moderate fine granular structure; very friable; 5% chert fragments; clear smooth boundary
Ap	10–16 cm; brown (10YR 4/3) silt loam; weak fine subangular blocky structure; friable; 5% chert fragments; clear smooth boundary
Bt1	16–23 cm; strong brown (7.5YR 5/6) silty clay loam; weak fine subangular blocky structure; friable; 5% chert fragments; clear smooth boundary
Bt2	23–46 cm; yellowish-red (5YR 5/6) clay loam; moderate medium subangular blocky structure; friable; 10% chert fragments; gradual wavy boundary
2Bt3	46–73 cm; red (2.5YR 4/6) clay; moderate medium angular blocky structure; firm; 20% chert fragments; gradual smooth boundary
Bt4	73–110 cm; red (2.5YR 4/6) clay; moderate medium angular blocky structure; firm; 10% chert fragments; gradual smooth boundary
Bt5	110–135 cm; red (2.5 YR 5/8) clay; moderate medium angular blocky structure; firm; gradual smooth boundary
Bt5	135–180 cm; red (2.5 YR 5/8) clay; moderate medium subangular blocky structure; friable; 10% chert fragments; gradual smooth boundary
BC	180–195 cm; red (2.5 YR 5/8) clay; weak medium subangular blocky structure; friable

ROANE Site 39

Location:	Pattie Gap Quadrangle, Walker Ridge; 1000 ft southeast from Dry Fork Valley Road, 500 ft north from Williams Road
Classification:	Typic Paleudults; fine-loamy, siliceous, thermic
Geomorphic position:	Foot slope near a depression
Slope and aspect:	14%, 220° SW
Parent material(s):	Surficial colluvium and residuum of the Copper Ridge Formation
Vegetation:	Chestnut oak, scarlet oak, blackjack oak, dogwood
Described by:	J.L. Branson
Sampling crew:	Mike Timpson, Dr. J.T. Ammons, and Janice Branson
Time since last rain:	1 day
Present weather:	50° F and sunny and windy
Date:	November 13, 1992

Soil Description:

Oi	5–0 cm; roots, leaf litter
A	0–7 cm; brown (10YR 5/3) cherty silt loam; weak medium granular structure; very friable; 20% chert fragments; abrupt smooth boundary
E	7–34 cm; brownish-yellow (10YR 6/6) silt loam or loam; weak medium subangular blocky structure; very friable; clear smooth boundary
Bt1	34–61 cm; strong brown (7.5YR 5/6) loam; moderate medium subangular blocky structure; friable; clear wavy boundary
Bt2	61–95 cm; yellowish-red (5YR 5/8) cherty clay loam; moderate medium angular blocky structure; firm; 20% chert fragments; gradual smooth boundary; A large pocket of Btx material present in the Bt2 horizon
2BC	95–146 cm; red (2.5YR 4/8) cherty clay; massive; 20% chert fragments; firm

ROANE Site 40

Location:	Pattie Gap Quadrangle, Walker Ridge; 900 ft north from Williams Road, 1500 ft southeast from the intersection of Williams Road and Dry Fork Valley Road
Classification:	Typic Paleudults; clayey, mixed, thermic
Geomorphic position:	Upland on a doubly convex slope at the top of the knob
Slope and aspect:	7%, 320° NW
Parent material(s):	Surficial colluvium and residuum of the Copper Ridge Formation
Vegetation:	Chestnut oak, white oak, hickory, Virginia pine
Described by:	J.L. Branson
Sampling crew:	Dr. J.T. Ammons, and Janice Branson
Time since last rain:	3 days
Present weather:	80° F and partly cloudy; heavy rain during sampling
Date:	September 8, 1992

Soil Description:

Oi	4–0 cm; leaf litter, roots
E	0–18 cm; pale brown (10YR 6/3) silt loam; weak fine granular structure; friable; 10% chert fragments; clear smooth boundary
Bt1	18–29 cm; reddish-yellow (7.5YR 7/6) silty clay loam; weak fine subangular blocky structure with some weak medium subangular blocky structure; friable; 2% chert fragments; gradual smooth boundary
Bt2	29–52 cm; yellowish-red (5YR 5/8) clay loam or clay; moderate medium subangular blocky structure; firm; 10% chert fragments; clear smooth boundary
2Bt3	52–75 cm; red (2.5YR 4/8) cherty clay; moderate medium subangular blocky structure; friable; 20% chert fragments; clear smooth boundary
2BC	75–102 cm; red (2.5YR 4/8) cherty clay; weak fine and medium subangular structure; 25% chert fragments; friable

ROANE Site 41

Location:	Pattie Gap Quadrangle, Walker Ridge; 1800 ft southeast from Dry Fork Valley Road, 1200 ft northeast from Williams Road
Classification:	Typic Hapludults; clayey, mixed, thermic
Geomorphic position:	Midslope
Slope and aspect:	18%, 160°S
Parent material(s):	Copper Ridge Formation
Vegetation:	White oak, scarlet oak, chestnut oak
Described by:	J.L. Branson
Sampling crew:	Mike Timpson, Dr. J.T. Ammons, and Janice Branson
Time since last rain:	1 day
Present weather:	45° F and sunny
Date:	November 13, 1992

Soil Description:

Oi	5–0 cm; leaf litter
Oa&A	0–2 cm; a mix of mineral matter and leaf litter
E	2–17 cm; dark yellowish-brown (10YR 4/4) cherty loam or silt loam; fine medium granular structure; friable; 20% chert fragments; clear smooth boundary
BE	17–33 cm; light brown (7.5YR 6/4) cherty loam; fine medium subangular blocky structure; friable; 20% chert fragments; clear smooth boundary
Bt1	33–58 cm; red (2.5YR 5/8) cherty clay or clay loam; moderate medium subangular blocky structure; friable; 25% chert fragments; clear smooth boundary
Bt2	58–74 cm; red (2.5YR 4/8) cherty clay or clay loam; weak coarse subangular blocky structure; firm; 25% chert fragments; clear smooth boundary
C	74–102 cm; red (2.5YR 4/8) cherty clay loam; massive; 25% chert fragments; friable

ROANE Site 42

Location:	Pattie Gap Quadrangle, Walker Ridge; 50 ft northeast of an old logging road, 1000 ft south of the power lines, 1500 ft southeast from Dry Fork Valley Road
Classification:	Typic Hapludults; clayey, mixed, thermic
Geomorphic position:	On a long slope 1/3 of the way from the top
Slope and aspect:	19%, 100° east
Parent material(s):	Copper Ridge Formation
Vegetation:	Chestnut oak, blackjack oak, red maple, sumac
Described by:	J.L. Branson
Sampling crew:	Mike Timpson, and Janice Branson
Time since last rain:	1 day
Present weather:	90° F and sunny
Date:	September 9, 1992

Soil Description:

Oi	5–0 cm; root mat, leaf litter
E1	0–15 cm; light brownish-gray (10YR 6/2) very cherty silt loam; weak fine granular structure; very friable; 40% chert fragments; clear smooth boundary
E2	15–35 cm; very pale brown (10YR 7/3) cherty silt loam; weak medium subangular blocky structure, very friable; 30% chert fragments; clear smooth boundary
Bt1	35–55 cm; yellowish-red (5YR 5/8) cherty clay loam; weak coarse subangular blocky structure; friable; 30% chert fragments; clear smooth boundary
Bt2	55–80 cm; red (2.5YR 5/8) cherty clay; moderate medium subangular blocky structure; firm; 30% chert fragments; clear smooth boundary
Bt3	80–125 cm; red (2.5YR 4/8) cherty clay; moderate medium subangular blocky structure; firm; 25% chert fragments; gradual smooth boundary

ROANE Site 43

Location:	Pattie Gap Quadrangle, Walker Ridge; 1300 ft northeast of an old logging road, 1200 ft south of the power lines, 1300 ft southeast of Dry Fork Valley Road
Classification:	Typic Paleudults; fine-loamy, siliceous, thermic
Geomorphic position:	Midslope on a convex slope just before a major slope break
Slope and aspect:	23%, 120° east
Parent material(s):	Surficial colluvium and residuum of the Copper Ridge Formation
Vegetation:	Chestnut oak, dogwood, sumac, sassafras
Described by:	J.L. Branson
Sampling crew:	Mike Timpson, and Janice Branson
Time since last rain:	1 day
Present weather:	90° F
Date:	September 9, 1992

Soil Description:

Oi	5–0 cm; thick root mat, leaf litter
E1	0–18 cm; light yellowish-brown (10YR 6/4) cherty silt loam; weak medium subangular blocky structure; friable; 30% chert fragments; clear smooth boundary
Bt1	18–48 cm; (7.5 YR 5/8) cherty silt loam; weak, medium subangular blocky structure; friable; clear, smooth boundary; 30% coarse fragments
Bt2	48–72 cm; strong brown (7.5YR 5/8) cherty clay loam; weak medium subangular blocky structure; friable; 20–25% chert fragments; clear smooth boundary
2Bt3	72–90 cm; yellowish-red (5YR 5/8) cherty clay; moderate medium subangular blocky structure; friable; 30–35% chert fragments; clear smooth boundary
BC	90–110 cm; red (2.5 YR 5/8) cherty clay; massive; friable

ROANE Site 44

Location:	Pattie Gap Quadrangle, Walker Ridge; 1400 ft south of the power lines, 1000 ft southeast from Dry Fork Valley Road
Classification:	Typic Paleudults; fine-loamy, siliceous, thermic
Geomorphic position:	Midslope just above a change to a steeper slope of 35%.
Slope and aspect:	23%, 140° southeast
Parent material(s):	Surficial colluvium and residuum of the Copper Ridge Formation
Vegetation:	Dogwood, maple, blackjack oak, chestnut oak, tulip poplar
Described by:	J.L. Branson
Sampling crew:	Sonja Entrekin, Janice Branson
Time since last rain:	3 days
Present weather:	80° F and partly sunny to cloudy
Date:	September 2, 1992

Soil Description:

Oi	5–0 cm; leaf litter, roots, twigs
E1	0–14 cm; brown (10YR 5/3) silt loam; weak fine granular structure; very friable; 10% chert fragments; clear smooth boundary
E2	14–34 cm; very pale brown (10YR 7/4) silt loam; weak medium and fine subangular blocky structure; very friable; 4% chert fragments; clear wavy boundary
E3	34–47 cm; very pale brown (10YR 7/4) cherty silt loam; moderate medium subangular blocky structure; friable; 20% chert fragments; clear wavy boundary
Bt1	47–88 cm; reddish-yellow (7.5YR 6/6) cherty clay loam; moderate medium subangular blocky structure; friable, 30% chert fragments; gradual wavy boundary
2Bt2	88–115 cm; strong brown (7.5YR 5/8) clay; moderate medium subangular blocky structure; friable; 10% chert fragments; clear irregular boundary
R	115 cm; ran into a solid carbonate rock. Unsure as to whether it is a large "floater" or a pinnacle

ROANE Site 45

Location:	Pattie Gap Quadrangle, Walker Ridge; 1600 ft south of the power lines, 1500 ft southeast from Dry Fork Valley Road
Classification:	Typic Paleudults; clayey, mixed, thermic
Geomorphic position:	Midslope
Slope and aspect:	23%, 20° southwest
Parent material(s):	Surficial colluvium and residuum of the Copper Ridge Formation
Vegetation:	Sassafras, chestnut oak, hickory, dogwood
Described by:	J.L. Branson
Sampling crew:	Rick Livingston, Sonja Entrekin, Dr. J.T. Ammons, and Janice Branson
Time since last rain:	2 days
Present weather:	75° F and sunny
Date:	October 7, 1992

Soil Description:

Oi	5–0 cm; leaf litter, twigs, roots
A	0–6 cm; brown (10YR 5/3) silt loam; weak medium granular structure; very friable; 5–10% chert fragments; abrupt smooth boundary
E	6–23 cm; light yellowish-brown (10YR 6/4) silt loam; weak fine subangular blocky structure; friable; 2% chert fragments; clear wavy boundary
Bt1	23–33 cm; strong brown (7.5YR 5/6) silt loam; weak fine subangular blocky structure; friable; 5% chert fragments; clear wavy boundary
2Bt2	33–61 cm; yellowish-red (5YR 5/8) clay; moderate medium angular and subangular blocky structure; friable; 10% chert fragments; clear wavy boundary
2Bt3	61–94 cm; yellowish-red (5YR 5/6) clay; weak medium angular and subangular blocky structure; friable; 10% chert fragments; clear wavy boundary
2BC	94–109 cm; red (2.5YR 4/8) clay; massive; 10% chert fragments; friable

ROANE Site 46

Location:	Pattie Gap Quadrangle, Walker Ridge; 1800 ft south of the power lines, 1500 southeast from Dry Fork Valley Road
Classification:	Typic Paleudults; fine-loamy, siliceous, thermic
Geomorphic position:	Midslope on a doubly convex slope, 50 ft. above a major slope break
Slope and aspect:	23%, 240° southwest
Parent material(s):	Ancient alluvial capping and residuum of the Copper Ridge Formation
Vegetation:	Red maple, dogwood
Described by:	J.L. Branson
Sampling crew:	Rick Livingston, Sonja Entrekin, Dr. J.T. Ammons, and Janice Branson
Time since last rain:	2 days
Present weather:	80° F and sunny
Date:	October 7, 1992

Soil Description:

Oi	5–0 cm; leaf litter, twigs, and roots
A	0–12 cm; dark yellowish-brown (10YR 4/4) silt loam; weak fine and medium granular structure; friable; 7% chert fragments; clear smooth boundary
AB	12–19 cm; strong brown (7.5YR 4/6) silt loam; weak medium subangular blocky structure; friable; clear smooth boundary
BE	19–28 cm; red (2.5YR 4/8) loam; weak medium subangular blocky; friable; clear smooth boundary
Bt1	28–43 cm; red (2.5YR 4/8) clay loam; moderate medium subangular blocky structure; friable; 5% chert fragments; clear smooth boundary
Bt2	43–64 cm; red (2.5YR 4/6) clay; moderate medium subangular blocky structure; friable; 5% chert fragments; gradual smooth boundary
2Bt3	64–104 cm; red (2.5YR 4/8) clay; massive; 13% chert fragments; friable

ROANE Site 47

Location:	Pattie Gap Quadrangle, Walker Ridge; 2100 ft south of the power lines, 1400 ft southeast from Dry Fork Valley Road
Classification:	Typic Paleudults; fine-loamy, siliceous, thermic
Geomorphic position:	Midslope just above where the slope breaks to 50%
Slope and aspect:	25%, 20° north
Parent material(s):	Surficial colluvium and residuum of the Copper Ridge Formation
Vegetation:	Tulip poplar, red maple, dogwood
Described by:	J.L. Branson
Sampling crew:	Rick Livingston, Sonja Entrekin, Dr. J.T. Ammons, and Janice Branson
Time since last rain:	2 days
Present weather:	80° F and sunny
Date:	October 7, 1992

Soil Description:

Oi	5–0 cm; leaf litter; twigs, roots
A	0–13 cm; dark yellowish-brown (10YR 4/4) silt loam; moderate medium granular structure; very friable; 2% chert fragments; clear smooth boundary
Ap	13–22 cm; dark yellowish-brown (10YR 4/4) silt loam; weak medium subangular blocky structure; very friable; 2% chert fragments; clear smooth boundary
Bt1	22–43 cm; strong brown (7.5YR 5/6) loam; weak medium subangular blocky structure; friable; 2% chert fragments; clear smooth boundary
2Bt2	43–61 cm; yellowish-red (5YR 5/8) clay loam; weak medium and coarse subangular blocky structure; friable to firm; 5% chert fragments; clear smooth boundary
2BC	61–89 cm; red (2.5YR 4/8) clay; moderate medium subangular blocky structure; 5% chert fragments; very firm

A.6 ANDERSON COUNTY SOIL PROFILES

ANDERSON Site 1

Location:	Norris Quadrangle, Pine Ridge; 1400 ft northeast of Old Anderson Pike, 1000 ft west from Hinds Creek Road
Classification:	Ochreptic Hapludults; clayey, kaolinitic, thermic, shallow
Control Section:	28 to 44 cm argillic horizon
Geomorphic position:	Midslope
Slope and aspect:	6% north
Parent material(s):	Dismal Gap Formation
Vegetation:	Virginia pine, tulip poplar, red maple, dogwood
Described by:	J. L. Branson
Sampling crew:	Branson, Livingston, Gallagher
Time Since Last Rain:	0 day
Present weather:	85° F and partly cloudy; heavy rain during sampling
Date:	July 17, 1992

Soil Description:

A	0 to 10 cm; dark brown (10YR 3/3) silt loam; weak medium granular structure; very friable; clear smooth boundary
Ap	10 to 28 cm; yellowish-brown (10YR 5/6) loam; weak medium granular structure; friable ; clear wavy boundary
Bt	28 to 44 cm; yellowish-red (5YR 5/6) channery clay; moderate medium subangular blocky structure; firm; clear wavy boundary
Cr	44 to 104 cm; soft olive, red, and yellow shale

Notes: This site had been cleared at one time. Age of the deciduous trees indicated they had been established at least 50 y. No evidence of a plow layer. Slope dips strongly (30%) approximately 50 ft from the site. Presently, this area is occupied by cattle for pasture.

ANDERSON Site 3

Location:	Big Ridge Park Quadrangle, Pine Ridge; 100 ft northwest from Judson Road, 0.4 miles south from Moore Valley Road (also known as Cooper Gap)
Classification:	Typic Hapludults; fine-loamy, mixed, thermic
Control Section:	16 to 53 cm entire argillic horizon
Geomorphic position:	Upland, convex slope
Slope and aspect:	7% southeast
Parent material(s):	Dismal Gap Formation
Vegetation:	Virginia Pine, dogwood, red maple, mosses, poison ivy, sumac, red cedar
Described by:	J. L. Branson
Sampling crew:	Branson, Timpson, Livingston, Gallagher, Entrekin
Time Since Last Rain:	0 days
Present weather:	85° F and heavy rain during sampling
Date:	July 15, 1992

Soil Description:

Oi	2 to 0 cm; moss and pine needles
A	0 to 4 cm; dark brown (10YR 4/3) loam; moderate medium granular structure; friable; abrupt smooth boundary
Ap	4 to 16 cm; yellowish-brown (10YR 5/4) loam; moderate fine granular structure; friable; clear smooth boundary
Bt1	16 to 40 cm; yellowish-red (5YR 4/6) clay; moderate medium angular blocky structure; firm; clear wavy boundary
Bt2	40 to 53 cm; yellowish-red (5YR 4/6) clay loam; moderate medium angular blocky structure; firm; clear wavy boundary
Cr	53 to 90 cm; soft olive, red, and yellow shale

ANDERSON Site 4

Location:	Big Ridge Park Quadrangle, Pine Ridge; 300 ft northwest from Judson Road, 0.6 miles south from Moore Valley Road (also known as Cooper Gap)
Classification:	Typic Hapludults; fine-loamy, mixed, thermic
Control Section:	24 to 70 cm argillic horizon
Geomorphic position:	Midslope, convex shape
Slope and aspect:	24% southeast
Parent material(s):	Dismal Gap Formation
Vegetation:	Virginia pine, dogwood, red maple, elm, poison ivy, cherry, sourwood
Described by:	J. L. Branson
Sampling crew:	Branson, Timpson, Livingston, Gallagher, Entrekin
Time Since Last Rain:	4 days
Present weather:	85° F and cloudy
Date:	July 15, 1992

Soil Description:

Oi	3 to 0 cm; leaf litter, small roots, and pine needles
A	0 to 5 cm; yellowish-brown (10YR 5/4) loam; weak medium granular structure; very friable; abrupt smooth boundary
Ap	5 to 24 cm; yellowish-brown (10YR 5/6) silt loam; weak fine granular structure; friable; abrupt smooth boundary
Bt1	24 to 37 cm; strong brown (7.5YR 5/6) silty clay loam; moderate fine subangular blocky structure; friable; clear smooth boundary
Bt2	37 to 53 cm; yellowish-red (5YR 4/6) clay loam; moderate medium subangular blocky structure; friable; clear wavy boundary
Bt&Cr	53 to 70 cm; Bt: yellowish-red (5YR 5/6) clay loam; moderate medium subangular block structure; friable; Cr: soft olive, red, and yellow shale; abrupt wavy boundary
Cr	70 to 100 cm; soft olive, red, and yellow shale

ANDERSON Site 5

Location:	Big Ridge Park Quadrangle, Pine Ridge; 300 ft northwest from Judson Road, 0.6 miles south from Moore Valley Road (also known as Cooper Gap), 300 ft south of Anderson Site 4
Classification:	Typic Hapludults; fine-loamy, mixed, thermic
Control Section:	6 to 56 cm of the argillic horizon
Geomorphic position:	Midslope, convex shape
Slope and aspect:	25% southeast
Parent material(s):	Dismal Gap Formation
Vegetation:	Virginia pine, dogwood, oak, poison ivy
Described by:	J. L. Branson
Sampling crew:	Branson, Timpson, Livingston, Gallagher, Entrekin
Time Since Last Rain:	4 days
Present weather:	85° F and cloudy
Date:	July 15, 1992

Soil Description:

Oi	2 to 0 cm; leaf litter, small roots, and pine needles
A	0 to 6 cm; dark yellowish-brown (10YR 4/4) loam; weak medium granular structure; very friable; clear smooth boundary
Ap	6 to 15 cm; dark yellowish-brown (10YR 4/6) loam; weak fine granular structure; friable; clear smooth boundary
Bt1	15 to 45 cm; yellowish-brown (10YR 5/6) clay loam; moderate medium subangular blocky structure; friable; clear smooth boundary
Bt2	45 to 70 cm; strong brown (7.5YR 5/8) clay loam; moderate medium subangular blocky structure; friable; clear smooth boundary
Cr	70 to 122 cm; soft olive, red, and yellow shale

ANDERSON Site 9

Location:	Powell Quadrangle, Pine Ridge; 1300 ft north from East Wolf Valley Road, 0.25 miles west from Nolan Road, 300 ft north from Anderson Site 19
Classification:	Ochreptic Hapludults; clayey, kaolinitic, thermic, shallow
Control Section:	12 to 35 cm of the argillic horizon
Geomorphic position:	Middle portion of a convex slope
Slope and aspect:	15% southeast
Parent material(s):	Dismal Gap Formation
Vegetation:	Virginia pine, red maple, tulip poplar, dogwood
Described by:	J. L. Branson
Sampling crew:	Branson, Timpson, Livingston, Gallagher, Entrekin
Time Since Last Rain:	2 days
Present weather:	75° F and cloudy
Date:	July 17, 1992

Soil Description:

Oi	2 to 0 cm; leaves and pine needles
A	0 to 5 cm; dark brown (10YR 3/3) loam; moderate fine granular structure; very friable; clear, smooth boundary
Ap	5 to 12 cm; yellowish-brown (10YR 5/4) loam; weak fine and medium granular structure; friable; clear smooth boundary
Bt	12 to 35 cm; strong brown (7.5YR 5/6) clay; moderate medium and coarse subangular blocky structure; firm; clear wavy boundary
BC	35 to 50 cm; strong brown (7.5YR 4/6) clay; 60% of structure is rock controlled; firm; clear wavy boundary
CB	50 to 62 cm; strong brown (7.5YR 5/6) clay loam; 80% structure is rock controlled; firm; clear, wavy boundary
Cr	62 to 105 cm; soft olive, red, and yellow shale

ANDERSON Site 10

Location:	Norris Quadrangle, Pine Ridge; 1200 ft northeast of Old Anderson Pike, 1000 ft west from Hinds Creek Road
Classification:	Typic Hapludults; fine-loamy, mixed, thermic
Control Section:	40 to 77 cm argillic horizon
Geomorphic position:	Upland slightly convex summit
Slope and aspect:	1% northeast
Parent material(s):	Dismal Gap Formation
Vegetation:	Virginia pine, tulip poplar, red maple, dogwood
Described by:	J. L. Branson
Sampling crew:	Branson, Livingston, Gallagher
Time Since Last Rain:	0 day
Present weather:	85° F and partly cloudy; heavy rain during sampling
Date:	July 17, 1992

Soil Description:

Oi	2 to 0 cm; roots and leaf litter
A	0 to 10 cm; very dark grayish-brown (10YR 3/2) silt loam; weak medium granular structure; friable; clear wavy boundary
E	10 to 21 cm; brown (10YR 5/3) silt loam; weak medium granular structure; friable; clear smooth boundary
BE	21 to 40 cm; yellowish-brown (10YR 5/4) and strong brown (7.5YR 5/6) clay loam; weak medium subangular blocky structure; friable; clear smooth boundary
Bt	40 to 77 cm; yellowish-red (5YR 5/6) clay loam; weak medium subangular blocky structure; friable; clear smooth boundary
Cr	77 to 136 cm; soft olive, red, and yellow shale

ANDERSON Site 11

Location:	Norris Quadrangle, Pine Ridge; 600 ft northwest from Hinds Creek Road, 1000 ft northwest from Hidden Drive
Classification:	Typic Hapludults; fine-loamy, mixed, thermic
Control Section:	18 to 56 cm of the argillic horizon
Geomorphic position:	Upland position
Slope and aspect:	12% southeast
Parent material(s):	Dismal Gap Formation
Vegetation:	tulip poplar, may apple, beech, red maple, hickory
Described by:	J. L. Branson
Sampling crew:	Branson, Timpson, Livingston, Gallagher, Entrekin
Time Since Last Rain:	2 days
Present weather:	65° F and partly cloudy
Date:	May 27, 1992 (sampled for gamma samples and description) July 16, 1992 (sampled for zero contamination samples)

Soil Description:

Oa	2 to 0 cm; crumbly organic matter
A	0 to 6 cm; brown (10YR 4/3) silt loam; moderate fine granular structure; very friable; clear wavy boundary
Ap	6 to 12 cm; yellowish-brown (10YR 5/6) silt loam or loam; weak fine granular structure; friable; clear wavy boundary
BE	12 to 18 cm; strong brown (7.5YR 5/6) and brown (7.5YR 5/4) loam; moderate fine subangular blocky structure; friable; clear wavy boundary
Bt1	18 to 30 cm; brown (7.5YR 5/4) clay; weak medium subangular blocky parting to moderate fine subangular blocky structure; firm; clear wavy boundary; yellowish-red (5YR 5/6) on ped faces
Bt2	30 to 56 cm; strong brown (7.5YR 5/6) clay loam; weak medium subangular blocky parting to moderate fine subangular blocky structure; friable; yellowish-red (5YR 5/6) on clay skins; clear irregular boundary
CB	56 to 92 cm; brown (7.5YR 5/4); clay loam; about 50% fine medium subangular blocky structure, remainder is rock controlled; friable to firm; gradual wavy boundary
Cr	92 to 140 cm; soft olive, red, and yellowish-brown shale

ANDERSON Site 12

Location:	Big Ridge Park Quadrangle, Pine Ridge; 500 ft northwest of Hinds Creek Road, 100 ft west from power lines, 200 ft west from Anderson Site 22
Classification:	Typic Hapludults; fine-loamy, mixed, thermic
Control Section:	16 to 56 cm argillic horizon
Geomorphic position:	Midslope
Slope and aspect:	15% southeast
Parent material(s):	Dismal Gap Formation
Vegetation:	Virginia pine, dogwood, sweetgum, hickory
Described by:	J. L. Branson
Sampling crew:	Branson, Timpson, Livingston, Gallagher, Entrekin
Time Since Last Rain:	1 day
Present weather:	80° F and partly cloudy
Date:	July 16, 1992

Soil Description:

Oi	2 to 0 cm; leaf litter and pine needles
A	0 to 7 cm; dark brown (10YR 3/3) silt loam; moderate fine granular structure; very friable; abrupt smooth boundary
Ap	7 to 16 cm; yellowish-brown (10YR 5/4) loam; weak medium granular structure; friable; clear, wavy boundary
Bt1	16 to 41 cm; strong brown (7.5YR 4/6) clay; moderate coarse subangular blocky structure; firm; clear, wavy boundary
Bt2	41 to 56 cm; yellowish-red (5YR 5/6) clay; moderate coarse subangular blocky structure; firm; clear wavy boundary
Cr1	56 to 90 cm; soft olive, red, and yellow shale
Cr2	90 to 122 cm; soft shale primarily red with some olive and yellowish-brown colors

Notes: This site had been cleared at one time. Age of the deciduous trees indicated they had been established at least 50 y. Slope dips strongly (30%) off to the side. Presently, this area is occupied by cattle for pasture.

ANDERSON Site 19

Location:	Powell Quadrangle, Pine Ridge; 100 ft north from East Wolf Valley Road, 0.25 miles west from Nolan Road, 300 ft south from Anderson Site 9
Classification:	Typic Hapludults; clayey, kaolinitic, thermic
Control Section:	23 to 72 cm of the argillic horizon
Geomorphic position:	Lower portion of a convex slope
Slope and aspect:	6% southeast
Parent material(s):	Dismal Gap Formation
Vegetation:	Virginia pine, red maple, tulip poplar, sassafras, mosses
Described by:	J. L. Branson
Sampling crew:	Branson, Timpson, Livingston, Gallagher, Entrekin
Time Since Last Rain:	2 days
Present weather:	75° F and cloudy
Date:	July 17, 1992.

Soil Description:

Oi	4 to 0 cm; moss, small roots, and pine needles
A	0 to 13 cm; very dark grayish-brown (10YR 3/2) silt loam; moderate medium granular structure; very friable; abrupt smooth boundary
Ap	13 to 23 cm; yellowish-brown (10YR 5/6) loam; weak fine and medium granular structure; friable; abrupt smooth boundary
Bt1	23 to 39 cm; yellowish-red (5YR 5/6) clay; moderate medium subangular blocky structure; firm; clear smooth boundary
Bt2	39 to 72 cm; yellowish-red (5YR 5/8) clay; moderate medium subangular blocky structure; firm; clear wavy boundary
BC	72 to 95 cm; yellowish-red (5YR 5/8) clay loam; weak medium subangular blocky structure; friable; gradual wavy boundary
Cr	95 to 135 cm; soft olive, red, and yellow shale

ANDERSON Site 20

Location:	Big Ridge Park Quadrangle, Pine Ridge; 100 ft northwest from Judson Road, 0.3 miles south from Moore Valley Road (also known as Cooper Gap), 300 ft north of Anderson Site 3
Classification:	Typic Hapludults; clayey, kaolinitic, thermic
Control Section:	13 to 63 cm of the argillic horizon
Geomorphic position:	Upland, convex slope, area is highly eroded
Slope and aspect:	12% southwest
Parent material(s):	Dismal Gap Formation
Vegetation:	Virginia pine, dogwood, tulip poplar, poison ivy, mosses
Described by:	J. L. Branson
Sampling crew:	Branson, Timpson, Livingston, Gallagher, Entrekin
Time Since Last Rain:	0 days
Present weather:	85° F and heavy rain during sampling
Date:	July 15, 1992

Soil Description:

Oi	2 to 0 cm; moss and leaf litter
A	0 to 5 cm; dark brown (7.5YR 4/4) silt loam; moderate medium granular structure; friable; clear smooth boundary
Ap	5 to 13 cm; yellowish-brown (10YR 5/6) silt loam; weak fine granular structure; friable; gradual smooth boundary
Bt1	13 to 21 cm; strong brown (7.5YR 5/6) silty clay loam; moderate medium subangular blocky structure; friable; abrupt smooth boundary
Bt2	21 to 42 cm; yellowish-red (5YR 5/6) clay; moderate medium subangular blocky structure; firm; clear wavy boundary
Bt3	42 to 84 cm; red (2.5YR 4.8) clay; strong, medium subangular blocky structure; friable; clear, wavy boundary
Cr	84 to 90 cm; soft light olive, red and yellowish-brown shale

ANDERSON Site 21

Location:	Big Ridge Park Quadrangle, Pine Ridge; 700 ft northwest from Hinds Creek Road, 150 ft west from power lines, 200 ft northeast from Anderson Site 12
Classification:	Ochreptic Hapludults; clayey, kaolinitic, thermic, shallow
Control Section:	12 to 28 cm argillic horizon
Geomorphic position:	Upland in the curve connecting two parallel slopes at the top of a small ridge
Slope and aspect:	11% southeast
Parent material(s):	Dismal Gap Formation
Vegetation:	Virginia pine, dogwood, sweetgum, hickory
Described by:	J. L. Branson
Sampling Crew:	Branson, Timpson, Livingston, Gallagher, Entrekin
Time Since Last Rain:	1 day
Present weather:	80° F and partly cloudy to sunny
Date:	July 16, 1992

Soil Description:

Oi	2 to 0 cm; leaf litter and pine needles
A	0 to 6 cm; dark brown (10YR 3/3) silt loam; moderate medium granular structure; friable; abrupt smooth boundary
Ap	6 to 12 cm; yellowish-brown (10YR 5/4) loam; moderate medium granular structure; friable; clear smooth boundary
Bt	12 to 28 cm; yellowish-red (5YR 4/6) clay; strong medium subangular blocky structure; firm; clear wavy boundary
Cr	28 to 87 cm; soft olive, red, and yellow shale

Notes: This site had been cleared at one time. Age of the deciduous trees indicated they had been established at least 50 y. Slope dips strongly (30%) approximately 50 ft from the site. Presently, this area is occupied by cattle for pasture.

ANDERSON Site 22

Location:	Big Ridge Park Quadrangle, Pine Ridge; 500 ft northwest from the intersection of Hill Road and Hind's Creek Road, 300 ft west of the power lines. It is 200 ft east from Anderson Site 12 on a convex slope.
Classification:	Ochreptic Hapludults; fine-loamy, mixed, thermic, shallow
Control Section:	4 to 28 cm entire argillic horizon
Geomorphic position:	Upland
Slope and aspect:	18% southeast
Parent material(s):	Dismal Gap Formation
Vegetation:	Virginia Pine, dogwood, cedar, poison ivy, red cedar
Described by:	J. L. Branson
Sampling crew:	Branson, Livingston
Time Since Last Rain:	0 days
Present weather:	85° F and heavy rain during sampling
Date:	July 15, 1992 (zero contamination sampling) July 16, 1992 (gamma sampling)

Soil Description:

Oi	2 to 0 cm; roots, leaf litter, and pine needles
A	0 to 4 cm; dark brown (10YR 4/3) loam; weak fine granular structure; friable; abrupt smooth boundary
Ap	4 to 14 cm; yellowish-brown (10YR 5/4) silt loam; weak medium granular structure; friable; clear wavy boundary
Bt	14 to 28 cm; yellowish-red (5YR 5/6) clay; moderate medium subangular blocky structure; firm; clear irregular boundary
Cr	28 to 98 cm; soft olive, red, and yellow shale

Note: A water seep occurred at approximately 50 cm.

ANDERSON Site 31

Location:	Powell Quadrangle, Chestnut Ridge; 1000 ft west of the Knox/Powell water tank, 300 ft south of dirt road, 800 ft northeast from Heiskell Road
Classification:	Typic Hapludults; clayey, mixed, thermic
Geomorphic position:	Lower slope just above a colluvial bench
Slope and aspect:	18%, 240° southwest
Parent material(s):	Surficial colluvium and residuum of the Copper Ridge Formation
Vegetation:	Virginia pine, sassafras, red oak, chestnut oak
Described by:	J.L. Branson
Sampling crew:	Mike Timpson, Mike Haarbauer, and Janice Branson
Time since last rain:	1 day
Present weather:	40° F and sunny and clear
Date:	December 5, 1992

Soil Description:

Oi	5–0 cm; leaf litter, twigs
A	0–11 cm; very dark grayish-brown and dark grayish-brown (10YR 3/2 and 10YR 4/2) gravelly silt loam; moderate fine granular parting to weak medium subangular blocky structure; very friable; 15% coarse fragments; clear smooth boundary
E1	11–20 cm; grayish-brown (10YR 5/2) silt loam; weak medium subangular blocky structure; very friable; clear smooth boundary
E2	20–49 cm; light yellowish-brown (10YR 6/4) silt loam; weak medium subangular blocky structure; very friable; 10% coarse fragments; clear smooth boundary
Bt	49–61 cm; brown (7.5YR 5/4) loam or clay loam; moderate medium subangular blocky structure; friable; 10% coarse fragments; clear smooth boundary
2Bt	61–87 cm; yellowish-red (5YR 5/6) clay; moderate medium subangular blocky structure; firm; 5% coarse fragments; clear smooth boundary
2BC	87–100 cm; yellowish-red (5YR 5/8) cherty clay loam; moderate medium and fine subangular blocky structure; friable; 15% coarse fragments; gradual smooth boundary
2C	100–132 cm; strong brown (7.5YR 5/8) and light yellowish-brown (2.5Y 6/4) saprolitic materials that easily crush to cherty clay; massive; friable

ANDERSON Site 32

Location:	Powell Quadrangle, Chestnut Ridge; 1200 ft southwest from water tank, and 100 ft south of access road, 800 ft northeast of Heiskell Road
Classification:	Typic Paleudults; clayey, mixed, thermic
Geomorphic position:	Midslope
Slope and aspect:	13%, 270° west
Parent material(s):	Surficial colluvium and residuum of the Copper Ridge Formation
Vegetation:	Chestnut oak, hickory, red oak, sassafras, hickory
Described by:	J.L. Branson
Sampling crew:	Lara Buckner, Rick Livingston, and Janice Branson
Time since last rain:	1 day
Present weather:	40° F and clear and sunny
Date:	December 5, 1992

Soil Description:

Oi	10–2 cm; hardwood leaf litter
Oa	2–0 cm; highly decomposed leaves, twigs, and roots
A	0–7 cm; dark brown (10YR 3/3) cherty silt loam; weak fine granular structure; very friable; 50% chert fragments; clear smooth boundary
E	7–38 cm; light yellowish-brown (10YR 6/4) silt loam; weak fine subangular blocky structure; very friable; clear smooth boundary
BE	38–45 cm; strong brown (7.5YR 5/8) silty clay loam; moderate fine subangular blocky structure; friable; 10–15% chert; clear wavy boundary
2Bt1	45–91 cm; yellowish-red (5YR 5/8) clay; moderate medium subangular blocky structure;friable; 5–10% chert fragments; gradual smooth boundary
2Bt2	91–120 cm; yellowish-red (5YR 5/8) clay; moderate medium subangular blocky structure; firm; 5–10% chert fragments; clear wavy boundary
2BC	120–144 cm; yellowish-red (5YR 5/8) gravelly clay; moderate medium subangular blocky structure; 20–30% chert; friable

ANDERSON Site 33

Location:	Powell Quadrangle, Pine Ridge; 700 ft southwest of the water tank, 100 ft south of old access road, 900 ft northeast of Heiskell Road
Classification:	Typic Paleudults; clayey, mixed, thermic
Geomorphic position:	Upper portion of long slope
Slope and aspect:	10%, 240° southwest
Parent material(s):	Copper Ridge Formation
Vegetation:	Red oak, chestnut oak, hickory, dogwood, sassafras
Described by:	J.L. Branson
Sampling crew:	Mike Morris, Steve Travis, and Janice Branson
Time since last rain:	1 day
Present weather:	40° F
Date:	December 5, 1992

Soil Description:

Oi	7–2 cm; leaf litter
Oa	2–0 cm; decomposed leaves
A	0–3 cm; very dark grayish-brown (10YR 3/2) extremely cherty silt loam; weak fine granular structure; very friable; 70% chert fragments; abrupt smooth boundary
E1	3–21 cm; light yellowish-brown (2.5Y 6/4) very cherty silt loam; weak medium subangular blocky structure; very friable; 50% chert fragments; clear smooth boundary
E2	21–36 cm; brownish-yellow (10YR 6/6) silt loam; weak medium subangular blocky structure; friable; 10% chert fragments; gradual smooth boundary
Bt1	36–46 cm; reddish-yellow (7.5 YR 6/8) cherty clay loam; moderate medium subangular blocky structure; friable; 25% chert fragments; clear smooth boundary
2Bt2	46–62 cm; yellowish-red (5YR 5/8) cherty clay loam; moderate medium subangular blocky structure; friable; 15% chert fragments; clear smooth boundary
2Bt3	62–75 cm; yellowish-red (5YR 5/8) cherty clay; moderate medium subangular blocky structure; firm; 25% chert fragments; gradual wavy boundary
2BC	75–117 cm; yellowish-red (5YR 5/8) clay; moderate medium subangular blocky structure; firm

ANDERSON Site 34

Location:	Powell Quadrangle, Chestnut Ridge; 500 ft northwest of water tank, 100 ft north of access road, 1400 ft northeast from Heiskell Road, 500 ft north from Anderson Site 33
Classification:	Typic Paleudults; fine-loamy, mixed, thermic
Geomorphic position:	Upland, midslope
Slope and aspect:	14%, 290° west
Parent material(s):	Surficial colluvium and residuum of the Copper Ridge Formation
Vegetation:	Chestnut oak, sassafras, dogwood, red maple
Described by:	J.L. Branson
Sampling crew:	Mike Timpson, Mike Haarbauer, Janice Branson
Time since last rain:	1 day
Present weather:	35° F and clear
Date:	December 5, 1992

Soil Description:

Oi	5–0 cm; leaf litter
A	0–7 cm; brown (10YR 4/3) silt loam; weak medium granular structure; very friable; abrupt smooth boundary
E1	7–27 cm; yellowish-brown (10YR 5/4) silt loam; weak medium subangular blocky structure; very friable; clear smooth boundary
E2	27–38 cm; brownish-yellow (10YR 6/8) silt loam; weak medium, subangular blocky structure; friable; clear wavy boundary
Bt1	38–52 cm; reddish-yellow (7.5YR 6/8) silty clay loam; moderate medium subangular blocky structure; friable; few chert fragments; clear smooth boundary
2Bt2	52–94 cm; reddish-yellow (5YR 6/8) clay loam; moderate medium subangular blocky; friable; 13% chert fragments; gradual smooth boundary
2BC	94–140 cm; yellowish-red (5YR 5/8) clay; weak medium subangular blocky structure; firm

ANDERSON Site 35

Location:	Powell Quadrangle, Chestnut Ridge; 700 ft northwest of water tank, 150 ft north of the access road, 1500 ft northeast from Heiskell Road
Classification:	Typic Paleudults; fine-loamy, mixed, thermic
Geomorphic position:	Upland, upper sideslope
Slope and aspect:	8%, 20° north
Parent material(s):	Colluvium and residuum from the Copper Ridge Formation
Vegetation:	Chestnut oak, sassafras, scarlet oak, white oak, red maple
Described by:	J.L. Branson
Sampling crew:	Mike Morris, Steve Travis, and Janice Branson
Time since last rain:	1 day
Present weather:	35° F and clear
Date:	December 5, 1992

Soil Description:

Oi	5–0 cm; leaf litter
A	0–12 cm; brown (10YR 4/3) silt loam; weak medium subangular blocky structure; very friable; clear smooth boundary
E	12–27 cm; dark yellowish-brown (10YR 4/6) silt loam; weak medium subangular blocky structure; very friable; clear smooth boundary
Bt1	27–46 cm; strong brown (7.5YR 5/6) silty clay loam; moderate medium subangular blocky structure; friable; clear smooth boundary
Bt2	46–62 cm; strong brown (7.5YR 5/8) clay loam; moderate medium subangular blocky structure; friable; clear smooth boundary
2Bt3	62–85 cm; yellowish-red (5YR 5/8) cherty clay loam; moderate, medium subangular blocky structure; friable; 20% chert fragments; gradual smooth boundary
2C	85–125 cm; red (2.5YR 4/8) clay; massive; firm

ANDERSON Site 36

Location:	Powell Quadrangle, Chestnut Ridge; 700 ft northwest of water tank, 200 ft north of access road, 1600 ft northeast from Heiskell Road
Classification:	Typic Paleudults; fine-loamy, mixed, thermic
Geomorphic position:	Midslope just above a bench
Slope and aspect:	32%, 350° north
Parent material(s):	Surficial colluvium and residuum of the Copper Ridge Formation
Vegetation:	Yellow poplar, white oak, hickory, red oak
Described by:	J.L. Branson
Sampling crew:	Lara Buckner, Rick Livingston, and Janice Branson
Time since last rain:	1 day
Present weather:	35° F and clear
Date:	December 5, 1992

Soil Description:

Oi	7–2 cm; leaf litter
Oa	2–0 cm; decomposed leaves, twigs
A	0–8 cm; dark yellowish-brown (10YR 3/4) silt loam; weak medium granular structure; very friable; 5% chert fragments; clear smooth boundary
E	8–26 cm; brown (10YR 5/3) silt loam; weak medium subangular blocky structure; very friable; 5% chert fragments; clear smooth boundary
BE	26–42 cm; yellowish-brown (10YR 5/4) silt loam; weak medium subangular blocky structure; friable; 5% chert fragments; clear wavy boundary
Bt	42–75 cm; yellowish-red (5YR 5/8) clay loam; moderate medium subangular blocky structure; friable; 10% chert fragments; clear wavy boundary
BC	75–90 cm; yellowish-red (5YR 5/8) very cherty clay loam; moderate medium subangular blocky structure; 60% chert fragments; firm

ANDERSON Site 37

Location:	Big Ridge Park Quadrangle, Chestnut Ridge; 800 ft west of Mt. Hebron Church, 700 ft southeast from Hinds Creek Road, 250 ft southwest from Anderson Site 38
Classification:	Typic Paleudults; clayey, mixed, thermic
Geomorphic position:	Upland, upper sideslope
Slope and aspect:	16%, 280° west
Parent material(s):	Copper Ridge Formation
Vegetation:	Cedar, red maple, oaks
Described by:	J.L. Branson
Sampling crew:	Dr. J.T. Ammons, and Janice Branson
Time since last rain:	2 days
Present weather:	35° F and overcast and cloudy
Date:	December 12, 1992

Soil Description:

Oi	5–0 cm; leaf litter
Ap	0–19 cm; dark yellowish-brown (10YR 4/4) cherty silt loam; moderate medium subangular blocky structure; friable; 15% chert fragments; clear smooth boundary
Bt1	19–33 cm; yellowish-red (5YR 5/8) clay loam; moderate medium subangular blocky structure; friable; clear smooth boundary
Bt2	33–80 cm; yellowish-red (5YR 5/8) clay; strong medium subangular blocky structure; firm; 10% chert fragments; gradual smooth boundary
Bt3	80–100 cm; red (2.5YR 4/6) clay; strong medium subangular blocky structure; firm; clear smooth boundary
BC	100–123 cm; red (2.5YR 4/6) clay; moderate medium subangular blocky structure; firm

ANDERSON Site 38

Location:	Big Ridge Park Quadrangle, Chestnut Ridge; 550 ft west from Mt. Hebron Church, and 650 ft southeast from Hinds Creek Road
Classification:	Typic Paleudults; clayey, mixed, thermic
Geomorphic position:	Upland, upper slope
Slope and aspect:	13%, 20° north
Parent material(s):	Surficial colluvium and residuum of the Copper Ridge Formation
Vegetation:	Red cedar, privet, red maple, red and black oaks
Described by:	J.L. Branson
Sampling crew:	Dr. J.T. Ammons, and Janice Branson
Time since last rain:	2 days
Present weather:	35° F and overcast and cloudy
Date:	December 12, 1992

Soil Description:

Oi	5–0 cm; leaf litter, roots
A	0–12 cm; dark yellowish-brown (10YR 4/4) cherty silt loam; moderate medium granular structure; very friable; 20% chert fragments; clear smooth boundary
E	12–29 cm; yellowish-brown (10YR 5/4) silt loam; weak medium, subangular blocky structure; very friable; 10% chert fragments; gradual smooth boundary
Bt1	29–40 cm; yellowish-red (5YR 5/6) cherty silty clay loam; weak fine subangular blocky structure; friable; 15% coarse fragments; clear smooth boundary
2Bt2	40–80 cm; red (2.5YR 4/6) clay; moderate medium, subangular blocky structure; firm; 5% chert fragments; gradual smooth boundary
2BC	80–120 cm; red (2.5YR 4/6) clay; moderate medium subangular blocky structure; firm

ANDERSON Site 39

Location:	Big Ridge Park Quadrangle, Chestnut Ridge; 1000 ft south from Mount Zion Church, 1000 ft southeast from Hinds Creek Valley Road
Classification:	Typic Paleudults; clayey, mixed, thermic
Geomorphic position:	Midslope on a short bench
Slope and aspect:	5%, 310° northwest
Parent material(s):	Surficial old alluvium and residuum of the Copper Ridge Formation
Vegetation:	Red oak, hickory, red maple
Described by:	J.L. Branson
Sampling crew:	Mike Timpson, Rick Livingston, Sonja Entrekin, and Janice Branson
Time since last rain:	1 day
Present weather:	20° F and cold with wind chill and snow flurries
Date:	December 11, 1992

Soil Description:

Oi	6–0 cm; leaves
A	0–8 cm; dark yellowish-brown (10YR 3/4) cherty silt loam; moderate medium granular structure; very friable; 20% coarse fragments; clear smooth boundary
BA	8–22 cm; strong brown (7.5YR 4/6) silt loam; weak medium subangular blocky structure; very friable; 5% chert fragments; clear smooth boundary
Bt1	22–34 cm; yellowish-red (5YR 5/6) clay loam; weak medium subangular blocky structure; friable; 5% chert fragments; clear smooth boundary
Bt2	34–60 cm; red (2.5YR 4/6) clay; moderate medium subangular blocky structure; firm; 5% chert fragments; gradual smooth boundary
BC	74–114 cm; red (2.5YR 4/6) clay; weak moderate subangular blocky structure; firm

ANDERSON Site 40

Location:	Big Ridge Park Quadrangle, Chestnut Ridge; 1200 ft south from Mt. Zion Church, 1500 ft southeast from Hinds Creek Valley Road
Classification:	Typic Paleudults; clayey, mixed, thermic
Geomorphic position:	Midslope upland
Slope and aspect:	21%, 10° north
Parent material(s):	Surficial old alluvium and residuum of the Copper Ridge Formation
Vegetation:	Virginia Pine, ferns, red maple
Described by:	J.L. Branson
Sampling crew:	Rick Livingston, Sonja Entrekin, Mike Timpson, and Janice Branson
Time since last rain:	1 day
Present weather:	Cold, wind chill 20° F and snow flurries
Date:	December 11, 1992

Soil Description:

Oi	5–0 cm; leaves, pine needles
A	0–19 cm; dark yellowish-brown (10YR 4/4) cherty silt loam; weak medium subangular blocky structure; very friable; 15% chert fragments; clear smooth boundary
Bt1	19–36 cm; strong brown (7.5YR 4/6) clay loam; weak medium subangular blocky structure; friable; 5% chert fragments; clear smooth boundary
2Bt2	36–72 cm; yellowish-red (5YR 4/6) clay; moderate medium subangular blocky structure; firm; 10% chert fragments; gradual smooth boundary
2BC	72–104 cm; yellowish-red (5YR 5/6) clay; weak medium subangular blocky structure; firm

ANDERSON Site 41

Location:	Big Ridge Park Quadrangle, Chestnut Ridge; 1500 ft south from Mt. Zion Church, 1700 ft southeast from Hinds Creek Valley Road
Classification:	Typic Paleudults; clayey, mixed, thermic
Geomorphic position:	Midslope
Slope and aspect:	18%, 1/2° north
Parent material(s):	Surficial colluvium and residuum of the Copper Ridge Formation
Vegetation:	Red Maple, Ferns, Dogwood, Virginia Pine
Described by:	J.L. Branson
Sampling crew:	Mike Timpson, Rick Livingston, Sonja Entrekin, and Janice Branson
Time since last rain:	1 day
Present weather:	20° F wind chill, cold, and snow flurries
Date:	December 11, 1992

Soil Description:

Oi	5–0 cm; leaf litter, pine needles
A	0–11 cm; dark yellowish-brown (10YR 3/4) cherty silt loam; moderate medium granular structure; very friable; 20% chert fragments; clear smooth boundary
AB	11–27 cm; brown (7.5YR 4/4) silt loam; weak medium, subangular blocky structure; friable; clear smooth boundary
Bt1	27–38 cm; strong brown (7.5YR 4/6) clay loam; moderate medium, subangular blocky structure; friable; 3% chert fragments; clear smooth boundary
2Bt2	38–70 cm; yellowish-red (5YR 4/6) clay; moderate coarse subangular blocky structure; firm; 5% chert fragments; gradual smooth boundary
2BC	70–125 cm; yellowish-red (5YR 5/6) clay; weak medium subangular blocky structure; friable

ANDERSON Site 42

Location:	Big Ridge Park Quadrangle, Chesnut Ridge; 1200 ft south of Mount Zion Church, 1800 ft southeast from Hinds Creek Valley Road
Classification:	Typic Paleudults; fine-loamy, siliceous, thermic
Geomorphic position:	Upper portion of a long slope
Slope and aspect:	19%, 1/2° north
Parent material(s):	Surficial colluvium and residuum of the Copper Ridge Formation
Vegetation:	Virginia Pine, Red Maple, Ferns
Described by:	J.L. Branson
Sampling crew:	Mike Timpson, Rick Livingston, Sonja Entrekin, and Janice Branson
Time since last rain:	1 day
Present weather:	20° F, cold, wind chill with snow flurries
Date:	December 11, 1992

Soil Description:

Oi	5–0 cm; leaves, pine needles
A	0–24 cm; dark brown (10YR 3/3) silt loam; weak medium subangular structure; very friable; 5% chert fragments; clear smooth boundary
Bt1	24–39 cm; strong brown (7.5YR 4/6) loam; weak medium subangular blocky structure; friable; clear smooth boundary
Bt2	39–53 cm; strong brown (7.5YR 5/6) cherty clay loam; moderate medium subangular blocky structure; friable; 15% chert fragments; clear smooth boundary
2Bt3	53–81 cm; yellowish-red (5YR 5/6) clay; moderate medium subangular blocky structure; firm; 5% chert fragments; gradual smooth boundary
2BC	81–93+ cm; yellowish-red (5YR 5/8) cherty clay; massive; 20% coarse fragments; firm

A.7 SITE LOCATIONS

A.7.1 Oak Ridge Reservation Site Locations

The following locations are approximate. Key: DG = Dismal Gap, NOL = Nolichucky, CR = Copper Ridge, CH = Chepultepec, BV = Chickamauga-Bethel Valley, and EF = Chickamauga, East Fork or K-25 section.

Site	North	East	Site	North	East
2 DG	29300	10300	45 CR	27600	18400
3 NOL	29300	11200	50 CH	26600	19800
5 NOL	29300	15300	51 CR	28400	21600
10 DG	30200	21460	52 CH	26600	20200
11 DG	29800	21460	53 CH	26200	22400
13 NOL	29480	23220	54 CR	28200	22500
15 NOL	29700	25720	55 CR	28400	23400
16 NOL	29700	25928	58 CR	28000	25000
19 DG	33000	28530	59 CR	28000	26600
21 NOL	29700	30940	60 CR	27800	27400
22 DG	30520	31250	62 CR	27900	29700
23 NOL	29800	31830	64 CR	27200	30000
24 NOL	29900	31980	66 CH	27000	31000
25 NOL	29800	32290	68 CH	26800	31700
26 DG	30000	34370	73 CH	26800	34000
27 DG	30100	34990	74 CH	27200	34000
28 NOL	29500	34580	75 CR	27200	35400
31 NOL	29900	35820	77 CH	26600	35200
32 DG	30200	36760	78 CH	26700	35600
33 DG	30000	36970	83 CR	27800	37600
35 DG	30000	37280	85 CH	26000	37800
41 DG	30200	39570	86 CH	26000	38200
42 NOL	30000	40500	90 CH	28000	40800
43 DG	30400	41460	91 CR	27000	41000
93 BV	21600	26500	118 EF	39800	23000
99 BV	22000	27750	119 EF	40000	23000
100 BV	21600	28000	120 EF	39800	23250
101 BV	21250	31550	121 EF	42100	26200
102 BV	21300	34900	122 EF	41300	27250
103 BV	20800	36400	123 EF	41200	29750
104 BV	21800	44000	124 EF	40900	30400
108 BV	22250	45000	125 EF	40600	29800
110 BV	22400	45800	126 EF	38950	28750
115 BV	22500	46700	127 EF	39500	28650
116 BV	22100	49000	128 EF	38900	29600
117 BV	22500	49000	129 EF	36100	26300

A.7.2 Latitudes and Longitudes for Roane and Anderson Counties

Site number	Latitude	Longitude
ANDERSON COUNTY		
1	36°11'48"	83°56'57"
3	36°11'40"	83°57'05"
4	36°06'28"	83°57'18"
5	36°11'29"	83°57'22"
9	36°06'00"	84°03'42"
10	36°08'47"	84°00'58"
11	36°09'10"	84°00'36"
12	36°10'32"	83°58'45"
19	36°11'01"	83°58'14"
20	36°11'32"	83°57'14"
21	36°l1'36"	83°57'14"
22	36°10'34"	83°58'14"
31	36°06'19"	84°02'55"
32	36°06'21"	84°02'54"
33	36°06'19"	84°02'50"
34	36°06'20"	84°02'47"
35	36°06'25"	84°02'51"
36	36°06'24"	84°02'15"
37	36°10'18"	83°58'36"
38	36°10'20"	83°58'34"
39	36°11'04"	83°57'06"
40	36°ll'0l'	83°57'04"
41	36°10'58"	83°57'01"
42	36°11'01"	83°56'57"
ROANE COUNTY		
3	35°43'02"	84°35'07"
7	35°40'41"	84°36'55"
8	35°40'38"	84°36'53"
9	35°42'53"	84°35'14"
10	35°44'41"	84°33'37"
13	35°44'22"	84°33'57"
14	35°44'19"	84°33'59"
17	35°41'31"	84°36'21"
19	35°42'50"	84°35'16"
20	35°42'47"	84°35'19"
21	35°42'44"	84°35'22"
22	35°42'46"	84°35'18"
33	35°44'25"	84°33'33"
34	35°44'30"	84°33'30"
35	35°44'33"	84°33'26"
39	35°42'00"	84°35'30"
40	35°41'59"	84°35'30"

Site number	Latitude	Longitude
41	35°42'00"	84°35'28"
42	35°40'14"	84°36'42"
43	35°40'16"	84°36'44"
44	35°40'16"	84°36'48"
45	35°40'12"	84°36'50"
46	35°40'09"	84°36'54"
47	35°40'06"	84°36'58"

Appendix B

SCREENING ANALYSIS DATA

Table B.1. Volatile organic analysis results for soil samples

Analysis	Units	A horizon	Qualifier	A horizon field dup	Qualifier
Location=AND; Formation=COPPER RIDGE; Site=31; Samp id=2256; Dup id=' '; Phase=2					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	18	J		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	8	J		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=AND; Formation=COPPER RIDGE; Site=32; Samp id=2258; Dup id=' '; Phase=2					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	9	J		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		

Table B.1 (continued)

Analysis	Units	A horizon	Qualifier	A horizon field dup	Qualifier
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	7	J		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=AND; Formation=COPPER RIDGE; Site=33; Samp id=2261; Dup id=' '; Phase=2					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	100	U		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	100	U		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=AND; Formation=COPPER RIDGE; Site=34; Samp id=2264; Dup id=' '; Phase=2					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	100	U		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		

Table B.1 (continued)

Analysis	Units	A horizon	Qualifier	A horizon field dup	Qualifier
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	100	U		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=AND; Formation=COPPER RIDGE; Site=35; Samp id=2267; Dup id=' '; Phase=2					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	18	J		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	5	J		
2-Hexanone	µg/kg	51	U		
4-Methyl-2-pentanone	µg/kg	51	U		
Location=AND; Formation=COPPER RIDGE; Site=36; Samp id=2270; Dup id=' '; Phase=2					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	10	U		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		

Table B.1 (continued)

Analysis	Units	A horizon	Qualifier	A horizon field dup	Qualifier
Freon-113	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Trichlorofluoromethane	µg/kg	5	U		
Vinyl acetate	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichlorobenzene	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
1,3-Dichlorobenzene	µg/kg	5	U		
1,4-Dichlorobenzene	µg/kg	5	U		
2-Butanone	µg/kg	10	U		
2-Chloroethylvinyl ether	µg/kg	5	U		
2-Hexanone	µg/kg	10	U		
4-Methyl-2-pentanone	µg/kg	10	U		
Location=AND; Formation=COPPER RIDGE; Site=37; Samp id=2272; Dup id=' '; Phase=2					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	100	U		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	100	U		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=AND; Formation=COPPER RIDGE; Site=38; Samp id=2274; Dup id=' '; Phase=2					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		

Table B.1 (continued)

Analysis	Units	A horizon	Qualifier	A horizon field dup	Qualifier
Acetone	µg/kg	100	U		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	8	J		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=AND; Formation=COPPER RIDGE; Site=39; Samp id=2276; Dup id=' '; Phase=2					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	100	U		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	100	U		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		

Table B.1 (continued)

Analysis	Units	A horizon	Qualifier	A horizon field dup	Qualifier
Location=AND; Formation=COPPER RIDGE; Site=40; Samp id=2278; Dup id=' '; Phase=2					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	6	J		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	100	U		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=AND; Formation=COPPER RIDGE; Site=41; Samp id=2280; Dup id=' '; Phase=2					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	100	U		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		

Table B.1 (continued)

Analysis	Units	A horizon	Qualifier	A horizon field dup	Qualifier
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	100	U		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=AND; Formation=COPPER RIDGE; Site=42; Samp id=2282; Dup id=' '; Phase=2					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	11	J		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	100	U		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=AND; Formation=DISMAL GAP; Site=1; Samp id=2029; Dup id=' '; Phase=1					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	100	U		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		

Table B.1 (continued)

Analysis	Units	A horizon	Qualifier	A horizon field dup	Qualifier
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	100	U		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=AND; Formation=DISMAL GAP; Site=10; Samp id=2028; Dup id=' '; Phase=1					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	6	J		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	100	U		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=AND; Formation=DISMAL GAP; Site=11; Samp id=2111; Dup id=' '; Phase=1					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	5	J		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		

Table B.1 (continued)

Analysis	Units	A horizon	Qualifier	A horizon field dup	Qualifier
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	99	U		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=AND; Formation=DISMAL GAP; Site=12; Samp id=2031; Dup id=' '; Phase=1					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	7	J		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	100	U		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=AND; Formation=DISMAL GAP; Site=19; Samp id=2027; Dup id=' '; Phase=1					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	100	U		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		

Table B.1 (continued)

Analysis	Units	A horizon	Qualifier	A horizon field dup	Qualifier
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	100	U		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=AND; Formation=DISMAL GAP; Site=20; Samp id=2069; Dup id=' '; Phase=1					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	5	J		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	100	U		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=AND; Formation=DISMAL GAP; Site=21; Samp id=2036; Dup id=' '; Phase=1					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	6	J		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		

Table B.1 (continued)

Analysis	Units	A horizon	Qualifier	A horizon field dup	Qualifier
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	100	U		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=AND; Formation=DISMAL GAP; Site=22; Samp id=2030; Dup id=' '; Phase=1					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	10	J		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	100	U		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		

Table B.1 (continued)

Analysis	Units	A horizon	Qualifier	A horizon field dup	Qualifier
Location=AND; Formation=DISMAL GAP; Site=3; Samp id=2032; Dup id=' '; Phase=1					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	5	J		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	100	U		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=AND; Formation=DISMAL GAP; Site=4; Samp id=2033; Dup id=' '; Phase=1					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	13	J		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		

Table B.1 (continued)

Analysis	Units	A horizon	Qualifier	A horizon field dup	Qualifier
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	100	U		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=AND; Formation=DISMAL GAP; Site=5; Samp id=2034; Dup id=' '; Phase=1					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	8	J		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	100	U		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=AND; Formation=DISMAL GAP; Site=9; Samp id=2026; Dup id=' '; Phase=1					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	8	J		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		

Table B.1 (continued)

Analysis	Units	A horizon	Qualifier	A horizon field dup	Qualifier
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	100	U		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=ORR; Formation=CHEPULTEPEC; Site=50; Samp id=1547; Dup id=' '; Phase=2					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	100	U		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	7	J		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=ORR; Formation=CHEPULTEPEC; Site=52; Samp id=1550; Dup id=' '; Phase=2					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	7	J		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		

Table B.1 (continued)

Analysis	Units	A horizon	Qualifier	A horizon field dup	Qualifier
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	5	J		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=ORR; Formation=CHEPULTEPEC; Site=53; Samp id=1552; Dup id=' '; Phase=2					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	100	U		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	100	U		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=ORR; Formation=CHEPULTEPEC; Site=66; Samp id=1737; Dup id=' '; Phase=2					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	100	U		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		

Table B.1 (continued)

Analysis	Units	A horizon	Qualifier	A horizon field dup	Qualifier
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	100	U		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=ORR; Formation=CHEPULTEPEC; Site=68; Samp id=1740; Dup id=' '; Phase=2					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	22	J		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	100	U		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=ORR; Formation=CHEPULTEPEC; Site=73; Samp id=1743; Dup id=' '; Phase=2					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	13	J		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		

Table B.1 (continued)

Analysis	Units	A horizon	Qualifier	A horizon field dup	Qualifier
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	100	U		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=ORR; Formation=CHEPULTEPEC; Site=74; Samp id=1745; Dup id=' '; Phase=2					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	5	J		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	100	U		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		

Table B.1 (continued)

Analysis	Units	A horizon	Qualifier	A horizon field dup	Qualifier
Location=ORR; Formation=CHEPULTEPEC; Site=77; Samp id=1599; Dup id=' '; Phase=2					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	100	U		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	100	U		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=ORR; Formation=CHEPULTEPEC; Site=78; Samp id=1601; Dup id=' '; Phase=2					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	100	U		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		

Table B.1 (continued)

Analysis	Units	A horizon	Qualifier	A horizon field dup	Qualifier
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	100	U		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=ORR; Formation=CHEPULTEPEC; Site=85; Samp id=1605; Dup id=' '; Phase=2					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	8	J		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	100	U		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=ORR; Formation=CHEPULTEPEC; Site=86; Samp id=1603; Dup id=' '; Phase=2					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	100	U		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		

Table B.1 (continued)

Analysis	Units	A horizon	Qualifier	A horizon field dup	Qualifier
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	100	U		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=ORR; Formation=CHEPULTEPEC; Site=90; Samp id=1748; Dup id=' '; Phase=2					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	6	J		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	100	U		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=ORR; Formation=CHICKAMAUGA Bethel V; Site=100; Samp id=1905; Dup id=' '; Phase=2					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	7	J		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		

Table B.1 (continued)

Analysis	Units	A horizon	Qualifier	A horizon field dup	Qualifier
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	100	U		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=ORR; Formation=CHICKAMAUGA Bethel V; Site=101; Samp id=1896; Dup id=' '; Phase=2					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	11	J		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	100	U		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=ORR; Formation=CHICKAMAUGA Bethel V; Site=102; Samp id=1893; Dup id=' '; Phase=2					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	9	J		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		

Table B.1 (continued)

Analysis	Units	A horizon	Qualifier	A horizon field dup	Qualifier
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	100	U		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=ORR; Formation=CHICKAMAUGA Bethel V; Site=103; Samp id=1890; Dup id=' '; Phase=2					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	11	J		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	100	U		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		

Table B.1 (continued)

Analysis	Units	A horizon	Qualifier	A horizon field dup	Qualifier
Location=ORR; Formation=CHICKAMAUGA Bethel V; Site=104; Samp id=1963; Dup id=' '; Phase=2					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	100	U		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	100	U		
2-Hexanone	µg/kg	51	U		
4-Methyl-2-pentanone	µg/kg	51	U		
Location=ORR; Formation=CHICKAMAUGA Bethel V; Site=108; Samp id=1966; Dup id=' '; Phase=2					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	100	U		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		

Table B.1 (continued)

Analysis	Units	A horizon	Qualifier	A horizon field dup	Qualifier
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	9	J		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=ORR; Formation=CHICKAMAUGA Bethel V; Site=110; Samp id=1969; Dup id=' '; Phase=2					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	5	J		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	100	U		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=ORR; Formation=CHICKAMAUGA Bethel V; Site=115; Samp id=1972; Dup id=' '; Phase=2					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	5	J		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		

Table B.1 (continued)

Analysis	Units	A horizon	Qualifier	A horizon field dup	Qualifier
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	100	U		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=ORR; Formation=CHICKAMAUGA Bethel V; Site=116; Samp id=1975; Dup id=' '; Phase=2					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	7	J		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	6	J		
2-Hexanone	µg/kg	49	U		
4-Methyl-2-pentanone	µg/kg	49	U		
Location=ORR; Formation=CHICKAMAUGA Bethel V; Site=117; Samp id=1978; Dup id=' '; Phase=2					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	98	U		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		

Table B.1 (continued)

Analysis	Units	A horizon	Qualifier	A horizon field dup	Qualifier
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	7	J		
2-Hexanone	µg/kg	49	U		
4-Methyl-2-pentanone	µg/kg	49	U		
Location=ORR; Formation=CHICKAMAUGA Bethel V; Site=93; Samp id=1899; Dup id=' '; Phase=2					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	10	J		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	100	U		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		

Table B.1 (continued)

Analysis	Units	A horizon	Qualifier	A horizon field dup	Qualifier
Location=ORR; Formation=CHICKAMAUGA Bethel V; Site=99; Samp id=1902; Dup id=' '; Phase=2					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	5	J		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	5	J		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=ORR; Formation=CHICKAMAUGA K-25; Site=118; Samp id=4094; Dup id=' '; Phase=2					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	100	U		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		

Table B.1 (continued)

Analysis	Units	A horizon	Qualifier	A horizon field dup	Qualifier
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	100	U		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=ORR; Formation=CHICKAMAUGA K-25; Site=119; Samp id=4126; Dup id=' '; Phase=2					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	100	U		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	100	U		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=ORR; Formation=CHICKAMAUGA K-25; Site=120; Samp id=4091; Dup id=' '; Phase=2					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	100	U		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		

Table B.1 (continued)

Analysis	Units	A horizon	Qualifier	A horizon field dup	Qualifier
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	100	U		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=ORR; Formation=CHICKAMAUGA K-25; Site=121; Samp id=4128; Dup id=' '; Phase=2					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	100	U		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	6	J		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=ORR; Formation=CHICKAMAUGA K-25; Site=122; Samp id=4104; Dup id=' '; Phase=2					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	98	U		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		

Table B.1 (continued)

Analysis	Units	A horizon	Qualifier	A horizon field dup	Qualifier
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	98	U		
2-Hexanone	µg/kg	49	U		
4-Methyl-2-pentanone	µg/kg	49	U		
Location=ORR; Formation=CHICKAMAUGA K-25; Site=123; Samp id=4130; Dup id=' '; Phase=2					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	19	J		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	100	U		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=ORR; Formation=CHICKAMAUGA K-25; Site=124; Samp id=4114; Dup id=' '; Phase=2					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	98	U		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		

Table B.1 (continued)

Analysis	Units	A horizon	Qualifier	A horizon field dup	Qualifier
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	98	U		
2-Hexanone	µg/kg	49	U		
4-Methyl-2-pentanone	µg/kg	49	U		
Location=ORR; Formation=CHICKAMAUGA K-25; Site=125; Samp id=4132; Dup id=' '; Phase=2					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	12	J		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	100	U		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=ORR; Formation=CHICKAMAUGA K-25; Site=126; Samp id=4088; Dup id=' '; Phase=2					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	5	J		

Table B.1 (continued)

Analysis	Units	A horizon	Qualifier	A horizon field dup	Qualifier
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	100	U		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=ORR; Formation=CHICKAMAUGA K-25; Site=127; Samp id=4134; Dup id=' '; Phase=2					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	100	U		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	100	U		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		

Table B.1 (continued)

Analysis	Units	A horizon	Qualifier	A horizon field dup	Qualifier
Location=ORR; Formation=CHICKAMAUGA K-25; Site=128; Samp id=4136; Dup id=' '; Phase=2					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	5	J		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	7	J		
2-Hexanone	µg/kg	51	U		
4-Methyl-2-pentanone	µg/kg	51	U		
Location=ORR; Formation=CHICKAMAUGA K-25; Site=129; Samp id=4085; Dup id=' '; Phase=2					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	100	U		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		

Table B.1 (continued)

Analysis	Units	A horizon	Qualifier	A horizon field dup	Qualifier
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	5	BJ		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=ORR; Formation=COPPER RIDGE; Site=45; Samp id=1543; Dup id=' '; Phase=2					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	100	U		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	100	U		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=ORR; Formation=COPPER RIDGE; Site=51; Samp id=1545; Dup id=' '; Phase=2					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	7	J		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		

Table B.1 (continued)

Analysis	Units	A horizon	Qualifier	A horizon field dup	Qualifier
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	8	J		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=ORR; Formation=COPPER RIDGE; Site=54; Samp id=1496; Dup id=' '; Phase=2					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	99	U		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	7	J		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=ORR; Formation=COPPER RIDGE; Site=55; Samp id=1494; Dup id=' '; Phase=2					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	6	J		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		

Table B.1 (continued)

Analysis	Units	A horizon	Qualifier	A horizon field dup	Qualifier
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	98	U		
2-Hexanone	µg/kg	49	U		
4-Methyl-2-pentanone	µg/kg	49	U		
Location=ORR; Formation=COPPER RIDGE; Site=58; Samp id=1541; Dup id=' '; Phase=2					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	7	J		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	6	J		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=ORR; Formation=COPPER RIDGE; Site=59; Samp id=1490; Dup id=' '; Phase=2					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	100	U		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		

Table B.1 (continued)

Analysis	Units	A horizon	Qualifier	A horizon field dup	Qualifier
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	100	U		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=ORR; Formation=COPPER RIDGE; Site=60; Samp id=1492; Dup id=' '; Phase=2					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	5	J		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	100	U		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=ORR; Formation=COPPER RIDGE; Site=62; Samp id=1479; Dup id=' '; Phase=2					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	100	U		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		

Table B.1 (continued)

Analysis	Units	A horizon	Qualifier	A horizon field dup	Qualifier
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	100	U		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=ORR; Formation=COPPER RIDGE; Site=64; Samp id=1482; Dup id=' '; Phase=2					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	6	J		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	7	J		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		

Table B.1 (continued)

Analysis	Units	A horizon	Qualifier	A horizon field dup	Qualifier
Location=ORR; Formation=COPPER RIDGE; Site=75; Samp id=1476; Dup id=' '; Phase=2					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	100	U		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	100	U		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=ORR; Formation=COPPER RIDGE; Site=83; Samp id=1473; Dup id=' '; Phase=2					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	100	U		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		

Table B.1 (continued)

Analysis	Units	A horizon	Qualifier	A horizon field dup	Qualifier
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	100	U		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=ORR; Formation=COPPER RIDGE; Site=91; Samp id=1470; Dup id=' '; Phase=2					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	100	U		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	100	U		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=ORR; Formation=DISMAL GAP; Site=10; Samp id=1258; Dup id=' '; Phase=1					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	14	BJ		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Freon-113	µg/kg	10	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Trichlorofluoromethane	µg/kg	10	U		
Vinyl acetate	µg/kg	10	U		

Table B.1 (continued)

Analysis	Units	A horizon	Qualifier	A horizon field dup	Qualifier
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichlorobenzene	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
1,3-Dichlorobenzene	µg/kg	5	U		
1,4-Dichlorobenzene	µg/kg	5	U		
2-Butanone	µg/kg	98	U		
2-Chloroethylvinyl ether	µg/kg	5	U		
2-Hexanone	µg/kg	49	U		
4-Methyl-2-pentanone	µg/kg	49	U		
Location=ORR; Formation=DISMAL GAP; Site=11; Samp id=1259; Dup id=' '; Phase=1					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	52	BJ		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Freon-113	µg/kg	10	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Trichlorofluoromethane	µg/kg	10	U		
Vinyl acetate	µg/kg	10	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichlorobenzene	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
1,3-Dichlorobenzene	µg/kg	5	U		
1,4-Dichlorobenzene	µg/kg	5	U		
2-Butanone	µg/kg	100	U		
2-Chloroethylvinyl ether	µg/kg	5	U		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=ORR; Formation=DISMAL GAP; Site=19; Samp id=1260; Dup id=' '; Phase=1					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	41	BJ		

Table B.1 (continued)

Analysis	Units	A horizon	Qualifier	A horizon field dup	Qualifier
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Freon-113	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Trichlorofluoromethane	µg/kg	5	U		
Vinyl acetate	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
1,4-Dichlorobenzene	µg/kg	5	U		
2-Butanone	µg/kg	100	U		
2-Chloroethylvinyl ether	µg/kg	5	U		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=ORR; Formation=DISMAL GAP; Site=2; Samp id=1257; Dup id=' '; Phase=1					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	26	BJ		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	8			
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Freon-113	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Trichlorofluoromethane	µg/kg	5	U		
Vinyl acetate	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		

Table B.1 (continued)

Analysis	Units	A horizon	Qualifier	A horizon field dup	Qualifier
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
1,4-Dichlorobenzene	µg/kg	5	U		
2-Butanone	µg/kg	99	U		
2-Chloroethylvinyl ether	µg/kg	5	U		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=ORR; Formation=DISMAL GAP; Site=22; Samp id=1261; Dup id=' '; Phase=1					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	26	BJ		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Freon-113	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Trichlorofluoromethane	µg/kg	5	U		
Vinyl acetate	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
1,4-Dichlorobenzene	µg/kg	5	U		
2-Butanone	µg/kg	100	U		
2-Chloroethylvinyl ether	µg/kg	5	U		
2-Hexanone	µg/kg	51	U		
4-Methyl-2-pentanone	µg/kg	51	U		
Location=ORR; Formation=DISMAL GAP; Site=26; Samp id=1262; Dup id=' '; Phase=1					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	64	BJ		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		

Table B.1 (continued)

Analysis	Units	A horizon	Qualifier	A horizon field dup	Qualifier
Freon-113	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Trichlorofluoromethane	µg/kg	5	U		
Vinyl acetate	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
1,4-Dichlorobenzene	µg/kg	5	U		
2-Butanone	µg/kg	100	U		
2-Chloroethylvinyl ether	µg/kg	5	U		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=ORR; Formation=DISMAL GAP; Site=27; Samp id=1263; Dup id=' '; Phase=1					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	53	BJ		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Freon-113	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Trichlorofluoromethane	µg/kg	5	U		
Vinyl acetate	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
1,4-Dichlorobenzene	µg/kg	5	U		
2-Butanone	µg/kg	8	BJ		
2-Chloroethylvinyl ether	µg/kg	5	U		
2-Hexanone	µg/kg	49	U		
4-Methyl-2-pentanone	µg/kg	49	U		

Table B.1 (continued)

Analysis	Units	A horizon	Qualifier	A horizon field dup	Qualifier
Location=ORR; Formation=DISMAL GAP; Site=32; Samp id=1268; Dup id=' '; Phase=1					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	12	J		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Freon-113	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Trichlorofluoromethane	µg/kg	5	U		
Vinyl acetate	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
1,4-Dichlorobenzene	µg/kg	5	U		
2-Butanone	µg/kg	98	U		
2-Chloroethylvinyl ether	µg/kg	5	U		
2-Hexanone	µg/kg	49	U		
4-Methyl-2-pentanone	µg/kg	49	U		
Location=ORR; Formation=DISMAL GAP; Site=33; Samp id=1264; Dup id=' '; Phase=1					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	55	BJ		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Freon-113	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Trichlorofluoromethane	µg/kg	5	U		
Vinyl acetate	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		

Table B.1 (continued)

Analysis	Units	A horizon	Qualifier	A horizon field dup	Qualifier
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
1,4-Dichlorobenzene	µg/kg	5	U		
2-Butanone	µg/kg	100	U		
2-Chloroethylvinyl ether	µg/kg	5	U		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=ORR; Formation=DISMAL GAP; Site=35; Samp id=1265; Dup id=' '; Phase=1					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	7	BJ		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Freon-113	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Trichlorofluoromethane	µg/kg	5	U		
Vinyl acetate	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
1,4-Dichlorobenzene	µg/kg	5	U		
2-Butanone	µg/kg	6	BJ		
2-Chloroethylvinyl ether	µg/kg	5	U		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=ORR; Formation=DISMAL GAP; Site=41; Samp id=1266; Dup id=' '; Phase=1					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	16	J		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		

Table B.1 (continued)

Analysis	Units	A horizon	Qualifier	A horizon field dup	Qualifier
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Freon-113	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Trichlorofluoromethane	µg/kg	5	U		
Vinyl acetate	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
1,4-Dichlorobenzene	µg/kg	5	U		
2-Butanone	µg/kg	99	U		
2-Chloroethylvinyl ether	µg/kg	5	U		
2-Hexanone	µg/kg	49	U		
4-Methyl-2-pentanone	µg/kg	49	U		
Location=ORR; Formation=DISMAL GAP; Site=43; Samp id=1267; Dup id=' '; Phase=1					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	100	U		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Freon-113	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Trichlorofluoromethane	µg/kg	5	U		
Vinyl acetate	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
1,4-Dichlorobenzene	µg/kg	5	U		
2-Butanone	µg/kg	100	U		
2-Chloroethylvinyl ether	µg/kg	5	U		

Table B.1 (continued)

Analysis	Units	A horizon	Qualifier	A horizon field dup	Qualifier
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=ORR; Formation=NOLICHUCKY; Site=13; Samp id=1273; Dup id=' '; Phase=1					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	10	J		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Freon-113	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Trichlorofluoromethane	µg/kg	5	U		
Vinyl acetate	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
1,4-Dichlorobenzene	µg/kg	5	U		
2-Butanone	µg/kg	99	U		
2-Chloroethylvinyl ether	µg/kg	5	U		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=ORR; Formation=NOLICHUCKY; Site=15; Samp id=1275; Dup id=' '; Phase=1					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	18	J		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Freon-113	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		

Table B.1 (continued)

Analysis	Units	A horizon	Qualifier	A horizon field dup	Qualifier
Trichloroethene	µg/kg	5	U		
Trichlorofluoromethane	µg/kg	5	U		
Vinyl acetate	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
1,4-Dichlorobenzene	µg/kg	5	U		
2-Butanone	µg/kg	98	U		
2-Chloroethylvinyl ether	µg/kg	5	U		
2-Hexanone	µg/kg	49	U		
4-Methyl-2-pentanone	µg/kg	49	U		
Location=ORR; Formation=NOLICHUCKY; Site=16; Samp id=1276; Dup id=' '; Phase=1					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	13	J		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Freon-113	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Trichlorofluoromethane	µg/kg	5	U		
Vinyl acetate	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
1,4-Dichlorobenzene	µg/kg	5	U		
2-Butanone	µg/kg	98	U		
2-Chloroethylvinyl ether	µg/kg	5	U		
2-Hexanone	µg/kg	49	U		
4-Methyl-2-pentanone	µg/kg	49	U		
Location=ORR; Formation=NOLICHUCKY; Site=21; Samp id=1279; Dup id=1280; Phase=1					
cis-1,2-Dichloroethene	µg/kg	5	U	5	U
cis-1,3-Dichloropropene	µg/kg	5	U	5	U
trans-1,2-Dichloroethene	µg/kg	5	U	5	U
trans-1,3-Dichloropropene	µg/kg	5	U	5	U
Acetone	µg/kg	8	J	11	J

Table B.1 (continued)

Analysis	Units	A horizon	Qualifier	A horizon field dup	Qualifier
Benzene	µg/kg	5	U	5	U
Bromodichloromethane	µg/kg	5	U	5	U
Bromoform	µg/kg	5	U	5	U
Bromomethane	µg/kg	10	U	10	U
Carbon disulfide	µg/kg	5	U	5	U
Carbon tetrachloride	µg/kg	5	U	5	U
Chlorobenzene	µg/kg	5	U	5	U
Chloroethane	µg/kg	10	U	10	U
Chloroform	µg/kg	5	U	5	U
Chloromethane	µg/kg	10	U	10	U
Dibromochloromethane	µg/kg	5	U	5	U
Ethyl benzene	µg/kg	5	U	5	U
Freon-113	µg/kg	5	U	5	U
Methylene chloride	µg/kg	5	U	5	U
Styrene	µg/kg	5	U	5	U
Tetrachloroethene	µg/kg	5	U	5	U
Toluene	µg/kg	5	U	5	U
Trichloroethene	µg/kg	5	U	5	U
Trichlorofluoromethane	µg/kg	5	U	5	U
Vinyl acetate	µg/kg	5	U	5	U
Vinyl chloride	µg/kg	10	U	10	U
Xylene (meta + para)	µg/kg	5	U	5	U
Xylene (ortho)	µg/kg	5	U	5	U
1,1-Dichloroethane	µg/kg	5	U	5	U
1,1-Dichloroethene	µg/kg	5	U	5	U
1,1,1-Trichloroethane	µg/kg	5	U	5	U
1,1,2-Trichloroethane	µg/kg	5	U	5	U
1,1,2,2-Tetrachloroethane	µg/kg	5	U	5	U
1,2-Dichloroethane	µg/kg	5	U	5	U
1,2-Dichloropropane	µg/kg	5	U	5	U
1,4-Dichlorobenzene	µg/kg	5	U	5	U
2-Butanone	µg/kg	98	U	100	U
2-Chloroethylvinyl ether	µg/kg	5	U	5	U
2-Hexanone	µg/kg	49	U	50	U
4-Methyl-2-pentanone	µg/kg	49	U	50	U
Location=ORR; Formation=NOLICHUCKY; Site=23; Samp id=1281; Dup id=1282; Phase=1					
cis-1,2-Dichloroethene	µg/kg	5	U	5	U
cis-1,3-Dichloropropene	µg/kg	5	U	5	U
trans-1,2-Dichloroethene	µg/kg	5	U	5	U
trans-1,3-Dichloropropene	µg/kg	5	U	5	U
Acetone	µg/kg	14	J	18	J
Benzene	µg/kg	5	U	5	U
Bromodichloromethane	µg/kg	5	U	5	U
Bromoform	µg/kg	5	U	5	U
Bromomethane	µg/kg	10	U	10	U
Carbon disulfide	µg/kg	5	U	5	U
Carbon tetrachloride	µg/kg	5	U	5	U
Chlorobenzene	µg/kg	5	U	5	U
Chloroethane	µg/kg	10	U	10	U
Chloroform	µg/kg	5	U	5	U
Chloromethane	µg/kg	10	U	10	U
Dibromochloromethane	µg/kg	5	U	5	U
Ethyl benzene	µg/kg	5	U	5	U
Freon-113	µg/kg	5	U	5	U
Methylene chloride	µg/kg	5	U	5	U
Styrene	µg/kg	5	U	5	U
Tetrachloroethene	µg/kg	5	U	5	U
Toluene	µg/kg	5	U	5	U
Trichloroethene	µg/kg	5	U	5	U
Trichlorofluoromethane	µg/kg	5	U	5	U
Vinyl acetate	µg/kg	5	U	5	U
Vinyl chloride	µg/kg	10	U	10	U
Xylene (meta + para)	µg/kg	5	U	5	U
Xylene (ortho)	µg/kg	5	U	5	U
1,1-Dichloroethane	µg/kg	5	U	5	U
1,1-Dichloroethene	µg/kg	5	U	5	U
1,1,1-Trichloroethane	µg/kg	5	U	5	U
1,1,2-Trichloroethane	µg/kg	5	U	5	U
1,1,2,2-Tetrachloroethane	µg/kg	5	U	5	U

Table B.1 (continued)

Analysis	Units	A horizon	Qualifier	A horizon field dup	Qualifier
1,2-Dichloroethane	µg/kg	5	U	5	U
1,2-Dichloropropane	µg/kg	5	U	5	U
1,4-Dichlorobenzene	µg/kg	5	U	5	U
2-Butanone	µg/kg	99	U	100	U
2-Chloroethylvinyl ether	µg/kg	5	U	5	U
2-Hexanone	µg/kg	50	U	50	U
4-Methyl-2-pentanone	µg/kg	50	U	50	U
Location=ORR; Formation=NOLICHUCKY; Site=24; Samp id=1284; Dup id=1285; Phase=1					
cis-1,2-Dichloroethene	µg/kg	5	U	5	U
cis-1,3-Dichloropropene	µg/kg	5	U	5	U
trans-1,2-Dichloroethene	µg/kg	5	U	5	U
trans-1,3-Dichloropropene	µg/kg	5	U	5	U
Acetone	µg/kg	100	U	10	J
Benzene	µg/kg	5	U	5	U
Bromodichloromethane	µg/kg	5	U	5	U
Bromoform	µg/kg	5	U	5	U
Bromomethane	µg/kg	10	U	10	U
Carbon disulfide	µg/kg	5	U	5	U
Carbon tetrachloride	µg/kg	5	U	5	U
Chlorobenzene	µg/kg	5	U	5	U
Chloroethane	µg/kg	10	U	10	U
Chloroform	µg/kg	5	U	5	U
Chloromethane	µg/kg	10	U	10	U
Dibromochloromethane	µg/kg	5	U	5	U
Ethyl benzene	µg/kg	5	U	5	U
Freon-113	µg/kg	5	U	5	U
Methylene chloride	µg/kg	5	U	5	U
Styrene	µg/kg	5	U	5	U
Tetrachloroethene	µg/kg	5	U	5	U
Toluene	µg/kg	5	U	5	U
Trichloroethene	µg/kg	5	U	5	U
Trichlorofluoromethane	µg/kg	5	U	5	U
Vinyl acetate	µg/kg	5	U	5	U
Vinyl chloride	µg/kg	10	U	10	U
Xylene (meta + para)	µg/kg	5	U	5	U
Xylene (ortho)	µg/kg	5	U	5	U
1,1-Dichloroethane	µg/kg	5	U	5	U
1,1-Dichloroethene	µg/kg	5	U	5	U
1,1,1-Trichloroethane	µg/kg	5	U	5	U
1,1,2-Trichloroethane	µg/kg	5	U	5	U
1,1,2,2-Tetrachloroethane	µg/kg	5	U	5	U
1,2-Dichloroethane	µg/kg	5	U	5	U
1,2-Dichloropropane	µg/kg	5	U	5	U
1,4-Dichlorobenzene	µg/kg	5	U	5	U
2-Butanone	µg/kg	100	U	100	U
2-Chloroethylvinyl ether	µg/kg	5	U	5	U
2-Hexanone	µg/kg	50	U	50	U
4-Methyl-2-pentanone	µg/kg	50	U	50	U
Location=ORR; Formation=NOLICHUCKY; Site=25; Samp id=1274; Dup id=' '; Phase=1					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	24	J		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		

Table B.1 (continued)

Analysis	Units	A horizon	Qualifier	A horizon field dup	Qualifier
Freon-113	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Trichlorofluoromethane	µg/kg	5	U		
Vinyl acetate	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
1,4-Dichlorobenzene	µg/kg	5	U		
2-Butanone	µg/kg	98	U		
2-Chloroethylvinyl ether	µg/kg	5	U		
2-Hexanone	µg/kg	49	U		
4-Methyl-2-pentanone	µg/kg	49	U		
Location=ORR; Formation=NOLICHUCKY; Site=28; Samp id=1286; Dup id=1287; Phase=1					
cis-1,2-Dichloroethene	µg/kg	5	U	5	U
cis-1,3-Dichloropropene	µg/kg	5	U	5	U
trans-1,2-Dichloroethene	µg/kg	5	U	5	U
trans-1,3-Dichloropropene	µg/kg	5	U	5	U
Acetone	µg/kg	22	J	14	J
Benzene	µg/kg	5	U	5	U
Bromodichloromethane	µg/kg	5	U	5	U
Bromoform	µg/kg	5	U	5	U
Bromomethane	µg/kg	10	U	10	U
Carbon disulfide	µg/kg	5	U	5	U
Carbon tetrachloride	µg/kg	5	U	5	U
Chlorobenzene	µg/kg	5	U	5	U
Chloroethane	µg/kg	10	U	10	U
Chloroform	µg/kg	5	U	5	U
Chloromethane	µg/kg	10	U	10	U
Dibromochloromethane	µg/kg	5	U	5	U
Ethyl benzene	µg/kg	5	U	5	U
Freon-113	µg/kg	5	U	5	U
Methylene chloride	µg/kg	5	U	5	U
Styrene	µg/kg	5	U	5	U
Tetrachloroethene	µg/kg	5	U	5	U
Toluene	µg/kg	5	U	5	U
Trichloroethene	µg/kg	5	U	5	U
Trichlorofluoromethane	µg/kg	5	U	5	U
Vinyl acetate	µg/kg	5	U	5	U
Vinyl chloride	µg/kg	10	U	10	U
Xylene (meta + para)	µg/kg	5	U	5	U
Xylene (ortho)	µg/kg	5	U	5	U
1,1-Dichloroethane	µg/kg	5	U	5	U
1,1-Dichloroethene	µg/kg	5	U	5	U
1,1,1-Trichloroethane	µg/kg	5	U	5	U
1,1,2-Trichloroethane	µg/kg	5	U	5	U
1,1,2,2-Tetrachloroethane	µg/kg	5	U	5	U
1,2-Dichloroethane	µg/kg	5	U	5	U
1,2-Dichloropropane	µg/kg	5	U	5	U
1,4-Dichlorobenzene	µg/kg	5	U	5	U
2-Butanone	µg/kg	98	U	100	U
2-Chloroethylvinyl ether	µg/kg	5	U	5	U
2-Hexanone	µg/kg	49	U	50	U
4-Methyl-2-pentanone	µg/kg	49	U	50	U

Table B.1 (continued)

Analysis	Units	A horizon	Qualifier	A horizon field dup	Qualifier
Location=ORR; Formation=NOLICHUCKY; Site=3; Samp id=1271; Dup id=' '; Phase=1					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	12	J		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Freon-113	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Trichlorofluoromethane	µg/kg	5	U		
Vinyl acetate	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
1,4-Dichlorobenzene	µg/kg	5	U		
2-Butanone	µg/kg	98	U		
2-Chloroethylvinyl ether	µg/kg	5	U		
2-Hexanone	µg/kg	49	U		
4-Methyl-2-pentanone	µg/kg	49	U		
Location=ORR; Formation=NOLICHUCKY; Site=31; Samp id=1288; Dup id=1289; Phase=1					
cis-1,2-Dichloroethene	µg/kg	5	U	5	U
cis-1,3-Dichloropropene	µg/kg	5	U	5	U
trans-1,2-Dichloroethene	µg/kg	5	U	5	U
trans-1,3-Dichloropropene	µg/kg	5	U	5	U
Acetone	µg/kg	27	J	78	J
Benzene	µg/kg	5	U	5	U
Bromodichloromethane	µg/kg	5	U	5	U
Bromoform	µg/kg	5	U	5	U
Bromomethane	µg/kg	10	U	10	U
Carbon disulfide	µg/kg	5	U	5	U
Carbon tetrachloride	µg/kg	5	U	5	U
Chlorobenzene	µg/kg	5	U	5	U
Chloroethane	µg/kg	10	U	10	U
Chloroform	µg/kg	5	U	5	U
Chloromethane	µg/kg	10	U	10	U
Dibromochloromethane	µg/kg	5	U	5	U
Ethyl benzene	µg/kg	5	U	5	U
Freon-113	µg/kg	5	U	5	U
Methylene chloride	µg/kg	5	U	5	U
Styrene	µg/kg	5	U	5	U
Tetrachloroethene	µg/kg	5	U	5	U
Toluene	µg/kg	5	U	5	U
Trichloroethene	µg/kg	5	U	5	U
Trichlorofluoromethane	µg/kg	24		5	U
Vinyl acetate	µg/kg	5	U	5	U

Table B.1 (continued)

Analysis	Units	A horizon	Qualifier	A horizon field dup	Qualifier
Vinyl chloride	µg/kg	10	U	10	U
Xylene (meta + para)	µg/kg	5	U	5	U
Xylene (ortho)	µg/kg	5	U	5	U
1,1-Dichloroethane	µg/kg	5	U	5	U
1,1-Dichloroethene	µg/kg	5	U	5	U
1,1,1-Trichloroethane	µg/kg	5	U	5	U
1,1,2-Trichloroethane	µg/kg	5	U	5	U
1,1,2,2-Tetrachloroethane	µg/kg	5	U	5	U
1,2-Dichloroethane	µg/kg	5	U	5	U
1,2-Dichloropropane	µg/kg	5	U	5	U
1,4-Dichlorobenzene	µg/kg	5	U	5	U
2-Butanone	µg/kg	100	U	7	BJ
2-Chloroethylvinyl ether	µg/kg	5	U	5	U
2-Hexanone	µg/kg	50	U	50	U
4-Methyl-2-pentanone	µg/kg	50	U	50	U
Location=ORR; Formation=NOLICHUCKY; Site=42; Samp id=1290; Dup id=1291; Phase=1					
cis-1,2-Dichloroethene	µg/kg	5	U	5	U
cis-1,3-Dichloropropene	µg/kg	5	U	5	U
trans-1,2-Dichloroethene	µg/kg	5	U	5	U
trans-1,3-Dichloropropene	µg/kg	5	U	5	U
Acetone	µg/kg	18	J	15	J
Benzene	µg/kg	5	U	5	U
Bromodichloromethane	µg/kg	5	U	5	U
Bromoform	µg/kg	5	U	5	U
Bromomethane	µg/kg	10	U	10	U
Carbon disulfide	µg/kg	5	U	5	U
Carbon tetrachloride	µg/kg	5	U	5	U
Chlorobenzene	µg/kg	5	U	5	U
Chloroethane	µg/kg	10	U	10	U
Chloroform	µg/kg	5	U	5	U
Chloromethane	µg/kg	10	U	10	U
Dibromochloromethane	µg/kg	5	U	5	U
Ethyl benzene	µg/kg	5	U	5	U
Freon-113	µg/kg	5	U	5	U
Methylene chloride	µg/kg	5	U	5	U
Styrene	µg/kg	5	U	5	U
Tetrachloroethene	µg/kg	5	U	5	U
Toluene	µg/kg	5	U	5	U
Trichloroethene	µg/kg	5	U	5	U
Trichlorofluoromethane	µg/kg	5	U	5	U
Vinyl acetate	µg/kg	5	U	5	U
Vinyl chloride	µg/kg	10	U	10	U
Xylene (meta + para)	µg/kg	5	U	5	U
Xylene (ortho)	µg/kg	5	U	5	U
1,1-Dichloroethane	µg/kg	5	U	5	U
1,1-Dichloroethene	µg/kg	5	U	5	U
1,1,1-Trichloroethane	µg/kg	5	U	5	U
1,1,2-Trichloroethane	µg/kg	5	U	5	U
1,1,2,2-Tetrachloroethane	µg/kg	5	UX	5	U
1,2-Dichloroethane	µg/kg	5	U	5	U
1,2-Dichloropropane	µg/kg	5	U	5	U
1,4-Dichlorobenzene	µg/kg	5	U	5	U
2-Butanone	µg/kg	100	U	100	U
2-Chloroethylvinyl ether	µg/kg	5	U	5	U
2-Hexanone	µg/kg	50	U	50	U
4-Methyl-2-pentanone	µg/kg	50	U	50	U
Location=ORR; Formation=NOLICHUCKY; Site=5; Samp id=1272; Dup id=' '; Phase=1					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	19	J		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		

Table B.1 (continued)

Analysis	Units	A horizon	Qualifier	A horizon field dup	Qualifier
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Freon-113	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Trichlorofluoromethane	µg/kg	5	U		
Vinyl acetate	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
1,4-Dichlorobenzene	µg/kg	5	U		
2-Butanone	µg/kg	99	U		
2-Chloroethylvinyl ether	µg/kg	5	U		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=ROA; Formation=COPPER RIDGE; Site=33; Samp id=3202; Dup id=' '; Phase=2					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	8	J		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	100	U		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		

Table B.1 (continued)

Analysis	Units	A horizon	Qualifier	A horizon field dup	Qualifier
Location=ROA; Formation=COPPER RIDGE; Site=34; Samp id=3205; Dup id=' '; Phase=2					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	17	J		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	100	U		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=ROA; Formation=COPPER RIDGE; Site=35; Samp id=3208; Dup id=' '; Phase=2					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	100	U		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		

Table B.1 (continued)

Analysis	Units	A horizon	Qualifier	A horizon field dup	Qualifier
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	100	U		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=ROA; Formation=COPPER RIDGE; Site=39; Samp id=3213; Dup id=' '; Phase=2					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	100	U		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	100	U		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=ROA; Formation=COPPER RIDGE; Site=40; Samp id=3210; Dup id=' '; Phase=2					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	14	J		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		

Table B.1 (continued)

Analysis	Units	A horizon	Qualifier	A horizon field dup	Qualifier
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	100	U		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=ROA; Formation=COPPER RIDGE; Site=41; Samp id=3216; Dup id=' '; Phase=2					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	100	U		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	100	U		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=ROA; Formation=COPPER RIDGE; Site=42; Samp id=3234; Dup id=' '; Phase=2					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	26	J		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		

Table B.1 (continued)

Analysis	Units	A horizon	Qualifier	A horizon field dup	Qualifier
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	100	U		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=ROA; Formation=COPPER RIDGE; Site=43; Samp id=3230; Dup id=3232; Phase=2					
cis-1,2-Dichloroethene	µg/kg	5	U	5	U
cis-1,3-Dichloropropene	µg/kg	5	U	5	U
trans-1,2-Dichloroethene	µg/kg	5	U	5	U
trans-1,3-Dichloropropene	µg/kg	5	U	5	U
Acetone	µg/kg	9	J	5	J
Benzene	µg/kg	5	U	5	U
Bromodichloromethane	µg/kg	5	U	5	U
Bromoform	µg/kg	5	U	5	U
Bromomethane	µg/kg	10	U	10	U
Carbon disulfide	µg/kg	5	U	5	U
Carbon tetrachloride	µg/kg	5	U	5	U
Chlorobenzene	µg/kg	5	U	5	U
Chloroethane	µg/kg	10	U	10	U
Chloroform	µg/kg	5	U	5	U
Chloromethane	µg/kg	10	U	10	U
Dibromochloromethane	µg/kg	5	U	5	U
Ethyl benzene	µg/kg	5	U	5	U
Methylene chloride	µg/kg	5	U	5	U
Styrene	µg/kg	5	U	5	U
Tetrachloroethene	µg/kg	5	U	5	U
Toluene	µg/kg	5	U	5	U
Trichloroethene	µg/kg	5	U	5	U
Vinyl chloride	µg/kg	10	U	10	U
Xylene (meta + para)	µg/kg	5	U	5	U
Xylene (ortho)	µg/kg	5	U	5	U
1,1-Dichloroethane	µg/kg	5	U	5	U
1,1-Dichloroethene	µg/kg	5	U	5	U
1,1,1-Trichloroethane	µg/kg	5	U	5	U
1,1,2-Trichloroethane	µg/kg	5	U	5	U
1,1,2,2-Tetrachloroethane	µg/kg	5	U	5	U
1,2-Dichloroethane	µg/kg	5	U	5	U
1,2-Dichloropropane	µg/kg	5	U	5	U
2-Butanone	µg/kg	100	U	100	U
2-Hexanone	µg/kg	50	U	50	U
4-Methyl-2-pentanone	µg/kg	50	U	50	U
Location=ROA; Formation=COPPER RIDGE; Site=44; Samp id=3228; Dup id=' '; Phase=2					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	8	J		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		

Table B.1 (continued)

Analysis	Units	A horizon	Qualifier	A horizon field dup	Qualifier
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	100	U		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=ROA; Formation=COPPER RIDGE; Site=45; Samp id=3226; Dup id=' '; Phase=2					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	6	J		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	100	U		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=ROA; Formation=COPPER RIDGE; Site=46; Samp id=3224; Dup id=' '; Phase=2					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	13	J		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		

Table B.1 (continued)

Analysis	Units	A horizon	Qualifier	A horizon field dup	Qualifier
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	100	U		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=ROA; Formation=COPPER RIDGE; Site=47; Samp id=3222; Dup id=' '; Phase=2					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	5	J		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	100	U		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		

Table B.1 (continued)

Analysis	Units	A horizon	Qualifier	A horizon field dup	Qualifier
Location=ROA; Formation=DISMAL GAP; Site=10; Samp id=3166; Dup id=' '; Phase=1					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	8	J		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Freon-113	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Trichlorofluoromethane	µg/kg	5	U		
Vinyl acetate	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
1,4-Dichlorobenzene	µg/kg	5	U		
2-Butanone	µg/kg	100	U		
2-Chloroethylvinyl ether	µg/kg	5	U		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=ROA; Formation=DISMAL GAP; Site=13; Samp id=3125; Dup id=3137; Phase=1					
cis-1,2-Dichloroethene	µg/kg	5	U	5	U
cis-1,3-Dichloropropene	µg/kg	5	U	5	U
trans-1,2-Dichloroethene	µg/kg	5	U	5	U
trans-1,3-Dichloropropene	µg/kg	5	U	5	U
Acetone	µg/kg	8	J	10	J
Benzene	µg/kg	5	U	5	U
Bromodichloromethane	µg/kg	5	U	5	U
Bromoform	µg/kg	5	U	5	U
Bromomethane	µg/kg	10	U	10	U
Carbon disulfide	µg/kg	5	U	5	U
Carbon tetrachloride	µg/kg	5	U	5	U
Chlorobenzene	µg/kg	5	U	5	U
Chloroethane	µg/kg	10	U	10	U
Chloroform	µg/kg	5	U	5	U
Chloromethane	µg/kg	10	U	10	U
Dibromochloromethane	µg/kg	5	U	5	U
Ethyl benzene	µg/kg	5	U	5	U
Freon-113	µg/kg	5	U	5	U
Methylene chloride	µg/kg	5	U	5	U
Styrene	µg/kg	5	U	5	U
Tetrachloroethene	µg/kg	5	U	5	U
Toluene	µg/kg	5	U	5	U
Trichloroethene	µg/kg	5	U	5	U
Trichlorofluoromethane	µg/kg	5	U	5	U
Vinyl acetate	µg/kg	5	U	5	U
Vinyl chloride	µg/kg	10	U	10	U

Table B.1 (continued)

Analysis	Units	A horizon	Qualifier	A horizon field dup	Qualifier
Xylene (meta + para)	µg/kg	5	U	5	U
Xylene (ortho)	µg/kg	5	U	5	U
1,1-Dichloroethane	µg/kg	5	U	5	U
1,1-Dichloroethene	µg/kg	5	U	5	U
1,1,1-Trichloroethane	µg/kg	5	U	5	U
1,1,2-Trichloroethane	µg/kg	5	U	5	U
1,1,2,2-Tetrachloroethane	µg/kg	5	U	5	U
1,2-Dichloroethane	µg/kg	5	U	5	U
1,2-Dichloropropane	µg/kg	5	U	5	U
1,4-Dichlorobenzene	µg/kg	5	U	5	U
2-Butanone	µg/kg	79	BJ	9	BJ
2-Chloroethylvinyl ether	µg/kg	5	U	5	U
2-Hexanone	µg/kg	50	U	49	U
4-Methyl-2-pentanone	µg/kg	50	U	49	U
Location=ROA; Formation=DISMAL GAP; Site=14; Samp id=3146; Dup id=' '; Phase=1					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	8	J		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Freon-113	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Trichlorofluoromethane	µg/kg	5	U		
Vinyl acetate	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
1,4-Dichlorobenzene	µg/kg	5	U		
2-Butanone	µg/kg	35	BJ		
2-Chloroethylvinyl ether	µg/kg	5	U		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=ROA; Formation=DISMAL GAP; Site=17; Samp id=3184; Dup id=' '; Phase=1					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	10	J		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		

Table B.1 (continued)

Analysis	Units	A horizon	Qualifier	A horizon field dup	Qualifier
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Freon-113	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Trichlorofluoromethane	µg/kg	5	U		
Vinyl acetate	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
1,4-Dichlorobenzene	µg/kg	5	U		
2-Butanone	µg/kg	8	BJ		
2-Chloroethylvinyl ether	µg/kg	5	U		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=ROA; Formation=DISMAL GAP; Site=19; Samp id=3199; Dup id=' '; Phase=1					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	100	U		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	100	U		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		

Table B.1 (continued)

Analysis	Units	A horizon	Qualifier	A horizon field dup	Qualifier
Location=ROA; Formation=DISMAL GAP; Site=20; Samp id=3198; Dup id=' '; Phase=1					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	100	U		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	100	U		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=ROA; Formation=DISMAL GAP; Site=21; Samp id=3196; Dup id=' '; Phase=1					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	100	U		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		

Table B.1 (continued)

Analysis	Units	A horizon	Qualifier	A horizon field dup	Qualifier
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	100	U		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=ROA; Formation=DISMAL GAP; Site=22; Samp id=3197; Dup id=' '; Phase=1					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	98	U		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	98	U		
2-Hexanone	µg/kg	49	U		
4-Methyl-2-pentanone	µg/kg	49	U		
Location=ROA; Formation=DISMAL GAP; Site=3; Samp id=3201; Dup id=' '; Phase=1					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	5	J		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		

Table B.1 (continued)

Analysis	Units	A horizon	Qualifier	A horizon field dup	Qualifier
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	5	BJ		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=ROA; Formation=DISMAL GAP; Site=7; Samp id=3185; Dup id=' '; Phase=1					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	7	J		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Freon-113	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Trichlorofluoromethane	µg/kg	5	U		
Vinyl acetate	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
1,4-Dichlorobenzene	µg/kg	5	U		
2-Butanone	µg/kg	100	U		
2-Chloroethylvinyl ether	µg/kg	5	U		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=ROA; Formation=DISMAL GAP; Site=8; Samp id=3186; Dup id=' '; Phase=1					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	7	J		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		

Table B.1 (continued)

Analysis	Units	A horizon	Qualifier	A horizon field dup	Qualifier
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Freon-113	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Trichlorofluoromethane	µg/kg	5	U		
Vinyl acetate	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	8			
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
1,4-Dichlorobenzene	µg/kg	5	U		
2-Butanone	µg/kg	100	U		
2-Chloroethylvinyl ether	µg/kg	5	U		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		
Location=ROA; Formation=DISMAL GAP; Site=9; Samp id=3200; Dup id=' '; Phase=1					
cis-1,2-Dichloroethene	µg/kg	5	U		
cis-1,3-Dichloropropene	µg/kg	5	U		
trans-1,2-Dichloroethene	µg/kg	5	U		
trans-1,3-Dichloropropene	µg/kg	5	U		
Acetone	µg/kg	100	U		
Benzene	µg/kg	5	U		
Bromodichloromethane	µg/kg	5	U		
Bromoform	µg/kg	5	U		
Bromomethane	µg/kg	10	U		
Carbon disulfide	µg/kg	5	U		
Carbon tetrachloride	µg/kg	5	U		
Chlorobenzene	µg/kg	5	U		
Chloroethane	µg/kg	10	U		
Chloroform	µg/kg	5	U		
Chloromethane	µg/kg	10	U		
Dibromochloromethane	µg/kg	5	U		
Ethyl benzene	µg/kg	5	U		
Methylene chloride	µg/kg	5	U		
Styrene	µg/kg	5	U		
Tetrachloroethene	µg/kg	5	U		
Toluene	µg/kg	5	U		
Trichloroethene	µg/kg	5	U		
Vinyl chloride	µg/kg	10	U		
Xylene (meta + para)	µg/kg	5	U		
Xylene (ortho)	µg/kg	5	U		
1,1-Dichloroethane	µg/kg	5	U		
1,1-Dichloroethene	µg/kg	5	U		
1,1,1-Trichloroethane	µg/kg	5	U		
1,1,2-Trichloroethane	µg/kg	5	U		
1,1,2,2-Tetrachloroethane	µg/kg	5	U		
1,2-Dichloroethane	µg/kg	5	U		
1,2-Dichloropropane	µg/kg	5	U		
2-Butanone	µg/kg	100	U		
2-Hexanone	µg/kg	50	U		
4-Methyl-2-pentanone	µg/kg	50	U		

Table B.2. Weighted gamma screening results for soil samples[a]

Analysis	Units	Depth (cm) 00–05	05–10	10–15	15–20	20-25	25–30
Location=AND; Formation=COPPER RIDGE; Site=31; 00–05=2203; 05–10=2204; 10–15=2205; 15–20=2206; 20–25=2207; 25-30=2208; Phase=2							
Cesium-137	pCi/g	0.73256	0.37976	0.10332	0.06438	0.03224	0.00804
Potassium-40	pCi/g	1.73709	1.91586	2.10093	2.45081	2.01757	2.12749
Radium-226	pCi/g	0.50704	0.55514	0.60491	0.59503	0.61582	0.60063
Thorium-232	pCi/g	0.35396	0.44699	0.51127	0.44704	0.48347	0.52314
Uranium-235	pCi/g	0.22720	0.05335		0.07322	0.08380	0.05514
Uranium-238	pCi/g	1.87793	1.02629		2.46377	1.80648	0.99122
Location=AND; Formation=COPPER RIDGE; Site=32; 00–05=2212; 05–10=2213; 10–15=2214; 15–20=2215; 20–25=2216; 25-30=2217; Phase=2							
Cesium-137	pCi/g	0.78489	0.18635	0.09568	0.02333	0.00318	0.00304
Potassium-40	pCi/g	1.51591	2.47573	2.44060	2.82340	3.28989	4.18094
Radium-226	pCi/g	0.52326	0.67759	0.72870	0.78198	0.72411	0.78168
Thorium-232	pCi/g	0.63228	0.56257	0.56599	0.58130	0.57422	0.69264
Uranium-235	pCi/g	0.13848	0.10924	0.20326	0.13177	0.13257	0.08669
Uranium-238	pCi/g	2.21315	2.03654	1.96424	1.97959	2.23510	1.58676
Location=AND; Formation=COPPER RIDGE; Site=33; 00–05=2221; 05–10=2222; 10–15=2223; 15–20=2224; 20–25=2225; 25-30=2226; Phase=2							
Cesium-137	pCi/g	0.86805	0.21344	0.08081	0.04379	0.03354	0.00490
Potassium-40	pCi/g	1.77329	2.26005	2.34045	2.42785	2.41589	2.58916
Radium-226	pCi/g	0.56678	0.61646	0.78564	0.73838	0.74191	0.69533
Thorium-232	pCi/g	0.34199	0.40075	0.45246	0.44757	0.45138	0.47055
Uranium-235	pCi/g	0.13487	0.17374	0.19540	0.11977	0.11891	0.07893
Uranium-238	pCi/g	0.60911	1.99912	2.17822	0.87519	1.66225	1.26452
Location=AND; Formation=COPPER RIDGE; Site=34; 00–05=2230; 05–10=2231; 10–15=2232; 15–20=2233; 20–25=2234; 25-30=2235; Phase=2							
Cesium-137	pCi/g	0.72579	0.49465	0.36771	0.18624	0.12188	0.05804
Potassium-40	pCi/g	3.47889	3.01606	3.26976	2.74865	3.08371	3.20147
Radium-226	pCi/g	0.95364	0.94179	0.98998	0.91094	0.87060	0.88093
Thorium-232	pCi/g	0.61858	0.64955	0.65605	0.60943	0.58014	0.58501
Uranium-235	pCi/g	0.19392	0.16706	0.15656	0.14339	0.05529	0.06248
Uranium-238	pCi/g	2.57243	1.69957	1.53984	2.36820	1.99701	1.24430
Location=AND; Formation=COPPER RIDGE; Site=35; 00–05=2239; 05–10=2240; 10–15=2241; 15–20=2242; 20–25=2243; 25-30=2244; Phase=2							
Cesium-137	pCi/g	0.53150	0.34390	0.07837	0.11647	0.00954	0.00458
Potassium-40	pCi/g	2.74278	4.17352	3.08020	3.97701	4.17611	3.97210
Radium-226	pCi/g	0.75353	0.88048	0.90777	0.83604	0.85575	0.75441
Thorium-232	pCi/g	0.83221	0.77173	0.72306	0.69508	0.78523	0.75844
Uranium-235	pCi/g	0.18258	0.19934	0.27231	0.18573	0.07653	0.05508
Uranium-238	pCi/g	2.40473	3.34121	3.20313	3.02868	1.60243	1.42560
Location=AND; Formation=COPPER RIDGE; Site=36; 00–05=2248; 05–10=2249; 10–15=2250; 15–20=2251; 20–25=2252; 25-30=2253; Phase=2							
Cesium-137	pCi/g	0.47755	0.17720	0.15596	0.02985	0.02905	0.00658
Potassium-40	pCi/g	3.38401	3.09831	3.38601	2.97470	2.85441	3.77005
Radium-226	pCi/g	0.91612	0.87731	0.86417	0.83839	0.78155	0.78228
Thorium-232	pCi/g	0.57038	0.57493	0.57045	0.58378	0.58734	0.65262
Uranium-235	pCi/g	0.19948	0.18655	0.17641	0.17061	0.15859	0.07353
Uranium-238	pCi/g	0.88464	2.72216	2.84852	3.19673	1.83871	1.51672

Table B.2 (continued)

Analysis	Units	Depth (cm) 00–05	05–10	10–15	15–20	20–25	25–30
Location=AND; Formation=COPPER RIDGE; Site=37; 00–05=2287; 05–10=2288; 10–15=2289; 15–20=2290; 20–25=2291; 25-30=2292; Phase=2							
Cesium-137	pCi/g	1.07299	0.69610	0.57877	0.37496	0.05467	0.00813
Potassium-40	pCi/g	3.78546	2.68513	2.50862	2.38283	3.25296	4.80193
Radium-226	pCi/g	1.05112	0.82304	0.91127	0.78462	0.82812	1.03727
Thorium-232	pCi/g	0.70981	0.58473	0.54484	0.48605	0.47490	0.60464
Uranium-235	pCi/g	0.22852	0.12887	0.15109	0.14342	0.05152	0.10662
Uranium-238	pCi/g	2.86259	3.95884	0.28402	1.71699	0.83669	1.91426
Location=AND; Formation=COPPER RIDGE; Site=38; 00–05=2296; 05–10=2297; 10–15=2298; 15–20=2299; 20–25=2300; 25-30=2301; Phase=2							
Cesium-137	pCi/g	1.02183	0.61949	0.30099	0.08881	0.03800	0.00725
Potassium-40	pCi/g	4.92117	3.82435	4.38945	3.54379	4.02833	3.84108
Radium-226	pCi/g	0.77056	0.65535	0.75966	0.67264	0.69858	0.69676
Thorium-232	pCi/g	0.55760	0.44787	0.48326	0.40735	0.43187	0.41008
Uranium-235	pCi/g	0.22540	0.15650	0.13089	0.03143	0.03642	0.06034
Uranium-238	pCi/g	4.28717	3.04269	2.38541	0.93944	1.08003	1.18812
Location=AND; Formation=COPPER RIDGE; Site=39; 00–05=2331; 05–10=2332; 10–15=2333; 15–20=2334; 20–25=2335; 25-30=2336; Phase=2							
Cesium-137	pCi/g	0.44619	0.34745	0.19369	0.11172	0.02742	0.01409
Potassium-40	pCi/g	2.33674	2.91416	2.90200	2.67502	3.02655	2.53587
Radium-226	pCi/g	0.87742	0.98273	0.99521	0.87104	0.81176	0.76207
Thorium-232	pCi/g	0.62021	0.69604	0.72401	0.63007	0.61198	0.63045
Uranium-235	pCi/g	0.18926	0.10230	0.15834	0.11007	0.07944	0.08620
Uranium-238	pCi/g	4.09139	2.68236	2.76682	2.53132	3.05158	0.90203
Location=AND; Formation=COPPER RIDGE; Site=40; 00–05=2322; 05–10=2323; 10–15=2324; 15–20=2325; 20–25=2326; 25-30=2327; Phase=2							
Cesium-137	pCi/g	0.85211	0.39631	0.07536	0.03244	0.01784	0.00179
Potassium-40	pCi/g	3.90597	4.28751	4.56551	4.96497	4.48585	3.86398
Radium-226	pCi/g	0.94750	0.96505	0.92617	0.95940	0.97082	0.93871
Thorium-232	pCi/g	0.83800	0.90142	0.98676	1.02443	0.98031	0.94777
Uranium-235	pCi/g	0.19173	0.18276	0.07901	0.10528	0.11387	0.06734
Uranium-238	pCi/g	5.72968	3.86449	3.26952	2.32441	1.17050	1.38489
Location=AND; Formation=COPPER RIDGE; Site=41; 00–05=2314; 05–10=2315; 10–15=2316; 15–20=2317; 20–25=2318; 25-30=2319; Phase=2							
Cesium-137	pCi/g	1.13664	0.91528	0.51366	0.08159	0.02022	0.00519
Potassium-40	pCi/g	4.48473	4.87910	4.86342	4.51613	5.48717	4.97048
Radium-226	pCi/g	0.99084	1.08735	1.11169	1.07832	1.08703	1.00715
Thorium-232	pCi/g	0.89809	0.91022	0.90059	0.90530	1.01890	0.92744
Uranium-235	pCi/g	0.19794	0.19653	0.21888	0.12762	0.08010	0.10685
Uranium-238	pCi/g	1.45992	1.69972	2.79876	1.60756	2.22816	1.76352
Location=AND; Formation=COPPER RIDGE; Site=42; 00–05=2305; 05–10=2306; 10–15=2307; 15–20=2308; 20–25=2309; 25-30=2310; Phase=2							
Cesium-137	pCi/g	0.66215	0.33570	0.15513	0.03418	0.02752	0.01134
Potassium-40	pCi/g	4.56549	4.08042	4.74424	5.25863	5.20465	5.39969
Radium-226	pCi/g	1.25763	1.32136	1.30281	1.19369	1.09153	1.13332
Thorium-232	pCi/g	0.98103	0.92221	0.94853	0.99471	0.89235	0.95286
Uranium-235	pCi/g	0.19771	0.19160	0.12521	0.10293	0.11995	0.10290
Uranium-238	pCi/g	2.86540	2.77620	3.04342	3.50521	2.18517	1.68820

Table B.2 (continued)

Analysis	Units	Depth (cm) 00–05	05–10	10–15	15–20	20–25	25–30
Location=AND; Formation=DISMAL GAP; Site=1; 00-05=2161; 05-10=2162; 10-15=2163; 15-20=2164; 20-25=2165; 25-30=2166; Phase=1							
Cesium-137	pCi/g	1.0405	0.1665	0.0405			0.0024
Potassium-40	pCi/g	15.3184	17.2832	24.2441	28.9573	27.5187	26.7698
Radium-226	pCi/g	0.5906	0.6374	0.6665	0.5316	0.5379	0.5178
Thorium-232	pCi/g	0.8824	0.9491	1.1162	1.1710	1.1096	1.1050
Uranium-235	pCi/g						0.0548
Uranium-238	pCi/g		1.5935		3.2284		1.0655
Location=AND; Formation=DISMAL GAP; Site=10; 00-05=2151; 05-10=2152; 10-15=2153; 15-20=2154; 20-25=2155; 25-30=2156; Phase=1							
Cesium-137	pCi/g	1.7352	0.4507	0.0784	0.1257	0.0380	0.0010
Potassium-40	pCi/g	11.8015	11.8693	12.2725	12.5808	16.4545	18.3984
Radium-226	pCi/g	0.7584	0.6983	0.7517	0.7760	0.7012	0.7227
Thorium-232	pCi/g	0.9708	0.8848	0.9176	0.9236	1.0609	1.0965
Uranium-235	pCi/g	0.2239	0.1365	0.1481	0.1374	0.1045	0.0549
Uranium-238	pCi/g	4.0791	2.6709	1.0747	0.6061	1.2632	1.0706
Location=AND; Formation=DISMAL GAP; Site=11; 00-05=2008; 05-10=2009; 10-15=2010; 15-20=2011; 20-25=2012; 25-30=2013; Phase=1							
Cesium-137	pCi/g	1.3817	0.3935	0.1478	0.0640	0.0289	0.0109
Potassium-40	pCi/g	27.4654	26.5695	27.4711	30.7996	34.7116	35.2470
Radium-226	pCi/g	0.5614	0.5051	0.4774	0.5233	0.5704	0.6033
Thorium-232	pCi/g	0.8008	0.8003	0.8681	0.9982	1.1924	1.2761
Uranium-235	pCi/g	0.3359	0.1403	0.1355	0.0286	0.1508	0.0515
Uranium-238	pCi/g	2.9494	2.7268	2.5674	1.3655	3.0768	1.9468
Location=AND; Formation=DISMAL GAP; Site=12; 00-05=2084; 05-10=2085; 10-15=2086; 15-20=2087; 20-25=2088; 25-30=2089; Phase=1							
Cesium-137	pCi/g	1.0709	0.1372	0.0255	0.0175	0.0314	0.0386
Potassium-40	pCi/g	24.4291	26.2972	30.1365	32.0915	34.8006	33.3333
Radium-226	pCi/g	0.5542	0.6450	0.6896	0.7044	0.7390	0.6715
Thorium-232	pCi/g	0.7771	0.8903	0.9694	1.2797	1.3595	1.3283
Uranium-235	pCi/g	0.1039		0.1844	0.2166	0.1761	0.2364
Uranium-238	pCi/g				4.7411	3.5144	4.4903
Location=AND; Formation=DISMAL GAP; Site=19; 00-05=2124; 05-10=2125; 10-15=2126; 15-20=2127; 20-25=2128; 25-30=2129; Phase=1							
Cesium-137	pCi/g	2.1956	0.3944	0.0641	0.0341	0.0048	0.0092
Potassium-40	pCi/g	10.8236	13.7935	14.9526	19.0090	21.5009	21.5915
Radium-226	pCi/g	0.5843	0.7096	0.6770	0.6492	0.6780	0.6273
Thorium-232	pCi/g	0.8043	1.0076	1.0909	1.2560	1.3327	1.2870
Uranium-235	pCi/g	0.1024	0.1452	0.1432	0.1029	0.1650	0.0666
Uranium-238	pCi/g	0.9936	0.8918	2.4189	2.7871	2.3963	1.3233
Location=AND; Formation=DISMAL GAP; Site=20; 00-05=2074; 05-10=2075; 10-15=2076; 15-20=2077; 20-25=2078; 25-30=2079; Phase=1							
Cesium-137	pCi/g	1.1134	0.0549	0.0363		0.0403	
Potassium-40	pCi/g	17.3193	16.7671	18.7084	21.6877	20.6868	19.2249
Radium-226	pCi/g	0.7066	0.6747	0.6899	0.7344	0.7655	0.5821
Thorium-232	pCi/g	1.0379	0.9686	1.1993	1.4205	1.4101	1.2856
Uranium-235	pCi/g					0.2252	0.0902
Uranium-238	pCi/g					4.0640	

Table B.2 (continued)

Analysis	Units	Depth (cm) 00–05	05–10	10–15	15–20	20–25	25–30
Location=AND; Formation=DISMAL GAP; Site=21; 00–05=2105; 05–10=2106; 10–15=2107; 15–20=2108; 20–25=2109; 25–30=2110; Phase=1							
Cesium-137	pCi/g	0.8445	0.1873	0.0844	0.0787	0.0172	0.0154
Potassium-40	pCi/g	21.1842	21.1774	29.5182	28.1374	26.8110	28.8829
Radium-226	pCi/g	0.4616	0.5328	0.5716	0.4946	0.5707	0.5243
Thorium-232	pCi/g	0.8694	0.8480	1.1365	1.1462	1.1399	1.2445
Uranium-235	pCi/g				0.1963	0.2800	0.2204
Uranium-238	pCi/g			5.6762	3.7402	4.0914	4.3602
Location=AND; Formation=DISMAL GAP; Site=22; 00–05=2094; 05–10=2095; 10–15=2096; 15–20=2097; 20–25=2098; 25–30=2099; Phase=1							
Cesium-137	pCi/g	0.5353	0.0534	0.0255	0.0269	0.0248	0.0075
Potassium-40	pCi/g	29.6099	26.6361	27.9045	25.3770	28.1517	29.2053
Radium-226	pCi/g	0.6262	0.6201	0.6371	0.6038	0.6204	0.5593
Thorium-232	pCi/g	1.0610	1.0666	1.2126	1.2661	1.1991	1.1141
Uranium-235	pCi/g	0.1576	0.1492	0.1560	0.1608	0.1619	0.0565
Uranium-238	pCi/g	3.1628	2.6898	3.2686	3.3346	2.9950	1.2268
Location=AND; Formation=DISMAL GAP; Site=3; 00–05=2063; 05–10=2064; 10–15=2065; 15–20=2066; 20–25=2067; 25–30=2068; Phase=1							
Cesium-137	pCi/g	0.5910	0.1505	0.0473	0.0247	0.0148	
Potassium-40	pCi/g	22.0278	20.0736	20.3150	22.0944	23.9437	22.9413
Radium-226	pCi/g	0.5822	0.6817	0.5955	0.5933	0.6653	0.5522
Thorium-232	pCi/g	1.1588	1.1267	1.1139	1.2530	1.3566	1.3722
Uranium-235	pCi/g	0.1369		0.1372	0.0526		
Uranium-238	pCi/g		2.1177		1.6575		4.4991
Location=AND; Formation=DISMAL GAP; Site=4; 00–05=2043; 05–10=2044; 10–15=2045; 15–20=2046; 20–25=2047; 25–30=2048; Phase=1							
Cesium-137	pCi/g	1.4287	0.1510	0.0498	0.0627	0.0692	0.0263
Potassium-40	pCi/g	38.6418	35.0762	34.7543	38.6450	39.4480	36.5679
Radium-226	pCi/g	0.6041	0.5853	0.5594	0.5266	0.5971	0.5300
Thorium-232	pCi/g	1.0622	0.9718	0.9949	1.1156	1.2681	1.1060
Uranium-235	pCi/g						
Uranium-238	pCi/g						
Location=AND; Formation=DISMAL GAP; Site=5; 00–05=2053; 05–10=2054; 10–15=2055; 15–20=2056; 20–25=2057; 25–30=2058; Phase=1							
Cesium-137	pCi/g	0.7101	0.0924	0.0095			
Potassium-40	pCi/g	42.2530	42.8831	42.2073	42.2013	39.4710	36.9445
Radium-226	pCi/g	0.5661	0.5771	0.5308	0.5410	0.5666	0.6190
Thorium-232	pCi/g	1.1098	1.1491	1.1711	1.1772	1.1599	1.1139
Uranium-235	pCi/g		0.2555			0.2688	0.0803
Uranium-238	pCi/g			3.4697	3.5550		1.1683
Location=AND; Formation=DISMAL GAP; Site=9; 00–05=2137; 05–10=2138; 10–15=2139; 15–20=2140; 20–25=2141; 25–30=2142; Phase=1							
Cesium-137	pCi/g	1.2969	0.2461	0.0855	0.0120	0.0403	0.0043
Potassium-40	pCi/g	17.1819	18.9354	20.4686	22.2786	22.6142	20.6699
Radium-226	pCi/g	0.5175	0.7025	0.7756	0.8913	0.7526	0.7397
Thorium-232	pCi/g	0.8142	1.2333	1.4551	1.4779	1.5131	1.3998
Uranium-235	pCi/g		0.4942		0.2734	0.2443	0.0979
Uranium-238	pCi/g	1.1784			5.1406	4.5186	2.2496

Table B.2 (continued)

Analysis	Units	Depth (cm) 00–05	05–10	10–15	15–20	20–25	25–30
Location=ORR; Formation=CHEPULTEPEC; Site=50; 00-05=1847; 05-10=1848; 10-15=1849; 15-20=1850; 20-25=1851; 25-30=1852; Phase=2							
Cesium-137	pCi/g	2.10241	0.15775	0.15342	0.08184	0.02196	0.01190
Potassium-40	pCi/g	1.86521	1.64010	1.62390	1.87998	1.96848	2.04277
Radium-226	pCi/g	0.84902	0.60450	0.80096	0.82490	0.76813	0.75780
Thorium-232	pCi/g	0.85090	0.89647	0.73944	0.71344	0.76171	0.77049
Uranium-235	pCi/g	0.27669	0.15540	0.06980	0.11901		0.06413
Uranium-238	pCi/g	4.98833	2.55921	2.21355	2.00319	1.78579	1.61368
Location=ORR; Formation=CHEPULTEPEC; Site=52; 00-05=1654; 05-10=1655; 10-15=1656; 15-20=1657; 20-25=1658; 25-30=1659; Phase=2							
Cesium-137	pCi/g	0.94567	0.75691	0.21236	0.08661	0.02230	0.00585
Potassium-40	pCi/g	1.83657	2.36038	2.40621	2.51101	2.53563	2.75268
Radium-226	pCi/g	0.66880	0.92030	0.85986	0.86925	0.83692	0.83155
Thorium-232	pCi/g	0.77927	0.79053	0.78731	0.70907	0.69291	0.66490
Uranium-235	pCi/g	0.20318	0.17013	0.15691	0.30185	0.10554	0.07704
Uranium-238	pCi/g	2.70509	2.42274	2.12015	1.70132	1.85996	1.23402
Location=ORR; Formation=CHEPULTEPEC; Site=53; 00-05=1642; 05-10=1643; 10-15=1644; 15-20=1645; 20-25=1646; 25-30=1647; Phase=2							
Cesium-137	pCi/g	0.55692	0.34886	0.10377	0.02640	0.02519	0.00505
Potassium-40	pCi/g	1.45076	2.12170	2.43330	2.52317	2.43012	2.29705
Radium-226	pCi/g	0.43267	0.71181	0.63744	0.65940	0.63295	0.52831
Thorium-232	pCi/g	0.44171	0.52641	0.48087	0.50593	0.47345	0.39785
Uranium-235	pCi/g	0.08800	0.06099	0.10436	0.04985	0.01261	0.04135
Location=ORR; Formation=CHEPULTEPEC; Site=66; 00-05=1821; 05-10=1822; 10-15=1823; 15-20=1824; 20-25=1825; 25-30=1826; Phase=2							
Cesium-137	pCi/g	0.60910	0.21391	0.13298	0.02826	0.01737	0.00263
Potassium-40	pCi/g	2.40029	2.47074	3.49271	3.68101	4.55206	6.08771
Radium-226	pCi/g	0.67443	0.66434	0.82011	0.74611	0.74032	0.75872
Thorium-232	pCi/g	0.48728	0.52861	0.59798	0.63006	0.84123	0.96222
Uranium-235	pCi/g	0.19274	0.10026	0.16056	0.10993	0.06597	0.04559
Location=ORR; Formation=CHEPULTEPEC; Site=68; 00-05=1787; 05-10=1788; 10-15=1789; 15-20=1790; 20-25=1791; 25-30=1792; Phase=2							
Cesium-137	pCi/g	0.85939	0.56481	0.29776	0.08572	0.01469	0.00865
Potassium-40	pCi/g	2.25573	2.18213	2.00510	2.37480	2.49411	2.69501
Radium-226	pCi/g	0.70901	0.66641	0.76377	0.71273	0.76090	0.72938
Thorium-232	pCi/g	0.48110	0.50472	0.47951	0.51198	0.50780	0.52553
Uranium-235	pCi/g	0.11856	0.14985	0.14525	0.10973	0.12596	0.02980
Uranium-238	pCi/g	2.04822	1.90646	2.31187	1.88291	1.79329	1.05443
Location=ORR; Formation=CHEPULTEPEC; Site=73; 00-05=1841; 05-10=1842; 10-15=1843; 15-20=1844; 20-25=1845; 25-30=1846; Phase=2							
Cesium-137	pCi/g	1.72656	0.74266	0.30316	0.02544	0.03622	0.02451
Potassium-40	pCi/g	3.99339	3.34947	3.84441	5.33054	8.42374	8.59054
Radium-226	pCi/g	0.87470	0.86587	0.85662	0.86176	1.08019	1.19483
Thorium-232	pCi/g	0.61118	0.55512	0.52520	0.62364	0.92944	0.98424
Uranium-235	pCi/g	0.13422	0.24984	0.07828		0.22091	0.11329
Uranium-238	pCi/g	3.25721	2.56090	2.77254	1.76096	3.88758	2.29655

Table B.2 (continued)

Analysis	Units	Depth (cm) 00–05	05–10	10–15	15–20	20–25	25–30
Location=ORR; Formation=CHEPULTEPEC; Site=74; 00-05=1773; 05-10=1774; 10-15=1775; 15-20=1776; 20-25=1777; 25-30=1778; Phase=2							
Cesium-137	pCi/g	0.96025	0.26977	0.04590	0.02125	0.01732	0.00500
Potassium-40	pCi/g	2.25082	1.91660	2.34893	2.74624	2.80257	3.75242
Radium-226	pCi/g	0.59209	0.54595	0.69166	0.68604	0.64524	0.77262
Thorium-232	pCi/g	0.37507	0.37835	0.40800	0.43511	0.45368	0.56593
Uranium-235	pCi/g	0.05496	0.11169	0.13967	0.08435	0.10323	0.02788
Uranium-238	pCi/g	2.81928	2.03545	2.34166	2.32901	1.49243	2.01357
Location=ORR; Formation=CHEPULTEPEC; Site=77; 00-05=1690; 05-10=1691; 10-15=1692; 15-20=1693; 20-25=1694; 25-30=1695; Phase=2							
Cesium-137	pCi/g	1.49008	0.67372	0.07884	0.01549	0.00605	0.00173
Potassium-40	pCi/g	2.05836	2.47857	2.65682	2.71133	3.23189	2.85856
Radium-226	pCi/g	0.67308	0.72096	0.76309	0.70380	0.72528	0.78096
Thorium-232	pCi/g	0.60401	0.67281	0.65027	0.64995	0.70600	0.62037
Uranium-235	pCi/g	0.17543		0.13445	0.09349	0.06048	0.06344
Uranium-238	pCi/g	2.86800	2.67554	2.13459	2.10577	1.49298	1.08271
Location=ORR; Formation=CHEPULTEPEC; Site=78; 00-05=1672; 05-10=1673; 10-15=1674; 15-20=1675; 20-25=1676; 25-30=1677; Phase=2							
Cesium-137	pCi/g	0.84300	0.59938	0.15047	0.02233	0.00533	0.00178
Potassium-40	pCi/g	2.78335	2.96564	2.77574	3.38102	2.37894	2.77230
Radium-226	pCi/g	0.87625	0.86353	0.76337	0.84107	0.66695	0.72479
Thorium-232	pCi/g	0.53698	0.57751	0.54178	0.73098	0.52900	0.58087
Uranium-235	pCi/g	0.15346	0.17103	0.14345	0.14361	0.03349	0.05811
Uranium-238	pCi/g	3.23746	2.13588	1.80648	2.18807	0.86810	1.31160
Location=ORR; Formation=CHEPULTEPEC; Site=85; 00-05=1726; 05-10=1727; 10-15=1728; 15-20=1729; 20-25=1730; 25-30=1731; Phase=2							
Cesium-137	pCi/g	0.99675	0.47968	0.14051	0.04096	0.02292	0.00261
Potassium-40	pCi/g	3.62987	3.96800	4.71797	4.42078	4.19563	4.24248
Radium-226	pCi/g	0.82100	0.81967	0.87965	0.77504	0.70771	0.71151
Thorium-232	pCi/g	0.61926	0.62927	0.66659	0.64630	0.59914	0.58887
Uranium-235	pCi/g	0.19439	0.15737	0.18623	0.10504	0.11408	0.01763
Uranium-238	pCi/g	1.82446	1.03794	3.13245	2.89798	1.41758	1.14031
Location=ORR; Formation=CHEPULTEPEC; Site=86; 00-05=1708; 05-10=1709; 10-15=1710; 15-20=1711; 20-25=1712; 25-30=1713; Phase=2							
Cesium-137	pCi/g	1.02891	0.22752	0.16600	0.05582	0.01965	0.00924
Potassium-40	pCi/g	0.76543	1.25940	2.69652	3.11371	2.67786	3.06805
Radium-226	pCi/g	0.48283	0.50695	0.67018	0.65021	0.57922	0.55953
Thorium-232	pCi/g	0.10907	0.18651	0.42869	0.44718	0.44317	0.41546
Uranium-235	pCi/g	0.13158	0.11178	0.28019	0.12743	0.16563	0.05644
Uranium-238	pCi/g	2.63913	1.62807	3.29619	2.92163	1.67386	1.26766
Location=ORR; Formation=CHEPULTEPEC; Site=90; 00-05=1757; 05-10=1758; 10-15=1759; 15-20=1760; 20-25=1761; 25-30=1762; Phase=2							
Cesium-137	pCi/g	0.99096	0.38078	0.09616	0.05189	0.03466	0.01477
Potassium-40	pCi/g	1.82854	1.52587	2.02061	2.09026	3.45065	5.31109
Radium-226	pCi/g	0.52324	0.51375	0.57124	0.45103	0.55692	0.54744
Thorium-232	pCi/g	0.55453	0.51412	0.56661	0.45697	0.57644	0.77534
Uranium-235	pCi/g	0.06764	0.19008	0.04453	0.09235	0.09054	0.01592
Uranium-238	pCi/g	0.87774	1.60235	1.98372	0.99219	2.10338	0.70735

Table B.2 (continued)

Analysis	Units	Depth (cm) 00–05	05–10	10–15	15–20	20–25	25–30
Location=ORR; Formation=CHICKAMAUGA Bethel V; Site=100; 00–05=1883; 05–10=1884; 10–15=1885; 15–20=1886; 20–25=1887; 25-30=1888; Phase=2							
Cesium-137	pCi/g	4.1484	0.0887	0.0276	0.0266	0.0265	0.0328
Potassium-40	pCi/g	25.1193	26.7140	33.1802	34.0221	32.0928	35.9458
Radium-226	pCi/g	0.7243	0.6227	0.6057	0.5096	0.5329	0.6249
Thorium-232	pCi/g	1.1726	1.2362	1.4337	1.4361	1.3364	1.5226
Uranium-235	pCi/g	0.3127	0.1906	0.1705	0.1704	0.1602	0.0234
Location=ORR; Formation=CHICKAMAUGA Bethel V; Site=101; 00–05=1920; 05–10=1921; 10–15=1922; 15–20=1923; 20–25=1924; 25-30=1925; Phase=2							
Cesium-137	pCi/g	2.8195	1.1620	0.4971	0.1861	0.1093	0.0669
Potassium-40	pCi/g	25.8557	28.3762	28.7446	27.6445	28.1725	29.3659
Radium-226	pCi/g	0.6397	0.6137	0.6723	0.5617	0.5790	0.6154
Thorium-232	pCi/g	1.2295	1.2602	1.3272	1.2671	1.2781	1.3224
Uranium-235	pCi/g	0.2592	0.2144	0.2153	0.0694	0.1559	0.0400
Location=ORR; Formation=CHICKAMAUGA Bethel V; Site=102; 00–05=1914; 05–10=1915; 10–15=1916; 15–20=1917; 20–25=1918; 25-30=1919; Phase=2							
Cesium-137	pCi/g	2.3368	1.2347	0.2961	0.0872	0.0399	0.0081
Potassium-40	pCi/g	14.8798	13.0872	14.4717	15.4992	17.6216	18.9912
Radium-226	pCi/g	0.8934	0.7905	0.8284	0.7152	0.8199	0.6996
Thorium-232	pCi/g	1.5042	1.2724	1.3420	1.2938	1.3094	1.2783
Uranium-235	pCi/g	0.1685	0.2083	0.1290	0.1575	0.1638	0.1154
Location=ORR; Formation=CHICKAMAUGA Bethel V; Site=103; 00–05=1908; 05–10=1909; 10–15=1910; 15–20=1911; 20–25=1912; 25-30=1913; Phase=2							
Cesium-137	pCi/g	1.6265	0.1131	0.1092	0.0111	0.0431	0.0171
Potassium-40	pCi/g	34.4526	28.9176	32.0552	32.0828	30.8301	31.4933
Radium-226	pCi/g	0.7153	0.5756	0.5848	0.6318	0.5546	0.5441
Thorium-232	pCi/g	1.1411	1.2310	1.4093	1.4282	1.4327	1.4606
Uranium-235	pCi/g	0.2528	0.1986	0.2215	0.2268	0.0536	0.0964
Location=ORR; Formation=CHICKAMAUGA Bethel V; Site=104; 00–05=1981; 05–10=1982; 10–15=1983; 15–20=1984; 20–25=1985; 25-30=1986; Phase=2							
Cesium-137	pCi/g	2.6889	0.3540	0.1038	0.0318	0.0055	0.0153
Potassium-40	pCi/g	23.3107	20.5458	24.8031	24.6567	26.8630	29.6826
Radium-226	pCi/g	0.8708	0.5928	0.6250	0.5898	0.5504	0.5771
Thorium-232	pCi/g	0.8802	0.6620	0.8729	1.0192	1.2982	1.4975
Uranium-235	pCi/g	0.2882	0.1099	0.1624	0.1116	0.1568	0.0328
Uranium-238	pCi/g			1.1765	4.7232	2.5866	
Location=ORR; Formation=CHICKAMAUGA Bethel V; Site=108; 00–05=1987; 05–10=1988; 10–15=1989; 15–20=1990; 20–25=1991; 25-30=1992; Phase=2							
Cesium-137	pCi/g	1.20756	0.1196	0.0615	0.0138	0.0263	0.0032
Potassium-40	pCi/g	7.91772	11.3295	19.7268	22.2148	24.7961	24.9512
Radium-226	pCi/g	0.82065	0.7505	0.8196	0.7283	0.7129	0.6790
Thorium-232	pCi/g	1.25172	1.3449	1.5114	1.5877	1.6662	1.7229
Uranium-235	pCi/g	0.27053	0.1960		0.0121	0.2420	0.0587
Uranium-238	pCi/g			3.3103	3.3971	3.2116	1.2403
Location=ORR; Formation=CHICKAMAUGA Bethel V; Site=110; 00–05=4032; 05–10=4033; 10–15=4034; 15–20=4035; 20–25=4036; 25-30=4037; Phase=2							
Cesium-137	pCi/g	0.98105	0.17764	0.0869	0.0644	0.0079	0.0303
Potassium-40	pCi/g	8.69078	9.51336	13.1116	12.5245	15.5835	14.0385

Table B.2 (continued)

Analysis	Units	Depth (cm) 00–05	05–10	10–15	15–20	20–25	25–30
Radium-226	pCi/g	0.99604	0.76348	0.8960	0.7386	1.1463	0.7284
Thorium-232	pCi/g	1.33402	1.19840	1.4199	1.2539	1.4847	1.3361
Uranium-235	pCi/g	0.21108	0.24451	0.2253	0.2437	0.1642	0.0353
Uranium-238	pCi/g				1.9764	2.6670	0.8714
Location=ORR; Formation=CHICKAMAUGA Bethel V; Site=115; 00-05=4026; 05-10=4027; 10-15=4028; 15-20=4029; 20-25=4030; 25-30=4031; Phase=2							
Cesium-137	pCi/g	1.63932	0.25246	0.06675	0.03083	0.0328	0.0248
Potassium-40	pCi/g	6.94570	7.89016	8.43249	9.54118	10.9773	12.2497
Radium-226	pCi/g	0.93882	0.91230	0.82885	0.82391	0.9375	1.0977
Thorium-232	pCi/g	1.30092	1.41934	1.31554	1.38067	1.4694	1.4943
Uranium-235	pCi/g	0.23453	0.17123	0.13255	0.17080	0.1233	0.1020
Uranium-238	pCi/g	4.88783	0.91213	2.53600	0.64080	2.9670	1.1241
Location=ORR; Formation=CHICKAMAUGA Bethel V; Site=116; 00-05=4000; 05-10=4001; 10-15=4002; 15-20=4003; 20-25=4004; 25-30=4005; Phase=2							
Cesium-137	pCi/g	1.1171	0.3121	0.0817	0.0378	0.0271	0.0148
Potassium-40	pCi/g	14.5564	15.3602	16.4251	19.7006	23.4032	23.7906
Radium-226	pCi/g	0.9115	0.7440	0.7302	0.6853	0.6189	0.6274
Thorium-232	pCi/g	1.2114	1.2710	1.2793	1.3579	1.4752	1.4623
Uranium-235	pCi/g	0.0889	0.1848	0.2112	0.1527	0.0219	0.0520
Location=ORR; Formation=CHICKAMAUGA Bethel V; Site=117; 00-05=4013; 05-10=4014; 10-15=4015; 15-20=4016; 20-25=4017; 25-30=4018; Phase=2							
Cesium-137	pCi/g	0.86595	0.48475	0.18540	0.0538	0.0156	0.0068
Potassium-40	pCi/g	7.99921	8.07801	9.88111	21.2407	23.5741	24.3898
Radium-226	pCi/g	0.79833	0.71445	0.70534	0.6280	0.6423	0.5496
Thorium-232	pCi/g	0.99564	1.00883	1.06998	1.4101	1.4237	1.3773
Uranium-235	pCi/g	0.19169	0.17305	0.16859	0.1576	0.0988	0.0413
Location=ORR; Formation=CHICKAMAUGA Bethel V; Site=93; 00-05=1871; 05-10=1872; 10-15=1873; 15-20=1874; 20-25=1875; 25-30=1876; Phase=2							
Cesium-137	pCi/g	1.6874	0.1548	0.0816	0.0515	0.0442	0.0358
Potassium-40	pCi/g	14.7053	15.5027	21.5573	22.5600	22.2651	27.2214
Radium-226	pCi/g	0.7843	0.6856	0.6729	0.6466	0.6053	0.8620
Thorium-232	pCi/g	1.3124	1.2895	1.4183	1.4014	1.3593	1.5816
Uranium-235	pCi/g	0.2159	0.3361	0.1650	0.1771	0.1643	0.1450
Location=ORR; Formation=CHICKAMAUGA Bethel V; Site=99; 00-05=1877; 05-10=1878; 10-15=1879; 15-20=1880; 20-25=1881; 25-30=1882; Phase=2							
Cesium-137	pCi/g	1.3424	0.3349	0.2164	0.0335	0.0135	0.0070
Potassium-40	pCi/g	12.6348	12.2586	14.3657	14.7168	15.0907	16.1017
Radium-226	pCi/g	0.9160	0.8829	0.9142	0.8761	0.8538	0.8647
Thorium-232	pCi/g	1.3127	1.3233	1.3863	1.3169	1.2438	1.2936
Uranium-235	pCi/g	0.2068	0.1909	0.1610	0.1638	0.1449	0.0461
Location=ORR; Formation=CHICKAMAUGA K-25; Site=118; 00-05=4077; 05-10=4078; 10-15=4079; 15-20=4080; 20-25=4081; 25-30=4082; Phase=2							
Cesium-137	pCi/g	4.3547	0.2531	0.0345	0.0791	0.0535	0.0194
Potassium-40	pCi/g	34.7095	25.7962	33.0683	30.6392	27.2936	30.2019
Radium-226	pCi/g	1.4909	0.8481	0.8304	0.8499	0.7395	0.6780
Thorium-232	pCi/g	2.8539	1.7956	2.1456	2.0113	1.8393	1.8581
Uranium-235	pCi/g	0.8611	0.2830	0.3192	0.4587	0.2699	0.1299
Uranium-238	pCi/g	10.7360	6.0008	5.7285	4.5065	5.6376	2.2427

Table B.2 (continued)

Analysis	Units	Depth (cm) 00–05	05–10	10–15	15–20	20–25	25–30
Location=ORR; Formation=CHICKAMAUGA K-25; Site=119; 00-05=4180; 05-10=4181; 10-15=4182; 15-20=4183; 20-25=4184; 25-30=4185; Phase=2							
Cesium-137	pCi/g	1.4584	0.5068	0.0501	0.0382	0.0369	0.0148
Potassium-40	pCi/g	12.2804	10.2521	10.5291	15.0735	18.5972	23.4081
Radium-226	pCi/g	1.0550	0.8003	0.7489	0.7660	0.6768	0.6063
Thorium-232	pCi/g	1.2823	1.1452	1.1784	1.2036	1.1759	1.3051
Uranium-235	pCi/g	0.3896	0.2970	0.1517	0.1877	0.2034	0.0602
Uranium-238	pCi/g	5.9931	3.4204	2.9711	1.8796	2.7881	1.2742
Location=ORR; Formation=CHICKAMAUGA K-25; Site=120; 00-05=4071; 05-10=4072; 10-15=4073; 15-20=4074; 20-25=4075; 25-30=4076; Phase=2							
Cesium-137	pCi/g	1.33960	0.53536	0.17735	0.04010	0.03723	0.0070
Potassium-40	pCi/g	5.20520	5.79742	5.51634	5.34278	8.32013	11.1744
Radium-226	pCi/g	1.40231	1.10239	1.22453	0.87288	1.11442	1.0019
Thorium-232	pCi/g	1.32052	1.14549	1.30369	1.05907	1.35182	1.4632
Uranium-235	pCi/g	0.30442	0.16768	0.06091	0.20111	0.18003	0.0937
Uranium-238	pCi/g	4.10116	4.11602	2.05312	2.03516	3.98922	2.2493
Location=ORR; Formation=CHICKAMAUGA K-25; Site=121; 00-05=4186; 05-10=4187; 10-15=4188; 15-20=4189; 20-25=4190; 25-30=4191; Phase=2							
Cesium-137	pCi/g	1.10186	0.07836	0.01962	0.0274	0.0343	0.0111
Potassium-40	pCi/g	6.80667	6.49062	7.92026	11.9132	26.9167	31.8098
Radium-226	pCi/g	0.76879	0.65263	0.63570	0.6228	0.5058	0.5205
Thorium-232	pCi/g	0.90520	0.83863	0.83011	0.9086	1.2449	1.3416
Uranium-235	pCi/g	0.16449	0.06696	0.04179	0.1466	0.1748	0.0450
Uranium-238	pCi/g	3.46693	2.61692	2.38197	2.5582	3.9474	1.8486
Location=ORR; Formation=CHICKAMAUGA K-25; Site=122; 00-05=4192; 05-10=4193; 10-15=4194; 15-20=4195; 20-25=4196; 25-30=4197; Phase=2							
Cesium-137	pCi/g	1.1869	0.56579	0.1236	0.0663	0.0213	0.0142
Potassium-40	pCi/g	13.6981	9.91624	15.5927	23.9834	26.2110	26.3081
Radium-226	pCi/g	1.1588	0.89597	0.8200	0.9734	0.9900	0.7625
Thorium-232	pCi/g	1.2927	0.98060	1.1210	1.5849	1.5897	1.5327
Uranium-235	pCi/g	0.2864	0.03328	0.1158	0.2249	0.2220	0.0644
Uranium-238	pCi/g	8.0204	3.55565	2.1722	3.8511	1.7435	1.3441
Location=ORR; Formation=CHICKAMAUGA K-25; Site=123; 00-05=4210; 05-10=4211; 10-15=4212; 15-20=4213; 20-25=4214; 25-30=4215; Phase=2							
Cesium-137	pCi/g	0.80657	0.3396	0.1059	0.0482	0.1111	0.0144
Potassium-40	pCi/g	8.40190	10.2694	14.3937	24.2186	22.5278	19.9658
Radium-226	pCi/g	0.67741	0.6301	0.7143	0.8308	0.7935	0.7137
Thorium-232	pCi/g	1.20688	1.1700	1.4841	2.0776	1.9009	1.7373
Uranium-235	pCi/g	0.12577	0.1699	0.2119	0.2363	0.1229	0.0764
Uranium-238	pCi/g	3.45669	3.2591	3.7070	5.0393	4.4112	1.7216
Location=ORR; Formation=CHICKAMAUGA K-25; Site=124; 00-05=4204; 05-10=4205; 10-15=4206; 15-20=4207; 20-25=4208; 25-30=4209; Phase=2							
Cesium-137	pCi/g	1.27278	0.59321	0.09693	0.0314	0.0353	0.0101
Potassium-40	pCi/g	7.54343	6.55849	7.74315	21.3926	23.8636	24.8610
Radium-226	pCi/g	0.90399	0.65415	0.60807	0.6839	0.6701	0.5720
Thorium-232	pCi/g	1.24992	1.18075	1.10543	1.4016	1.3920	1.4174
Uranium-235	pCi/g	0.33240	0.18125	0.14240	0.1807	0.1839	0.0437
Uranium-238	pCi/g	5.16611	2.85472	2.44710	3.6553	4.1227	1.2276

Table B.2 (continued)

Analysis	Units	Depth (cm) 00–05	05–10	10–15	15–20	20–25	25–30
Location=ORR; Formation=CHICKAMAUGA K-25; Site=125; 00-05=4198; 05-10=4199; 10-15=4200; 15-20=4201; 20-25=4202; 25-30=4203; Phase=2							
Cesium-137	pCi/g	0.99402	0.24710	0.07979	0.0291	0.0310	0.0125
Potassium-40	pCi/g	6.75983	6.71753	9.54873	13.8157	17.4617	18.2644
Radium-226	pCi/g	0.73304	0.63580	0.66263	0.6297	0.6617	0.6110
Thorium-232	pCi/g	0.88512	0.94483	0.95977	1.1324	1.2079	1.2172
Uranium-235	pCi/g	0.20058	0.10260	0.15377	0.1574	0.1611	0.0546
Uranium-238	pCi/g	2.97745	2.33500	2.59780	3.3636	5.2730	1.0867
Location=ORR; Formation=CHICKAMAUGA K-25; Site=126; 00-05=4065; 05-10=4066; 10-15=4067; 15-20=4068; 20-25=4069; 25-30=4070; Phase=2							
Cesium-137	pCi/g	1.4562	0.2313	0.0681	0.0342	0.0119	0.0071
Potassium-40	pCi/g	12.6823	12.7013	14.8319	14.7306	19.5074	21.7761
Radium-226	pCi/g	1.1450	0.8826	0.7798	0.7959	0.7794	0.7892
Thorium-232	pCi/g	1.4928	1.3104	1.2581	1.2906	1.4133	1.5751
Uranium-235	pCi/g	0.3047	0.1723	0.1682	0.1784	0.1815	0.0628
Uranium-238	pCi/g	1.9494	1.3067	3.1178	3.2683	3.1206	1.1513
Location=ORR; Formation=CHICKAMAUGA K-25; Site=127; 00-05=4241; 05-10=4242; 10-15=4243; 15-20=4244; 20-25=4245; 25-30=4246; Phase=2							
Cesium-137	pCi/g	2.6830	0.2583	0.0805	0.0453	0.0707	0.0080
Potassium-40	pCi/g	25.9252	25.8546	28.1656	29.7581	30.2571	16.8718
Radium-226	pCi/g	0.9024	0.9525	0.9015	0.7875	0.7977	0.4991
Thorium-232	pCi/g	1.8306	1.7610	1.7809	1.7608	1.9787	1.0384
Uranium-235	pCi/g	0.3840	0.1811	0.2298	0.2540	0.3645	0.0757
Uranium-238	pCi/g	7.5973	2.6635	5.2910	4.8094	5.5249	1.7233
Location=ORR; Formation=CHICKAMAUGA K-25; Site=128; 00-05=4247; 05-10=4248; 10-15=4249; 15-20=4250; 20-25=4251; 25-30=4252; Phase=2							
Cesium-137	pCi/g	1.61619	0.2387	0.09971	0.0314	0.0310	0.0217
Potassium-40	pCi/g	9.82509	10.3859	9.26337	15.4870	19.8834	20.2383
Radium-226	pCi/g	0.96177	0.7177	0.74336	0.8062	0.7147	0.6801
Thorium-232	pCi/g	1.17616	1.1405	1.06324	1.3554	1.5291	1.4257
Uranium-235	pCi/g	0.30702	0.1698	0.17603	0.2328	0.1300	0.1301
Uranium-238	pCi/g	4.62269	2.1094	3.21695	1.9292	3.5529	2.1577
Location=ORR; Formation=CHICKAMAUGA K-25; Site=129; 00-05=4059; 05-10=4060; 10-15=4061; 15-20=4062; 20-25=4063; 25-30=4064; Phase=2							
Cesium-137	pCi/g	1.61429	0.29571	0.10771	0.0762	0.0481	0.0151
Potassium-40	pCi/g	4.54902	4.97201	7.60954	12.3434	16.7873	19.0190
Radium-226	pCi/g	0.86919	0.89614	0.93261	0.9577	0.8687	0.8283
Thorium-232	pCi/g	0.88852	0.90314	1.08012	1.4345	1.6353	1.9284
Uranium-235	pCi/g	0.19919	0.18315	0.18858	0.2403	0.4288	0.0976
Uranium-238	pCi/g	5.28711	3.22948	4.15098	3.8462	4.1144	1.8656
Location=ORR; Formation=COPPER RIDGE; Site=45; 00-05=1593; 05-10=1594; 10-15=1595; 15-20=1596; 20-25=1597; 25-30=1598; Phase=2							
Cesium-137	pCi/g	1.31459	0.21678	0.05398	0.01377	0.01854	0.00991
Potassium-40	pCi/g	2.40802	2.43464	3.15164	2.80080	2.76635	2.72684
Radium-226	pCi/g	0.82141	0.84477	0.96069	0.88417	0.89114	0.86004
Thorium-232	pCi/g	0.55643	0.58987	0.62893	0.65335	0.72237	0.71819
Uranium-235	pCi/g	0.12673	0.12308	0.12736	0.04333	0.09776	0.07162

Table B.2 (continued)

Analysis	Units	Depth (cm) 00–05	05–10	10–15	15–20	20–25	25–30
Location=ORR; Formation=COPPER RIDGE; Site=51; 00–05=1566; 05–10=1567; 10–15=1568; 15–20=1569; 20–25=1570; 25-30=1571; Phase=2							
Cesium-137	pCi/g	0.73767	0.46321	0.20490	0.07874	0.01963	0.00013
Potassium-40	pCi/g	2.45618	2.77590	2.59210	2.97926	3.18076	2.77015
Radium-226	pCi/g	0.72157	0.77017	0.74240	0.79845	0.78172	0.68494
Thorium-232	pCi/g	0.66572	0.67044	0.60575	0.62838	0.60392	0.57781
Uranium-235	pCi/g	0.07907	0.12186	0.12679	0.23184	0.12207	0.04404
Location=ORR; Formation=COPPER RIDGE; Site=54; 00–05=1630; 05–10=1631; 10–15=1632; 15–20=1633; 20–25=1634; 25-30=1635; Phase=2							
Cesium-137	pCi/g	0.64576	0.37812	0.14020	0.06296	0.04645	0.05509
Potassium-40	pCi/g	2.71302	3.43090	3.56716	4.12647	4.10096	4.28849
Radium-226	pCi/g	0.82373	1.01040	1.01885	1.01716	0.99389	1.21019
Thorium-232	pCi/g	0.53051	0.61884	0.62160	0.60884	0.68825	0.70076
Uranium-235	pCi/g	0.01508	0.20106	0.12349	0.03315	0.12283	0.08208
Location=ORR; Formation=COPPER RIDGE; Site=55; 00–05=1560; 05–10=1561; 10–15=1562; 15–20=1563; 20–25=1564; 25-30=1565; Phase=2							
Cesium-137	pCi/g	0.61139	0.55791	0.39879	0.12312	0.01598	0.01582
Potassium-40	pCi/g	1.90430	2.45251	3.71398	3.40865	3.52387	3.40780
Radium-226	pCi/g	0.67114	0.80242	0.97207	1.00194	0.97963	0.92247
Thorium-232	pCi/g	0.41367	0.52104	0.61295	0.61924	0.63580	0.56552
Uranium-235	pCi/g	0.14904	0.14581	0.07268	0.14143	0.09627	0.05659
Location=ORR; Formation=COPPER RIDGE; Site=58; 00–05=1519; 05–10=1520; 10–15=1521; 15–20=1522; 20–25=1523; 25-30=1524; Phase=2							
Cesium-137	pCi/g	0.66312	0.33993	0.17862	0.02516	0.01537	0.00034
Potassium-40	pCi/g	2.94865	3.14324	3.82270	3.22667	3.00775	3.68430
Radium-226	pCi/g	0.65135	0.76370	0.88086	0.80912	0.71954	0.92610
Thorium-232	pCi/g	0.59720	0.67898	0.78012	0.66765	0.60329	0.83300
Uranium-235	pCi/g	0.12708	0.12637	0.12423	0.07819	0.08214	0.08181
Location=ORR; Formation=COPPER RIDGE; Site=59; 00–05=1513; 05–10=1514; 10–15=1515; 15–20=1516; 20–25=1517; 25-30=1518; Phase=2							
Cesium-137	pCi/g	1.27053	0.19831	0.09355	0.03261	0.01504	0.01884
Potassium-40	pCi/g	2.84551	2.95404	2.67501	2.81630	3.16815	3.05796
Radium-226	pCi/g	0.82470	0.91875	0.91501	0.98392	0.89643	0.89360
Thorium-232	pCi/g	0.51482	0.68239	0.65350	0.68352	0.65714	0.60265
Uranium-235	pCi/g	0.15886	0.07964	0.22271	0.06912	0.11979	0.05196
Location=ORR; Formation=COPPER RIDGE; Site=60; 00–05=1572; 05–10=1573; 10–15=1574; 15–20=1575; 20–25=1576; 25-30=1577; Phase=2							
Cesium-137	pCi/g	0.71665	0.19398	0.07772	0.03267	0.02987	0.03054
Potassium-40	pCi/g	1.61427	1.93660	2.02797	2.22403	2.99855	3.12826
Radium-226	pCi/g	0.70957	0.73995	0.74825	0.76166	0.88828	0.92520
Thorium-232	pCi/g	0.56235	0.62577	0.67116	0.78586	0.98420	1.03009
Uranium-235	pCi/g	0.15589	0.20990	0.14784	0.11901	0.13203	0.05134
Location=ORR; Formation=COPPER RIDGE; Site=62; 00–05=1554; 05–10=1555; 10–15=1556; 15–20=1557; 20–25=1558; 25-30=1559; Phase=2							
Cesium-137	pCi/g	1.46219	0.44444	0.12942	0.08320	0.03744	0.02214
Potassium-40	pCi/g	2.74205	2.17922	2.39099	2.37025	2.51268	2.40552
Radium-226	pCi/g	0.92132	0.82577	0.93225	0.75297	0.80691	0.77066

Table B.2 (continued)

Analysis	Units	Depth (cm) 00–05	05–10	10–15	15–20	20–25	25–30
Thorium-232	pCi/g	0.76372	0.73340	0.76144	0.73456	0.74223	0.65953
Uranium-235	pCi/g	0.17870	0.08602	0.13667	0.11608	0.04808	0.05601
Location=ORR; Formation=COPPER RIDGE; Site=64; 00-05=1624; 05-10=1625; 10-15=1626; 15-20=1627; 20-25=1628; 25-30=1629; Phase=2							
Cesium-137	pCi/g	1.35825	0.55949	0.13025	0.05076	0.02776	0.00672
Potassium-40	pCi/g	4.57810	4.35225	3.88484	4.25317	4.20743	5.00062
Radium-226	pCi/g	1.14307	1.26928	1.19442	1.05443	1.09406	1.12214
Thorium-232	pCi/g	0.63299	0.57065	0.60510	0.59333	0.62899	0.63976
Uranium-235	pCi/g	0.18705	0.15061	0.08557	0.10751	0.06522	0.04050
Location=ORR; Formation=COPPER RIDGE; Site=75; 00-05=1584; 05-10=1585; 10-15=1586; 15-20=1587; 20-25=1588; 25-30=1589; Phase=2							
Cesium-137	pCi/g	1.20643	0.70914	0.09526	0.00893	0.00797	0.00902
Potassium-40	pCi/g	3.12891	3.66351	3.27692	3.49178	3.33220	3.78174
Radium-226	pCi/g	0.96178	1.01614	1.00702	0.84096	0.96231	1.09401
Thorium-232	pCi/g	0.85230	0.82211	0.76017	0.61532	0.69202	0.81179
Uranium-235	pCi/g	0.16778	0.02727	0.04514	0.17811	0.11366	0.05796
Location=ORR; Formation=COPPER RIDGE; Site=83; 00-05=1636; 05-10=1637; 10-15=1638; 15-20=1639; 20-25=1640; 25-30=1641; Phase=2							
Cesium-137	pCi/g	1.43142	0.45581	0.07816	0.01367	0.01237	0.00939
Potassium-40	pCi/g	3.16801	3.04970	3.32586	3.63522	3.64562	3.91081
Radium-226	pCi/g	0.87328	0.93309	1.02638	1.01598	1.03243	1.06284
Thorium-232	pCi/g	0.74561	0.77374	0.71966	0.76888	0.75811	0.80789
Uranium-235	pCi/g	0.07876	0.10211	0.05145	0.06377	0.09445	0.13108
Location=ORR; Formation=COPPER RIDGE; Site=91; 00-05=1525; 05-10=1526; 10-15=1527; 15-20=1528; 20-25=1529; 25-30=1530; Phase=2							
Cesium-137	pCi/g	1.55850	0.79606	0.11417	0.01851	0.01913	0.00043
Potassium-40	pCi/g	3.18634	3.35480	3.00799	3.32103	3.72947	3.91862
Radium-226	pCi/g	1.01708	1.00546	1.06773	1.05082	1.06568	0.97347
Thorium-232	pCi/g	0.72699	0.77791	0.82529	0.79722	0.83680	0.82024
Uranium-235	pCi/g	0.19485	0.13070	0.11341	0.06298	0.20416	0.10720
Location=ORR; Formation=DISMAL GAP; Site=10; 00-05=1129; 05-10=1130; 10-15=1131; 15-20=1132; 20-25=1133; 25-30=1134; Phase=1							
Cesium-137	pCi/g	1.3656	0.8561	0.2386	0.1730	0.0296	0.0148
Potassium-40	pCi/g	22.0029	23.1574	16.1954	19.3380	17.1920	17.0671
Radium-226	pCi/g	0.7174	0.6503	0.4937	0.5869	0.8397	0.5044
Thorium-232	pCi/g	1.1676	1.2337	0.9389	1.1499	1.1452	1.0976
Uranium-235	pCi/g	0.1695	0.1837	0.0671	0.1521	0.1485	0.0242
Uranium-238	pCi/g	3.5354	3.6073	2.3943	2.8313	2.4951	0.4048
Location=ORR; Formation=DISMAL GAP; Site=11; 00-05=1040; 05-10=1041; 10-15=1042; 15-20=1043; 20-25=1044; 25-30=1045; Phase=1							
Cesium-137	pCi/g	1.3536	0.4110	0.1274	0.0915	0.0520	0.0220
Potassium-40	pCi/g	27.3335	26.2783	24.7049	22.4150	29.1504	30.8557
Radium-226	pCi/g	0.8693	0.7244	0.6513	0.6776	0.7581	0.8685
Thorium-232	pCi/g	1.4545	1.3252	1.3623	1.3867	1.5856	1.6720
Uranium-235	pCi/g	0.1348	0.1714	0.1145	0.1162	0.1236	0.1354

Table B.2 (continued)

Analysis	Units	Depth (cm) 00–05	05–10	10–15	15–20	20–25	25–30
Location=ORR; Formation=DISMAL GAP; Site=19; 00–05=1093; 05–10=1094; 10–15=1095; 15–20=1096; 20–25=1097; 25-30=1098; Phase=1							
Cesium-137	pCi/g	1.15976	0.0860	0.0184	0.0049	0.0072	0.0044
Potassium-40	pCi/g	9.78573	12.2284	13.9657	15.6700	17.5225	19.3992
Radium-226	pCi/g	0.55824	0.6651	0.6638	0.7204	0.7024	0.7533
Thorium-232	pCi/g	0.69456	0.9246	0.9387	1.0822	1.1208	1.2394
Uranium-235	pCi/g	0.13685	0.1363	0.0849	0.0545	0.0412	0.1009
Uranium-238	pCi/g	2.35735	2.1892	0.6857	1.4209	0.5366	1.7466
Location=ORR; Formation=DISMAL GAP; Site=2; 00–05=1183; 05–10=1184; 10–15=1185; 15–20=1186; 20–25=1187; 25-30=1188; Phase=1							
Cesium-137	pCi/g	1.7189	0.2115	0.0747	0.0422	0.0284	0.0131
Potassium-40	pCi/g	15.1972	16.3894	19.4542	21.4761	23.1861	22.8751
Radium-226	pCi/g	0.9044	0.7510	0.6634	0.6080	0.7755	0.5888
Thorium-232	pCi/g	1.0133	0.9939	1.0647	1.0588	1.1916	1.3749
Uranium-235	pCi/g	0.0967	0.1449	0.1463	0.1388	0.1908	0.1606
Uranium-238	pCi/g	3.2767	2.3829	2.3630	2.0251	2.4461	2.7837
Location=ORR; Formation=DISMAL GAP; Site=22; 00–05=1100; 05–10=1101; 10–15=1102; 15–20=1103; 20–25=1104; 25-30=1105; Phase=1							
Cesium-137	pCi/g	1.5205	0.3829	0.0907	0.0285	0.0265	0.0101
Potassium-40	pCi/g	13.5478	15.9145	18.1063	26.8466	28.8003	27.9817
Radium-226	pCi/g	0.6656	0.6936	0.7541	0.7897	0.6973	0.5653
Thorium-232	pCi/g	0.9694	1.0370	1.1640	1.4235	1.4542	1.4183
Uranium-235	pCi/g	0.1789	0.1117		0.1689		0.0530
Uranium-238	pCi/g	3.2313	2.3585	2.4392	2.9163	2.8677	1.3261
Location=ORR; Formation=DISMAL GAP; Site=26; 00–05=1207; 05–10=1208; 10–15=1209; 15–20=1210; 20–25=1211; 25-30=1212; Phase=1							
Cesium-137	pCi/g	1.3703	0.2945	0.0957	0.0251	0.0116	0.0129
Potassium-40	pCi/g	18.3172	17.9569	20.0332	20.9431	21.5800	26.3039
Radium-226	pCi/g	0.8390	0.5569	0.6158	0.6438	0.6505	0.6739
Thorium-232	pCi/g	1.0653	0.9838	1.0935	1.1993	1.3079	1.4047
Uranium-235	pCi/g	0.1761	0.1001	0.1578	0.1472	0.1718	0.0495
Uranium-238	pCi/g	3.3415	2.8359	2.7844	2.9593	2.5301	1.6265
Location=ORR; Formation=DISMAL GAP; Site=27; 00–05=1009; 05–10=1010; 10–15=1011; 15–20=1012; 20–25=1013; 25-30=1014; Phase=1							
Cesium-137	pCi/g	1.2572	0.3332	0.1850	0.0111	0.0082	0.0013
Potassium-40	pCi/g	12.6756	14.8813	14.8364	15.4542	16.6053	16.9683
Radium-226	pCi/g	0.7552	0.8678	0.6976	0.7580	0.7483	0.6641
Thorium-232	pCi/g	0.9894	1.1002	1.0336	1.0406	1.0213	0.9938
Uranium-235	pCi/g	0.1628	0.1161	0.1443	0.1126	0.1126	0.0949
Location=ORR; Formation=DISMAL GAP; Site=32; 00–05=1087; 05–10=1088; 10–15=1089; 15–20=1090; 20–25=1091; 25-30=1092; Phase=1							
Cesium-137	pCi/g	1.0464	0.2435	0.1281	0.0150	0.0001	0.0005
Potassium-40	pCi/g	15.4072	15.6139	15.8296	16.9094	20.7083	21.1364
Radium-226	pCi/g	0.6552	0.5872	0.6975	0.6931	0.6028	0.5331
Thorium-232	pCi/g	1.0246	0.9444	0.9937	1.0446	1.1923	1.0643
Uranium-235	pCi/g	0.0761	0.0511	0.1186	0.0571	0.0617	0.0455
Uranium-238	pCi/g	1.0328	1.2187	2.0979	1.2029	0.8208	0.7408

Table B.2 (continued)

Analysis	Units	Depth (cm) 00–05	05–10	10–15	15–20	20–25	25–30
Location=ORR; Formation=DISMAL GAP; Site=33; 00–05=1109; 05–10=1110; 10–15=1111; 15–20=1112; 20–25=1113; 25-30=1114; Phase=1							
Cesium-137	pCi/g	2.6559	0.3720	0.0489	0.0306	0.0283	0.0200
Potassium-40	pCi/g	19.1068	17.4362	19.8696	18.0485	16.6901	19.5761
Radium-226	pCi/g	1.2161	0.7522	0.6108	0.6012	0.6634	0.7477
Thorium-232	pCi/g	1.3637	1.0643	1.1503	1.1354	1.1780	1.1920
Uranium-235	pCi/g	0.1426	0.1776	0.1254	0.1659		0.1333
Uranium-238	pCi/g	7.8303	3.4469	3.7913	3.1028	2.1457	2.4243
Location=ORR; Formation=DISMAL GAP; Site=35; 00–05=1116; 05–10=1117; 10–15=1118; 15–20=1119; 20–25=1120; 25-30=1121; Phase=1							
Cesium-137	pCi/g	0.87748	0.09969	0.02041	0.01806	0.00300	0.0191
Potassium-40	pCi/g	6.20873	5.68209	5.81069	6.62107	7.71612	10.6939
Radium-226	pCi/g	0.72322	0.81582	0.88972	0.75208	0.71532	0.8264
Thorium-232	pCi/g	0.80594	0.94075	0.90856	0.89607	0.89224	1.0554
Uranium-235	pCi/g	0.11851	0.10982	0.13253	0.12612	0.02210	0.1065
Uranium-238	pCi/g	3.08327	2.05896	0.75256	3.83585	1.26806	2.4462
Location=ORR; Formation=DISMAL GAP; Site=41; 00–05=1028; 05–10=1029; 10–15=1030; 15–20=1031; 20–25=1032; 25-30=1033; Phase=1							
Cesium-137	pCi/g	2.0686	0.60128	0.3249	0.0779	0.0207	0.0216
Potassium-40	pCi/g	10.7427	9.92154	11.0152	18.5631	18.6508	20.0673
Radium-226	pCi/g	0.7561	0.72228	0.6847	0.6112	0.5917	0.7496
Thorium-232	pCi/g	1.0634	1.00867	1.0485	1.4132	1.5553	1.6006
Uranium-235	pCi/g	0.1896	0.13170	0.1131	0.1402	0.1234	0.1315
Location=ORR; Formation=DISMAL GAP; Site=43; 00–05=1240; 05–10=1241; 10–15=1242; 15–20=1243; 20–25=1244; 25-30=1245; Phase=1							
Cesium-137	pCi/g	1.2980	0.3329	0.0690	0.0321	0.0300	0.0385
Potassium-40	pCi/g	16.9967	16.2910	15.8280	17.6780	18.1977	22.3797
Radium-226	pCi/g	0.8646	0.9468	0.8196	0.7193	0.6794	0.7219
Thorium-232	pCi/g	1.2621	1.1425	1.1133	1.2199	1.1961	1.2745
Uranium-235	pCi/g	0.2573	0.2029		0.1681	0.1775	0.1858
Uranium-238	pCi/g	4.9464	2.6392	1.7212	2.7298	5.6479	4.1528
Location=ORR; Formation=NOLICHUCKY; Site=13; 00–05=1355; 05–10=1356; 10–15=1357; 15–20=1358; 20–25=1359; 25-30=1360; Phase=1							
Cesium-137	pCi/g	1.2523	0.4773	0.0890	0.0208	0.0035	0.0064
Potassium-40	pCi/g	15.2972	13.4125	13.4367	12.9746	12.8163	18.2887
Radium-226	pCi/g	0.8298	0.7163	0.6500	0.6454	0.5691	0.6463
Thorium-232	pCi/g	1.2134	1.1583	1.1003	1.0305	0.9680	1.2154
Uranium-235	pCi/g	0.1304	0.1522	0.1367	0.1359	0.1241	0.0759
Uranium-238	pCi/g	2.7410	2.1689	2.1121	1.9954	0.7563	1.1959
Location=ORR; Formation=NOLICHUCKY; Site=15; 00–05=1307; 05–10=1308; 10–15=1309; 15–20=1310; 20–25=1311; 25-30=1312; Phase=1							
Cesium-137	pCi/g	1.31838	0.37165	0.06814	0.03282	0.0439	0.0376
Potassium-40	pCi/g	7.57668	7.42748	8.37181	9.91225	12.7679	15.2212
Radium-226	pCi/g	0.75488	0.74257	0.81304	0.68292	0.7380	0.8035
Thorium-232	pCi/g	1.10444	1.17495	1.21709	1.32450	1.5444	1.6724
Uranium-235	pCi/g	0.25544	0.19953	0.19982	0.26038	0.2233	0.2312
Uranium-238	pCi/g	3.92091	3.55493	3.02203	0.85926	3.2127	3.7710

Table B.2 (continued)

Analysis	Units	Depth (cm) 00–05	05–10	10–15	15–20	20–25	25–30
Location=ORR; Formation=NOLICHUCKY; Site=16; 00-05=1343; 05-10=1344; 10-15=1345; 15-20=1346; 20-25=1347; 25-30=1348; Phase=1							
Cesium-137	pCi/g	1.4118	0.3658	0.0694	0.0235		0.0261
Potassium-40	pCi/g	18.6789	17.0942	16.7292	16.9414	12.1189	13.0763
Radium-226	pCi/g	0.8334	0.7990	0.7655	0.7565	0.7995	0.7460
Thorium-232	pCi/g	1.4208	1.4286	1.3369	1.3412	1.3938	1.3556
Uranium-235	pCi/g		0.1074				0.0920
Uranium-238	pCi/g		0.7675	3.3155			1.0901
Location=ORR; Formation=NOLICHUCKY; Site=21; 00-05=1367; 05-10=1368; 10-15=1369; 15-20=1370; 20-25=1371; 25-30=1372; Phase=1							
Cesium-137	pCi/g	3.0932	0.1176	0.0299	0.0294	0.0157	0.0081
Potassium-40	pCi/g	34.9695	30.5231	24.6009	23.5949	27.9409	36.0979
Radium-226	pCi/g	0.7174	0.6222	0.7803	0.5500	0.5476	0.5080
Thorium-232	pCi/g	1.7714	1.6407	1.6096	1.7286	1.6812	1.4985
Uranium-235	pCi/g	0.2569	0.0629	0.1863	0.1076	0.2444	0.0296
Uranium-238	pCi/g	4.6271	3.0044	2.9325	3.2139	2.6644	1.2930
Location=ORR; Formation=NOLICHUCKY; Site=23; 00-05=1316; 05-10=1317; 10-15=1318; 15-20=1319; 20-25=1320; 25-30=1321; Phase=1							
Cesium-137	pCi/g	1.0747	0.5820	0.0663	0.0405	0.0283	0.0380
Potassium-40	pCi/g	10.2992	12.4700	21.3062	27.4506	28.2411	29.2868
Radium-226	pCi/g	0.7428	0.7925	0.6529	0.5557	0.6003	0.5588
Thorium-232	pCi/g	1.1539	1.2869	1.5108	1.6378	1.6599	1.6898
Uranium-235	pCi/g	0.2182	0.2202	0.2275	0.2288	0.2327	0.2311
Uranium-238	pCi/g	2.5799	2.7668	3.8144	4.3977	4.8436	2.5994
Location=ORR; Formation=NOLICHUCKY; Site=24; 00-05=1361; 05-10=1362; 10-15=1363; 15-20=1364; 20-25=1365; 25-30=1366; Phase=1							
Cesium-137	pCi/g	1.8149	0.4331	0.1023	0.0399	0.0273	0.0016
Potassium-40	pCi/g	29.1557	25.3314	27.3521	28.6304	30.9524	31.1790
Radium-226	pCi/g	0.8650	0.6682	0.6839	0.6464	0.6724	0.6171
Thorium-232	pCi/g	1.5330	1.3191	1.5141	1.5585	1.6765	1.6022
Uranium-235	pCi/g	0.2297	0.1567	0.1659	0.1657	0.1667	0.0492
Uranium-238	pCi/g	4.1051	4.5234	1.1107	2.5580	2.8852	0.9021
Location=ORR; Formation=NOLICHUCKY; Site=25; 00-05=1325; 05-10=1326; 10-15=1327; 15-20=1328; 20-25=1329; 25-30=1330; Phase=1							
Cesium-137	pCi/g	1.2195	0.0508	0.0220	0.0459	0.0073	
Potassium-40	pCi/g	22.2143	21.5251	22.0695	28.4921	32.4522	33.0335
Radium-226	pCi/g	0.6716	0.6243	0.6632	0.6693	0.6224	0.5640
Thorium-232	pCi/g	1.2591	1.3567	1.3916	1.6653	1.6946	1.6435
Uranium-235	pCi/g	0.2184			0.2563		
Uranium-238	pCi/g			1.4411			
Location=ORR; Formation=NOLICHUCKY; Site=28; 00-05=1337; 05-10=1338; 10-15=1339; 15-20=1340; 20-25=1341; 25-30=1342; Phase=1							
Cesium-137	pCi/g	1.4521	0.4315	0.1465	0.0288	0.0241	0.0079
Potassium-40	pCi/g	10.9102	12.0193	12.0245	28.8269	35.8351	35.2583
Radium-226	pCi/g	0.8626	0.9214	0.8631	0.7461	0.5446	0.6036
Thorium-232	pCi/g	1.0515	1.1281	1.2079	1.4183	1.4888	1.4185
Uranium-235	pCi/g	0.1886	0.1687	0.1467	0.3551	0.1632	0.0079
Uranium-238	pCi/g	2.6364	2.1114	2.3656	1.5654	3.1094	0.9010

Table B.2 (continued)

Analysis	Units	Depth (cm) 00–05	05–10	10–15	15–20	20–25	25–30
Location=ORR; Formation=NOLICHUCKY; Site=3; 00-05=1331; 05-10=1332; 10-15=1333; 15-20=1334; 20-25=1335; 25-30=1336; Phase=1							
Cesium-137	pCi/g	1.18164	0.3320	0.0515	0.0236	0.0261	0.0017
Potassium-40	pCi/g	9.83880	11.2675	10.9431	11.8086	15.6450	15.6981
Radium-226	pCi/g	0.76528	0.7156	0.6469	0.7372	0.7150	0.7377
Thorium-232	pCi/g	1.00806	1.0064	0.9741	1.1360	1.2901	1.2811
Uranium-235	pCi/g	0.15702	0.1385	0.0556	0.1362	0.1167	0.0301
Uranium-238	pCi/g	2.51189	1.9898	1.9450	2.2331	2.4346	0.8476
Location=ORR; Formation=NOLICHUCKY; Site=31; 00-05=1373; 05-10=1374; 10-15=1375; 15-20=1376; 20-25=1377; 25-30=1378; Phase=1							
Cesium-137	pCi/g	1.81133	0.40512	0.06764	0.01823	0.0082	0.0093
Potassium-40	pCi/g	7.58745	7.85760	7.91839	8.72471	10.7174	13.0808
Radium-226	pCi/g	0.81426	0.87903	0.84332	0.89600	0.8555	0.7552
Thorium-232	pCi/g	1.10946	1.08215	1.11157	1.13255	1.1654	1.2004
Uranium-235	pCi/g	0.18207	0.27899	0.14678	0.06268	0.0492	0.0811
Uranium-238	pCi/g	3.21282	1.08908	2.30077	1.38541	0.8731	2.0346
Location=ORR; Formation=NOLICHUCKY; Site=42; 00-05=1379; 05-10=1380; 10-15=1381; 15-20=1382; 20-25=1383; 25-30=1384; Phase=1							
Cesium-137	pCi/g	1.1265	0.1807	0.0418	0.0249	0.0041	0.0093
Potassium-40	pCi/g	12.7187	13.3355	21.0567	23.6743	20.8052	19.6050
Radium-226	pCi/g	0.7755	0.6449	0.7492	0.5907	0.6654	0.6581
Thorium-232	pCi/g	1.1648	1.1105	1.2794	1.3561	1.3606	1.2759
Uranium-235	pCi/g	0.1788	0.1978	0.0899	0.0443	0.0432	0.0236
Uranium-238	pCi/g	3.2981	2.1334	1.1212	2.5000	1.2277	1.6120
Location=ORR; Formation=NOLICHUCKY; Site=5; 00-05=1349; 05-10=1350; 10-15=1351; 15-20=1352; 20-25=1353; 25-30=1354; Phase=1							
Cesium-137	pCi/g	1.13769	0.42327	0.0943	0.0288	0.0096	0.0034
Potassium-40	pCi/g	8.44980	9.81740	10.3635	11.9426	13.3605	14.0540
Radium-226	pCi/g	0.84649	1.03180	0.7932	0.7644	0.7808	0.6828
Thorium-232	pCi/g	1.09361	1.27041	1.1657	1.1789	1.2477	1.2289
Uranium-235	pCi/g	0.10365	0.16878	0.0620	0.1338	0.1376	0.0866
Uranium-238	pCi/g	0.86400	2.24251	1.9811	1.9422	2.3860	0.8546
Location=ROA; Formation=COPPER RIDGE; Site=33; 00-05=3248; 05-10=3249; 10-15=3250; 15-20=3251; 20-25=3252; 25-30=3253; Phase=2							
Cesium-137	pCi/g	1.42089	0.17370	0.13236	0.08078	0.00976	0.02394
Potassium-40	pCi/g	3.66091	5.62405	5.68683	6.20255	6.42044	5.84363
Radium-226	pCi/g	0.61187	0.85530	0.94200	1.05538	1.00632	0.92647
Thorium-232	pCi/g	0.46099	0.86471	1.00398	1.17719	1.28282	1.17226
Uranium-235	pCi/g		0.13936	0.08840	0.07543	0.09698	0.08271
Location=ROA; Formation=COPPER RIDGE; Site=34; 00-05=3334; 05-10=3335; 10-15=3336; 15-20=3337; 20-25=3338; 25-30=3339; Phase=2							
Cesium-137	pCi/g	1.50010	0.39234	0.13031	0.04139	0.01188	0.02232
Potassium-40	pCi/g	2.06069	3.20465	2.81806	3.69338	3.97714	4.49428
Radium-226	pCi/g	1.20894	1.26975	1.14309	1.21746	1.22803	1.33746
Thorium-232	pCi/g	0.47181	0.62236	0.62107	0.80169	0.93824	1.13285
Uranium-235	pCi/g	0.20547	0.19351	0.11316	0.41792	0.09387	0.09821
Uranium-238	pCi/g	2.15706	2.07559	2.18372	3.35191	1.81413	2.93381

Table B.2 (continued)

Analysis	Units	Depth (cm) 00–05	05–10	10–15	15–20	20–25	25–30
Location=ROA; Formation=COPPER RIDGE; Site=35; 00–05=3239; 05–10=3240; 10–15=3241; 15–20=3242; 20–25=3243; 25-30=3244; Phase=2							
Cesium-137	pCi/g	0.74448	0.47548	0.39568	0.22968	0.11171	0.01546
Potassium-40	pCi/g	2.37983	2.97783	3.11111	3.84590	3.84399	3.56885
Radium-226	pCi/g	0.70666	0.77877	0.77855	0.82811	0.91289	0.80375
Thorium-232	pCi/g	0.54866	0.59929	0.59707	0.67450	0.76217	0.71218
Uranium-235	pCi/g	0.13423	0.12701	0.05596	0.13020		0.04460
Location=ROA; Formation=COPPER RIDGE; Site=39; 00–05=3343; 05–10=3344; 10–15=3345; 15–20=3346; 20–25=3347; 25-30=3348; Phase=2							
Cesium-137	pCi/g	1.19964	0.52695	0.15373	0.03051	0.02256	0.00601
Potassium-40	pCi/g	1.13013	1.60930	2.01373	2.47298	2.17872	2.05719
Radium-226	pCi/g	0.37441	0.50181	0.57357	0.63343	0.61066	0.56519
Thorium-232	pCi/g	0.28021	0.38252	0.42223	0.47041	0.44419	0.46148
Uranium-235	pCi/g	0.15649	0.15288	0.14462	0.14204	0.11531	0.06908
Uranium-238	pCi/g	3.03199	2.80025	2.35244	2.57874	2.62625	0.56791
Location=ROA; Formation=COPPER RIDGE; Site=40; 00–05=3267; 05–10=3268; 10–15=3269; 15–20=3270; 20–25=3271; 25-30=3272; Phase=2							
Cesium-137	pCi/g	1.02160	0.30799	0.05902	0.01482	0.00677	0.00663
Potassium-40	pCi/g	1.69320	1.30756	1.47958	1.53804	2.05725	1.91741
Radium-226	pCi/g	0.58486	0.53910	0.54432	0.54351	0.55226	0.55265
Thorium-232	pCi/g	0.40629	0.37357	0.40845	0.39573	0.44499	0.45797
Uranium-235	pCi/g	0.14017	0.10252	0.03263	0.10082	0.07711	0.04508
Location=ROA; Formation=COPPER RIDGE; Site=41; 00–05=3352; 05–10=3353; 10–15=3354; 15–20=3355; 20–25=3356; 25-30=3357; Phase=2							
Cesium-137	pCi/g	0.88398	0.33666	0.10927	0.03548	0.02445	0.01198
Potassium-40	pCi/g	1.28679	1.71866	1.42272	1.73185	1.78048	1.44937
Radium-226	pCi/g	0.44430	0.54968	0.51597	0.57426	0.55097	0.42974
Thorium-232	pCi/g	0.30179	0.41479	0.33370	0.40299	0.40394	0.31513
Uranium-235	pCi/g	0.15924	0.13800	0.15647	0.13517	0.12688	0.03775
Uranium-238	pCi/g	1.95675	1.31326	2.74891	2.63331	2.43280	0.66468
Location=ROA; Formation=COPPER RIDGE; Site=42; 00–05=3276; 05–10=3277; 10–15=3278; 15–20=3279; 20–25=3280; 25-30=3281; Phase=2							
Cesium-137	pCi/g	0.81581	0.28574	0.07326	0.05847	0.02060	0.00336
Potassium-40	pCi/g	1.56942	2.56750	2.59056	2.58473	2.55578	2.78359
Radium-226	pCi/g	0.64389	0.68527	0.79614	0.80461	0.77313	0.74344
Thorium-232	pCi/g	0.49772	0.47805	0.55512	0.55197	0.55703	0.55041
Uranium-235	pCi/g	0.14479	0.03502	0.13266	0.05985	0.12432	0.08765
Location=ROA; Formation=COPPER RIDGE; Site=43; 00–05=3285; 05–10=3286; 10–15=3287; 15–20=3288; 20–25=3289; 25-30=3290; Phase=2							
Cesium-137	pCi/g	1.33013	0.60864	0.13026	0.07920	0.03467	0.02015
Potassium-40	pCi/g	2.38210	2.36627	2.49891	2.43622	2.50911	2.61555
Radium-226	pCi/g	0.62641	0.63599	0.65419	0.73858	0.73074	0.70106
Thorium-232	pCi/g	0.47328	0.53264	0.63097	0.61873	0.63939	0.73477
Uranium-235	pCi/g		0.24902	0.12685	0.27740	0.12333	0.09324
Location=ROA; Formation=COPPER RIDGE; Site=44; 00–05=3257; 05–10=3258; 10–15=3259; 15–20=3260; 20–25=3261; 25-30=3262; Phase=2							
Cesium-137	pCi/g	0.65399	0.19382	0.03836	0.02781	0.02858	0.02969
Potassium-40	pCi/g	1.58787	2.76000	2.61316	3.15918	2.91833	2.67472

Table B.2 (continued)

Analysis	Units	Depth (cm) 00–05	05–10	10–15	15–20	20–25	25–30
Radium-226	pCi/g	0.64419	0.79218	0.78815	0.72928	0.70668	0.59892
Thorium-232	pCi/g	0.63206	0.66964	0.62208	0.59277	0.63110	0.54020
Uranium-235	pCi/g	0.14065	0.14304	0.12120	0.18906	0.08387	0.06813
Location=ROA; Formation=COPPER RIDGE; Site=45; 00-05=3312; 05-10=3313; 10-15=3314; 15-20=3315; 20-25=3316; 25-30=3317; Phase=2							
Cesium-137	pCi/g	0.89438	0.43598	0.10722	0.03823	0.03171	0.01201
Potassium-40	pCi/g	2.16620	2.38725	2.63967	2.80100	2.31511	2.73322
Radium-226	pCi/g	0.68194	0.78870	1.07470	0.80994	0.69929	0.69517
Thorium-232	pCi/g	0.49183	0.50322	0.55650	0.51313	0.50845	0.55551
Uranium-235	pCi/g	0.15722	0.22716	0.15622	0.10671	0.09078	0.03234
Uranium-238	pCi/g	2.43663	2.01107	2.22693	2.14694	2.03645	1.10243
Location=ROA; Formation=COPPER RIDGE; Site=46; 00-05=3303; 05-10=3304; 10-15=3305; 15-20=3306; 20-25=3307; 25-30=3308; Phase=2							
Cesium-137	pCi/g	0.87173	0.55333	0.19283	0.05686	0.01535	0.02846
Potassium-40	pCi/g	2.50159	2.51479	2.26845	2.49321	2.32488	2.98673
Radium-226	pCi/g	0.71013	0.75386	0.77877	0.69155	0.70618	0.79303
Thorium-232	pCi/g	0.72202	0.70826	0.64636	0.68451	0.78843	0.96833
Uranium-235	pCi/g	0.10204	0.15382	0.05957	0.09354	0.13894	0.15626
Location=ROA; Formation=COPPER RIDGE; Site=47; 00-05=3294; 05-10=3295; 10-15=3296; 15-20=3297; 20-25=3298; 25-30=3299; Phase=2							
Cesium-137	pCi/g	0.83528	0.18813	0.02676	0.02606	0.02194	0.02398
Potassium-40	pCi/g	2.85348	3.77000	2.77097	3.17363	3.17019	2.83175
Radium-226	pCi/g	0.87308	0.93785	0.89051	0.86913	0.84645	0.82832
Thorium-232	pCi/g	0.90364	0.80033	0.75580	0.73762	0.78887	0.74115
Uranium-235	pCi/g	0.10091	0.16262	0.15553	0.10678	0.14427	0.14184
Location=ROA; Formation=DISMAL GAP; Site=10; 00-05=3178; 05-10=3179; 10-15=3180; 15-20=3181; 20-25=3182; 25-30=3183; Phase=1							
Cesium-137	pCi/g	0.6479	0.0460	0.0289	0.0182	0.0259	0.0257
Potassium-40	pCi/g	11.1886	12.2362	13.1197	17.5574	19.4597	21.8072
Radium-226	pCi/g	0.6988	0.7406	0.7150	0.7095	0.7025	0.7337
Thorium-232	pCi/g	0.9756	1.1513	1.1846	1.4620	1.5374	1.7462
Uranium-235	pCi/g	0.1505	0.0913	0.0219	0.0350	0.1580	0.1664
Uranium-238	pCi/g	2.2086	0.4811	2.2488	1.1617	1.9573	2.7254
Location=ROA; Formation=DISMAL GAP; Site=13; 00-05=3131; 05-10=3132; 10-15=3133; 15-20=3134; 20-25=3135; 25-30=3136; Phase=1							
Cesium-137	pCi/g	0.20342	0.03059	0.01112	0.0064	0.0494	0.0253
Potassium-40	pCi/g	6.21173	6.58742	8.07113	11.7095	16.5192	19.2372
Radium-226	pCi/g	0.70700	0.70586	0.71849	0.6952	0.6415	0.6707
Thorium-232	pCi/g	1.01938	0.97115	1.01649	1.1559	1.2880	1.4293
Uranium-235	pCi/g	0.10645	0.07286	0.12643	0.1399	0.1517	0.1553
Uranium-238	pCi/g	2.28876	1.65555	2.15058	1.3867	1.0939	2.4900
Location=ROA; Formation=DISMAL GAP; Site=14; 00-05=3152; 05-10=3153; 10-15=3154; 15-20=3155; 20-25=3156; 25-30=3157; Phase=1							
Cesium-137	pCi/g	1.5469	0.2365	0.0486	0.0053	0.0383	0.0366
Potassium-40	pCi/g	15.9916	21.2335	20.4532	17.4199	18.2892	18.5685
Radium-226	pCi/g	0.6981	0.6281	0.6715	0.6370	0.6924	0.5819
Thorium-232	pCi/g	1.2680	1.3550	1.4823	1.4512	1.5986	1.5064
Uranium-235	pCi/g	0.1999	0.2226	0.1907	0.2500	0.1130	0.2129
Uranium-238	pCi/g	4.1361	3.5846	2.4398	3.9481	4.4876	3.7519

Table B.2 (continued)

Analysis	Units	Depth (cm) 00–05	05–10	10–15	15–20	20–25	25–30
Location=ROA; Formation=DISMAL GAP; Site=17; 00–05=3022; 05–10=3023; 10–15=3024; 15–20=3025; 20–25=3026; 25-30=3027; Phase=1							
Cesium-137	pCi/g	1.06811	0.41668	0.12426	0.0491	0.0243	0.0144
Potassium-40	pCi/g	7.86085	8.01872	8.32302	12.3916	15.1041	17.0407
Radium-226	pCi/g	0.74439	0.74809	0.68905	0.6779	0.7289	0.7326
Thorium-232	pCi/g	1.01544	1.02281	1.05709	1.1309	1.2731	1.3357
Uranium-235	pCi/g	0.08073	0.15287		0.1279		0.0391
Uranium-238	pCi/g	1.49078	0.61736	1.98948	2.0866	2.3101	0.7476
Location=ROA; Formation=DISMAL GAP; Site=19; 00–05=3036; 05–10=3037; 10–15=3038; 15–20=3039; 20–25=3040; 25-30=3041; Phase=1							
Cesium-137	pCi/g	0.77258	0.07183	0.02488	0.02617	0.01874	0.02448
Potassium-40	pCi/g	7.65583	9.00872	8.31273	9.59149	9.03652	9.54134
Radium-226	pCi/g	0.98148	1.22142	1.13411	0.92588	1.00616	0.94241
Thorium-232	pCi/g	1.22177	1.38829	1.21685	1.26869	1.33524	1.25627
Uranium-235	pCi/g	0.10668	0.20344		0.17395	0.10917	0.06610
Uranium-238	pCi/g	1.22403	2.76961	2.52996	2.85302	2.96084	2.53167
Location=ROA; Formation=DISMAL GAP; Site=20; 00–05=3050; 05–10=3051; 10–15=3052; 15–20=3053; 20–25=3054; 25-30=3055; Phase=1							
Cesium-137	pCi/g	0.86373	0.16860	0.0694	0.0374	0.0177	0.0102
Potassium-40	pCi/g	8.37732	9.11153	15.4059	18.4632	26.6641	29.0528
Radium-226	pCi/g	0.98084	0.64531	0.6469	0.6153	0.5690	0.6767
Thorium-232	pCi/g	0.94018	0.97575	1.2443	1.2996	1.4085	1.4203
Uranium-235	pCi/g	0.18081	0.15954	0.1336	0.1782	0.0445	0.0749
Uranium-238	pCi/g	2.96989	3.16245	1.9166	3.9993	1.1015	0.6548
Location=ROA; Formation=DISMAL GAP; Site=21; 00–05=3117; 05–10=3118; 10–15=3119; 15–20=3120; 20–25=3121; 25-30=3122; Phase=1							
Cesium-137	pCi/g	0.9331	0.1301	0.02048	0.03094	0.01416	0.03293
Potassium-40	pCi/g	12.7528	12.7725	9.16888	8.93252	9.76466	9.57555
Radium-226	pCi/g	0.6918	0.8860	0.79204	0.87766	1.03810	0.89798
Thorium-232	pCi/g	1.2858	1.3053	1.11777	1.17581	1.22282	1.26791
Uranium-235	pCi/g	0.1020	0.0993	0.18391	0.20862	0.20426	0.23618
Uranium-238	pCi/g	3.6122	1.3212	3.17418	3.58721	2.33844	3.60514
Location=ROA; Formation=DISMAL GAP; Site=22; 00–05=3062; 05–10=3063; 10–15=3064; 15–20=3065; 20–25=3066; 25-30=3067; Phase=1							
Cesium-137	pCi/g	0.56818	0.11340	0.0243	0.0286	0.0322	0.0077
Potassium-40	pCi/g	7.22849	8.81445	12.4847	17.6887	21.6703	21.7934
Radium-226	pCi/g	0.72895	0.65960	0.6180	1.0002	1.0064	0.9894
Thorium-232	pCi/g	0.92026	0.95387	1.0513	1.3405	1.5092	1.4504
Uranium-235	pCi/g	0.13483	0.11169	0.1491	0.0546	0.3750	0.0671
Uranium-238	pCi/g	3.73728	2.25628	2.3393	3.0799	3.0480	1.1228
Location=ROA; Formation=DISMAL GAP; Site=3; 00–05=3103; 05–10=3104; 10–15=3105; 15–20=3106; 20–25=3107; 25-30=3108; Phase=1							
Cesium-137	pCi/g	0.8547	0.1987	0.0747	0.0327	0.0061	0.0162
Potassium-40	pCi/g	11.5364	10.8670	10.4431	10.4249	10.9776	11.0646
Radium-226	pCi/g	0.7445	0.9087	0.8165	0.7291	0.6889	0.6538
Thorium-232	pCi/g	1.1137	1.1802	1.1179	1.1422	1.1728	1.1765
Uranium-235	pCi/g	0.0547	0.1555	0.1333	0.0442	0.1412	0.1444
Uranium-238	pCi/g	4.2823	1.7353	2.7705	2.4742	2.5445	2.4345

Table B.2 (continued)

Analysis	Units	Depth (cm) 00–05	05–10	10–15	15–20	20–25	25–30
Location=ROA; Formation=DISMAL GAP; Site=7; 00–05=3089; 05–10=3090; 10–15=3091; 15–20=3092; 20–25=3093; 25-30=3094; Phase=1							
Cesium-137	pCi/g	1.00018	0.06758	0.05618	0.0358	0.0033	0.0022
Potassium-40	pCi/g	7.85868	9.07075	8.85627	10.6781	15.1970	18.7766
Radium-226	pCi/g	0.78784	0.77877	0.80245	0.7743	0.7757	0.7139
Thorium-232	pCi/g	0.99946	1.15157	1.09878	1.1931	1.3321	1.4702
Uranium-235	pCi/g	0.09426	0.17547	0.32156	0.1489	0.0679	0.0258
Uranium-238	pCi/g	2.25179	1.09497	1.61468	1.6798	1.3074	1.1676
Location=ROA; Formation=DISMAL GAP; Site=8; 00–05=3076; 05–10=3077; 10–15=3078; 15–20=3079; 20–25=3080; 25-30=3081; Phase=1							
Cesium-137	pCi/g	1.80437	0.47874	0.07930	0.02469	0.02150	0.0078
Potassium-40	pCi/g	6.84697	6.31750	6.59872	7.26735	8.17710	10.9998
Radium-226	pCi/g	0.73428	0.74100	0.75145	0.79693	0.74925	0.7442
Thorium-232	pCi/g	1.10390	1.07775	1.10967	1.16853	1.29059	1.2971
Uranium-235	pCi/g	0.16511		0.11434	0.13874	0.14543	0.1043
Uranium-238	pCi/g	2.17199	1.97052	2.13584	1.33850	1.17409	1.2732
Location=ROA; Formation=DISMAL GAP; Site=9; 00–05=3008; 05–10=3009; 10–15=3010; 15–20=3011; 20–25=3012; 25-30=3013; Phase=1							
Cesium-137	pCi/g	2.37360	0.33769	0.03726	0.00893	0.00427	0.00863
Potassium-40	pCi/g	7.97527	7.65437	7.31478	7.00821	7.48968	7.82609
Radium-226	pCi/g	0.76762	0.79481	0.75858	0.78649	0.78544	0.71572
Thorium-232	pCi/g	1.07995	1.15073	1.02602	1.03807	1.01271	0.96568
Uranium-235	pCi/g	0.20495	0.16226	0.04140	0.08682	0.08396	0.05803
Uranium-238	pCi/g	1.68335	1.37521	0.69534	1.51008	0.79716	1.24066

[a]Weighted results are on an oven-dried-soil weight (dry-weight) basis.

Table B.3. Unweighted gamma screening results for soil samples[a]

Analysis	Units	Depth (cm) 00–05	05–10	10–15	15–20	20–25	25–30
Location=AND; Formation=COPPER RIDGE; Site=31; 00–05=2203; 05–10=2204; 10–15=2205; 15–20=2206; 20–25=2207; 25–30=2208; Phase=2							
Cesium-137	pCi/cm^2	4.369	2.672	0.766	0.546	0.294	0.071
Potassium-40	pCi/cm^2	10.360	13.480	15.570	20.800	18.370	18.890
Radium-226	pCi/cm^2	3.024	3.906	4.483	5.050	5.607	5.333
Thorium-232	pCi/cm^2	2.111	3.145	3.789	3.794	4.402	4.645
Uranium-235	pCi/cm^2	1.355	0.375		0.621	0.763	0.490
Uranium-238	pCi/cm^2	11.200	7.221		20.910	16.448	8.801
Location=AND; Formation=COPPER RIDGE; Site=32; 00–05=2212; 05–10=2213; 10–15=2214; 15–20=2215; 20–25=2216; 25–30=2217; Phase=2							
Cesium-137	pCi/cm^2	4.809	1.382	0.797	0.197	0.026	0.021
Potassium-40	pCi/cm^2	9.288	18.360	20.340	23.790	27.260	29.300
Radium-226	pCi/cm^2	3.206	5.025	6.073	6.589	6.000	5.478
Thorium-232	pCi/cm^2	3.874	4.172	4.717	4.898	4.758	4.854
Uranium-235	pCi/cm^2	0.848	0.810	1.694	1.110	1.098	0.608
Uranium-238	pCi/cm^2	13.560	15.103	16.370	16.680	18.520	11.120
Location=AND; Formation=COPPER RIDGE; Site=33; 00–05=2221; 05–10=2222; 10–15=2223; 15–20=2224; 20–25=2225; 25–30=2226; Phase=2							
Cesium-137	pCi/cm^2	5.414	1.699	0.677	0.398	0.309	0.048
Potassium-40	pCi/cm^2	11.060	17.990	19.620	22.040	22.260	25.410
Radium-226	pCi/cm^2	3.535	4.907	6.586	6.703	6.836	6.824
Thorium-232	pCi/cm^2	2.133	3.190	3.793	4.063	4.159	4.618
Uranium-235	pCi/cm^2	0.841	1.383	1.638	1.087	1.096	0.775
Uranium-238	pCi/cm^2	3.799	15.913	18.260	7.945	15.316	12.410
Location=AND; Formation=COPPER RIDGE; Site=34; 00–05=2230; 05–10=2231; 10–15=2232; 15–20=2233; 20–25=2234; 25–30=2235; Phase=2							
Cesium-137	pCi/cm^2	3.507	2.957	2.275	1.307	0.939	0.443
Potassium-40	pCi/cm^2	16.810	18.030	20.230	19.290	23.760	24.440
Radium-226	pCi/cm^2	4.608	5.630	6.125	6.393	6.708	6.725
Thorium-232	pCi/cm^2	2.989	3.883	4.059	4.277	4.470	4.466
Uranium-235	pCi/cm^2	0.937	0.999	0.969	1.006	0.426	0.477
Uranium-238	pCi/cm^2	12.430	10.160	9.527	16.620	15.387	9.499
Location=AND; Formation=COPPER RIDGE; Site=35; 00–05=2239; 05–10=2240; 10–15=2241; 15–20=2242; 20–25=2243; 25–30=2244; Phase=2							
Cesium-137	pCi/cm^2	3.459	2.299	0.625	1.003	0.080	0.037
Potassium-40	pCi/cm^2	17.850	27.900	24.580	34.250	35.000	32.460
Radium-226	pCi/cm^2	4.904	5.886	7.244	7.200	7.172	6.165
Thorium-232	pCi/cm^2	5.416	5.159	5.770	5.986	6.581	6.198
Uranium-235	pCi/cm^2	1.188	1.333	2.173	1.600	0.641	0.450
Uranium-238	pCi/cm^2	15.650	22.336	25.561	26.083	13.430	11.650
Location=AND; Formation=COPPER RIDGE; Site=36; 00–05=2248; 05–10=2249; 10–15=2250; 15–20=2251; 20–25=2252; 25–30=2253; Phase=2							
Cesium-137	pCi/cm^2	2.670	1.141	1.046	0.201	0.228	0.048
Potassium-40	pCi/cm^2	18.920	19.950	22.710	19.990	22.370	27.740
Radium-226	pCi/cm^2	5.122	5.649	5.796	5.634	6.125	5.756
Thorium-232	pCi/cm^2	3.189	3.702	3.826	3.923	4.603	4.802
Uranium-235	pCi/cm^2	1.115	1.201	1.183	1.147	1.243	0.541
Uranium-238	pCi/cm^2	4.946	17.528	19.105	21.482	14.410	11.160

Table B.3 (continued)

Analysis	Units	Depth (cm) 00–05	05–10	10–15	15–20	20–25	25–30
Location=AND; Formation=COPPER RIDGE; Site=37; 00–05=2287; 05–10=2288; 10–15=2289; 15–20=2290; 20–25=2291; 25–30=2292; Phase=2							
Cesium-137	pCi/cm^2	3.631	3.619	3.020	2.096	0.388	0.062
Potassium-40	pCi/cm^2	12.810	13.960	13.090	13.320	23.070	36.850
Radium-226	pCi/cm^2	3.557	4.279	4.755	4.386	5.873	7.960
Thorium-232	pCi/cm^2	2.402	3.040	2.843	2.717	3.368	4.640
Uranium-235	pCi/cm^2	0.773	0.670	0.788	0.802	0.365	0.818
Uranium-238	pCi/cm^2	9.687	20.582	1.482	9.598	5.934	14.690
Location=AND; Formation=COPPER RIDGE; Site=38; 00–05=2296; 05–10=2297; 10–15=2298; 15–20=2299; 20–25=2300; 25–30=2301; Phase=2							
Cesium-137	pCi/cm^2	4.213	3.541	1.861	0.585	0.268	0.052
Potassium-40	pCi/cm^2	20.290	21.860	27.140	23.350	28.440	27.360
Radium-226	pCi/cm^2	3.177	3.746	4.697	4.432	4.932	4.963
Thorium-232	pCi/cm^2	2.299	2.560	2.988	2.684	3.049	2.921
Uranium-235	pCi/cm^2	0.929	0.895	0.809	0.207	0.257	0.430
Uranium-238	pCi/cm^2	17.676	17.392	14.749	6.190	7.625	8.463
Location=AND; Formation=COPPER RIDGE; Site=39; 00–05=2331; 05–10=2332; 10–15=2333; 15–20=2334; 20–25=2335; 25–30=2336; Phase=2							
Cesium-137	pCi/cm^2	2.446	2.133	1.172	0.758	0.197	0.108
Potassium-40	pCi/cm^2	12.810	17.890	17.560	18.150	21.770	19.440
Radium-226	pCi/cm^2	4.810	6.033	6.022	5.910	5.839	5.842
Thorium-232	pCi/cm^2	3.400	4.273	4.381	4.275	4.402	4.833
Uranium-235	pCi/cm^2	1.038	0.628	0.958	0.747	0.571	0.661
Uranium-238	pCi/cm^2	22.429	16.467	16.742	17.175	21.950	6.915
Location=AND; Formation=COPPER RIDGE; Site=40; 00–05=2322; 05–10=2323; 10–15=2324; 15–20=2325; 20–25=2326; 25–30=2327; Phase=2							
Cesium-137	pCi/cm^2	4.350	2.211	0.444	0.181	0.101	0.011
Potassium-40	pCi/cm^2	19.940	23.920	26.900	27.640	25.520	23.010
Radium-226	pCi/cm^2	4.837	5.384	5.457	5.341	5.523	5.590
Thorium-232	pCi/cm^2	4.278	5.029	5.814	5.703	5.577	5.644
Uranium-235	pCi/cm^2	0.979	1.020	0.466	0.586	0.648	0.401
Uranium-238	pCi/cm^2	29.250	21.560	19.264	12.940	6.659	8.247
Location=AND; Formation=COPPER RIDGE; Site=41; 00–05=2314; 05–10=2315; 10–15=2316; 15–20=2317; 20–25=2318; 25–30=2319; Phase=2							
Cesium-137	pCi/cm^2	5.956	4.883	2.971	0.473	0.117	0.033
Potassium-40	pCi/cm^2	23.500	26.030	28.130	26.180	31.650	31.990
Radium-226	pCi/cm^2	5.192	5.801	6.430	6.251	6.270	6.482
Thorium-232	pCi/cm^2	4.706	4.856	5.209	5.248	5.877	5.969
Uranium-235	pCi/cm^2	1.037	1.049	1.266	0.740	0.462	0.688
Uranium-238	pCi/cm^2	7.650	9.068	16.188	9.319	12.852	11.350
Location=AND; Formation=COPPER RIDGE; Site=42; 00–05=2305; 05–10=2306; 10–15=2307; 15–20=2308; 20–25=2309; 25–30=2310; Phase=2							
Cesium-137	pCi/cm^2	3.665	2.037	0.983	0.207	0.196	0.080
Potassium-40	pCi/cm^2	25.270	24.760	30.050	31.820	37.130	38.030
Radium-226	pCi/cm^2	6.961	8.018	8.252	7.223	7.787	7.982
Thorium-232	pCi/cm^2	5.430	5.596	6.008	6.019	6.366	6.711
Uranium-235	pCi/cm^2	1.094	1.163	0.793	0.623	0.856	0.725
Uranium-238	pCi/cm^2	15.860	16.846	19.277	21.210	15.589	11.890

Table B.3 (continued)

Analysis	Units	Depth (cm) 00–05	05–10	10–15	15–20	20–25	25–30
Location=AND; Formation=DISMAL GAP; Site=1; 00–05=2161; 05–10=2162; 10–15=2163; 15–20=2164; 20–25=2165; 25–30=2166; Phase=1							
Cesium-137	pCi/cm^2	5.245	1.112	0.216			0.015
Potassium-40	pCi/cm^2	77.220	115.400	129.100	161.900	154.600	162.600
Radium-226	pCi/cm^2	2.977	4.256	3.549	2.972	3.022	3.145
Thorium-232	pCi/cm^2	4.448	6.337	5.944	6.547	6.234	6.712
Uranium-235	pCi/cm^2						0.333
Uranium-238	pCi/cm^2		10.640		18.050		6.472
Location=AND; Formation=DISMAL GAP; Site=10; 00–05=2151; 05–10=2152; 10–15=2153; 15–20=2154; 20–25=2155; 25–30=2156; Phase=1							
Cesium-137	pCi/cm^2	4.999	2.828	0.504	0.793	0.275	0.007
Potassium-40	pCi/cm^2	34.000	74.480	78.900	79.360	118.900	134.400
Radium-226	pCi/cm^2	2.185	4.382	4.833	4.895	5.067	5.279
Thorium-232	pCi/cm^2	2.797	5.552	5.899	5.826	7.666	8.010
Uranium-235	pCi/cm^2	0.645	0.857	0.952	0.867	0.755	0.401
Uranium-238	pCi/cm^2	11.752	16.760	6.909	3.823	9.128	7.821
Location=AND; Formation=DISMAL GAP; Site=11; 00–05=2008; 05–10=2009; 10–15=2010; 15–20=2011; 20–25=2012; 25–30=2013; Phase=1							
Cesium-137	pCi/cm^2	6.389	2.294	0.921	0.421	0.177	0.062
Potassium-40	pCi/cm^2	127.000	154.900	171.200	202.600	212.400	202.600
Radium-226	pCi/cm^2	2.596	2.945	2.975	3.442	3.490	3.468
Thorium-232	pCi/cm^2	3.703	4.666	5.410	6.566	7.296	7.335
Uranium-235	pCi/cm^2	1.553	0.818	0.844	0.188	0.923	0.296
Uranium-238	pCi/cm^2	13.638	15.897	16.000	8.982	18.827	11.190
Location=AND; Formation=DISMAL GAP; Site=12; 00–05=2084; 05–10=2085; 10–15=2086; 15–20=2087; 20–25=2088; 25–30=2089; Phase=1							
Cesium-137	pCi/cm^2	5.909	0.815	0.139	0.092	0.159	0.200
Potassium-40	pCi/cm^2	134.800	156.100	163.400	169.700	176.300	172.700
Radium-226	pCi/cm^2	3.058	3.829	3.739	3.725	3.744	3.479
Thorium-232	pCi/cm^2	4.288	5.285	5.256	6.767	6.887	6.882
Uranium-235	pCi/cm^2	0.573		1.000	1.145	0.892	1.225
Uranium-238	pCi/cm^2				25.071	17.804	23.264
Location=AND; Formation=DISMAL GAP; Site=19; 00–05=2124; 05–10=2125; 10–15=2126; 15–20=2127; 20–25=2128; 25–30=2129; Phase=1							
Cesium-137	pCi/cm^2	11.250	2.483	0.419	0.198	0.024	0.050
Potassium-40	pCi/cm^2	55.460	86.830	97.760	110.100	108.300	116.400
Radium-226	pCi/cm^2	2.994	4.467	4.426	3.760	3.415	3.382
Thorium-232	pCi/cm^2	4.121	6.343	7.132	7.275	6.713	6.938
Uranium-235	pCi/cm^2	0.525	0.914	0.937	0.596	0.831	0.359
Uranium-238	pCi/cm^2	5.091	5.614	15.815	16.143	12.070	7.134
Location=AND; Formation=DISMAL GAP; Site=20; 00–05=2074; 05–10=2075; 10–15=2076; 15–20=2077; 20–25=2078; 25–30=2079; Phase=1							
Cesium-137	pCi/cm^2	6.284	0.356	0.196		0.197	
Potassium-40	pCi/cm^2	97.750	108.500	101.100	104.600	101.200	90.530
Radium-226	pCi/cm^2	3.988	4.366	3.728	3.542	3.745	2.741
Thorium-232	pCi/cm^2	5.858	6.268	6.481	6.851	6.898	6.054
Uranium-235	pCi/cm^2					1.102	0.425
Uranium-238	pCi/cm^2					19.881	

Table B.3 (continued)

Analysis	Units	Depth (cm) 00–05	05–10	10–15	15–20	20–25	25–30
Location=AND; Formation=DISMAL GAP; Site=21; 00–05=2105; 05–10=2106; 10–15=2107; 15–20=2108; 20–25=2109; 25–30=2110; Phase=1							
Cesium-137	pCi/cm^2	3.965	1.209	0.471	0.438	0.090	0.081
Potassium-40	pCi/cm^2	99.460	136.700	164.800	156.500	139.900	151.000
Radium-226	pCi/cm^2	2.167	3.439	3.191	2.751	2.978	2.741
Thorium-232	pCi/cm^2	4.082	5.474	6.345	6.375	5.948	6.506
Uranium-235	pCi/cm^2				1.092	1.461	1.152
Uranium-238	pCi/cm^2			31.690	20.803	21.349	22.795
Location=AND; Formation=DISMAL GAP; Site=22; 00–05=2094; 05–10=2095; 10–15=2096; 15–20=2097; 20–25=2098; 25–30=2099; Phase=1							
Cesium-137	pCi/cm^2	3.019	0.325	0.144	0.144	0.139	0.045
Potassium-40	pCi/cm^2	167.000	162.400	157.800	136.300	158.100	176.400
Radium-226	pCi/cm^2	3.532	3.781	3.603	3.243	3.484	3.378
Thorium-232	pCi/cm^2	5.984	6.503	6.857	6.800	6.734	6.729
Uranium-235	pCi/cm^2	0.889	0.910	0.882	0.863	0.909	0.341
Uranium-238	pCi/cm^2	17.838	16.400	18.484	17.910	16.820	7.410
Location=AND; Formation=DISMAL GAP; Site=3; 00–05=2063; 05–10=2064; 10–15=2065; 15–20=2066; 20–25=2067; 25–30=2068; Phase=1							
Cesium-137	pCi/cm^2	3.276	0.941	0.297	0.144	0.077	
Potassium-40	pCi/cm^2	122.100	125.500	127.700	128.700	124.100	118.400
Radium-226	pCi/cm^2	3.227	4.262	3.743	3.456	3.448	2.850
Thorium-232	pCi/cm^2	6.423	7.044	7.002	7.299	7.031	7.082
Uranium-235	pCi/cm^2	0.759		0.863	0.306		
Uranium-238	pCi/cm^2		13.240		9.655		23.220
Location=AND; Formation=DISMAL GAP; Site=4; 00–05=2043; 05–10=2044; 10–15=2045; 15–20=2046; 20–25=2047; 25–30=2048; Phase=1							
Cesium-137	pCi/cm^2	7.805	0.921	0.313	0.378	0.404	0.162
Potassium-40	pCi/cm^2	211.100	214.000	218.500	233.300	230.100	224.600
Radium-226	pCi/cm^2	3.300	3.571	3.517	3.179	3.483	3.255
Thorium-232	pCi/cm^2	5.803	5.929	6.255	6.735	7.397	6.793
Uranium-235	pCi/cm^2						
Uranium-238	pCi/cm^2						
Location=AND; Formation=DISMAL GAP; Site=5; 00–05=2053; 05–10=2054; 10–15=2055; 15–20=2056; 20–25=2057; 25–30=2058; Phase=1							
Cesium-137	pCi/cm^2	3.946	0.560	0.062			
Potassium-40	pCi/cm^2	234.800	260.000	276.500	268.400	235.800	207.000
Radium-226	pCi/cm^2	3.146	3.499	3.477	3.441	3.385	3.468
Thorium-232	pCi/cm^2	6.167	6.967	7.672	7.487	6.929	6.241
Uranium-235	pCi/cm^2		1.549			1.606	0.450
Uranium-238	pCi/cm^2			22.730	22.610		6.546
Location=AND; Formation=DISMAL GAP; Site=9; 00–05=2137; 05–10=2138; 10–15=2139; 15–20=2140; 20–25=2141; 25–30=2142; Phase=1							
Cesium-137	pCi/cm^2	7.064	1.246	0.387	0.046	0.190	0.020
Potassium-40	pCi/cm^2	93.590	95.870	92.600	86.530	106.400	96.570
Radium-226	pCi/cm^2	2.819	3.557	3.509	3.462	3.541	3.456
Thorium-232	pCi/cm^2	4.435	6.244	6.583	5.740	7.119	6.540
Uranium-235	pCi/cm^2		2.502		1.062	1.149	0.457
Uranium-238	pCi/cm^2	6.419			19.966	21.260	10.510

Table B.3 (continued)

Analysis	Units	Depth (cm) 00–05	05–10	10–15	15–20	20–25	25–30
Location=ORR; Formation=CHEPULTEPEC; Site=50; 00–05=1847; 05–10=1848; 10–15=1849; 15–20=1850; 20–25=1851; 25–30=1852; Phase=2							
Cesium-137	pCi/cm^2	5.584	1.059	0.963	0.565	0.151	0.083
Potassium-40	pCi/cm^2	4.954	11.010	10.190	12.970	13.490	14.330
Radium-226	pCi/cm^2	2.255	4.058	5.026	5.691	5.264	5.316
Thorium-232	pCi/cm^2	2.260	6.018	4.640	4.922	5.220	5.405
Uranium-235	pCi/cm^2	0.735	1.043	0.438	0.821		0.450
Uranium-238	pCi/cm^2	13.249	17.180	13.890	13.820	12.238	11.320
Location=ORR; Formation=CHEPULTEPEC; Site=52; 00–05=1654; 05–10=1655; 10–15=1656; 15–20=1657; 20–25=1658; 25–30=1659; Phase=2							
Cesium-137	pCi/cm^2	4.143	4.188	1.285	0.492	0.135	0.039
Potassium-40	pCi/cm^2	8.046	13.060	14.560	14.250	15.300	18.220
Radium-226	pCi/cm^2	2.930	5.092	5.203	4.933	5.050	5.504
Thorium-232	pCi/cm^2	3.414	4.374	4.764	4.024	4.181	4.401
Uranium-235	pCi/cm^2	0.890	0.941	0.949	1.713	0.637	0.510
Uranium-238	pCi/cm^2	11.851	13.405	12.829	9.655	11.223	8.168
Location=ORR; Formation=CHEPULTEPEC; Site=53; 00–05=1642; 05–10=1643; 10–15=1644; 15–20=1645; 20–25=1646; 25–30=1647; Phase=2							
Cesium-137	pCi/cm^2	3.263	1.955	0.681	0.162	0.144	0.036
Potassium-40	pCi/cm^2	8.500	11.890	15.960	15.520	13.910	16.270
Radium-226	pCi/cm^2	2.535	3.989	4.181	4.056	3.623	3.742
Thorium-232	pCi/cm^2	2.588	2.950	3.154	3.112	2.710	2.818
Uranium-235	pCi/cm^2	0.516	0.342	0.685	0.307	0.072	0.293
Location=ORR; Formation=CHEPULTEPEC; Site=66; 00–05=1821; 05–10=1822; 10–15=1823; 15–20=1824; 20–25=1825; 25–30=1826; Phase=2							
Cesium-137	pCi/cm^2	3.375	1.316	0.620	0.200	0.124	0.018
Potassium-40	pCi/cm^2	13.300	15.200	16.290	26.010	32.570	42.060
Radium-226	pCi/cm^2	3.737	4.087	3.825	5.272	5.297	5.242
Thorium-232	pCi/cm^2	2.700	3.252	2.789	4.452	6.019	6.648
Uranium-235	pCi/cm^2	1.068	0.617	0.749	0.777	0.472	0.315
Location=ORR; Formation=CHEPULTEPEC; Site=68; 00–05=1787; 05–10=1788; 10–15=1789; 15–20=1790; 20–25=1791; 25–30=1792; Phase=2							
Cesium-137	pCi/cm^2	4.046	3.647	1.984	0.597	0.100	0.062
Potassium-40	pCi/cm^2	10.620	14.090	13.360	16.550	16.940	19.210
Radium-226	pCi/cm^2	3.338	4.303	5.089	4.967	5.168	5.199
Thorium-232	pCi/cm^2	2.265	3.259	3.195	3.568	3.449	3.746
Uranium-235	pCi/cm^2	0.558	0.968	0.968	0.765	0.856	0.212
Uranium-238	pCi/cm^2	9.643	12.310	15.404	13.122	12.180	7.516
Location=ORR; Formation=CHEPULTEPEC; Site=73; 00–05=1841; 05–10=1842; 10–15=1843; 15–20=1844; 20–25=1845; 25–30=1846; Phase=2							
Cesium-137	pCi/cm^2	5.746	4.756	1.738	0.194	0.184	0.134
Potassium-40	pCi/cm^2	13.290	21.450	22.040	40.720	42.860	46.870
Radium-226	pCi/cm^2	2.911	5.545	4.911	6.583	5.496	6.519
Thorium-232	pCi/cm^2	2.034	3.555	3.011	4.764	4.729	5.370
Uranium-235	pCi/cm^2	0.447	1.600	0.449		1.124	0.618
Uranium-238	pCi/cm^2	10.840	16.400	15.895	13.452	19.780	12.530

Table B.3 (continued)

Analysis	Units	Depth (cm) 00–05	05–10	10–15	15–20	20–25	25–30
Location=ORR; Formation=CHEPULTEPEC; Site=74; 00–05=1773; 05–10=1774; 10–15=1775; 15–20=1776; 20–25=1777; 25–30=1778; Phase=2							
Cesium-137	pCi/cm^2	5.000	1.682	0.303	0.143	0.127	0.031
Potassium-40	pCi/cm^2	11.720	11.950	15.510	18.430	20.540	23.220
Radium-226	pCi/cm^2	3.083	3.404	4.567	4.604	4.729	4.781
Thorium-232	pCi/cm^2	1.953	2.359	2.694	2.920	3.325	3.502
Uranium-235	pCi/cm^2	0.286	0.696	0.922	0.566	0.757	0.173
Uranium-238	pCi/cm^2	14.680	12.691	15.462	15.630	10.938	12.460
Location=ORR; Formation=CHEPULTEPEC; Site=77; 00–05=1690; 05–10=1691; 10–15=1692; 15–20=1693; 20–25=1694; 25–30=1695; Phase=2							
Cesium-137	pCi/cm^2	7.507	3.694	0.518	0.113	0.044	0.012
Potassium-40	pCi/cm^2	10.370	13.590	17.450	19.790	23.470	20.150
Radium-226	pCi/cm^2	3.391	3.953	5.012	5.137	5.267	5.505
Thorium-232	pCi/cm^2	3.043	3.689	4.271	4.744	5.127	4.373
Uranium-235	pCi/cm^2	0.884		0.883	0.682	0.439	0.447
Uranium-238	pCi/cm^2	14.449	14.670	14.020	15.370	10.842	7.632
Location=ORR; Formation=CHEPULTEPEC; Site=78; 00–05=1672; 05–10=1673; 10–15=1674; 15–20=1675; 20–25=1676; 25–30=1677; Phase=2							
Cesium-137	pCi/cm^2	4.537	3.070	0.900	0.128	0.038	0.014
Potassium-40	pCi/cm^2	14.980	15.190	16.610	19.380	16.900	21.940
Radium-226	pCi/cm^2	4.716	4.423	4.568	4.821	4.738	5.736
Thorium-232	pCi/cm^2	2.890	2.958	3.242	4.190	3.758	4.597
Uranium-235	pCi/cm^2	0.826	0.876	0.858	0.823	0.238	0.460
Uranium-238	pCi/cm^2	17.424	10.940	10.810	12.542	6.167	10.380
Location=ORR; Formation=CHEPULTEPEC; Site=85; 00–05=1726; 05–10=1727; 10–15=1728; 15–20=1729; 20–25=1730; 25–30=1731; Phase=2							
Cesium-137	pCi/cm^2	4.605	2.668	0.615	0.219	0.139	0.015
Potassium-40	pCi/cm^2	16.770	22.070	20.660	23.660	25.350	24.250
Radium-226	pCi/cm^2	3.793	4.559	3.852	4.148	4.276	4.067
Thorium-232	pCi/cm^2	2.861	3.500	2.919	3.459	3.620	3.366
Uranium-235	pCi/cm^2	0.898	0.875	0.816	0.562	0.689	0.101
Uranium-238	pCi/cm^2	8.429	5.773	13.717	15.510	8.565	6.518
Location=ORR; Formation=CHEPULTEPEC; Site=86; 00–05=1708; 05–10=1709; 10–15=1710; 15–20=1711; 20–25=1712; 25–30=1713; Phase=2							
Cesium-137	pCi/cm^2	4.733	1.670	0.819	0.291	0.123	0.057
Potassium-40	pCi/cm^2	3.521	9.244	13.310	16.210	16.750	18.890
Radium-226	pCi/cm^2	2.221	3.721	3.308	3.385	3.623	3.445
Thorium-232	pCi/cm^2	0.502	1.369	2.116	2.328	2.772	2.558
Uranium-235	pCi/cm^2	0.605	0.820	1.383	0.663	1.036	0.348
Uranium-238	pCi/cm^2	12.140	11.950	16.270	15.210	10.470	7.805
Location=ORR; Formation=CHEPULTEPEC; Site=90; 00–05=1757; 05–10=1758; 10–15=1759; 15–20=1760; 20–25=1761; 25–30=1762; Phase=2							
Cesium-137	pCi/cm^2	5.479	3.047	0.644	0.359	0.252	0.105
Potassium-40	pCi/cm^2	10.110	12.210	13.530	14.450	25.100	37.730
Radium-226	pCi/cm^2	2.893	4.111	3.825	3.118	4.051	3.889
Thorium-232	pCi/cm^2	3.066	4.114	3.794	3.159	4.193	5.508
Uranium-235	pCi/cm^2	0.374	1.521	0.298	0.638	0.659	0.113
Uranium-238	pCi/cm^2	4.853	12.822	13.283	6.859	15.300	5.025

Table B.3 (continued)

Analysis	Units	Depth (cm) 00–05	05–10	10–15	15–20	20–25	25–30
Location=ORR; Formation=CHICKAMAUGA Bethel V; Site=100; 00-05=1883; 05-10=1884; 10-15=1885; 15-20=1886; 20-25=1887; 25-30=1888; Phase=2							
Cesium-137	pCi/cm^2	12.520	0.550	0.156	0.149	0.165	0.160
Potassium-40	pCi/cm^2	75.810	165.600	187.800	191.000	199.200	175.200
Radium-226	pCi/cm^2	2.186	3.860	3.428	2.861	3.308	3.046
Thorium-232	pCi/cm^2	3.539	7.663	8.115	8.062	8.295	7.421
Uranium-235	pCi/cm^2	0.944	1.182	0.965	0.957	0.995	0.114
Location=ORR; Formation=CHICKAMAUGA Bethel V; Site=101; 00-05=1920; 05-10=1921; 10-15=1922; 15-20=1923; 20-25=1924; 25-30=1925; Phase=2							
Cesium-137	pCi/cm^2	11.450	6.548	2.665	1.156	0.662	0.411
Potassium-40	pCi/cm^2	105.000	159.900	154.100	171.700	170.500	180.600
Radium-226	pCi/cm^2	2.598	3.458	3.604	3.489	3.504	3.785
Thorium-232	pCi/cm^2	4.993	7.101	7.115	7.870	7.735	8.133
Uranium-235	pCi/cm^2	1.053	1.208	1.154	0.431	0.944	0.246
Location=ORR; Formation=CHICKAMAUGA Bethel V; Site=102; 00-05=1914; 05-10=1915; 10-15=1916; 15-20=1917; 20-25=1918; 25-30=1919; Phase=2							
Cesium-137	pCi/cm^2	8.069	6.771	1.729	0.517	0.219	0.051
Potassium-40	pCi/cm^2	51.380	71.770	84.500	91.910	96.760	118.600
Radium-226	pCi/cm^2	3.085	4.335	4.837	4.241	4.502	4.369
Thorium-232	pCi/cm^2	5.194	6.978	7.836	7.672	7.190	7.983
Uranium-235	pCi/cm^2	0.582	1.143	0.753	0.934	0.899	0.721
Location=ORR; Formation=CHICKAMAUGA Bethel V; Site=103; 00-05=1908; 05-10=1909; 10-15=1910; 15-20=1911; 20-25=1912; 25-30=1913; Phase=2							
Cesium-137	pCi/cm^2	5.958	0.709	0.578	0.057	0.234	0.094
Potassium-40	pCi/cm^2	126.200	181.400	169.700	165.900	167.500	172.300
Radium-226	pCi/cm^2	2.620	3.611	3.096	3.267	3.013	2.977
Thorium-232	pCi/cm^2	4.180	7.722	7.461	7.385	7.784	7.991
Uranium-235	pCi/cm^2	0.926	1.246	1.172	1.173	0.291	0.528
Location=ORR; Formation=CHICKAMAUGA Bethel V; Site=104; 00-05=1981; 05-10=1982; 10-15=1983; 15-20=1984; 20-25=1985; 25-30=1986; Phase=2							
Cesium-137	pCi/cm^2	7.139	2.257	0.646	0.216	0.034	0.082
Potassium-40	pCi/cm^2	61.890	131.000	154.300	167.000	165.100	159.900
Radium-226	pCi/cm^2	2.312	3.780	3.888	3.995	3.383	3.109
Thorium-232	pCi/cm^2	2.337	4.221	5.430	6.903	7.979	8.067
Uranium-235	pCi/cm^2	0.765	0.701	1.010	0.756	0.963	0.177
Uranium-238	pCi/cm^2			7.319	31.990	15.897	
Location=ORR; Formation=CHICKAMAUGA Bethel V; Site=108; 00-05=1987; 05-10=1988; 10-15=1989; 15-20=1990; 20-25=1991; 25-30=1992; Phase=2							
Cesium-137	pCi/cm^2	7.191	0.867	0.396	0.083	0.142	0.017
Potassium-40	pCi/cm^2	47.150	82.150	127.100	132.600	133.800	127.700
Radium-226	pCi/cm^2	4.887	5.442	5.281	4.347	3.847	3.475
Thorium-232	pCi/cm^2	7.454	9.752	9.738	9.477	8.991	8.818
Uranium-235	pCi/cm^2	1.611	1.422		0.072	1.306	0.300
Uranium-238	pCi/cm^2			21.328	20.277	17.330	6.348
Location=ORR; Formation=CHICKAMAUGA Bethel V; Site=110; 00-05=4032; 05-10=4033; 10-15=4034; 15-20=4035; 20-25=4036; 25-30=4037; Phase=2							
Cesium-137	pCi/cm^2	5.695	1.044	0.540	0.440	0.045	0.191
Potassium-40	pCi/cm^2	50.450	55.910	81.410	85.530	89.340	88.330

Table B.3 (continued)

Analysis	Units	Depth (cm) 00–05	05–10	10–15	15–20	20–25	25–30
Radium-226	pCi/cm^2	5.782	4.487	5.563	5.044	6.572	4.583
Thorium-232	pCi/cm^2	7.744	7.043	8.816	8.563	8.512	8.407
Uranium-235	pCi/cm^2	1.225	1.437	1.399	1.664	0.941	0.222
Uranium-238	pCi/cm^2				13.497	15.290	5.483
Location=ORR; Formation=CHICKAMAUGA Bethel V; Site=115; 00-05=4026; 05-10=4027; 10-15=4028; 15-20=4029; 20-25=4030; 25-30=4031; Phase=2							
Cesium-137	pCi/cm^2	6.913	1.540	0.491	0.220	0.218	0.141
Potassium-40	pCi/cm^2	29.290	48.130	62.080	68.000	73.120	69.860
Radium-226	pCi/cm^2	3.959	5.565	6.102	5.872	6.245	6.260
Thorium-232	pCi/cm^2	5.486	8.658	9.685	9.840	9.788	8.522
Uranium-235	pCi/cm^2	0.989	1.045	0.976	1.217	0.821	0.582
Uranium-238	pCi/cm^2	20.612	5.564	18.670	4.567	19.763	6.411
Location=ORR; Formation=CHICKAMAUGA Bethel V; Site=116; 00-05=4000; 05-10=4001; 10-15=4002; 15-20=4003; 20-25=4004; 25-30=4005; Phase=2							
Cesium-137	pCi/cm^2	4.999	1.915	0.541	0.222	0.164	0.093
Potassium-40	pCi/cm^2	65.140	94.250	108.800	115.800	141.800	150.000
Radium-226	pCi/cm^2	4.079	4.565	4.837	4.028	3.750	3.956
Thorium-232	pCi/cm^2	5.421	7.799	8.474	7.982	8.938	9.220
Uranium-235	pCi/cm^2	0.398	1.134	1.399	0.897	0.133	0.328
Location=ORR; Formation=CHICKAMAUGA Bethel V; Site=117; 00-05=4013; 05-10=4014; 10-15=4015; 15-20=4016; 20-25=4017; 25-30=4018; Phase=2							
Cesium-137	pCi/cm^2	4.367	2.908	1.232	0.319	0.096	0.042
Potassium-40	pCi/cm^2	40.340	48.460	65.660	126.000	145.900	149.900
Radium-226	pCi/cm^2	4.026	4.286	4.687	3.725	3.975	3.378
Thorium-232	pCi/cm^2	5.021	6.052	7.110	8.365	8.811	8.465
Uranium-235	pCi/cm^2	0.967	1.038	1.120	0.935	0.612	0.254
Location=ORR; Formation=CHICKAMAUGA Bethel V; Site=93; 00-05=1871; 05-10=1872; 10-15=1873; 15-20=1874; 20-25=1875; 25-30=1876; Phase=2							
Cesium-137	pCi/cm^2	8.474	0.993	0.439	0.257	0.252	0.165
Potassium-40	pCi/cm^2	73.850	99.450	116.000	112.800	126.800	125.300
Radium-226	pCi/cm^2	3.939	4.398	3.621	3.233	3.447	3.968
Thorium-232	pCi/cm^2	6.591	8.272	7.632	7.007	7.741	7.280
Uranium-235	pCi/cm^2	1.084	2.156	0.888	0.885	0.935	0.668
Location=ORR; Formation=CHICKAMAUGA Bethel V; Site=99; 00-05=1877; 05-10=1878; 10-15=1879; 15-20=1880; 20-25=1881; 25-30=1882; Phase=2							
Cesium-137	pCi/cm^2	8.641	2.230	1.286	0.235	0.098	0.051
Potassium-40	pCi/cm^2	81.330	81.630	85.390	102.900	109.800	117.800
Radium-226	pCi/cm^2	5.896	5.879	5.434	6.126	6.212	6.326
Thorium-232	pCi/cm^2	8.450	8.812	8.240	9.208	9.050	9.464
Uranium-235	pCi/cm^2	1.331	1.271	0.957	1.146	1.054	0.338
Location=ORR; Formation=CHICKAMAUGA K-25; Site=118; 00-05=4077; 05-10=4078; 10-15=4079; 15-20=4080; 20-25=4081; 25-30=4082; Phase=2							
Cesium-137	pCi/cm^2	7.869	1.200	0.156	0.323	0.280	0.097
Potassium-40	pCi/cm^2	62.720	122.300	149.700	125.100	142.500	151.100
Radium-226	pCi/cm^2	2.694	4.021	3.759	3.470	3.861	3.392
Thorium-232	pCi/cm^2	5.157	8.513	9.713	8.212	9.603	9.296
Uranium-235	pCi/cm^2	1.556	1.342	1.445	1.873	1.409	0.650
Uranium-238	pCi/cm^2	19.400	28.450	25.933	18.400	29.434	11.220

Table B.3 (continued)

Analysis	Units	Depth (cm) 00–05	05–10	10–15	15–20	20–25	25–30
Location=ORR; Formation=CHICKAMAUGA K-25; Site=119; 00–05=4180; 05–10=4181; 10–15=4182; 15–20=4183; 20–25=4184; 25–30=4185; Phase=2							
Cesium-137	pCi/cm^2	4.432	2.875	0.400	0.252	0.252	0.090
Potassium-40	pCi/cm^2	37.320	58.160	84.170	99.440	127.000	143.000
Radium-226	pCi/cm^2	3.206	4.540	5.987	5.053	4.622	3.704
Thorium-232	pCi/cm^2	3.897	6.497	9.420	7.940	8.030	7.973
Uranium-235	pCi/cm^2	1.184	1.685	1.213	1.239	1.389	0.368
Uranium-238	pCi/cm^2	18.213	19.404	23.751	12.400	19.040	7.784
Location=ORR; Formation=CHICKAMAUGA K-25; Site=120; 00–05=4071; 05–10=4072; 10–15=4073; 15–20=4074; 20–25=4075; 25–30=4076; Phase=2							
Cesium-137	pCi/cm^2	4.635	2.907	1.015	0.317	0.235	0.041
Potassium-40	pCi/cm^2	18.010	31.480	31.570	42.240	52.500	65.180
Radium-226	pCi/cm^2	4.852	5.986	7.008	6.901	7.032	5.844
Thorium-232	pCi/cm^2	4.569	6.220	7.461	8.373	8.530	8.535
Uranium-235	pCi/cm^2	1.053	0.911	0.349	1.590	1.136	0.547
Uranium-238	pCi/cm^2	14.190	22.350	11.750	16.090	25.172	13.120
Location=ORR; Formation=CHICKAMAUGA K-25; Site=121; 00–05=4186; 05–10=4187; 10–15=4188; 15–20=4189; 20–25=4190; 25–30=4191; Phase=2							
Cesium-137	pCi/cm^2	5.614	0.614	0.143	0.190	0.187	0.060
Potassium-40	pCi/cm^2	34.680	50.880	57.810	82.380	146.400	171.900
Radium-226	pCi/cm^2	3.917	5.116	4.640	4.307	2.751	2.813
Thorium-232	pCi/cm^2	4.612	6.574	6.059	6.283	6.771	7.250
Uranium-235	pCi/cm^2	0.838	0.525	0.305	1.014	0.951	0.243
Uranium-238	pCi/cm^2	17.664	20.514	17.386	17.690	21.470	9.990
Location=ORR; Formation=CHICKAMAUGA K-25; Site=122; 00–05=4192; 05–10=4193; 10–15=4194; 15–20=4195; 20–25=4196; 25–30=4197; Phase=2							
Cesium-137	pCi/cm^2	3.200	2.567	0.747	0.367	0.113	0.077
Potassium-40	pCi/cm^2	36.930	44.990	94.180	132.700	139.600	143.800
Radium-226	pCi/cm^2	3.124	4.065	4.953	5.386	5.273	4.168
Thorium-232	pCi/cm^2	3.485	4.449	6.771	8.769	8.467	8.378
Uranium-235	pCi/cm^2	0.772	0.151	0.700	1.244	1.183	0.352
Uranium-238	pCi/cm^2	21.623	16.132	13.120	21.308	9.286	7.347
Location=ORR; Formation=CHICKAMAUGA K-25; Site=123; 00–05=4210; 05–10=4211; 10–15=4212; 15–20=4213; 20–25=4214; 25–30=4215; Phase=2							
Cesium-137	pCi/cm^2	4.078	2.105	0.566	0.221	0.490	0.072
Potassium-40	pCi/cm^2	42.480	63.660	76.920	110.800	99.370	99.250
Radium-226	pCi/cm^2	3.425	3.906	3.817	3.801	3.500	3.548
Thorium-232	pCi/cm^2	6.102	7.253	7.931	9.505	8.385	8.636
Uranium-235	pCi/cm^2	0.636	1.053	1.132	1.081	0.542	0.380
Uranium-238	pCi/cm^2	17.477	20.203	19.810	23.055	19.458	8.558
Location=ORR; Formation=CHICKAMAUGA K-25; Site=124; 00–05=4204; 05–10=4205; 10–15=4206; 15–20=4207; 20–25=4208; 25–30=4209; Phase=2							
Cesium-137	pCi/cm^2	4.176	3.144	0.771	0.199	0.227	0.062
Potassium-40	pCi/cm^2	24.750	34.760	61.620	136.100	153.300	152.000
Radium-226	pCi/cm^2	2.966	3.467	4.839	4.351	4.305	3.497
Thorium-232	pCi/cm^2	4.101	6.258	8.797	8.917	8.942	8.666
Uranium-235	pCi/cm^2	1.091	0.961	1.133	1.149	1.181	0.267
Uranium-238	pCi/cm^2	16.950	15.130	19.474	23.255	26.484	7.506

Table B.3 (continued)

Analysis	Units	Depth (cm) 00–05	05–10	10–15	15–20	20–25	25–30
Location=ORR; Formation=CHICKAMAUGA K-25; Site=125; 00–05=4198; 05–10=4199; 10–15=4200; 15–20=4201; 20–25=4202; 25–30=4203; Phase=2							
Cesium-137	pCi/cm^2	5.157	1.684	0.587	0.186	0.207	0.085
Potassium-40	pCi/cm^2	35.070	45.780	70.250	88.310	116.400	124.600
Radium-226	pCi/cm^2	3.803	4.333	4.875	4.025	4.411	4.168
Thorium-232	pCi/cm^2	4.592	6.439	7.061	7.238	8.052	8.304
Uranium-235	pCi/cm^2	1.041	0.699	1.131	1.006	1.074	0.372
Uranium-238	pCi/cm^2	15.447	15.913	19.112	21.500	35.150	7.414
Location=ORR; Formation=CHICKAMAUGA K-25; Site=126; 00–05=4065; 05–10=4066; 10–15=4067; 15–20=4068; 20–25=4069; 25–30=4070; Phase=2							
Cesium-137	pCi/cm^2	6.911	1.569	0.487	0.216	0.078	0.043
Potassium-40	pCi/cm^2	60.190	86.140	105.900	93.230	128.300	130.700
Radium-226	pCi/cm^2	5.434	5.986	5.568	5.037	5.126	4.737
Thorium-232	pCi/cm^2	7.085	8.887	8.983	8.168	9.295	9.454
Uranium-235	pCi/cm^2	1.446	1.169	1.201	1.129	1.194	0.377
Uranium-238	pCi/cm^2	9.252	8.862	22.261	20.685	20.524	6.910
Location=ORR; Formation=CHICKAMAUGA K-25; Site=127; 00–05=4241; 05–10=4242; 10–15=4243; 15–20=4244; 20–25=4245; 25–30=4246; Phase=2							
Cesium-137	pCi/cm^2	7.888	1.126	0.335	0.198	0.275	0.060
Potassium-40	pCi/cm^2	76.220	112.700	117.000	130.400	117.700	126.100
Radium-226	pCi/cm^2	2.653	4.152	3.745	3.451	3.103	3.730
Thorium-232	pCi/cm^2	5.382	7.676	7.398	7.716	7.697	7.761
Uranium-235	pCi/cm^2	1.129	0.789	0.955	1.113	1.418	0.566
Uranium-238	pCi/cm^2	22.336	11.610	21.979	21.075	21.492	12.880
Location=ORR; Formation=CHICKAMAUGA K-25; Site=128; 00–05=4247; 05–10=4248; 10–15=4249; 15–20=4250; 20–25=4251; 25–30=4252; Phase=2							
Cesium-137	pCi/cm^2	6.468	1.528	0.593	0.182	0.192	0.119
Potassium-40	pCi/cm^2	39.320	66.470	55.080	89.670	122.800	110.400
Radium-226	pCi/cm^2	3.849	4.593	4.420	4.668	4.414	3.710
Thorium-232	pCi/cm^2	4.707	7.299	6.322	7.848	9.444	7.777
Uranium-235	pCi/cm^2	1.229	1.087	1.047	1.348	0.803	0.710
Uranium-238	pCi/cm^2	18.500	13.500	19.128	11.170	21.943	11.770
Location=ORR; Formation=CHICKAMAUGA K-25; Site=129; 00–05=4059; 05–10=4060; 10–15=4061; 15–20=4062; 20–25=4063; 25–30=4064; Phase=2							
Cesium-137	pCi/cm^2	5.763	1.902	0.745	0.484	0.274	0.077
Potassium-40	pCi/cm^2	16.240	31.980	52.620	78.430	95.520	96.940
Radium-226	pCi/cm^2	3.103	5.764	6.449	6.085	4.943	4.222
Thorium-232	pCi/cm^2	3.172	5.809	7.469	9.115	9.305	9.829
Uranium-235	pCi/cm^2	0.711	1.178	1.304	1.527	2.440	0.498
Uranium-238	pCi/cm^2	18.875	20.772	28.704	24.439	23.411	9.509
Location=ORR; Formation=COPPER RIDGE; Site=45; 00–05=1593; 05–10=1594; 10–15=1595; 15–20=1596; 20–25=1597; 25–30=1598; Phase=2							
Cesium-137	pCi/cm^2	6.360	1.194	0.309	0.083	0.112	0.063
Potassium-40	pCi/cm^2	11.650	13.410	18.040	16.830	16.670	17.340
Radium-226	pCi/cm^2	3.974	4.653	5.499	5.313	5.370	5.469
Thorium-232	pCi/cm^2	2.692	3.249	3.600	3.926	4.353	4.567
Uranium-235	pCi/cm^2	0.613	0.678	0.729	0.260	0.589	0.455

Table B.3 (continued)

Analysis	Units	Depth (cm) 00–05	05–10	10–15	15–20	20–25	25–30
Location=ORR; Formation=COPPER RIDGE; Site=51; 00–05=1566; 05–10=1567; 10–15=1568; 15–20=1569; 20–25=1570; 25–30=1571; Phase=2							
Cesium-137	pCi/cm^2	3.619	2.745	1.396	0.528	0.126	0.001
Potassium-40	pCi/cm^2	12.050	16.450	17.660	19.970	20.430	20.970
Radium-226	pCi/cm^2	3.540	4.564	5.058	5.352	5.021	5.185
Thorium-232	pCi/cm^2	3.266	3.973	4.127	4.212	3.879	4.374
Uranium-235	pCi/cm^2	0.388	0.722	0.864	1.554	0.784	0.333
Location=ORR; Formation=COPPER RIDGE; Site=54; 00–05=1630; 05–10=1631; 10–15=1632; 15–20=1633; 20–25=1634; 25–30=1635; Phase=2							
Cesium-137	pCi/cm^2	3.418	2.364	0.937	0.407	0.319	0.312
Potassium-40	pCi/cm^2	14.360	21.450	23.850	26.690	28.190	24.320
Radium-226	pCi/cm^2	4.360	6.317	6.812	6.579	6.832	6.863
Thorium-232	pCi/cm^2	2.808	3.869	4.156	3.938	4.731	3.974
Uranium-235	pCi/cm^2	0.080	1.257	0.826	0.214	0.844	0.466
Location=ORR; Formation=COPPER RIDGE; Site=55; 00–05=1560; 05–10=1561; 10–15=1562; 15–20=1563; 20–25=1564; 25–30=1565; Phase=2							
Cesium-137	pCi/cm^2	2.415	2.996	2.242	0.698	0.093	0.095
Potassium-40	pCi/cm^2	7.522	13.170	20.880	19.310	20.590	20.440
Radium-226	pCi/cm^2	2.651	4.309	5.465	5.676	5.724	5.533
Thorium-232	pCi/cm^2	1.634	2.798	3.446	3.508	3.715	3.392
Uranium-235	pCi/cm^2	0.589	0.783	0.409	0.801	0.563	0.339
Location=ORR; Formation=COPPER RIDGE; Site=58; 00–05=1519; 05–10=1520; 10–15=1521; 15–20=1522; 20–25=1523; 25–30=1524; Phase=2							
Cesium-137	pCi/cm^2	3.551	2.283	1.078	0.179	0.115	0.002
Potassium-40	pCi/cm^2	15.790	21.110	23.070	22.990	22.510	20.540
Radium-226	pCi/cm^2	3.488	5.129	5.316	5.765	5.385	5.163
Thorium-232	pCi/cm^2	3.198	4.560	4.708	4.757	4.515	4.644
Uranium-235	pCi/cm^2	0.681	0.849	0.750	0.557	0.615	0.456
Location=ORR; Formation=COPPER RIDGE; Site=59; 00–05=1513; 05–10=1514; 10–15=1515; 15–20=1516; 20–25=1517; 25–30=1518; Phase=2							
Cesium-137	pCi/cm^2	5.617	1.152	0.531	0.183	0.101	0.131
Potassium-40	pCi/cm^2	12.580	17.160	15.170	15.760	21.290	21.210
Radium-226	pCi/cm^2	3.646	5.337	5.189	5.506	6.024	6.198
Thorium-232	pCi/cm^2	2.276	3.964	3.706	3.825	4.416	4.180
Uranium-235	pCi/cm^2	0.702	0.463	1.263	0.387	0.805	0.360
Location=ORR; Formation=COPPER RIDGE; Site=60; 00–05=1572; 05–10=1573; 10–15=1574; 15–20=1575; 20–25=1576; 25–30=1577; Phase=2							
Cesium-137	pCi/cm^2	3.948	1.230	0.467	0.221	0.185	0.182
Potassium-40	pCi/cm^2	8.893	12.280	12.180	15.070	18.600	18.610
Radium-226	pCi/cm^2	3.909	4.692	4.494	5.161	5.510	5.504
Thorium-232	pCi/cm^2	3.098	3.968	4.031	5.325	6.105	6.128
Uranium-235	pCi/cm^2	0.859	1.331	0.888	0.806	0.819	0.305
Location=ORR; Formation=COPPER RIDGE; Site=62; 00–05=1554; 05–10=1555; 10–15=1556; 15–20=1557; 20–25=1558; 25–30=1559; Phase=2							
Cesium-137	pCi/cm^2	6.207	2.584	0.718	0.574	0.236	0.128
Potassium-40	pCi/cm^2	11.640	12.670	13.270	16.350	15.850	13.940
Radium-226	pCi/cm^2	3.911	4.801	5.174	5.194	5.090	4.466

Table B.3 (continued)

Analysis	Units	Depth (cm) 00–05	05–10	10–15	15–20	20–25	25–30
Thorium-232	pCi/cm^2	3.242	4.264	4.226	5.067	4.682	3.822
Uranium-235	pCi/cm^2	0.759	0.500	0.759	0.801	0.303	0.325
Location=ORR; Formation=COPPER RIDGE; Site=64; 00–05=1624; 05–10=1625; 10–15=1626; 15–20=1627; 20–25=1628; 25–30=1629; Phase=2							
Cesium-137	pCi/cm^2	4.652	2.859	0.751	0.332	0.170	0.054
Potassium-40	pCi/cm^2	15.680	22.240	22.400	27.820	25.720	40.450
Radium-226	pCi/cm^2	3.915	6.486	6.887	6.897	6.688	9.077
Thorium-232	pCi/cm^2	2.168	2.916	3.489	3.881	3.845	5.175
Uranium-235	pCi/cm^2	0.641	0.770	0.493	0.703	0.399	0.328
Location=ORR; Formation=COPPER RIDGE; Site=75; 00–05=1584; 05–10=1585; 10–15=1586; 15–20=1587; 20–25=1588; 25–30=1589; Phase=2							
Cesium-137	pCi/cm^2	5.587	3.823	0.529	0.061	0.047	0.047
Potassium-40	pCi/cm^2	14.490	19.750	18.200	23.800	19.540	19.510
Radium-226	pCi/cm^2	4.454	5.478	5.593	5.732	5.643	5.644
Thorium-232	pCi/cm^2	3.947	4.432	4.222	4.194	4.058	4.188
Uranium-235	pCi/cm^2	0.777	0.147	0.251	1.214	0.667	0.299
Location=ORR; Formation=COPPER RIDGE; Site=83; 00–05=1636; 05–10=1637; 10–15=1638; 15–20=1639; 20–25=1640; 25–30=1641; Phase=2							
Cesium-137	pCi/cm^2	6.032	2.357	0.453	0.087	0.079	0.060
Potassium-40	pCi/cm^2	13.350	15.770	19.290	23.200	23.270	25.080
Radium-226	pCi/cm^2	3.680	4.825	5.953	6.484	6.590	6.816
Thorium-232	pCi/cm^2	3.142	4.001	4.174	4.907	4.839	5.181
Uranium-235	pCi/cm^2	0.332	0.528	0.298	0.407	0.603	0.841
Location=ORR; Formation=COPPER RIDGE; Site=91; 00–05=1525; 05–10=1526; 10–15=1527; 15–20=1528; 20–25=1529; 25–30=1530; Phase=2							
Cesium-137	pCi/cm^2	6.114	4.079	0.657	0.110	0.113	0.003
Potassium-40	pCi/cm^2	12.500	17.190	17.320	19.800	22.030	26.290
Radium-226	pCi/cm^2	3.990	5.152	6.148	6.265	6.295	6.531
Thorium-232	pCi/cm^2	2.852	3.986	4.752	4.753	4.943	5.503
Uranium-235	pCi/cm^2	0.764	0.670	0.653	0.376	1.206	0.719
Location=ORR; Formation=DISMAL GAP; Site=10; 00–05=1129; 05–10=1130; 10–15=1131; 15–20=1132; 20–25=1133; 25–30=1134; Phase=1							
Cesium-137	pCi/cm^2	4.759	3.682	1.414	0.873	0.174	0.082
Potassium-40	pCi/cm^2	76.680	99.600	95.990	97.560	100.900	95.320
Radium-226	pCi/cm^2	2.500	2.797	2.926	2.961	4.928	2.817
Thorium-232	pCi/cm^2	4.069	5.306	5.565	5.801	6.721	6.130
Uranium-235	pCi/cm^2	0.591	0.790	0.398	0.767	0.872	0.135
Uranium-238	pCi/cm^2	12.321	15.515	14.191	14.284	14.644	2.261
Location=ORR; Formation=DISMAL GAP; Site=11; 00–05=1040; 05–10=1041; 10–15=1042; 15–20=1043; 20–25=1044; 25–30=1045; Phase=1							
Cesium-137	pCi/cm^2	4.310	1.672	0.583	0.398	0.200	0.086
Potassium-40	pCi/cm^2	87.030	106.900	113.000	97.550	112.200	120.800
Radium-226	pCi/cm^2	2.768	2.947	2.979	2.949	2.918	3.400
Thorium-232	pCi/cm^2	4.631	5.391	6.231	6.035	6.103	6.546
Uranium-235	pCi/cm^2	0.429	0.697	0.524	0.506	0.476	0.530

Table B.3 (continued)

Analysis	Units	Depth (cm) 00–05	05–10	10–15	15–20	20–25	25–30
Location=ORR; Formation=DISMAL GAP; Site=19; 00–05=1093; 05–10=1094; 10–15=1095; 15–20=1096; 20–25=1097; 25–30=1098; Phase=1							
Cesium-137	pCi/cm^2	8.065	0.603	0.126	0.029	0.048	0.027
Potassium-40	pCi/cm^2	68.050	85.770	96.070	93.080	115.000	121.400
Radium-226	pCi/cm^2	3.882	4.665	4.566	4.279	4.610	4.714
Thorium-232	pCi/cm^2	4.830	6.485	6.457	6.428	7.356	7.756
Uranium-235	pCi/cm^2	0.952	0.956	0.584	0.324	0.270	0.632
Uranium-238	pCi/cm^2	16.393	15.355	4.717	8.440	3.522	10.930
Location=ORR; Formation=DISMAL GAP; Site=2; 00–05=1183; 05–10=1184; 10–15=1185; 15–20=1186; 20–25=1187; 25–30=1188; Phase=1							
Cesium-137	pCi/cm^2	6.188	1.218	0.427	0.279	0.182	0.077
Potassium-40	pCi/cm^2	54.710	94.370	111.200	142.000	148.600	134.300
Radium-226	pCi/cm^2	3.256	4.324	3.792	4.020	4.970	3.457
Thorium-232	pCi/cm^2	3.648	5.723	6.086	7.001	7.637	8.072
Uranium-235	pCi/cm^2	0.348	0.835	0.836	0.918	1.223	0.943
Uranium-238	pCi/cm^2	11.796	13.721	13.507	13.390	15.677	16.343
Location=ORR; Formation=DISMAL GAP; Site=22; 00–05=1100; 05–10=1101; 10–15=1102; 15–20=1103; 20–25=1104; 25–30=1105; Phase=1							
Cesium-137	pCi/cm^2	6.120	2.393	0.568	0.156	0.142	0.055
Potassium-40	pCi/cm^2	54.530	99.450	113.400	147.200	154.600	152.500
Radium-226	pCi/cm^2	2.679	4.334	4.723	4.330	3.743	3.081
Thorium-232	pCi/cm^2	3.902	6.480	7.290	7.805	7.806	7.730
Uranium-235	pCi/cm^2	0.720	0.698		0.926		0.289
Uranium-238	pCi/cm^2	13.006	14.738	15.277	15.990	15.394	7.227
Location=ORR; Formation=DISMAL GAP; Site=26; 00–05=1207; 05–10=1208; 10–15=1209; 15–20=1210; 20–25=1211; 25–30=1212; Phase=1							
Cesium-137	pCi/cm^2	6.384	1.531	0.519	0.136	0.056	0.063
Potassium-40	pCi/cm^2	85.340	93.340	108.600	113.700	103.800	127.600
Radium-226	pCi/cm^2	3.909	2.895	3.338	3.495	3.129	3.269
Thorium-232	pCi/cm^2	4.963	5.114	5.928	6.511	6.291	6.814
Uranium-235	pCi/cm^2	0.820	0.520	0.856	0.799	0.826	0.240
Uranium-238	pCi/cm^2	15.568	14.741	15.094	16.066	12.170	7.890
Location=ORR; Formation=DISMAL GAP; Site=27; 00–05=1009; 05–10=1010; 10–15=1011; 15–20=1012; 20–25=1013; 25–30=1014; Phase=1							
Cesium-137	pCi/cm^2	4.135	1.333	0.837	0.055	0.043	0.007
Potassium-40	pCi/cm^2	41.690	59.540	67.120	76.560	86.630	99.010
Radium-226	pCi/cm^2	2.484	3.472	3.156	3.755	3.904	3.875
Thorium-232	pCi/cm^2	3.254	4.402	4.676	5.155	5.328	5.799
Uranium-235	pCi/cm^2	0.536	0.465	0.653	0.558	0.588	0.554
Location=ORR; Formation=DISMAL GAP; Site=32; 00–05=1087; 05–10=1088; 10–15=1089; 15–20=1090; 20–25=1091; 25–30=1092; Phase=1							
Cesium-137	pCi/cm^2	5.229	1.642	0.908	0.103	0.001	0.003
Potassium-40	pCi/cm^2	76.990	105.300	112.200	116.100	130.400	148.800
Radium-226	pCi/cm^2	3.274	3.960	4.944	4.759	3.796	3.753
Thorium-232	pCi/cm^2	5.120	6.369	7.043	7.172	7.508	7.493
Uranium-235	pCi/cm^2	0.380	0.345	0.841	0.392	0.389	0.321
Uranium-238	pCi/cm^2	5.161	8.219	14.870	8.259	5.169	5.215

Table B.3 (continued)

Analysis	Units	Depth (cm) 00–05	05–10	10–15	15–20	20–25	25–30
Location=ORR; Formation=DISMAL GAP; Site=33; 00–05=1109; 05–10=1110; 10–15=1111; 15–20=1112; 20–25=1113; 25–30=1114; Phase=1							
Cesium-137	pCi/cm^2	6.244	2.304	0.322	0.194	0.202	0.128
Potassium-40	pCi/cm^2	44.920	108.000	131.000	114.500	118.700	125.600
Radium-226	pCi/cm^2	2.859	4.659	4.027	3.814	4.718	4.797
Thorium-232	pCi/cm^2	3.206	6.592	7.584	7.203	8.378	7.648
Uranium-235	pCi/cm^2	0.335	1.100	0.827	1.053		0.855
Uranium-238	pCi/cm^2	18.409	21.350	24.996	19.684	15.260	15.554
Location=ORR; Formation=DISMAL GAP; Site=35; 00–05=1116; 05–10=1117; 10–15=1118; 15–20=1119; 20–25=1120; 25–30=1121; Phase=1							
Cesium-137	pCi/cm^2	4.784	0.668	0.140	0.128	0.022	0.130
Potassium-40	pCi/cm^2	33.850	38.070	39.780	46.950	57.570	72.430
Radium-226	pCi/cm^2	3.943	5.466	6.091	5.333	5.337	5.597
Thorium-232	pCi/cm^2	4.394	6.303	6.220	6.354	6.657	7.148
Uranium-235	pCi/cm^2	0.646	0.736	0.907	0.894	0.165	0.722
Uranium-238	pCi/cm^2	16.810	13.795	5.152	27.200	9.461	16.568
Location=ORR; Formation=DISMAL GAP; Site=41; 00–05=1028; 05–10=1029; 10–15=1030; 15–20=1031; 20–25=1032; 25–30=1033; Phase=1							
Cesium-137	pCi/cm^2	5.877	2.912	1.600	0.336	0.082	0.087
Potassium-40	pCi/cm^2	30.520	48.050	54.250	79.970	73.820	80.450
Radium-226	pCi/cm^2	2.148	3.498	3.372	2.633	2.342	3.005
Thorium-232	pCi/cm^2	3.021	4.885	5.164	6.088	6.156	6.417
Uranium-235	pCi/cm^2	0.539	0.638	0.557	0.604	0.488	0.527
Location=ORR; Formation=DISMAL GAP; Site=43; 00–05=1240; 05–10=1241; 10–15=1242; 15–20=1243; 20–25=1244; 25–30=1245; Phase=1							
Cesium-137	pCi/cm^2	5.571	1.920	0.434	0.195	0.172	0.199
Potassium-40	pCi/cm^2	72.950	93.950	99.590	107.500	104.200	115.300
Radium-226	pCi/cm^2	3.711	5.460	5.157	4.374	3.890	3.719
Thorium-232	pCi/cm^2	5.417	6.589	7.005	7.418	6.849	6.566
Uranium-235	pCi/cm^2	1.104	1.170		1.022	1.016	0.957
Uranium-238	pCi/cm^2	21.230	15.220	10.830	16.600	32.340	21.395
Location=ORR; Formation=NOLICHUCKY; Site=13; 00–05=1355; 05–10=1356; 10–15=1357; 15–20=1358; 20–25=1359; 25–30=1360; Phase=1							
Cesium-137	pCi/cm^2	5.246	2.894	0.620	0.152	0.028	0.045
Potassium-40	pCi/cm^2	64.080	81.320	93.600	94.870	101.300	127.600
Radium-226	pCi/cm^2	3.476	4.343	4.528	4.719	4.498	4.509
Thorium-232	pCi/cm^2	5.083	7.023	7.665	7.535	7.651	8.480
Uranium-235	pCi/cm^2	0.546	0.923	0.952	0.993	0.981	0.530
Uranium-238	pCi/cm^2	11.482	13.150	14.713	14.590	5.978	8.344
Location=ORR; Formation=NOLICHUCKY; Site=15; 00–05=1307; 05–10=1308; 10–15=1309; 15–20=1310; 20–25=1311; 25–30=1312; Phase=1							
Cesium-137	pCi/cm^2	5.201	2.050	0.387	0.195	0.249	0.208
Potassium-40	pCi/cm^2	29.890	40.970	47.510	58.740	72.330	84.280
Radium-226	pCi/cm^2	2.978	4.096	4.614	4.047	4.181	4.449
Thorium-232	pCi/cm^2	4.357	6.481	6.907	7.849	8.749	9.260
Uranium-235	pCi/cm^2	1.008	1.101	1.134	1.543	1.265	1.280
Uranium-238	pCi/cm^2	15.468	19.609	17.150	5.092	18.200	20.880

Table B.3 (continued)

Analysis	Units	Depth (cm) 00–05	05–10	10–15	15–20	20–25	25–30
Location=ORR; Formation=NOLICHUCKY; Site=16; 00–05=1343; 05–10=1344; 10–15=1345; 15–20=1346; 20–25=1347; 25–30=1348; Phase=1							
Cesium-137	pCi/cm^2	6.754	2.168	0.482	0.158		0.172
Potassium-40	pCi/cm^2	89.360	101.300	116.000	114.100	75.210	85.820
Radium-226	pCi/cm^2	3.987	4.735	5.308	5.095	4.962	4.896
Thorium-232	pCi/cm^2	6.797	8.466	9.270	9.033	8.650	8.897
Uranium-235	pCi/cm^2		0.637				0.604
Uranium-238	pCi/cm^2		4.548	22.990			7.154
Location=ORR; Formation=NOLICHUCKY; Site=21; 00–05=1367; 05–10=1368; 10–15=1369; 15–20=1370; 20–25=1371; 25–30=1372; Phase=1							
Cesium-137	pCi/cm^2	10.650	0.724	0.165	0.156	0.092	0.055
Potassium-40	pCi/cm^2	120.400	187.900	135.600	125.100	164.600	243.300
Radium-226	pCi/cm^2	2.470	3.830	4.301	2.916	3.226	3.424
Thorium-232	pCi/cm^2	6.099	10.100	8.872	9.165	9.904	10.100
Uranium-235	pCi/cm^2	0.885	0.388	1.027	0.570	1.440	0.200
Uranium-238	pCi/cm^2	15.931	18.495	16.164	17.040	15.696	8.715
Location=ORR; Formation=NOLICHUCKY; Site=23; 00–05=1316; 05–10=1317; 10–15=1318; 15–20=1319; 20–25=1320; 25–30=1321; Phase=1							
Cesium-137	pCi/cm^2	5.495	2.962	0.352	0.201	0.156	0.195
Potassium-40	pCi/cm^2	52.660	63.460	113.200	136.100	155.100	150.300
Radium-226	pCi/cm^2	3.798	4.033	3.469	2.755	3.297	2.868
Thorium-232	pCi/cm^2	5.900	6.549	8.027	8.120	9.116	8.672
Uranium-235	pCi/cm^2	1.116	1.120	1.209	1.134	1.278	1.186
Uranium-238	pCi/cm^2	13.191	14.080	20.266	21.804	26.601	13.340
Location=ORR; Formation=NOLICHUCKY; Site=24; 00–05=1361; 05–10=1362; 10–15=1363; 15–20=1364; 20–25=1365; 25–30=1366; Phase=1							
Cesium-137	pCi/cm^2	6.922	2.744	0.586	0.251	0.166	0.009
Potassium-40	pCi/cm^2	111.200	160.500	156.700	180.400	188.500	183.800
Radium-226	pCi/cm^2	3.299	4.234	3.918	4.073	4.095	3.638
Thorium-232	pCi/cm^2	5.847	8.358	8.674	9.820	10.210	9.445
Uranium-235	pCi/cm^2	0.876	0.993	0.951	1.044	1.015	0.290
Uranium-238	pCi/cm^2	15.657	28.660	6.363	16.118	17.571	5.318
Location=ORR; Formation=NOLICHUCKY; Site=25; 00–05=1325; 05–10=1326; 10–15=1327; 15–20=1328; 20–25=1329; 25–30=1330; Phase=1							
Cesium-137	pCi/cm^2	6.829	0.357	0.152	0.265	0.042	
Potassium-40	pCi/cm^2	124.400	151.300	152.500	164.200	186.600	202.000
Radium-226	pCi/cm^2	3.761	4.388	4.583	3.857	3.579	3.449
Thorium-232	pCi/cm^2	7.051	9.536	9.616	9.597	9.744	10.050
Uranium-235	pCi/cm^2	1.223			1.477		
Uranium-238	pCi/cm^2			9.958			
Location=ORR; Formation=NOLICHUCKY; Site=28; 00–05=1337; 05–10=1338; 10–15=1339; 15–20=1340; 20–25=1341; 25–30=1342; Phase=1							
Cesium-137	pCi/cm^2	5.695	2.859	0.971	0.179	0.156	0.053
Potassium-40	pCi/cm^2	42.790	79.640	79.650	178.900	233.000	237.500
Radium-226	pCi/cm^2	3.383	6.105	5.717	4.630	3.541	4.066
Thorium-232	pCi/cm^2	4.124	7.475	8.001	8.802	9.680	9.555
Uranium-235	pCi/cm^2	0.740	1.118	0.972	2.204	1.061	0.053
Uranium-238	pCi/cm^2	10.340	13.990	15.670	9.715	20.217	6.069

Table B.3 (continued)

Analysis	Units	Depth (cm) 00–05	05–10	10–15	15–20	20–25	25–30
Location=ORR; Formation=NOLICHUCKY; Site=3; 00–05=1331; 05–10=1332; 10–15=1333; 15–20=1334; 20–25=1335; 25–30=1336; Phase=1							
Cesium-137	pCi/cm^2	6.011	2.085	0.376	0.150	0.143	0.009
Potassium-40	pCi/cm^2	50.050	70.760	79.950	74.760	85.750	84.440
Radium-226	pCi/cm^2	3.893	4.494	4.726	4.667	3.919	3.968
Thorium-232	pCi/cm^2	5.128	6.320	7.117	7.192	7.071	6.891
Uranium-235	pCi/cm^2	0.799	0.870	0.406	0.862	0.640	0.162
Uranium-238	pCi/cm^2	12.778	12.496	14.210	14.138	13.344	4.559
Location=ORR; Formation=NOLICHUCKY; Site=31; 00–05=1373; 05–10=1374; 10–15=1375; 15–20=1376; 20–25=1377; 25–30=1378; Phase=1							
Cesium-137	pCi/cm^2	8.026	2.515	0.424	0.116	0.057	0.069
Potassium-40	pCi/cm^2	33.620	48.780	49.680	55.620	74.250	97.400
Radium-226	pCi/cm^2	3.608	5.457	5.291	5.712	5.927	5.623
Thorium-232	pCi/cm^2	4.916	6.718	6.974	7.220	8.074	8.938
Uranium-235	pCi/cm^2	0.807	1.732	0.921	0.400	0.341	0.604
Uranium-238	pCi/cm^2	14.236	6.761	14.435	8.832	6.049	15.150
Location=ORR; Formation=NOLICHUCKY; Site=42; 00–05=1379; 05–10=1380; 10–15=1381; 15–20=1382; 20–25=1383; 25–30=1384; Phase=1							
Cesium-137	pCi/cm^2	5.113	1.114	0.269	0.172	0.028	0.064
Potassium-40	pCi/cm^2	57.730	82.200	135.500	163.400	141.600	135.000
Radium-226	pCi/cm^2	3.520	3.975	4.821	4.077	4.529	4.532
Thorium-232	pCi/cm^2	5.287	6.845	8.233	9.360	9.260	8.786
Uranium-235	pCi/cm^2	0.812	1.219	0.579	0.306	0.294	0.163
Uranium-238	pCi/cm^2	14.970	13.150	7.215	17.255	8.356	11.100
Location=ORR; Formation=NOLICHUCKY; Site=5; 00–05=1349; 05–10=1350; 10–15=1351; 15–20=1352; 20–25=1353; 25–30=1354; Phase=1							
Cesium-137	pCi/cm^2	6.040	2.063	0.628	0.207	0.069	0.025
Potassium-40	pCi/cm^2	44.860	47.850	69.000	85.700	96.650	103.100
Radium-226	pCi/cm^2	4.494	5.029	5.281	5.485	5.648	5.009
Thorium-232	pCi/cm^2	5.806	6.192	7.761	8.460	9.026	9.015
Uranium-235	pCi/cm^2	0.550	0.823	0.413	0.960	0.995	0.636
Uranium-238	pCi/cm^2	4.587	10.930	13.190	13.937	17.260	6.269
Location=ROA; Formation=COPPER RIDGE; Site=33; 00–05=3248; 05–10=3249; 10–15=3250; 15–20=3251; 20–25=3252; 25–30=3253; Phase=2							
Cesium-137	pCi/cm^2	7.157	1.144	0.799	0.468	0.054	0.149
Potassium-40	pCi/cm^2	18.440	37.040	34.320	35.950	35.550	36.400
Radium-226	pCi/cm^2	3.082	5.633	5.685	6.117	5.572	5.771
Thorium-232	pCi/cm^2	2.322	5.695	6.059	6.823	7.103	7.302
Uranium-235	pCi/cm^2		0.918	0.534	0.437	0.537	0.515
Location=ROA; Formation=COPPER RIDGE; Site=34; 00–05=3334; 05–10=3335; 10–15=3336; 15–20=3337; 20–25=3338; 25–30=3339; Phase=2							
Cesium-137	pCi/cm^2	7.316	2.429	0.953	0.290	0.080	0.144
Potassium-40	pCi/cm^2	10.050	19.840	20.600	25.850	26.790	29.060
Radium-226	pCi/cm^2	5.896	7.861	8.356	8.521	8.272	8.648
Thorium-232	pCi/cm^2	2.301	3.853	4.540	5.611	6.320	7.325
Uranium-235	pCi/cm^2	1.002	1.198	0.827	2.925	0.632	0.635
Uranium-238	pCi/cm^2	10.520	12.850	15.963	23.460	12.220	18.970

Table B.3 (continued)

Analysis	Units	Depth (cm) 00–05	05–10	10–15	15–20	20–25	25–30
Location=ROA; Formation=COPPER RIDGE; Site=35; 00–05=3239; 05–10=3240; 10–15=3241; 15–20=3242; 20–25=3243; 25–30=3244; Phase=2							
Cesium-137	pCi/cm^2	3.779	2.938	2.564	1.407	0.675	0.107
Potassium-40	pCi/cm^2	12.080	18.400	20.160	23.560	23.210	24.750
Radium-226	pCi/cm^2	3.587	4.812	5.045	5.073	5.512	5.574
Thorium-232	pCi/cm^2	2.785	3.703	3.869	4.132	4.602	4.939
Uranium-235	pCi/cm^2	0.681	0.785	0.363	0.798		0.309
Location=ROA; Formation=COPPER RIDGE; Site=39; 00–05=3343; 05–10=3344; 10–15=3345; 15–20=3346; 20–25=3347; 25–30=3348; Phase=2							
Cesium-137	pCi/cm^2	6.075	3.353	1.097	0.237	0.190	0.053
Potassium-40	pCi/cm^2	5.723	10.240	14.370	19.220	18.310	18.130
Radium-226	pCi/cm^2	1.896	3.193	4.093	4.923	5.132	4.981
Thorium-232	pCi/cm^2	1.419	2.434	3.013	3.656	3.733	4.067
Uranium-235	pCi/cm^2	0.792	0.973	1.032	1.104	0.969	0.609
Uranium-238	pCi/cm^2	15.354	17.818	16.787	20.042	22.071	5.005
Location=ROA; Formation=COPPER RIDGE; Site=40; 00–05=3267; 05–10=3268; 10–15=3269; 15–20=3270; 20–25=3271; 25–30=3272; Phase=2							
Cesium-137	pCi/cm^2	6.007	2.123	0.425	0.108	0.047	0.050
Potassium-40	pCi/cm^2	9.956	9.013	10.650	11.240	14.230	14.440
Radium-226	pCi/cm^2	3.439	3.716	3.918	3.972	3.820	4.162
Thorium-232	pCi/cm^2	2.389	2.575	2.940	2.892	3.078	3.449
Uranium-235	pCi/cm^2	0.824	0.707	0.235	0.737	0.533	0.340
Location=ROA; Formation=COPPER RIDGE; Site=41; 00–05=3352; 05–10=3353; 10–15=3354; 15–20=3355; 20–25=3356; 25–30=3357; Phase=2							
Cesium-137	pCi/cm^2	5.539	2.331	0.800	0.278	0.203	0.109
Potassium-40	pCi/cm^2	8.063	11.900	10.420	13.550	14.810	13.140
Radium-226	pCi/cm^2	2.784	3.806	3.779	4.493	4.583	3.896
Thorium-232	pCi/cm^2	1.891	2.872	2.444	3.153	3.360	2.857
Uranium-235	pCi/cm^2	0.998	0.956	1.146	1.058	1.055	0.342
Uranium-238	pCi/cm^2	12.261	9.093	20.133	20.603	20.236	6.026
Location=ROA; Formation=COPPER RIDGE; Site=42; 00–05=3276; 05–10=3277; 10–15=3278; 15–20=3279; 20–25=3280; 25–30=3281; Phase=2							
Cesium-137	pCi/cm^2	4.119	1.725	0.467	0.361	0.132	0.023
Potassium-40	pCi/cm^2	7.924	15.500	16.520	15.940	16.380	19.410
Radium-226	pCi/cm^2	3.251	4.137	5.077	4.962	4.955	5.184
Thorium-232	pCi/cm^2	2.513	2.886	3.540	3.404	3.570	3.838
Uranium-235	pCi/cm^2	0.731	0.211	0.846	0.369	0.797	0.611
Location=ROA; Formation=COPPER RIDGE; Site=43; 00–05=3285; 05–10=3286; 10–15=3287; 15–20=3288; 20–25=3289; 25–30=3290; Phase=2							
Cesium-137	pCi/cm^2	7.192	4.028	0.898	0.565	0.248	0.148
Potassium-40	pCi/cm^2	12.880	15.660	17.220	17.380	17.910	19.240
Radium-226	pCi/cm^2	3.387	4.209	4.508	5.269	5.216	5.157
Thorium-232	pCi/cm^2	2.559	3.525	4.348	4.414	4.564	5.405
Uranium-235	pCi/cm^2		1.648	0.874	1.979	0.880	0.686
Location=ROA; Formation=COPPER RIDGE; Site=44; 00–05=3257; 05–10=3258; 10–15=3259; 15–20=3260; 20–25=3261; 25–30=3262; Phase=2							
Cesium-137	pCi/cm^2	3.937	1.066	0.228	0.182	0.193	0.226
Potassium-40	pCi/cm^2	9.559	15.180	15.530	20.620	19.690	20.360

Table B.3 (continued)

Analysis	Units	Depth (cm) 00–05	05–10	10–15	15–20	20–25	25–30
Radium-226	pCi/cm^2	3.878	4.357	4.684	4.760	4.768	4.559
Thorium-232	pCi/cm^2	3.805	3.683	3.697	3.869	4.258	4.112
Uranium-235	pCi/cm^2	0.847	0.787	0.720	1.234	0.566	0.519
Location=ROA; Formation=COPPER RIDGE; Site=45; 00–05=3312; 05–10=3313; 10–15=3314; 15–20=3315; 20–25=3316; 25–30=3317; Phase=2							
Cesium-137	pCi/cm^2	4.488	2.639	0.683	0.261	0.240	0.088
Potassium-40	pCi/cm^2	10.870	14.450	16.820	19.100	17.530	20.040
Radium-226	pCi/cm^2	3.422	4.774	6.848	5.523	5.295	5.097
Thorium-232	pCi/cm^2	2.468	3.046	3.546	3.499	3.850	4.073
Uranium-235	pCi/cm^2	0.789	1.375	0.995	0.728	0.687	0.237
Uranium-238	pCi/cm^2	12.227	12.173	14.190	14.640	15.420	8.083
Location=ROA; Formation=COPPER RIDGE; Site=46; 00–05=3303; 05–10=3304; 10–15=3305; 15–20=3306; 20–25=3307; 25–30=3308; Phase=2							
Cesium-137	pCi/cm^2	4.105	2.900	1.168	0.356	0.097	0.172
Potassium-40	pCi/cm^2	11.780	13.180	13.740	15.600	14.670	18.010
Radium-226	pCi/cm^2	3.344	3.951	4.717	4.327	4.456	4.782
Thorium-232	pCi/cm^2	3.400	3.712	3.915	4.283	4.975	5.839
Uranium-235	pCi/cm^2	0.481	0.806	0.361	0.585	0.877	0.942
Location=ROA; Formation=COPPER RIDGE; Site=47; 00–05=3294; 05–10=3295; 10–15=3296; 15–20=3297; 20–25=3298; 25–30=3299; Phase=2							
Cesium-137	pCi/cm^2	3.580	1.011	0.146	0.162	0.137	0.154
Potassium-40	pCi/cm^2	12.230	20.260	15.160	19.740	19.820	18.160
Radium-226	pCi/cm^2	3.742	5.040	4.872	5.406	5.292	5.312
Thorium-232	pCi/cm^2	3.873	4.301	4.135	4.588	4.932	4.753
Uranium-235	pCi/cm^2	0.433	0.874	0.851	0.664	0.902	0.910
Location=ROA; Formation=DISMAL GAP; Site=10; 00–05=3178; 05–10=3179; 10–15=3180; 15–20=3181; 20–25=3182; 25–30=3183; Phase=1							
Cesium-137	pCi/cm^2	3.799	0.315	0.207	0.116	0.160	0.145
Potassium-40	pCi/cm^2	65.610	83.720	93.950	111.700	120.300	122.600
Radium-226	pCi/cm^2	4.098	5.067	5.120	4.514	4.343	4.125
Thorium-232	pCi/cm^2	5.721	7.877	8.483	9.301	9.504	9.817
Uranium-235	pCi/cm^2	0.883	0.625	0.157	0.223	0.977	0.936
Uranium-238	pCi/cm^2	12.951	3.292	16.104	7.391	12.100	15.322
Location=ROA; Formation=DISMAL GAP; Site=13; 00–05=3131; 05–10=3132; 10–15=3133; 15–20=3134; 20–25=3135; 25–30=3136; Phase=1							
Cesium-137	pCi/cm^2	1.249	0.211	0.078	0.042	0.274	0.131
Potassium-40	pCi/cm^2	38.140	45.440	56.280	76.100	91.830	99.610
Radium-226	pCi/cm^2	4.341	4.869	5.010	4.518	3.566	3.473
Thorium-232	pCi/cm^2	6.259	6.699	7.088	7.512	7.160	7.401
Uranium-235	pCi/cm^2	0.654	0.503	0.882	0.909	0.843	0.804
Uranium-238	pCi/cm^2	14.053	11.420	14.996	9.012	6.081	12.893
Location=ROA; Formation=DISMAL GAP; Site=14; 00–05=3152; 05–10=3153; 10–15=3154; 15–20=3155; 20–25=3156; 25–30=3157; Phase=1							
Cesium-137	pCi/cm^2	6.661	1.273	0.240	0.028	0.177	0.181
Potassium-40	pCi/cm^2	68.860	114.300	101.100	91.890	84.240	91.970
Radium-226	pCi/cm^2	3.006	3.381	3.319	3.360	3.189	2.882
Thorium-232	pCi/cm^2	5.460	7.294	7.327	7.655	7.363	7.461
Uranium-235	pCi/cm^2	0.861	1.198	0.943	1.319	0.520	1.055
Uranium-238	pCi/cm^2	17.810	19.296	12.060	20.826	20.670	18.583

Table B.3 (continued)

Analysis	Units	Depth (cm) 00–05	05–10	10–15	15–20	20–25	25–30
Location=ROA; Formation=DISMAL GAP; Site=17; 00–05=3022; 05–10=3023; 10–15=3024; 15–20=3025; 20–25=3026; 25–30=3027; Phase=1							
Cesium-137	pCi/cm^2	5.840	2.448	0.803	0.301	0.143	0.081
Potassium-40	pCi/cm^2	42.980	47.110	53.800	76.010	88.540	95.530
Radium-226	pCi/cm^2	4.070	4.395	4.454	4.158	4.273	4.107
Thorium-232	pCi/cm^2	5.552	6.009	6.833	6.937	7.463	7.488
Uranium-235	pCi/cm^2	0.441	0.898		0.784		0.219
Uranium-238	pCi/cm^2	8.151	3.627	12.860	12.799	13.542	4.191
Location=ROA; Formation=DISMAL GAP; Site=19; 00–05=3036; 05–10=3037; 10–15=3038; 15–20=3039; 20–25=3040; 25–30=3041; Phase=1							
Cesium-137	pCi/cm^2	3.421	0.288	0.131	0.124	0.085	0.119
Potassium-40	pCi/cm^2	33.900	36.170	43.700	45.550	41.080	46.390
Radium-226	pCi/cm^2	4.346	4.904	5.962	4.397	4.574	4.582
Thorium-232	pCi/cm^2	5.410	5.574	6.397	6.025	6.070	6.108
Uranium-235	pCi/cm^2	0.472	0.817		0.826	0.496	0.321
Uranium-238	pCi/cm^2	5.420	11.120	13.300	13.549	13.460	12.309
Location=ROA; Formation=DISMAL GAP; Site=20; 00–05=3050; 05–10=3051; 10–15=3052; 15–20=3053; 20–25=3054; 25–30=3055; Phase=1							
Cesium-137	pCi/cm^2	4.418	0.974	0.382	0.203	0.091	0.053
Potassium-40	pCi/cm^2	42.850	52.610	84.640	100.200	137.400	150.900
Radium-226	pCi/cm^2	5.017	3.726	3.554	3.339	2.932	3.515
Thorium-232	pCi/cm^2	4.809	5.634	6.836	7.053	7.258	7.377
Uranium-235	pCi/cm^2	0.925	0.921	0.734	0.967	0.229	0.389
Uranium-238	pCi/cm^2	15.191	18.260	10.530	21.704	5.676	3.401
Location=ROA; Formation=DISMAL GAP; Site=21; 00–05=3117; 05–10=3118; 10–15=3119; 15–20=3120; 20–25=3121; 25–30=3122; Phase=1							
Cesium-137	pCi/cm^2	4.254	0.630	0.116	0.157	0.076	0.169
Potassium-40	pCi/cm^2	58.140	61.870	51.850	45.270	52.280	49.180
Radium-226	pCi/cm^2	3.154	4.292	4.479	4.448	5.558	4.612
Thorium-232	pCi/cm^2	5.862	6.323	6.321	5.959	6.547	6.512
Uranium-235	pCi/cm^2	0.465	0.481	1.040	1.057	1.094	1.213
Uranium-238	pCi/cm^2	16.468	6.400	17.950	18.180	12.520	18.516
Location=ROA; Formation=DISMAL GAP; Site=22; 00–05=3062; 05–10=3063; 10–15=3064; 15–20=3065; 20–25=3066; 25–30=3067; Phase=1							
Cesium-137	pCi/cm^2	3.071	0.669	0.127	0.135	0.131	0.030
Potassium-40	pCi/cm^2	39.070	51.970	65.270	83.420	88.480	86.280
Radium-226	pCi/cm^2	3.940	3.889	3.231	4.717	4.109	3.917
Thorium-232	pCi/cm^2	4.974	5.624	5.496	6.322	6.162	5.742
Uranium-235	pCi/cm^2	0.729	0.659	0.780	0.257	1.531	0.266
Uranium-238	pCi/cm^2	20.200	13.303	12.230	14.525	12.445	4.445
Location=ROA; Formation=DISMAL GAP; Site=3; 00–05=3103; 05–10=3104; 10–15=3105; 15–20=3106; 20–25=3107; 25–30=3108; Phase=1							
Cesium-137	pCi/cm^2	3.894	1.029	0.396	0.188	0.037	0.094
Potassium-40	pCi/cm^2	52.560	56.280	55.380	60.110	65.800	64.020
Radium-226	pCi/cm^2	3.392	4.706	4.330	4.204	4.129	3.783
Thorium-232	pCi/cm^2	5.074	6.112	5.928	6.586	7.030	6.807
Uranium-235	pCi/cm^2	0.249	0.805	0.707	0.255	0.846	0.836
Uranium-238	pCi/cm^2	19.510	8.987	14.692	14.266	15.252	14.086

Table B.3 (continued)

Analysis	Units	Depth (cm) 00–05	05–10	10–15	15–20	20–25	25–30
Location=ROA; Formation=DISMAL GAP; Site=7; 00–05=3089; 05–10=3090; 10–15=3091; 15–20=3092; 20–25=3093; 25–30=3094; Phase=1							
Cesium-137	pCi/cm^2	5.577	0.430	0.367	0.231	0.019	0.012
Potassium-40	pCi/cm^2	43.820	57.690	57.920	68.970	87.960	101.600
Radium-226	pCi/cm^2	4.393	4.953	5.248	5.001	4.490	3.863
Thorium-232	pCi/cm^2	5.573	7.324	7.186	7.706	7.710	7.955
Uranium-235	pCi/cm^2	0.526	1.116	2.103	0.962	0.393	0.140
Uranium-238	pCi/cm^2	12.556	6.964	10.560	10.850	7.567	6.318
Location=ROA; Formation=DISMAL GAP; Site=8; 00–05=3076; 05–10=3077; 10–15=3078; 15–20=3079; 20–25=3080; 25–30=3081; Phase=1							
Cesium-137	pCi/cm^2	8.006	3.085	0.521	0.154	0.128	0.042
Potassium-40	pCi/cm^2	30.380	40.710	43.380	45.450	48.850	58.750
Radium-226	pCi/cm^2	3.258	4.775	4.940	4.984	4.476	3.975
Thorium-232	pCi/cm^2	4.898	6.945	7.295	7.308	7.710	6.928
Uranium-235	pCi/cm^2	0.733		0.752	0.868	0.869	0.557
Uranium-238	pCi/cm^2	9.637	12.698	14.041	8.371	7.014	6.800
Location=ROA; Formation=DISMAL GAP; Site=9; 00–05=3008; 05–10=3009; 10–15=3010; 15–20=3011; 20–25=3012; 25–30=3013; Phase=1							
Cesium-137	pCi/cm^2	8.253	1.575	0.206	0.048	0.026	0.059
Potassium-40	pCi/cm^2	27.730	35.700	40.480	37.550	45.380	53.820
Radium-226	pCi/cm^2	2.669	3.707	4.198	4.214	4.759	4.922
Thorium-232	pCi/cm^2	3.755	5.367	5.678	5.562	6.136	6.641
Uranium-235	pCi/cm^2	0.713	0.757	0.229	0.465	0.509	0.399
Uranium-238	pCi/cm^2	5.853	6.414	3.848	8.091	4.830	8.532

[a]Unweighted results are on a field-moist, volumetric basis.

Appendix C

ORGANIC ANALYSIS DATA

Table C.1. Organic analysis results for soil samples

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
Location=AND; Formation=COPPER RIDGE; Site=31; A=2257; A dup=' '; Phase=2					
alpha-BHC	µg/kg	2.10	UJ		
alpha-Chlordane	µg/kg	2.10	U		
beta-BHC	µg/kg	2.10	U		
delta-BHC	µg/kg	2.10	UJ		
gamma-Chlordane	µg/kg	2.10	U		
Acenaphthylene	µg/kg	41.60	U		
Aldrin	µg/kg	2.10	U		
Benzo(a)anthracene	µg/kg	2.70	J		
Benzo(a)pyrene	µg/kg	2.30	J		
Dalapon	µg/kg	4168.00	U		
Dicamba	µg/kg	191.00	U		
Dichlorprop	µg/kg	476.00	UJ		
Dieldrin	µg/kg	4.20	U		
Dinoseb	µg/kg	100.00	U		
Endosulfan sulfate	µg/kg	4.20	U		
Endosulfan I	µg/kg	2.10	U		
Endosulfan II	µg/kg	4.20	U		
Endrin	µg/kg	4.20	U		
Endrin aldehyde	µg/kg	4.20	U		
Endrin ketone	µg/kg	4.20	U		
Fluoranthene	µg/kg	4.00	J		
Heptachlor	µg/kg	2.10	U		
Heptachlor epoxide	µg/kg	2.10	U		
Indeno(1,2,3-cd)pyrene	µg/kg	10.40	U		
Lindane	µg/kg	2.10	UJ		
Methoxychlor	µg/kg	21.00	U		
MCPA	µg/kg	178637.00	UJ		
MCPP	µg/kg	135764.00	UJ		
Phenanthrene	µg/kg	6.90	J		
Pyrene	µg/kg	3.70	J		
PCB-1016	µg/kg	42.00	U		
PCB-1221	µg/kg	84.00	U		
PCB-1232	µg/kg	42.00	U		
PCB-1242	µg/kg	42.00	U		
PCB-1248	µg/kg	42.00	U		
PCB-1254	µg/kg	42.00	U		
PCB-1260	µg/kg	42.00	U		
Silvex	µg/kg	119.00	U		
Toxaphene	µg/kg	210.00	U		
2,4-D	µg/kg	857.00	U		
2,4-DB	µg/kg	643.00	U		
2,4,5-T	µg/kg	143.00	U		
4,4'-DDD	µg/kg	4.20	U		
4,4'-DDE	µg/kg	4.20	U		
4,4'-DDT	µg/kg	4.20	UJ		
Location=AND; Formation=COPPER RIDGE; Site=32; A=2259; A dup=' '; Phase=2					
alpha-BHC	µg/kg	2.20	UJ		
alpha-Chlordane	µg/kg	2.20	U		
beta-BHC	µg/kg	2.20	U		
delta-BHC	µg/kg	2.20	UJ		
gamma-Chlordane	µg/kg	2.20	U		
Acenaphthene	µg/kg	1.10	J		
Acenaphthylene	µg/kg	43.20	U		
Aldrin	µg/kg	2.20	U		
Benzo(a)anthracene	µg/kg	1.70	J		
Benzo(a)pyrene	µg/kg	1.70	J		
Benzo(b)fluoranthene	µg/kg	3.50			
Benzo(ghi)perylene	µg/kg	4.50			
Benzo(k)fluoranthene	µg/kg	1.50	J		
Dalapon	µg/kg	3400.00	U		
Dicamba	µg/kg	155.00	U		
Dichlorprop	µg/kg	389.00	UJ		

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
Dieldrin	µg/kg	4.30	U		
Dinoseb	µg/kg	82.00	U		
Endosulfan sulfate	µg/kg	4.30	U		
Endosulfan I	µg/kg	2.20	U		
Endosulfan II	µg/kg	4.30	U		
Endrin	µg/kg	4.30	U		
Endrin aldehyde	µg/kg	4.30	U		
Endrin ketone	µg/kg	4.30	U		
Fluoranthene	µg/kg	3.50			
Heptachlor	µg/kg	2.20	U		
Heptachlor epoxide	µg/kg	2.20	U		
Indeno(1,2,3-cd)pyrene	µg/kg	10.80	U		
Lindane	µg/kg	2.20	UJ		
Methoxychlor	µg/kg	22.00	U		
MCPA	µg/kg	145716.00	UJ		
MCPP	µg/kg	110744.00	UJ		
Phenanthrene	µg/kg	6.30			
Pyrene	µg/kg	3.50			
PCB-1016	µg/kg	43.00	U		
PCB-1221	µg/kg	87.00	U		
PCB-1232	µg/kg	43.00	U		
PCB-1242	µg/kg	43.00	U		
PCB-1248	µg/kg	43.00	U		
PCB-1254	µg/kg	43.00	U		
PCB-1260	µg/kg	43.00	U		
Silvex	µg/kg	97.00	U		
Toxaphene	µg/kg	220.00	U		
2,4-D	µg/kg	699.00	U		
2,4-DB	µg/kg	525.00	U		
2,4,5-T	µg/kg	117.00	U		
4,4'-DDD	µg/kg	4.30	U		
4,4'-DDE	µg/kg	4.30	U		
4,4'-DDT	µg/kg	4.30	UJ		
Location=AND; Formation=COPPER RIDGE; Site=33; A=2262; A dup=' '; Phase=2					
alpha-BHC	µg/kg	2.80	UJ		
alpha-Chlordane	µg/kg	2.80	U		
beta-BHC	µg/kg	2.80	U		
delta-BHC	µg/kg	2.80	UJ		
gamma-Chlordane	µg/kg	2.80	U		
Acenaphthylene	µg/kg	53.90	U		
Aldrin	µg/kg	3.40			
Dalapon	µg/kg	3305.00	UJ		
Dicamba	µg/kg	151.00	UJ		
Dichlorprop	µg/kg	378.00	UJ		
Dieldrin	µg/kg	5.50	U		
Dinoseb	µg/kg	79.00	UJ		
Endosulfan sulfate	µg/kg	5.50	U		
Endosulfan I	µg/kg	2.80	U		
Endosulfan II	µg/kg	5.50	U		
Endrin	µg/kg	5.50	U		
Endrin aldehyde	µg/kg	5.50	U		
Endrin ketone	µg/kg	5.50	U		
Fluorene	µg/kg	2.40	J		
Heptachlor	µg/kg	2.80	U		
Heptachlor epoxide	µg/kg	2.80	U		
Indeno(1,2,3-cd)pyrene	µg/kg	13.50	U		
Lindane	µg/kg	2.80	UJ		
Methoxychlor	µg/kg	28.00	U		
MCPA	µg/kg	141643.00	UJ		
MCPP	µg/kg	107649.00	UJ		
Phenanthrene	µg/kg	1.10	J		
PCB-1016	µg/kg	55.00	U		
PCB-1221	µg/kg	110.00	U		
PCB-1232	µg/kg	55.00	U		
PCB-1242	µg/kg	55.00	U		

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
PCB-1248	µg/kg	55.00	U		
PCB-1254	µg/kg	55.00	U		
PCB-1260	µg/kg	55.00	U		
Silvex	µg/kg	94.00	UJ		
Toxaphene	µg/kg	280.00	U		
2,4-D	µg/kg	680.00	UJ		
2,4-DB	µg/kg	510.00	UJ		
2,4,5-T	µg/kg	113.00	UJ		
4,4'-DDD	µg/kg	5.50	U		
4,4'-DDE	µg/kg	5.50	U		
4,4'-DDT	µg/kg	5.50	UJ		
Location=AND; Formation=COPPER RIDGE; Site=34; A=2265; A dup=' '; Phase=2					
alpha-BHC	µg/kg	2.20	UJ		
alpha-Chlordane	µg/kg	2.20	U		
beta-BHC	µg/kg	2.20	U		
delta-BHC	µg/kg	2.20	UJ		
gamma-Chlordane	µg/kg	2.20	U		
Acenaphthylene	µg/kg	43.10	U		
Aldrin	µg/kg	2.20	U		
Benzo(a)anthracene	µg/kg	1.50	J		
Benzo(a)pyrene	µg/kg	2.40	J		
Benzo(b)fluoranthene	µg/kg	4.50	J		
Benzo(ghi)perylene	µg/kg	1.70	J		
Benzo(k)fluoranthene	µg/kg	1.50	J		
Dieldrin	µg/kg	4.40	U		
Endosulfan sulfate	µg/kg	4.40	U		
Endosulfan I	µg/kg	2.20	U		
Endosulfan II	µg/kg	4.40	U		
Endrin	µg/kg	4.40	U		
Endrin aldehyde	µg/kg	4.40	U		
Endrin ketone	µg/kg	4.40	U		
Fluorene	µg/kg	2.80	J		
Heptachlor	µg/kg	2.20	U		
Heptachlor epoxide	µg/kg	2.20	U		
Indeno(1,2,3-cd)pyrene	µg/kg	10.80	U		
Lindane	µg/kg	2.20	UJ		
Methoxychlor	µg/kg	22.00	U		
Phenanthrene	µg/kg	5.00	J		
Pyrene	µg/kg	3.20	J		
PCB-1016	µg/kg	44.00	U		
PCB-1221	µg/kg	88.00	U		
PCB-1232	µg/kg	44.00	U		
PCB-1242	µg/kg	44.00	U		
PCB-1248	µg/kg	44.00	U		
PCB-1254	µg/kg	44.00	U		
PCB-1260	µg/kg	44.00	U		
Toxaphene	µg/kg	220.00	U		
4,4'-DDD	µg/kg	4.40	U		
4,4'-DDE	µg/kg	4.40	U		
4,4'-DDT	µg/kg	4.40	UJ		
Location=AND; Formation=COPPER RIDGE; Site=35; A=2268; A dup=' '; Phase=2					
alpha-BHC	µg/kg	1.30	UJ		
alpha-Chlordane	µg/kg	2.90	U		
beta-BHC	µg/kg	2.90	U		
delta-BHC	µg/kg	2.90	UJ		
gamma-Chlordane	µg/kg	2.90	U		
Acenaphthylene	µg/kg	59.40	U		
Aldrin	µg/kg	2.90	U		
Anthracene	µg/kg	0.90	J		
Benzo(a)anthracene	µg/kg	0.90	J		
Benzo(a)pyrene	µg/kg	0.90	J		

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
Benzo(ghi)perylene	µg/kg	1.80	J		
Dieldrin	µg/kg	5.90	U		
Endosulfan sulfate	µg/kg	5.90	U		
Endosulfan I	µg/kg	2.90	U		
Endosulfan II	µg/kg	5.90	U		
Endrin	µg/kg	5.90	U		
Endrin aldehyde	µg/kg	5.90	U		
Endrin ketone	µg/kg	5.90	U		
Heptachlor	µg/kg	2.90	U		
Heptachlor epoxide	µg/kg	2.90	U		
Indeno(1,2,3-cd)pyrene	µg/kg	10.70	J		
Lindane	µg/kg	2.90	UJ		
Methoxychlor	µg/kg	29.00	U		
Phenanthrene	µg/kg	2.10	J		
Pyrene	µg/kg	1.80	J		
PCB-1016	µg/kg	59.00	U		
PCB-1221	µg/kg	120.00	U		
PCB-1232	µg/kg	59.00	U		
PCB-1242	µg/kg	59.00	U		
PCB-1248	µg/kg	59.00	U		
PCB-1254	µg/kg	59.00	U		
PCB-1260	µg/kg	59.00	U		
Toxaphene	µg/kg	290.00	U		
4,4'-DDD	µg/kg	5.90	U		
4,4'-DDE	µg/kg	5.90	U		
4,4'-DDT	µg/kg	5.90	UJ		
Location=AND; Formation=COPPER RIDGE; Site=36; A=2271; A dup=' '; Phase=2					
alpha-BHC	µg/kg	2.20	UJ		
alpha-Chlordane	µg/kg	2.20	U		
beta-BHC	µg/kg	2.20	U		
delta-BHC	µg/kg	2.20	UJ		
gamma-Chlordane	µg/kg	2.20	U		
Acenaphthylene	µg/kg	43.90	U		
Aldrin	µg/kg	2.20	U		
Anthracene	µg/kg	11.80	J		
Benzo(a)anthracene	µg/kg	3.10	J		
Benzo(b)fluoranthene	µg/kg	2.60	J		
Benzo(ghi)perylene	µg/kg	4.40			
Benzo(k)fluoranthene	µg/kg	2.40	J		
Dalapon	µg/kg	4536.00	U		
Dicamba	µg/kg	151.00	U		
Dichlorprop	µg/kg	378.00	UJ		
Dieldrin	µg/kg	4.40	U		
Dinoseb	µg/kg	79.00	U		
Endosulfan sulfate	µg/kg	4.40	U		
Endosulfan I	µg/kg	1.60	UJ		
Endosulfan II	µg/kg	4.40	U		
Endrin	µg/kg	4.40	U		
Endrin aldehyde	µg/kg	4.40	U		
Endrin ketone	µg/kg	4.40	U		
Fluoranthene	µg/kg	2.20	J		
Heptachlor	µg/kg	2.20	U		
Heptachlor epoxide	µg/kg	2.20	U		
Indeno(1,2,3-cd)pyrene	µg/kg	2.00	J		
Lindane	µg/kg	2.20	UJ		
Methoxychlor	µg/kg	22.00	U		
MCPA	µg/kg	141643.00	UJ		
MCPP	µg/kg	107649.00	UJ		
Phenanthrene	µg/kg	3.10	J		
PCB-1016	µg/kg	44.00	U		
PCB-1221	µg/kg	89.00	U		
PCB-1232	µg/kg	44.00	U		
PCB-1242	µg/kg	44.00	U		
PCB-1248	µg/kg	44.00	U		
PCB-1254	µg/kg	44.00	U		

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
PCB-1260	µg/kg	44.00	U		
Silvex	µg/kg	94.00	U		
Toxaphene	µg/kg	220.00	U		
2,4-D	µg/kg	680.00	U		
2,4-DB	µg/kg	510.00	U		
2,4,5-T	µg/kg	113.00	U		
4,4'-DDD	µg/kg	4.40	U		
4,4'-DDE	µg/kg	4.40	U		
4,4'-DDT	µg/kg	4.40	UJ		
Location=AND; Formation=COPPER RIDGE; Site=37; A=2273; A dup=' '; Phase=2					
alpha-BHC	µg/kg	2.30	UJ		
alpha-Chlordane	µg/kg	2.30	U		
beta-BHC	µg/kg	2.30	U		
delta-BHC	µg/kg	2.30	UJ		
gamma-Chlordane	µg/kg	2.30	U		
Acenaphthylene	µg/kg	45.40	U		
Aldrin	µg/kg	2.30	U		
Anthracene	µg/kg	1.40	J		
Benzo(a)anthracene	µg/kg	1.80	J		
Benzo(a)pyrene	µg/kg	2.30	J		
Benzo(b)fluoranthene	µg/kg	1.40	J		
Benzo(ghi)perylene	µg/kg	2.70	J		
Benzo(k)fluoranthene	µg/kg	1.40	J		
Dalapon	µg/kg	4580.00	U		
Dibenzo(a,h)anthracene	µg/kg	0.90	J		
Dicamba	µg/kg	209.00	U		
Dichlorprop	µg/kg	523.00	UJ		
Dieldrin	µg/kg	4.60	U		
Dinoseb	µg/kg	110.00	U		
Endosulfan sulfate	µg/kg	4.60	U		
Endosulfan I	µg/kg	2.30	U		
Endosulfan II	µg/kg	4.60	U		
Endrin	µg/kg	4.60	U		
Endrin aldehyde	µg/kg	4.60	U		
Endrin ketone	µg/kg	4.60	U		
Heptachlor	µg/kg	2.30	U		
Heptachlor epoxide	µg/kg	2.30	U		
Indeno(1,2,3-cd)pyrene	µg/kg	11.80			
Lindane	µg/kg	2.30	UJ		
Methoxychlor	µg/kg	23.00	U		
MCPA	µg/kg	196293.00	UJ		
MCPP	µg/kg	149182.00	UJ		
Phenanthrene	µg/kg	2.50	J		
Pyrene	µg/kg	3.90	J		
PCB-1016	µg/kg	46.00	U		
PCB-1221	µg/kg	93.00	U		
PCB-1232	µg/kg	46.00	U		
PCB-1242	µg/kg	46.00	U		
PCB-1248	µg/kg	46.00	U		
PCB-1254	µg/kg	46.00	U		
PCB-1260	µg/kg	46.00	U		
Silvex	µg/kg	131.00	U		
Toxaphene	µg/kg	230.00	U		
2,4-D	µg/kg	942.00	U		
2,4-DB	µg/kg	707.00	U		
2,4,5-T	µg/kg	157.00	U		
4,4'-DDD	µg/kg	4.60	U		
4,4'-DDE	µg/kg	4.60	U		
4,4'-DDT	µg/kg	4.60	UJ		

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
Location=AND; Formation=COPPER RIDGE; Site=38; A=2275; A dup=' '; Phase=2					
alpha-BHC	µg/kg	2.40	UJ		
alpha-Chlordane	µg/kg	2.40	U		
beta-BHC	µg/kg	2.40	U		
delta-BHC	µg/kg	2.40	UJ		
gamma-Chlordane	µg/kg	2.40	U		
Acenaphthylene	µg/kg	47.50	U		
Aldrin	µg/kg	2.40	U		
Benzo(a)anthracene	µg/kg	3.80	J		
Benzo(a)pyrene	µg/kg	2.80	J		
Benzo(ghi)perylene	µg/kg	2.10	J		
Benzo(k)fluoranthene	µg/kg	1.20	J		
Dalapon	µg/kg	4580.00	UJ		
Dicamba	µg/kg	209.00	UJ		
Dichlorprop	µg/kg	523.00	UJ		
Dieldrin	µg/kg	4.80	U		
Dinoseb	µg/kg	110.00	UJ		
Endosulfan sulfate	µg/kg	4.80	U		
Endosulfan I	µg/kg	2.40	U		
Endosulfan II	µg/kg	4.80	U		
Endrin	µg/kg	4.80	U		
Endrin aldehyde	µg/kg	4.80	U		
Endrin ketone	µg/kg	4.80	U		
Heptachlor	µg/kg	2.40	U		
Heptachlor epoxide	µg/kg	2.40	U		
Indeno(1,2,3-cd)pyrene	µg/kg	11.90			
Lindane	µg/kg	2.40	UJ		
Methoxychlor	µg/kg	24.00	U		
MCPA	µg/kg	196293.00	UJ		
MCPP	µg/kg	149182.00	UJ		
Phenanthrene	µg/kg	3.30	J		
Pyrene	µg/kg	3.60	J		
PCB-1016	µg/kg	48.00	U		
PCB-1221	µg/kg	96.00	U		
PCB-1232	µg/kg	48.00	U		
PCB-1242	µg/kg	48.00	U		
PCB-1248	µg/kg	48.00	U		
PCB-1254	µg/kg	48.00	U		
PCB-1260	µg/kg	48.00	U		
Silvex	µg/kg	131.00	UJ		
Toxaphene	µg/kg	240.00	U		
2,4-D	µg/kg	942.00	UJ		
2,4-DB	µg/kg	707.00	UJ		
2,4,5-T	µg/kg	157.00	UJ		
4,4'-DDD	µg/kg	4.80	U		
4,4'-DDE	µg/kg	4.80	U		
4,4'-DDT	µg/kg	4.80	UJ		
Location=AND; Formation=COPPER RIDGE; Site=39; A=2277; A dup=' '; Phase=2					
alpha-BHC	µg/kg	2.20	UJ		
alpha-Chlordane	µg/kg	2.20	U		
beta-BHC	µg/kg	2.20	U		
delta-BHC	µg/kg	2.20	UJ		
gamma-Chlordane	µg/kg	2.20	U		
Acenaphthylene	µg/kg	44.90	U		
Aldrin	µg/kg	2.20	U		
Anthracene	µg/kg	1.10	J		
Benzo(a)anthracene	µg/kg	2.70	J		
Benzo(a)pyrene	µg/kg	1.30	J		
Benzo(b)fluoranthene	µg/kg	3.10	J		
Benzo(ghi)perylene	µg/kg	1.80	J		
Benzo(k)fluoranthene	µg/kg	1.10	J		
Dalapon	µg/kg	4584.00	U		
Dicamba	µg/kg	209.00	U		

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
Dichlorprop	µg/kg	523.00	UJ		
Dieldrin	µg/kg	4.50	U		
Dinoseb	µg/kg	110.00	U		
Endosulfan sulfate	µg/kg	4.50	U		
Endosulfan I	µg/kg	2.20	U		
Endosulfan II	µg/kg	4.50	U		
Endrin	µg/kg	4.50	U		
Endrin aldehyde	µg/kg	4.50	U		
Endrin ketone	µg/kg	4.50	U		
Heptachlor	µg/kg	2.20	U		
Heptachlor epoxide	µg/kg	2.20	U		
Indeno(1,2,3-cd)pyrene	µg/kg	25.60			
Lindane	µg/kg	2.20	UJ		
Methoxychlor	µg/kg	22.00	U		
MCPA	µg/kg	196293.00	UJ		
MCPP	µg/kg	149182.00	UJ		
Phenanthrene	µg/kg	4.70	J		
Pyrene	µg/kg	4.70	J		
PCB-1016	µg/kg	45.00	U		
PCB-1221	µg/kg	90.00	U		
PCB-1232	µg/kg	45.00	U		
PCB-1242	µg/kg	45.00	U		
PCB-1248	µg/kg	45.00	U		
PCB-1254	µg/kg	45.00	U		
PCB-1260	µg/kg	45.00	U		
Silvex	µg/kg	131.00	U		
Toxaphene	µg/kg	220.00	U		
2,4-D	µg/kg	942.00	U		
2,4-DB	µg/kg	707.00	U		
2,4,5-T	µg/kg	157.00	U		
4,4'-DDD	µg/kg	4.50	U		
4,4'-DDE	µg/kg	4.50	U		
4,4'-DDT	µg/kg	4.50	UJ		
Location=AND; Formation=COPPER RIDGE; Site=40; A=2279; A dup=' '; Phase=2					
alpha-BHC	µg/kg	2.20	UJ		
alpha-Chlordane	µg/kg	2.20	U		
beta-BHC	µg/kg	2.20	U		
delta-BHC	µg/kg	2.20	UJ		
gamma-Chlordane	µg/kg	2.20	U		
Acenaphthylene	µg/kg	42.60	U		
Aldrin	µg/kg	2.20	U		
Anthracene	µg/kg	0.90	J		
Benzo(a)anthracene	µg/kg	3.00	J		
Benzo(a)pyrene	µg/kg	0.60	J		
Benzo(b)fluoranthene	µg/kg	2.10	J		
Benzo(ghi)perylene	µg/kg	1.70	J		
Benzo(k)fluoranthene	µg/kg	1.10	J		
Dalapon	µg/kg	3472.00	UJ		
Dibenzo(a,h)anthracene	µg/kg	1.90	J		
Dicamba	µg/kg	209.00	U		
Dichlorprop	µg/kg	523.00	UJ		
Dieldrin	µg/kg	4.30	U		
Dinoseb	µg/kg	110.00	U		
Endosulfan sulfate	µg/kg	4.30	U		
Endosulfan I	µg/kg	2.20	U		
Endosulfan II	µg/kg	4.30	U		
Endrin	µg/kg	4.30	U		
Endrin aldehyde	µg/kg	4.30	U		
Endrin ketone	µg/kg	4.30	U		
Fluoranthene	µg/kg	3.60	J		
Heptachlor	µg/kg	2.20	U		
Heptachlor epoxide	µg/kg	2.20	U		
Indeno(1,2,3-cd)pyrene	µg/kg	8.30	J		
Lindane	µg/kg	2.20	UJ		
Methoxychlor	µg/kg	22.00	U		

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
MCPA	µg/kg	196293.00	UJ		
MCPP	µg/kg	149182.00	UJ		
Phenanthrene	µg/kg	2.60	J		
Pyrene	µg/kg	3.40	J		
PCB-1016	µg/kg	43.00	U		
PCB-1221	µg/kg	86.00	U		
PCB-1232	µg/kg	43.00	U		
PCB-1242	µg/kg	43.00	U		
PCB-1248	µg/kg	43.00	U		
PCB-1254	µg/kg	43.00	U		
PCB-1260	µg/kg	43.00	U		
Silvex	µg/kg	131.00	U		
Toxaphene	µg/kg	220.00	U		
2,4-D	µg/kg	942.00	U		
2,4-DB	µg/kg	707.00	U		
2,4,5-T	µg/kg	157.00	U		
4,4'-DDD	µg/kg	4.30	U		
4,4'-DDE	µg/kg	4.30	U		
4,4'-DDT	µg/kg	4.30	UJ		
Location=AND; Formation=COPPER RIDGE; Site=41; A=2281; A dup=' '; Phase=2					
alpha-BHC	µg/kg	2.10	UJ		
alpha-Chlordane	µg/kg	2.20			
beta-BHC	µg/kg	2.10	U		
delta-BHC	µg/kg	2.10	UJ		
gamma-Chlordane	µg/kg	2.10	U		
Acenaphthylene	µg/kg	42.70	U		
Aldrin	µg/kg	2.10	U		
Anthracene	µg/kg	0.60	J		
Benzo(a)anthracene	µg/kg	1.50	J		
Benzo(a)pyrene	µg/kg	2.10	J		
Benzo(b)fluoranthene	µg/kg	2.80	J		
Benzo(ghi)perylene	µg/kg	1.70	J		
Benzo(k)fluoranthene	µg/kg	1.10	J		
Dieldrin	µg/kg	4.20	U		
Endosulfan sulfate	µg/kg	4.20	U		
Endosulfan I	µg/kg	3.00	P		
Endosulfan II	µg/kg	4.20	U		
Endrin	µg/kg	4.20	U		
Endrin aldehyde	µg/kg	4.20	U		
Endrin ketone	µg/kg	4.20	U		
Fluoranthene	µg/kg	3.20	J		
Fluorene	µg/kg	1.50	J		
Heptachlor	µg/kg	2.10	U		
Heptachlor epoxide	µg/kg	2.10	U		
Indeno(1,2,3-cd)pyrene	µg/kg	19.60			
Lindane	µg/kg	2.10	UJ		
Methoxychlor	µg/kg	21.00	U		
Phenanthrene	µg/kg	2.60	J		
Pyrene	µg/kg	3.40	J		
PCB-1016	µg/kg	42.00	U		
PCB-1221	µg/kg	84.00	U		
PCB-1232	µg/kg	42.00	U		
PCB-1242	µg/kg	42.00	U		
PCB-1248	µg/kg	42.00	U		
PCB-1254	µg/kg	42.00	U		
PCB-1260	µg/kg	42.00	U		
Toxaphene	µg/kg	210.00	U		
4,4'-DDD	µg/kg	4.20	U		
4,4'-DDE	µg/kg	4.20	U		
4,4'-DDT	µg/kg	4.20	UJ		

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
Location=AND; Formation=COPPER RIDGE; Site=42; A=2283; A dup=' '; Phase=2					
alpha-BHC	µg/kg	2.20	UJ		
alpha-Chlordane	µg/kg	2.20	U		
beta-BHC	µg/kg	2.20	U		
delta-BHC	µg/kg	2.20	UJ		
gamma-Chlordane	µg/kg	2.20	U		
Acenaphthene	µg/kg	1.30	J		
Acenaphthylene	µg/kg	43.10	U		
Aldrin	µg/kg	2.20	U		
Anthracene	µg/kg	0.90	J		
Benzo(a)anthracene	µg/kg	2.60	J		
Benzo(a)pyrene	µg/kg	2.20	J		
Benzo(b)fluoranthene	µg/kg	2.40	J		
Benzo(ghi)perylene	µg/kg	2.40	J		
Benzo(k)fluoranthene	µg/kg	1.30	J		
Chrysene	µg/kg	4.30	J		
Dalapon	µg/kg	4480.00	UJ		
Dicamba	µg/kg	205.00	U		
Dichlorprop	µg/kg	512.00	UJ		
Dieldrin	µg/kg	4.30	U		
Dinoseb	µg/kg	108.00	U		
Endosulfan sulfate	µg/kg	4.30	U		
Endosulfan I	µg/kg	2.20	U		
Endosulfan II	µg/kg	4.30	U		
Endrin	µg/kg	4.30	U		
Endrin aldehyde	µg/kg	4.30	U		
Endrin ketone	µg/kg	4.30	U		
Fluoranthene	µg/kg	1.50	J		
Heptachlor	µg/kg	2.20	U		
Heptachlor epoxide	µg/kg	2.20	U		
Indeno(1,2,3-cd)pyrene	µg/kg	17.20			
Lindane	µg/kg	2.20	UJ		
Methoxychlor	µg/kg	22.00	U		
MCPA	µg/kg	192002.00	UJ		
MCPP	µg/kg	145921.00	UJ		
Phenanthrene	µg/kg	12.70	J		
Pyrene	µg/kg	1.30	J		
PCB-1016	µg/kg	43.00	U		
PCB-1221	µg/kg	86.00	U		
PCB-1232	µg/kg	43.00	U		
PCB-1242	µg/kg	43.00	U		
PCB-1248	µg/kg	43.00	U		
PCB-1254	µg/kg	43.00	U		
PCB-1260	µg/kg	43.00	U		
Silvex	µg/kg	128.00	U		
Toxaphene	µg/kg	220.00	U		
2,4-D	µg/kg	922.00	U		
2,4-DB	µg/kg	691.00	U		
2,4,5-T	µg/kg	154.00	U		
4,4'-DDD	µg/kg	4.30	U		
4,4'-DDE	µg/kg	4.30	U		
4,4'-DDT	µg/kg	4.30	UJ		
Location=AND; Formation=DISMAL GAP; Site=1; A=2157; A dup=' '; Phase=1					
alpha-BHC	µg/kg	2.50	U		
alpha-Chlordane	µg/kg	2.50	U		
beta-BHC	µg/kg	2.50	U		
delta-BHC	µg/kg	2.50	U		
gamma-Chlordane	µg/kg	2.50	U		
Acenaphthene	µg/kg	17.00	JN		
Acenaphthylene	µg/kg	36.00	UJ		
Aldrin	µg/kg	2.50	UJ		
Anthracene	µg/kg	1.00	UJ		
Benzo(a)anthracene	µg/kg	3.80	JN		

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
Benzo(a)pyrene	µg/kg	5.90	JN		
Benzo(b)fluoranthene	µg/kg	3.00	UJ		
Benzo(k)fluoranthene	µg/kg	3.00	UN		
Chrysene	µg/kg	22.00	UJ		
Dieldrin	µg/kg	4.90	UJ		
Endosulfan sulfate	µg/kg	4.90	U		
Endosulfan I	µg/kg	2.50	U		
Endosulfan II	µg/kg	4.90	U		
Endrin	µg/kg	4.90	U		
Endrin aldehyde	µg/kg	4.90	U		
Endrin ketone	µg/kg	4.90	U		
Fluoranthene	µg/kg	23.00	J		
Fluorene	µg/kg	6.00	UJ		
Heptachlor	µg/kg	2.50	UJ		
Heptachlor epoxide	µg/kg	2.50	U		
Indeno(1,2,3-cd)pyrene	µg/kg	6.00	UJ		
Lindane	µg/kg	2.50	UJ		
Methoxychlor	µg/kg	25.40	U		
Naphthalene	µg/kg	15.00	UJ		
Phenanthrene	µg/kg	15.00	J		
Pyrene	µg/kg	1.00	UJ		
PCB-1016	µg/kg	49.40	U		
PCB-1221	µg/kg	100.30	U		
PCB-1232	µg/kg	49.40	U		
PCB-1242	µg/kg	49.40	U		
PCB-1248	µg/kg	49.40	U		
PCB-1254	µg/kg	49.40	U		
PCB-1260	µg/kg	49.40	U		
Toxaphene	µg/kg	254.50	U		
4,4'-DDD	µg/kg	4.90	U		
4,4'-DDE	µg/kg	4.90	U		
4,4'-DDT	µg/kg	4.90	UJ		
Location=AND; Formation=DISMAL GAP; Site=10; A=2143; A dup=' '; Phase=1					
alpha-BHC	µg/kg	2.50	U		
alpha-Chlordane	µg/kg	2.50	U		
beta-BHC	µg/kg	2.50	U		
delta-BHC	µg/kg	2.50	U		
gamma-Chlordane	µg/kg	2.50	U		
Aldrin	µg/kg	2.50	UJ		
Benzo(a)anthracene	µg/kg	3.80	J		
Benzo(a)pyrene	µg/kg	5.40	J		
Dieldrin	µg/kg	4.80	UJ		
Endosulfan sulfate	µg/kg	4.80	U		
Endosulfan I	µg/kg	2.50	U		
Endosulfan II	µg/kg	4.80	U		
Endrin	µg/kg	4.80	U		
Endrin aldehyde	µg/kg	4.80	U		
Endrin ketone	µg/kg	4.80	U		
Heptachlor	µg/kg	2.50	UJ		
Heptachlor epoxide	µg/kg	2.50	U		
Lindane	µg/kg	2.50	UJ		
Methoxychlor	µg/kg	24.90	U		
PCB-1016	µg/kg	48.30	U		
PCB-1221	µg/kg	98.00	U		
PCB-1232	µg/kg	48.30	U		
PCB-1242	µg/kg	48.30	U		
PCB-1248	µg/kg	48.30	U		
PCB-1254	µg/kg	48.30	U		
PCB-1260	µg/kg	48.30	U		
Toxaphene	µg/kg	248.80	U		
4,4'-DDD	µg/kg	4.80	U		
4,4'-DDE	µg/kg	4.80	U		
4,4'-DDT	µg/kg	4.80	UJ		

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
Location=AND; Formation=DISMAL GAP; Site=11; A=2112; A dup=' '; Phase=1					
alpha-BHC	µg/kg	2.60	U		
alpha-Chlordane	µg/kg	2.60	U		
beta-BHC	µg/kg	2.60	U		
delta-BHC	µg/kg	2.60	U		
gamma-Chlordane	µg/kg	2.60	U		
Acenaphthene	µg/kg	2.00	UJ		
Acenaphthylene	µg/kg	200.00	J		
Aldrin	µg/kg	2.60	UJ		
Anthracene	µg/kg	2.00	UJ		
Benzo(a)anthracene	µg/kg	1.70	JN		
Benzo(a)pyrene	µg/kg	3.00	UJ		
Benzo(b)fluoranthene	µg/kg	3.00	UJ		
Benzo(k)fluoranthene	µg/kg	3.00	UJ		
Chrysene	µg/kg	23.00	UJ		
Dieldrin	µg/kg	5.00	UJ		
Endosulfan sulfate	µg/kg	5.00	U		
Endosulfan I	µg/kg	2.60	U		
Endosulfan II	µg/kg	5.00	U		
Endrin	µg/kg	5.00	U		
Endrin aldehyde	µg/kg	5.00	U		
Endrin ketone	µg/kg	5.00	U		
Fluoranthene	µg/kg	8.00	UJ		
Fluorene	µg/kg	6.00	UJ		
Heptachlor	µg/kg	2.60	UJ		
Heptachlor epoxide	µg/kg	2.60	U		
Indeno(1,2,3-cd)pyrene	µg/kg	6.00	UJ		
Lindane	µg/kg	2.60	UJ		
Methoxychlor	µg/kg	25.80	U		
Naphthalene	µg/kg	15.00	UJ		
Phenanthrene	µg/kg	13.00	JN		
Pyrene	µg/kg	2.00	UJ		
PCB-1016	µg/kg	50.00	U		
PCB-1221	µg/kg	101.60	U		
PCB-1232	µg/kg	50.00	U		
PCB-1242	µg/kg	50.00	U		
PCB-1248	µg/kg	50.00	U		
PCB-1254	µg/kg	50.00	U		
PCB-1260	µg/kg	50.00	U		
Toxaphene	µg/kg	257.80	U		
4,4'-DDD	µg/kg	5.00	U		
4,4'-DDE	µg/kg	5.00	U		
4,4'-DDT	µg/kg	5.00	UJ		
Location=AND; Formation=DISMAL GAP; Site=12; A=2080; A dup=' '; Phase=1					
alpha-BHC	µg/kg	2.30	U		
alpha-Chlordane	µg/kg	2.30	U		
beta-BHC	µg/kg	2.30	U		
delta-BHC	µg/kg	2.30	U		
gamma-Chlordane	µg/kg	2.30	U		
Acenaphthene	µg/kg	3.20	J		
Acenaphthylene	µg/kg	34.00	UJ		
Aldrin	µg/kg	2.30	UJ		
Anthracene	µg/kg	1.00	UJ		
Benzo(a)anthracene	µg/kg	2.10	J		
Benzo(a)pyrene	µg/kg	2.70	J		
Benzo(b)fluoranthene	µg/kg	3.00	UJ		
Benzo(k)fluoranthene	µg/kg	3.00	UJ		
Chrysene	µg/kg	21.00	UJ		
Dieldrin	µg/kg	4.50	UJ		
Endosulfan sulfate	µg/kg	4.50	U		
Endosulfan I	µg/kg	2.30	U		
Endosulfan II	µg/kg	4.50	U		
Endrin	µg/kg	4.50	U		

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
Endrin aldehyde	µg/kg	4.50	U		
Endrin ketone	µg/kg	4.50	U		
Fluoranthene	µg/kg	7.00	UJ		
Fluorene	µg/kg	5.00	UJ		
Heptachlor	µg/kg	2.30	UJ		
Heptachlor epoxide	µg/kg	2.30	U		
Indeno(1,2,3-cd)pyrene	µg/kg	5.00	UJ		
Lindane	µg/kg	2.30	UJ		
Methoxychlor	µg/kg	23.30	U		
Naphthalene	µg/kg	14.00	UJ		
Phenanthrene	µg/kg	35.00	J		
Pyrene	µg/kg	1.00	UJ		
PCB-1016	µg/kg	45.30	U		
PCB-1221	µg/kg	92.00	U		
PCB-1232	µg/kg	45.30	U		
PCB-1242	µg/kg	158.70			
PCB-1248	µg/kg	45.30	U		
PCB-1254	µg/kg	45.30	U		
PCB-1260	µg/kg	45.30	U		
Toxaphene	µg/kg	233.50	U		
4,4'-DDD	µg/kg	4.50	U		
4,4'-DDE	µg/kg	4.50	U		
4,4'-DDT	µg/kg	4.50	UJ		
Location=AND; Formation=DISMAL GAP; Site=19; A=2116; A dup=2120; Phase=1					
alpha-BHC	µg/kg	2.10	U	2.1	U
alpha-Chlordane	µg/kg	2.10	U	2.1	U
beta-BHC	µg/kg	2.10	U	2.1	U
delta-BHC	µg/kg	2.10	U	2.1	U
gamma-Chlordane	µg/kg	2.10	U	2.1	U
Acenaphthene	µg/kg	4.60	J	3.1	JN
Acenaphthylene	µg/kg	13.00	J	32.0	UJ
Aldrin	µg/kg	2.10	UJ	2.1	UJ
Anthracene	µg/kg	1.00	UJ	1.0	UJ
Benzo(a)anthracene	µg/kg	2.70	JN	2.2	J
Benzo(a)pyrene	µg/kg	3.70	JN	2.9	JN
Benzo(b)fluoranthene	µg/kg	2.00	UJ	3.0	UJ
Benzo(k)fluoranthene	µg/kg	2.00	UJ	3.0	UJ
Chrysene	µg/kg	19.00	UJ	19.0	UJ
Dieldrin	µg/kg	4.10	UJ	4.1	UJ
Endosulfan sulfate	µg/kg	4.10	U	4.1	U
Endosulfan I	µg/kg	2.10	U	2.1	U
Endosulfan II	µg/kg	4.10	U	4.1	U
Endrin	µg/kg	4.10	U	4.1	U
Endrin aldehyde	µg/kg	4.10	U	4.1	U
Endrin ketone	µg/kg	4.10	U	4.1	U
Fluoranthene	µg/kg	6.00	UJ	6.0	UJ
Fluorene	µg/kg	21.00	JN	24.0	JN
Heptachlor	µg/kg	2.10	UJ	2.1	UJ
Heptachlor epoxide	µg/kg	2.10	U	2.1	U
Indeno(1,2,3-cd)pyrene	µg/kg	5.00	UJ	5.0	UJ
Lindane	µg/kg	2.10	UJ	2.1	UJ
Methoxychlor	µg/kg	21.10	U	21.2	U
Naphthalene	µg/kg	12.00	UJN	13.0	UJ
Phenanthrene	µg/kg	23.00	J	20.0	J
Pyrene	µg/kg	1.00	UJ	1.0	UJ
PCB-1016	µg/kg	41.00	U	41.1	U
PCB-1221	µg/kg	83.30	U	83.5	U
PCB-1232	µg/kg	41.00	U	41.1	U
PCB-1242	µg/kg	41.00	U	41.1	U
PCB-1248	µg/kg	41.00	U	41.1	U
PCB-1254	µg/kg	41.00	U	41.1	U
PCB-1260	µg/kg	41.00	U	41.1	U
Toxaphene	µg/kg	211.40	U	211.8	U
4,4'-DDD	µg/kg	4.10	U	4.1	U

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
4,4'-DDE	µg/kg	4.10	U	4.1	U
4,4'-DDT	µg/kg	4.10	UJ	4.1	UJ
Location=AND; Formation=DISMAL GAP; Site=20; A=2070; A dup=' '; Phase=1					
alpha-BHC	µg/kg	2.10	U		
alpha-Chlordane	µg/kg	2.10	U		
beta-BHC	µg/kg	2.10	U		
delta-BHC	µg/kg	2.10	U		
gamma-Chlordane	µg/kg	2.10	U		
Acenaphthene	µg/kg	1.10	JN		
Acenaphthylene	µg/kg	30.00	UJ		
Aldrin	µg/kg	2.10	UJ		
Anthracene	µg/kg	1.10	UJ		
Benzo(a)anthracene	µg/kg	1.00	UJ		
Benzo(a)pyrene	µg/kg	2.00	UJ		
Benzo(b)fluoranthene	µg/kg	2.00	UJ		
Benzo(k)fluoranthene	µg/kg	2.00	UJ		
Chrysene	µg/kg	18.00	UJ		
Dieldrin	µg/kg	4.00	UJ		
Endosulfan sulfate	µg/kg	4.00	U		
Endosulfan I	µg/kg	2.10	U		
Endosulfan II	µg/kg	4.00	U		
Endrin	µg/kg	4.00	U		
Endrin aldehyde	µg/kg	4.00	U		
Endrin ketone	µg/kg	4.00	U		
Fluoranthene	µg/kg	6.00	UJ		
Fluorene	µg/kg	70.00	JN		
Heptachlor	µg/kg	2.10	UJ		
Heptachlor epoxide	µg/kg	2.10	U		
Indeno(1,2,3-cd)pyrene	µg/kg	5.00	UJ		
Lindane	µg/kg	2.10	UJ		
Methoxychlor	µg/kg	20.60	U		
Naphthalene	µg/kg	12.00	UJ		
Phenanthrene	µg/kg	12.00	JN		
Pyrene	µg/kg	1.00	UJ		
PCB-1016	µg/kg	40.00	U		
PCB-1221	µg/kg	81.30	U		
PCB-1232	µg/kg	40.00	U		
PCB-1242	µg/kg	40.00	U		
PCB-1248	µg/kg	40.00	U		
PCB-1254	µg/kg	40.00	U		
PCB-1260	µg/kg	40.00	U		
Toxaphene	µg/kg	206.30	U		
4,4'-DDD	µg/kg	4.00	U		
4,4'-DDE	µg/kg	4.00	U		
4,4'-DDT	µg/kg	4.00	UJ		
Location=AND; Formation=DISMAL GAP; Site=21; A=2101; A dup=' '; Phase=1					
alpha-BHC	µg/kg	2.30	U		
alpha-Chlordane	µg/kg	2.30	U		
beta-BHC	µg/kg	2.30	U		
delta-BHC	µg/kg	2.30	U		
gamma-Chlordane	µg/kg	2.30	U		
Acenaphthene	µg/kg	5.80	JN		
Acenaphthylene	µg/kg	33.00	UJ		
Aldrin	µg/kg	2.30	UJ		
Anthracene	µg/kg	1.00	UJ		
Benzo(a)anthracene	µg/kg	1.90	J		
Benzo(a)pyrene	µg/kg	3.00	UJ		
Benzo(b)fluoranthene	µg/kg	3.00	UJ		
Benzo(k)fluoranthene	µg/kg	3.00	UJ		
Chrysene	µg/kg	20.00	UJ		
Dieldrin	µg/kg	4.40	UJ		

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
Endosulfan sulfate	µg/kg	4.40	U		
Endosulfan I	µg/kg	2.30	U		
Endosulfan II	µg/kg	4.40	U		
Endrin	µg/kg	4.40	U		
Endrin aldehyde	µg/kg	4.40	U		
Endrin ketone	µg/kg	4.40	U		
Fluoranthene	µg/kg	7.00	UJ		
Fluorene	µg/kg	9.80	JN		
Heptachlor	µg/kg	2.30	UJ		
Heptachlor epoxide	µg/kg	2.30	U		
Indeno(1,2,3-cd)pyrene	µg/kg	5.00	UJ		
Lindane	µg/kg	2.30	UJ		
Methoxychlor	µg/kg	22.90	U		
Naphthalene	µg/kg	13.00	UJ		
Phenanthrene	µg/kg	1.00	UJ		
Pyrene	µg/kg	1.00	UJ		
PCB-1016	µg/kg	44.50	U		
PCB-1221	µg/kg	90.30	U		
PCB-1232	µg/kg	44.50	U		
PCB-1242	µg/kg	44.50	U		
PCB-1248	µg/kg	44.50	U		
PCB-1254	µg/kg	44.50	U		
PCB-1260	µg/kg	44.50	U		
Toxaphene	µg/kg	229.00	U		
4,4'-DDD	µg/kg	4.40	U		
4,4'-DDE	µg/kg	4.40	U		
4,4'-DDT	µg/kg	4.40	UJ		
Location=AND; Formation=DISMAL GAP; Site=22; A=2090; A dup=' '; Phase=1					
alpha-BHC	µg/kg	2.30	U		
alpha-Chlordane	µg/kg	2.30	U		
beta-BHC	µg/kg	2.30	U		
delta-BHC	µg/kg	2.30	U		
gamma-Chlordane	µg/kg	2.30	U		
Acenaphthene	µg/kg	19.00	J		
Aldrin	µg/kg	2.30	UJ		
Benzo(a)pyrene	µg/kg	2.10	JN		
Benzo(ghi)perylene	µg/kg	3.00	J		
Dieldrin	µg/kg	4.50	UJ		
Endosulfan sulfate	µg/kg	4.50	U		
Endosulfan I	µg/kg	2.30	U		
Endosulfan II	µg/kg	4.50	U		
Endrin	µg/kg	4.50	U		
Endrin aldehyde	µg/kg	4.50	U		
Endrin ketone	µg/kg	4.50	U		
Heptachlor	µg/kg	2.30	UJ		
Heptachlor epoxide	µg/kg	2.30	U		
Lindane	µg/kg	2.30	UJ		
Methoxychlor	µg/kg	23.10	U		
Phenanthrene	µg/kg	17.00	JN		
Pyrene	µg/kg	0.84	J		
PCB-1016	µg/kg	44.90	U		
PCB-1221	µg/kg	91.20	U		
PCB-1232	µg/kg	44.90	U		
PCB-1242	µg/kg	44.90	U		
PCB-1248	µg/kg	44.90	U		
PCB-1254	µg/kg	44.90	U		
PCB-1260	µg/kg	44.90	U		
Toxaphene	µg/kg	231.30	U		
4,4'-DDD	µg/kg	4.50	U		
4,4'-DDE	µg/kg	4.50	U		
4,4'-DDT	µg/kg	4.50	UJ		

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
Location=AND; Formation=DISMAL GAP; Site=3; A=2059; A dup=' '; Phase=1					
alpha-BHC	µg/kg	2.00	U		
alpha-Chlordane	µg/kg	2.00	U		
beta-BHC	µg/kg	2.00	U		
delta-BHC	µg/kg	2.00	U		
gamma-Chlordane	µg/kg	2.00	U		
Aldrin	µg/kg	2.00	UJ		
Benzo(a)anthracene	µg/kg	1.70	J		
Benzo(a)pyrene	µg/kg	2.10	J		
Dieldrin	µg/kg	3.90	UJ		
Endosulfan sulfate	µg/kg	3.90	U		
Endosulfan I	µg/kg	2.00	U		
Endosulfan II	µg/kg	3.90	U		
Endrin	µg/kg	3.90	U		
Endrin aldehyde	µg/kg	3.90	U		
Endrin ketone	µg/kg	3.90	U		
Heptachlor	µg/kg	2.00	UJ		
Heptachlor epoxide	µg/kg	2.00	U		
Lindane	µg/kg	2.00	UJ		
Methoxychlor	µg/kg	20.30	U		
Phenanthrene	µg/kg	30.00	J		
PCB-1016	µg/kg	39.50	U		
PCB-1221	µg/kg	80.10	U		
PCB-1232	µg/kg	39.50	U		
PCB-1242	µg/kg	39.50	U		
PCB-1248	µg/kg	39.50	U		
PCB-1254	µg/kg	39.50	U		
PCB-1260	µg/kg	39.50	U		
Toxaphene	µg/kg	203.30	U		
4,4'-DDD	µg/kg	3.90	U		
4,4'-DDE	µg/kg	3.90	U		
4,4'-DDT	µg/kg	3.90	UJ		
Location=AND; Formation=DISMAL GAP; Site=4; A=2039; A dup=' '; Phase=1					
alpha-BHC	µg/kg	1.90	U		
alpha-Chlordane	µg/kg	1.90	U		
beta-BHC	µg/kg	1.90	U		
delta-BHC	µg/kg	1.90	U		
gamma-Chlordane	µg/kg	1.90	U		
Acenaphthene	µg/kg	1.00	UJ		
Acenaphthylene	µg/kg	28.00	UJ		
Aldrin	µg/kg	1.90	UJ		
Anthracene	µg/kg	1.00	UJ		
Benzo(a)anthracene	µg/kg	0.50	JN		
Benzo(a)pyrene	µg/kg	2.00	UJ		
Benzo(b)fluoranthene	µg/kg	2.00	UJ		
Benzo(k)fluoranthene	µg/kg	2.00	UJ		
Chrysene	µg/kg	17.00	UJ		
Dieldrin	µg/kg	3.70	UJ		
Endosulfan sulfate	µg/kg	3.70	U		
Endosulfan I	µg/kg	1.90	U		
Endosulfan II	µg/kg	3.70	U		
Endrin	µg/kg	3.70	U		
Endrin aldehyde	µg/kg	3.70	U		
Endrin ketone	µg/kg	3.70	U		
Fluoranthene	µg/kg	6.00	UJ		
Fluorene	µg/kg	5.00	UJ		
Heptachlor	µg/kg	1.90	UJ		
Heptachlor epoxide	µg/kg	1.90	U		
Indeno(1,2,3-cd)pyrene	µg/kg	5.00	UJ		
Lindane	µg/kg	1.90	UJ		
Methoxychlor	µg/kg	18.90	U		
Naphthalene	µg/kg	11.00	UJ		
Phenanthrene	µg/kg	11.00	J		

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
Pyrene	µg/kg	1.00	UJ		
PCB-1016	µg/kg	36.70	U		
PCB-1221	µg/kg	74.50	U		
PCB-1232	µg/kg	36.70	U		
PCB-1242	µg/kg	36.70	U		
PCB-1248	µg/kg	36.70	U		
PCB-1254	µg/kg	36.70	U		
PCB-1260	µg/kg	36.70	U		
Toxaphene	µg/kg	189.10	U		
4,4'-DDD	µg/kg	3.70	U		
4,4'-DDE	µg/kg	3.70	U		
4,4'-DDT	µg/kg	3.70	UJ		
Location=AND; Formation=DISMAL GAP; Site=5; A=2149; A dup=' '; Phase=1					
alpha-BHC	µg/kg	1.90	U		
alpha-Chlordane	µg/kg	1.90	U		
beta-BHC	µg/kg	1.90	U		
delta-BHC	µg/kg	1.90	U		
gamma-Chlordane	µg/kg	1.90	U		
Acenaphthene	µg/kg	1.80	JN		
Acenaphthylene	µg/kg	29.00	UJ		
Aldrin	µg/kg	1.90	UJ		
Anthracene	µg/kg	1.00	UJ		
Benzo(a)anthracene	µg/kg	1.10	JN		
Benzo(a)pyrene	µg/kg	1.60	JN		
Benzo(b)fluoranthene	µg/kg	2.00	UJ		
Benzo(k)fluoranthene	µg/kg	2.00	UJ		
Chrysene	µg/kg	17.00	UJ		
Dieldrin	µg/kg	3.80	UJ		
Endosulfan sulfate	µg/kg	3.80	UJ		
Endosulfan I	µg/kg	1.90	U		
Endosulfan II	µg/kg	3.80	U		
Endrin	µg/kg	3.80	U		
Endrin aldehyde	µg/kg	3.80	UJ		
Endrin ketone	µg/kg	3.80	UJ		
Fluoranthene	µg/kg	34.00	J		
Fluorene	µg/kg	5.00	UJ		
Heptachlor	µg/kg	1.90	UJ		
Heptachlor epoxide	µg/kg	1.90	U		
Indeno(1,2,3-cd)pyrene	µg/kg	5.00	UJ		
Lindane	µg/kg	1.90	UJ		
Methoxychlor	µg/kg	19.50	UJ		
Naphthalene	µg/kg	11.00	UJ		
Phenanthrene	µg/kg	33.00	J		
Pyrene	µg/kg	1.00	UJ		
PCB-1016	µg/kg	37.80	U		
PCB-1221	µg/kg	76.70	U		
PCB-1232	µg/kg	37.80	U		
PCB-1242	µg/kg	37.80	U		
PCB-1248	µg/kg	37.80	U		
PCB-1254	µg/kg	37.80	U		
PCB-1260	µg/kg	37.80	U		
Toxaphene	µg/kg	194.60	U		
4,4'-DDD	µg/kg	3.80	U		
4,4'-DDE	µg/kg	3.80	U		
4,4'-DDT	µg/kg	3.80	UJ		
Location=AND; Formation=DISMAL GAP; Site=9; A=2130; A dup=' '; Phase=1					
alpha-BHC	µg/kg	2.00	U		
alpha-Chlordane	µg/kg	2.00	U		
beta-BHC	µg/kg	2.00	U		
delta-BHC	µg/kg	2.00	U		
gamma-Chlordane	µg/kg	2.00	U		

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
Acenaphthene	µg/kg	7.60	J		
Aldrin	µg/kg	2.00	UJ		
Benzo(a)anthracene	µg/kg	2.90	J		
Dieldrin	µg/kg	3.80	UJ		
Endosulfan sulfate	µg/kg	3.80	U		
Endosulfan I	µg/kg	2.00	U		
Endosulfan II	µg/kg	3.80	U		
Endrin	µg/kg	3.80	U		
Endrin aldehyde	µg/kg	3.80	U		
Endrin ketone	µg/kg	3.80	U		
Heptachlor	µg/kg	2.00	UJ		
Heptachlor epoxide	µg/kg	2.00	U		
Lindane	µg/kg	2.00	UJ		
Methoxychlor	µg/kg	19.80	U		
Phenanthrene	µg/kg	33.00	J		
PCB-1016	µg/kg	38.50	U		
PCB-1221	µg/kg	78.10	U		
PCB-1232	µg/kg	38.50	U		
PCB-1242	µg/kg	38.50	U		
PCB-1248	µg/kg	38.50	U		
PCB-1254	µg/kg	38.50	U		
PCB-1260	µg/kg	38.50	U		
Toxaphene	µg/kg	198.20	U		
4,4'-DDD	µg/kg	3.80	U		
4,4'-DDE	µg/kg	3.80	U		
4,4'-DDT	µg/kg	3.80	UJ		
Location=ORR; Formation=CHEPULTEPEC; Site=50; A=1548; A dup=' '; Phase=2					
Acenaphthene	µg/kg	0.80	J		
Acenaphthylene	µg/kg	75.10	U		
Benzo(a)anthracene	µg/kg	1.50	J		
Benzo(ghi)perylene	µg/kg	2.60	J		
Dibenzo(a,h)anthracene	µg/kg	0.40	J		
Fluoranthene	µg/kg	0.40	J		
Indeno(1,2,3-cd)pyrene	µg/kg	18.80	U		
Naphthalene	µg/kg	48.40	J		
Phenanthrene	µg/kg	1.50	J		
Pyrene	µg/kg	2.60	J		
Location=ORR; Formation=CHEPULTEPEC; Site=53; A=1553; A dup=' '; Phase=2					
Acenaphthylene	µg/kg	74.20	U		
Benzo(a)anthracene	µg/kg	2.60	J		
Benzo(a)pyrene	µg/kg	2.60	J		
Benzo(ghi)perylene	µg/kg	2.60	J		
Benzo(k)fluoranthene	µg/kg	1.10	J		
Dibenzo(a,h)anthracene	µg/kg	3.70	J		
Fluoranthene	µg/kg	4.10	J		
Fluorene	µg/kg	0.20	J		
Indeno(1,2,3-cd)pyrene	µg/kg	18.60	U		
Phenanthrene	µg/kg	4.80	J		
Pyrene	µg/kg	3.30	J		
Location=ORR; Formation=CHEPULTEPEC; Site=66; A=1738; A dup=' '; Phase=2					
alpha-BHC	µg/kg	1.80	UJ		
alpha-Chlordane	µg/kg	1.80	U		
beta-BHC	µg/kg	1.80	UJ		
delta-BHC	µg/kg	1.80	UJ		
gamma-Chlordane	µg/kg	1.80	U		
Acenaphthylene	µg/kg	76.90	U		
Aldrin	µg/kg	1.80	U		
Benzo(a)anthracene	µg/kg	0.40	J		

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
Dalapon	µg/kg	3742.00	U		
Dicamba	µg/kg	171.00	U		
Dichlorprop	µg/kg	428.00	U		
Dieldrin	µg/kg	3.60	U		
Dinoseb	µg/kg	90.00	U		
Endosulfan sulfate	µg/kg	3.60	U		
Endosulfan I	µg/kg	1.80	U		
Endosulfan II	µg/kg	3.60	U		
Endrin	µg/kg	3.60	U		
Endrin aldehyde	µg/kg	3.60	U		
Endrin ketone	µg/kg	3.60	U		
Fluoranthene	µg/kg	2.70	J		
Fluorene	µg/kg	0.80	J		
Heptachlor	µg/kg	1.80	U		
Heptachlor epoxide	µg/kg	1.80	U		
Indeno(1,2,3-cd)pyrene	µg/kg	19.20	U		
Lindane	µg/kg	1.80	UJ		
Methoxychlor	µg/kg	18.00	U		
MCPA	µg/kg	160370.00	UJ		
MCPP	µg/kg	121881.00	U		
Phenanthrene	µg/kg	1.50	J		
Pyrene	µg/kg	1.20	J		
PCB-1016	µg/kg	36.00	U		
PCB-1221	µg/kg	73.00	U		
PCB-1232	µg/kg	36.00	U		
PCB-1242	µg/kg	36.00	U		
PCB-1248	µg/kg	36.00	U		
PCB-1254	µg/kg	36.00	U		
PCB-1260	µg/kg	36.00	U		
Silvex	µg/kg	107.00	UJ		
Toxaphene	µg/kg	180.00	U		
2,4-D	µg/kg	1227.00	J		
2,4-DB	µg/kg	577.00	U		
2,4,5-T	µg/kg	128.00	UJ		
4,4'-DDD	µg/kg	3.60	U		
4,4'-DDE	µg/kg	3.60	UJ		
4,4'-DDT	µg/kg	3.60	UJ		
Location=ORR; Formation=CHEPULTEPEC; Site=68; A=1741; A dup=' '; Phase=2					
alpha-BHC	µg/kg	1.90	UJ		
alpha-Chlordane	µg/kg	1.90	U		
beta-BHC	µg/kg	1.90	UJ		
delta-BHC	µg/kg	1.90	UJ		
gamma-Chlordane	µg/kg	1.90	U		
Acenaphthylene	µg/kg	76.60	U		
Aldrin	µg/kg	1.90	U		
Anthracene	µg/kg	0.40	J		
Benzo(a)anthracene	µg/kg	1.90	J		
Benzo(a)pyrene	µg/kg	3.10	J		
Benzo(b)fluoranthene	µg/kg	3.40	J		
Benzo(ghi)perylene	µg/kg	1.90	J		
Benzo(k)fluoranthene	µg/kg	1.50	J		
Dalapon	µg/kg	3850.00	U		
Dicamba	µg/kg	177.00	U		
Dichlorprop	µg/kg	443.00	U		
Dieldrin	µg/kg	3.80	U		
Dinoseb	µg/kg	93.00	U		
Endosulfan sulfate	µg/kg	3.80	U		
Endosulfan I	µg/kg	1.90	U		
Endosulfan II	µg/kg	3.80	U		
Endrin	µg/kg	3.80	U		
Endrin aldehyde	µg/kg	3.80	U		
Endrin ketone	µg/kg	3.80	U		
Fluoranthene	µg/kg	1.90	J		
Fluorene	µg/kg	0.80	U		
Heptachlor	µg/kg	1.90	U		

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
Heptachlor epoxide	µg/kg	1.90	U		
Indeno(1,2,3-cd)pyrene	µg/kg	19.20	U		
Lindane	µg/kg	1.90	UJ		
Methoxychlor	µg/kg	19.00	U		
MCPA	µg/kg	165955.00	UJ		
MCPP	µg/kg	126126.00	U		
Phenanthrene	µg/kg	3.40	J		
Pyrene	µg/kg	2.70	J		
PCB-1016	µg/kg	38.00	U		
PCB-1221	µg/kg	76.00	U		
PCB-1232	µg/kg	38.00	U		
PCB-1242	µg/kg	38.00	U		
PCB-1248	µg/kg	38.00	U		
PCB-1254	µg/kg	38.00	U		
PCB-1260	µg/kg	38.00	U		
Silvex	µg/kg	111.00	UJ		
Toxaphene	µg/kg	190.00	U		
2,4-D	µg/kg	797.00	UJ		
2,4-DB	µg/kg	597.00	U		
2,4,5-T	µg/kg	133.00	UJ		
4,4'-DDD	µg/kg	3.80	U		
4,4'-DDE	µg/kg	3.80	UJ		
4,4'-DDT	µg/kg	3.80	UJ		
Location=ORR; Formation=CHEPULTEPEC; Site=73; A=1744; A dup=' '; Phase=2					
alpha-BHC	µg/kg	2.00	UJ		
alpha-Chlordane	µg/kg	2.00	U		
beta-BHC	µg/kg	2.00	UJ		
delta-BHC	µg/kg	2.00	UJ		
gamma-Chlordane	µg/kg	2.00	U		
Acenaphthene	µg/kg	4.10	UJ		
Acenaphthylene	µg/kg	81.80	U		
Aldrin	µg/kg	2.00	U		
Anthracene	µg/kg	4.10	U		
Benzo(a)anthracene	µg/kg	4.50	J		
Benzo(a)pyrene	µg/kg	5.30	J		
Benzo(b)fluoranthene	µg/kg	4.50	J		
Benzo(ghi)perylene	µg/kg	3.70	J		
Benzo(k)fluoranthene	µg/kg	2.50	J		
Chrysene	µg/kg	4.10	U		
Dibenzo(a,h)anthracene	µg/kg	4.10	U		
Dieldrin	µg/kg	4.10	U		
Endosulfan sulfate	µg/kg	4.10	U		
Endosulfan I	µg/kg	2.00	U		
Endosulfan II	µg/kg	4.10	U		
Endrin	µg/kg	4.10	U		
Endrin aldehyde	µg/kg	4.10	U		
Endrin ketone	µg/kg	4.10	U		
Fluoranthene	µg/kg	7.00	J		
Fluorene	µg/kg	1.60	U		
Heptachlor	µg/kg	2.00	U		
Heptachlor epoxide	µg/kg	2.00	U		
Indeno(1,2,3-cd)pyrene	µg/kg	20.40	U		
Lindane	µg/kg	2.00	UJ		
Methoxychlor	µg/kg	20.00	U		
Naphthalene	µg/kg	4.90	J		
Phenanthrene	µg/kg	5.30	J		
Pyrene	µg/kg	5.70	J		
PCB-1016	µg/kg	41.00	U		
PCB-1221	µg/kg	81.00	U		
PCB-1232	µg/kg	41.00	U		
PCB-1242	µg/kg	41.00	U		
PCB-1248	µg/kg	41.00	U		
PCB-1254	µg/kg	41.00	U		
PCB-1260	µg/kg	41.00	U		
Toxaphene	µg/kg	200.00	U		

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
4,4'-DDD	µg/kg	4.10	U		
4,4'-DDE	µg/kg	4.10	UJ		
4,4'-DDT	µg/kg	4.10	UJ		
Location=ORR; Formation=CHEPULTEPEC; Site=74; A=1746; A dup=' '; Phase=2					
alpha-BHC	µg/kg	1.90	UJ		
alpha-Chlordane	µg/kg	1.90	U		
beta-BHC	µg/kg	1.90	UJ		
delta-BHC	µg/kg	1.90	UJ		
gamma-Chlordane	µg/kg	1.90	U		
Acenaphthene	µg/kg	3.90	U		
Acenaphthylene	µg/kg	77.90	U		
Aldrin	µg/kg	1.90	U		
Anthracene	µg/kg	0.40	J		
Benzo(a)anthracene	µg/kg	1.60	J		
Benzo(a)pyrene	µg/kg	2.70	J		
Benzo(b)fluoranthene	µg/kg	3.90	U		
Benzo(ghi)perylene	µg/kg	1.60	J		
Benzo(k)fluoranthene	µg/kg	1.20	J		
Chrysene	µg/kg	3.90	U		
Dibenzo(a,h)anthracene	µg/kg	0.80	J		
Dieldrin	µg/kg	3.90	U		
Endosulfan sulfate	µg/kg	3.90	U		
Endosulfan I	µg/kg	1.90	U		
Endosulfan II	µg/kg	3.90	U		
Endrin	µg/kg	3.90	U		
Endrin aldehyde	µg/kg	3.90	U		
Endrin ketone	µg/kg	3.90	U		
Fluoranthene	µg/kg	5.10			
Fluorene	µg/kg	1.60	U		
Heptachlor	µg/kg	1.90	U		
Heptachlor epoxide	µg/kg	1.90	U		
Indeno(1,2,3-cd)pyrene	µg/kg	19.50	U		
Lindane	µg/kg	1.90	UJ		
Methoxychlor	µg/kg	19.00	U		
Naphthalene	µg/kg	4.70	J		
Phenanthrene	µg/kg	3.50	J		
Pyrene	µg/kg	4.30			
PCB-1016	µg/kg	39.00	U		
PCB-1221	µg/kg	78.00	U		
PCB-1232	µg/kg	39.00	U		
PCB-1242	µg/kg	39.00	U		
PCB-1248	µg/kg	39.00	U		
PCB-1254	µg/kg	39.00	U		
PCB-1260	µg/kg	39.00	U		
Toxaphene	µg/kg	190.00	U		
4,4'-DDD	µg/kg	3.90	U		
4,4'-DDE	µg/kg	3.90	UJ		
4,4'-DDT	µg/kg	3.90	UJ		
Location=ORR; Formation=CHEPULTEPEC; Site=90; A=1749; A dup=' '; Phase=2					
alpha-BHC	µg/kg	1.90	UJ		
alpha-Chlordane	µg/kg	1.90	U		
beta-BHC	µg/kg	1.90	UJ		
delta-BHC	µg/kg	1.90	UJ		
gamma-Chlordane	µg/kg	1.90	U		
Acenaphthene	µg/kg	4.70	U		
Acenaphthylene	µg/kg	93.80	U		
Aldrin	µg/kg	1.90	U		
Anthracene	µg/kg	4.70	U		
Benzo(a)anthracene	µg/kg	1.90	J		
Benzo(a)pyrene	µg/kg	3.30	J		
Benzo(b)fluoranthene	µg/kg	4.70	U		

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
Benzo(ghi)perylene	µg/kg	3.80	J		
Benzo(k)fluoranthene	µg/kg	1.90	J		
Chrysene	µg/kg	4.70	U		
Dibenzo(a,h)anthracene	µg/kg	4.70	U		
Dieldrin	µg/kg	3.80	U		
Endosulfan sulfate	µg/kg	3.80	U		
Endosulfan I	µg/kg	1.90	U		
Endosulfan II	µg/kg	3.80	U		
Endrin	µg/kg	3.80	U		
Endrin aldehyde	µg/kg	3.80	U		
Endrin ketone	µg/kg	3.80	U		
Fluoranthene	µg/kg	8.90			
Fluorene	µg/kg	4.70	U		
Heptachlor	µg/kg	1.90	U		
Heptachlor epoxide	µg/kg	1.90	U		
Indeno(1,2,3-cd)pyrene	µg/kg	16.40	J		
Lindane	µg/kg	1.90	UJ		
Methoxychlor	µg/kg	19.00	U		
Naphthalene	µg/kg	23.50	U		
Phenanthrene	µg/kg	4.20	J		
Pyrene	µg/kg	8.00			
PCB-1016	µg/kg	38.00	U		
PCB-1221	µg/kg	75.00	U		
PCB-1232	µg/kg	38.00	U		
PCB-1242	µg/kg	38.00	U		
PCB-1248	µg/kg	38.00	U		
PCB-1254	µg/kg	38.00	U		
PCB-1260	µg/kg	38.00	U		
Toxaphene	µg/kg	190.00	U		
4,4'-DDD	µg/kg	3.80	U		
4,4'-DDE	µg/kg	3.80	UJ		
4,4'-DDT	µg/kg	3.80	UJ		
Location=ORR; Formation=CHICKAMAUGA Bethel V; Site=100; A=1906; A dup=' '; Phase=2					
1alpha-BHC	µg/kg	2.40	UJ		
alpha-Chlordane	µg/kg	2.40	UJ		
beta-BHC	µg/kg	2.40	UJ		
delta-BHC	µg/kg	2.40	UJ		
gamma-Chlordane	µg/kg	2.40	UJ		
Acenaphthylene	µg/kg	88.40	UJ		
Aldrin	µg/kg	2.40	UJ		
Anthracene	µg/kg	1.30	J		
Benzo(a)anthracene	µg/kg	7.50	J		
Benzo(a)pyrene	µg/kg	7.50	J		
Benzo(b)fluoranthene	µg/kg	7.10	J		
Benzo(k)fluoranthene	µg/kg	4.40	J		
Chrysene	µg/kg	6.20	J		
Dibenzo(a,h)anthracene	µg/kg	4.40	U		
Dieldrin	µg/kg	4.60	UJ		
Endosulfan sulfate	µg/kg	23.50	UJ		
Endosulfan I	µg/kg	2.40	UJ		
Endosulfan II	µg/kg	4.60	UJ		
Endrin	µg/kg	4.60	UJ		
Endrin aldehyde	µg/kg	4.60	UJ		
Endrin ketone	µg/kg	4.60	UJ		
Fluoranthene	µg/kg	2.70	J		
Heptachlor	µg/kg	2.40	UJ		
Heptachlor epoxide	µg/kg	2.40	UJ		
Indeno(1,2,3-cd)pyrene	µg/kg	5.30	J		
Lindane	µg/kg	2.40	UJ		
Methoxychlor	µg/kg	4.60	UJ		
Naphthalene	µg/kg	16.30	J		
Phenanthrene	µg/kg	20.80	J		
Pyrene	µg/kg	11.00	J		
PCB-1016	µg/kg	46.00	UJ		
PCB-1221	µg/kg	93.00	UJ		

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
PCB-1232	µg/kg	46.00	UJ		
PCB-1242	µg/kg	46.00	UJ		
PCB-1248	µg/kg	46.00	UJ		
PCB-1254	µg/kg	46.00	UJ		
PCB-1260	µg/kg	46.00	UJ		
Toxaphene	µg/kg	235.00	UJ		
4,4'-DDD	µg/kg	4.60	UJ		
4,4'-DDE	µg/kg	4.60	UJ		
4,4'-DDT	µg/kg	4.60	UJ		
Location=ORR; Formation=CHICKAMAUGA Bethel V; Site=101; A=1897; A dup=' '; Phase=2					
alpha-BHC	µg/kg	2.30	UJ		
alpha-Chlordane	µg/kg	2.30	UJ		
beta-BHC	µg/kg	2.30	UJ		
delta-BHC	µg/kg	2.30	UJ		
gamma-Chlordane	µg/kg	2.30	UJ		
Acenaphthylene	µg/kg	86.30	UJ		
Aldrin	µg/kg	2.30	UJ		
Anthracene	µg/kg	0.40	J		
Benzo(a)anthracene	µg/kg	4.30	J		
Benzo(a)pyrene	µg/kg	5.20	J		
Benzo(b)fluoranthene	µg/kg	3.50	J		
Benzo(ghi)perylene	µg/kg	4.70	J		
Benzo(k)fluoranthene	µg/kg	3.00	J		
Chrysene	µg/kg	8.60	J		
Dalapon	µg/kg	4361.00	UJ		
Dicamba	µg/kg	199.00	UJ		
Dichlorprop	µg/kg	498.00	UJ		
Dieldrin	µg/kg	4.40	UJ		
Dinoseb	µg/kg	105.00	UJ		
Endosulfan sulfate	µg/kg	4.40	UJ		
Endosulfan I	µg/kg	2.30	UJ		
Endosulfan II	µg/kg	4.40	UJ		
Endrin	µg/kg	4.40	UJ		
Endrin aldehyde	µg/kg	4.40	UJ		
Endrin ketone	µg/kg	4.40	UJ		
Fluoranthene	µg/kg	8.60	J		
Fluorene	µg/kg	1.30	J		
Heptachlor	µg/kg	2.30	UJ		
Heptachlor epoxide	µg/kg	2.30	UJ		
Indeno(1,2,3-cd)pyrene	µg/kg	17.30	J		
Lindane	µg/kg	2.30	UJ		
Methoxychlor	µg/kg	22.70	UJ		
MCPA	µg/kg	186890.00	UJ		
MCPP	µg/kg	142037.00	UJ		
Phenanthrene	µg/kg	6.00	J		
Pyrene	µg/kg	9.10	J		
PCB-1016	µg/kg	44.00	UJ		
PCB-1221	µg/kg	89.00	UJ		
PCB-1232	µg/kg	44.00	UJ		
PCB-1242	µg/kg	44.00	UJ		
PCB-1248	µg/kg	44.00	UJ		
PCB-1254	µg/kg	44.00	UJ		
PCB-1260	µg/kg	44.00	UJ		
Silvex	µg/kg	125.00	UJ		
Toxaphene	µg/kg	227.00	UJ		
2,4-D	µg/kg	897.00	UJ		
2,4-DB	µg/kg	673.00	UJ		
2,4,5-T	µg/kg	150.00	UJ		
4,4'-DDD	µg/kg	4.40	UJ		
4,4'-DDE	µg/kg	4.40	UJ		
4,4'-DDT	µg/kg	4.40	UJ		

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
Endrin ketone	µg/kg	4.20	UJ		
Heptachlor	µg/kg	2.20	UJ		
Heptachlor epoxide	µg/kg	2.20	UJ		
Indeno(1,2,3-cd)pyrene	µg/kg	21.40	UJ		
Lindane	µg/kg	2.20	UJ		
Methoxychlor	µg/kg	21.90	UJ		
MCPA	µg/kg	188348.00	U		
MCPP	µg/kg	143145.00	U		
Naphthalene	µg/kg	1.70	J		
Phenanthrene	µg/kg	10.30	J		
Pyrene	µg/kg	4.70	J		
PCB-1016	µg/kg	42.00	UJ		
PCB-1221	µg/kg	86.00	UJ		
PCB-1232	µg/kg	42.00	UJ		
PCB-1242	µg/kg	42.00	UJ		
PCB-1248	µg/kg	42.00	UJ		
PCB-1254	µg/kg	42.00	UJ		
PCB-1260	µg/kg	42.00	UJ		
Silvex	µg/kg	126.00	U		
Toxaphene	µg/kg	219.00	UJ		
2,4-D	µg/kg	904.00	U		
2,4-DB	µg/kg	678.00	U		
2,4,5-T	µg/kg	151.00	U		
4,4'-DDD	µg/kg	4.20	UJ		
4,4'-DDE	µg/kg	4.20	UJ		
4,4'-DDT	µg/kg	4.20	UJ		
Location=ORR; Formation=CHICKAMAUGA Bethel V; Site=104; A=1964; A dup=' '; Phase=2					
alpha-BHC	µg/kg	2.20	UJ		
alpha-Chlordane	µg/kg	2.20	U		
beta-BHC	µg/kg	2.20	U		
delta-BHC	µg/kg	2.20	UJ		
gamma-Chlordane	µg/kg	2.20	U		
Acenaphthylene	µg/kg	83.80	UJ		
Aldrin	µg/kg	2.20	U		
Benzo(a)pyrene	µg/kg	3.40	J		
Benzo(b)fluoranthene	µg/kg	2.10	J		
Benzo(k)fluoranthene	µg/kg	1.70	J		
Dieldrin	µg/kg	4.20	U		
Endosulfan sulfate	µg/kg	4.20	U		
Endosulfan I	µg/kg	2.20	U		
Endosulfan II	µg/kg	4.20	U		
Endrin	µg/kg	4.20	U		
Endrin aldehyde	µg/kg	2.20	U		
Endrin ketone	µg/kg	2.20	U		
Heptachlor	µg/kg	2.20	U		
Heptachlor epoxide	µg/kg	2.20	U		
Indeno(1,2,3-cd)pyrene	µg/kg	20.90	UJ		
Lindane	µg/kg	2.20	U		
Methoxychlor	µg/kg	21.70	U		
Naphthalene	µg/kg	0.80	J		
Phenanthrene	µg/kg	4.60	J		
PCB-1016	µg/kg	22.00	U		
PCB-1221	µg/kg	43.00	U		
PCB-1232	µg/kg	22.00	U		
PCB-1242	µg/kg	22.00	U		
PCB-1248	µg/kg	22.00	U		
PCB-1254	µg/kg	22.00	U		
PCB-1260	µg/kg	22.00	U		
Toxaphene	µg/kg	217.00	U		
4,4'-DDD	µg/kg	4.20	U		
4,4'-DDE	µg/kg	4.20	UJ		
4,4'-DDT	µg/kg	4.20	U		

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
Location=ORR; Formation=CHICKAMAUGA Bethel V; Site=102; A=1894; A dup=' '; Phase=2					
alpha-BHC	µg/kg	2.40	UJ		
alpha-Chlordane	µg/kg	2.40	UJ		
beta-BHC	µg/kg	2.40	UJ		
delta-BHC	µg/kg	2.40	UJ		
gamma-Chlordane	µg/kg	2.40	UJ		
Acenaphthylene	µg/kg	90.70	U		
Aldrin	µg/kg	2.40	UJ		
Anthracene	µg/kg	0.50	J		
Benzo(a)anthracene	µg/kg	5.00	J		
Benzo(a)pyrene	µg/kg	4.50	J		
Benzo(b)fluoranthene	µg/kg	5.90	J		
Benzo(ghi)perylene	µg/kg	4.50	J		
Benzo(k)fluoranthene	µg/kg	2.70	J		
Chrysene	µg/kg	5.90	J		
Dieldrin	µg/kg	4.60	UJ		
Endosulfan sulfate	µg/kg	4.60	UJ		
Endosulfan I	µg/kg	2.40	UJ		
Endosulfan II	µg/kg	4.60	UJ		
Endrin	µg/kg	4.60	UJ		
Endrin aldehyde	µg/kg	4.60	UJ		
Endrin ketone	µg/kg	4.60	UJ		
Heptachlor	µg/kg	2.40	UJ		
Heptachlor epoxide	µg/kg	2.40	UJ		
Indeno(1,2,3-cd)pyrene	µg/kg	10.90	J		
Lindane	µg/kg	2.40	UJ		
Methoxychlor	µg/kg	23.40	UJ		
Phenanthrene	µg/kg	5.00	J		
Pyrene	µg/kg	7.70	J		
PCB-1016	µg/kg	46.00	UJ		
PCB-1221	µg/kg	93.00	UJ		
PCB-1232	µg/kg	46.00	UJ		
PCB-1242	µg/kg	46.00	UJ		
PCB-1248	µg/kg	46.00	UJ		
PCB-1254	µg/kg	46.00	UJ		
PCB-1260	µg/kg	46.00	UJ		
Toxaphene	µg/kg	235.00	UJ		
4,4'-DDD	µg/kg	4.60	UJ		
4,4'-DDE	µg/kg	4.60	UJ		
4,4'-DDT	µg/kg	4.60	UJ		
Location=ORR; Formation=CHICKAMAUGA Bethel V; Site=103; A=1891; A dup=' '; Phase=2					
alpha-BHC	µg/kg	2.20	UJ		
alpha-Chlordane	µg/kg	2.20	UJ		
beta-BHC	µg/kg	2.20	UJ		
delta-BHC	µg/kg	2.20	UJ		
gamma-Chlordane	µg/kg	2.20	UJ		
Acenaphthylene	µg/kg	85.70	UJ		
Aldrin	µg/kg	2.20	UJ		
Benzo(a)anthracene	µg/kg	3.00	J		
Benzo(a)pyrene	µg/kg	3.40	J		
Benzo(ghi)perylene	µg/kg	2.60	J		
Benzo(k)fluoranthene	µg/kg	1.70	J		
Chrysene	µg/kg	3.40	J		
Dalapon	µg/kg	4395.00	U		
Dicamba	µg/kg	201.00	U		
Dichlorprop	µg/kg	502.00	U		
Dieldrin	µg/kg	4.20	UJ		
Dinoseb	µg/kg	105.00	U		
Endosulfan sulfate	µg/kg	4.20	UJ		
Endosulfan I	µg/kg	2.20	UJ		
Endosulfan II	µg/kg	4.20	UJ		
Endrin	µg/kg	4.20	UJ		
Endrin aldehyde	µg/kg	4.20	UJ		

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
Location=ORR; Formation=CHICKAMAUGA Bethel V; Site=108; A=1967; A dup=' '; Phase=2					
alpha-BHC	µg/kg	2.20	UJ		
alpha-Chlordane	µg/kg	2.20	U		
beta-BHC	µg/kg	2.20	U		
delta-BHC	µg/kg	2.20	UJ		
gamma-Chlordane	µg/kg	2.20	U		
Acenaphthylene	µg/kg	86.30	UJ		
Aldrin	µg/kg	2.20	U		
Benzo(a)pyrene	µg/kg	0.90	J		
Benzo(k)fluoranthene	µg/kg	1.30	J		
Dieldrin	µg/kg	4.30	U		
Endosulfan sulfate	µg/kg	4.30	U		
Endosulfan I	µg/kg	2.20	U		
Endosulfan II	µg/kg	4.30	U		
Endrin	µg/kg	4.30	U		
Endrin aldehyde	µg/kg	4.30	U		
Endrin ketone	µg/kg	4.30	U		
Fluoranthene	µg/kg	3.90	J		
Heptachlor	µg/kg	2.20	U		
Heptachlor epoxide	µg/kg	2.20	U		
Indeno(1,2,3-cd)pyrene	µg/kg	21.60	UJ		
Lindane	µg/kg	2.20	U		
Methoxychlor	µg/kg	22.10	U		
Naphthalene	µg/kg	25.00	J		
Phenanthrene	µg/kg	3.50	J		
PCB-1016	µg/kg	43.00	U		
PCB-1221	µg/kg	87.00	U		
PCB-1232	µg/kg	43.00	U		
PCB-1242	µg/kg	43.00	U		
PCB-1248	µg/kg	43.00	U		
PCB-1254	µg/kg	43.00	U		
PCB-1260	µg/kg	43.00	U		
Toxaphene	µg/kg	221.00	U		
4,4'-DDD	µg/kg	4.30	U		
4,4'-DDE	µg/kg	4.30	UJ		
4,4'-DDT	µg/kg	4.30	U		
Location=ORR; Formation=CHICKAMAUGA Bethel V; Site=110; A=1970; A dup=' '; Phase=2					
alpha-BHC	µg/kg	2.20	UJ		
alpha-Chlordane	µg/kg	2.20	U		
beta-BHC	µg/kg	2.20	U		
delta-BHC	µg/kg	2.20	UJ		
gamma-Chlordane	µg/kg	2.20	U		
Acenaphthylene	µg/kg	88.50	UJ		
Aldrin	µg/kg	2.20	U		
Benzo(a)pyrene	µg/kg	3.50	J		
Benzo(k)fluoranthene	µg/kg	1.80	J		
Dibenzo(a,h)anthracene	µg/kg	0.40	J		
Dieldrin	µg/kg	4.30	U		
Endosulfan sulfate	µg/kg	4.30	U		
Endosulfan I	µg/kg	2.20	U		
Endosulfan II	µg/kg	4.30	U		
Endrin	µg/kg	4.30	U		
Endrin aldehyde	µg/kg	4.30	U		
Endrin ketone	µg/kg	4.30	U		
Heptachlor	µg/kg	2.20	U		
Heptachlor epoxide	µg/kg	2.20	U		
Indeno(1,2,3-cd)pyrene	µg/kg	11.90	J		
Lindane	µg/kg	2.20	U		
Methoxychlor	µg/kg	22.20	U		
Phenanthrene	µg/kg	4.40	J		
PCB-1016	µg/kg	43.00	U		
PCB-1221	µg/kg	88.00	U		
PCB-1232	µg/kg	43.00	U		

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
PCB-1242	µg/kg	43.00	U		
PCB-1248	µg/kg	43.00	U		
PCB-1254	µg/kg	43.00	U		
PCB-1260	µg/kg	43.00	U		
Toxaphene	µg/kg	222.00	U		
4,4'-DDD	µg/kg	4.30	U		
4,4'-DDE	µg/kg	4.30	UJ		
4,4'-DDT	µg/kg	4.30	U		
Location=ORR; Formation=CHICKAMAUGA Bethel V; Site=115; A=1973; A dup=' '; Phase=2					
alpha-BHC	µg/kg	2.30	UJ		
alpha-Chlordane	µg/kg	2.30	U		
beta-BHC	µg/kg	2.30	U		
delta-BHC	µg/kg	2.30	UJ		
gamma-Chlordane	µg/kg	2.30	U		
Acenaphthene	µg/kg	3.50	J		
Acenaphthylene	µg/kg	87.30	UJ		
Aldrin	µg/kg	2.30	U		
Benzo(a)pyrene	µg/kg	4.80	J		
Benzo(b)fluoranthene	µg/kg	5.70	J		
Benzo(k)fluoranthene	µg/kg	4.00	J		
Chrysene	µg/kg	4.40	U		
Dibenzo(a,h)anthracene	µg/kg	0.90	J		
Dieldrin	µg/kg	4.40	U		
Endosulfan sulfate	µg/kg	4.40	U		
Endosulfan I	µg/kg	2.30	U		
Endosulfan II	µg/kg	4.40	U		
Endrin	µg/kg	4.40	U		
Endrin aldehyde	µg/kg	4.40	U		
Endrin ketone	µg/kg	4.40	U		
Fluoranthene	µg/kg	1.30	J		
Heptachlor	µg/kg	2.30	U		
Heptachlor epoxide	µg/kg	2.30	U		
Indeno(1,2,3-cd)pyrene	µg/kg	56.60	J		
Lindane	µg/kg	2.30	U		
Methoxychlor	µg/kg	4.40	U		
Naphthalene	µg/kg	9.20	J		
Phenanthrene	µg/kg	8.30	J		
PCB-1016	µg/kg	44.00	U		
PCB-1221	µg/kg	89.00	U		
PCB-1232	µg/kg	44.00	U		
PCB-1242	µg/kg	44.00	U		
PCB-1248	µg/kg	44.00	U		
PCB-1254	µg/kg	44.00	U		
PCB-1260	µg/kg	44.00	U		
Toxaphene	µg/kg	227.00	U		
4,4'-DDD	µg/kg	3.20	UJ		
4,4'-DDE	µg/kg	4.40	UJ		
4,4'-DDT	µg/kg	4.40	U		
Location=ORR; Formation=CHICKAMAUGA Bethel V; Site=116; A=1976; A dup=' '; Phase=2					
alpha-BHC	µg/kg	2.10	UJ		
alpha-Chlordane	µg/kg	2.10	UJ		
beta-BHC	µg/kg	2.10	UJ		
delta-BHC	µg/kg	2.10	UJ		
gamma-Chlordane	µg/kg	2.10	UJ		
Acenaphthylene	µg/kg	83.10	UJ		
Aldrin	µg/kg	2.10	UJ		
Benzo(a)pyrene	µg/kg	4.20	J		
Benzo(b)fluoranthene	µg/kg	4.20	J		
Benzo(k)fluoranthene	µg/kg	2.90	J		
Dieldrin	µg/kg	4.10	UJ		
Endosulfan sulfate	µg/kg	4.10	UJ		

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
Endosulfan I	µg/kg	2.10	UJ		
Endosulfan II	µg/kg	4.10	UJ		
Endrin	µg/kg	4.10	UJ		
Endrin aldehyde	µg/kg	4.10	UJ		
Endrin ketone	µg/kg	4.10	UJ		
Fluoranthene	µg/kg	12.50	J		
Heptachlor	µg/kg	2.10	UJ		
Heptachlor epoxide	µg/kg	2.10	UJ		
Indeno(1,2,3-cd)pyrene	µg/kg	5.80	J		
Lindane	µg/kg	2.10	UJ		
Methoxychlor	µg/kg	21.40	UJ		
Naphthalene	µg/kg	4.60	J		
Phenanthrene	µg/kg	11.20	J		
PCB-1016	µg/kg	41.00	UJ		
PCB-1221	µg/kg	84.00	UJ		
PCB-1232	µg/kg	41.00	UJ		
PCB-1242	µg/kg	41.00	UJ		
PCB-1248	µg/kg	41.00	UJ		
PCB-1254	µg/kg	41.00	UJ		
PCB-1260	µg/kg	41.00	UJ		
Toxaphene	µg/kg	214.00	UJ		
4,4'-DDD	µg/kg	4.10	UJ		
4,4'-DDE	µg/kg	4.10	UJ		
4,4'-DDT	µg/kg	4.10	UJ		
Location=ORR; Formation=CHICKAMAUGA Bethel V; Site=117; A=1979; A dup=' '; Phase=2					
alpha-BHC	µg/kg	2.20	UJ		
alpha-Chlordane	µg/kg	2.20	U		
beta-BHC	µg/kg	2.20	U		
delta-BHC	µg/kg	2.20	UJ		
gamma-Chlordane	µg/kg	2.20	U		
Acenaphthylene	µg/kg	86.10	UJ		
Aldrin	µg/kg	2.20	U		
Benzo(a)pyrene	µg/kg	2.60	J		
Benzo(k)fluoranthene	µg/kg	0.90	J		
Dieldrin	µg/kg	4.30	U		
Endosulfan sulfate	µg/kg	4.30	U		
Endosulfan I	µg/kg	2.20	U		
Endosulfan II	µg/kg	4.30	U		
Endrin	µg/kg	4.30	U		
Endrin aldehyde	µg/kg	4.30	U		
Endrin ketone	µg/kg	4.30	U		
Fluoranthene	µg/kg	6.00	J		
Fluorene	µg/kg	5.20	J		
Heptachlor	µg/kg	2.20	U		
Heptachlor epoxide	µg/kg	2.20	U		
Lindane	µg/kg	2.20	U		
Methoxychlor	µg/kg	21.90	U		
Naphthalene	µg/kg	15.10	J		
Phenanthrene	µg/kg	5.20	J		
PCB-1016	µg/kg	43.00	U		
PCB-1221	µg/kg	86.00	U		
PCB-1232	µg/kg	43.00	U		
PCB-1242	µg/kg	43.00	U		
PCB-1248	µg/kg	43.00	U		
PCB-1254	µg/kg	43.00	U		
PCB-1260	µg/kg	43.00	U		
Toxaphene	µg/kg	219.00	U		
4,4'-DDD	µg/kg	4.30	U		
4,4'-DDE	µg/kg	4.30	UJ		
4,4'-DDT	µg/kg	4.30	U		

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
Location=ORR; Formation=CHICKAMAUGA Bethel V; Site=93; A=1900; A dup=' '; Phase=2					
alpha-BHC	µg/kg	2.20	UJ		
alpha-Chlordane	µg/kg	2.20	UJ		
beta-BHC	µg/kg	2.20	UJ		
delta-BHC	µg/kg	2.20	UJ		
gamma-Chlordane	µg/kg	2.20	UJ		
Acenaphthylene	µg/kg	83.80	UJ		
Aldrin	µg/kg	2.20	UJ		
Anthracene	µg/kg	0.40	J		
Benzo(a)anthracene	µg/kg	2.50	J		
Benzo(a)pyrene	µg/kg	4.20	J		
Benzo(b)fluoranthene	µg/kg	3.40	J		
Benzo(ghi)perylene	µg/kg	2.10	J		
Benzo(k)fluoranthene	µg/kg	2.50	J		
Dieldrin	µg/kg	4.20	UJ		
Endosulfan sulfate	µg/kg	4.20	UJ		
Endosulfan I	µg/kg	2.20	UJ		
Endosulfan II	µg/kg	4.20	UJ		
Endrin	µg/kg	4.20	UJ		
Endrin aldehyde	µg/kg	4.20	UJ		
Endrin ketone	µg/kg	4.20	UJ		
Fluoranthene	µg/kg	3.80	J		
Heptachlor	µg/kg	2.20	UJ		
Heptachlor epoxide	µg/kg	2.20	UJ		
Indeno(1,2,3-cd)pyrene	µg/kg	17.60	J		
Lindane	µg/kg	2.20	UJ		
Methoxychlor	µg/kg	21.60	UJ		
Phenanthrene	µg/kg	5.00	J		
Pyrene	µg/kg	8.80	J		
PCB-1016	µg/kg	42.00	UJ		
PCB-1221	µg/kg	85.00	UJ		
PCB-1232	µg/kg	42.00	UJ		
PCB-1242	µg/kg	42.00	UJ		
PCB-1248	µg/kg	42.00	UJ		
PCB-1254	µg/kg	42.00	UJ		
PCB-1260	µg/kg	42.00	UJ		
Toxaphene	µg/kg	216.00	UJ		
4,4'-DDD	µg/kg	4.20	UJ		
4,4'-DDE	µg/kg	4.20	UJ		
4,4'-DDT	µg/kg	4.20	UJ		
Location=ORR; Formation=CHICKAMAUGA Bethel V; Site=99; A=1903; A dup=' '; Phase=2					
alpha-BHC	µg/kg	2.20	UJ		
alpha-Chlordane	µg/kg	2.20	UJ		
beta-BHC	µg/kg	2.20	UJ		
delta-BHC	µg/kg	2.20	UJ		
gamma-Chlordane	µg/kg	2.20	UJ		
Acenaphthylene	µg/kg	86.50	U		
Aldrin	µg/kg	2.20	UJ		
Anthracene	µg/kg	0.90	J		
Benzo(a)anthracene	µg/kg	5.20	J		
Benzo(a)pyrene	µg/kg	6.10	J		
Benzo(b)fluoranthene	µg/kg	6.10	J		
Benzo(ghi)perylene	µg/kg	4.30	J		
Benzo(k)fluoranthene	µg/kg	3.00	J		
Dalapon	µg/kg	4506.00	UJ		
Dicamba	µg/kg	206.00	UJ		
Dichlorprop	µg/kg	515.00	UJ		
Dieldrin	µg/kg	4.30	UJ		
Dinoseb	µg/kg	108.00	UJ		
Endosulfan sulfate	µg/kg	4.30	UJ		
Endosulfan I	µg/kg	2.20	UJ		
Endosulfan II	µg/kg	4.30	UJ		
Endrin	µg/kg	4.30	UJ		

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
Endrin aldehyde	µg/kg	4.30	UJ		
Endrin ketone	µg/kg	4.30	UJ		
Fluoranthene	µg/kg	10.80	J		
Heptachlor	µg/kg	2.20	UJ		
Heptachlor epoxide	µg/kg	2.20	UJ		
Indeno(1,2,3-cd)pyrene	µg/kg	6.90	J		
Lindane	µg/kg	2.20	UJ		
Methoxychlor	µg/kg	22.10	UJ		
MCPA	µg/kg	193113.00	UJ		
MCPP	µg/kg	146766.00	UJ		
Phenanthrene	µg/kg	6.50	J		
Pyrene	µg/kg	7.30	J		
PCB-1016	µg/kg	43.00	UJ		
PCB-1221	µg/kg	87.00	UJ		
PCB-1232	µg/kg	43.00	UJ		
PCB-1242	µg/kg	43.00	UJ		
PCB-1248	µg/kg	43.00	UJ		
PCB-1254	µg/kg	43.00	UJ		
PCB-1260	µg/kg	43.00	UJ		
Silvex	µg/kg	129.00	UJ		
Toxaphene	µg/kg	221.00	UJ		
2,4-D	µg/kg	927.00	UJ		
2,4-DB	µg/kg	695.00	UJ		
2,4,5-T	µg/kg	154.00	UJ		
4,4'-DDD	µg/kg	4.30	UJ		
4,4'-DDE	µg/kg	4.30	UJ		
4,4'-DDT	µg/kg	4.30	UJ		
Location=ORR; Formation=CHICKAMAUGA K-25; Site=118; A=4095; A dup=' '; Phase=2					
alpha-BHC	µg/kg	2.70	UJ		
alpha-Chlordane	µg/kg	2.70	U		
beta-BHC	µg/kg	2.70	U		
delta-BHC	µg/kg	2.70	UJ		
gamma-Chlordane	µg/kg	2.70	U		
Acenaphthene	µg/kg	2.40	J		
Acenaphthylene	µg/kg	54.20	U		
Aldrin	µg/kg	2.70	U		
Anthracene	µg/kg	1.60	J		
Benzo(a)anthracene	µg/kg	13.30	J		
Benzo(a)pyrene	µg/kg	11.40	J		
Benzo(b)fluoranthene	µg/kg	12.70	J		
Benzo(ghi)perylene	µg/kg	11.10	J		
Benzo(k)fluoranthene	µg/kg	8.70	J		
Chrysene	µg/kg	15.20	J		
Dalapon	µg/kg	5304.00	UJ		
Dibenzo(a,h)anthracene	µg/kg	0.80	J		
Dicamba	µg/kg	242.00	U		
Dichlorprop	µg/kg	606.00	UJ		
Dieldrin	µg/kg	5.40	U		
Dinoseb	µg/kg	127.00	U		
Endosulfan sulfate	µg/kg	5.40	U		
Endosulfan I	µg/kg	2.70	U		
Endosulfan II	µg/kg	5.40	U		
Endrin	µg/kg	5.40	U		
Endrin aldehyde	µg/kg	5.40	U		
Endrin ketone	µg/kg	5.40	U		
Fluoranthene	µg/kg	7.00	J		
Heptachlor	µg/kg	2.70	U		
Heptachlor epoxide	µg/kg	2.70	U		
Indeno(1,2,3-cd)pyrene	µg/kg	28.50			
Lindane	µg/kg	2.70	UJ		
Methoxychlor	µg/kg	27.00	U		
MCPA	µg/kg	227314.00	UJ		
MCPP	µg/kg	172759.00	UJ		
Naphthalene	µg/kg	3.00	J		
Phenanthrene	µg/kg	16.50	J		

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
Pyrene	µg/kg	26.80	J		
PCB-1016	µg/kg	54.00	U		
PCB-1221	µg/kg	110.00	U		
PCB-1232	µg/kg	54.00	U		
PCB-1242	µg/kg	54.00	U		
PCB-1248	µg/kg	54.00	U		
PCB-1254	µg/kg	54.00	U		
PCB-1260	µg/kg	54.00	U		
Silvex	µg/kg	152.00	U		
Toxaphene	µg/kg	270.00	U		
2,4-D	µg/kg	1091.00	U		
2,4-DB	µg/kg	818.00	U		
2,4,5-T	µg/kg	182.00	U		
4,4'-DDD	µg/kg	5.40	U		
4,4'-DDE	µg/kg	5.40	U		
4,4'-DDT	µg/kg	5.40	UJ		
Location=ORR; Formation=CHICKAMAUGA K-25; Site=119; A=4127; A dup=' '; Phase=2					
alpha-BHC	µg/kg	2.10	UJ		
alpha-Chlordane	µg/kg	2.10	UJ		
beta-BHC	µg/kg	2.10	UJ		
delta-BHC	µg/kg	2.10	UJ		
gamma-Chlordane	µg/kg	2.10	UJ		
Acenaphthylene	µg/kg	42.40	U		
Aldrin	µg/kg	2.10	UJ		
Anthracene	µg/kg	2.30	J		
Benzo(a)anthracene	µg/kg	4.90	J		
Benzo(a)pyrene	µg/kg	5.70	J		
Benzo(b)fluoranthene	µg/kg	5.30	J		
Benzo(ghi)perylene	µg/kg	5.10	J		
Benzo(k)fluoranthene	µg/kg	2.80	J		
Chrysene	µg/kg	4.70	J		
Dibenzo(a,h)anthracene	µg/kg	0.80	J		
Dieldrin	µg/kg	4.30	UJ		
Endosulfan sulfate	µg/kg	4.30	UJ		
Endosulfan I	µg/kg	2.10	UJ		
Endosulfan II	µg/kg	4.30	UJ		
Endrin	µg/kg	4.30	UJ		
Endrin aldehyde	µg/kg	4.30	UJ		
Endrin ketone	µg/kg	4.30	UJ		
Fluoranthene	µg/kg	6.10	J		
Fluorene	µg/kg	1.30	J		
Heptachlor	µg/kg	2.10	UJ		
Heptachlor epoxide	µg/kg	2.10	UJ		
Indeno(1,2,3-cd)pyrene	µg/kg	4.40	J		
Lindane	µg/kg	2.10	UJ		
Methoxychlor	µg/kg	21.00	UJ		
Naphthalene	µg/kg	2.30	J		
Phenanthrene	µg/kg	8.00	J		
Pyrene	µg/kg	12.30	J		
PCB-1016	µg/kg	43.00	UJ		
PCB-1221	µg/kg	85.00	UJ		
PCB-1232	µg/kg	43.00	UJ		
PCB-1242	µg/kg	43.00	UJ		
PCB-1248	µg/kg	43.00	UJ		
PCB-1254	µg/kg	43.00	UJ		
PCB-1260	µg/kg	43.00	UJ		
Toxaphene	µg/kg	210.00	UJ		
4,4'-DDD	µg/kg	4.30	UJ		
4,4'-DDE	µg/kg	4.30	UJ		
4,4'-DDT	µg/kg	4.30	UJ		

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
Location=ORR; Formation=CHICKAMAUGA K-25; Site=120; A=4092; A dup=' '; Phase=2					
alpha-BHC	µg/kg	2.40	UJ		
alpha-Chlordane	µg/kg	2.40	U		
beta-BHC	µg/kg	2.40	U		
delta-BHC	µg/kg	2.40	UJ		
gamma-Chlordane	µg/kg	2.40	U		
Acenaphthylene	µg/kg	48.30	U		
Aldrin	µg/kg	2.40	U		
Anthracene	µg/kg	2.20	J		
Benzo(a)anthracene	µg/kg	15.70	J		
Benzo(a)pyrene	µg/kg	11.10	J		
Benzo(b)fluoranthene	µg/kg	10.60	J		
Benzo(ghi)perylene	µg/kg	10.90	J		
Benzo(k)fluoranthene	µg/kg	5.80	J		
Dalapon	µg/kg	4867.00	UJ		
Dicamba	µg/kg	195.00	U		
Dichlorprop	µg/kg	488.00	UJ		
Dieldrin	µg/kg	4.80	U		
Dinoseb	µg/kg	102.00	U		
Endosulfan sulfate	µg/kg	4.80	U		
Endosulfan I	µg/kg	2.40	U		
Endosulfan II	µg/kg	4.80	U		
Endrin	µg/kg	4.80	U		
Endrin aldehyde	µg/kg	4.80	U		
Endrin ketone	µg/kg	4.80	U		
Fluoranthene	µg/kg	4.30	J		
Fluorene	µg/kg	4.60	J		
Heptachlor	µg/kg	2.40	U		
Heptachlor epoxide	µg/kg	2.40	U		
Indeno(1,2,3-cd)pyrene	µg/kg	34.10			
Lindane	µg/kg	2.40	UJ		
Methoxychlor	µg/kg	24.00	U		
MCPA	µg/kg	183025.00	UJ		
MCPP	µg/kg	139099.00	UJ		
Phenanthrene	µg/kg	12.80	J		
Pyrene	µg/kg	22.20	J		
PCB-1016	µg/kg	48.00	U		
PCB-1221	µg/kg	96.00	U		
PCB-1232	µg/kg	48.00	U		
PCB-1242	µg/kg	48.00	U		
PCB-1248	µg/kg	48.00	U		
PCB-1254	µg/kg	48.00	U		
PCB-1260	µg/kg	48.00	U		
Silvex	µg/kg	122.00	U		
Toxaphene	µg/kg	240.00	U		
2,4-D	µg/kg	879.00	U		
2,4-DB	µg/kg	659.00	U		
2,4,5-T	µg/kg	146.00	U		
4,4'-DDD	µg/kg	4.80	U		
4,4'-DDE	µg/kg	4.80	U		
4,4'-DDT	µg/kg	4.80	UJ		
Location=ORR; Formation=CHICKAMAUGA K-25; Site=121; A=4129; A dup=' '; Phase=2					
alpha-BHC	µg/kg	2.30	UJ		
alpha-Chlordane	µg/kg	3.60	J		
beta-BHC	µg/kg	2.30	UJ		
delta-BHC	µg/kg	2.30	UJ		
gamma-Chlordane	µg/kg	2.30	UJ		
Acenaphthene	µg/kg	0.90	J		
Acenaphthylene	µg/kg	45.30	U		
Aldrin	µg/kg	2.30	UJ		
Anthracene	µg/kg	1.40	J		
Benzo(a)anthracene	µg/kg	9.50	J		
Benzo(a)pyrene	µg/kg	9.70	J		

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
Benzo(b)fluoranthene	µg/kg	11.60	J		
Benzo(ghi)perylene	µg/kg	8.80	J		
Benzo(k)fluoranthene	µg/kg	5.40	J		
Chrysene	µg/kg	12.70	J		
Dieldrin	µg/kg	4.50	UJ		
Endosulfan sulfate	µg/kg	4.50	UJ		
Endosulfan I	µg/kg	2.30	UJ		
Endosulfan II	µg/kg	4.50	UJ		
Endrin	µg/kg	4.50	UJ		
Endrin aldehyde	µg/kg	4.50	UJ		
Endrin ketone	µg/kg	4.50	UJ		
Fluoranthene	µg/kg	22.20	J		
Fluorene	µg/kg	0.90	J		
Heptachlor	µg/kg	2.30	UJ		
Heptachlor epoxide	µg/kg	2.30	UJ		
Indeno(1,2,3-cd)pyrene	µg/kg	9.10	J		
Lindane	µg/kg	2.30	UJ		
Methoxychlor	µg/kg	23.00	UJ		
Naphthalene	µg/kg	5.40	J		
Phenanthrene	µg/kg	12.90	J		
Pyrene	µg/kg	24.50	J		
PCB-1016	µg/kg	45.00	UJ		
PCB-1221	µg/kg	90.00	UJ		
PCB-1232	µg/kg	45.00	UJ		
PCB-1242	µg/kg	45.00	UJ		
PCB-1248	µg/kg	45.00	UJ		
PCB-1254	µg/kg	45.00	UJ		
PCB-1260	µg/kg	45.00	UJ		
Toxaphene	µg/kg	230.00	UJ		
4,4'-DDD	µg/kg	4.50	UJ		
4,4'-DDE	µg/kg	4.50	UJ		
4,4'-DDT	µg/kg	4.50	UJ		
Location=ORR; Formation=CHICKAMAUGA K-25; Site=122; A=4105; A dup=' '; Phase=2					
alpha-BHC	µg/kg	2.20	UJ		
alpha-Chlordane	µg/kg	2.20	U		
beta-BHC	µg/kg	2.20	U		
delta-BHC	µg/kg	2.20	UJ		
gamma-Chlordane	µg/kg	2.20	U		
Acenaphthylene	µg/kg	44.40	U		
Aldrin	µg/kg	2.20	U		
Anthracene	µg/kg	2.40	J		
Benzo(a)anthracene	µg/kg	5.50	J		
Benzo(a)pyrene	µg/kg	5.10	J		
Benzo(b)fluoranthene	µg/kg	3.80	J		
Benzo(ghi)perylene	µg/kg	5.80	J		
Benzo(k)fluoranthene	µg/kg	2.40	J		
Dalapon	µg/kg	4766.00	UJ		
Dibenzo(a,h)anthracene	µg/kg	0.70	J		
Dicamba	µg/kg	218.00	U		
Dichlorprop	µg/kg	545.00	UJ		
Dieldrin	µg/kg	4.50	U		
Dinoseb	µg/kg	114.00	U		
Endosulfan sulfate	µg/kg	4.50	U		
Endosulfan I	µg/kg	2.20	U		
Endosulfan II	µg/kg	4.50	U		
Endrin	µg/kg	4.50	U		
Endrin aldehyde	µg/kg	4.50	U		
Endrin ketone	µg/kg	4.50	U		
Fluoranthene	µg/kg	6.00	J		
Fluorene	µg/kg	3.80	J		
Heptachlor	µg/kg	2.20	U		
Heptachlor epoxide	µg/kg	2.20	U		
Indeno(1,2,3-cd)pyrene	µg/kg	11.10	U		
Lindane	µg/kg	2.20	UJ		
Methoxychlor	µg/kg	22.00	U		

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
MCPA	µg/kg	204237.00	UJ		
MCPP	µg/kg	155220.00	UJ		
Phenanthrene	µg/kg	4.70	J		
Pyrene	µg/kg	7.80	J		
PCB-1016	µg/kg	45.00	U		
PCB-1221	µg/kg	90.00	U		
PCB-1232	µg/kg	45.00	U		
PCB-1242	µg/kg	45.00	U		
PCB-1248	µg/kg	45.00	U		
PCB-1254	µg/kg	45.00	U		
PCB-1260	µg/kg	45.00	U		
Silvex	µg/kg	136.00	U		
Toxaphene	µg/kg	220.00	U		
2,4-D	µg/kg	980.00	U		
2,4-DB	µg/kg	735.00	U		
2,4,5-T	µg/kg	163.00	U		
4,4'-DDD	µg/kg	4.50	U		
4,4'-DDE	µg/kg	4.50	U		
4,4'-DDT	µg/kg	4.50	UJ		
Location=ORR; Formation=CHICKAMAUGA K-25; Site=123; A=4131; A dup=' '; Phase=2					
alpha-BHC	µg/kg	2.30	UJ		
alpha-Chlordane	µg/kg	2.30	UJ		
beta-BHC	µg/kg	2.30	UJ		
delta-BHC	µg/kg	2.30	UJ		
gamma-Chlordane	µg/kg	2.30	UJ		
Acenaphthylene	µg/kg	45.30	U		
Aldrin	µg/kg	2.30	UJ		
Anthracene	µg/kg	0.90	J		
Benzo(a)anthracene	µg/kg	6.60	J		
Benzo(a)pyrene	µg/kg	7.70	J		
Benzo(b)fluoranthene	µg/kg	7.20	J		
Benzo(ghi)perylene	µg/kg	5.90	J		
Benzo(k)fluoranthene	µg/kg	4.10	J		
Chrysene	µg/kg	7.70	J		
Dieldrin	µg/kg	4.60	UJ		
Endosulfan sulfate	µg/kg	4.60	UJ		
Endosulfan I	µg/kg	2.30	UJ		
Endosulfan II	µg/kg	4.60	UJ		
Endrin	µg/kg	4.60	UJ		
Endrin aldehyde	µg/kg	4.60	UJ		
Endrin ketone	µg/kg	4.60	UJ		
Fluoranthene	µg/kg	15.20	J		
Heptachlor	µg/kg	2.30	UJ		
Heptachlor epoxide	µg/kg	2.30	UJ		
Indeno(1,2,3-cd)pyrene	µg/kg	20.20			
Lindane	µg/kg	2.30	UJ		
Methoxychlor	µg/kg	23.00	UJ		
Phenanthrene	µg/kg	9.10	J		
Pyrene	µg/kg	17.40	J		
PCB-1016	µg/kg	46.00	UJ		
PCB-1221	µg/kg	92.00	UJ		
PCB-1232	µg/kg	46.00	UJ		
PCB-1242	µg/kg	46.00	UJ		
PCB-1248	µg/kg	46.00	UJ		
PCB-1254	µg/kg	46.00	UJ		
PCB-1260	µg/kg	46.00	UJ		
Toxaphene	µg/kg	230.00	UJ		
4,4'-DDD	µg/kg	4.60	UJ		
4,4'-DDE	µg/kg	4.60	UJ		
4,4'-DDT	µg/kg	4.60	UJ		

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
Location=ORR; Formation=CHICKAMAUGA K-25; Site=124; A=4115; A dup=' '; Phase=2					
alpha-BHC	µg/kg	2.30	UJ		
alpha-Chlordane	µg/kg	2.30	U		
beta-BHC	µg/kg	2.30	U		
delta-BHC	µg/kg	2.30	UJ		
gamma-Chlordane	µg/kg	2.30	U		
Acenaphthylene	µg/kg	46.40	U		
Aldrin	µg/kg	2.30	U		
Anthracene	µg/kg	1.40	J		
Benzo(a)anthracene	µg/kg	7.20	J		
Benzo(a)pyrene	µg/kg	4.60	J		
Benzo(b)fluoranthene	µg/kg	4.40	J		
Benzo(ghi)perylene	µg/kg	4.60	J		
Benzo(k)fluoranthene	µg/kg	3.50	J		
Chrysene	µg/kg	2.30	U		
Dalapon	µg/kg	4549.00	UJ		
Dicamba	µg/kg	208.00	U		
Dichlorprop	µg/kg	520.00	UJ		
Dieldrin	µg/kg	4.70	U		
Dinoseb	µg/kg	109.00	U		
Endosulfan sulfate	µg/kg	4.70	U		
Endosulfan I	µg/kg	2.30	U		
Endosulfan II	µg/kg	4.70	U		
Endrin	µg/kg	4.70	U		
Endrin aldehyde	µg/kg	4.70	U		
Endrin ketone	µg/kg	4.70	U		
Fluoranthene	µg/kg	4.60	J		
Heptachlor	µg/kg	2.30	U		
Heptachlor epoxide	µg/kg	2.30	U		
Indeno(1,2,3-cd)pyrene	µg/kg	6.50	J		
Lindane	µg/kg	2.30	UJ		
Methoxychlor	µg/kg	23.00	U		
MCPA	µg/kg	194936.00	UJ		
MCPP	µg/kg	148151.00	UJ		
Phenanthrene	µg/kg	7.00	J		
Pyrene	µg/kg	10.40	J		
PCB-1016	µg/kg	47.00	U		
PCB-1221	µg/kg	93.00	U		
PCB-1232	µg/kg	47.00	U		
PCB-1242	µg/kg	47.00	U		
PCB-1248	µg/kg	47.00	U		
PCB-1254	µg/kg	47.00	U		
PCB-1260	µg/kg	47.00	U		
Silvex	µg/kg	130.00	U		
Toxaphene	µg/kg	230.00	U		
2,4-D	µg/kg	936.00	U		
2,4-DB	µg/kg	702.00	U		
2,4,5-T	µg/kg	156.00	U		
4,4'-DDD	µg/kg	4.70	U		
4,4'-DDE	µg/kg	4.70	U		
4,4'-DDT	µg/kg	4.70	UJ		
Location=ORR; Formation=CHICKAMAUGA K-25; Site=125; A=4133; A dup=' '; Phase=2					
alpha-BHC	µg/kg	2.40	UJ		
alpha-Chlordane	µg/kg	2.40	UJ		
beta-BHC	µg/kg	2.40	UJ		
delta-BHC	µg/kg	2.40	UJ		
gamma-Chlordane	µg/kg	2.40	UJ		
Acenaphthylene	µg/kg	47.30	U		
Aldrin	µg/kg	2.40	UJ		
Anthracene	µg/kg	0.70	J		
Benzo(a)anthracene	µg/kg	6.60	J		
Benzo(a)pyrene	µg/kg	4.50	J		
Benzo(b)fluoranthene	µg/kg	3.50	J		

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
Benzo(ghi)perylene	µg/kg	4.00	J		
Benzo(k)fluoranthene	µg/kg	2.40	J		
Dieldrin	µg/kg	4.80	UJ		
Endosulfan sulfate	µg/kg	4.80	UJ		
Endosulfan I	µg/kg	2.40	UJ		
Endosulfan II	µg/kg	4.80	UJ		
Endrin	µg/kg	4.80	UJ		
Endrin aldehyde	µg/kg	4.80	UJ		
Endrin ketone	µg/kg	4.80	UJ		
Fluoranthene	µg/kg	7.80	J		
Fluorene	µg/kg	1.70	J		
Heptachlor	µg/kg	2.40	UJ		
Heptachlor epoxide	µg/kg	1.90	UJ		
Indeno(1,2,3-cd)pyrene	µg/kg	11.80	U		
Lindane	µg/kg	2.40	UJ		
Methoxychlor	µg/kg	24.00	UJ		
Naphthalene	µg/kg	1.20	J		
Phenanthrene	µg/kg	6.90	J		
Pyrene	µg/kg	10.90	J		
PCB-1016	µg/kg	48.00	UJ		
PCB-1221	µg/kg	95.00	UJ		
PCB-1232	µg/kg	48.00	UJ		
PCB-1242	µg/kg	48.00	UJ		
PCB-1248	µg/kg	48.00	UJ		
PCB-1254	µg/kg	48.00	UJ		
PCB-1260	µg/kg	48.00	UJ		
Toxaphene	µg/kg	240.00	UJ		
4,4'-DDD	µg/kg	4.80	UJ		
4,4'-DDE	µg/kg	4.80	UJ		
4,4'-DDT	µg/kg	4.80	UJ		
Location=ORR; Formation=CHICKAMAUGA K-25; Site=126; A=4089; A dup=' '; Phase=2					
alpha-BHC	µg/kg	2.20	UJ		
alpha-Chlordane	µg/kg	2.20	U		
beta-BHC	µg/kg	2.20	U		
delta-BHC	µg/kg	2.20	UJ		
gamma-Chlordane	µg/kg	2.20	U		
Acenaphthene	µg/kg	1.10	J		
Acenaphthylene	µg/kg	44.50	U		
Aldrin	µg/kg	2.20	U		
Benzo(a)anthracene	µg/kg	3.80	J		
Benzo(a)pyrene	µg/kg	3.30	J		
Benzo(b)fluoranthene	µg/kg	2.70	J		
Benzo(ghi)perylene	µg/kg	2.20	J		
Benzo(k)fluoranthene	µg/kg	1.80	J		
Dieldrin	µg/kg	4.40	U		
Endosulfan sulfate	µg/kg	4.40	U		
Endosulfan I	µg/kg	2.20	U		
Endosulfan II	µg/kg	4.40	U		
Endrin	µg/kg	4.40	U		
Endrin aldehyde	µg/kg	4.40	U		
Endrin ketone	µg/kg	4.40	U		
Fluoranthene	µg/kg	6.50	J		
Heptachlor	µg/kg	2.20	U		
Heptachlor epoxide	µg/kg	2.20	U		
Indeno(1,2,3-cd)pyrene	µg/kg	11.10	U		
Lindane	µg/kg	2.20	UJ		
Methoxychlor	µg/kg	22.00	U		
Naphthalene	µg/kg	0.70	J		
Phenanthrene	µg/kg	4.20	J		
Pyrene	µg/kg	6.00	J		
PCB-1016	µg/kg	44.00	U		
PCB-1221	µg/kg	89.00	U		
PCB-1232	µg/kg	44.00	U		
PCB-1242	µg/kg	44.00	U		
PCB-1248	µg/kg	44.00	U		

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
PCB-1254	µg/kg	44.00	U		
PCB-1260	µg/kg	44.00	U		
Toxaphene	µg/kg	220.00	U		
4,4'-DDD	µg/kg	4.40	U		
4,4'-DDE	µg/kg	4.40	U		
4,4'-DDT	µg/kg	4.40	UJ		
Location=ORR; Formation=CHICKAMAUGA K-25; Site=127; A=4135; A dup=' '; Phase=2					
alpha-BHC	µg/kg	2.40	UJ		
alpha-Chlordane	µg/kg	2.40	UJ		
beta-BHC	µg/kg	2.40	UJ		
delta-BHC	µg/kg	2.40	UJ		
gamma-Chlordane	µg/kg	2.40	UJ		
Acenaphthylene	µg/kg	47.40	U		
Aldrin	µg/kg	2.40	UJ		
Anthracene	µg/kg	0.90	J		
Benzo(a)anthracene	µg/kg	3.10	J		
Benzo(a)pyrene	µg/kg	2.60	J		
Benzo(b)fluoranthene	µg/kg	2.80	J		
Benzo(ghi)perylene	µg/kg	3.10	J		
Benzo(k)fluoranthene	µg/kg	1.20	J		
Chrysene	µg/kg	2.40	U		
Dieldrin	µg/kg	4.80	UJ		
Endosulfan sulfate	µg/kg	4.80	UJ		
Endosulfan I	µg/kg	2.40	UJ		
Endosulfan II	µg/kg	4.80	UJ		
Endrin	µg/kg	4.80	UJ		
Endrin aldehyde	µg/kg	4.80	UJ		
Endrin ketone	µg/kg	4.80	UJ		
Fluoranthene	µg/kg	3.30	J		
Heptachlor	µg/kg	2.40	UJ		
Heptachlor epoxide	µg/kg	2.40	UJ		
Indeno(1,2,3-cd)pyrene	µg/kg	11.90	U		
Lindane	µg/kg	2.40	UJ		
Methoxychlor	µg/kg	24.00	UJ		
Phenanthrene	µg/kg	5.50	J		
Pyrene	µg/kg	4.30	J		
PCB-1016	µg/kg	48.00	UJ		
PCB-1221	µg/kg	96.00	UJ		
PCB-1232	µg/kg	48.00	UJ		
PCB-1242	µg/kg	48.00	UJ		
PCB-1248	µg/kg	48.00	UJ		
PCB-1254	µg/kg	48.00	UJ		
PCB-1260	µg/kg	48.00	UJ		
Toxaphene	µg/kg	240.00	UJ		
4,4'-DDD	µg/kg	4.80	UJ		
4,4'-DDE	µg/kg	4.80	UJ		
4,4'-DDT	µg/kg	4.80	UJ		
Location=ORR; Formation=CHICKAMAUGA K-25; Site=128; A=4137; A dup=' '; Phase=2					
alpha-BHC	µg/kg	2.10	UJ		
alpha-Chlordane	µg/kg	2.10	UJ		
beta-BHC	µg/kg	2.10	UJ		
delta-BHC	µg/kg	2.10	UJ		
gamma-Chlordane	µg/kg	2.10	UJ		
Acenaphthylene	µg/kg	41.30	U		
Aldrin	µg/kg	2.10	UJ		
Anthracene	µg/kg	0.40	J		
Benzo(a)anthracene	µg/kg	1.20	J		
Benzo(a)pyrene	µg/kg	1.90	J		
Benzo(b)fluoranthene	µg/kg	1.90	J		
Benzo(ghi)perylene	µg/kg	2.10	J		
Benzo(k)fluoranthene	µg/kg	1.00	J		

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
Dieldrin	µg/kg	4.10	UJ		
Endosulfan sulfate	µg/kg	4.10	UJ		
Endosulfan I	µg/kg	2.10	UJ		
Endosulfan II	µg/kg	4.10	UJ		
Endrin	µg/kg	4.10	UJ		
Endrin aldehyde	µg/kg	4.10	UJ		
Endrin ketone	µg/kg	4.10	UJ		
Fluoranthene	µg/kg	5.20	J		
Fluorene	µg/kg	0.40	J		
Heptachlor	µg/kg	2.10	UJ		
Heptachlor epoxide	µg/kg	2.10	UJ		
Indeno(1,2,3-cd)pyrene	µg/kg	12.00			
Lindane	µg/kg	2.10	UJ		
Methoxychlor	µg/kg	21.00	UJ		
Naphthalene	µg/kg	1.40	J		
Phenanthrene	µg/kg	2.90	J		
Pyrene	µg/kg	3.90	J		
PCB-1016	µg/kg	41.00	UJ		
PCB-1221	µg/kg	82.00	UJ		
PCB-1232	µg/kg	41.00	UJ		
PCB-1242	µg/kg	41.00	UJ		
PCB-1248	µg/kg	41.00	UJ		
PCB-1254	µg/kg	41.00	UJ		
PCB-1260	µg/kg	41.00	UJ		
Toxaphene	µg/kg	210.00	UJ		
4,4'-DDD	µg/kg	4.10	UJ		
4,4'-DDE	µg/kg	4.10	UJ		
4,4'-DDT	µg/kg	4.10	UJ		
Location=ORR; Formation=CHICKAMAUGA K-25; Site=129; A=4086; A dup=' '; Phase=2					
Acenaphthylene	µg/kg	41.30	U		
Benzo(a)anthracene	µg/kg	4.50	J		
Benzo(a)pyrene	µg/kg	4.10	J		
Benzo(b)fluoranthene	µg/kg	1.70	J		
Benzo(ghi)perylene	µg/kg	2.90	J		
Benzo(k)fluoranthene	µg/kg	2.70	J		
Dalapon	µg/kg	4271.00	UJ		
Dicamba	µg/kg	195.00	U		
Dichlorprop	µg/kg	488.00	UJ		
Dinoseb	µg/kg	102.00	U		
Fluorene	µg/kg	0.80	J		
Indeno(1,2,3-cd)pyrene	µg/kg	10.30	U		
MCPA	µg/kg	183025.00	UJ		
MCPP	µg/kg	139099.00	UJ		
Phenanthrene	µg/kg	6.00	J		
Pyrene	µg/kg	10.70	J		
Silvex	µg/kg	122.00	U		
2,4-D	µg/kg	879.00	U		
2,4-DB	µg/kg	659.00	U		
2,4,5-T	µg/kg	146.00	U		
Location=ORR; Formation=COPPER RIDGE; Site=45; A=1544; A dup=' '; Phase=2					
Acenaphthene	µg/kg	1.50	J		
Benzo(a)anthracene	µg/kg	2.20	J		
Benzo(a)pyrene	µg/kg	1.10	J		
Benzo(ghi)perylene	µg/kg	0.40	J		
Fluoranthene	µg/kg	1.50	J		
Indeno(1,2,3-cd)pyrene	µg/kg	18.60	U		
Phenanthrene	µg/kg	6.70	J		
Pyrene	µg/kg	3.00	J		

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
Location=ORR; Formation=COPPER RIDGE; Site=51; A=1546; A dup=' '; Phase=2					
Benzo(a)anthracene	µg/kg	1.20	J		
Benzo(ghi)perylene	µg/kg	2.00	J		
Benzo(k)fluoranthene	µg/kg	0.80	J		
Fluoranthene	µg/kg	4.40	J		
Fluorene	µg/kg	0.40	J		
Indeno(1,2,3-cd)pyrene	µg/kg	20.00	U		
Naphthalene	µg/kg	10.40	J		
Phenanthrene	µg/kg	2.40	J		
Pyrene	µg/kg	3.20	J		
Location=ORR; Formation=COPPER RIDGE; Site=54; A=1497; A dup=' '; Phase=2					
alpha-BHC	µg/kg	1.80	UJ		
alpha-Chlordane	µg/kg	1.80	U		
beta-BHC	µg/kg	1.80	U		
delta-BHC	µg/kg	1.80	U		
gamma-Chlordane	µg/kg	1.80	U		
Acenaphthylene	µg/kg	182.80	U		
Aldrin	µg/kg	1.80	U		
Anthracene	µg/kg	0.40	J		
Benzo(a)anthracene	µg/kg	1.50	J		
Benzo(a)pyrene	µg/kg	1.50	J		
Benzo(b)fluoranthene	µg/kg	1.10	J		
Benzo(k)fluoranthene	µg/kg	0.70	J		
Chrysene	µg/kg	2.20	J		
Dibenzo(a,h)anthracene	µg/kg	2.90	J		
Dieldrin	µg/kg	3.70	U		
Endosulfan sulfate	µg/kg	3.70	U		
Endosulfan I	µg/kg	1.80	U		
Endosulfan II	µg/kg	3.70	U		
Endrin	µg/kg	3.70	U		
Endrin aldehyde	µg/kg	3.70	U		
Endrin ketone	µg/kg	3.70	U		
Fluoranthene	µg/kg	4.80	J		
Fluorene	µg/kg	2.20	J		
Heptachlor	µg/kg	1.80	U		
Heptachlor epoxide	µg/kg	1.80	U		
Indeno(1,2,3-cd)pyrene	µg/kg	18.30	UJ		
Lindane	µg/kg	1.80	UJ		
Methoxychlor	µg/kg	18.00	U		
Phenanthrene	µg/kg	2.90	J		
Pyrene	µg/kg	4.40	J		
PCB-1016	µg/kg	37.00	U		
PCB-1221	µg/kg	74.00	U		
PCB-1232	µg/kg	37.00	U		
PCB-1242	µg/kg	37.00	U		
PCB-1248	µg/kg	37.00	U		
PCB-1254	µg/kg	37.00	U		
PCB-1260	µg/kg	37.00	U		
Toxaphene	µg/kg	180.00	U		
4,4'-DDD	µg/kg	3.70	UJ		
4,4'-DDE	µg/kg	3.70	U		
4,4'-DDT	µg/kg	3.30	UJ		
Location=ORR; Formation=COPPER RIDGE; Site=55; A=1495; A dup=' '; Phase=2					
alpha-BHC	µg/kg	1.90	UJ		
alpha-Chlordane	µg/kg	1.90	U		
beta-BHC	µg/kg	1.70	UJ		
delta-BHC	µg/kg	1.90	U		
gamma-Chlordane	µg/kg	1.90	U		
Acenaphthylene	µg/kg	4287.40			
Aldrin	µg/kg	1.90	U		

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
Anthracene	µg/kg	0.80	J		
Benzo(a)anthracene	µg/kg	1.90	J		
Benzo(a)pyrene	µg/kg	1.90	J		
Benzo(b)fluoranthene	µg/kg	0.40	J		
Benzo(k)fluoranthene	µg/kg	1.10	J		
Chrysene	µg/kg	2.70	J		
Dibenzo(a,h)anthracene	µg/kg	3.80	J		
Dieldrin	µg/kg	3.70	U		
Endosulfan sulfate	µg/kg	3.70	U		
Endosulfan I	µg/kg	1.90	U		
Endosulfan II	µg/kg	1.80	UJ		
Endrin	µg/kg	3.70	U		
Endrin aldehyde	µg/kg	3.70	U		
Endrin ketone	µg/kg	3.70	U		
Fluoranthene	µg/kg	6.50	J		
Heptachlor	µg/kg	1.90	U		
Heptachlor epoxide	µg/kg	1.90	U		
Indeno(1,2,3-cd)pyrene	µg/kg	19.10	UJ		
Lindane	µg/kg	1.90	UJ		
Methoxychlor	µg/kg	19.00	U		
Phenanthrene	µg/kg	3.40	J		
Pyrene	µg/kg	5.00	J		
PCB-1016	µg/kg	37.00	U		
PCB-1221	µg/kg	74.00	U		
PCB-1232	µg/kg	37.00	U		
PCB-1242	µg/kg	37.00	U		
PCB-1248	µg/kg	37.00	U		
PCB-1254	µg/kg	37.00	U		
PCB-1260	µg/kg	37.00	U		
Toxaphene	µg/kg	190.00	U		
4,4'-DDD	µg/kg	1.70	UJ		
4,4'-DDE	µg/kg	3.70	U		
4,4'-DDT	µg/kg	3.70	UJ		
Location=ORR; Formation=COPPER RIDGE; Site=58; A=1542; A dup=' '; Phase=2					
Acenaphthylene	µg/kg	76.50	U		
Benzo(a)anthracene	µg/kg	0.40	J		
Benzo(k)fluoranthene	µg/kg	0.80	J		
Fluoranthene	µg/kg	1.50	J		
Indeno(1,2,3-cd)pyrene	µg/kg	19.10	U		
Naphthalene	µg/kg	20.30	J		
Phenanthrene	µg/kg	1.50	J		
Pyrene	µg/kg	0.40	J		
Location=ORR; Formation=COPPER RIDGE; Site=59; A=1491; A dup=' '; Phase=2					
alpha-BHC	µg/kg	1.90	UJ		
alpha-Chlordane	µg/kg	1.90	U		
beta-BHC	µg/kg	1.90	U		
delta-BHC	µg/kg	1.30	UJ		
gamma-Chlordane	µg/kg	1.90	U		
Acenaphthene	µg/kg	3.80	U		
Acenaphthylene	µg/kg	187.60	U		
Aldrin	µg/kg	1.90	U		
Anthracene	µg/kg	14.60			
Benzo(a)anthracene	µg/kg	7.50			
Benzo(a)pyrene	µg/kg	11.30			
Benzo(b)fluoranthene	µg/kg	9.40			
Benzo(ghi)perylene	µg/kg	10.10			
Benzo(k)fluoranthene	µg/kg	6.00			
Chrysene	µg/kg	12.00			
Dibenzo(a,h)anthracene	µg/kg	1.50	J		
Dieldrin	µg/kg	3.80	U		
Endosulfan sulfate	µg/kg	3.80	U		

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
Endosulfan I	µg/kg	1.90	U		
Endosulfan II	µg/kg	3.80	U		
Endrin	µg/kg	3.80	U		
Endrin aldehyde	µg/kg	3.80	U		
Endrin ketone	µg/kg	3.80	U		
Fluoranthene	µg/kg	28.90			
Fluorene	µg/kg	0.80	J		
Heptachlor	µg/kg	1.90	U		
Heptachlor epoxide	µg/kg	1.90	U		
Indeno(1,2,3-cd)pyrene	µg/kg	18.80	UJ		
Lindane	µg/kg	1.90	UJ		
Methoxychlor	µg/kg	19.00	U		
Naphthalene	µg/kg	18.80	U		
Phenanthrene	µg/kg	19.10			
Pyrene	µg/kg	26.30			
PCB-1016	µg/kg	38.00	U		
PCB-1221	µg/kg	75.00	U		
PCB-1232	µg/kg	38.00	U		
PCB-1242	µg/kg	38.00	U		
PCB-1248	µg/kg	38.00	U		
PCB-1254	µg/kg	38.00	U		
PCB-1260	µg/kg	38.00	U		
Toxaphene	µg/kg	190.00	U		
4,4'-DDD	µg/kg	3.80	UJ		
4,4'-DDE	µg/kg	3.80	U		
4,4'-DDT	µg/kg	2.70	UJ		
Location=ORR; Formation=COPPER RIDGE; Site=60; A=1493; A dup=' '; Phase=2					
alpha-BHC	µg/kg	1.90	UJ		
alpha-Chlordane	µg/kg	1.90	U		
beta-BHC	µg/kg	1.90	U		
delta-BHC	µg/kg	1.90	U		
gamma-Chlordane	µg/kg	1.90	U		
Acenaphthene	µg/kg	3.80	U		
Acenaphthylene	µg/kg	940.10			
Aldrin	µg/kg	1.90	U		
Anthracene	µg/kg	1.50	J		
Benzo(a)anthracene	µg/kg	5.30			
Benzo(a)pyrene	µg/kg	7.20			
Benzo(b)fluoranthene	µg/kg	5.30			
Benzo(ghi)perylene	µg/kg	6.40			
Benzo(k)fluoranthene	µg/kg	3.80			
Chrysene	µg/kg	7.90			
Dibenzo(a,h)anthracene	µg/kg	1.50	J		
Dieldrin	µg/kg	3.70	U		
Endosulfan sulfate	µg/kg	3.70	U		
Endosulfan I	µg/kg	1.90	U		
Endosulfan II	µg/kg	3.70	U		
Endrin	µg/kg	3.70	U		
Endrin aldehyde	µg/kg	3.70	U		
Endrin ketone	µg/kg	3.70	U		
Fluoranthene	µg/kg	16.60			
Fluorene	µg/kg	3.80	U		
Heptachlor	µg/kg	1.90	U		
Heptachlor epoxide	µg/kg	1.90	U		
Indeno(1,2,3-cd)pyrene	µg/kg	18.80	UJ		
Lindane	µg/kg	1.90	UJ		
Methoxychlor	µg/kg	19.00	U		
Naphthalene	µg/kg	18.80	U		
Phenanthrene	µg/kg	8.30			
Pyrene	µg/kg	16.20			
PCB-1016	µg/kg	37.00	U		
PCB-1221	µg/kg	75.00	U		
PCB-1232	µg/kg	37.00	U		
PCB-1242	µg/kg	37.00	U		
PCB-1248	µg/kg	37.00	U		

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
PCB-1254	µg/kg	37.00	U		
PCB-1260	µg/kg	37.00	U		
Toxaphene	µg/kg	190.00	U		
4,4'-DDD	µg/kg	3.70	UJ		
4,4'-DDE	µg/kg	3.70	U		
4,4'-DDT	µg/kg	1.90	UJ		
Location=ORR; Formation=COPPER RIDGE; Site=62; A=1480; A dup=' '; Phase=2					
alpha-BHC	µg/kg	1.80	UJ		
alpha-Chlordane	µg/kg	1.80	U		
beta-BHC	µg/kg	1.80	U		
delta-BHC	µg/kg	1.80	U		
gamma-Chlordane	µg/kg	1.80	U		
Acenaphthylene	µg/kg	177.60	U		
Aldrin	µg/kg	1.80	U		
Anthracene	µg/kg	0.40	J		
Benzo(a)anthracene	µg/kg	2.10	J		
Benzo(a)pyrene	µg/kg	2.10	J		
Benzo(b)fluoranthene	µg/kg	1.40	J		
Benzo(ghi)perylene	µg/kg	2.80	J		
Benzo(k)fluoranthene	µg/kg	1.40	J		
Chrysene	µg/kg	3.60	J		
Dieldrin	µg/kg	3.70	U		
Endosulfan sulfate	µg/kg	3.70	U		
Endosulfan I	µg/kg	1.80	U		
Endosulfan II	µg/kg	3.70	U		
Endrin	µg/kg	3.70	U		
Endrin aldehyde	µg/kg	3.70	U		
Endrin ketone	µg/kg	3.70	U		
Fluoranthene	µg/kg	6.70	J		
Heptachlor	µg/kg	1.80	U		
Heptachlor epoxide	µg/kg	1.80	U		
Indeno(1,2,3-cd)pyrene	µg/kg	17.80	UJ		
Lindane	µg/kg	1.80	UJ		
Methoxychlor	µg/kg	18.00	U		
Phenanthrene	µg/kg	4.30	J		
Pyrene	µg/kg	6.40	J		
PCB-1016	µg/kg	37.00	U		
PCB-1221	µg/kg	74.00	U		
PCB-1232	µg/kg	37.00	U		
PCB-1242	µg/kg	37.00	U		
PCB-1248	µg/kg	37.00	U		
PCB-1254	µg/kg	37.00	U		
PCB-1260	µg/kg	37.00	U		
Toxaphene	µg/kg	180.00	U		
4,4'-DDD	µg/kg	3.70	UJ		
4,4'-DDE	µg/kg	3.70	U		
4,4'-DDT	µg/kg	3.70	UJ		
Location=ORR; Formation=COPPER RIDGE; Site=64; A=1483; A dup=' '; Phase=2					
alpha-BHC	µg/kg	1.90	UJ		
alpha-Chlordane	µg/kg	1.90	U		
beta-BHC	µg/kg	1.90	U		
delta-BHC	µg/kg	1.90	U		
gamma-Chlordane	µg/kg	1.90	U		
Acenaphthylene	µg/kg	28.40	J		
Aldrin	µg/kg	1.90	U		
Benzo(a)anthracene	µg/kg	0.80	J		
Benzo(a)pyrene	µg/kg	0.80	J		
Benzo(ghi)perylene	µg/kg	1.20	J		
Benzo(k)fluoranthene	µg/kg	0.40	J		
Chrysene	µg/kg	1.20	J		
Dibenzo(a,h)anthracene	µg/kg	0.40	J		

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
Dieldrin	µg/kg	3.80	U		
Endosulfan sulfate	µg/kg	3.80	U		
Endosulfan I	µg/kg	1.90	U		
Endosulfan II	µg/kg	3.80	U		
Endrin	µg/kg	3.80	U		
Endrin aldehyde	µg/kg	2.00	UJ		
Endrin ketone	µg/kg	3.80	U		
Fluoranthene	µg/kg	3.60	J		
Heptachlor	µg/kg	1.90	U		
Heptachlor epoxide	µg/kg	1.90	U		
Indeno(1,2,3-cd)pyrene	µg/kg	19.70	UJ		
Lindane	µg/kg	1.90	UJ		
Methoxychlor	µg/kg	19.00	U		
Phenanthrene	µg/kg	1.60	J		
Pyrene	µg/kg	2.80	J		
PCB-1016	µg/kg	38.00	U		
PCB-1221	µg/kg	77.00	U		
PCB-1232	µg/kg	38.00	U		
PCB-1242	µg/kg	38.00	U		
PCB-1248	µg/kg	38.00	U		
PCB-1254	µg/kg	38.00	U		
PCB-1260	µg/kg	38.00	U		
Toxaphene	µg/kg	190.00	U		
4,4'-DDD	µg/kg	3.80	UJ		
4,4'-DDE	µg/kg	3.80	U		
4,4'-DDT	µg/kg	3.80	UJ		
Location=ORR; Formation=COPPER RIDGE; Site=75; A=1477; A dup=' '; Phase=2					
alpha-BHC	µg/kg	2.00	UJ		
alpha-Chlordane	µg/kg	2.00	U		
beta-BHC	µg/kg	2.00	U		
delta-BHC	µg/kg	2.00	U		
gamma-Chlordane	µg/kg	2.00	U		
Acenaphthene	µg/kg	3.90	U		
Acenaphthylene	µg/kg	195.30	U		
Aldrin	µg/kg	2.00	U		
Anthracene	µg/kg	0.40	J		
Benzo(a)anthracene	µg/kg	1.60	J		
Benzo(a)pyrene	µg/kg	2.00	J		
Benzo(b)fluoranthene	µg/kg	1.60	J		
Benzo(ghi)perylene	µg/kg	2.70	J		
Benzo(k)fluoranthene	µg/kg	1.20	J		
Chrysene	µg/kg	2.70	J		
Dibenzo(a,h)anthracene	µg/kg	0.80	J		
Dieldrin	µg/kg	4.00	U		
Endosulfan sulfate	µg/kg	4.00	U		
Endosulfan I	µg/kg	2.00	U		
Endosulfan II	µg/kg	4.00	U		
Endrin	µg/kg	4.00	U		
Endrin aldehyde	µg/kg	4.00	U		
Endrin ketone	µg/kg	4.00	U		
Fluoranthene	µg/kg	4.70			
Fluorene	µg/kg	3.90	U		
Heptachlor	µg/kg	2.00	U		
Heptachlor epoxide	µg/kg	2.00	U		
Indeno(1,2,3-cd)pyrene	µg/kg	19.50	UJ		
Lindane	µg/kg	2.00	UJ		
Methoxychlor	µg/kg	20.00	U		
Naphthalene	µg/kg	19.50	U		
Phenanthrene	µg/kg	2.70	J		
Pyrene	µg/kg	4.30			
PCB-1016	µg/kg	40.00	U		
PCB-1221	µg/kg	79.00	U		
PCB-1232	µg/kg	40.00	U		
PCB-1242	µg/kg	40.00	U		
PCB-1248	µg/kg	40.00	U		

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
PCB-1254	µg/kg	40.00	U		
PCB-1260	µg/kg	40.00	U		
Toxaphene	µg/kg	200.00	U		
4,4'-DDD	µg/kg	4.00	UJ		
4,4'-DDE	µg/kg	4.00	U		
4,4'-DDT	µg/kg	4.00	UJ		
Location=ORR; Formation=COPPER RIDGE; Site=83; A=1474; A dup=' '; Phase=2					
alpha-BHC	µg/kg	2.00	UJ		
alpha-Chlordane	µg/kg	2.00	UJ		
beta-BHC	µg/kg	2.00	UJ		
delta-BHC	µg/kg	2.00	UJ		
gamma-Chlordane	µg/kg	2.00	UJ		
Acenaphthene	µg/kg	2.40	J		
Acenaphthylene	µg/kg	198.40	UJ		
Aldrin	µg/kg	2.00	UJ		
Anthracene	µg/kg	0.40	J		
Benzo(a)anthracene	µg/kg	3.20	J		
Benzo(a)pyrene	µg/kg	4.00	J		
Benzo(b)fluoranthene	µg/kg	2.80	J		
Benzo(ghi)perylene	µg/kg	4.80	J		
Benzo(k)fluoranthene	µg/kg	2.00	J		
Chrysene	µg/kg	5.20	J		
Dibenzo(a,h)anthracene	µg/kg	0.40	J		
Dieldrin	µg/kg	4.00	UJ		
Endosulfan sulfate	µg/kg	4.00	UJ		
Endosulfan I	µg/kg	2.20	J		
Endosulfan II	µg/kg	4.00	UJ		
Endrin	µg/kg	4.00	UJ		
Endrin aldehyde	µg/kg	4.00	UJ		
Endrin ketone	µg/kg	4.00	UJ		
Fluoranthene	µg/kg	10.30	J		
Heptachlor	µg/kg	2.00	UJ		
Heptachlor epoxide	µg/kg	2.00	UJ		
Indeno(1,2,3-cd)pyrene	µg/kg	19.80	UJ		
Lindane	µg/kg	2.00	UJ		
Methoxychlor	µg/kg	20.00	UJ		
Naphthalene	µg/kg	7.50	J		
Phenanthrene	µg/kg	5.20	J		
Pyrene	µg/kg	9.10	J		
PCB-1016	µg/kg	40.00	UJ		
PCB-1221	µg/kg	79.00	UJ		
PCB-1232	µg/kg	40.00	UJ		
PCB-1242	µg/kg	40.00	UJ		
PCB-1248	µg/kg	40.00	UJ		
PCB-1254	µg/kg	40.00	UJ		
PCB-1260	µg/kg	40.00	UJ		
Toxaphene	µg/kg	200.00	UJ		
4,4'-DDD	µg/kg	4.00	UJ		
4,4'-DDE	µg/kg	4.00	UJ		
4,4'-DDT	µg/kg	4.00	UJ		
Location=ORR; Formation=COPPER RIDGE; Site=91; A=1471; A dup=' '; Phase=2					
alpha-BHC	µg/kg	2.00	UJ		
alpha-Chlordane	µg/kg	2.00	U		
beta-BHC	µg/kg	2.00	U		
delta-BHC	µg/kg	2.00	U		
gamma-Chlordane	µg/kg	2.00	U		
Acenaphthene	µg/kg	0.80	J		
Acenaphthylene	µg/kg	43.40	J		
Aldrin	µg/kg	2.00	U		
Anthracene	µg/kg	0.80	J		
Benzo(a)anthracene	µg/kg	4.30	J		

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
Benzo(a)pyrene	µg/kg	5.10	J		
Benzo(b)fluoranthene	µg/kg	3.90	J		
Benzo(ghi)perylene	µg/kg	5.50	J		
Benzo(k)fluoranthene	µg/kg	2.70	J		
Chrysene	µg/kg	6.60	J		
Dibenzo(a,h)anthracene	µg/kg	0.40	J		
Dieldrin	µg/kg	4.00	U		
Endosulfan sulfate	µg/kg	4.00	U		
Endosulfan II	µg/kg	4.00	U		
Endrin	µg/kg	4.00	U		
Endrin aldehyde	µg/kg	4.00	U		
Endrin ketone	µg/kg	1.80	UJ		
Fluoranthene	µg/kg	11.30	J		
Fluorene	µg/kg	3.90	UJ		
Heptachlor	µg/kg	2.00	U		
Heptachlor epoxide	µg/kg	2.00	U		
Indeno(1,2,3-cd)pyrene	µg/kg	19.50	UJ		
Lindane	µg/kg	2.00	UJ		
Methoxychlor	µg/kg	20.00	U		
Naphthalene	µg/kg	19.50	UJ		
Phenanthrene	µg/kg	5.50	J		
Pyrene	µg/kg	10.60	J		
PCB-1016	µg/kg	40.00	U		
PCB-1221	µg/kg	79.00	U		
PCB-1232	µg/kg	40.00	U		
PCB-1242	µg/kg	40.00	U		
PCB-1248	µg/kg	40.00	U		
PCB-1254	µg/kg	40.00	U		
PCB-1260	µg/kg	40.00	U		
Toxaphene	µg/kg	200.00	U		
4,4'-DDD	µg/kg	4.00	UJ		
4,4'-DDE	µg/kg	4.00	U		
4,4'-DDT	µg/kg	4.00	UJ		
Location=ORR; Formation=DISMAL GAP; Site=10; A=1127; A dup=' '; Phase=1					
alpha-BHC	µg/kg	4.40	U		
alpha-Chlordane	µg/kg	4.40	U		
beta-BHC	µg/kg	4.40	UJ		
delta-BHC	µg/kg	4.40	U		
gamma-Chlordane	µg/kg	4.40	U		
Acenaphthene	µg/kg	241.00	UJN		
Acenaphthylene	µg/kg	307.00	UJN		
Aldrin	µg/kg	4.40	UJ		
Anthracene	µg/kg	88.00	UJN		
Benzo(a)anthracene	µg/kg	2.00	UJN		
Benzo(a)pyrene	µg/kg	3.00	UJN		
Benzo(b)fluoranthene	µg/kg	2.00	UJN		
Benzo(ghi)perylene	µg/kg	10.00	UJN		
Benzo(k)fluoranthene	µg/kg	2.00	UJN		
Chrysene	µg/kg	20.00	UJN		
Dibenzo(a,h)anthracene	µg/kg	4.00	UJN		
Dicamba	µg/kg	212.00	UJ		
Dichlorprop	µg/kg	531.00	UJ		
Dieldrin	µg/kg	8.80	U		
Dinoseb	µg/kg	111.00	UJ		
Endosulfan sulfate	µg/kg	8.80	U		
Endosulfan I	µg/kg	4.40	U		
Endosulfan II	µg/kg	8.80	U		
Endrin	µg/kg	8.80	U		
Endrin aldehyde	µg/kg	8.80	U		
Endrin ketone	µg/kg	8.80	U		
Fluorene	µg/kg	28.00	UJN		
Heptachlor	µg/kg	4.40	U		
Heptachlor epoxide	µg/kg	4.40	U		
Indeno(1,2,3-cd)pyrene	µg/kg	6.00	UJN		
Lindane	µg/kg	4.40	UJ		

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
Methoxychlor	µg/kg	44.00	UJ		
MCPA	µg/kg	199104.00	UJ		
MCPP	µg/kg	151319.00	UJ		
Naphthalene	µg/kg	241.00	UJN		
Phenanthrene	µg/kg	86.00	UJN		
Pyrene	µg/kg	36.00	UJN		
PCB-1016	µg/kg	88.00	U		
PCB-1221	µg/kg	180.00	U		
PCB-1232	µg/kg	88.00	U		
PCB-1242	µg/kg	88.00	U		
PCB-1248	µg/kg	88.00	U		
PCB-1254	µg/kg	88.00	U		
PCB-1260	µg/kg	88.00	U		
Silvex	µg/kg	133.00	UJ		
Toxaphene	µg/kg	440.00	U		
2,4-D	µg/kg	956.00	UJ		
2,4-DB	µg/kg	717.00	UJ		
2,4,5-T	µg/kg	159.00	UJ		
4,4'-DDD	µg/kg	8.80	U		
4,4'-DDE	µg/kg	8.80	U		
4,4'-DDT	µg/kg	8.80	U		
Location=ORR; Formation=DISMAL GAP; Site=11; A=1080; A dup=' '; Phase=1					
alpha-BHC	µg/kg	4.30	UJ		
alpha-Chlordane	µg/kg	4.30	U		
beta-BHC	µg/kg	4.30	U		
delta-BHC	µg/kg	4.30	U		
gamma-Chlordane	µg/kg	4.30	U		
Acenaphthene	µg/kg	11593.00	UJ		
Acenaphthylene	µg/kg	14814.00	UJ		
Aldrin	µg/kg	4.30	U		
Anthracene	µg/kg	4251.00	UJ		
Benzo(a)anthracene	µg/kg	84.00	UJ		
Benzo(a)pyrene	µg/kg	148.00	UJ		
Benzo(b)fluoranthene	µg/kg	116.00	UJ		
Benzo(ghi)perylene	µg/kg	490.00	UJ		
Benzo(k)fluoranthene	µg/kg	109.00	UJ		
Chrysene	µg/kg	966.00	UJ		
Dibenzo(a,h)anthracene	µg/kg	193.00	UJ		
Dicamba	µg/kg	412.00	UJ		
Dichlorprop	µg/kg	1031.00	UJ		
Dieldrin	µg/kg	8.60	UJ		
Dinoseb	µg/kg	216.00	UJ		
Endosulfan sulfate	µg/kg	8.80	U		
Endosulfan I	µg/kg	4.30	U		
Endosulfan II	µg/kg	8.60	U		
Endrin	µg/kg	8.60	U		
Endrin aldehyde	µg/kg	8.60	UJ		
Endrin ketone	µg/kg	8.60	U		
Fluoranthene	µg/kg	348.00	UJ		
Fluorene	µg/kg	1353.00	UJ		
Heptachlor	µg/kg	4.30	U		
Heptachlor epoxide	µg/kg	4.30	U		
Indeno(1,2,3-cd)pyrene	µg/kg	277.00	UJ		
Lindane	µg/kg	4.30	U		
Methoxychlor	µg/kg	43.00	U		
MCPA	µg/kg	386449.00	UJ		
MCPP	µg/kg	293701.00	UJ		
Naphthalene	µg/kg	11593.00	UJ		
Phenanthrene	µg/kg	4122.00	UJ		
Pyrene	µg/kg	1739.00	UJ		
PCB-1016	µg/kg	86.00	U		
PCB-1221	µg/kg	254.00	U		
PCB-1232	µg/kg	86.00	U		
PCB-1242	µg/kg	86.00	U		
PCB-1248	µg/kg	86.00	U		

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
PCB-1254	µg/kg	86.00	U		
PCB-1260	µg/kg	86.00	U		
Silvex	µg/kg	258.00	UJ		
Toxaphene	µg/kg	430.00	U		
2,4-D	µg/kg	1855.00	UJ		
2,4-DB	µg/kg	1391.00	UJ		
2,4,5-T	µg/kg	309.00	UJ		
4,4'-DDD	µg/kg	8.60	U		
4,4'-DDE	µg/kg	8.60	UJ		
4,4'-DDT	µg/kg	8.60	U		
Location=ORR; Formation=DISMAL GAP; Site=19; A=1099; A dup=' '; Phase=1					
alpha-BHC	µg/kg	4.30	UJ		
alpha-Chlordane	µg/kg	4.30	U		
beta-BHC	µg/kg	4.30	U		
delta-BHC	µg/kg	4.30	U		
gamma-Chlordane	µg/kg	4.30	U		
Acenaphthene	µg/kg	2382.00	U		
Acenaphthylene	µg/kg	3044.00	UJ		
Aldrin	µg/kg	4.30	U		
Anthracene	µg/kg	873.00	UJ		
Benzo(a)anthracene	µg/kg	17.00	U		
Benzo(a)pyrene	µg/kg	30.00	UJ		
Benzo(b)fluoranthene	µg/kg	24.00	UJ		
Benzo(ghi)perylene	µg/kg	101.00	UJ		
Benzo(k)fluoranthene	µg/kg	22.00	UJ		
Chrysene	µg/kg	198.00	U		
Dibenzo(a,h)anthracene	µg/kg	40.00	UJ		
Dicamba	µg/kg	208.00	UJ		
Dichlorprop	µg/kg	520.00	UJ		
Dieldrin	µg/kg	8.60	UJ		
Dinoseb	µg/kg	109.00	UJ		
Endosulfan sulfate	µg/kg	8.60	U		
Endosulfan I	µg/kg	4.30	U		
Endosulfan II	µg/kg	8.60	U		
Endrin	µg/kg	8.60	U		
Endrin aldehyde	µg/kg	8.60	UJ		
Endrin ketone	µg/kg	8.60	U		
Fluorene	µg/kg	150.00	J		
Heptachlor	µg/kg	4.30	UJ		
Heptachlor epoxide	µg/kg	4.30	U		
Indeno(1,2,3-cd)pyrene	µg/kg	57.00	U		
Lindane	µg/kg	4.30	U		
Methoxychlor	µg/kg	43.00	U		
MCPA	µg/kg	195116.00	UJ		
MCPP	µg/kg	148288.00	UJ		
Naphthalene	µg/kg	2382.00	UJ		
Phenanthrene	µg/kg	847.00	UJ		
Pyrene	µg/kg	357.00	J		
PCB-1016	µg/kg	86.00	U		
PCB-1221	µg/kg	254.00	U		
PCB-1232	µg/kg	86.00	U		
PCB-1242	µg/kg	86.00	U		
PCB-1248	µg/kg	86.00	U		
PCB-1254	µg/kg	86.00	U		
PCB-1260	µg/kg	86.00	U		
Silvex	µg/kg	130.00	UJ		
Toxaphene	µg/kg	430.00	U		
2,4-D	µg/kg	937.00	UJ		
2,4-DB	µg/kg	702.00	UJ		
2,4,5-T	µg/kg	156.00	UJ		
4,4'-DDD	µg/kg	8.60	U		
4,4'-DDE	µg/kg	8.60	UJ		
4,4'-DDT	µg/kg	8.60	U		

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
Location=ORR; Formation=DISMAL GAP; Site=2; A=1190; A dup=1201; Phase=1					
alpha-BHC	µg/kg	4.10	UJ	4.0	UJ
alpha-Chlordane	µg/kg	4.10	UJ	4.0	UJ
beta-BHC	µg/kg	4.10	UJ	4.0	UJ
delta-BHC	µg/kg	4.10	UJ	4.0	UJ
gamma-Chlordane	µg/kg	4.10	U	4.0	U
Acenaphthene	µg/kg	213.00	UJ	213.0	UJ
Acenaphthylene	µg/kg	272.00	UJ	272.0	UJ
Aldrin	µg/kg	4.10	U	4.0	U
Anthracene	µg/kg	78.00	UJ	78.0	UJ
Benzo(a)anthracene	µg/kg	2.00	UJ	2.0	UJ
Benzo(a)pyrene	µg/kg	3.00	UJ	3.0	UJ
Benzo(b)fluoranthene	µg/kg	2.00	UJ	2.0	UJ
Benzo(ghi)perylene	µg/kg	9.00	UJ	9.0	UJ
Benzo(k)fluoranthene	µg/kg	2.00	UJ	2.0	UJ
Chrysene	µg/kg	18.00	UJ	18.0	UJ
Dalapon	µg/kg	864.00	UJ	850.0	UJ
Dibenzo(a,h)anthracene	µg/kg	4.00	UJ	4.0	UJ
Dicamba	µg/kg	40.00	U	39.0	UJ
Dichlorprop	µg/kg	99.00	U	98.0	UJ
Dieldrin	µg/kg	4.10	UJ	4.0	UJ
Dinoseb	µg/kg	21.00	U	21.0	UJ
Endosulfan sulfate	µg/kg	8.20	U		
Endosulfan I	µg/kg	4.10	UJ	4.0	UJ
Endosulfan II	µg/kg	8.20	U	8.0	U
Endrin	µg/kg	8.20	U	8.0	U
Endrin aldehyde	µg/kg	8.20	U		
Endrin ketone	µg/kg	8.20	U	8.0	U
Fluorene	µg/kg	25.00	UJ	25.0	UJ
Heptachlor	µg/kg	4.10	UJ	4.0	UJ
Heptachlor epoxide	µg/kg	4.10	U	4.0	U
Indeno(1,2,3-cd)pyrene	µg/kg	5.00	UJ	5.0	UJ
Lindane	µg/kg	4.10	UJ	4.0	UJ
Methoxychlor	µg/kg	41.00	U	40.0	U
MCPA	µg/kg	37230.00	U	36643.0	UJ
MCPP	µg/kg	28295.00	U	27849.0	UJ
Naphthalene	µg/kg	213.00	UJ	213.0	UJ
Phenanthrene	µg/kg	76.00	UJ	76.0	UJ
Pyrene	µg/kg	32.00	UJN	9.1	J
PCB-1016	µg/kg	82.00	U	80.0	U
PCB-1221	µg/kg	160.00	U	160.0	U
PCB-1232	µg/kg	82.00	U	80.0	U
PCB-1242	µg/kg	82.00	U	80.0	U
PCB-1248	µg/kg	82.00	U	80.0	U
PCB-1254	µg/kg	82.00	U	80.0	U
PCB-1260	µg/kg	82.00	U	80.0	U
Silvex	µg/kg	25.00	UJ	24.0	UJ
Toxaphene	µg/kg	410.00	U	400.0	U
2,4-D	µg/kg	179.00	U	176.0	UJ
2,4-DB	µg/kg	134.00	U	132.0	UJ
2,4,5-T	µg/kg	30.00	UJ	29.0	UJ
4,4'-DDD	µg/kg	8.20	UJ	8.0	UJ
4,4'-DDE	µg/kg	8.20	UJ	8.0	UJ
4,4'-DDT	µg/kg	8.20	U	8.0	U
Location=ORR; Formation=DISMAL GAP; Site=22; A=1106; A dup=' '; Phase=1					
alpha-BHC	µg/kg	4.30	UJ		
alpha-Chlordane	µg/kg	4.30	U		
beta-BHC	µg/kg	4.30	U		
delta-BHC	µg/kg	4.30	U		
gamma-Chlordane	µg/kg	4.30	U		
Acenaphthene	µg/kg	2437.00	UJN		
Acenaphthylene	µg/kg	3114.00	UJN		
Aldrin	µg/kg	4.30	U		

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
Anthracene	µg/kg	894.00	UJN		
Benzo(a)anthracene	µg/kg	18.00	UJN		
Benzo(a)pyrene	µg/kg	31.00	UJN		
Benzo(b)fluoranthene	µg/kg	24.00	UJN		
Benzo(ghi)perylene	µg/kg	103.00	UJN		
Benzo(k)fluoranthene	µg/kg	23.00	UJN		
Chrysene	µg/kg	203.00	UJN		
Dibenzo(a,h)anthracene	µg/kg	41.00	UJN		
Dicamba	µg/kg	216.00	UJ		
Dichlorprop	µg/kg	539.00	UJ		
Dieldrin	µg/kg	4.30	UJ		
Dinoseb	µg/kg	113.00	UJ		
Endosulfan sulfate	µg/kg	8.80	U		
Endosulfan I	µg/kg	4.30	U		
Endosulfan II	µg/kg	8.80	U		
Endrin	µg/kg	8.80	U		
Endrin aldehyde	µg/kg	8.80	UJ		
Endrin ketone	µg/kg	8.80	U		
Fluorene	µg/kg	284.00	UJN		
Heptachlor	µg/kg	4.30	UJ		
Heptachlor epoxide	µg/kg	4.30	U		
Indeno(1,2,3-cd)pyrene	µg/kg	58.00	UJN		
Lindane	µg/kg	4.30	U		
Methoxychlor	µg/kg	43.00	U		
MCPA	µg/kg	202302.00	UJ		
MCPP	µg/kg	153749.00	UJ		
Naphthalene	µg/kg	2437.00	UJN		
Phenanthrene	µg/kg	867.00	UJN		
Pyrene	µg/kg	366.00	UJN		
PCB-1016	µg/kg	88.00	U		
PCB-1221	µg/kg	176.00	U		
PCB-1232	µg/kg	88.00	U		
PCB-1242	µg/kg	88.00	U		
PCB-1248	µg/kg	88.00	U		
PCB-1254	µg/kg	88.00	U		
PCB-1260	µg/kg	88.00	U		
Silvex	µg/kg	135.00	UJ		
Toxaphene	µg/kg	430.00	U		
2,4-D	µg/kg	971.00	UJ		
2,4-DB	µg/kg	728.00	UJ		
2,4,5-T	µg/kg	162.00	UJ		
4,4'-DDD	µg/kg	8.80	U		
4,4'-DDE	µg/kg	8.80	UJ		
4,4'-DDT	µg/kg	4.30	U		
Location=ORR; Formation=DISMAL GAP; Site=26; A=1213; A dup=' '; Phase=1					
alpha-BHC	µg/kg	4.10	UJ		
alpha-Chlordane	µg/kg	4.10	UJ		
beta-BHC	µg/kg	4.10	UJ		
delta-BHC	µg/kg	4.10	UJ		
gamma-Chlordane	µg/kg	4.10	U		
Aldrin	µg/kg	4.10	U		
Dalapon	µg/kg	877.00	UJ		
Dicamba	µg/kg	40.00	U		
Dichlorprop	µg/kg	101.00	U		
Dieldrin	µg/kg	8.30	UJ		
Dinoseb	µg/kg	21.00	U		
Endosulfan sulfate	µg/kg	8.30	U		
Endosulfan I	µg/kg	4.10	UJ		
Endosulfan II	µg/kg	8.30	U		
Endrin	µg/kg	8.30	U		
Endrin aldehyde	µg/kg	8.30	U		
Endrin ketone	µg/kg	8.30	U		
Heptachlor	µg/kg	4.10	UJ		
Heptachlor epoxide	µg/kg	4.10	U		
Lindane	µg/kg	4.10	UJ		

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
Methoxychlor	µg/kg	41.00	U		
MCPA	µg/kg	37798.00	U		
MCPP	µg/kg	28726.00	U		
PCB-1016	µg/kg	83.00	U		
PCB-1221	µg/kg	170.00	U		
PCB-1232	µg/kg	83.00	U		
PCB-1242	µg/kg	83.00	U		
PCB-1248	µg/kg	83.00	U		
PCB-1254	µg/kg	83.00	U		
PCB-1260	µg/kg	83.00	U		
Silvex	µg/kg	25.00	UJ		
Toxaphene	µg/kg	410.00	U		
2,4-D	µg/kg	181.00	U		
2,4-DB	µg/kg	136.00	U		
2,4,5-T	µg/kg	30.00	UJ		
4,4'-DDD	µg/kg	8.30	UJ		
4,4'-DDE	µg/kg	8.30	UJ		
4,4'-DDT	µg/kg	8.30	U		
Location=ORR; Formation=DISMAL GAP; Site=27; A=1072; A dup=' '; Phase=1					
alpha-BHC	µg/kg	4.30	UJ		
alpha-Chlordane	µg/kg	4.30	U		
beta-BHC	µg/kg	4.30	U		
delta-BHC	µg/kg	4.30	U		
gamma-Chlordane	µg/kg	4.30	U		
Acenaphthene	µg/kg	11841.00	UJN		
Acenaphthylene	µg/kg	15130.00	UJN		
Aldrin	µg/kg	4.30	U		
Anthracene	µg/kg	4342.00	UJN		
Benzo(a)anthracene	µg/kg	86.00	UJN		
Benzo(a)pyrene	µg/kg	151.00	UJN		
Benzo(b)fluoranthene	µg/kg	118.00	UJN		
Benzo(ghi)perylene	µg/kg	500.00	UJN		
Benzo(k)fluoranthene	µg/kg	112.00	UJN		
Chrysene	µg/kg	987.00	UJN		
Dibenzo(a,h)anthracene	µg/kg	197.00	UJN		
Dicamba	µg/kg	421.00	UJ		
Dichlorprop	µg/kg	1052.00	UJ		
Dieldrin	µg/kg	8.50	UJ		
Dinoseb	µg/kg	221.00	UJ		
Endosulfan sulfate	µg/kg	8.50	U		
Endosulfan I	µg/kg	4.30	U		
Endosulfan II	µg/kg	8.50	U		
Endrin	µg/kg	8.50	U		
Endrin aldehyde	µg/kg	8.50	UJ		
Endrin ketone	µg/kg	8.50	U		
Fluoranthene	µg/kg	355.00	UJN		
Fluorene	µg/kg	1381.00	UJN		
Heptachlor	µg/kg	4.30	U		
Heptachlor epoxide	µg/kg	4.30	U		
Indeno(1,2,3-cd)pyrene	µg/kg	283.00	UJN		
Lindane	µg/kg	4.30	U		
Methoxychlor	µg/kg	43.00	U		
MCPA	µg/kg	394685.00	UJ		
MCPP	µg/kg	299961.00	UJ		
Naphthalene	µg/kg	11841.00	UJN		
Phenanthrene	µg/kg	4210.00	UJN		
Pyrene	µg/kg	1776.00	UJN		
PCB-1016	µg/kg	85.00	U		
PCB-1221	µg/kg	254.00	U		
PCB-1232	µg/kg	85.00	U		
PCB-1242	µg/kg	85.00	U		
PCB-1248	µg/kg	85.00	U		
PCB-1254	µg/kg	85.00	U		
PCB-1260	µg/kg	85.00	U		
Silvex	µg/kg	263.00	UJ		

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
Toxaphene	µg/kg	430.00	U		
2,4-D	µg/kg	1894.00	UJ		
2,4-DB	µg/kg	1421.00	UJ		
2,4,5-T	µg/kg	316.00	UJ		
4,4'-DDD	µg/kg	8.50	U		
4,4'-DDE	µg/kg	8.50	UJ		
4,4'-DDT	µg/kg	8.50	U		
Location=ORR; Formation=DISMAL GAP; Site=32; A=1107; A dup=' '; Phase=1					
alpha-BHC	µg/kg	4.20	UJ		
alpha-Chlordane	µg/kg	4.20	U		
beta-BHC	µg/kg	4.20	UJ		
delta-BHC	µg/kg	4.20	U		
gamma-Chlordane	µg/kg	4.20	U		
Acenaphthene	µg/kg	2291.00	UJN		
Acenaphthylene	µg/kg	2928.00	UJN		
Aldrin	µg/kg	4.20	UJ		
Anthracene	µg/kg	840.00	UJN		
Benzo(a)anthracene	µg/kg	17.00	UJN		
Benzo(a)pyrene	µg/kg	29.00	UJN		
Benzo(b)fluoranthene	µg/kg	23.00	UJN		
Benzo(ghi)perylene	µg/kg	97.00	UJN		
Benzo(k)fluoranthene	µg/kg	22.00	UJN		
Chrysene	µg/kg	191.00	UJN		
Dibenzo(a,h)anthracene	µg/kg	38.00	UJN		
Dicamba	µg/kg	204.00	UJ		
Dichlorprop	µg/kg	509.00	UJ		
Dieldrin	µg/kg	8.40	UJ		
Dinoseb	µg/kg	107.00	UJ		
Endosulfan sulfate	µg/kg	8.40	U		
Endosulfan I	µg/kg	4.20	U		
Endosulfan II	µg/kg	8.40	U		
Endrin	µg/kg	8.40	U		
Endrin aldehyde	µg/kg	8.40	U		
Endrin ketone	µg/kg	8.40	U		
Fluorene	µg/kg	267.00	UJN		
Heptachlor	µg/kg	4.20	UJ		
Heptachlor epoxide	µg/kg	4.20	U		
Indeno(1,2,3-cd)pyrene	µg/kg	55.00	UJN		
Lindane	µg/kg	4.20	U		
Methoxychlor	µg/kg	42.00	UJ		
MCPA	µg/kg	190937.00	UJ		
MCPP	µg/kg	145112.00	UJ		
Naphthalene	µg/kg	2291.00	UJN		
Phenanthrene	µg/kg	815.00	UJN		
Pyrene	µg/kg	344.00	UJN		
PCB-1016	µg/kg	84.00	U		
PCB-1221	µg/kg	170.00	U		
PCB-1232	µg/kg	84.00	U		
PCB-1242	µg/kg	84.00	U		
PCB-1248	µg/kg	84.00	U		
PCB-1254	µg/kg	84.00	U		
PCB-1260	µg/kg	84.00	U		
Silvex	µg/kg	127.00	UJ		
Toxaphene	µg/kg	420.00	U		
2,4-D	µg/kg	916.00	UJ		
2,4-DB	µg/kg	687.00	UJ		
2,4,5-T	µg/kg	153.00	UJ		
4,4'-DDD	µg/kg	8.40	UJ		
4,4'-DDE	µg/kg	8.40	UJ		
4,4'-DDT	µg/kg	8.40	UJ		

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
Location=ORR; Formation=DISMAL GAP; Site=33; A=1108; A dup=' '; Phase=1					
alpha-BHC	µg/kg	4.70	UJ		
alpha-Chlordane	µg/kg	4.70	U		
beta-BHC	µg/kg	4.70	UJ		
delta-BHC	µg/kg	4.70	U		
gamma-Chlordane	µg/kg	4.70	U		
Acenaphthene	µg/kg	2568.00	UJN		
Acenaphthylene	µg/kg	3281.00	UJN		
Aldrin	µg/kg	4.70	UJ		
Anthracene	µg/kg	942.00	UJN		
Benzo(a)anthracene	µg/kg	19.00	UJN		
Benzo(a)pyrene	µg/kg	33.00	UJN		
Benzo(b)fluoranthene	µg/kg	26.00	UJN		
Benzo(ghi)perylene	µg/kg	108.00	UJN		
Benzo(k)fluoranthene	µg/kg	24.00	UJN		
Chrysene	µg/kg	214.00	UJN		
Dibenzo(a,h)anthracene	µg/kg	43.00	UJN		
Dicamba	µg/kg	228.00	UJ		
Dichlorprop	µg/kg	570.00	UJ		
Dieldrin	µg/kg	9.40	UJ		
Dinoseb	µg/kg	120.00	UJ		
Endosulfan sulfate	µg/kg	9.40	U		
Endosulfan I	µg/kg	4.70	U		
Endosulfan II	µg/kg	9.40	U		
Endrin	µg/kg	9.40	U		
Endrin aldehyde	µg/kg	9.40	U		
Endrin ketone	µg/kg	9.40	U		
Fluorene	µg/kg	300.00	UJN		
Heptachlor	µg/kg	4.70	UJ		
Heptachlor epoxide	µg/kg	4.70	U		
Indeno(1,2,3-cd)pyrene	µg/kg	61.00	UJN		
Lindane	µg/kg	4.70	U		
Methoxychlor	µg/kg	47.00	UJ		
MCPA	µg/kg	213583.00	UJ		
MCPP	µg/kg	162323.00	UJ		
Naphthalene	µg/kg	2568.00	UJN		
Phenanthrene	µg/kg	913.00	UJN		
Pyrene	µg/kg	385.00	UJN		
PCB-1016	µg/kg	94.00	U		
PCB-1221	µg/kg	190.00	U		
PCB-1232	µg/kg	94.00	U		
PCB-1242	µg/kg	94.00	U		
PCB-1248	µg/kg	94.00	U		
PCB-1254	µg/kg	94.00	U		
PCB-1260	µg/kg	94.00	U		
Silvex	µg/kg	142.00	UJ		
Toxaphene	µg/kg	470.00	U		
2,4-D	µg/kg	1025.00	UJ		
2,4-DB	µg/kg	769.00	UJ		
2,4,5-T	µg/kg	171.00	UJ		
4,4'-DDD	µg/kg	9.40	UJ		
4,4'-DDE	µg/kg	9.40	UJ		
4,4'-DDT	µg/kg	9.40	UJ		
Location=ORR; Formation=DISMAL GAP; Site=35; A=1115; A dup=' '; Phase=1					
alpha-BHC	µg/kg	4.20	UJ		
alpha-Chlordane	µg/kg	4.20	U		
beta-BHC	µg/kg	4.20	UJ		
delta-BHC	µg/kg	4.20	U		
gamma-Chlordane	µg/kg	4.20	U		
Acenaphthene	µg/kg	2285.00	UJN		
Acenaphthylene	µg/kg	2920.00	UJN		
Aldrin	µg/kg	4.20	UJ		
Anthracene	µg/kg	838.00	UJN		

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
Benzo(a)anthracene	µg/kg	17.00	UJN		
Benzo(a)pyrene	µg/kg	29.00	UJN		
Benzo(b)fluoranthene	µg/kg	23.00	UJN		
Benzo(ghi)perylene	µg/kg	96.00	UJN		
Benzo(k)fluoranthene	µg/kg	22.00	UJN		
Chrysene	µg/kg	190.00	UJN		
Dibenzo(a,h)anthracene	µg/kg	38.00	UJN		
Dicamba	µg/kg	202.00	UJ		
Dichlorprop	µg/kg	504.00	UJ		
Dieldrin	µg/kg	8.40	UJ		
Dinoseb	µg/kg	106.00	UJ		
Endosulfan sulfate	µg/kg	8.40	U		
Endosulfan I	µg/kg	4.20	U		
Endosulfan II	µg/kg	8.40	U		
Endrin	µg/kg	8.40	U		
Endrin aldehyde	µg/kg	8.40	U		
Endrin ketone	µg/kg	8.40	U		
Fluorene	µg/kg	267.00	UJN		
Heptachlor	µg/kg	4.20	UJ		
Heptachlor epoxide	µg/kg	4.20	U		
Indeno(1,2,3-cd)pyrene	µg/kg	55.00	UJN		
Lindane	µg/kg	4.20	U		
Methoxychlor	µg/kg	42.00	UJ		
MCPA	µg/kg	189119.00	UJ		
MCPP	µg/kg	143730.00	UJ		
Naphthalene	µg/kg	2285.00	UJN		
Phenanthrene	µg/kg	813.00	UJN		
Pyrene	µg/kg	343.00	UJN		
PCB-1016	µg/kg	84.00	U		
PCB-1221	µg/kg	170.00	U		
PCB-1232	µg/kg	84.00	U		
PCB-1242	µg/kg	84.00	U		
PCB-1248	µg/kg	84.00	U		
PCB-1254	µg/kg	84.00	U		
PCB-1260	µg/kg	84.00	U		
Silvex	µg/kg	126.00	UJ		
Toxaphene	µg/kg	420.00	U		
2,4-D	µg/kg	908.00	UJ		
2,4-DB	µg/kg	681.00	UJ		
2,4,5-T	µg/kg	151.00	UJ		
4,4'-DDD	µg/kg	8.40	UJ		
4,4'-DDE	µg/kg	8.40	UJ		
4,4'-DDT	µg/kg	8.40	UJ		
Location=ORR; Formation=DISMAL GAP; Site=41; A=1064; A dup=' '; Phase=1					
alpha-BHC	µg/kg	4.20	UJ		
alpha-Chlordane	µg/kg	4.20	U		
beta-BHC	µg/kg	4.20	U		
delta-BHC	µg/kg	4.20	U		
gamma-Chlordane	µg/kg	4.20	U		
Acenaphthene	µg/kg	11464.00	UJN		
Acenaphthylene	µg/kg	14648.00	UJN		
Aldrin	µg/kg	4.20	U		
Anthracene	µg/kg	4203.00	UJN		
Benzo(a)anthracene	µg/kg	83.00	UJN		
Benzo(a)pyrene	µg/kg	146.00	UJN		
Benzo(b)fluoranthene	µg/kg	115.00	UJN		
Benzo(ghi)perylene	µg/kg	484.00	UJN		
Benzo(k)fluoranthene	µg/kg	108.00	UJN		
Chrysene	µg/kg	955.00	UJN		
Dibenzo(a,h)anthracene	µg/kg	191.00	UJN		
Dicamba	µg/kg	408.00	UJ		
Dichlorprop	µg/kg	1019.00	UJ		
Dieldrin	µg/kg	8.50	UJ		
Dinoseb	µg/kg	214.00	UJ		
Endosulfan sulfate	µg/kg	8.50	U		

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
Endosulfan I	µg/kg	4.20	U		
Endosulfan II	µg/kg	8.50	U		
Endrin	µg/kg	8.50	U		
Endrin aldehyde	µg/kg	8.50	UJ		
Endrin ketone	µg/kg	8.50	U		
Fluoranthene	µg/kg	344.00	UJN		
Fluorene	µg/kg	1337.00	UJN		
Heptachlor	µg/kg	4.20	U		
Heptachlor epoxide	µg/kg	4.20	U		
Indeno(1,2,3-cd)pyrene	µg/kg	274.00	UJN		
Lindane	µg/kg	4.20	U		
Methoxychlor	µg/kg	42.00	U		
MCPA	µg/kg	382117.00	UJ		
MCPP	µg/kg	290409.00	UJ		
Naphthalene	µg/kg	11464.00	UJN		
Phenanthrene	µg/kg	4076.00	UJN		
Pyrene	µg/kg	1720.00	UJN		
PCB-1016	µg/kg	85.00	U		
PCB-1221	µg/kg	169.00	U		
PCB-1232	µg/kg	85.00	U		
PCB-1242	µg/kg	85.00	U		
PCB-1248	µg/kg	85.00	U		
PCB-1254	µg/kg	85.00	U		
PCB-1260	µg/kg	85.00	U		
Silvex	µg/kg	255.00	UJ		
Toxaphene	µg/kg	420.00	U		
2,4-D	µg/kg	1834.00	UJ		
2,4-DB	µg/kg	1376.00	UJ		
2,4,5-T	µg/kg	306.00	UJ		
4,4'-DDD	µg/kg	8.50	U		
4,4'-DDE	µg/kg	8.50	UJ		
4,4'-DDT	µg/kg	8.50	U		
Location=ORR; Formation=DISMAL GAP; Site=43; A=1231; A dup=' '; Phase=1					
alpha-BHC	µg/kg	2.10	UJ		
alpha-Chlordane	µg/kg	2.10	UJ		
beta-BHC	µg/kg	2.10	UJ		
delta-BHC	µg/kg	2.10	UJ		
gamma-Chlordane	µg/kg	2.10	UJ		
Acenaphthene	µg/kg	233.00	U		
Acenaphthylene	µg/kg	2970.00	UJ		
Aldrin	µg/kg	2.10	UJ		
Anthracene	µg/kg	850.00	UJ		
Benzo(a)anthracene	µg/kg	2.00	U		
Benzo(a)pyrene	µg/kg	1.00	UJ		
Benzo(b)fluoranthene	µg/kg	2.00	U		
Benzo(ghi)perylene	µg/kg	10.00	UJ		
Benzo(k)fluoranthene	µg/kg	2.00	UJ		
Chrysene	µg/kg	19.00	U		
Dibenzo(a,h)anthracene	µg/kg	4.00	U		
Dieldrin	µg/kg	4.20	UJ		
Endosulfan sulfate	µg/kg	4.20	UJ		
Endosulfan I	µg/kg	2.10	UJ		
Endosulfan II	µg/kg	4.20	UJ		
Endrin	µg/kg	4.20	UJ		
Endrin aldehyde	µg/kg	4.20	UJ		
Endrin ketone	µg/kg	4.20	UJ		
Fluorene	µg/kg	270.00	UJ		
Heptachlor	µg/kg	2.10	UJ		
Heptachlor epoxide	µg/kg	2.10	UJ		
Indeno(1,2,3-cd)pyrene	µg/kg	60.00	UJ		
Lindane	µg/kg	2.10	UJ		
Methoxychlor	µg/kg	22.00	UJ		
Naphthalene	µg/kg	2330.00	UJ		
Phenanthrene	µg/kg	830.00	UJ		
Pyrene	µg/kg	35.00	UJ		

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
PCB-1016	µg/kg	42.00	UJ		
PCB-1221	µg/kg	85.00	UJ		
PCB-1232	µg/kg	42.00	UJ		
PCB-1242	µg/kg	42.00	UJ		
PCB-1248	µg/kg	42.00	UJ		
PCB-1254	µg/kg	42.00	UJ		
PCB-1260	µg/kg	42.00	UJ		
Toxaphene	µg/kg	210.00	UJ		
4,4'-DDD	µg/kg	4.20	UJ		
4,4'-DDE	µg/kg	4.20	UJ		
4,4'-DDT	µg/kg	4.20	UJ		
Location=ORR; Formation=NOLICHUCKY; Site=13; A=1299; A dup=' '; Phase=1					
alpha-BHC	µg/kg	2.10	UJ		
alpha-Chlordane	µg/kg	2.10	U		
beta-BHC	µg/kg	2.10	UJ		
delta-BHC	µg/kg	2.10	UJ		
gamma-Chlordane	µg/kg	2.10	U		
Acenaphthene	µg/kg	224.00	UJN		
Acenaphthylene	µg/kg	286.00	UJ		
Aldrin	µg/kg	2.10	U		
Anthracene	µg/kg	82.00	UJ		
Benzo(a)pyrene	µg/kg	3.00	UJN		
Benzo(b)fluoranthene	µg/kg	2.00	J		
Benzo(ghi)perylene	µg/kg	9.00	UJ		
Benzo(k)fluoranthene	µg/kg	2.00	UJN		
Dibenzo(a,h)anthracene	µg/kg	4.00	UJ		
Dieldrin	µg/kg	4.10	UJ		
Endosulfan sulfate	µg/kg	4.10	U		
Endosulfan I	µg/kg	2.10	U		
Endosulfan II	µg/kg	4.10	U		
Endrin	µg/kg	4.10	U		
Endrin aldehyde	µg/kg	4.10	U		
Endrin ketone	µg/kg	4.10	U		
Fluorene	µg/kg	26.00	UJ		
Heptachlor	µg/kg	2.10	UJ		
Heptachlor epoxide	µg/kg	2.10	U		
Indeno(1,2,3-cd)pyrene	µg/kg	5.00	UJ		
Lindane	µg/kg	2.10	UJ		
Methoxychlor	µg/kg	21.00	U		
Naphthalene	µg/kg	224.00	UJ		
Phenanthrene	µg/kg	80.00	UJ		
Pyrene	µg/kg	34.00	UJN		
PCB-1016	µg/kg	41.00	U		
PCB-1221	µg/kg	82.00	U		
PCB-1232	µg/kg	41.00	U		
PCB-1242	µg/kg	41.00	U		
PCB-1248	µg/kg	41.00	U		
PCB-1254	µg/kg	41.00	U		
PCB-1260	µg/kg	41.00	U		
Toxaphene	µg/kg	210.00	U		
4,4'-DDD	µg/kg	4.10	UJ		
4,4'-DDE	µg/kg	4.10	UJ		
4,4'-DDT	µg/kg	4.10	UJ		
Location=ORR; Formation=NOLICHUCKY; Site=15; A=1300; A dup=' '; Phase=1					
alpha-BHC	µg/kg	2.00	UJ		
alpha-Chlordane	µg/kg	2.00	U		
beta-BHC	µg/kg	2.00	UJ		
delta-BHC	µg/kg	2.00	UJ		
gamma-Chlordane	µg/kg	2.00	U		
Acenaphthene	µg/kg	224.00	UJ		
Acenaphthylene	µg/kg	286.00	UJ		

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
Aldrin	µg/kg	2.00	U		
Anthracene	µg/kg	82.00	UJ		
Benzo(a)pyrene	µg/kg	3.00	UJN		
Benzo(b)fluoranthene	µg/kg	2.00	UJ		
Benzo(ghi)perylene	µg/kg	9.00	UJ		
Benzo(k)fluoranthene	µg/kg	2.00	UJ		
Dibenzo(a,h)anthracene	µg/kg	4.00	UJ		
Dieldrin	µg/kg	4.10	UJ		
Endosulfan sulfate	µg/kg	4.10	U		
Endosulfan I	µg/kg	2.00	U		
Endosulfan II	µg/kg	4.10	U		
Endrin	µg/kg	4.10	U		
Endrin aldehyde	µg/kg	4.10	U		
Endrin ketone	µg/kg	4.10	U		
Fluorene	µg/kg	26.00	UJ		
Heptachlor	µg/kg	2.60	UJ		
Heptachlor epoxide	µg/kg	2.00	U		
Indeno(1,2,3-cd)pyrene	µg/kg	5.00	UJ		
Lindane	µg/kg	2.00	UJ		
Methoxychlor	µg/kg	20.00	U		
Naphthalene	µg/kg	224.00	UJ		
Phenanthrene	µg/kg	80.00	UJ		
Pyrene	µg/kg	34.00	UJN		
PCB-1016	µg/kg	41.00	U		
PCB-1221	µg/kg	82.00	U		
PCB-1232	µg/kg	41.00	U		
PCB-1242	µg/kg	41.00	U		
PCB-1248	µg/kg	41.00	U		
PCB-1254	µg/kg	41.00	U		
PCB-1260	µg/kg	41.00	U		
Toxaphene	µg/kg	200.00	U		
4,4'-DDD	µg/kg	4.10	UJ		
4,4'-DDE	µg/kg	4.10	UJ		
4,4'-DDT	µg/kg	4.10	UJ		
Location=ORR; Formation=NOLICHUCKY; Site=16; A=1301; A dup=' '; Phase=1					
alpha-BHC	µg/kg	2.00	UJ		
alpha-Chlordane	µg/kg	2.00	U		
beta-BHC	µg/kg	2.00	UJ		
delta-BHC	µg/kg	2.00	UJ		
gamma-Chlordane	µg/kg	2.00	U		
Acenaphthene	µg/kg	216.00	UJ		
Acenaphthylene	µg/kg	276.00	UJ		
Aldrin	µg/kg	2.00	U		
Anthracene	µg/kg	79.00	UJ		
Benzo(a)pyrene	µg/kg	1.00	J		
Benzo(b)fluoranthene	µg/kg	1.00	J		
Benzo(ghi)perylene	µg/kg	9.00	UJ		
Benzo(k)fluoranthene	µg/kg	1.00	J		
Dibenzo(a,h)anthracene	µg/kg	4.00	UJ		
Dieldrin	µg/kg	4.00	UJ		
Endosulfan sulfate	µg/kg	4.00	U		
Endosulfan I	µg/kg	2.00	U		
Endosulfan II	µg/kg	4.00	U		
Endrin	µg/kg	4.00	U		
Endrin aldehyde	µg/kg	4.00	U		
Endrin ketone	µg/kg	4.00	U		
Fluorene	µg/kg	25.00	UJ		
Heptachlor	µg/kg	2.00	UJ		
Heptachlor epoxide	µg/kg	2.00	U		
Indeno(1,2,3-cd)pyrene	µg/kg	5.00	UJ		
Lindane	µg/kg	2.00	UJ		
Methoxychlor	µg/kg	21.00	U		
Naphthalene	µg/kg	216.00	UJ		
Phenanthrene	µg/kg	77.00	UJ		
Pyrene	µg/kg	32.00	UJN		

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
PCB-1016	µg/kg	40.00	U		
PCB-1221	µg/kg	80.00	U		
PCB-1232	µg/kg	40.00	U		
PCB-1242	µg/kg	40.00	U		
PCB-1248	µg/kg	40.00	U		
PCB-1254	µg/kg	40.00	U		
PCB-1260	µg/kg	40.00	U		
Toxaphene	µg/kg	200.00	U		
4,4'-DDD	µg/kg	4.00	UJ		
4,4'-DDE	µg/kg	4.00	UJ		
4,4'-DDT	µg/kg	4.00	UJ		
Location=ORR; Formation=NOLICHUCKY; Site=21; A=1296; A dup=' '; Phase=1					
alpha-BHC	µg/kg	2.20	UJ		
alpha-Chlordane	µg/kg	2.20	U		
beta-BHC	µg/kg	2.20	UJ		
delta-BHC	µg/kg	2.20	UJ		
gamma-Chlordane	µg/kg	2.20	U		
Acenaphthene	µg/kg	240.00	UJ		
Acenaphthylene	µg/kg	3070.00	UJ		
Aldrin	µg/kg	2.20	U		
Anthracene	µg/kg	880.00	UJ		
Benzo(a)pyrene	µg/kg	3.00	UJ		
Benzo(b)fluoranthene	µg/kg	2.00	UJ		
Benzo(ghi)perylene	µg/kg	10.00	UJ		
Benzo(k)fluoranthene	µg/kg	2.00	UJ		
Dibenzo(a,h)anthracene	µg/kg	4.00	UJ		
Dieldrin	µg/kg	4.40	UJ		
Endosulfan sulfate	µg/kg	4.40	U		
Endosulfan I	µg/kg	2.20	U		
Endosulfan II	µg/kg	4.40	U		
Endrin	µg/kg	4.40	U		
Endrin aldehyde	µg/kg	4.40	U		
Endrin ketone	µg/kg	4.40	U		
Fluorene	µg/kg	280.00	UJ		
Heptachlor	µg/kg	2.20	UJ		
Heptachlor epoxide	µg/kg	2.20	U		
Indeno(1,2,3-cd)pyrene	µg/kg	60.00	UJ		
Lindane	µg/kg	2.20	UJ		
Methoxychlor	µg/kg	22.00	U		
Naphthalene	µg/kg	2400.00	UJ		
Phenanthrene	µg/kg	850.00	UJN		
Pyrene	µg/kg	36.00	UJN		
PCB-1016	µg/kg	44.00	U		
PCB-1221	µg/kg	88.00	U		
PCB-1232	µg/kg	44.00	U		
PCB-1242	µg/kg	44.00	U		
PCB-1248	µg/kg	44.00	U		
PCB-1254	µg/kg	44.00	U		
PCB-1260	µg/kg	44.00	U		
Toxaphene	µg/kg	220.00	U		
4,4'-DDD	µg/kg	4.40	UJ		
4,4'-DDE	µg/kg	4.40	UJ		
4,4'-DDT	µg/kg	4.40	UJ		
Location=ORR; Formation=NOLICHUCKY; Site=23; A=1295; A dup=' '; Phase=1					
alpha-BHC	µg/kg	2.00	UJ		
alpha-Chlordane	µg/kg	2.00	U		
beta-BHC	µg/kg	2.00	UJ		
delta-BHC	µg/kg	2.00	UJ		
gamma-Chlordane	µg/kg	2.00	U		
Acenaphthene	µg/kg	112.00	J		
Acenaphthylene	µg/kg	2750.00	UJ		

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
Aldrin	µg/kg	2.00	U		
Anthracene	µg/kg	790.00	UJ		
Benzo(a)pyrene	µg/kg	3.00	UJ		
Benzo(b)fluoranthene	µg/kg	2.00	UJ		
Benzo(ghi)perylene	µg/kg	9.00	UJ		
Benzo(k)fluoranthene	µg/kg	2.00	UJ		
Dibenzo(a,h)anthracene	µg/kg	4.00	UJ		
Dieldrin	µg/kg	4.00	UJ		
Endosulfan sulfate	µg/kg	4.00	U		
Endosulfan I	µg/kg	2.00	U		
Endosulfan II	µg/kg	4.00	U		
Endrin	µg/kg	4.00	U		
Endrin aldehyde	µg/kg	4.00	U		
Endrin ketone	µg/kg	4.00	U		
Fluorene	µg/kg	250.00	UJ		
Heptachlor	µg/kg	2.00	UJ		
Heptachlor epoxide	µg/kg	2.00	U		
Indeno(1,2,3-cd)pyrene	µg/kg	50.00	UJ		
Lindane	µg/kg	2.00	UJ		
Methoxychlor	µg/kg	20.00	U		
Naphthalene	µg/kg	2150.00	UJ		
Phenanthrene	µg/kg	760.00	UJ		
Pyrene	µg/kg	32.00	UJN		
PCB-1016	µg/kg	40.00	U		
PCB-1221	µg/kg	79.00	U		
PCB-1232	µg/kg	40.00	U		
PCB-1242	µg/kg	40.00	U		
PCB-1248	µg/kg	40.00	U		
PCB-1254	µg/kg	40.00	U		
PCB-1260	µg/kg	40.00	U		
Toxaphene	µg/kg	200.00	U		
4,4'-DDD	µg/kg	4.00	UJ		
4,4'-DDE	µg/kg	4.00	UJ		
4,4'-DDT	µg/kg	4.00	UJ		
Location=ORR; Formation=NOLICHUCKY; Site=24; A=1294; A dup=' '; Phase=1					
alpha-BHC	µg/kg	2.10	UJ		
alpha-Chlordane	µg/kg	2.10	U		
beta-BHC	µg/kg	2.10	UJ		
delta-BHC	µg/kg	2.10	UJ		
gamma-Chlordane	µg/kg	2.10	U		
Acenaphthene	µg/kg	230.00	UJ		
Acenaphthylene	µg/kg	2940.00	UJ		
Aldrin	µg/kg	2.10	U		
Anthracene	µg/kg	840.00	UJ		
Benzo(a)pyrene	µg/kg	3.00	UJ		
Benzo(b)fluoranthene	µg/kg	2.00	UJ		
Benzo(ghi)perylene	µg/kg	10.00	UJ		
Benzo(k)fluoranthene	µg/kg	2.00	UJ		
Dibenzo(a,h)anthracene	µg/kg	4.00	UJ		
Dieldrin	µg/kg	4.30	UJ		
Endosulfan sulfate	µg/kg	4.30	U		
Endosulfan I	µg/kg	2.10	U		
Endosulfan II	µg/kg	4.30	U		
Endrin	µg/kg	4.30	U		
Endrin aldehyde	µg/kg	4.30	U		
Endrin ketone	µg/kg	4.30	U		
Fluorene	µg/kg	270.00	UJ		
Heptachlor	µg/kg	2.10	UJ		
Heptachlor epoxide	µg/kg	2.10	U		
Indeno(1,2,3-cd)pyrene	µg/kg	60.00	UJ		
Lindane	µg/kg	2.10	UJ		
Methoxychlor	µg/kg	21.00	U		
Naphthalene	µg/kg	2300.00	UJ		
Phenanthrene	µg/kg	820.00	UJN		
Pyrene	µg/kg	10.00	J		

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
PCB-1016	µg/kg	43.00	U		
PCB-1221	µg/kg	85.00	U		
PCB-1232	µg/kg	43.00	U		
PCB-1242	µg/kg	43.00	U		
PCB-1248	µg/kg	43.00	U		
PCB-1254	µg/kg	43.00	U		
PCB-1260	µg/kg	43.00	U		
Toxaphene	µg/kg	210.00	U		
4,4'-DDD	µg/kg	4.30	UJ		
4,4'-DDE	µg/kg	4.30	UJ		
4,4'-DDT	µg/kg	4.30	UJ		
Location=ORR; Formation=NOLICHUCKY; Site=25; A=1293; A dup=' '; Phase=1					
alpha-BHC	µg/kg	2.00	UJ		
alpha-Chlordane	µg/kg	2.00	U		
beta-BHC	µg/kg	2.00	UJ		
delta-BHC	µg/kg	2.00	UJ		
gamma-Chlordane	µg/kg	2.00	U		
Acenaphthene	µg/kg	220.00	UJ		
Acenaphthylene	µg/kg	2810.00	UJN		
Aldrin	µg/kg	2.00	U		
Anthracene	µg/kg	810.00	UJ		
Benzo(a)pyrene	µg/kg	3.00	UJN		
Benzo(b)fluoranthene	µg/kg	2.00	UJ		
Benzo(ghi)perylene	µg/kg	9.00	UJN		
Benzo(k)fluoranthene	µg/kg	2.00	UJN		
Dibenzo(a,h)anthracene	µg/kg	4.00	UJ		
Dieldrin	µg/kg	4.00	UJ		
Endosulfan sulfate	µg/kg	4.00	U		
Endosulfan I	µg/kg	2.00	U		
Endosulfan II	µg/kg	4.00	U		
Endrin	µg/kg	4.00	U		
Endrin aldehyde	µg/kg	4.00	U		
Endrin ketone	µg/kg	4.00	U		
Fluorene	µg/kg	260.00	UJ		
Heptachlor	µg/kg	2.60	UJ		
Heptachlor epoxide	µg/kg	2.00	U		
Indeno(1,2,3-cd)pyrene	µg/kg	50.00	UJ		
Lindane	µg/kg	2.00	UJ		
Methoxychlor	µg/kg	20.00	U		
Naphthalene	µg/kg	2200.00	UJ		
Phenanthrene	µg/kg	780.00	UJ		
Pyrene	µg/kg	33.00	UJN		
PCB-1016	µg/kg	40.00	U		
PCB-1221	µg/kg	80.00	U		
PCB-1232	µg/kg	40.00	U		
PCB-1242	µg/kg	40.00	U		
PCB-1248	µg/kg	40.00	U		
PCB-1254	µg/kg	40.00	U		
PCB-1260	µg/kg	40.00	U		
Toxaphene	µg/kg	200.00	U		
4,4'-DDD	µg/kg	4.00	UJ		
4,4'-DDE	µg/kg	4.00	UJ		
4,4'-DDT	µg/kg	4.00	UJ		
Location=ORR; Formation=NOLICHUCKY; Site=28; A=1292; A dup=' '; Phase=1					
alpha-BHC	µg/kg	1.90	UJ		
alpha-Chlordane	µg/kg	1.90	U		
beta-BHC	µg/kg	1.90	UJ		
delta-BHC	µg/kg	1.90	UJ		
gamma-Chlordane	µg/kg	1.90	U		
Acenaphthene	µg/kg	207.00	UJ		
Acenaphthylene	µg/kg	2650.00	UJN		

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
Aldrin	µg/kg	1.90	U		
Anthracene	µg/kg	760.00	UJ		
Benzo(a)pyrene	µg/kg	3.00	UJ		
Benzo(b)fluoranthene	µg/kg	2.00	UJ		
Benzo(ghi)perylene	µg/kg	9.00	UJ		
Benzo(k)fluoranthene	µg/kg	2.00	UJ		
Dibenzo(a,h)anthracene	µg/kg	3.00	UJ		
Dieldrin	µg/kg	3.80	UJ		
Endosulfan sulfate	µg/kg	3.80	U		
Endosulfan I	µg/kg	1.90	U		
Endosulfan II	µg/kg	3.80	U		
Endrin	µg/kg	3.80	U		
Endrin aldehyde	µg/kg	3.80	U		
Endrin ketone	µg/kg	3.80	U		
Fluorene	µg/kg	240.00	UJ		
Heptachlor	µg/kg	1.90	UJ		
Heptachlor epoxide	µg/kg	1.90	U		
Indeno(1,2,3-cd)pyrene	µg/kg	50.00	UJ		
Lindane	µg/kg	1.90	UJ		
Methoxychlor	µg/kg	19.00	U		
Naphthalene	µg/kg	2070.00	UJ		
Phenanthrene	µg/kg	740.00	UJ		
Pyrene	µg/kg	31.00	UJN		
PCB-1016	µg/kg	38.00	U		
PCB-1221	µg/kg	76.00	U		
PCB-1232	µg/kg	38.00	U		
PCB-1242	µg/kg	38.00	U		
PCB-1248	µg/kg	38.00	U		
PCB-1254	µg/kg	38.00	U		
PCB-1260	µg/kg	38.00	U		
Toxaphene	µg/kg	190.00	U		
4,4'-DDD	µg/kg	3.80	UJ		
4,4'-DDE	µg/kg	3.80	UJ		
4,4'-DDT	µg/kg	3.80	UJ		
Location=ORR; Formation=NOLICHUCKY; Site=3; A=1297; A dup=' '; Phase=1					
alpha-BHC	µg/kg	2.00	UJ		
alpha-Chlordane	µg/kg	2.00	U		
beta-BHC	µg/kg	2.00	UJ		
delta-BHC	µg/kg	2.00	UJ		
gamma-Chlordane	µg/kg	2.00	U		
Acenaphthene	µg/kg	220.00	UJ		
Acenaphthylene	µg/kg	2810.00	UJ		
Aldrin	µg/kg	2.00	U		
Anthracene	µg/kg	810.00	UJ		
Benzo(a)pyrene	µg/kg	3.00	UJN		
Benzo(b)fluoranthene	µg/kg	2.00	UJ		
Benzo(ghi)perylene	µg/kg	9.00	UJ		
Benzo(k)fluoranthene	µg/kg	2.00	UJN		
Dibenzo(a,h)anthracene	µg/kg	4.00	UJ		
Dieldrin	µg/kg	4.00	UJ		
Endosulfan sulfate	µg/kg	4.00	U		
Endosulfan I	µg/kg	2.00	U		
Endosulfan II	µg/kg	4.00	U		
Endrin	µg/kg	4.00	U		
Endrin aldehyde	µg/kg	4.00	U		
Endrin ketone	µg/kg	4.00	U		
Fluorene	µg/kg	260.00	UJ		
Heptachlor	µg/kg	2.00	UJ		
Heptachlor epoxide	µg/kg	2.00	U		
Indeno(1,2,3-cd)pyrene	µg/kg	50.00	UJ		
Lindane	µg/kg	2.00	UJ		
Methoxychlor	µg/kg	20.00	U		
Naphthalene	µg/kg	2200.00	UJ		
Phenanthrene	µg/kg	780.00	UJ		
Pyrene	µg/kg	33.00	UJN		

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
PCB-1016	µg/kg	40.00	U		
PCB-1221	µg/kg	81.00	U		
PCB-1232	µg/kg	40.00	U		
PCB-1242	µg/kg	40.00	U		
PCB-1248	µg/kg	40.00	U		
PCB-1254	µg/kg	40.00	U		
PCB-1260	µg/kg	40.00	U		
Toxaphene	µg/kg	200.00	U		
4,4'-DDD	µg/kg	4.00	UJ		
4,4'-DDE	µg/kg	4.00	UJ		
4,4'-DDT	µg/kg	4.00	UJ		
Location=ORR; Formation=NOLICHUCKY; Site=31; A=1303; A dup=' '; Phase=1					
alpha-BHC	µg/kg	2.00	UJ		
alpha-Chlordane	µg/kg	2.00	U		
beta-BHC	µg/kg	2.00	UJ		
delta-BHC	µg/kg	2.00	UJ		
gamma-Chlordane	µg/kg	2.00	U		
Acenaphthene	µg/kg	221.00	UJ		
Acenaphthylene	µg/kg	283.00	UJ		
Aldrin	µg/kg	2.00	U		
Anthracene	µg/kg	81.00	UJ		
Benzo(a)anthracene	µg/kg	2.00	UJ		
Benzo(a)pyrene	µg/kg	3.00	UJ		
Benzo(b)fluoranthene	µg/kg	1.00	J		
Benzo(ghi)perylene	µg/kg	9.00	UJ		
Benzo(k)fluoranthene	µg/kg	2.00	UJ		
Chrysene	µg/kg	18.00	UJ		
Dibenzo(a,h)anthracene	µg/kg	4.00	UJ		
Dieldrin	µg/kg	4.10	UJ		
Endosulfan sulfate	µg/kg	4.10	U		
Endosulfan I	µg/kg	2.00	U		
Endosulfan II	µg/kg	4.10	U		
Endrin	µg/kg	4.10	U		
Endrin aldehyde	µg/kg	4.10	U		
Endrin ketone	µg/kg	4.10	U		
Fluorene	µg/kg	26.00	UJN		
Heptachlor	µg/kg	2.00	UJ		
Heptachlor epoxide	µg/kg	2.00	U		
Indeno(1,2,3-cd)pyrene	µg/kg	5.00	UJ		
Lindane	µg/kg	2.00	UJ		
Methoxychlor	µg/kg	20.00	U		
Naphthalene	µg/kg	221.00	UJ		
Phenanthrene	µg/kg	79.00	UJ		
Pyrene	µg/kg	33.00	UJ		
PCB-1016	µg/kg	41.00	U		
PCB-1221	µg/kg	81.00	U		
PCB-1232	µg/kg	41.00	U		
PCB-1242	µg/kg	41.00	U		
PCB-1248	µg/kg	41.00	U		
PCB-1254	µg/kg	41.00	U		
PCB-1260	µg/kg	41.00	U		
Toxaphene	µg/kg	200.00	U		
4,4'-DDD	µg/kg	4.10	UJ		
4,4'-DDE	µg/kg	4.10	UJ		
4,4'-DDT	µg/kg	4.10	UJ		
Location=ORR; Formation=NOLICHUCKY; Site=42; A=1302; A dup=' '; Phase=1					
alpha-BHC	µg/kg	2.00	UJ		
alpha-Chlordane	µg/kg	2.00	U		
beta-BHC	µg/kg	2.00	UJ		
delta-BHC	µg/kg	2.00	UJ		
gamma-Chlordane	µg/kg	2.00	U		

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
Acenaphthene	µg/kg	218.00	UJ		
Acenaphthylene	µg/kg	2780.00	UJ		
Aldrin	µg/kg	2.00	U		
Anthracene	µg/kg	800.00	UJ		
Benzo(a)anthracene	µg/kg	2.00	UJ		
Benzo(a)pyrene	µg/kg	3.00	UJ		
Benzo(b)fluoranthene	µg/kg	1.00	J		
Benzo(ghi)perylene	µg/kg	9.00	UJN		
Benzo(k)fluoranthene	µg/kg	2.00	UJN		
Chrysene	µg/kg	18.00	UJ		
Dibenzo(a,h)anthracene	µg/kg	4.00	UJ		
Dieldrin	µg/kg	3.90	UJ		
Endosulfan sulfate	µg/kg	3.90	U		
Endosulfan I	µg/kg	2.00	U		
Endosulfan II	µg/kg	3.90	U		
Endrin	µg/kg	3.90	U		
Endrin aldehyde	µg/kg	3.90	U		
Endrin ketone	µg/kg	3.90	U		
Fluorene	µg/kg	250.00	UJ		
Heptachlor	µg/kg	2.00	UJ		
Heptachlor epoxide	µg/kg	2.00	U		
Indeno(1,2,3-cd)pyrene	µg/kg	50.00	UJ		
Lindane	µg/kg	2.00	UJ		
Methoxychlor	µg/kg	20.00	U		
Naphthalene	µg/kg	2180.00	UJ		
Phenanthrene	µg/kg	770.00	UJN		
Pyrene	µg/kg	11.00	J		
PCB-1016	µg/kg	39.00	U		
PCB-1221	µg/kg	78.00	U		
PCB-1232	µg/kg	39.00	U		
PCB-1242	µg/kg	39.00	U		
PCB-1248	µg/kg	39.00	U		
PCB-1254	µg/kg	39.00	U		
PCB-1260	µg/kg	39.00	U		
Toxaphene	µg/kg	200.00	U		
4,4'-DDD	µg/kg	3.90	UJ		
4,4'-DDE	µg/kg	3.90	UJ		
4,4'-DDT	µg/kg	3.90	UJ		
Location=ORR; Formation=NOLICHUCKY; Site=5; A=1298; A dup=' '; Phase=1					
alpha-BHC	µg/kg	1.90	UJ		
alpha-Chlordane	µg/kg	1.90	U		
beta-BHC	µg/kg	1.90	UJ		
delta-BHC	µg/kg	1.90	UJ		
gamma-Chlordane	µg/kg	1.90	U		
Acenaphthene	µg/kg	202.00	UJ		
Acenaphthylene	µg/kg	2580.00	UJ		
Aldrin	µg/kg	1.90	U		
Anthracene	µg/kg	740.00	UJ		
Benzo(a)pyrene	µg/kg	3.00	UJ		
Benzo(b)fluoranthene	µg/kg	2.00	UJ		
Benzo(ghi)perylene	µg/kg	9.00	UJ		
Benzo(k)fluoranthene	µg/kg	2.00	UJ		
Dibenzo(a,h)anthracene	µg/kg	3.00	UJ		
Dieldrin	µg/kg	3.70	UJ		
Endosulfan sulfate	µg/kg	3.70	U		
Endosulfan I	µg/kg	1.90	U		
Endosulfan II	µg/kg	3.70	U		
Endrin	µg/kg	3.70	U		
Endrin aldehyde	µg/kg	3.70	U		
Endrin ketone	µg/kg	3.70	U		
Fluorene	µg/kg	240.00	UJ		
Heptachlor	µg/kg	1.90	UJ		
Heptachlor epoxide	µg/kg	1.90	U		
Indeno(1,2,3-cd)pyrene	µg/kg	50.00	UJ		
Lindane	µg/kg	1.90	UJ		

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
Methoxychlor	µg/kg	19.00	U		
Naphthalene	µg/kg	2020.00	UJ		
Phenanthrene	µg/kg	720.00	UJ		
Pyrene	µg/kg	30.00	UJN		
PCB-1016	µg/kg	37.00	U		
PCB-1221	µg/kg	75.00	U		
PCB-1232	µg/kg	37.00	U		
PCB-1242	µg/kg	37.00	U		
PCB-1248	µg/kg	37.00	U		
PCB-1254	µg/kg	37.00	U		
PCB-1260	µg/kg	37.00	U		
Toxaphene	µg/kg	190.00	U		
4,4'-DDD	µg/kg	3.70	UJ		
4,4'-DDE	µg/kg	3.70	UJ		
4,4'-DDT	µg/kg	3.70	UJ		
Location=ROA; Formation=COPPER RIDGE; Site=33; A=3203; A dup=' '; Phase=2					
alpha-BHC	µg/kg	2.70	U		
alpha-Chlordane	µg/kg	2.70	U		
beta-BHC	µg/kg	2.70	U		
delta-BHC	µg/kg	2.70	U		
gamma-Chlordane	µg/kg	2.70	U		
Aldrin	µg/kg	2.70	U		
Benzo(a)anthracene	µg/kg	2.10	J		
Benzo(a)pyrene	µg/kg	1.10	J		
Benzo(b)fluoranthene	µg/kg	1.60	J		
Benzo(k)fluoranthene	µg/kg	1.60	J		
Chrysene	µg/kg	2.70	J		
Dalapon	µg/kg	5527.20	UJ		
Dibenzo(a,h)anthracene	µg/kg	2.70	J		
Dicamba	µg/kg	254.10	U		
Dichlorprop	µg/kg	635.30	U		
Dieldrin	µg/kg	5.20	U		
Dinoseb	µg/kg	133.40	UJ		
Endosulfan sulfate	µg/kg	5.20	U		
Endosulfan I	µg/kg	2.70	U		
Endosulfan II	µg/kg	5.20	U		
Endrin	µg/kg	5.20	U		
Endrin aldehyde	µg/kg	5.20	U		
Endrin ketone	µg/kg	5.20	U		
Fluoranthene	µg/kg	5.90	J		
Fluorene	µg/kg	1.10	J		
Heptachlor	µg/kg	2.70	U		
Heptachlor epoxide	µg/kg	2.70	U		
Lindane	µg/kg	2.70	U		
Methoxychlor	µg/kg	26.80	U		
MCPA	µg/kg	238239.50	U		
MCPP	µg/kg	181062.10	U		
Phenanthrene	µg/kg	4.30	J		
Pyrene	µg/kg	1.60	J		
PCB-1016	µg/kg	52.10	U		
PCB-1221	µg/kg	105.70	U		
PCB-1232	µg/kg	52.10	U		
PCB-1242	µg/kg	52.10	U		
PCB-1248	µg/kg	52.10	U		
PCB-1254	µg/kg	52.10	U		
PCB-1260	µg/kg	52.10	U		
Silvex	µg/kg	158.80	UJ		
Toxaphene	µg/kg	268.30	U		
2,4-D	µg/kg	1143.50	UJ		
2,4-DB	µg/kg	857.70	UJ		
2,4,5-T	µg/kg	190.60	U		
4,4'-DDD	µg/kg	5.20	UJ		
4,4'-DDE	µg/kg	5.20	UJ		
4,4'-DDT	µg/kg	11.50	J		

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
Location=ROA; Formation=COPPER RIDGE; Site=34; A=3206; A dup=' '; Phase=2					
alpha-BHC	µg/kg	2.40	U		
alpha-Chlordane	µg/kg	2.40	U		
beta-BHC	µg/kg	2.40	U		
delta-BHC	µg/kg	2.40	U		
gamma-Chlordane	µg/kg	2.40	U		
Acenaphthene	µg/kg	4.70	U		
Acenaphthylene	µg/kg	236.70	U		
Aldrin	µg/kg	2.40	U		
Anthracene	µg/kg	1.90	J		
Benzo(a)anthracene	µg/kg	6.20	J		
Benzo(a)pyrene	µg/kg	3.30	J		
Benzo(b)fluoranthene	µg/kg	2.40	J		
Benzo(ghi)perylene	µg/kg	3.30	J		
Benzo(k)fluoranthene	µg/kg	1.90	J		
Chrysene	µg/kg	4.70	U		
Dalapon	µg/kg	5527.20	UJ		
Dibenzo(a,h)anthracene	µg/kg	1.90	J		
Dicamba	µg/kg	254.10	U		
Dichlorprop	µg/kg	635.30	U		
Dieldrin	µg/kg	4.60	U		
Dinoseb	µg/kg	133.40	UJ		
Endosulfan sulfate	µg/kg	4.60	U		
Endosulfan I	µg/kg	2.40	U		
Endosulfan II	µg/kg	4.60	U		
Endrin	µg/kg	4.60	U		
Endrin aldehyde	µg/kg	4.60	U		
Endrin ketone	µg/kg	4.60	U		
Fluoranthene	µg/kg	6.20			
Fluorene	µg/kg	0.50	J		
Heptachlor	µg/kg	2.40	U		
Heptachlor epoxide	µg/kg	2.40	U		
Indeno(1,2,3-cd)pyrene	µg/kg	42.60			
Lindane	µg/kg	2.40	U		
Methoxychlor	µg/kg	24.00	U		
MCPA	µg/kg	238239.50	U		
MCPP	µg/kg	181062.10	U		
Naphthalene	µg/kg	23.70	U		
Phenanthrene	µg/kg	10.90			
Pyrene	µg/kg	6.20	J		
PCB-1016	µg/kg	46.50	U		
PCB-1221	µg/kg	94.40	U		
PCB-1232	µg/kg	46.50	U		
PCB-1242	µg/kg	46.50	U		
PCB-1248	µg/kg	46.50	U		
PCB-1254	µg/kg	46.50	U		
PCB-1260	µg/kg	46.50	U		
Silvex	µg/kg	158.80	UJ		
Toxaphene	µg/kg	239.50	U		
2,4-D	µg/kg	1143.50	UJ		
2,4-DB	µg/kg	857.70	UJ		
2,4,5-T	µg/kg	190.60	U		
4,4'-DDD	µg/kg	4.60	UJ		
4,4'-DDE	µg/kg	4.60	UJ		
4,4'-DDT	µg/kg	4.60	UJ		
Location=ROA; Formation=COPPER RIDGE; Site=35; A=3209; A dup=' '; Phase=2					
alpha-BHC	µg/kg	2.20	U		
alpha-Chlordane	µg/kg	2.20	U		
beta-BHC	µg/kg	2.20	U		
delta-BHC	µg/kg	2.20	U		
gamma-Chlordane	µg/kg	2.20	U		
Acenaphthene	µg/kg	4.30	UJ		
Acenaphthylene	µg/kg	154.10	J		

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
Aldrin	µg/kg	2.20	U		
Anthracene	µg/kg	4.30	UJ		
Benzo(a)anthracene	µg/kg	4.70	J		
Benzo(a)pyrene	µg/kg	0.90	J		
Benzo(b)fluoranthene	µg/kg	4.30	UJ		
Benzo(ghi)perylene	µg/kg	2.10	J		
Benzo(k)fluoranthene	µg/kg	0.90	J		
Chrysene	µg/kg	4.30	UJ		
Dalapon	µg/kg	4536.30	UJ		
Dibenzo(a,h)anthracene	µg/kg	4.30	UJ		
Dicamba	µg/kg	208.60	U		
Dichlorprop	µg/kg	521.40	U		
Dieldrin	µg/kg	4.20	U		
Dinoseb	µg/kg	109.50	UJ		
Endosulfan sulfate	µg/kg	4.20	U		
Endosulfan I	µg/kg	2.20	U		
Endosulfan II	µg/kg	4.20	U		
Endrin	µg/kg	4.20	U		
Endrin aldehyde	µg/kg	4.20	U		
Endrin ketone	µg/kg	4.20	U		
Fluoranthene	µg/kg	3.00	J		
Fluorene	µg/kg	4.30	UJ		
Heptachlor	µg/kg	2.20	U		
Heptachlor epoxide	µg/kg	2.20	U		
Indeno(1,2,3-cd)pyrene	µg/kg	17.90	UJ		
Lindane	µg/kg	2.20	U		
Methoxychlor	µg/kg	21.90	U		
MCPA	µg/kg	195530.40	U		
MCPP	µg/kg	148603.10	U		
Naphthalene	µg/kg	21.30	UJ		
Phenanthrene	µg/kg	1.70	J		
Pyrene	µg/kg	2.60	J		
PCB-1016	µg/kg	42.40	U		
PCB-1221	µg/kg	86.20	U		
PCB-1232	µg/kg	42.40	U		
PCB-1242	µg/kg	42.40	U		
PCB-1248	µg/kg	42.40	U		
PCB-1254	µg/kg	42.40	U		
PCB-1260	µg/kg	42.40	U		
Silvex	µg/kg	130.40	UJ		
Toxaphene	µg/kg	218.60	U		
2,4-D	µg/kg	938.50	UJ		
2,4-DB	µg/kg	703.90	UJ		
2,4,5-T	µg/kg	156.40	U		
4,4'-DDD	µg/kg	4.20	UJ		
4,4'-DDE	µg/kg	4.20	UJ		
4,4'-DDT	µg/kg	4.20	UJ		

Location=ROA; Formation=COPPER RIDGE; Site=39; A=3214; A dup=' '; Phase=2

alpha-BHC	µg/kg	2.00	U		
alpha-Chlordane	µg/kg	2.00	U		
beta-BHC	µg/kg	2.00	U		
delta-BHC	µg/kg	2.00	U		
gamma-Chlordane	µg/kg	2.00	U		
Acenaphthene	µg/kg	4.10	UJ		
Acenaphthylene	µg/kg	203.80	UJ		
Aldrin	µg/kg	2.00	U		
Anthracene	µg/kg	4.10	UJ		
Benzo(a)anthracene	µg/kg	1.60	J		
Benzo(a)pyrene	µg/kg	0.80	J		
Benzo(b)fluoranthene	µg/kg	4.10	UJ		
Benzo(ghi)perylene	µg/kg	1.20	J		
Benzo(k)fluoranthene	µg/kg	0.80	J		
Chrysene	µg/kg	4.10	UJ		
Dalapon	µg/kg	4270.10	UJ		
Dibenzo(a,h)anthracene	µg/kg	4.10	UJ		

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
Dicamba	µg/kg	196.30	U		
Dichlorprop	µg/kg	490.80	U		
Dieldrin	µg/kg	3.90	U		
Dinoseb	µg/kg	103.10	UJ		
Endosulfan sulfate	µg/kg	3.90	U		
Endosulfan I	µg/kg	2.00	U		
Endosulfan II	µg/kg	3.90	U		
Endrin	µg/kg	3.90	U		
Endrin aldehyde	µg/kg	3.90	U		
Endrin ketone	µg/kg	3.90	U		
Fluoranthene	µg/kg	5.30	J		
Fluorene	µg/kg	4.10	UJ		
Heptachlor	µg/kg	2.00	U		
Heptachlor epoxide	µg/kg	2.00	U		
Indeno(1,2,3-cd)pyrene	µg/kg	20.40	UJ		
Lindane	µg/kg	2.00	U		
Methoxychlor	µg/kg	20.30	U		
MCPA	µg/kg	184054.30	U		
MCPP	µg/kg	139881.30	U		
Naphthalene	µg/kg	20.40	UJ		
Phenanthrene	µg/kg	2.40	J		
Pyrene	µg/kg	0.80	J		
PCB-1016	µg/kg	39.30	U		
PCB-1221	µg/kg	79.90	U		
PCB-1232	µg/kg	39.30	U		
PCB-1242	µg/kg	39.30	U		
PCB-1248	µg/kg	39.30	U		
PCB-1254	µg/kg	39.30	U		
PCB-1260	µg/kg	39.30	U		
Silvex	µg/kg	122.70	UJ		
Toxaphene	µg/kg	202.60	U		
2,4-D	µg/kg	883.50	UJ		
2,4-DB	µg/kg	662.60	UJ		
2,4,5-T	µg/kg	147.20	U		
4,4'-DDD	µg/kg	3.90	U		
4,4'-DDE	µg/kg	3.90	U		
4,4'-DDT	µg/kg	3.90	UJ		
Location=ROA; Formation=COPPER RIDGE; Site=40; A=3211; A dup=' '; Phase=2					
alpha-BHC	µg/kg	1.90	U		
alpha-Chlordane	µg/kg	1.90	U		
beta-BHC	µg/kg	1.90	U		
delta-BHC	µg/kg	1.90	U		
gamma-Chlordane	µg/kg	1.90	U		
Acenaphthene	µg/kg	3.90	UJ		
Aldrin	µg/kg	1.90	U		
Anthracene	µg/kg	3.90	UJ		
Benzo(a)anthracene	µg/kg	6.60	J		
Benzo(a)pyrene	µg/kg	1.60	J		
Benzo(b)fluoranthene	µg/kg	1.20	J		
Benzo(ghi)perylene	µg/kg	2.30	J		
Benzo(k)fluoranthene	µg/kg	0.80	J		
Chrysene	µg/kg	3.90	UJ		
Dalapon	µg/kg	3992.70	UJ		
Dibenzo(a,h)anthracene	µg/kg	0.80	J		
Dicamba	µg/kg	183.60	U		
Dichlorprop	µg/kg	458.90	U		
Dieldrin	µg/kg	3.70	U		
Dinoseb	µg/kg	96.40	UJ		
Endosulfan sulfate	µg/kg	3.70	U		
Endosulfan I	µg/kg	1.90	U		
Endosulfan II	µg/kg	3.70	U		
Endrin	µg/kg	3.70	U		
Endrin aldehyde	µg/kg	3.70	U		
Endrin ketone	µg/kg	3.70	U		
Fluoranthene	µg/kg	4.30	J		

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
Fluorene	µg/kg	3.90	UJ		
Heptachlor	µg/kg	1.90	U		
Heptachlor epoxide	µg/kg	1.90	U		
Indeno(1,2,3-cd)pyrene	µg/kg	15.50	UJ		
Lindane	µg/kg	1.90	U		
Methoxychlor	µg/kg	19.30	U		
MCPA	µg/kg	172098.80	P		
MCPP	µg/kg	130795.10	U		
Naphthalene	µg/kg	19.40	UJ		
Phenanthrene	µg/kg	3.10	J		
Pyrene	µg/kg	3.90	J		
PCB-1016	µg/kg	37.50	U		
PCB-1221	µg/kg	76.10	U		
PCB-1232	µg/kg	37.50	U		
PCB-1242	µg/kg	37.50	U		
PCB-1248	µg/kg	37.50	U		
PCB-1254	µg/kg	37.50	U		
PCB-1260	µg/kg	37.50	U		
Silvex	µg/kg	114.70	UJ		
Toxaphene	µg/kg	193.10	U		
2,4-D	µg/kg	826.10	UJ		
2,4-DB	µg/kg	619.60	UJ		
2,4,5-T	µg/kg	137.70	U		
4,4'-DDD	µg/kg	3.70	U		
4,4'-DDE	µg/kg	3.70	U		
4,4'-DDT	µg/kg	3.70	UJ		
Location=ROA; Formation=COPPER RIDGE; Site=41; A=3217; A dup=' '; Phase=2					
alpha-BHC	µg/kg	2.10	U		
alpha-Chlordane	µg/kg	2.10	U		
beta-BHC	µg/kg	2.10	U		
delta-BHC	µg/kg	2.10	U		
gamma-Chlordane	µg/kg	2.10	U		
Acenaphthene	µg/kg	4.20	UJ		
Acenaphthylene	µg/kg	207.60	UJ		
Aldrin	µg/kg	2.10	U		
Anthracene	µg/kg	1.70	J		
Benzo(a)anthracene	µg/kg	1.70	J		
Benzo(a)pyrene	µg/kg	1.70	J		
Benzo(b)fluoranthene	µg/kg	2.10	J		
Benzo(ghi)perylene	µg/kg	1.20	J		
Benzo(k)fluoranthene	µg/kg	1.70	J		
Chrysene	µg/kg	2.50	J		
Dalapon	µg/kg	4253.40	UJ		
Dibenzo(a,h)anthracene	µg/kg	0.80	J		
Dicamba	µg/kg	195.60	U		
Dichlorprop	µg/kg	488.90	U		
Dieldrin	µg/kg	4.10	U		
Dinoseb	µg/kg	102.70	UJ		
Endosulfan sulfate	µg/kg	4.10	U		
Endosulfan I	µg/kg	2.10	U		
Endosulfan II	µg/kg	4.10	U		
Endrin	µg/kg	4.10	U		
Endrin aldehyde	µg/kg	4.10	U		
Endrin ketone	µg/kg	4.10	U		
Fluoranthene	µg/kg	5.80	J		
Fluorene	µg/kg	4.20	UJ		
Heptachlor	µg/kg	2.10	U		
Heptachlor epoxide	µg/kg	2.10	U		
Indeno(1,2,3-cd)pyrene	µg/kg	45.20	UJ		
Lindane	µg/kg	2.10	U		
Methoxychlor	µg/kg	21.30	U		
MCPA	µg/kg	183337.10	U		
MCPP	µg/kg	139336.20	U		
Naphthalene	µg/kg	20.80	UJ		
Phenanthrene	µg/kg	5.40	J		

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
Pyrene	µg/kg	1.70	J		
PCB-1016	µg/kg	41.40	U		
PCB-1221	µg/kg	84.00	U		
PCB-1232	µg/kg	41.40	U		
PCB-1242	µg/kg	41.40	U		
PCB-1248	µg/kg	41.40	U		
PCB-1254	µg/kg	41.40	U		
PCB-1260	µg/kg	41.40	U		
Silvex	µg/kg	122.20	UJ		
Toxaphene	µg/kg	213.10	U		
2,4-D	µg/kg	880.00	UJ		
2,4-DB	µg/kg	660.00	UJ		
2,4,5-T	µg/kg	146.70	U		
4,4'-DDD	µg/kg	4.10	U		
4,4'-DDE	µg/kg	4.10	U		
4,4'-DDT	µg/kg	4.10	UJ		
Location=ROA; Formation=COPPER RIDGE; Site=42; A=3235; A dup=' '; Phase=2					
alpha-BHC	µg/kg	2.00	U		
alpha-Chlordane	µg/kg	2.00	U		
beta-BHC	µg/kg	2.00	U		
delta-BHC	µg/kg	2.00	U		
gamma-Chlordane	µg/kg	2.00	U		
Acenaphthene	µg/kg	4.00	U		
Acenaphthylene	µg/kg	197.70	U		
Aldrin	µg/kg	2.00	U		
Anthracene	µg/kg	6.70			
Benzo(a)anthracene	µg/kg	3.20	J		
Benzo(a)pyrene	µg/kg	1.20	J		
Benzo(b)fluoranthene	µg/kg	4.00	U		
Benzo(ghi)perylene	µg/kg	1.60	J		
Benzo(k)fluoranthene	µg/kg	0.80	J		
Chrysene	µg/kg	4.00	U		
Dalapon	µg/kg	4128.20	UJ		
Dibenzo(a,h)anthracene	µg/kg	0.80	J		
Dicamba	µg/kg	189.80	U		
Dichlorprop	µg/kg	474.50	U		
Dieldrin	µg/kg	4.00	U		
Dinoseb	µg/kg	99.60	UJ		
Endosulfan sulfate	µg/kg	4.00	U		
Endosulfan I	µg/kg	2.00	U		
Endosulfan II	µg/kg	4.00	U		
Endrin	µg/kg	4.00	U		
Endrin aldehyde	µg/kg	4.00	U		
Endrin ketone	µg/kg	4.00	U		
Fluoranthene	µg/kg	2.80	J		
Fluorene	µg/kg	4.00	U		
Heptachlor	µg/kg	2.00	U		
Heptachlor epoxide	µg/kg	2.00	U		
Indeno(1,2,3-cd)pyrene	µg/kg	19.80	UJ		
Lindane	µg/kg	2.00	U		
Methoxychlor	µg/kg	20.40	U		
MCPA	µg/kg	177939.70	UJ		
MCPP	µg/kg	135234.10	UJ		
Naphthalene	µg/kg	19.80	U		
Phenanthrene	µg/kg	3.60	J		
Pyrene	µg/kg	2.00	J		
PCB-1016	µg/kg	39.60	U		
PCB-1221	µg/kg	80.50	U		
PCB-1232	µg/kg	39.60	U		
PCB-1242	µg/kg	39.60	U		
PCB-1248	µg/kg	39.60	U		
PCB-1254	µg/kg	39.60	U		
PCB-1260	µg/kg	39.60	U		
Silvex	µg/kg	118.60	UJ		
Toxaphene	µg/kg	204.20	U		

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
2,4-D	µg/kg	854.10	UJ		
2,4-DB	µg/kg	640.60	UJ		
2,4,5-T	µg/kg	142.40	U		
4,4'-DDD	µg/kg	4.00	U		
4,4'-DDE	µg/kg	4.00	U		
4,4'-DDT	µg/kg	4.00	UJ		
Location=ROA; Formation=COPPER RIDGE; Site=43; A=3231; A dup=3233; Phase=2					
alpha-BHC	µg/kg	2.20	U	2.0	U
alpha-Chlordane	µg/kg	2.20	U	2.0	U
beta-BHC	µg/kg	2.20	U	2.0	U
delta-BHC	µg/kg	2.20	U	2.0	U
gamma-Chlordane	µg/kg	2.20	U	2.0	U
Acenaphthylene	µg/kg	214.20	U	202.1	U
Aldrin	µg/kg	2.20	U	2.0	U
Anthracene	µg/kg	0.90	J	2.0	J
Benzo(a)anthracene	µg/kg	12.40	J	2.0	J
Benzo(a)pyrene	µg/kg	1.30	J	1.2	J
Benzo(b)fluoranthene	µg/kg	14.10	J	0.4	J
Benzo(ghi)perylene	µg/kg	2.10	J	1.6	J
Benzo(k)fluoranthene	µg/kg	0.40	J	0.8	J
Chrysene	µg/kg			2.4	J
Dalapon	µg/kg	4470.90	UJ	4302.1	UJ
Dibenzo(a,h)anthracene	µg/kg	8.60	J	0.8	J
Dicamba	µg/kg	205.60	U	197.8	U
Dichlorprop	µg/kg	513.90	U	494.5	U
Dieldrin	µg/kg	4.20	U	3.9	U
Dinoseb	µg/kg	107.90	UJ	103.8	UJ
Endosulfan sulfate	µg/kg	4.20	U	3.9	U
Endosulfan I	µg/kg	2.20	U	2.0	U
Endosulfan II	µg/kg	4.20	U	3.9	U
Endrin	µg/kg	4.20	U	3.9	U
Endrin aldehyde	µg/kg	4.20	U	3.9	U
Endrin ketone	µg/kg	4.20	U	3.9	U
Fluoranthene	µg/kg	10.70	J	4.9	J
Fluorene	µg/kg	1.70	J		
Heptachlor	µg/kg	2.20	U	2.0	U
Heptachlor epoxide	µg/kg	2.20	U	2.0	U
Indeno(1,2,3-cd)pyrene	µg/kg	12.80	U	22.6	
Lindane	µg/kg	2.20	U	2.0	U
Methoxychlor	µg/kg	21.50	U	20.3	U
MCPA	µg/kg	192712.10	UJ	185436.6	UJ
MCPP	µg/kg	146461.20	UJ	140931.9	UJ
Phenanthrene	µg/kg	11.60	J	5.3	J
Pyrene	µg/kg	5.60	J	6.5	J
PCB-1016	µg/kg	41.80	U	39.5	U
PCB-1221	µg/kg	84.80	U	80.1	U
PCB-1232	µg/kg	41.80	U	39.5	U
PCB-1242	µg/kg	41.80	U	39.5	U
PCB-1248	µg/kg	41.80	U	39.5	U
PCB-1254	µg/kg	41.80	U	39.5	U
PCB-1260	µg/kg	41.80	U	45.4	J
Silvex	µg/kg	128.50	UJ	123.6	UJ
Toxaphene	µg/kg	215.20	U	203.2	U
2,4-D	µg/kg	925.00	UJ	890.1	UJ
2,4-DB	µg/kg	693.80	UJ	667.6	UJ
2,4,5-T	µg/kg	154.20	U	148.3	U
4,4'-DDD	µg/kg	4.20	U	3.9	U
4,4'-DDE	µg/kg	4.20	U	3.9	U
4,4'-DDT	µg/kg	4.20	UJ	3.9	UJ

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
Location=ROA; Formation=COPPER RIDGE; Site=44; A=3229; A dup=' '; Phase=2					
alpha-BHC	µg/kg	2.00	UJ		
alpha-Chlordane	µg/kg	2.00	UJ		
beta-BHC	µg/kg	2.00	UJ		
delta-BHC	µg/kg	2.00	UJ		
gamma-Chlordane	µg/kg	2.00	UJ		
Acenaphthene	µg/kg	0.80	J		
Aldrin	µg/kg	2.00	UJ		
Benzo(a)anthracene	µg/kg	2.00	J		
Benzo(a)pyrene	µg/kg	1.20	J		
Benzo(b)fluoranthene	µg/kg	1.20	J		
Benzo(ghi)perylene	µg/kg	2.70	J		
Benzo(k)fluoranthene	µg/kg	0.80	J		
Chrysene	µg/kg	2.30	J		
Dalapon	µg/kg	4117.50	UJ		
Dibenzo(a,h)anthracene	µg/kg	0.40	J		
Dicamba	µg/kg	189.30	U		
Dichlorprop	µg/kg	473.30	U		
Dieldrin	µg/kg	3.90	UJ		
Dinoseb	µg/kg	99.40	UJ		
Endosulfan sulfate	µg/kg	3.90	UJ		
Endosulfan I	µg/kg	2.00	UJ		
Endosulfan II	µg/kg	3.90	UJ		
Endrin	µg/kg	3.90	UJ		
Endrin aldehyde	µg/kg	3.90	UJ		
Endrin ketone	µg/kg	3.90	UJ		
Fluoranthene	µg/kg	3.90	J		
Heptachlor	µg/kg	2.00	UJ		
Heptachlor epoxide	µg/kg	2.00	UJ		
Lindane	µg/kg	2.00	UJ		
Methoxychlor	µg/kg	20.20	UJ		
MCPA	µg/kg	177477.90	UJ		
MCPP	µg/kg	134883.20	UJ		
Phenanthrene	µg/kg	2.30	J		
Pyrene	µg/kg	3.50	J		
PCB-1016	µg/kg	39.20	UJ		
PCB-1221	µg/kg	79.70	UJ		
PCB-1232	µg/kg	39.20	UJ		
PCB-1242	µg/kg	39.20	UJ		
PCB-1248	µg/kg	39.20	UJ		
PCB-1254	µg/kg	39.20	UJ		
PCB-1260	µg/kg	39.20	UJ		
Silvex	µg/kg	118.30	UJ		
Toxaphene	µg/kg	202.10	UJ		
2,4-D	µg/kg	851.90	UJ		
2,4-DB	µg/kg	638.90	UJ		
2,4,5-T	µg/kg	142.00	U		
4,4'-DDD	µg/kg	3.90	UJ		
4,4'-DDE	µg/kg	3.90	UJ		
4,4'-DDT	µg/kg	3.90	UJ		
Location=ROA; Formation=COPPER RIDGE; Site=45; A=3227; A dup=' '; Phase=2					
alpha-BHC	µg/kg	2.00	U		
alpha-Chlordane	µg/kg	2.00	U		
beta-BHC	µg/kg	2.00	U		
delta-BHC	µg/kg	2.00	U		
gamma-Chlordane	µg/kg	2.00	U		
Aldrin	µg/kg	2.00	U		
Anthracene	µg/kg	3.60	J		
Benzo(a)anthracene	µg/kg	2.80	J		
Benzo(a)pyrene	µg/kg	1.60	J		
Benzo(b)fluoranthene	µg/kg	1.60	J		
Benzo(ghi)perylene	µg/kg	2.80	J		
Benzo(k)fluoranthene	µg/kg	1.20	J		

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
Chrysene	µg/kg	3.20	J		
Dalapon	µg/kg	4161.30	UJ		
Dibenzo(a,h)anthracene	µg/kg	0.40	J		
Dicamba	µg/kg	191.30	U		
Dichlorprop	µg/kg	478.30	U		
Dieldrin	µg/kg	4.00	U		
Dinoseb	µg/kg	100.40	UJ		
Endosulfan sulfate	µg/kg	4.00	U		
Endosulfan I	µg/kg	2.00	U		
Endosulfan II	µg/kg	4.00	U		
Endrin	µg/kg	4.00	U		
Endrin aldehyde	µg/kg	4.00	U		
Endrin ketone	µg/kg	4.00	U		
Fluoranthene	µg/kg	4.00	J		
Heptachlor	µg/kg	2.00	U		
Heptachlor epoxide	µg/kg	2.00	U		
Indeno(1,2,3-cd)pyrene	µg/kg	20.60	J		
Lindane	µg/kg	2.00	U		
Methoxychlor	µg/kg	20.40	U		
MCPA	µg/kg	179367.80	U		
MCPP	µg/kg	136319.50	U		
Phenanthrene	µg/kg	4.40	J		
Pyrene	µg/kg	4.00	J		
PCB-1016	µg/kg	39.50	U		
PCB-1221	µg/kg	80.20	U		
PCB-1232	µg/kg	39.50	U		
PCB-1242	µg/kg	39.50	U		
PCB-1248	µg/kg	39.50	U		
PCB-1254	µg/kg	39.50	U		
PCB-1260	µg/kg	39.50	U		
Silvex	µg/kg	119.60	U		
Toxaphene	µg/kg	203.60	U		
2,4-D	µg/kg	861.00	UJ		
2,4-DB	µg/kg	645.70	UJ		
2,4,5-T	µg/kg	143.50	UJ		
4,4'-DDD	µg/kg	4.00	UJ		
4,4'-DDE	µg/kg	4.00	UJ		
4,4'-DDT	µg/kg	4.00	UJ		
Location=ROA; Formation=COPPER RIDGE; Site=46; A=3225; A dup=' '; Phase=2					
alpha-BHC	µg/kg	2.20	U		
alpha-Chlordane	µg/kg	2.20	U		
beta-BHC	µg/kg	2.20	U		
delta-BHC	µg/kg	2.20	U		
gamma-Chlordane	µg/kg	2.20	U		
Acenaphthene	µg/kg	4.30	U		
Acenaphthylene	µg/kg	212.80	UJ		
Aldrin	µg/kg	2.20	U		
Anthracene	µg/kg	0.40	J		
Benzo(a)anthracene	µg/kg	2.60	J		
Benzo(a)pyrene	µg/kg	0.40	J		
Benzo(b)fluoranthene	µg/kg	0.90	J		
Benzo(ghi)perylene	µg/kg	4.30	U		
Benzo(k)fluoranthene	µg/kg	0.90	J		
Chrysene	µg/kg	4.30	U		
Dalapon	µg/kg	4351.60	UJ		
Dibenzo(a,h)anthracene	µg/kg	4.30	U		
Dicamba	µg/kg	200.10	U		
Dichlorprop	µg/kg	500.20	U		
Dieldrin	µg/kg	4.20	U		
Dinoseb	µg/kg	105.00	U		
Endosulfan sulfate	µg/kg	4.20	U		
Endosulfan I	µg/kg	2.20	U		
Endosulfan II	µg/kg	4.20	U		
Endrin	µg/kg	4.20	U		
Endrin aldehyde	µg/kg	4.20	U		

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
Endrin ketone	µg/kg	4.20	U		
Fluoranthene	µg/kg	3.00	J		
Fluorene	µg/kg	4.30	U		
Heptachlor	µg/kg	2.20	U		
Heptachlor epoxide	µg/kg	2.20	U		
Indeno(1,2,3-cd)pyrene	µg/kg	21.30	UJ		
Lindane	µg/kg	2.20	U		
Methoxychlor	µg/kg	21.80	U		
MCPA	µg/kg	187569.40	U		
MCPP	µg/kg	142552.70	U		
Naphthalene	µg/kg	21.30	U		
Phenanthrene	µg/kg	1.30	J		
Pyrene	µg/kg	0.90	J		
PCB-1016	µg/kg	42.30	U		
PCB-1221	µg/kg	85.90	U		
PCB-1232	µg/kg	42.30	U		
PCB-1242	µg/kg	42.30	U		
PCB-1248	µg/kg	42.30	U		
PCB-1254	µg/kg	42.30	U		
PCB-1260	µg/kg	42.30	U		
Silvex	µg/kg	125.00	U		
Toxaphene	µg/kg	217.90	U		
2,4-D	µg/kg	900.30	UJ		
2,4-DB	µg/kg	675.20	UJ		
2,4,5-T	µg/kg	150.10	UJ		
4,4'-DDD	µg/kg	4.20	UJ		
4,4'-DDE	µg/kg	4.20	UJ		
4,4'-DDT	µg/kg	4.20	UJ		
Location=ROA; Formation=COPPER RIDGE; Site=47; A=3223; A dup=' '; Phase=2					
alpha-BHC	µg/kg	2.20	U		
alpha-Chlordane	µg/kg	2.20	U		
beta-BHC	µg/kg	2.20	U		
delta-BHC	µg/kg	2.20	U		
gamma-Chlordane	µg/kg	2.20	U		
Acenaphthene	µg/kg	4.20	UJ		
Acenaphthylene	µg/kg	212.20	UJ		
Aldrin	µg/kg	2.20	U		
Anthracene	µg/kg	0.40	J		
Benzo(a)anthracene	µg/kg	3.40	J		
Benzo(a)pyrene	µg/kg	4.20	UJ		
Benzo(b)fluoranthene	µg/kg	2.10	J		
Benzo(ghi)perylene	µg/kg	1.30	J		
Benzo(k)fluoranthene	µg/kg	0.40	J		
Chrysene	µg/kg	4.20	UJ		
Dalapon	µg/kg	4467.50	UJ		
Dibenzo(a,h)anthracene	µg/kg	0.40	J		
Dicamba	µg/kg	205.40	U		
Dichlorprop	µg/kg	513.50	U		
Dieldrin	µg/kg	4.20	U		
Dinoseb	µg/kg	107.80	UJ		
Endosulfan sulfate	µg/kg	4.20	U		
Endosulfan I	µg/kg	2.20	U		
Endosulfan II	µg/kg	4.20	U		
Endrin	µg/kg	4.20	U		
Endrin aldehyde	µg/kg	4.20	U		
Endrin ketone	µg/kg	4.20	U		
Fluoranthene	µg/kg	3.40	J		
Fluorene	µg/kg	4.20	UJ		
Heptachlor	µg/kg	2.20	U		
Heptachlor epoxide	µg/kg	2.20	U		
Indeno(1,2,3-cd)pyrene	µg/kg	13.20	J		
Lindane	µg/kg	2.20	U		
Methoxychlor	µg/kg	21.60	U		
MCPA	µg/kg	192563.20	U		
MCPP	µg/kg	146348.00	U		

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
Naphthalene	µg/kg	21.20	UJ		
Phenanthrene	µg/kg	0.80	J		
Pyrene	µg/kg	0.40	J		
PCB-1016	µg/kg	41.90	U		
PCB-1221	µg/kg	85.10	U		
PCB-1232	µg/kg	41.90	U		
PCB-1242	µg/kg	41.90	U		
PCB-1248	µg/kg	41.90	U		
PCB-1254	µg/kg	41.90	U		
PCB-1260	µg/kg	41.90	U		
Silvex	µg/kg	128.40	UJ		
Toxaphene	µg/kg	216.00	U		
2,4-D	µg/kg	924.30	UJ		
2,4-DB	µg/kg	693.20	UJ		
2,4,5-T	µg/kg	154.10	U		
4,4'-DDD	µg/kg	4.20	UJ		
4,4'-DDE	µg/kg	4.20	UJ		
4,4'-DDT	µg/kg	4.20	UJ		
Location=ROA; Formation=DISMAL GAP; Site=10; A=3168; A dup=' '; Phase=1					
alpha-BHC	µg/kg	6.30	UJ		
alpha-Chlordane	µg/kg	6.30	U		
beta-BHC	µg/kg	6.30	UJ		
delta-BHC	µg/kg	6.30	UJ		
gamma-Chlordane	µg/kg	6.30	U		
Acenaphthene	µg/kg	3407.00	UJ		
Acenaphthylene	µg/kg	4354.00	UJ		
Aldrin	µg/kg	6.30	U		
Anthracene	µg/kg	1249.00	UJ		
Benzo(a)anthracene	µg/kg	25.00	UJ		
Benzo(a)pyrene	µg/kg	44.00	UJ		
Benzo(b)fluoranthene	µg/kg	34.00	UJ		
Benzo(ghi)perylene	µg/kg	144.00	UJ		
Benzo(k)fluoranthene	µg/kg	32.00	UJ		
Chrysene	µg/kg	284.00	UJ		
Dibenzo(a,h)anthracene	µg/kg	57.00	UJ		
Dieldrin	µg/kg	13.00	UJ		
Endosulfan sulfate	µg/kg	13.00	U		
Endosulfan I	µg/kg	6.30	U		
Endosulfan II	µg/kg	13.00	U		
Endrin	µg/kg	13.00	U		
Endrin aldehyde	µg/kg	13.00	U		
Endrin ketone	µg/kg	13.00	U		
Fluorene	µg/kg	398.00	UJ		
Heptachlor	µg/kg	6.30	U		
Heptachlor epoxide	µg/kg	6.30	U		
Indeno(1,2,3-cd)pyrene	µg/kg	81.00	UJ		
Lindane	µg/kg	6.30	UJ		
Methoxychlor	µg/kg	63.00	U		
Naphthalene	µg/kg	3407.00	UJ		
Phenanthrene	µg/kg	1211.00	UJ		
Pyrene	µg/kg	511.00	UJ		
PCB-1016	µg/kg	130.00	U		
PCB-1221	µg/kg	250.00	U		
PCB-1232	µg/kg	130.00	U		
PCB-1242	µg/kg	130.00	U		
PCB-1248	µg/kg	130.00	U		
PCB-1254	µg/kg	130.00	U		
PCB-1260	µg/kg	130.00	U		
Toxaphene	µg/kg	630.00	U		
4,4'-DDD	µg/kg	13.00	UJ		
4,4'-DDE	µg/kg	13.00	UJ		
4,4'-DDT	µg/kg	13.00	U		

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
Location=ROA; Formation=DISMAL GAP; Site=13; A=3127; A dup=3139; Phase=1					
alpha-BHC	µg/kg	4.20	UJ	4.1	UJ
alpha-Chlordane	µg/kg	4.20	U	4.1	U
beta-BHC	µg/kg	4.20	UJ	4.1	UJ
delta-BHC	µg/kg	4.20	UJ	4.1	UJ
gamma-Chlordane	µg/kg	4.20	U	4.1	U
Acenaphthene	µg/kg	229.00	U	223.0	U
Acenaphthylene	µg/kg	2930.00	UJ	2850.0	UJ
Aldrin	µg/kg	4.20	U	4.1	U
Anthracene	µg/kg	840.00	UJ	820.0	U
Benzo(a)anthracene	µg/kg			2.0	U
Benzo(a)pyrene	µg/kg	3.00	UJ	3.0	UJ
Benzo(b)fluoranthene	µg/kg	1.00	J	1.0	J
Benzo(ghi)perylene	µg/kg	10.00	UJ	9.0	UJ
Benzo(k)fluoranthene	µg/kg	2.00	UJ	2.0	UJ
Chrysene	µg/kg			19.0	U
Dibenzo(a,h)anthracene	µg/kg	4.00	UJ	4.0	U
Dieldrin	µg/kg	8.40	UJ	8.2	UJ
Endosulfan sulfate	µg/kg	8.40	U	8.2	U
Endosulfan I	µg/kg	4.20	U	4.1	U
Endosulfan II	µg/kg	8.40	U	8.2	U
Endrin	µg/kg	8.40	U	8.2	U
Endrin aldehyde	µg/kg	8.40	U	8.2	U
Endrin ketone	µg/kg	8.40	U	8.2	U
Fluorene	µg/kg	270.00	UJ	260.0	UJ
Heptachlor	µg/kg	4.20	U	4.1	U
Heptachlor epoxide	µg/kg	4.20	U	4.1	U
Indeno(1,2,3-cd)pyrene	µg/kg	50.00	UJ	50.0	UJ
Lindane	µg/kg	4.20	UJ	4.1	UJ
Methoxychlor	µg/kg	43.00	U	41.0	U
Naphthalene	µg/kg	2290.00	UJ	2230.0	UJ
Phenanthrene	µg/kg	790.00	UJ	790.0	UJ
Pyrene	µg/kg	34.00	U	33.0	UJ
PCB-1016	µg/kg	84.00	U	82.0	U
PCB-1221	µg/kg	170.00	U	160.0	U
PCB-1232	µg/kg	84.00	U	82.0	U
PCB-1242	µg/kg	84.00	U	82.0	U
PCB-1248	µg/kg	84.00	U	82.0	U
PCB-1254	µg/kg	84.00	U	82.0	U
PCB-1260	µg/kg	84.00	U	82.0	U
Toxaphene	µg/kg	420.00	U	410.0	U
4,4'-DDD	µg/kg	8.40	UJ	8.2	UJ
4,4'-DDE	µg/kg	8.40	UJ	8.2	UJ
4,4'-DDT	µg/kg	8.40	U	8.2	U
Location=ROA; Formation=DISMAL GAP; Site=14; A=3148; A dup=' '; Phase=1					
alpha-BHC	µg/kg	2.20	UJ		
alpha-Chlordane	µg/kg	2.20	UJ		
beta-BHC	µg/kg	2.20	UJ		
delta-BHC	µg/kg	2.20	UJ		
gamma-Chlordane	µg/kg	2.20	UJ		
Acenaphthene	µg/kg	240.00	UJ		
Acenaphthylene	µg/kg	3070.00	UJ		
Aldrin	µg/kg	2.20	UJ		
Anthracene	µg/kg	880.00	UJN		
Benzo(a)pyrene	µg/kg	1.00	JN		
Benzo(b)fluoranthene	µg/kg	2.00	UJN		
Benzo(ghi)perylene	µg/kg	10.00	UJ		
Benzo(k)fluoranthene	µg/kg	2.00	UJN		
Dibenzo(a,h)anthracene	µg/kg	4.00	UJ		
Dieldrin	µg/kg	4.40	UJ		
Endosulfan sulfate	µg/kg	4.40	UJ		
Endosulfan I	µg/kg	2.20	UJ		
Endosulfan II	µg/kg	4.40	UJ		

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
Endrin	µg/kg	4.40	UJ		
Endrin aldehyde	µg/kg	4.40	UJ		
Endrin ketone	µg/kg	4.40	UJ		
Fluorene	µg/kg	280.00	UJ		
Heptachlor	µg/kg	2.20	UJ		
Heptachlor epoxide	µg/kg	2.20	UJ		
Indeno(1,2,3-cd)pyrene	µg/kg	60.00	UJ		
Lindane	µg/kg	2.20	UJ		
Methoxychlor	µg/kg	22.00	UJ		
Naphthalene	µg/kg	2400.00	UJ		
Phenanthrene	µg/kg	850.00	UJ		
Pyrene	µg/kg	36.00	UJ		
PCB-1016	µg/kg	44.00	UJ		
PCB-1221	µg/kg	89.00	UJ		
PCB-1232	µg/kg	44.00	UJ		
PCB-1242	µg/kg	44.00	UJ		
PCB-1248	µg/kg	44.00	UJ		
PCB-1254	µg/kg	44.00	UJ		
PCB-1260	µg/kg	44.00	UJ		
Toxaphene	µg/kg	220.00	UJ		
4,4'-DDD	µg/kg	4.40	UJ		
4,4'-DDE	µg/kg	4.40	UJ		
4,4'-DDT	µg/kg	4.40	UJ		
Location=ROA; Formation=DISMAL GAP; Site=17; A=3018; A dup=' '; Phase=1					
alpha-BHC	µg/kg	3.80	UJ		
alpha-Chlordane	µg/kg	3.80	U		
beta-BHC	µg/kg	3.80	UJ		
delta-BHC	µg/kg	3.80	U		
gamma-Chlordane	µg/kg	3.80	U		
Acenaphthene	µg/kg	2091.00	UJN		
Acenaphthylene	µg/kg	2672.00	UJN		
Aldrin	µg/kg	3.80	U		
Anthracene	µg/kg	767.00	UJN		
Benzo(a)anthracene	µg/kg	15.00	UJN		
Benzo(a)pyrene	µg/kg	27.00	UJN		
Benzo(b)fluoranthene	µg/kg	21.00	UJN		
Benzo(ghi)perylene	µg/kg	88.00	UJN		
Benzo(k)fluoranthene	µg/kg	20.00	UJN		
Chrysene	µg/kg	174.00	UJN		
Dibenzo(a,h)anthracene	µg/kg	35.00	UJN		
Dicamba	µg/kg	185.00	UJ		
Dichlorprop	µg/kg	462.00	UJ		
Dieldrin	µg/kg	7.60	UJ		
Dinoseb	µg/kg	97.00	UJ		
Endosulfan sulfate	µg/kg	7.60	U		
Endosulfan I	µg/kg	3.80	U		
Endosulfan II	µg/kg	7.60	U		
Endrin	µg/kg	7.60	U		
Endrin aldehyde	µg/kg	7.60	U		
Endrin ketone	µg/kg	7.60	U		
Fluorene	µg/kg	244.00	UJN		
Heptachlor	µg/kg	3.80	U		
Heptachlor epoxide	µg/kg	3.80	U		
Indeno(1,2,3-cd)pyrene	µg/kg	50.00	UJN		
Lindane	µg/kg	3.80	U		
Methoxychlor	µg/kg	38.00	UJ		
MCPA	µg/kg	173405.00	UJ		
MCPP	µg/kg	131788.00	UJ		
Naphthalene	µg/kg	2091.00	UJN		
Phenanthrene	µg/kg	744.00	UJN		
Pyrene	µg/kg	314.00	UJN		
PCB-1016	µg/kg	76.00	U		
PCB-1221	µg/kg	150.00	U		
PCB-1232	µg/kg	76.00	U		
PCB-1242	µg/kg	76.00	U		

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
PCB-1248	µg/kg	76.00	U		
PCB-1254	µg/kg	76.00	U		
PCB-1260	µg/kg	76.00	U		
Silvex	µg/kg	116.00	UJ		
Toxaphene	µg/kg	380.00	U		
2,4-D	µg/kg	832.00	UJ		
2,4-DB	µg/kg	624.00	UJ		
2,4,5-T	µg/kg	139.00	UJ		
4,4'-DDD	µg/kg	7.60	UJ		
4,4'-DDE	µg/kg	7.60	UJ		
4,4'-DDT	µg/kg	7.60	UJ		
Location=ROA; Formation=DISMAL GAP; Site=19; A=3032; A dup=' '; Phase=1					
alpha-BHC	µg/kg	4.40	U		
alpha-Chlordane	µg/kg	4.30	U		
beta-BHC	µg/kg	4.30	UJ		
delta-BHC	µg/kg	4.30	U		
gamma-Chlordane	µg/kg	4.30	U		
Acenaphthene	µg/kg	233.00	UJN		
Acenaphthylene	µg/kg	298.00	UJN		
Aldrin	µg/kg	4.30	UJ		
Anthracene	µg/kg	85.00	UJN		
Benzo(a)anthracene	µg/kg	2.00	UJN		
Benzo(a)pyrene	µg/kg	3.00	UJN		
Benzo(b)fluoranthene	µg/kg	2.00	UJN		
Benzo(ghi)perylene	µg/kg	10.00	UJN		
Benzo(k)fluoranthene	µg/kg	2.00	UJN		
Chrysene	µg/kg	19.00	UJN		
Dibenzo(a,h)anthracene	µg/kg	4.00	UJN		
Dicamba	µg/kg	204.00	UJ		
Dichlorprop	µg/kg	509.00	UJ		
Dieldrin	µg/kg	8.60	U		
Dinoseb	µg/kg	107.00	UJ		
Endosulfan sulfate	µg/kg	8.60	U		
Endosulfan I	µg/kg	4.30	U		
Endosulfan II	µg/kg	8.60	U		
Endrin	µg/kg	8.60	U		
Endrin aldehyde	µg/kg	8.60	U		
Endrin ketone	µg/kg	8.60	U		
Fluorene	µg/kg	27.00	UJN		
Heptachlor	µg/kg	4.30	U		
Heptachlor epoxide	µg/kg	4.30	U		
Indeno(1,2,3-cd)pyrene	µg/kg	6.00	UJN		
Lindane	µg/kg	4.30	UJ		
Methoxychlor	µg/kg	43.00	UJ		
MCPA	µg/kg	190824.00	UJ		
MCPP	µg/kg	145027.00	UJ		
Naphthalene	µg/kg	233.00	UJN		
Phenanthrene	µg/kg	83.00	UJN		
Pyrene	µg/kg	35.00	UJN		
PCB-1016	µg/kg	86.00	U		
PCB-1221	µg/kg	170.00	U		
PCB-1232	µg/kg	86.00	U		
PCB-1242	µg/kg	86.00	U		
PCB-1248	µg/kg	86.00	U		
PCB-1254	µg/kg	86.00	U		
PCB-1260	µg/kg	86.00	U		
Silvex	µg/kg	127.00	UJ		
Toxaphene	µg/kg	430.00	U		
2,4-D	µg/kg	916.00	UJ		
2,4-DB	µg/kg	687.00	UJ		
2,4,5-T	µg/kg	153.00	UJ		
4,4'-DDD	µg/kg	8.60	U		
4,4'-DDE	µg/kg	8.60	U		
4,4'-DDT	µg/kg	8.60	U		

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
Location=ROA; Formation=DISMAL GAP; Site=20; A=3046; A dup=' '; Phase=1					
alpha-BHC	µg/kg	1.90	UJ		
alpha-Chlordane	µg/kg	1.90	UJ		
beta-BHC	µg/kg	1.90	UJ		
delta-BHC	µg/kg	1.90	UJ		
gamma-Chlordane	µg/kg	1.90	UJ		
Acenaphthene	µg/kg	213.00	UJ		
Acenaphthylene	µg/kg	272.00	UJ		
Aldrin	µg/kg	1.90	UJ		
Anthracene	µg/kg	78.00	UJ		
Benzo(a)anthracene	µg/kg	2.00	UJ		
Benzo(a)pyrene	µg/kg	3.00	UJ		
Benzo(b)fluoranthene	µg/kg	2.00	UJ		
Benzo(ghi)perylene	µg/kg	9.00	UJ		
Benzo(k)fluoranthene	µg/kg	2.00	UJ		
Chrysene	µg/kg	18.00	UJ		
Dalapon	µg/kg	827.00	UJ		
Dibenzo(a,h)anthracene	µg/kg	4.00	UJ		
Dicamba	µg/kg	38.00	UJ		
Dichlorprop	µg/kg	95.00	UJ		
Dieldrin	µg/kg	3.90	UJ		
Dinoseb	µg/kg	20.00	UJ		
Endosulfan sulfate	µg/kg	3.90	UJ		
Endosulfan I	µg/kg	1.90	UJ		
Endosulfan II	µg/kg	3.90	UJ		
Endrin	µg/kg	3.90	UJ		
Endrin aldehyde	µg/kg	3.90	UJ		
Endrin ketone	µg/kg	3.90	UJ		
Fluorene	µg/kg	119.00	J		
Heptachlor	µg/kg	1.90	UJ		
Heptachlor epoxide	µg/kg	1.90	UJ		
Indeno(1,2,3-cd)pyrene	µg/kg	5.00	UJ		
Lindane	µg/kg	1.90	UJ		
Methoxychlor	µg/kg	19.00	UJ		
MCPA	µg/kg	35668.00	UJ		
MCPP	µg/kg	27107.00	UJ		
Naphthalene	µg/kg	213.00	UJ		
Phenanthrene	µg/kg	76.00	UJ		
Pyrene	µg/kg	32.00	UJ		
PCB-1016	µg/kg	39.00	UJ		
PCB-1221	µg/kg	78.00	UJ		
PCB-1232	µg/kg	39.00	UJ		
PCB-1242	µg/kg	39.00	UJ		
PCB-1248	µg/kg	39.00	UJ		
PCB-1254	µg/kg	39.00	UJ		
PCB-1260	µg/kg	39.00	UJ		
Silvex	µg/kg	24.00	UJ		
Toxaphene	µg/kg	190.00	UJ		
2,4-D	µg/kg	171.00	UJ		
2,4-DB	µg/kg	128.00	UJ		
2,4,5-T	µg/kg	29.00	UJ		
4,4'-DDD	µg/kg	3.90	UJ		
4,4'-DDE	µg/kg	3.90	UJ		
4,4'-DDT	µg/kg	3.90	UJ		
Location=ROA; Formation=DISMAL GAP; Site=21; A=3113; A dup=' '; Phase=1					
alpha-BHC	µg/kg	2.10	UJ		
alpha-Chlordane	µg/kg	2.10	UJ		
beta-BHC	µg/kg	2.10	UJ		
delta-BHC	µg/kg	2.10	UJ		
gamma-Chlordane	µg/kg	2.10	UJ		
Acenaphthene	µg/kg	229.00	UJ		
Acenaphthylene	µg/kg	2920.00	UJ		
Aldrin	µg/kg	2.10	UJ		

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
Anthracene	µg/kg	840.00	UJ		
Benzo(a)anthracene	µg/kg	2.00	UJ		
Benzo(a)pyrene	µg/kg	3.00	UJ		
Benzo(b)fluoranthene	µg/kg	2.00	UJ		
Benzo(ghi)perylene	µg/kg	10.00	UJ		
Benzo(k)fluoranthene	µg/kg	2.00	UJ		
Chrysene	µg/kg	19.00	UJ		
Dibenzo(a,h)anthracene	µg/kg	4.00	UJ		
Dieldrin	µg/kg	4.10	UJ		
Endosulfan sulfate	µg/kg	4.10	UJ		
Endosulfan I	µg/kg	2.10	UJ		
Endosulfan II	µg/kg	4.10	UJ		
Endrin	µg/kg	4.10	UJ		
Endrin aldehyde	µg/kg	4.10	UJ		
Endrin ketone	µg/kg	4.10	UJ		
Fluorene	µg/kg	270.00	UJ		
Heptachlor	µg/kg	2.10	UJ		
Heptachlor epoxide	µg/kg	2.10	UJ		
Indeno(1,2,3-cd)pyrene	µg/kg	50.00	UJ		
Lindane	µg/kg	2.10	UJ		
Methoxychlor	µg/kg	21.00	UJ		
Naphthalene	µg/kg	2290.00	UJ		
Phenanthrene	µg/kg	810.00	UJ		
Pyrene	µg/kg	34.00	UJ		
PCB-1016	µg/kg	41.00	UJ		
PCB-1221	µg/kg	82.00	UJ		
PCB-1232	µg/kg	41.00	UJ		
PCB-1242	µg/kg	41.00	UJ		
PCB-1248	µg/kg	41.00	UJ		
PCB-1254	µg/kg	41.00	UJ		
PCB-1260	µg/kg	41.00	UJ		
Toxaphene	µg/kg	210.00	UJ		
4,4'-DDD	µg/kg	4.10	UJ		
4,4'-DDE	µg/kg	4.10	UJ		
4,4'-DDT	µg/kg	4.10	UJ		
Location=ROA; Formation=DISMAL GAP; Site=22; A=3058; A dup=' '; Phase=1					
alpha-BHC	µg/kg	3.90	UJ		
alpha-Chlordane	µg/kg	3.90	UJ		
beta-BHC	µg/kg	3.90	UJ		
delta-BHC	µg/kg	3.90	UJ		
gamma-Chlordane	µg/kg	3.90	UJ		
Acenaphthene	µg/kg	213.00	UJ		
Acenaphthylene	µg/kg	272.00	UJ		
Aldrin	µg/kg	3.90	UJ		
Anthracene	µg/kg	78.00	UJ		
Benzo(a)anthracene	µg/kg	2.00	UJ		
Benzo(a)pyrene	µg/kg	3.00	UJ		
Benzo(b)fluoranthene	µg/kg	2.00	UJ		
Benzo(ghi)perylene	µg/kg	9.00	UJ		
Benzo(k)fluoranthene	µg/kg	2.00	UJ		
Chrysene	µg/kg	18.00	UJ		
Dalapon	µg/kg	806.00	UJ		
Dibenzo(a,h)anthracene	µg/kg	4.00	UJ		
Dicamba	µg/kg	37.00	U		
Dichlorprop	µg/kg	93.00	U		
Dieldrin	µg/kg	7.70	UJ		
Dinoseb	µg/kg	19.00	U		
Endosulfan sulfate	µg/kg	7.70	UJ		
Endosulfan I	µg/kg	3.90	UJ		
Endosulfan II	µg/kg	7.70	UJ		
Endrin	µg/kg	7.70	UJ		
Endrin aldehyde	µg/kg	7.70	UJ		
Endrin ketone	µg/kg	7.70	UJ		
Fluorene	µg/kg	25.00	UJ		
Heptachlor	µg/kg	3.90	UJ		

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
Heptachlor epoxide	µg/kg	3.90	UJ		
Indeno(1,2,3-cd)pyrene	µg/kg	5.00	UJ		
Lindane	µg/kg	3.90	UJ		
Methoxychlor	µg/kg	40.00	UJ		
MCPA	µg/kg	34722.00	U		
MCPP	µg/kg	26389.00	U		
Naphthalene	µg/kg	496.00	J		
Phenanthrene	µg/kg	76.00	UJ		
Pyrene	µg/kg	32.00	UJ		
PCB-1016	µg/kg	77.00	UJ		
PCB-1221	µg/kg	150.00	UJ		
PCB-1232	µg/kg	77.00	UJ		
PCB-1242	µg/kg	77.00	UJ		
PCB-1248	µg/kg	77.00	UJ		
PCB-1254	µg/kg	77.00	UJ		
PCB-1260	µg/kg	77.00	UJ		
Silvex	µg/kg	23.00	UJ		
Toxaphene	µg/kg	390.00	UJ		
2,4-D	µg/kg	167.00	U		
2,4-DB	µg/kg	125.00	U		
2,4,5-T	µg/kg	28.00	UJ		
4,4'-DDD	µg/kg	7.70	UJ		
4,4'-DDE	µg/kg	7.70	UJ		
4,4'-DDT	µg/kg	7.70	UJ		
Location=ROA; Formation=DISMAL GAP; Site=3; A=3099; A dup=' '; Phase=1					
alpha-BHC	µg/kg	3.80	UJ		
alpha-Chlordane	µg/kg	3.80	U		
beta-BHC	µg/kg	3.80	UJ		
delta-BHC	µg/kg	3.80	UJ		
gamma-Chlordane	µg/kg	3.80	U		
Aldrin	µg/kg	3.80	U		
Dalapon	µg/kg	824.00	UJ		
Dicamba	µg/kg	38.00	U		
Dichlorprop	µg/kg	95.00	U		
Dieldrin	µg/kg	7.60	UJ		
Dinoseb	µg/kg	20.00	U		
Endosulfan sulfate	µg/kg	7.60	U		
Endosulfan I	µg/kg	3.80	U		
Endosulfan II	µg/kg	7.60	U		
Endrin	µg/kg	7.60	U		
Endrin aldehyde	µg/kg	7.60	U		
Endrin ketone	µg/kg	7.60	U		
Heptachlor	µg/kg	3.80	UJ		
Heptachlor epoxide	µg/kg	3.80	U		
Lindane	µg/kg	3.80	UJ		
Methoxychlor	µg/kg	38.00	U		
MCPA	µg/kg	35499.00	U		
MCPP	µg/kg	26979.00	U		
Naphthalene	µg/kg	234.00	J		
PCB-1016	µg/kg	76.00	U		
PCB-1221	µg/kg	150.00	U		
PCB-1232	µg/kg	76.00	U		
PCB-1242	µg/kg	76.00	U		
PCB-1248	µg/kg	76.00	U		
PCB-1254	µg/kg	76.00	U		
PCB-1260	µg/kg	76.00	U		
Silvex	µg/kg	24.00	UJ		
Toxaphene	µg/kg	380.00	U		
2,4-D	µg/kg	170.00	U		
2,4-DB	µg/kg	128.00	U		
2,4,5-T	µg/kg	28.00	UJ		
4,4'-DDD	µg/kg	7.60	UJ		
4,4'-DDE	µg/kg	7.60	UJ		
4,4'-DDT	µg/kg	7.60	U		

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
Location=ROA; Formation=DISMAL GAP; Site=7; A=3085; A dup=' '; Phase=1					
alpha-BHC	µg/kg	4.50	UJ		
alpha-Chlordane	µg/kg	4.50	U		
beta-BHC	µg/kg	4.50	UJ		
delta-BHC	µg/kg	4.50	UJ		
gamma-Chlordane	µg/kg	4.50	U		
Acenaphthene	µg/kg	242.00	UJ		
Acenaphthylene	µg/kg	310.00	UJ		
Aldrin	µg/kg	4.50	U		
Anthracene	µg/kg	89.00	UJ		
Benzo(a)anthracene	µg/kg	2.00	UJ		
Benzo(a)pyrene	µg/kg	3.00	UJ		
Benzo(b)fluoranthene	µg/kg	1.80	JN		
Benzo(ghi)perylene	µg/kg	10.00	UJ		
Benzo(k)fluoranthene	µg/kg	2.00	UJ		
Chrysene	µg/kg	20.00	UJ		
Dalapon	µg/kg	937.00	UJ		
Dibenzo(a,h)anthracene	µg/kg	4.00	UJ		
Dicamba	µg/kg	43.00	U		
Dichlorprop	µg/kg	108.00	U		
Dieldrin	µg/kg	8.90	UJ		
Dinoseb	µg/kg	23.00	U		
Endosulfan sulfate	µg/kg	8.90	U		
Endosulfan I	µg/kg	4.50	U		
Endosulfan II	µg/kg	8.90	U		
Endrin	µg/kg	8.90	U		
Endrin aldehyde	µg/kg	8.90	U		
Endrin ketone	µg/kg	8.90	U		
Fluorene	µg/kg	28.00	UJ		
Heptachlor	µg/kg	4.50	UJ		
Heptachlor epoxide	µg/kg	4.50	U		
Indeno(1,2,3-cd)pyrene	µg/kg	6.00	UJ		
Lindane	µg/kg	4.50	UJ		
Methoxychlor	µg/kg	45.00	U		
MCPA	µg/kg	40404.00	U		
MCPP	µg/kg	30707.00	U		
Naphthalene	µg/kg	242.00	UJ		
Phenanthrene	µg/kg	86.00	UJ		
Pyrene	µg/kg	36.00	UJ		
PCB-1016	µg/kg	89.00	U		
PCB-1221	µg/kg	180.00	U		
PCB-1232	µg/kg	89.00	U		
PCB-1242	µg/kg	89.00	U		
PCB-1248	µg/kg	89.00	U		
PCB-1254	µg/kg	89.00	U		
PCB-1260	µg/kg	89.00	U		
Silvex	µg/kg	27.00	UJ		
Toxaphene	µg/kg	450.00	U		
2,4-D	µg/kg	194.00	U		
2,4-DB	µg/kg	145.00	U		
2,4,5-T	µg/kg	32.00	UJ		
4,4'-DDD	µg/kg	8.90	UJ		
4,4'-DDE	µg/kg	8.90	UJ		
4,4'-DDT	µg/kg	8.90	U		
Location=ROA; Formation=DISMAL GAP; Site=8; A=3072; A dup=' '; Phase=1					
alpha-BHC	µg/kg	4.40	UJ		
alpha-Chlordane	µg/kg	4.40	UJ		
beta-BHC	µg/kg	4.40	UJ		
delta-BHC	µg/kg	4.40	U		
gamma-Chlordane	µg/kg	4.40	U		
Acenaphthene	µg/kg	228.00	UJ		
Acenaphthylene	µg/kg	291.00	UJ		
Aldrin	µg/kg	4.40	U		

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
Anthracene	µg/kg	84.00	UJ		
Benzo(a)anthracene	µg/kg	2.00	UJ		
Benzo(a)pyrene	µg/kg	3.00	UJ		
Benzo(b)fluoranthene	µg/kg	2.00	UJ		
Benzo(ghi)perylene	µg/kg	10.00	UJ		
Benzo(k)fluoranthene	µg/kg	2.00	UJ		
Chrysene	µg/kg	19.00	UJ		
Dalapon	µg/kg	881.00	UJ		
Dibenzo(a,h)anthracene	µg/kg	4.00	UJ		
Dicamba	µg/kg	41.00	UJ		
Dichlorprop	µg/kg	101.00	UJ		
Dieldrin	µg/kg	8.50	UJ		
Dinoseb	µg/kg	21.00	UJ		
Endosulfan sulfate	µg/kg	8.50	U		
Endosulfan I	µg/kg	4.40	UJ		
Endosulfan II	µg/kg	8.50	U		
Endrin	µg/kg	8.50	U		
Endrin aldehyde	µg/kg	8.50	U		
Endrin ketone	µg/kg	8.50	U		
Fluorene	µg/kg	27.00	UJ		
Heptachlor	µg/kg	4.40	UJ		
Heptachlor epoxide	µg/kg	4.40	U		
Indeno(1,2,3-cd)pyrene	µg/kg	5.00	UJ		
Lindane	µg/kg	4.40	UJ		
Methoxychlor	µg/kg	44.00	UJ		
MCPA	µg/kg	37989.00	UJ		
MCPP	µg/kg	28872.00	UJ		
Naphthalene	µg/kg	228.00	UJ		
Phenanthrene	µg/kg	203.00	J		
Pyrene	µg/kg	34.00	UJ		
PCB-1016	µg/kg	85.00	U		
PCB-1221	µg/kg	172.00	U		
PCB-1232	µg/kg	85.00	U		
PCB-1242	µg/kg	85.00	U		
PCB-1248	µg/kg	85.00	U		
PCB-1254	µg/kg	85.00	U		
PCB-1260	µg/kg	85.00	U		
Silvex	µg/kg	25.00	UJ		
Toxaphene	µg/kg	436.00	U		
2,4-D	µg/kg	182.00	UJ		
2,4-DB	µg/kg	137.00	UJ		
2,4,5-T	µg/kg	30.00	UJ		
4,4'-DDD	µg/kg	8.50	UJ		
4,4'-DDE	µg/kg	8.50	UJ		
4,4'-DDT	µg/kg	14.00	J		
Location=ROA; Formation=DISMAL GAP; Site=9; A=3003; A dup=' '; Phase=1					
alpha-BHC	µg/kg	4.00	UJ		
alpha-Chlordane	µg/kg	4.00	U		
beta-BHC	µg/kg	4.00	U		
delta-BHC	µg/kg	4.00	U		
gamma-Chlordane	µg/kg	4.00	U		
Acenaphthene	µg/kg	11258.00	UJN		
Acenaphthylene	µg/kg	14386.00	UJN		
Aldrin	µg/kg	4.00	U		
Anthracene	µg/kg	4128.00	UJN		
Benzo(a)anthracene	µg/kg	81.00	UJN		
Benzo(a)pyrene	µg/kg	144.00	UJN		
Benzo(b)fluoranthene	µg/kg	113.00	UJN		
Benzo(ghi)perylene	µg/kg	475.00	UJN		
Benzo(k)fluoranthene	µg/kg	106.00	UJN		
Chrysene	µg/kg	938.00	UJN		
Dibenzo(a,h)anthracene	µg/kg	188.00	UJN		
Dicamba	µg/kg	400.00	UJ		
Dichlorprop	µg/kg	1001.00	UJ		
Dieldrin	µg/kg	8.10	UJ		

Table C.1 (continued)

Analysis	Units	A horizon Result	Qualifier	A horizon field dup	Qualifier
Dinoseb	µg/kg	210.00	UJ		
Endosulfan sulfate	µg/kg	8.10	U		
Endosulfan I	µg/kg	4.00	U		
Endosulfan II	µg/kg	8.10	U		
Endrin	µg/kg	8.10	U		
Endrin aldehyde	µg/kg	8.10	UJ		
Endrin ketone	µg/kg	8.10	U		
Fluoranthene	µg/kg	338.00	UJN		
Fluorene	µg/kg	1313.00	UJN		
Heptachlor	µg/kg	4.00	U		
Heptachlor epoxide	µg/kg	4.00	U		
Indeno(1,2,3-cd)pyrene	µg/kg	269.00	UJN		
Lindane	µg/kg	4.00	U		
Methoxychlor	µg/kg	40.00	U		
MCPA	µg/kg	375281.00	UJ		
MCPP	µg/kg	285214.00	UJ		
Naphthalene	µg/kg	11258.00	UJN		
Phenanthrene	µg/kg	4003.00	UJN		
Pyrene	µg/kg	1689.00	UJN		
PCB-1016	µg/kg	81.00	U		
PCB-1221	µg/kg	163.00	U		
PCB-1232	µg/kg	81.00	U		
PCB-1242	µg/kg	81.00	U		
PCB-1248	µg/kg	81.00	U		
PCB-1254	µg/kg	81.00	U		
PCB-1260	µg/kg	81.00	U		
Silvex	µg/kg	250.00	UJ		
Toxaphene	µg/kg	400.00	U		
2,4-D	µg/kg	1801.00	UJ		
2,4-DB	µg/kg	1351.00	UJ		
2,4,5-T	µg/kg	300.00	UJ		
4,4'-DDD	µg/kg	8.10	U		
4,4'-DDE	µg/kg	8.10	UJ		
4,4'-DDT	µg/kg	8.10	U		

Appendix D

INORGANIC ANALYSIS DATA

Table D.1. Inorganic analysis results for composite soil samples

Analysis	Units	A horizon result	Qualifier	B horizon result	Qualifier	C horizon result	Qualifier	A lab split result	Qualifier
Location=AND; Formation=COPPER RIDGE; Site=31,32,36; Sample type=Regular; A=7057; B=7060; C=7063; A lab split=' '; Phase=2									
Aluminum	mg/kg	10600.00		16300.00		14300.00			
Antimony	mg/kg	0.48	UJ	0.43	UJ	0.41	UJ		
Arsenic	mg/kg	9.40		20.20		23.30			
Barium	mg/kg	59.50		27.40	B	14.50	B		
Beryllium	mg/kg	0.61	B	0.55	B	0.48	B		
Boron	mg/kg	4.80	U	4.80	U	4.80	U		
Cadmium	mg/kg	0.24	U	0.22	U	0.21	U		
Calcium	mg/kg	423.00	B	197.00	B	180.00	B		
Chromium	mg/kg	19.70		25.20		23.70			
Cobalt	mg/kg	11.40	B	3.60	B	2.50	B		
Copper	mg/kg	6.60		21.80		24.90			
Cyanide	mg/kg	1.20	UJ	1.00	UJ	1.00	UJ		
Iron	mg/kg	20000.00		26400.00		26400.00			
Lead	mg/kg	21.00		8.80		10.60			
Lithium	mg/kg	4.80	B	7.80	B	8.80	B		
Magnesium	mg/kg	463.00	B	833.00	B	803.00	B		
Manganese	mg/kg	1800.00	J	77.70	J	66.30	J		
Mercury	mg/kg	0.12		0.11		0.15			
Molybdenum	mg/kg	2.60	U	2.60	U	3.00	B		
Nickel	mg/kg	4.90	U	11.80		9.70			
Potassium	mg/kg	367.00	B	1030.00	B	1240.00			
Selenium	mg/kg	0.77	B	0.45	B	0.54	B		
Silicon	mg/kg	368.00	J	481.00	J	555.00	J		
Silver	mg/kg	0.96	U	0.87	U	0.83	U		
Sodium	mg/kg	343.00	B	350.00	B	326.00	B		
Strontium	mg/kg	2.90	J	1.40	J	1.10	J		
Sulfate	mg/kg	78.00		52.00		43.00			
Thallium	mg/kg	0.73	U	0.65	U	0.62	U		
Vanadium	mg/kg	44.20	J	48.80	J	47.90	J		
Zinc	mg/kg	38.30	J	83.40	J	67.70	J		
Location=AND; Formation=COPPER RIDGE; Site=33,34,35; Sample type=Regular; A=7046; B=7051; C=7054; A lab split=7047; Phase=2									
Aluminum	mg/kg	10600.00		16400.00		18200.00		11400.00	
Antimony	mg/kg	0.46	UJ	0.41	UJ	0.45	UJ	0.46	UJ
Arsenic	mg/kg	7.60		11.20		25.60		16.10	
Barium	mg/kg	102.00		48.30		22.80	B	97.30	
Beryllium	mg/kg	0.53	B	0.48	B	0.57	B	0.52	B
Boron	mg/kg	4.80	U	4.80	U	4.80	U	4.80	U
Cadmium	mg/kg	0.23	U	0.21	U	0.23	U	0.23	U
Calcium	mg/kg	845.00	B	273.00	B	271.00	B	854.00	B
Chromium	mg/kg	15.10		23.30		30.50		16.40	
Cobalt	mg/kg	8.40	B	8.30	B	3.70	B	11.00	B
Copper	mg/kg	7.00		17.20		30.10		7.40	
Cyanide	mg/kg	1.10	UJ	1.00	UJ	1.10	UJ	1.20	UJ
Iron	mg/kg	10200.00		24800.00		35000.00		10700.00	
Lead	mg/kg	21.50		23.70		9.40		37.60	
Lithium	mg/kg	4.60	B	9.60	B	9.30	B	6.10	B
Magnesium	mg/kg	537.00	B	692.00	B	671.00	B	566.00	B
Manganese	mg/kg	1280.00	J	966.00	J	238.00	J	1830.00	J
Mercury	mg/kg	0.12	U	0.12		0.19		0.12	
Molybdenum	mg/kg	2.60	U	4.50	B	3.60	B	2.60	U
Nickel	mg/kg	7.00	B	9.20		12.00		7.00	B
Potassium	mg/kg	546.00	B	702.00	B	782.00	B	395.00	B
Selenium	mg/kg	0.58	B	0.66	B	0.71	B	3.60	
Silicon	mg/kg	418.00	J	498.00	J	435.00	J	429.00	J
Silver	mg/kg	0.92	U	0.82	U	0.90	U	0.92	U
Sodium	mg/kg	374.00	B	365.00	B	408.00	B	351.00	B
Strontium	mg/kg	6.10	J	2.40	J	2.20	J	5.60	J
Sulfate	mg/kg	58.00		59.00		26.00		56.00	
Thallium	mg/kg	0.69	U	0.61	U	0.67	U	2.60	
Vanadium	mg/kg	23.80	J	52.40	J	69.10	J	24.60	J
Zinc	mg/kg	33.30	J	51.40	J	80.70	J	36.20	J

Table D.1 (continued)

Analysis	Units	A horizon result	Qualifier	B horizon result	Qualifier	C horizon result	Qualifier	A lab split result	Qualifier
Location=AND; Formation=COPPER RIDGE; Site=37,38,41; Sample type=Regular; A=7075; B=7078; C=7081; A lab split=' '; Phase=2									
Aluminum	mg/kg	15400.00		24500.00		28600.00			
Antimony	mg/kg	0.50	UJ	0.41	UJ	0.43	UJ		
Arsenic	mg/kg	14.40	J	26.80		36.50			
Barium	mg/kg	156.00		58.90		40.60	B		
Beryllium	mg/kg	0.95	B	1.00	B	1.20			
Boron	mg/kg	6.00	UJ	4.90	UJ	5.10	UJ		
Cadmium	mg/kg	0.25	U	0.20	U	0.21	U		
Calcium	mg/kg	1730.00		732.00	B	552.00	B		
Chromium	mg/kg	20.70	J	26.60	J	26.10	J		
Cobalt	mg/kg	35.30		23.30		31.00			
Copper	mg/kg	13.40		39.50		54.20			
Cyanide	mg/kg	1.20	UJ	1.00	UJ	1.10	UJ		
Iron	mg/kg	14600.00		32600.00		40300.00			
Lead	mg/kg	45.60		49.50		77.90	J		
Lithium	mg/kg	13.80	B	22.20		22.70			
Magnesium	mg/kg	931.00	B	1010.00	B	928.00	B		
Manganese	mg/kg	2560.00	J	786.00	J	1440.00	J		
Mercury	mg/kg	0.11		0.14		0.21			
Molybdenum	mg/kg	3.20	U	2.70	U	2.80	U		
Nickel	mg/kg	13.50		27.70		33.50			
Potassium	mg/kg	614.00	B	918.00	B	1040.00	B		
Selenium	mg/kg	0.82	B	0.70	B	0.69	B		
Silicon	mg/kg	495.00		580.00		456.00			
Silver	mg/kg	1.00	U	0.82	U	0.86	U		
Sodium	mg/kg	423.00	B	410.00	B	400.00	B		
Strontium	mg/kg	7.50	B	3.30	B	0.96	B		
Sulfate	mg/kg	150.00		53.90		39.30			
Thallium	mg/kg	0.74	U	0.61	U	0.65	B		
Vanadium	mg/kg	32.10	J	63.60	J	72.60	J		
Zinc	mg/kg	67.40	J	141.00	J	170.00	J		
Location=AND; Formation=COPPER RIDGE; Site=39,40,42; Sample type=Regular; A=7066; B=7069; C=7072; A lab split=' '; Phase=2									
Aluminum	mg/kg	19100.00		21600.00		25800.00			
Antimony	mg/kg	0.46	UJ	0.43	UJ	0.43	UJ		
Arsenic	mg/kg	13.40	J	29.80		21.20	J		
Barium	mg/kg	196.00		62.10		38.90	B		
Beryllium	mg/kg	1.00	B	0.70	B	0.66	B		
Boron	mg/kg	5.60	UJ	5.10	UJ	5.20	UJ		
Cadmium	mg/kg	0.23	U	0.21	U	0.22	U		
Calcium	mg/kg	1050.00	B	754.00	B	654.00	B		
Chromium	mg/kg	25.70	J	52.80	J	60.40	J		
Cobalt	mg/kg	16.40		12.30		5.50	B		
Copper	mg/kg	11.00		17.00		19.90			
Cyanide	mg/kg	1.20	UJ	1.00	UJ	1.10	UJ		
Iron	mg/kg	17900.00		35100.00		35000.00			
Lead	mg/kg	42.30		29.70		12.10			
Lithium	mg/kg	7.50	B	13.10	B	14.50	B		
Magnesium	mg/kg	898.00	B	981.00	B	1090.00			
Manganese	mg/kg	3470.00	J	1230.00	J	500.00	J		
Mercury	mg/kg	0.11		0.16		0.17			
Molybdenum	mg/kg	3.00	U	2.80	B	2.80	U		
Nickel	mg/kg	13.20		13.80		17.00			
Potassium	mg/kg	613.00	B	803.00	B	1020.00	B		
Selenium	mg/kg	0.88	B	0.72	B	0.66	B		
Silicon	mg/kg	537.00		484.00		592.00			
Silver	mg/kg	0.93	U	0.85	U	0.87	U		
Sodium	mg/kg	463.00	B	373.00	B	386.00	B		
Strontium	mg/kg	7.70	B	6.30	B	5.20	B		
Sulfate	mg/kg	178.00		56.80		37.40			
Thallium	mg/kg	0.70	U	0.64	U	0.66	U		
Vanadium	mg/kg	40.70	J	67.40	J	67.90	J		
Zinc	mg/kg	42.00	J	47.80	J	50.50	J		

Table D.1 (continued)

Analysis	Units	A horizon result	Qualifier	B horizon result	Qualifier	C horizon result	Qualifier	A lab split result	Qualifier
Location=AND; Formation=DISMAL GAP; Site=1,20,22; Sample type=Regular; A=7028; B=7031; C=7034; A lab split=' '; Phase=1									
Aluminum	mg/kg	23500.00		36500.00		35500.00			
Antimony	mg/kg	0.90	J	0.47	UJ	0.50	UJ		
Arsenic	mg/kg	4.90	B	5.20		2.50	U		
Barium	mg/kg	91.00		77.10		85.00			
Beryllium	mg/kg	0.75	B	1.00	B	1.10	B		
Boron	mg/kg	10.50	U	9.90	U	10.40	U		
Cadmium	mg/kg	0.25	U	0.24	U	0.25	U		
Calcium	mg/kg	2110.00		899.00	B	257.00	B		
Chromium	mg/kg	27.20		30.80		37.70	J		
Cobalt	mg/kg	10.20	B	13.70		17.10			
Copper	mg/kg	15.70		16.80		19.80			
Cyanide	mg/kg	0.12	UJ	0.22	J	0.12	UJ		
Iron	mg/kg	24300.00		39500.00		41900.00			
Lead	mg/kg	25.60		15.30		14.50			
Lithium	mg/kg	10.40	B	18.20		20.50			
Magnesium	mg/kg	2200.00	J	2720.00	J	3810.00	J		
Manganese	mg/kg	834.00		532.00		608.00			
Mercury	mg/kg	0.12	U	0.11	U	0.11	U		
Molybdenum	mg/kg	1.70	U	1.70	U	1.90	B		
Nickel	mg/kg	18.00		23.60		32.40			
Potassium	mg/kg	3620.00	J	3580.00	J	3320.00	J		
Selenium	mg/kg	0.85	J	0.78	J	0.60	J		
Silicon	mg/kg	220.00	J	271.00	J	224.00	J		
Silver	mg/kg	1.20	UJ	1.20	UJ	1.20	UJ		
Strontium	mg/kg	8.40		4.70		4.50			
Sulfate	mg/kg	12.50		47.00		12.60			
Thallium	mg/kg	0.50	U	0.47	U	0.50	U		
Vanadium	mg/kg	30.60		43.40		40.20			
Zinc	mg/kg	48.10		50.30		59.00			
Location=AND; Formation=DISMAL GAP; Site=3,5,11; Sample type=Regular; A=7010; B=7013; C=7016; A lab split=' '; Phase=1									
Aluminum	mg/kg	24100.00		33400.00		37200.00			
Antimony	mg/kg	1.00	UJ	1.40	UJ	1.40	UJ		
Arsenic	mg/kg	4.10	B	4.50	B	4.60	B		
Barium	mg/kg	74.80		70.10		80.10			
Beryllium	mg/kg	0.86	B	0.82	B	1.00	B		
Boron	mg/kg	10.20	U	10.20	U	10.00	U		
Cadmium	mg/kg	0.24	U	0.24	U	0.24	U		
Calcium	mg/kg	1340.00		776.00	B	832.00	B		
Chromium	mg/kg	29.30		38.80		40.10			
Cobalt	mg/kg	14.10		9.60	B	9.80	B		
Copper	mg/kg	16.30		21.50		22.40			
Cyanide	mg/kg	0.12	UJ	0.12	UJ	0.12	UJ		
Iron	mg/kg	30700.00		41000.00		41800.00			
Lead	mg/kg	24.60		19.40		21.90			
Lithium	mg/kg	10.10	B	16.30		19.60			
Magnesium	mg/kg	3230.00	J	2920.00	J	3650.00	J		
Manganese	mg/kg	572.00		207.00		216.00			
Mercury	mg/kg	0.11	U	0.11	U	0.12	U		
Molybdenum	mg/kg	1.70	U	1.80	B	1.70	U		
Nickel	mg/kg	23.00		22.50		27.20			
Potassium	mg/kg	5090.00	J	4430.00	J	5890.00	J		
Selenium	mg/kg	0.61	B	0.53	B	0.50	B		
Silicon	mg/kg	211.00	J	268.00	J	188.00	J		
Silver	mg/kg	1.20	UJ	1.20	UJ	1.20	UJ		
Strontium	mg/kg	6.40		5.20		6.00			
Sulfate	mg/kg	11.40	B	39.30		15.30			
Thallium	mg/kg	0.49	U	0.48	U	0.48	U		
Vanadium	mg/kg	31.10		43.80		43.80			
Zinc	mg/kg	54.90		52.70		62.20			

Table D.1 (continued)

Analysis	Units	A horizon result	Qualifier	B horizon result	Qualifier	C horizon result	Qualifier	A lab split result	Qualifier
Location=AND; Formation=DISMAL GAP; Site=4,12,21; Sample type=Regular; A=7019; B=7022; C=7025; A lab split=' '; Phase=1									
Aluminum	mg/kg	22300.00		35800.00		39300.00			
Antimony	mg/kg	1.40	UJ	1.30	J	1.40	J		
Arsenic	mg/kg	3.10	B	2.30	U	4.80	B		
Barium	mg/kg	76.50		67.30		63.90			
Beryllium	mg/kg	0.94	B	1.20		1.50			
Boron	mg/kg	10.30	U	9.90	U	10.10	U		
Cadmium	mg/kg	0.25	U	0.23	U	0.24	U		
Calcium	mg/kg	1300.00		776.00	B	320.00	B		
Chromium	mg/kg	22.60		29.30		26.90			
Cobalt	mg/kg	13.30		7.30	B	15.00			
Copper	mg/kg	16.40		19.80		26.70			
Cyanide	mg/kg	0.27	J	0.12	UJ	0.12	UJ		
Iron	mg/kg	24100.00		38200.00		45400.00			
Lead	mg/kg	36.40		16.80					
Lithium	mg/kg	10.40	B	20.50		15.90			
Magnesium	mg/kg	2770.00	J	3050.00	J	3490.00	J		
Manganese	mg/kg	576.00		111.00		627.00			
Mercury	mg/kg	0.11	U	0.11	U	0.11	U		
Molybdenum	mg/kg	1.70	U	1.60	U	1.70	U		
Nickel	mg/kg	21.00		25.30		24.80			
Potassium	mg/kg	3940.00	J	4140.00	J	5410.00	J		
Selenium	mg/kg	0.76	J	0.68	B	0.50	B		
Silicon	mg/kg	228.00	J	208.00	J	198.00	J		
Silver	mg/kg	1.20	UJ	1.20	UJ	1.20	UJ		
Strontium	mg/kg	5.60		3.60		2.50			
Sulfate	mg/kg	14.40		47.10		29.50			
Thallium	mg/kg	0.49	U	0.47	U	0.48	U		
Vanadium	mg/kg	27.80		41.00		39.50			
Zinc	mg/kg	50.50		45.60		51.90			
Location=AND; Formation=DISMAL GAP; Site=9,10,19; Sample type=Field duplicate; A=7037; B=7040; C=7043; A lab split=' '; Phase=1									
Aluminum	mg/kg	22000.00		34900.00		45000.00			
Antimony	mg/kg	0.50	UJ	0.62	UJ	0.72	UJ		
Arsenic	mg/kg	4.90		5.60		6.80			
Barium	mg/kg	80.60		90.50		137.00			
Beryllium	mg/kg	0.75	B	0.83	B	1.20	B		
Boron	mg/kg	10.40	U	10.00	U	10.00	U		
Cadmium	mg/kg	0.24	U	0.24	U	0.24	U		
Calcium	mg/kg	920.00	B	658.00	B	289.00	B		
Chromium	mg/kg	43.50		51.60	J	60.30	J		
Cobalt	mg/kg	11.00	B	18.40		23.20			
Copper	mg/kg	11.10		18.20		60.00			
Cyanide	mg/kg	0.12	U	0.12	UJ	0.12	UJ		
Iron	mg/kg	22600.00		39000.00		42400.00			
Lead	mg/kg	30.30		23.90		34.90			
Lithium	mg/kg	11.40	B	21.70		33.50			
Magnesium	mg/kg	2590.00	J	2820.00	J	3640.00	J		
Manganese	mg/kg	814.00		536.00		1330.00			
Mercury	mg/kg	0.12		0.11	U	0.11	U		
Molybdenum	mg/kg	1.70	U	2.00	B	1.70	B		
Nickel	mg/kg	20.90		24.80		35.50			
Potassium	mg/kg	3150.00	J	3230.00	J	3660.00	J		
Selenium	mg/kg	0.76	B	0.71	B	0.47	U		
Silicon	mg/kg	205.00	J	226.00	J	281.00	J		
Silver	mg/kg	1.20	UJ	1.20	UJ	1.20	UJ		
Strontium	mg/kg	4.80		3.90		3.70			
Sulfate	mg/kg	17.60		37.90		9.90	B		
Thallium	mg/kg	0.49	U	0.47	U	0.47	U		
Vanadium	mg/kg	30.50		51.60		48.60			
Zinc	mg/kg	44.90		54.70		70.70			

Table D.1 (continued)

Analysis	Units	A horizon result	Qualifier	B horizon result	Qualifier	C horizon result	Qualifier	A lab split result	Qualifier
Location=AND; Formation=DISMAL GAP; Site=9,10,19; Sample type=Regular; A=7001; B=7004; C=7007; A lab split=' '; Phase=1									
Aluminum	mg/kg	23000.00		37900.00		42800.00			
Antimony	mg/kg	1.30	UJ	1.20	UJ	1.40	UJ		
Arsenic	mg/kg	6.60	J	5.90		3.00	B		
Barium	mg/kg	82.00		92.50		83.80			
Beryllium	mg/kg	0.84	B	0.91	B	1.10	B		
Boron	mg/kg	10.70	U	9.70	U	10.50	U		
Cadmium	mg/kg	0.25	U	0.24	U	0.25	U		
Calcium	mg/kg	894.00	B	598.00	B	341.00	B		
Chromium	mg/kg	25.90		34.60		38.80			
Cobalt	mg/kg	13.80		27.30		12.80			
Copper	mg/kg	12.20		18.40		34.10			
Cyanide	mg/kg	0.40	J	0.12	UJ	0.13	UJ		
Iron	mg/kg	25000.00		38600.00		41000.00			
Lead	mg/kg	28.30		26.40		25.90			
Lithium	mg/kg	9.80	B	23.00		24.40			
Magnesium	mg/kg	2710.00	J	2910.00	J	3010.00	J		
Manganese	mg/kg	1020.00		450.00		659.00			
Mercury	mg/kg	0.11		0.10	U	0.13	U		
Molybdenum	mg/kg	2.20	B	1.60	U	1.90	B		
Nickel	mg/kg	22.30		27.00		30.60			
Potassium	mg/kg	3160.00	J	3490.00	J	3810.00	J		
Selenium	mg/kg	0.81	B	0.78	B	0.53	B		
Silicon	mg/kg	246.00	J	209.00	J	222.00	J		
Silver	mg/kg	1.30	UJ	1.20	UJ	1.30	UJ		
Strontium	mg/kg	4.90		4.00		2.20			
Sulfate	mg/kg	20.50		32.00		13.40			
Thallium	mg/kg	0.51	U	0.47	U	0.50	U		
Vanadium	mg/kg	33.60		51.60		46.50			
Zinc	mg/kg	46.40		57.20		61.10			
Location=ORR; Formation=CHEPULTEPEC; Site=50,66,73; Sample type=Field duplicate; A=5173; B=5178; C=5184; A lab split=5174 Phase=2									
Aluminum	mg/kg	7670.00		19400.00		17500.00		8470.00	
Antimony	mg/kg	0.46	U	0.40	U	0.39	U	0.40	U
Arsenic	mg/kg	31.20	J	20.70	J	24.10	J	17.30	J
Barium	mg/kg	36.50	B	37.10	B	17.90	B	32.70	B
Beryllium	mg/kg	0.33	B	0.51	B	0.60	B	0.47	B
Boron	mg/kg	5.30	U	5.30	U	4.80	U	7.00	B
Cadmium	mg/kg	0.23	U	0.20	U	0.20	U	0.20	U
Calcium	mg/kg	439.00	B	244.00	B	208.00	B	463.00	B
Chromium	mg/kg	21.50	J	33.60	J	30.20	J	33.80	J
Cobalt	mg/kg	13.20	J	2.00	UJ	16.70	J	10.90	J
Copper	mg/kg	5.10	U	15.40		22.30		4.50	U
Iron	mg/kg	15900.00		29400.00		31400.00		22400.00	
Lead	mg/kg	29.80		7.80		34.80		12.80	
Lithium	mg/kg	6.50	J	20.70	J	12.10	J	6.80	U
Magnesium	mg/kg	376.00	B	790.00	B	599.00	B	361.00	B
Manganese	mg/kg	585.00		59.20		272.00		506.00	
Mercury	mg/kg	0.11	U	0.10	U	0.14		0.12	U
Molybdenum	mg/kg	2.90	U	2.90	U	2.60	U	2.90	U
Nickel	mg/kg	7.80	U	13.00	U	15.90		7.90	U
Potassium	mg/kg	300.00	UJ			906.00	J	359.00	UJ
Selenium	mg/kg			0.50	U	0.39	UJ		
Silicon	mg/kg	487.00		589.00		421.00		498.00	
Silver	mg/kg	0.89	U	0.88	U	0.79	U	0.89	U
Sodium	mg/kg	308.00	B	301.00	B	280.00	B	357.00	B
Strontium	mg/kg	2.40	U	1.40	U	0.22	U	2.20	U
Sulfate	mg/kg	65.10		44.90		17.40		89.50	
Vanadium	mg/kg	35.50		59.00		56.30		53.20	
Zinc	mg/kg	56.80	J	101.00	J	160.00	J	35.80	J

Table D.1 (continued)

Analysis	Units	A horizon result	Qualifier	B horizon result	Qualifier	C horizon result	Qualifier	A lab split result	Qualifier
Location=ORR; Formation=CHEPULTEPEC; Site=50,66,73; Sample type=Regular; A=5165; B=5170; C=5181; A lab split=5166; Phase=2									
Aluminum	mg/kg	8790.00		19700.00		19400.00		7450.00	
Antimony	mg/kg	0.44	U	0.40	U	0.40	U	0.43	U
Arsenic	mg/kg	7.10	J	21.50	J	30.60	J	13.00	J
Barium	mg/kg	31.60	B	54.20		31.70	B	37.80	B
Beryllium	mg/kg	0.55	B	0.58	B	0.75	B	0.28	B
Boron	mg/kg	5.50	U	5.00	U	5.60	B	5.30	U
Cadmium	mg/kg	0.22	U	0.20	U	0.20	U	0.22	U
Calcium	mg/kg	390.00	B	325.00	B	181.00	B	468.00	B
Chromium	mg/kg	26.90	J	30.40	J	33.10	J	13.30	J
Cobalt	mg/kg	9.80	J	1.60	UJ	16.10	J	12.70	J
Copper	mg/kg	3.60	U	19.20		27.90		4.70	U
Iron	mg/kg	30000.00		31400.00		37500.00		10200.00	
Lead	mg/kg	10.60		9.60		11.60		14.60	
Lithium	mg/kg	5.20	J	18.50	J	17.10	U	5.90	J
Magnesium	mg/kg	280.00	B	768.00	B	689.00	B	342.00	B
Manganese	mg/kg	766.00		59.00		306.00		639.00	
Mercury	mg/kg	0.11	U	0.09	U	0.11		0.10	
Molybdenum	mg/kg	3.00	U	2.70	U	2.70	J	2.90	U
Nickel	mg/kg	8.10	U	14.70	U	21.40		7.50	U
Potassium	mg/kg	218.00	UJ	1040.00	J	1080.00	J	316.00	UJ
Silicon	mg/kg	508.00		410.00		535.00		507.00	
Silver	mg/kg	0.91	U	0.83	U	0.82	U	0.89	U
Sodium	mg/kg	339.00	B	273.00	B	313.00	B	294.00	B
Strontium	mg/kg	1.80	U	2.00	U	0.20	U	2.30	U
Sulfate	mg/kg	68.90		51.70		18.10		73.50	
Vanadium	mg/kg	61.20		62.70		59.90		23.50	
Zinc	mg/kg	35.50	J	133.00	J	203.00	J	37.30	J
Location=ORR; Formation=CHEPULTEPEC; Site=52,53,78; Sample type=Regular; A=5127; B=5130; C=5133; A lab split=' '; Phase=2									
Aluminum	mg/kg	8440.00		15600.00		16300.00			
Antimony	mg/kg	0.42	U	0.42	U	0.43	U		
Arsenic	mg/kg	15.60		24.40		180.00			
Barium	mg/kg	58.90		28.40	B	12.80	B		
Beryllium	mg/kg	0.51	U	0.64	U	0.77	U		
Boron	mg/kg	5.00	U	5.20	U	5.20	U		
Cadmium	mg/kg	0.21	U	0.21	U	0.21	U		
Calcium	mg/kg	404.00	B	447.00	B	234.00	B		
Chromium	mg/kg	15.30	J	27.80	J	26.40	J		
Cobalt	mg/kg	11.30		6.10	U	3.00	B		
Copper	mg/kg	5.10	U	15.70		29.30	U		
Cyanide	mg/kg	1.00	U	1.00	U	1.00	U		
Iron	mg/kg	18400.00		33000.00	J	34400.00	J		
Lead	mg/kg	18.00		7.50		13.90			
Lithium	mg/kg	2.50	U	5.80	B	7.40	B		
Magnesium	mg/kg	341.00	B	672.00	B	890.00	B		
Manganese	mg/kg	1250.00		325.00		60.30			
Mercury	mg/kg	0.15	J	0.10	J	0.23	J		
Molybdenum	mg/kg	2.70	U	2.80	U	2.80	U		
Nickel	mg/kg	6.30	U	9.20	U	16.40			
Potassium	mg/kg	267.00	U	945.00	B	1530.00			
Selenium	mg/kg	0.50	J	0.42	B	0.75	B		
Silicon	mg/kg	554.00	J	602.00	J	596.00	J		
Silver	mg/kg	0.84	U	0.87	U	0.86	U		
Sodium	mg/kg	334.00	B	334.00	B	388.00	B		
Strontium	mg/kg	2.90	B	3.70	B	1.10	B		
Sulfate	mg/kg	60.50		25.00		10.80	U		
Thallium	mg/kg	0.42	U	0.42	U	0.43	U		
Vanadium	mg/kg	35.30	J	59.80	J	54.00	J		
Zinc	mg/kg	30.50	J	85.10	J	177.00	J		

Table D.1 (continued)

Analysis	Units	A horizon result	Qualifier	B horizon result	Qualifier	C horizon result	Qualifier	A lab split result	Qualifier
Location=ORR; Formation=CHEPULTEPEC; Site=68,74,90; Sample type=Regular; A=5154; B=5159; C=5162; A lab split=5155; Phase=2									
Aluminum	mg/kg	7490.00		19000.00		17500.00		7810.00	
Antimony	mg/kg	0.42	U	0.40	U	0.38	U	0.42	U
Arsenic	mg/kg	13.80	J	24.40	J	15.90	J	7.30	J
Barium	mg/kg	31.70	B	28.70	B	11.30	B	32.40	B
Beryllium	mg/kg	0.29	B	0.52	B	0.47	B	0.33	B
Boron	mg/kg	5.10	U	8.00	B	10.00	B	4.90	U
Cadmium	mg/kg	0.21	U	0.20	U	0.19	U	0.21	U
Calcium	mg/kg	338.00	B	506.00	B	230.00	B	349.00	B
Chromium	mg/kg	12.10	J	31.10	J	26.80	J	13.90	J
Cobalt	mg/kg	7.50	J	1.70	J	1.10	UJ	8.50	J
Copper	mg/kg	4.10	B	13.60		14.40		4.10	B
Iron	mg/kg	8500.00		33800.00		33100.00		10700.00	
Lead	mg/kg	25.30		10.90		10.60		11.90	
Lithium	mg/kg	12.10	J	15.30	U	14.40	U	4.40	J
Magnesium	mg/kg	329.00	B	733.00	B	590.00	B	341.00	B
Manganese	mg/kg	386.00		43.10		46.10		437.00	
Mercury	mg/kg	0.11	U	0.11		0.15		0.11	U
Molybdenum	mg/kg	2.70	U	2.90	J	2.90	J	2.70	U
Nickel	mg/kg	5.30	U	9.90	U	11.40	U	6.70	U
Potassium	mg/kg	307.00	UJ	1190.00	J	995.00	J	337.00	UJ
Silicon	mg/kg	514.00		611.00		569.00		483.00	
Silver	mg/kg	0.84	U	0.88	U	0.89	U	0.82	U
Sodium	mg/kg	286.00	B	332.00	B	302.00	B	303.00	B
Strontium	mg/kg	1.80	U	3.00	U	0.49	U	1.90	U
Sulfate	mg/kg	76.60		58.40		28.10			
Vanadium	mg/kg	19.00		65.70		62.00		24.90	
Zinc	mg/kg	21.40	J	59.90	J	60.80	J	22.10	J
Location=ORR; Formation=CHEPULTEPEC; Site=77,85,86; Sample type=Field duplicate; A=5145; B=5148; C=5151; A lab split=' '; Phase=2									
Aluminum	mg/kg	10300.00		19300.00		18400.00			
Antimony	mg/kg	0.41	U	0.43	U	0.42	U		
Arsenic	mg/kg	4.40		18.70		14.90			
Barium	mg/kg	151.00		45.40		149.00			
Beryllium	mg/kg	1.10	U	1.40	U	2.00	U		
Boron	mg/kg	5.00	U	4.80	U	5.00	U		
Cadmium	mg/kg	0.21	U	0.21	U	0.21	UJ		
Calcium	mg/kg	680.00	B	723.00	B	314.00	B		
Chromium	mg/kg	9.30	UJ	29.60	J	22.30	J		
Cobalt	mg/kg	16.90		10.20		71.40			
Copper	mg/kg	7.80		22.10		30.50			
Cyanide	mg/kg	1.00	U	1.00	U	1.00	U		
Iron	mg/kg	9350.00	J	38800.00	J	35700.00	J		
Lead	mg/kg	16.20		17.80		93.40	J		
Lithium	mg/kg	2.50	U	9.70	B	27.40			
Magnesium	mg/kg	513.00	B	1050.00		827.00	B		
Manganese	mg/kg	2430.00		264.00		2600.00			
Mercury	mg/kg	0.20	J	0.11	J	0.19	J		
Molybdenum	mg/kg	2.70	U	2.60	U	2.70	U		
Nickel	mg/kg	14.90		18.30		62.00			
Potassium	mg/kg	361.00	U	1020.00		1440.00			
Selenium	mg/kg	0.41	UJ	0.75	J	0.63	J		
Silicon	mg/kg	649.00	J	714.00	J	759.00	J		
Silver	mg/kg	0.84	U	0.80	U	0.84	U		
Sodium	mg/kg	348.00	B	314.00	B	332.00	B		
Strontium	mg/kg	4.80	B	5.60	B	1.30	B		
Sulfate	mg/kg	91.40		90.90		10.50	U		
Thallium	mg/kg	0.41	U	0.43	U	0.54	B		
Vanadium	mg/kg	18.80	J	64.40	J	57.10	J		
Zinc	mg/kg	99.20	J	266.00	J	467.00	J		

Table D.1 (continued)

Analysis	Units	A horizon result	Qualifier	B horizon result	Qualifier	C horizon result	Qualifier	A lab split result	Qualifier
Location=ORR; Formation=CHEPULTEPEC; Site=77,85,86; Sample type=Regular; A=5136; B=5139; C=5142; A lab split=' '; Phase=2									
Aluminum	mg/kg	9230.00		20600.00		18400.00			
Antimony	mg/kg	0.43	U	0.44	U	0.45	U		
Arsenic	mg/kg	7.00		13.70		15.10			
Barium	mg/kg	101.00		41.10	B	119.00			
Beryllium	mg/kg	0.88	U	1.50	U	1.80	U		
Boron	mg/kg	5.00	U	5.20	U	5.40	U		
Cadmium	mg/kg	0.22	U	0.22	U	0.22	U		
Calcium	mg/kg	585.00	B	979.00	B	447.00	B		
Chromium	mg/kg	11.70	J	26.50	J	24.90	J		
Cobalt	mg/kg	16.40		4.80	U	31.20			
Copper	mg/kg	5.90	U	20.60		26.80			
Cyanide	mg/kg	1.00	U	1.10	U	1.10	U		
Iron	mg/kg	14200.00	J	35100.00	J	36400.00	J		
Lead	mg/kg	20.70		10.80		17.60			
Lithium	mg/kg	3.10	U	12.40	B	17.50	B		
Magnesium	mg/kg	441.00	B	1230.00		895.00	B		
Manganese	mg/kg	2050.00		138.00		1880.00			
Mercury	mg/kg	0.18	J	0.14	J	0.12	J		
Molybdenum	mg/kg	2.70	U	2.80	U	2.90	U		
Nickel	mg/kg	10.50	U	22.00		39.60			
Potassium	mg/kg	305.00	U	1490.00		1410.00			
Selenium	mg/kg	0.56	J	0.48	J	0.56	J		
Silicon	mg/kg	592.00	J	700.00	J	683.00	J		
Silver	mg/kg	0.83	U	0.86	U	0.89	U		
Sodium	mg/kg	331.00	B	331.00	B	340.00	B		
Strontium	mg/kg	4.10	B	7.20	B	2.70	B		
Sulfate	mg/kg	79.90		36.40		12.30			
Thallium	mg/kg	0.43	U	0.44	U	0.45	U		
Vanadium	mg/kg	29.20	J	56.80	J	58.40	J		
Zinc	mg/kg	75.30	J	348.00	J	409.00	J		
Location=ORR; Formation=CHICKAMAUGA; Bethel V Site=101,102,103; Sample type=Regular; A=5196; B=5199; C=5202; A lab split=' '; Phase=2									
Aluminum	mg/kg	18000.00		28300.00		30900.00			
Antimony	mg/kg	0.45	UJ	0.44	UJ	0.43	UJ		
Arsenic	mg/kg	5.70	J	11.20	J	16.90	J		
Barium	mg/kg	103.00		142.00		140.00			
Beryllium	mg/kg	1.20		1.90		2.20			
Cadmium	mg/kg	0.23	UJ	0.22	UJ	0.21	UJ		
Calcium	mg/kg	3500.00		3640.00		6840.00			
Chromium	mg/kg	23.40	J	30.40	J	29.40	J		
Cobalt	mg/kg	15.20		11.60		31.90			
Copper	mg/kg	20.20		27.70		34.10			
Cyanide	mg/kg	1.10	U	1.10	U	1.10	U		
Iron	mg/kg	31000.00		50100.00		51000.00			
Lead	mg/kg	33.30	J	25.60	J	50.10	J		
Magnesium	mg/kg	2200.00		3060.00		4540.00			
Manganese	mg/kg	1510.00	J	539.00	J	667.00	J		
Mercury	mg/kg	0.21		0.10	U	0.09	U		
Nickel	mg/kg	18.50		28.80		39.10			
Potassium	mg/kg	2220.00		2370.00		2210.00			
Selenium	mg/kg	0.95	B	0.97	B	0.92	B		
Silver	mg/kg	0.89	U	0.88	U	0.86	U		
Sodium	mg/kg	377.00	B	433.00	B	409.00	B		
Sulfate	mg/kg	83.20		95.70		73.70			
Thallium	mg/kg	0.68	U	0.66	U	0.64	U		
Vanadium	mg/kg	28.60		36.00		34.20			
Zinc	mg/kg	51.30	J	63.60	J	99.00	J		
Location=ORR; Formation=CHICKAMAUGA; Bethel V Site=104,108,110; Sample type=Regular; A=5205; B=5208; C=5211; A lab split=' '; Phase=2									
Aluminum	mg/kg	16400.00		36100.00		35900.00			
Antimony	mg/kg	0.43	UJ	0.43	UJ	0.47	UJ		

Table D.1 (continued)

Analysis	Units	A horizon result	Qualifier	B horizon result	Qualifier	C horizon result	Qualifier	A lab split result	Qualifier
Arsenic	mg/kg	7.00		5.60	J	4.30			
Barium	mg/kg	72.50		125.00		160.00			
Beryllium	mg/kg	1.10		1.60		1.80			
Boron	mg/kg	4.70	U	4.80	U	4.80	U		
Cadmium	mg/kg	0.21	U	0.21	U	0.23	U		
Calcium	mg/kg	2020.00		2590.00		5960.00			
Chromium	mg/kg	44.70		44.50		38.60			
Cobalt	mg/kg	18.70		13.30		14.50			
Copper	mg/kg	11.40		21.20		25.60			
Cyanide	mg/kg	1.10	UJ	1.10	UJ	1.10	UJ		
Iron	mg/kg	43000.00		55400.00		55000.00			
Lead	mg/kg	32.40		25.60		40.00			
Lithium	mg/kg	10.20	B	29.80		33.70			
Magnesium	mg/kg	1180.00		2490.00		3130.00			
Manganese	mg/kg	740.00	J	291.00	J	645.00	J		
Mercury	mg/kg	0.16		0.11	U	0.11			
Molybdenum	mg/kg	2.60	U	2.60	U	2.60	U		
Nickel	mg/kg	12.30		21.60		26.20			
Potassium	mg/kg	1140.00		2700.00		2890.00			
Selenium	mg/kg	0.56	B	0.62	B	0.47	UJ		
Silicon	mg/kg	512.00	J	549.00	J	468.00	J		
Silver	mg/kg	0.86	U	0.86	U	0.93	U		
Sodium	mg/kg	414.00	B	384.00	B	485.00	B		
Strontium	mg/kg	5.60	J	7.80	J	15.00	J		
Sulfate	mg/kg	64.00		75.00		22.00			
Thallium	mg/kg	0.65	U	0.65	U	0.70	U		
Vanadium	mg/kg	48.00	J	55.90	J	47.70	J		
Zinc	mg/kg	37.70	J	58.60	J	70.40	J		
Location=ORR; Formation=CHICKAMAUGA Bethel V; Site=115,116,117; Sample type=Regular; A=5216; B=5222; C=5225; A lab split=5217; Phase=2									
Aluminum	mg/kg	16800.00		31500.00		39400.00		15400.00	
Antimony	mg/kg	0.46	UJ	0.45	UJ	0.46	UJ	0.45	UJ
Arsenic	mg/kg	5.90		6.80		3.80		5.70	
Barium	mg/kg	72.40		96.80		149.00		79.80	
Beryllium	mg/kg	0.95	B	1.20		2.40		0.78	B
Boron	mg/kg	4.80	U	4.70	U	4.80	U	4.80	U
Cadmium	mg/kg	0.23	U	0.23	U	0.23	U	0.23	U
Calcium	mg/kg	1710.00		1800.00		3460.00		1640.00	
Chromium	mg/kg	44.10		37.30		32.80		29.00	
Cobalt	mg/kg	17.60		17.30		37.70		19.50	
Copper	mg/kg	16.60		21.20		26.90		11.10	
Cyanide	mg/kg	1.10	UJ	1.10	UJ	1.10	UJ	1.10	UJ
Iron	mg/kg	39600.00		49200.00		55100.00		31400.00	
Lead	mg/kg			36.80		39.30			
Lithium	mg/kg	12.60	B	28.20		40.80		12.40	B
Magnesium	mg/kg	1200.00		2190.00		2960.00		1120.00	B
Manganese	mg/kg	986.00	J	328.00	J	687.00	J	1390.00	J
Mercury	mg/kg	0.15		0.11	U	0.12		0.15	
Molybdenum	mg/kg	2.60	U	2.90	B	2.60	U	2.60	U
Nickel	mg/kg	10.40		17.90		32.70		10.00	
Potassium	mg/kg	1630.00		2870.00		3100.00		1750.00	
Selenium	mg/kg	0.55	B	0.63	B	0.46	U	0.57	B
Silicon	mg/kg	471.00	J	557.00	J	526.00	J	545.00	J
Silver	mg/kg	0.92	U	0.90	U	0.92	U	0.91	U
Sodium	mg/kg	407.00	B	449.00	B	440.00	B	392.00	B
Strontium	mg/kg	5.60	J	6.10	J	11.70	J	5.30	J
Sulfate	mg/kg	79.00		65.00		18.00		88.00	
Thallium	mg/kg	0.69	U	0.67	U	0.69	U	0.69	U
Vanadium	mg/kg	46.50	J	52.90	J	49.70	J	37.60	J
Zinc	mg/kg	52.30	J	52.00	J	80.50	J	38.80	J
Location=ORR; Formation=CHICKAMAUGA Bethel V; Site=93,99,100; Sample type=Regular; A=5187; B=5190; C=5193; A lab split=' '; Phase=2									
Aluminum	mg/kg	15700.00		24100.00		28300.00			
Antimony	mg/kg	0.45	UJ	0.44	UJ	0.48	J		
Arsenic	mg/kg	6.60	J	5.80	J	5.50	J		
Barium	mg/kg	70.60		94.60		133.00			

Table D.1 (continued)

Analysis	Units	A horizon result	Qualifier	B horizon result	Qualifier	C horizon result	Qualifier	A lab split result	Qualifier
Beryllium	mg/kg	0.94	B	1.20		1.40			
Cadmium	mg/kg	0.22	UJ	0.22	UJ	0.23	UJ		
Calcium	mg/kg	1000.00	B	1400.00		3160.00			
Chromium	mg/kg	34.80	J	26.80	J	32.30	J		
Cobalt	mg/kg	22.10		12.30		16.10			
Copper	mg/kg	21.70		25.00		30.30			
Cyanide	mg/kg	1.10	U	1.10	U	1.10	U		
Iron	mg/kg	35300.00		41800.00		50200.00			
Lead	mg/kg	42.00	J	6.80	J	32.60	J		
Magnesium	mg/kg	1210.00		1760.00		2600.00			
Manganese	mg/kg	928.00	J	395.00	J	701.00	J		
Mercury	mg/kg	0.13		0.10	U	0.11	U		
Nickel	mg/kg	14.10		23.30		30.90			
Potassium	mg/kg	1350.00		1810.00		1870.00			
Selenium	mg/kg	1.00	B	1.00	B	0.97	B		
Silver	mg/kg	0.88	U	0.91	U	0.92	U		
Sodium	mg/kg	378.00	B	402.00	B	352.00	B		
Sulfate	mg/kg	181.00		85.40		62.20			
Thallium	mg/kg	0.67	U	0.66	U	0.68	U		
Vanadium	mg/kg	30.90		35.60		38.80			
Zinc	mg/kg	46.20		62.20	J	84.30	J		
Location=ORR; Formation=CHICKAMAUGA K-25; Site=118,122,124; Sample type=Regular; A=5240; B=5246; C=5249; A lab split=5241; Phase=2									
Aluminum	mg/kg	15900.00		32900.00		36100.00		16500.00	
Antimony	mg/kg	0.51	UJ	0.45	UJ	0.43	UJ	0.51	UJ
Arsenic	mg/kg	8.50		7.00		3.80		9.80	
Barium	mg/kg	92.80		87.40		80.60		84.70	
Beryllium	mg/kg	1.00	B	2.20		2.00		1.10	B
Boron	mg/kg	6.10	UJ	5.40	UJ	5.10	UJ	6.10	UJ
Cadmium	mg/kg	0.25	U	0.23	U	0.21	U	0.25	U
Calcium	mg/kg	3420.00		2400.00		5110.00		3540.00	
Chromium	mg/kg	28.20	J	31.10	J	29.50	J	35.10	J
Cobalt	mg/kg	23.60		36.60		28.40		16.70	
Copper	mg/kg	19.10		23.00		22.60		19.70	
Cyanide	mg/kg	1.30	UJ	1.10	UJ	1.10	UJ	1.30	UJ
Iron	mg/kg	37100.00		58200.00		51200.00		42300.00	
Lead	mg/kg	37.70		27.10		23.00		37.30	
Lithium	mg/kg	15.00	B	32.10		37.00		14.90	B
Magnesium	mg/kg	1150.00	B	2140.00		2430.00		1160.00	B
Manganese	mg/kg	1600.00	J	496.00	J	341.00	J	1240.00	J
Mercury	mg/kg	0.80		0.11		0.11		0.75	
Molybdenum	mg/kg	3.30	U	2.90	U	2.80	U	3.30	U
Nickel	mg/kg	24.60		28.40		28.20		26.10	
Potassium	mg/kg	2160.00		3880.00		3850.00		2190.00	
Selenium	mg/kg	0.78	J	0.60	B	0.47	B	0.87	B
Silicon	mg/kg	705.00		913.00		879.00		682.00	
Silver	mg/kg	1.00	U	0.90	U	0.86	U	1.00	U
Sodium	mg/kg	477.00	B	461.00	B	446.00	B	502.00	B
Strontium	mg/kg	9.60	B	6.80	B	6.70	B	9.80	B
Sulfate	mg/kg	181.00		334.00		24.90		162.00	
Thallium	mg/kg	0.78	U	0.67	U	0.65	U	0.77	UJ
Vanadium	mg/kg	37.70	J	51.60	J	46.10	J	41.30	J
Zinc	mg/kg	60.20	J	72.60	J	72.20	J	65.70	J
Location=ORR; Formation=CHICKAMAUGA K-25; Site=119,123,127; Sample type=Regular; A=5252; B=5257; C=5260; A lab split=5253; Phase=2									
Aluminum	mg/kg	22400.00		40300.00		40500.00		21300.00	
Antimony	mg/kg	0.48	UJ	0.43	UJ	0.44	UJ	0.48	UJ
Arsenic	mg/kg	8.70		11.10		10.80		9.40	
Barium	mg/kg	99.70		133.00		158.00		96.30	
Beryllium	mg/kg	1.40		1.90		1.90		1.30	
Boron	mg/kg	5.70	UJ	5.20	UJ	5.30	UJ	5.70	UJ
Cadmium	mg/kg	0.24	U	0.22	U	0.22	U	0.24	U
Calcium	mg/kg	1430.00		1530.00		1840.00		1410.00	
Chromium	mg/kg	39.80	J	39.00	J	36.00	J	29.80	J
Cobalt	mg/kg	19.40		10.80	B	21.50		18.30	

Table D.1 (continued)

Analysis	Units	A horizon result	Qualifier	B horizon result	Qualifier	C horizon result	Qualifier	A lab split result	Qualifier
Copper	mg/kg	11.30		15.00		16.30		11.00	
Cyanide	mg/kg	1.20	UJ	1.10	UJ	1.10	UJ	1.20	UJ
Iron	mg/kg	39600.00		56600.00		57400.00		37800.00	
Lead	mg/kg	31.30		15.50		15.50		31.90	
Lithium	mg/kg	20.50	B	42.30		49.90		21.10	B
Magnesium	mg/kg	1350.00		2880.00		2670.00		1390.00	
Manganese	mg/kg	2350.00	J	612.00	J	2240.00	J	2210.00	J
Mercury	mg/kg	0.65		0.17		0.16		0.61	
Molybdenum	mg/kg	3.10	U	2.80	U	2.90	U	3.10	U
Nickel	mg/kg	19.30		22.00		24.20		19.90	
Potassium	mg/kg	2230.00		4660.00		3900.00		2320.00	
Selenium	mg/kg	0.83	B	1.00	B	0.69	B	1.10	B
Silicon	mg/kg	660.00		802.00		782.00		732.00	
Silver	mg/kg	0.96	U	0.87	U	0.89	U	0.95	U
Sodium	mg/kg	452.00	B	497.00	B	454.00	B	440.00	B
Strontium	mg/kg	40.80	B	63.10		44.50	B	39.20	B
Sulfate	mg/kg	319.00		169.00		255.00		395.00	
Thallium	mg/kg	0.71	U	0.65	U	0.66	U	0.72	U
Vanadium	mg/kg	43.20	J	55.30	J	53.70	J	40.70	J
Zinc	mg/kg	58.40	J	89.70	J	71.20	J	57.60	J
Location=ORR; Formation=CHICKAMAUGA K-25; Site=120,126,129; Sample type=Regular; A=5228; B=5234; C=5237; A lab split=5229; Phase=2									
Aluminum	mg/kg	16000.00		35900.00		30300.00		16600.00	
Antimony	mg/kg	0.46	UJ	0.43	UJ	0.44	UJ	0.46	UJ
Arsenic	mg/kg	6.30		7.60		6.40		7.70	
Barium	mg/kg	77.00		74.60		51.40		78.90	
Beryllium	mg/kg	0.69	B	0.93	B	0.96	B	0.65	B
Boron	mg/kg	4.80	U	4.80	U	4.80	U	4.70	U
Cadmium	mg/kg	0.23	U	0.22	U	0.22	U	0.23	U
Calcium	mg/kg	808.00	B	396.00	B	361.00	B	815.00	B
Chromium	mg/kg	44.60		48.50		32.20		36.20	
Cobalt	mg/kg	20.10		7.50	B	4.00	B	19.50	
Copper	mg/kg	10.10		18.20		22.40		9.70	
Cyanide	mg/kg	1.20	UJ	1.00	UJ	1.10	UJ	1.10	UJ
Iron	mg/kg	24600.00		58600.00		61000.00		24300.00	
Lead	mg/kg	38.40		12.80		15.40		39.40	
Lithium	mg/kg	9.10	B	26.10		22.60		9.70	B
Magnesium	mg/kg	794.00	B	1610.00		1580.00		827.00	B
Manganese	mg/kg	1730.00	J	206.00	J	102.00	J	1850.00	J
Mercury	mg/kg	0.40		0.11		0.17		0.36	
Molybdenum	mg/kg	2.60	U	3.10	B	2.60	U	2.60	U
Nickel	mg/kg	15.80		18.40		19.60		16.90	
Potassium	mg/kg	1050.00	B	2620.00		3130.00		1080.00	B
Selenium	mg/kg	0.73	B	0.92	UJ	0.70	B	0.70	B
Silicon	mg/kg	546.00	J	710.00	J	695.00	J	576.00	J
Silver	mg/kg	0.92	U	0.87	U	0.88	U	0.92	U
Sodium	mg/kg	378.00	B	401.00	B	430.00	B	380.00	B
Strontium	mg/kg	4.70	J	5.60	J	6.50	J	4.80	J
Sulfate	mg/kg	62.00		59.00		18.00		57.00	
Thallium	mg/kg	0.69	U	0.64	U	0.66	U	0.70	U
Vanadium	mg/kg	39.00	J	74.40	J	53.60	J	40.20	J
Zinc	mg/kg	36.80	J	68.60	J	62.00	J	36.50	J
Location=ORR; Formation=CHICKAMAUGA K-25; Site=121,125,128; Sample type=Regular; A=5263; B=5268; C=5271; A lab split=5264 Phase=2									
Aluminum	mg/kg	13100.00		30800.00		31300.00		12800.00	
Antimony	mg/kg	0.44	UJ	0.44	UJ	0.41	UJ	0.44	UJ
Arsenic	mg/kg	6.20		5.10	B	8.10		5.40	
Barium	mg/kg	51.20		73.70		59.60		51.00	
Beryllium	mg/kg	0.77	B	1.10	B	1.10		0.69	B
Boron	mg/kg	5.30	UJ	5.30	UJ	5.00	UJ	5.30	UJ
Cadmium	mg/kg	0.22	U	0.22	U	0.21	U	0.22	U
Calcium	mg/kg	862.00	B	1390.00		638.00	B	852.00	B
Chromium	mg/kg	31.40	J	23.30	J	21.50	J	18.80	J
Cobalt	mg/kg	21.50		8.70	B	16.90		17.30	
Copper	mg/kg	8.10		16.40		15.90		7.80	

Table D.1 (continued)

Analysis	Units	A horizon result	Qualifier	B horizon result	Qualifier	C horizon result	Qualifier	A lab split result	Qualifier
Cyanide	mg/kg	1.10	UJ	1.00	UJ	0.98	UJ	1.10	UJ
Iron	mg/kg	26600.00		47800.00		46300.00		22300.00	
Lead	mg/kg	23.40	J	14.30		14.20		19.80	
Lithium	mg/kg	10.70	B	31.80		40.30		13.10	B
Magnesium	mg/kg	1050.00	B	2850.00		2700.00		1110.00	
Manganese	mg/kg	1500.00	J	186.00	J	241.00	J	1190.00	J
Mercury	mg/kg	0.30		0.10	U	0.11		0.34	
Molybdenum	mg/kg	2.90	U	2.90	U	2.70	U	2.80	U
Nickel	mg/kg	11.40		19.20		20.70		10.20	
Potassium	mg/kg	1520.00		4710.00		4470.00		1570.00	
Selenium	mg/kg	0.62	B	0.66	J	0.41	U	0.57	B
Silicon	mg/kg	626.00		748.00		661.00		586.00	
Silver	mg/kg	0.88	U	0.88	U	0.83	U	0.88	U
Sodium	mg/kg	382.00	B	466.00	B	421.00	B	414.00	B
Strontium	mg/kg	9.60	B	17.90	B	13.70	B	10.50	B
Sulfate	mg/kg	355.00		107.00		32.00		194.00	
Thallium	mg/kg	0.67	U	0.66	U	0.62	U	0.66	U
Vanadium	mg/kg	31.70	J	36.30	J	33.20	J	23.20	J
Zinc	mg/kg	33.50	J	56.80	J	57.40	J	33.70	J

Location=ORR; Formation=COPPER RIDGE; Site=45,60,75; Sample type=Regular; A=5109; B=5112; C=5115; A lab split=' '; Phase=2

Aluminum	mg/kg	10500.00		19400.00		14200.00			
Antimony	mg/kg	0.42	U	0.41	U	0.41	U		
Arsenic	mg/kg	11.30	J	27.10	J	56.30	J		
Barium	mg/kg	79.90		48.50		9.10	B		
Beryllium	mg/kg	0.54	B	0.50	B	0.62	B		
Boron	mg/kg	5.00	U	5.10	U	5.00	U		
Cadmium	mg/kg	0.21	U	0.21	U	0.21	U		
Calcium	mg/kg	518.00	B	377.00	B	154.00	B		
Chromium	mg/kg	23.90		30.30		22.20			
Cobalt	mg/kg	5.50	B	3.30	B	2.40	U		
Copper	mg/kg	5.90		12.40		23.70			
Cyanide	mg/kg	0.92	UJ	0.96	UJ				
Iron	mg/kg	13200.00	J	27800.00	J	32000.00	J		
Lead	mg/kg	18.20	J	13.00	J	30.80	J		
Lithium	mg/kg	3.10	B	9.60	B	2.50	U		
Magnesium	mg/kg	445.00	B	671.00	B	337.00	B		
Manganese	mg/kg	940.00	J	367.00	J	84.70	J		
Mercury	mg/kg	0.15		0.10		0.30			
Molybdenum	mg/kg	1.50	U	1.50	U	2.60	B		
Nickel	mg/kg	7.80	B	9.80		12.50			
Potassium	mg/kg	398.00	B	618.00	B	609.00	B		
Selenium	mg/kg	0.70	B	0.71	B	0.66	B		
Silver	mg/kg	1.00	U	1.10	U	1.10	U		
Sodium	mg/kg	352.00	B	352.00	B	349.00	B		
Strontium	mg/kg	3.70	B	2.90	B	0.25	U		
Sulfate	mg/kg	47.80		45.30		10.50			
Thallium	mg/kg	0.42	U	0.41	U	0.41	U		
Vanadium	mg/kg	31.10	J	57.00	J	61.50	J		
Zinc	mg/kg	30.20		55.40		124.00	UJ		

Location=ORR; Formation=COPPER RIDGE; Site=51,55,62; Sample type=Regular; A=5100; B=5104; C=5106; A lab split=' '; Phase=2

Aluminum	mg/kg	9780.00		12400.00		14300.00			
Antimony	mg/kg	0.43	U	0.43	U	0.45	U		
Arsenic	mg/kg	17.70	J	38.90	J	58.40	J		
Barium	mg/kg	62.90		36.30	B	10.00	B		
Beryllium	mg/kg	0.51	B	0.49	B	0.81	B		
Boron	mg/kg	4.90	U	5.20	U	5.40	U		
Cadmium	mg/kg	0.21	U	0.22	U	0.22	U		
Calcium	mg/kg	398.00	B	447.00	B	219.00	B		
Chromium	mg/kg	10.50		26.20		32.00			
Cobalt	mg/kg	6.40	B	1.80	U	4.20	B		
Copper	mg/kg	5.40		14.60		31.70			
Cyanide	mg/kg	1.20	UJ	1.10	UJ	0.99	UJ		
Iron	mg/kg	9700.00	J	29000.00	J	39800.00	J		

Table D.1 (continued)

Analysis	Units	A horizon result	Qualifier	B horizon result	Qualifier	C horizon result	Qualifier	A lab split result	Qualifier
Lead	mg/kg	25.10	J	18.50	J	39.20	J		
Lithium	mg/kg	2.80	B	4.20	B	4.00	B		
Magnesium	mg/kg	411.00	B	385.00	B	345.00	B		
Manganese	mg/kg	943.00	J	73.60	J	106.00	J		
Mercury	mg/kg	0.14		0.11		0.30			
Molybdenum	mg/kg	1.40	U	2.90	B	3.00	B		
Nickel	mg/kg	7.40	B	7.60	B	14.80			
Potassium	mg/kg	274.00	B	428.00	B	707.00	B		
Selenium	mg/kg	0.60	B	0.89	B	1.00	B		
Silver	mg/kg	1.00	U	1.10	U	1.10	U		
Sodium	mg/kg	360.00	B	371.00	B	358.00	B		
Strontium	mg/kg	2.70	B	2.90	B	0.68	U		
Sulfate	mg/kg	44.20		51.00		17.20			
Thallium	mg/kg	0.43	U	0.43	U	0.45	U		
Vanadium	mg/kg	21.70	J	57.80	J	81.30	J		
Zinc	mg/kg	29.20		67.10		148.00			
Location=ORR; Formation=COPPER RIDGE; Site=54,64,83; Sample type=Regular; A=5118; B=5121; C=5124; A lab split=' '; Phase=2									
Aluminum	mg/kg	10300.00		21200.00		23400.00			
Antimony	mg/kg	0.43	U	0.41	U	0.44	U		
Arsenic	mg/kg	25.00		512.00		655.00			
Barium	mg/kg	71.00		43.60		14.10	B		
Beryllium	mg/kg	0.54	U	0.76	U	0.90	U		
Boron	mg/kg	5.20	U	5.10	U	5.40	U		
Cadmium	mg/kg	0.22	U	0.20	UJ	0.22	U		
Calcium	mg/kg	529.00	B	259.00	B	185.00	U		
Chromium	mg/kg	13.10	J	25.70	J	27.50	J		
Cobalt	mg/kg	19.10		5.10	U	3.60	U		
Copper	mg/kg	10.90	U	28.10		33.50			
Cyanide	mg/kg	1.10	U	1.00	U	1.00	U		
Iron	mg/kg	11500.00	J	33900.00	J	42000.00	J		
Lead	mg/kg	165.00	J	22.10		31.20			
Lithium	mg/kg	3.80	U	7.80	B	6.60	B		
Magnesium	mg/kg	487.00	B	739.00	B	722.00	B		
Manganese	mg/kg	1530.00		120.00		91.80			
Mercury	mg/kg	0.18	J	0.10	J	0.15	J		
Molybdenum	mg/kg	2.80	U	4.90	B	6.20	B		
Nickel	mg/kg	11.00	U	17.60		21.30			
Potassium	mg/kg	413.00	B	727.00	B	1040.00	B		
Selenium	mg/kg	0.56	B	0.69	B	0.70	J		
Silicon	mg/kg	633.00	J	663.00	J	637.00	J		
Silver	mg/kg	0.86	U	0.86	U	0.89	U		
Sodium	mg/kg	359.00	U	361.00	B	350.00	B		
Strontium	mg/kg	3.70	B	1.50	B	0.45	U		
Sulfate	mg/kg	132.00		39.00		11.10	U		
Thallium	mg/kg	0.43	U	0.41	B	0.44	U		
Vanadium	mg/kg	26.00	J	66.00	J	74.30	J		
Zinc	mg/kg	41.30	J	90.40	J	133.00	J		
Location=ORR; Formation=COPPER RIDGE; Site=58,59,91; Sample type=Regular; A=5091; B=5094; C=5097; A lab split=' '; Phase=2									
Aluminum	mg/kg	11600.00		16400.00		21300.00			
Antimony	mg/kg	0.46	U	0.45	U	0.48	U		
Arsenic	mg/kg	67.10	J	72.80	J	97.40	J		
Barium	mg/kg	74.40		32.60	B	14.20	B		
Beryllium	mg/kg	0.57	B	0.71	B	0.96	B		
Boron	mg/kg	5.50	U	5.60	U	5.90	U		
Cadmium	mg/kg	0.23	U	0.23	U	0.24	U		
Calcium	mg/kg	594.00	B	216.00	B	151.00	B		
Chromium	mg/kg	17.20		36.30		35.70			
Cobalt	mg/kg	5.40	B	2.50	U	2.00	U		
Copper	mg/kg	7.80		23.60		35.90			
Cyanide	mg/kg	1.10	UJ	0.84	UJ	0.99	UJ		
Iron	mg/kg	13900.00	J	41700.00	J	53900.00	J		
Lead	mg/kg	28.20	J	22.10	J	34.90	J		
Lithium	mg/kg	2.80	U	5.10	B	4.90	B		

Table D.1 (continued)

Analysis	Units	A horizon result	Qualifier	B horizon result	Qualifier	C horizon result	Qualifier	A lab split result	Qualifier
Magnesium	mg/kg	517.00	B	550.00	B	495.00	B		
Manganese	mg/kg	959.00	J	116.00	J	88.70	J		
Mercury	mg/kg	0.16		0.12		0.28			
Molybdenum	mg/kg	1.80	B	4.50	B	4.30	B		
Nickel	mg/kg	8.10	B	13.20		15.80			
Potassium	mg/kg	416.00	B	661.00	B	904.00	B		
Selenium	mg/kg	0.70	B	1.00	B	1.30			
Silver	mg/kg	1.20	U	1.20	U	1.20	U		
Sodium	mg/kg	379.00	B	345.00	B	380.00	B		
Strontium	mg/kg	4.10	B	1.40	U	0.52	U		
Sulfate	mg/kg	57.30		45.30		12.40	U		
Thallium	mg/kg	0.46	U	0.45	U	0.48	U		
Vanadium	mg/kg	27.80	J	74.20	J	101.00	J		
Zinc	mg/kg	40.90		103.00		146.00			
Location=ORR; Formation=DISMAL GAP; Site=10,33,35; Sample type=Regular; A=5019; B=5022; C=5025; A lab split=' '; Phase=1									
Aluminum	mg/kg	16900.00		25600.00		42600.00			
Antimony	mg/kg	0.22	UJ	0.23	UJ	0.31	U		
Arsenic	mg/kg	7.30	B	8.00	B	10.70	B		
Barium	mg/kg	77.20		89.00		123.00			
Beryllium	mg/kg	0.55	B	0.39	B	0.97	B		
Boron	mg/kg	21.10	J	21.20	J	34.00	J		
Cadmium	mg/kg	0.22	U	0.23	U	0.31	U		
Calcium	mg/kg	991.00		892.00	U	1290.00			
Chromium	mg/kg	22.50		36.90		57.30			
Cobalt	mg/kg	11.30		7.10	B	16.80			
Copper	mg/kg	15.00	J	20.50	J	29.90	J		
Cyanide	mg/kg	0.44	J	0.46	J	0.63	J		
Iron	mg/kg	33900.00	J	34600.00	J	52000.00	J		
Lead	mg/kg	17.00	B	15.00	B	25.30	B		
Lithium	mg/kg	15.20		22.80		33.00			
Magnesium	mg/kg	2330.00		3170.00		5190.00			
Manganese	mg/kg	791.00		212.00		462.00			
Mercury	mg/kg	0.34		0.17	U	0.21	U		
Molybdenum	mg/kg	9.00	U	9.30	U	12.80	U		
Nickel	mg/kg	19.50		20.20		30.20			
Osmium	mg/kg	14.00	UJ	14.70	UJ	19.90	UJ		
Potassium	mg/kg	1960.00		2280.00		3800.00			
Selenium	mg/kg	0.68	U	0.48	U	0.62	U		
Silicon	mg/kg	488.00	J	401.00	J	623.00	J		
Silver	mg/kg	2.00	U	2.00	U	2.80	U		
Strontium	mg/kg	6.10		7.00		10.50			
Sulfate	mg/kg	57.60	J	75.30	J	200.00	J		
Thallium	mg/kg	0.79	B	0.61	B	0.31	U		
Vanadium	mg/kg	37.70		40.00		60.10			
Zinc	mg/kg	45.30		49.70		69.80			
Location=ORR; Formation=DISMAL GAP; Site=11,27,41; Sample type=Regular; A=5001; B=5004; C=5007; A lab split=' '; Phase=1									
Aluminum	mg/kg	18500.00		34600.00		38100.00			
Antimony	mg/kg	0.23	UJ	0.24	UJ	0.23	UJ		
Arsenic	mg/kg	5.50	B	4.00	B	18.30	B		
Barium	mg/kg	88.60		83.60		82.70			
Beryllium	mg/kg	0.62	B	0.67	B	1.00	B		
Boron	mg/kg	19.80	U	34.00	J	33.40	J		
Cadmium	mg/kg	0.23	U	0.24	U	0.23	U		
Calcium	mg/kg	1050.00		695.00		606.00			
Chromium	mg/kg	19.40		36.00		45.50			
Cobalt	mg/kg	12.20		7.40	B	6.30	B		
Copper	mg/kg	16.80	J	2.80	J	35.50	J		
Cyanide	mg/kg	0.12	UJ	-0.01	UJ	-0.04	UJ		
Iron	mg/kg	25500.00	J	42300.00	J	43300.00	J		
Lead	mg/kg	35.40	B	10.70	B	12.50	B		
Lithium	mg/kg	14.00		26.60		28.90			
Magnesium	mg/kg	2090.00	J	3170.00	J	3980.00	J		
Manganese	mg/kg	1020.00		272.00		85.00			

Table D.1 (continued)

Analysis	Units	A horizon result	Qualifier	B horizon result	Qualifier	C horizon result	Qualifier	A lab split result	Qualifier
Mercury	mg/kg	0.31	J	0.17	J	0.06	J		
Molybdenum	mg/kg	9.50	U	9.80	U	9.50	U		
Nickel	mg/kg	19.50		23.30		26.30			
Osmium	mg/kg	14.80	UJ	15.20	UJ	14.80	UJ		
Potassium	mg/kg	1890.00	J	2380.00	J	2940.00	J		
Selenium	mg/kg	0.60	U	0.33	U	0.23	U		
Silicon	mg/kg	486.00	J	383.00	J	442.00	J		
Silver	mg/kg	2.10	U	2.20	U	2.10	U		
Strontium	mg/kg	7.00		5.90		5.90			
Sulfate	mg/kg	163.00	J	141.00	J	135.00	J		
Thallium	mg/kg	0.23	U	0.24	U	0.32	B		
Vanadium	mg/kg	31.60		4.80	B	44.70			
Zinc	mg/kg	42.50		55.60		59.80			
Location=ORR; Formation=DISMAL GAP; Site=19,22,32; Sample type=Regular; A=5010; B=5013; C=5016; A lab split=' '; Phase=1									
Aluminum	mg/kg	18000.00		36900.00		37100.00			
Antimony	mg/kg	0.21	UJ	0.22	U	0.22	U		
Arsenic	mg/kg	6.80	B	19.50	B	20.20	B		
Barium	mg/kg	89.10		117.00		124.00			
Beryllium	mg/kg	0.66	B	0.86	B	0.71	B		
Boron	mg/kg			33.70	J	28.60	J		
Cadmium	mg/kg	0.21	U	0.22	U	0.22	U		
Calcium	mg/kg	805.00	U	1130.00		992.00			
Chromium	mg/kg	27.70		37.20		41.90			
Cobalt	mg/kg	12.80		10.80	B	12.30			
Copper	mg/kg	12.40	J	24.20	J	22.40	J		
Cyanide	mg/kg			0.44	J	0.45	J		
Iron	mg/kg	23800.00	J	39900.00	J	39400.00	J		
Lead	mg/kg	14.60	B	14.80	B	13.30	B		
Lithium	mg/kg			26.30		27.90			
Magnesium	mg/kg	2490.00		3430.00		3650.00			
Manganese	mg/kg	768.00		306.00		807.00			
Mercury	mg/kg	0.30		0.17		0.13	U		
Molybdenum	mg/kg	8.70	U	9.00	U	9.10	U		
Nickel	mg/kg	19.50		23.30		25.30			
Osmium	mg/kg			14.20	UJ	14.30	UJ		
Potassium	mg/kg	2010.00		2980.00		2710.00			
Selenium	mg/kg	0.36	U	0.84	U	0.22	U		
Silicon	mg/kg	477.00	J	530.00	J	511.00	J		
Silver	mg/kg	1.90	U	2.00	U	2.00	U		
Strontium	mg/kg			10.20		10.90			
Sulfate	mg/kg			93.90	J	125.00	J		
Thallium	mg/kg	0.21	U	0.46	B	0.64	B		
Vanadium	mg/kg	27.90		41.80		43.50			
Zinc	mg/kg	42.30		50.60		54.80			
Location=ORR; Formation=DISMAL GAP; Site=2,26,43; Sample type=Field duplicate; A=5037; B=5040; C=5043; A lab split=' '; Phase=1									
Aluminum	mg/kg	20400.00		26800.00		35900.00			
Antimony	mg/kg	0.23	U	0.23	U	0.24	U		
Arsenic	mg/kg	5.30		4.90		6.10			
Barium	mg/kg	104.00		100.00		112.00			
Beryllium	mg/kg	1.10	B	1.30		1.50			
Boron	mg/kg	9.80	U	11.80		20.70			
Cadmium	mg/kg	0.23	U	0.23	U	0.24	U		
Calcium	mg/kg	788.00	U	801.00	U	837.00			
Chromium	mg/kg	29.00		34.30		46.80			
Cobalt	mg/kg	13.70		13.90		7.70	B		
Copper	mg/kg	13.30		16.70		22.00			
Cyanide	mg/kg	0.12	UJ	0.12	UJ	0.12	UJ		
Iron	mg/kg	24000.00		31800.00		38000.00			
Lead	mg/kg	18.90		7.80		12.30			
Lithium	mg/kg	12.70		14.20		20.70			
Magnesium	mg/kg	3390.00		3260.00		5100.00			
Manganese	mg/kg	970.00		399.00		180.00			
Mercury	mg/kg	0.40		0.15	U	0.15	U		

Table D.1 (continued)

Analysis	Units	A horizon result	Qualifier	B horizon result	Qualifier	C horizon result	Qualifier	A lab split result	Qualifier
Molybdenum	mg/kg	9.50	U	9.50	U	9.80	U		
Nickel	mg/kg	25.30		24.60		33.30			
Potassium	mg/kg	2130.00		2550.00		3170.00			
Selenium	mg/kg	1.20	U	1.20	U	1.20	U		
Silicon	mg/kg	461.00		559.00		489.00			
Silver	mg/kg	2.10	U	2.10	U	2.10	U		
Strontium	mg/kg	6.60		8.20		9.80			
Sulfate	mg/kg	111.00		72.40		79.50			
Thallium	mg/kg	0.28	U	0.23	U	0.38	U		
Vanadium	mg/kg	27.90	J	35.10	J	39.60	J		
Zinc	mg/kg	53.60		48.60		62.70			
Location=ORR; Formation=DISMAL GAP; Site=2,26,43; Sample type=Regular; A=5028; B=5031; C=5034; A lab split=' '; Phase=1									
Aluminum	mg/kg	44300.00		30300.00		41200.00			
Antimony	mg/kg	0.21	U	0.23	U	0.24	U		
Arsenic	mg/kg	5.80		6.80		6.70			
Barium	mg/kg	212.00		101.00		110.00			
Beryllium	mg/kg	2.20		1.20		1.60			
Boron	mg/kg	16.40		9.80	U	13.90			
Cadmium	mg/kg	0.21	U	0.23	U	0.24	U		
Calcium	mg/kg	1860.00		708.00	U	729.00	U		
Chromium	mg/kg	32.10		45.10		35.30			
Cobalt	mg/kg	36.70		8.40	B	24.00			
Copper	mg/kg	30.10		18.30		35.30			
Cyanide	mg/kg	0.11	UJ	0.12	UJ	0.12	UJ		
Iron	mg/kg	49000.00		34600.00		38900.00			
Lead	mg/kg	19.80		8.40		9.90			
Lithium	mg/kg	27.00		15.70		22.90			
Magnesium	mg/kg	7430.00		3430.00		4530.00			
Manganese	mg/kg	2220.00		285.00		699.00			
Mercury	mg/kg	0.23		0.15	U	0.15	U		
Molybdenum	mg/kg	9.20	U	9.60	U	9.80	U		
Nickel	mg/kg	56.70		25.20		35.20			
Potassium	mg/kg	5390.00		2980.00		3150.00			
Selenium	mg/kg	1.00	U	1.20	U	1.20	U		
Silicon	mg/kg	697.00		868.00		503.00			
Silver	mg/kg	2.00	U	2.10	U	2.10	U		
Strontium	mg/kg	16.80		7.00		9.40			
Sulfate	mg/kg	28.00		151.00		85.50			
Thallium	mg/kg	0.44	U	0.40	U	0.45	U		
Vanadium	mg/kg	54.00	J	40.10	J	41.40	J		
Zinc	mg/kg	108.00		52.00		62.00			
Location=ORR; Formation=NOLICHUCKY; Site=15,23,25; Sample type=Regular; A=5055; B=5058; C=5061; A lab split=' '; Phase=1									
Aluminum	mg/kg	25100.00		38800.00		38200.00			
Antimony	mg/kg	0.49	B	0.80	B	0.60	B		
Arsenic	mg/kg	6.30		6.80		5.20			
Barium	mg/kg	59.70		76.00		71.20			
Beryllium	mg/kg	0.73	B	0.91	B	1.10	B		
Boron	mg/kg	9.30	UJ	10.20	UJ	10.00	UJ		
Cadmium	mg/kg	0.22	U	0.24	U	0.24	U		
Calcium	mg/kg	422.00	U	550.00	U	451.00	U		
Chromium	mg/kg	29.90		45.30		38.10			
Cobalt	mg/kg	11.10		7.30	B	6.90	B		
Copper	mg/kg	12.20		19.30		20.40			
Cyanide	mg/kg	0.11	UJ	0.12	UJ	0.12	UJ		
Iron	mg/kg	28800.00		45900.00		45700.00			
Lead	mg/kg	20.40		9.30		11.70			
Lithium	mg/kg	15.50		26.90		19.90			
Magnesium	mg/kg	2010.00		2460.00		2900.00			
Manganese	mg/kg	405.00		128.00		133.00			
Mercury	mg/kg	0.18		0.12	U	0.11	U		
Molybdenum	mg/kg	1.50	U	2.00	B	1.70	U		
Nickel	mg/kg	16.50		17.50		18.70			
Potassium	mg/kg	2950.00		3660.00		5070.00			
Selenium	mg/kg	0.74	B	1.00	B	0.88	B		

Table D.1 (continued)

Analysis	Units	A horizon result	Qualifier	B horizon result	Qualifier	C horizon result	Qualifier	A lab split result	Qualifier
Silicon	mg/kg	203.00	J	218.00	J	217.00	J		
Silver	mg/kg	1.10	UJ	1.20	UJ	1.20	UJ		
Strontium	mg/kg	3.20		3.80		3.70			
Sulfate	mg/kg	18.90		44.50		47.40			
Thallium	mg/kg	0.45	U	0.59	B	0.48	B		
Vanadium	mg/kg	35.20		54.10		42.80			
Zinc	mg/kg	36.80		44.10		39.40			
Location=ORR; Formation=NOLICHUCKY; Site=16,28,42; Sample type=Regular; A=5064; B=5067; C=5070; A lab split=' '; Phase=1									
Aluminum	mg/kg	21300.00		30500.00		34300.00			
Antimony	mg/kg	0.47	U	0.70	B	0.55	B		
Arsenic	mg/kg	0.46	U	0.48	U	5.20	UJ		
Barium	mg/kg	67.60		78.80		85.20			
Beryllium	mg/kg	0.85	B	1.10	B	1.10	B		
Boron	mg/kg	9.90	UJ	10.10	UJ	10.10	UJ		
Cadmium	mg/kg	0.23	U	0.24	U	0.24	U		
Calcium	mg/kg	594.00	U	901.00	B	1160.00	B		
Chromium	mg/kg	0.46	U	0.48	U	39.30			
Cobalt	mg/kg	14.10		12.70		18.60			
Copper	mg/kg	11.00		18.90		21.00			
Cyanide	mg/kg	0.12	UJ	0.12	UJ	0.12	UJ		
Iron	mg/kg	32100.00		51800.00		44700.00			
Lead	mg/kg	0.23	U	0.24	U	11.50			
Lithium	mg/kg	7.60	B	19.70		20.20			
Magnesium	mg/kg	1730.00		2360.00		3140.00			
Manganese	mg/kg	657.00		291.00		364.00			
Mercury	mg/kg	0.19		0.11	U	0.11	U		
Molybdenum	mg/kg	1.60	U	1.70	U	1.70	U		
Nickel	mg/kg	15.20		20.20		22.30			
Potassium	mg/kg	3010.00		3520.00		4880.00			
Selenium	mg/kg	0.46	U	0.48	U	0.47	U		
Silicon	mg/kg	291.00	J	215.00	J	487.00	J		
Silver	mg/kg	1.20	UJ	1.20	UJ	1.20	UJ		
Strontium	mg/kg	5.00		5.60		7.60			
Sulfate	mg/kg	17.90		43.10		37.00			
Thallium	mg/kg	0.46	U	0.48	U	0.47	B		
Vanadium	mg/kg	33.20		42.80		40.80			
Zinc	mg/kg	33.90		38.30		38.50			
Location=ORR; Formation=NOLICHUCKY; Site=3,13,24; Sample type=Regular; A=5082; B=5085; C=5088; A lab split=' '; Phase=1									
Aluminum	mg/kg	21800.00		42100.00		46700.00			
Antimony	mg/kg	0.47	U	0.80	B	1.00	B		
Arsenic	mg/kg	6.40		6.70		8.80			
Barium	mg/kg	106.00		107.00		86.80			
Beryllium	mg/kg	0.81	B	1.20	B	1.40			
Boron	mg/kg	9.80	UJ	10.20	UJ	10.20	UJ		
Cadmium	mg/kg	0.23	U	0.24	U	0.23	U		
Calcium	mg/kg	952.00	B	1360.00		1320.00			
Chromium	mg/kg	26.40		36.80		72.80			
Cobalt	mg/kg	17.50		40.10		12.70			
Copper	mg/kg	12.70		25.50		30.20			
Cyanide	mg/kg	0.12	UJ	0.12	UJ	0.12	UJ		
Iron	mg/kg	28500.00		40600.00		37700.00			
Lead	mg/kg	17.20		18.20		47.60			
Lithium	mg/kg	11.10	B	27.80		32.10			
Magnesium	mg/kg	2410.00		3300.00		3830.00			
Manganese	mg/kg	935.00		761.00		320.00			
Mercury	mg/kg	0.19		0.12	U	0.12	U		
Molybdenum	mg/kg	1.60	U	1.70	U	1.70	U		
Nickel	mg/kg	20.00		23.90		27.00			
Potassium	mg/kg	3230.00		4340.00		5560.00			
Selenium	mg/kg	0.63	B	0.66	B	1.10	B		
Silicon	mg/kg	185.00	J	274.00	J	238.00	J		
Silver	mg/kg	1.20	UJ	1.20	UJ	1.20	UJ		
Strontium	mg/kg	6.10		8.70		7.60			

Table D.1 (continued)

Analysis	Units	A horizon result	Qualifier	B horizon result	Qualifier	C horizon result	Qualifier	A lab split result	Qualifier
Sulfate	mg/kg	14.10		344.00		35.10			
Thallium	mg/kg	0.47	U	0.49	U	0.68	B		
Vanadium	mg/kg	32.10		46.30		43.50			
Zinc	mg/kg	40.70		46.80		51.60			
Location=ORR; Formation=NOLICHUCKY; Site=5,21,31; Sample type=Regular; A=5073; B=5076; C=5079; A lab split=' '; Phase=1									
Aluminum	mg/kg	20800.00		29300.00		33700.00			
Antimony	mg/kg	0.47	U	0.59	B	0.62	B		
Arsenic	mg/kg	5.80		5.90		11.00			
Barium	mg/kg	75.40		86.20		81.30			
Beryllium	mg/kg	0.76	B	0.84	B	1.10	B		
Boron	mg/kg	9.90	UJ	10.00	UJ	9.70	UJ		
Cadmium	mg/kg	0.23	U	0.24	U	0.24	U		
Calcium	mg/kg	498.00	B	370.00	B	339.00	U		
Chromium	mg/kg	27.70		30.70		80.10			
Cobalt	mg/kg	15.90		8.70	B	27.30			
Copper	mg/kg	11.00		14.90		29.70			
Cyanide	mg/kg	0.12	UJ	0.12	UJ	0.12	UJ		
Iron	mg/kg	23000.00		33400.00		39200.00			
Lead	mg/kg	15.30		9.80		49.60			
Lithium	mg/kg	10.90	B	21.80		23.30			
Magnesium	mg/kg	1940.00		2870.00		3740.00			
Manganese	mg/kg	733.00		173.00		689.00			
Mercury	mg/kg	0.18		0.11	U	0.10	U		
Molybdenum	mg/kg	1.60	U	1.70	U	1.60	U		
Nickel	mg/kg	17.80		22.30		30.90			
Potassium	mg/kg	2640.00		3330.00		4600.00			
Selenium	mg/kg	0.56	B	0.62	B	1.10	B		
Silicon	mg/kg	328.00	J	294.00	J	246.00	J		
Silver	mg/kg	1.20	UJ	1.20	UJ	1.20	UJ		
Strontium	mg/kg	4.40		5.00		3.40			
Sulfate	mg/kg	25.40		58.90		34.90			
Thallium	mg/kg	0.47	U	0.48	U	0.72	B		
Vanadium	mg/kg	29.40		41.30		38.70			
Zinc	mg/kg	40.60		49.50		50.70			
Location=ROA; Formation=COPPER RIDGE; Site=33,35,44; Sample type=Regular; A=6046; B=6049; C=6052; A lab split=' '; Phase=2									
Aluminum	mg/kg	9290.00		18000.00		23200.00			
Antimony	mg/kg	0.44	U	0.45	U	0.47	U		
Arsenic	mg/kg	10.30		25.30		36.10			
Barium	mg/kg	72.00		39.30	B	16.20	B		
Beryllium	mg/kg	0.51	B	0.58	B	0.73	B		
Cadmium	mg/kg	0.22	U	0.22	U	0.23	U		
Calcium	mg/kg	716.00	B	432.00	B	337.00	B		
Chromium	mg/kg	12.20	J	28.50	J	47.10	J		
Cobalt	mg/kg	7.80	B	6.40	U	4.50	U		
Copper	mg/kg	7.40		14.50		22.30			
Cyanide	mg/kg	1.00	UJ	1.00	UJ	1.10	UJ		
Iron	mg/kg	11100.00	J	25200.00	J	49100.00	J		
Lead	mg/kg	21.20		22.30		31.60	J		
Lithium	mg/kg	5.30	B	17.10	B	22.60	B		
Magnesium	mg/kg	454.00	B	787.00	B	627.00	B		
Manganese	mg/kg	1050.00		222.00		94.80			
Mercury	mg/kg	0.12		0.12		0.25			
Molybdenum	mg/kg	1.60	U	2.00	B	4.00	B		
Nickel	mg/kg	7.00	U	14.60		17.70			
Potassium	mg/kg	376.00	B	744.00	B	692.00	B		
Selenium	mg/kg	0.44	U	0.74	B	0.63	B		
Silver	mg/kg	1.10	U	1.10	U	1.20	U		
Sodium	mg/kg	383.00	B	428.00	B	415.00	B		
Strontium	mg/kg	4.60	B	2.60	B	1.20	B		
Sulfate	mg/kg	28.10		124.00	J	4.50	J		
Thallium	mg/kg	0.44	U	0.45	U	0.47	U		
Vanadium	mg/kg	23.40	J	50.60	J	98.90	J		
Zinc	mg/kg	42.80		64.90		95.80			

Table D.1 (continued)

Analysis	Units	A horizon result	Qualifier	B horizon result	Qualifier	C horizon result	Qualifier	A lab split result	Qualifier
Location=ROA; Formation=COPPER RIDGE; Site=34,39,41; Sample type=Regular; A=6082; B=6087; C=6090; A lab split=6084; Phase=2									
Aluminum	mg/kg	8120.00		16200.00		13900.00		8490.00	
Antimony	mg/kg	0.46	UJ	0.42	UJ	0.42	UJ	0.46	UJ
Arsenic	mg/kg	14.00	J	22.80	J	35.80	J	15.20	J
Barium	mg/kg	59.90		29.20	B	11.70	B	63.40	
Beryllium	mg/kg	0.52	B	0.59	B	0.73	B	0.48	B
Cadmium	mg/kg	0.23	UJ	0.21	UJ	0.21	UJ	0.23	UJ
Calcium	mg/kg	801.00	B	240.00	B	198.00	B	869.00	B
Chromium	mg/kg	15.30	J	27.40	J	32.20	J	11.70	J
Cobalt	mg/kg	4.90	B	4.00	B	2.30	B	4.30	B
Copper	mg/kg	15.30		21.00		25.40		11.90	
Cyanide	mg/kg	1.20	UJ	1.00	UJ	1.00	UJ	1.10	UJ
Iron	mg/kg	14100.00		33200.00		45000.00		11100.00	
Lead	mg/kg	30.80	J	13.30	J	21.30	J	36.80	J
Magnesium	mg/kg	356.00	B	479.00	B	276.00	B	355.00	B
Manganese	mg/kg	944.00	J	186.00	J	91.80	J	1070.00	J
Mercury	mg/kg	0.14		0.18		0.18		0.16	
Nickel	mg/kg	6.90	B	10.50		13.80		6.40	U
Selenium	mg/kg	0.92	B	0.79	B	0.82	B	0.84	B
Silver	mg/kg	0.89	U	0.82	U	0.84	U	0.90	U
Sodium	mg/kg	343.00	B	270.00	B	280.00	B	311.00	B
Sulfate	mg/kg	80.80		41.10		20.90		83.70	
Thallium	mg/kg	0.69	U	0.63	U	0.63	U	0.68	U
Vanadium	mg/kg	29.80		69.00		91.50		25.00	
Zinc	mg/kg	70.90	J	85.90	J	102.00	J	53.50	J
Location=ROA; Formation=COPPER RIDGE; Site=40,42,43; Sample type=Regular; A=6055; B=6058; C=6061; A lab Split=' '; Phase=2									
Aluminum	mg/kg	8410.00		13600.00		17000.00			
Antimony	mg/kg	0.43	U	0.44	U	0.46	U		
Arsenic	mg/kg	6.20		11.20		24.40			
Barium	mg/kg	37.40	B	28.70	B	16.30	B		
Beryllium	mg/kg	0.34	B	0.31	B	0.39	B		
Boron	mg/kg			5.30	U				
Cadmium	mg/kg	0.21	U	0.22	U	0.23	U		
Calcium	mg/kg	280.00	B	272.00	B	172.00	B		
Chromium	mg/kg	11.90	J	19.00	J	30.70	J		
Cobalt	mg/kg	5.00	U	2.40	U	1.70	U		
Copper	mg/kg	2.70	U	8.90		9.90			
Cyanide	mg/kg	1.00	UJ	1.00	UJ	1.10	UJ		
Iron	mg/kg	13600.00	J	16700.00	J	31600.00	J		
Lead	mg/kg	13.50		6.50		9.70	J		
Lithium	mg/kg	2.60	B	6.60	B	7.70	B		
Magnesium	mg/kg	379.00	B	527.00	B	543.00	B		
Manganese	mg/kg	369.00		53.70		41.70			
Mercury	mg/kg	0.12		0.20		0.30			
Molybdenum	mg/kg	1.50	U	1.50	U	1.90	B		
Nickel	mg/kg	5.90	U	6.10	U	8.00	U		
Potassium	mg/kg	261.00	B	396.00	B	434.00	B		
Selenium	mg/kg	0.49	B	0.44	U	0.65	B		
Silver	mg/kg	1.10	U	1.10	U	1.20	U		
Sodium	mg/kg	371.00	B	352.00	B	392.00	B		
Strontium	mg/kg	2.30	B	2.00	B	1.20	B		
Sulfate	mg/kg	36.80	J	36.00	J	20.30	J		
Thallium	mg/kg	0.43	U	0.44	U	0.46	U		
Vanadium	mg/kg	19.20	J	37.20	J	68.70	J		
Zinc	mg/kg	36.60		29.30		39.30			
Location=ROA; Formation=COPPER RIDGE; Site=45,46,47; Sample type=Field duplicate; A=6076; B=6079; C=6067; A lab split=' '; Phase=2									
Aluminum	mg/kg	10700.00		14300.00		15500.00			
Antimony	mg/kg	0.42	U	0.41	U	2.20	U		
Arsenic	mg/kg	8.30		13.10		20.20			

Table D.1 (continued)

Analysis	Units	A horizon result	Qualifier	B horizon result	Qualifier	C horizon result	Qualifier	A lab split result	Qualifier
Barium	mg/kg	87.10		45.40		23.90	B		
Beryllium	mg/kg	0.50	B	0.42	U	0.46	B		
Boron	mg/kg	5.00	U	4.90	U	5.30	U		
Cadmium	mg/kg	0.21	U	0.20	U	0.22	U		
Calcium	mg/kg	562.00	B	312.00	B	313.00	B		
Chromium	mg/kg	13.40	J	29.50	J	32.10	J		
Cobalt	mg/kg	6.90	U	1.90	U	1.10	U		
Copper	mg/kg	5.40	U	10.50	U	14.40			
Cyanide	mg/kg	1.10	UJ	1.10	UJ	1.10	UJ		
Iron	mg/kg	9030.00	J	23300.00	J	30500.00	J		
Lead	mg/kg	14.60		7.20		8.30			
Lithium	mg/kg	3.10	B	5.60	B	6.60	B		
Magnesium	mg/kg	478.00	B	479.00	B	474.00	B		
Manganese	mg/kg	1270.00		74.50		51.40			
Mercury	mg/kg	0.10	U	0.12	J	0.23	J		
Molybdenum	mg/kg	2.70	U	2.70	U	3.20	B		
Nickel	mg/kg	6.40	U	7.60	U	9.30			
Potassium	mg/kg	290.00	U	430.00	B	419.00	B		
Selenium	mg/kg	0.42	U	0.49	B	0.59	B		
Silicon	mg/kg	621.00	J	596.00	J	591.00	J		
Silver	mg/kg	0.84	U	0.82	U	0.89	U		
Sodium	mg/kg	349.00	B	314.00	B	389.00	B		
Strontium	mg/kg	4.20	B	2.70	B	2.40	B		
Sulfate	mg/kg	120.00		52.60		11.10	U		
Thallium	mg/kg	0.42	U	0.41	U	0.44	U		
Vanadium	mg/kg	21.60	J	51.50	J	70.90	J		
Zinc	mg/kg	24.50	J	22.90	J	26.30	J		
Location=ROA; Formation=COPPER RIDGE; Site=45,46,47; Sample type=Regular; A=6073; B=6070; C=6064; A lab split=' '; Phase=2									
Aluminum	mg/kg	10900.00		13700.00		13700.00			
Antimony	mg/kg	0.41	U	0.42	U	2.20	U		
Arsenic	mg/kg	7.20		11.10		26.50			
Barium	mg/kg	83.00		57.60		18.50	B		
Beryllium	mg/kg	0.49	B	0.36	B	0.45	B		
Boron	mg/kg	5.00	U	5.00	U	5.30	U		
Cadmium	mg/kg	0.21	U	0.21	J	0.22	U		
Calcium	mg/kg	510.00	B	304.00	B	300.00	B		
Chromium	mg/kg	12.80	J	20.10	J	35.40	J		
Cobalt	mg/kg	7.40	B	3.10	B	1.30	U		
Copper	mg/kg	5.50		8.00		12.30			
Cyanide	mg/kg	1.00	UJ	1.00	UJ	1.10	UJ		
Iron	mg/kg	9700.00	J	16600.00	J	28900.00	J		
Lead	mg/kg	17.00		7.70		10.30			
Lithium	mg/kg	3.20	B	6.30	B	4.50	B		
Magnesium	mg/kg	455.00	B	480.00	B	389.00	B		
Manganese	mg/kg	1450.00		133.00		65.60			
Mercury	mg/kg	0.10	U	0.10	U	0.20	J		
Molybdenum	mg/kg	2.70	U	2.70	U	2.90	U		
Nickel	mg/kg	6.10	B	7.10	B	7.50	B		
Potassium	mg/kg	321.00	B	315.00	B	414.00	B		
Selenium	mg/kg	0.41	U	0.54	B	0.48	B		
Silicon	mg/kg	538.00	J	565.00	J	602.00	J		
Silver	mg/kg	0.83	U	0.84	U	0.89	U		
Sodium	mg/kg	324.00	B	364.00	B	345.00	B		
Strontium	mg/kg	3.80	B	2.50	B	2.10	B		
Sulfate	mg/kg	94.20		67.20		11.10	U		
Thallium	mg/kg	0.41	U	0.42	U	0.44	U		
Vanadium	mg/kg	24.10	J	39.40	J	68.10	J		
Zinc	mg/kg	24.90	J	21.10	J	21.90	J		
Location=ROA; Formation=DISMAL GAP; Site=10,13,14; Sample type=Field duplicate; A=6037; B=6040; C=6043; A lab split=' '; Phase=1									
Aluminum	mg/kg	17500.00		33300.00		28000.00			
Antimony	mg/kg	0.26	UJ	0.23	UJ	0.22	UJ		
Arsenic	mg/kg	6.90		7.10		6.70			
Barium	mg/kg	179.00		90.70		103.00			

Table D.1 (continued)

Analysis	Units	A horizon result	Qualifier	B horizon result	Qualifier	C horizon result	Qualifier	A lab split result	Qualifier
Beryllium	mg/kg	1.00	B	1.30		1.60			
Boron	mg/kg	10.40	U	13.10		22.10			
Cadmium	mg/kg	0.26	U	0.23	U	0.22	U		
Calcium	mg/kg	1990.00		800.00		606.00			
Chromium	mg/kg	32.40		47.70		42.30			
Cobalt	mg/kg	40.10		4.30	B	13.30			
Copper	mg/kg	7.70		16.90		20.90			
Cyanide	mg/kg	0.40	J	0.12	UJ	0.11	UJ		
Iron	mg/kg	30500.00		45200.00		41100.00			
Lead	mg/kg	15.20		7.40		13.30			
Lithium	mg/kg	11.60		25.40		25.60			
Magnesium	mg/kg	2000.00		3170.00		4750.00			
Manganese	mg/kg	4470.00		125.00		574.00			
Mercury	mg/kg	0.15	U	0.15	U	0.15	U		
Molybdenum	mg/kg	10.10	U	9.40	U	8.40	U		
Nickel	mg/kg	23.20		26.90		38.90			
Potassium	mg/kg	1840.00		3310.00		3480.00			
Selenium	mg/kg	1.30	U	1.20	U	1.10	U		
Silicon	mg/kg	462.00		613.00		530.00			
Silver	mg/kg	2.20	U	2.10	U	1.80	U		
Strontium	mg/kg	8.30		6.70		6.50			
Sulfate	mg/kg	103.00		130.00		74.00			
Thallium	mg/kg	0.38	U	0.37	U	0.27	U		
Vanadium	mg/kg	37.60	J	45.60	J	34.80	J		
Zinc	mg/kg	51.90		57.40		72.60			

Location=ROA; Formation=DISMAL GAP; Site=10,13,14; Sample type=Regular; A=6028; B=6031; C=6034; A lab split=' '; Phase=1

Aluminum	mg/kg	17700.00		29300.00		27300.00			
Antimony	mg/kg	0.25	UJ	0.20	UJ	0.22	UJ		
Arsenic	mg/kg	3.90		7.20		11.80			
Barium	mg/kg	182.00		82.10		93.20			
Beryllium	mg/kg	1.10	B	1.20		1.40			
Boron	mg/kg	26.00		12.20		16.90			
Cadmium	mg/kg	0.25	U	0.20	U	0.22	U		
Calcium	mg/kg	2020.00		758.00		582.00			
Chromium	mg/kg	25.60		46.00		48.30			
Cobalt	mg/kg	31.60		7.40	B	8.70	B		
Copper	mg/kg	12.00		18.00		17.80			
Cyanide	mg/kg	0.13	UJ	0.12	UJ	0.11	UJ		
Iron	mg/kg	28100.00		40900.00		37000.00			
Lead	mg/kg	15.00		10.90		7.40			
Lithium	mg/kg	12.60		23.20		24.70			
Magnesium	mg/kg	2420.00		2950.00		4620.00			
Manganese	mg/kg	2420.00		212.00		236.00			
Mercury	mg/kg	0.15	U	0.15	U	0.15	U		
Molybdenum	mg/kg	9.80	U	8.70	U	9.00	U		
Nickel	mg/kg	24.10		23.80		34.90			
Potassium	mg/kg	2090.00		2750.00		3490.00			
Selenium	mg/kg	1.30	U	1.00	U	1.10	U		
Silicon	mg/kg	549.00		592.00		458.00			
Silver	mg/kg	2.10	U	1.90	U	2.00	U		
Strontium	mg/kg	8.90		5.70		5.70			
Sulfate	mg/kg	32.10		107.00		28.40			
Thallium	mg/kg	0.36	U	0.37	U	0.38	U		
Vanadium	mg/kg	32.20	J	41.80	J	35.10	J		
Zinc	mg/kg	55.10		51.20		61.30			

Location=ROA; Formation=DISMAL GAP; Site=3,7,21; Sample type=Regular; A=6019; B=6022; C=6025; A lab split=' '; Phase=1

Aluminum	mg/kg	16500.00		18400.00		25000.00			
Antimony	mg/kg	0.22	U	0.19	U	0.22	U		
Arsenic	mg/kg	5.70		5.90		6.20			
Barium	mg/kg	73.20		60.60		62.30			
Beryllium	mg/kg	0.82	B	0.82	B	1.10	B		
Boron	mg/kg	14.00		9.30	U	12.80			
Cadmium	mg/kg	0.22	U	0.19	U	0.22	U		

Table D.1 (continued)

Analysis	Units	A horizon result	Qualifier	B horizon result	Qualifier	C horizon result	Qualifier	A lab split result	Qualifier
Calcium	mg/kg	857.00		464.00	U	337.00	U		
Chromium	mg/kg	33.80		32.40		38.20			
Cobalt	mg/kg	17.80		20.40		5.80	B		
Copper	mg/kg	8.90		7.60		18.10			
Cyanide	mg/kg	0.48	J	0.11	UJ	0.11	UJ		
Iron	mg/kg	25900.00		26000.00		41600.00			
Lead	mg/kg	23.90		15.90		14.10			
Lithium	mg/kg	10.90		11.60		17.40			
Magnesium	mg/kg	2010.00		1560.00		2180.00			
Manganese	mg/kg	1380.00		786.00		152.00			
Mercury	mg/kg	0.15	U	0.15	U	0.15	U		
Molybdenum	mg/kg	9.00	U	9.10	U	9.80	U		
Nickel	mg/kg	17.40		14.10		19.80			
Potassium	mg/kg	1700.00		1330.00		2260.00			
Selenium	mg/kg	1.10	U	0.96	U	1.10	U		
Silicon	mg/kg	445.00		486.00		438.00			
Silver	mg/kg	2.00	U	2.00	U	2.20	U		
Strontium	mg/kg	4.60		3.30		3.10			
Sulfate	mg/kg	78.20		119.00		44.30			
Thallium	mg/kg	0.22	U	0.48	U	0.33	U		
Vanadium	mg/kg	31.30	J	33.30	J	34.80	J		
Zinc	mg/kg	40.60		34.10		42.70			
Location=ROA; Formation=DISMAL GAP; Site=8,20,22; Sample type=Regular; A=6010; B=6013; C=6016; A lab split=' '; Phase=1									
Aluminum	mg/kg	13300.00		26400.00		24300.00			
Antimony	mg/kg	0.22	UJ	0.22	UJ	0.22	UJ		
Arsenic	mg/kg	6.60	B	10.00	B	7.50	B		
Barium	mg/kg	57.60		64.00		63.50			
Beryllium	mg/kg	0.37	B	0.33	B	0.53	B		
Boron	mg/kg	53.00	J	40.00	J	33.00	J		
Cadmium	mg/kg	0.22	U	0.22	U	0.22	U		
Calcium	mg/kg	801.00	U	473.00	U	369.00	U		
Chromium	mg/kg	27.90		52.40		44.00			
Cobalt	mg/kg	8.90	B	3.80	B	6.10	B		
Copper	mg/kg	14.10	J	19.80	J	23.70	J		
Cyanide	mg/kg	0.42	UJ	0.44	UJ	0.44	UJ		
Iron	mg/kg	26600.00	J	37900.00	J	37900.00	J		
Lead	mg/kg	17.80	B	11.90	B	10.80	B		
Lithium	mg/kg	14.30	U	24.90		26.70			
Magnesium	mg/kg	1180.00		1910.00		3120.00			
Manganese	mg/kg	783.00		132.00		83.80			
Mercury	mg/kg	0.21		0.18		0.14	U		
Molybdenum	mg/kg	9.00	U	8.90	U	9.10	U		
Nickel	mg/kg	11.80		15.40		26.70			
Osmium	mg/kg	14.10	UJ	14.00	UJ	14.00	UJ		
Potassium	mg/kg	1060.00		1750.00		2320.00			
Selenium	mg/kg	0.53	U	0.61	U	0.38	U		
Silicon	mg/kg	516.00	J	588.00	J	397.00	J		
Silver	mg/kg	2.00	U	2.00	U	2.00	U		
Strontium	mg/kg	4.40		5.00		3.80			
Sulfate	mg/kg	57.50	J	145.00	J	36.50	J		
Thallium	mg/kg	0.22	U	0.22	U	0.22	U		
Vanadium	mg/kg	33.70		44.30		35.20			
Zinc	mg/kg	34.70		42.70		49.20			
Location=ROA; Formation=DISMAL GAP; Site=9,17,19; Sample type=Regular; A=6004; B=6001; C=6007; A lab split=' '; Phase=1									
Aluminum	mg/kg	14500.00		20600.00		23700.00			
Antimony	mg/kg	0.21	UJ	0.21	UJ	0.21	UJ		
Arsenic	mg/kg	5.80	B	5.80	B	7.10	B		
Barium	mg/kg	78.30		69.40		73.20			
Beryllium	mg/kg	0.55	B	0.46	B	0.53	B		
Boron	mg/kg	38.90	J	16.00	J	36.60	J		
Cadmium	mg/kg	0.21	U	0.21	U	0.21	U		
Calcium	mg/kg	526.00	U	605.00	U	487.00	U		
Chromium	mg/kg	20.20		26.50		29.60			
Cobalt	mg/kg	37.00		20.30		27.00			
Copper	mg/kg	12.00	J	13.40	J	38.90	J		

Table D.1 (continued)

Analysis	Units	A horizon result	Qualifier	B horizon result	Qualifier	C horizon result	Qualifier	A lab split result	Qualifier
Cyanide	mg/kg	0.43	J	0.42	UJ	0.42	UJ		
Iron	mg/kg	20700.00	J	26600.00	J	37000.00	J		
Lead	mg/kg	48.20	B	15.50	B	38.90	B		
Lithium	mg/kg	13.70	U	19.20		31.20			
Magnesium	mg/kg	1200.00		1700.00		2570.00			
Manganese	mg/kg	2360.00		774.00		963.00			
Mercury	mg/kg	0.16		0.15	U	0.16			
Molybdenum	mg/kg	8.70	U	8.60	U	8.60	U		
Nickel	mg/kg	16.20		18.70		26.70			
Osmium	mg/kg	13.50	UJ	13.40	UJ	13.50	UJ		
Potassium	mg/kg	818.00		1280.00		2100.00			
Selenium	mg/kg	1.20		0.44	B	0.21	U		
Silicon	mg/kg	474.00	J	422.00	J	373.00	J		
Silver	mg/kg	1.90	U	1.90	U	1.90	U		
Sodium	mg/kg	301.00	U	332.00	U	305.00	U		
Strontium	mg/kg	3.50		4.50		4.20			
Sulfate	mg/kg	78.40	J	159.00	J	59.70	J		
Thallium	mg/kg	0.27	B	0.42	B	0.59	B		
Vanadium	mg/kg	29.30		36.20		35.20			
Zinc	mg/kg	36.30		36.20		48.30			

Appendix E

RADIONUCLIDE ANALYSIS DATA

Table E.1. Radionuclide analysis results for composite soil samples

Analysis	Units	A horizon Result	Qualifier	B horizon Result	Qualifier	C horizon Result	Qualifier	A lab split Result	Qualifier
Location=AND; Formation=COPPER RIDGE; Site=31,32,36; Sample type=Regular; A=7058; B=7061; C=7064; A lab split=' '; Phase=2									
Americium-241	pCi/g	0.0756	U	0.09	U	0.0480	U		
Barium-133	pCi/g	0.0316	U	0.03	U	0.0212	U		
Cesium-137	pCi/g	0.5240		0.03	U	0.0203	U		
Chromium-51	pCi/g	0.5000	U	0.63	U	0.3940	U		
Cobalt-57	pCi/g	0.0172	U	0.02	U	0.0130	U		
Cobalt-60	pCi/g	0.0284	U	0.03	U	0.1950	U		
Curium-243	pCi/g	0.1460	U						
Curium-244	pCi/g	0.0685	UJ						
Curium-245	pCi/g	0.2080	U						
Curium-247	pCi/g	0.0280	U						
Europium-152	pCi/g	0.1500	U	0.16	U	0.1090	U		
Europium-154	pCi/g	0.0326	U	0.04	U	0.0247	U		
Hafnium-181	pCi/g	0.0509	U	0.06	U	0.0368	U		
Iridium-192	pCi/g	0.0308	U	0.03	U	0.0228	U		
Neptunium-237	pCi/g	0.1150	J						
Neptunium-237 (gamma)	pCi/g	3.3700	U	3.70	U	2.4700	U		
Niobium-95	pCi/g	0.0624	U	0.07	U	0.0496	U		
Plutonium-238	pCi/g	0.0831	UJ						
Plutonium-239/240	pCi/g	0.0665	UJ						
Potassium-40	pCi/g	2.2000		4.23		5.0300			
Radium-226	pCi/g	1.0400		1.15		0.9610			
Ruthenium-103	pCi/g	0.0485	U	0.06	U	0.0370	U		
Strontium-90	pCi/g	0.9230	U						
Thorium-228	pCi/g	0.6620	J	0.99	J	1.0300	J		
Thorium-230	pCi/g	0.7320	J	1.20	J	1.1700	J		
Thorium-232	pCi/g	0.6270	J	1.13	J	0.9100	J		
Thorium-234	pCi/g	0.8590	UJ	2.47	J	0.5820	UJ		
Total Uranium	pCi/g	0.5280	J						
Uranium-233/234	pCi/g	0.9790	J	1.52	J	1.3600	J		
Uranium-235	pCi/g	0.0799	J	0.09	J	0.0389	UJ		
Uranium-235 (gamma)	pCi/g	0.1490	U	0.15	U	0.1040	U		
Uranium-236	pCi/g	0.0254	UJ	0.01	UJ	0.0122	UJ		
Uranium-238	pCi/g	1.2000	J	1.65	J	1.4200	J		
Uranium-238 (gamma)	pCi/g	16.1000	U	18.70	U	13.1000	U		
Zinc-65	pCi/g	0.0623	U	0.06	U	0.0447	U		
Zirconium-95	pCi/g	0.0670	U	0.08	U	0.0535	U		

Table E.1 (continued)

Analysis	Units	A horizon Result	Qualifier	B horizon Result	Qualifier	C horizon Result	Qualifier	A lab split Result	Qualifier
Location=AND; Formation=COPPER RIDGE; Site=33; Sample type=Regular; A=7084; B=' '; C=' '; A lab split=' '; Phase=2									
Technetium-99	pCi/g	1.2800	U						
Location=AND; Formation=COPPER RIDGE; Site=33,34,35; Sample type=Regular; A=7048; B=7052; C=7055; A lab split=7049; Phase=2									
Americium-241	pCi/g	0.0496	U	0.07	U	0.0882	U	0.0715	U
Barium-133	pCi/g	0.0154	U	0.03	U	0.0345	U	0.0248	U
Cesium-137	pCi/g	0.0142	U	1.01		0.0323	U	0.5750	
Chromium-51	pCi/g	0.2580	U	0.44	U	0.5710	U	0.4540	U
Cobalt-57	pCi/g	0.0101	U	0.01	U	0.0191	U	0.0147	U
Cobalt-60	pCi/g	0.0144	U	0.02	U	0.0324	U	0.0241	U
Curium-243	pCi/g	0.0816	U					0.1200	U
Curium-244	pCi/g	0.0078	UJ					0.3340	UJ
Curium-245	pCi/g	0.1230	U					0.1790	U
Curium-247	pCi/g	0.0149	U					0.0228	U
Europium-152	pCi/g	0.0793	U	0.14	U	0.1700	U	0.1260	U
Europium-154	pCi/g	0.0193	U	0.03	U	0.0360	U	0.0279	U
Hafnium-181	pCi/g	0.0257	U	0.04	U	0.0556	U	0.0407	U
Iridium-192	pCi/g	0.0167	U	0.03	U	0.0355	U	0.0269	U
Neptunium-237	pCi/g	0.0594	UJ					0.0700	J
Neptunium-237 (gamma)	pCi/g	2.0600	U	2.98	U	3.9200	U	2.9900	U
Niobium-95	pCi/g	0.0371	U	0.05	U	0.0726	U	0.0589	U
Plutonium-238	pCi/g	0.0477	UJ					0.1410	UJ
Plutonium-239/240	pCi/g	0.0331	UJ					0.0344	UJ
Potassium-40	pCi/g	5.3300		6.78		4.0600		3.0700	
Radium-226	pCi/g	0.9200		1.01		1.0900		1.0400	
Ruthenium-103	pCi/g	0.0240	U	0.03	U	0.0548	U	0.0406	U
Strontium-90	pCi/g	0.8660	U					0.8130	U
Thorium-228	pCi/g	0.9070	J	1.08	J	1.1700	J	0.7260	J
Thorium-230	pCi/g	1.2500	J	0.93	J	1.3500	J	0.8480	J
Thorium-232	pCi/g	0.8390	J	1.16	J	1.0700	J	0.6180	J
Thorium-234	pCi/g	1.2300	J	0.92	UJ	1.0000	UJ	0.6280	UJ
Total Uranium	pCi/g	0.4160	J					1.9900	J
Uranium-233/234	pCi/g	1.0900	J	1.15	J	1.3300	J	0.9510	J
Uranium-235	pCi/g	0.1110	J	0.08	J	0.0504	J	0.0539	J
Uranium-235 (gamma)	pCi/g	0.0794	U	0.18	U	0.1690	U	0.0116	U
Uranium-236	pCi/g	0.0119	UJ	0.01	UJ	0.0401	UJ	0.0293	UJ
Uranium-238	pCi/g	1.4100	J	1.42	J	1.2600	J	1.1500	J
Uranium-238 (gamma)	pCi/g	9.0200	U	14.30	U	18.7000	U	15.5000	U
Zinc-65	pCi/g	0.0331	U	0.06	U	0.0710	U	0.0498	U
Zirconium-95	pCi/g	0.0389	U	0.06	U	0.0811	U	0.0593	U

Table E.1 (continued)

Analysis	Units	A horizon Result	Qualifier	B horizon Result	Qualifier	C horizon Result	Qualifier	A lab split Result	Qualifier
Location=AND; Formation=COPPER RIDGE; Site=34; Sample type=Regular; A=7085; B=' '; C=' '; A lab split=' '; Phase=2									
Technetium-99	pCi/g	3.3500							
Location=AND; Formation=COPPER RIDGE; Site=36; Sample type=Regular; A=7086; B=' '; C=' '; A lab split=' '; Phase=2									
Technetium-99	pCi/g	3.5400							
Location=AND; Formation=COPPER RIDGE; Site=37,38,41; Sample type=Regular; A=7076; B=7079; C=7082; A lab split=' '; Phase=2									
Americium-241	pCi/g	0.1030	U	0.10	U	0.1110	U		
Barium-133	pCi/g	0.0426	U	0.03	U	0.0377	U		
Cesium-137	pCi/g	1.1100		0.03	U	0.0336	U		
Chromium-51	pCi/g	0.7200	U	0.57	U	0.6480	U		
Cobalt-57	pCi/g	0.0239	U	0.02	U	0.0224	U		
Cobalt-60	pCi/g	0.0375	U	0.03	U	0.0331	U		
Curium-243	pCi/g	0.2050	U						
Curium-245	pCi/g	0.2900	U						
Curium-247	pCi/g	0.0384	U						
Europium-152	pCi/g	0.2070	U	0.19	U	0.1850	U		
Europium-154	pCi/g	0.0466	U	0.04	U	0.0426	U		
Hafnium-181	pCi/g	0.0732	U	0.05	U	0.0624	U		
Iridium-192	pCi/g	0.0440	U	0.03	U	0.0384	U		
Neptunium-237	pCi/g	0.0629	UJ						
Neptunium-237 (gamma)	pCi/g	4.6800	U	4.19	U	4.4300	U		
Niobium-95	pCi/g	0.0859	U	0.08	U	0.0777	U		
Plutonium-238	pCi/g	0.2250	J						
Plutonium-239/240	pCi/g	0.0397	UJ						
Potassium-40	pCi/g	3.7700		8.18		6.6500			
Radium-226	pCi/g	0.0733	U	2.82		1.5800			
Ruthenium-103	pCi/g	0.0700	U	0.05	U	0.0607	U		
Strontium-90	pCi/g	1.0200	U						
Thorium-228	pCi/g	0.9420	J	1.54	J	1.3100	J		
Thorium-230	pCi/g	1.3400	J	2.55	J	2.5500	J		
Thorium-232	pCi/g	0.8510	J	1.25	J	1.2500	J		
Thorium-234	pCi/g	1.1700	UJ	3.68	J	1.1500	UJ		
Total Uranium	pCi/g	0.8640	J						
Uranium-233/234	pCi/g	1.3200	J	2.64	J	1.8500	J		

Table E.1 (continued)

Analysis	Units	A horizon Result	Qualifier	B horizon Result	Qualifier	C horizon Result	Qualifier	A lab split Result	Qualifier
Uranium-235	pCi/g	0.0836	J	0.22	J	0.3390	J		
Uranium-235 (gamma)	pCi/g	0.2050	U	0.18	U	0.1860	U		
Uranium-236	pCi/g	0.0139	UJ	0.03	UJ	0.0099	UJ		
Uranium-238	pCi/g	1.4700	J	2.90	J	1.8100	J		
Uranium-238 (gamma)	pCi/g	23.3000	U	19.00	U	20.8000	U		
Zinc-65	pCi/g	0.0862	U	0.07	U	0.0710	U		
Zirconium-95	pCi/g	0.0991	U	0.08	U	0.0873	U		
Location=AND; Formation=COPPER RIDGE; Site=39,40,42; Sample type=Regular; A=7067; B=7070; C=7073; A lab split=' '; Phase=2									
Americium-241	pCi/g	0.0973	U	0.08	U	0.1110	U		
Barium-133	pCi/g	0.0386	U	0.03	U	0.0379	U		
Cesium-137	pCi/g	0.9460		0.02	U	0.0345	U		
Chromium-51	pCi/g	0.6210	U	0.44	U	0.6490	U		
Cobalt-57	pCi/g	0.0217	U	0.02	U	0.0227	U		
Cobalt-60	pCi/g	0.0354	U	0.02	U	0.0336	U		
Curium-243	pCi/g	0.1870	U						
Curium-245	pCi/g	0.2650	U						
Curium-247	pCi/g	0.0364	U						
Europium-152	pCi/g	0.1950	U	0.14	U	0.1840	U		
Europium-154	pCi/g	0.0415	U	0.03	U	0.0435	U		
Hafnium-181	pCi/g	0.0639	U	0.04	U	0.0619	U		
Iridium-192	pCi/g	0.0400	U	0.03	U	0.0393	U		
Neptunium-237	pCi/g	0.0461	J						
Neptunium-237 (gamma)	pCi/g	4.2500	U	3.24	U	4.5300	U		
Niobium-95	pCi/g	0.0841	U	0.06	U	0.0755	U		
Plutonium-238	pCi/g	0.1650	UJ						
Plutonium-239/240	pCi/g	0.0519	UJ						
Potassium-40	pCi/g	3.7100		5.77		5.5200			
Radium-226	pCi/g	1.5800		0.97		1.5900			
Ruthenium-103	pCi/g	0.0612	U	0.04	U	0.0625	U		
Strontium-90	pCi/g	0.7250	U						
Thorium-228	pCi/g	1.0000	J	1.25	J	1.2600	J		
Thorium-230	pCi/g	1.3900	J	1.84	J	1.6900	J		
Thorium-232	pCi/g	0.9740	J	1.28	J	1.2700	J		
Thorium-234	pCi/g	1.0600	UJ	1.96	J	2.6300	J		
Total Uranium	pCi/g	2.1600	J						
Uranium-233/234	pCi/g	1.4400	J	1.53	J	1.4800	J		
Uranium-235	pCi/g	0.0548	J	0.38	J	0.3210	J		
Uranium-235 (gamma)	pCi/g	0.1030	U	0.12	U	0.1890	U		

Table E.1 (continued)

Analysis	Units	A horizon Result	Qualifier	B horizon Result	Qualifier	C horizon Result	Qualifier	A lab split Result	Qualifier
Uranium-236	pCi/g	0.0348	UJ	0.01	UJ	0.0100	UJ		
Uranium-238	pCi/g	1.5100	J	1.42	J	1.5400	J		
Uranium-238 (gamma)	pCi/g	19.8000	U	15.10	U	20.3000	U		
Zinc-65	pCi/g	0.0826	U	0.05	U	0.0751	U		
Zirconium-95	pCi/g	0.0916	U	0.06	U	0.0872	U		
Location=AND; Formation=DISMAL GAP; Site=1,20,22; Sample type=Regular; A=7029; B=7032; C=7035; A lab split=' '; Phase=1									
Americium-241	pCi/g	0.0420	U	0.04	U	0.0320	U		
Barium-133	pCi/g	0.0110	U	0.01	U	0.0077	U		
Cesium-137	pCi/g	0.9300		0.14		0.0074	U		
Chromium-51	pCi/g	0.1000	U	0.06	U	0.0490	U		
Cobalt-57	pCi/g	0.0074	U	0.01	U	0.0054	U		
Cobalt-60	pCi/g	0.0100	U	0.01	U	0.0077	U		
Europium-152	pCi/g	0.0440	U	0.04	U	0.0360	U		
Europium-154	pCi/g	0.0150	U	0.01	U	0.0110	U		
Hafnium-181	pCi/g	0.0120	U	0.01	U	0.0065	U		
Iridium-192	pCi/g	0.0090	U	0.01	U	0.0056	U		
Neptunium-237	pCi/g	0.0750	J						
Niobium-95	pCi/g	0.0140	U	0.01	U				
Plutonium-238	pCi/g	0.0370	UJ						
Plutonium-239/240	pCi/g	0.0150	UJ						
Potassium-40	pCi/g	30.0000		21.00		21.0000			
Radium-226	pCi/g	1.6000		1.90		1.5000			
Ruthenium-103	pCi/g	0.0120	U	0.01	U	0.0061	U		
Strontium-90	pCi/g	4.2000	U						
Thorium-228	pCi/g	1.8000	J	1.10	J	1.3000	J		
Thorium-230	pCi/g	0.6000	J	1.20	J	0.8000	J		
Thorium-232	pCi/g	1.1000	J	1.10	J	1.1000	J		
Thorium-234	pCi/g	0.9700		1.20		1.0000			
Total Uranium	pCi/g	0.8400	J						
Uranium-233/234	pCi/g	0.7400	J	0.95	J	0.9800	J		
Uranium-235	pCi/g	0.0680	UJ	0.05	J	0.0470	J		
Uranium-235 (gamma)	pCi/g	0.0548		0.05		0.0194			
Uranium-236	pCi/g	0.0430	UJ	0.02	UJ	0.0210	UJ		
Uranium-238	pCi/g	0.8600	J	1.10	J	0.8500	J		
Zinc-65	pCi/g	0.0250	U	0.02	U	0.0180	U		
Zirconium-95	pCi/g	0.0200	U	0.02	U	0.0130	U		

Table E.1 (continued)

Analysis	Units	A horizon Result	Qualifier	B horizon Result	Qualifier	C horizon Result	Qualifier	A lab split Result	Qualifier
Location=AND; Formation=DISMAL GAP; Site=3; Sample type=Regular; A=7087; B=' '; C=' '; A lab split=' '; Phase=2									
Technetium-99	pCi/g	6.3200							
Location=AND; Formation=DISMAL GAP; Site=3,5,11; Sample type=Regular; A=7011; B=7014; C=7017; A lab split=' '; Phase=1									
Americium-241	pCi/g	0.0280	U	0.03	U	0.0360	U		
Barium-133	pCi/g	0.0069	U	0.01	U	0.0087	U		
Cesium-137	pCi/g	0.0340		1.20		0.0280			
Chromium-51	pCi/g	0.0690	U	0.09	U	0.0870	U		
Cobalt-57	pCi/g	0.0059	U	0.01	U	0.0061	U		
Cobalt-60	pCi/g	0.0069	U	0.01	U	0.0089	U		
Europium-152	pCi/g	0.0360	U	0.04	U	0.0420	U		
Europium-154	pCi/g	0.0120	U	0.01	U	0.0120	U		
Hafnium-181	pCi/g	0.0080	U	0.01	U	0.0099	U		
Iridium-192	pCi/g	0.0060	U	0.01	U	0.0074	U		
Neptunium-237	pCi/g	0.1500	J						
Niobium-95	pCi/g	0.0110	U	0.01	U	0.0130	U		
Plutonium-238	pCi/g	0.0550	UJ						
Plutonium-239/240	pCi/g	0.0120	UJ						
Potassium-40	pCi/g	17.0000		31.00		31.0000			
Radium-226	pCi/g	2.1000		1.60		1.8000			
Ruthenium-103	pCi/g	0.0075	U	0.01	U	0.0095	U		
Strontium-90	pCi/g	3.9000	U						
Thorium-228	pCi/g	1.2000	J	0.58	J	1.3000	J		
Thorium-230	pCi/g	1.1000	J	0.63	J	1.0000	J		
Thorium-232	pCi/g	1.1000	J	0.87	J	1.4000	J		
Thorium-234	pCi/g	1.2000		0.92		1.2000			
Total Uranium	pCi/g	1.2000	J						
Uranium-233/234	pCi/g	0.9900	J	0.91	J	0.7900	J		
Uranium-235	pCi/g	0.0510	UJ	0.09	J	0.0500	J		
Uranium-235 (gamma)	pCi/g	0.0666		0.06		0.0404			
Uranium-236	pCi/g	0.0180	UJ	0.02	UJ	0.0380	UJ		
Uranium-238	pCi/g	0.9800	J	0.80	J	0.8400	J		
Zinc-65	pCi/g	0.0170	U	0.02	U	0.0220	U		
Zirconium-95	pCi/g	0.0150	U	0.02	U	0.0180	U		

Table E.1 (continued)

Analysis	Units	A horizon Result	Qualifier	B horizon Result	Qualifier	C horizon Result	Qualifier	A lab split Result	Qualifier
Location=AND; Formation=DISMAL GAP; Site=4; Sample type=Regular; A=7088; B=' '; C=' '; A lab split=' '; Phase=2									
Technetium-99	pCi/g	4.6400							
Location=AND; Formation=DISMAL GAP; Site=4; Sample type=Field Duplicate; A=7089; B=' '; C=' '; A lab split=' '; Phase=2									
Technetium-99	pCi/g	0.7750	U						
Location=AND; Formation=DISMAL GAP; Site=4,12,21; Sample type=Regular; A=7020; B=7023; C=7026; A lab split=' '; Phase=1									
Americium-241	pCi/g	0.0300	U	0.03	U	0.0390	U		
Barium-133	pCi/g	0.0073	U	0.01	U	0.0100	U		
Cesium-137	pCi/g	0.0074	U	0.01		1.1000			
Chromium-51	pCi/g	0.0730	U	0.05	U	0.0620	U		
Cobalt-57	pCi/g	0.0060	U	0.01	U	0.0064	U		
Cobalt-60	pCi/g	0.0082	U	0.01	U	0.0083	U		
Europium-152	pCi/g	0.0370	U	0.04	U	0.0420	U		
Europium-154	pCi/g	0.0120	U	0.01	U	0.0130	U		
Hafnium-181	pCi/g	0.0084	U	0.01	U	0.0086	U		
Iridium-192	pCi/g	0.0063	U	0.01	U	0.0071	U		
Neptunium-237	pCi/g	0.0700	J						
Niobium-95	pCi/g	0.0110	U	0.01	U	0.0086	U		
Plutonium-238	pCi/g	0.0580	UJ						
Plutonium-239/240	pCi/g	0.0580	UJ						
Potassium-40	pCi/g	21.0000		33.00		15.0000			
Radium-226	pCi/g	1.9000		1.60		1.6000			
Ruthenium-103	pCi/g	0.0077	U	0.01	U	0.0079	U		
Strontium-90	pCi/g	3.9000	U						
Thorium-228	pCi/g	1.0000	J	1.20	J	0.7900	J		
Thorium-230	pCi/g	0.8010	J	0.81	J	0.6800	J		
Thorium-232	pCi/g	1.1000	J	1.10	J	0.7100	J		
Thorium-234	pCi/g	1.2000		1.00		0.9100			
Total Uranium	pCi/g	0.8600	J						
Uranium-233/234	pCi/g	1.1000	J	0.85	J	0.8000	J		
Uranium-235	pCi/g	0.0450	UJ	0.02	UJ	0.0320	UJ		
Uranium-235 (gamma)	pCi/g	0.0660		0.07		0.0366			
Uranium-236	pCi/g	0.0190	UJ	0.02	UJ	0.0310	UJ		
Uranium-238	pCi/g	0.9200	J	0.93	J	0.8100	J		
Zinc-65	pCi/g	0.0190	U	0.02	U	0.0190	U		
Zirconium-95	pCi/g	0.0170	U	0.02	U	0.0140	U		

Table E.1 (continued)

Analysis	Units	A horizon Result	Qualifier	B horizon Result	Qualifier	C horizon Result	Qualifier	A lab split Result	Qualifier
Location=AND; Formation=DISMAL GAP; Site=9,10,19; Sample type=Regular; A=7002; B=7005; C=7008; A lab split=' '; Phase=1									
Americium-241	pCi/g	0.0330	U	0.03	U	0.0380	U		
Barium-133	pCi/g	0.0098	U	0.01	U	0.0096	U		
Cesium-137	pCi/g	1.8000		0.01		0.0200			
Chromium-51	pCi/g	0.0930	U	0.05	U	0.0940	U		
Cobalt-57	pCi/g	0.0067	U	0.01	U	0.0068	U		
Cobalt-60	pCi/g	0.0079	U	0.01	U	0.0091	U		
Europium-152	pCi/g	0.0420	U	0.04	U	0.0410	U		
Europium-154	pCi/g	0.0140	U	0.01	U	0.0140	U		
Hafnium-181	pCi/g	0.0120	U	0.01	U	0.0110	U		
Iridium-192	pCi/g	0.0080	U	0.01	U	0.0081	U		
Niobium-95	pCi/g	0.0120	U	0.01	U	0.0130	U		
Plutonium-238	pCi/g	0.0540	UJ						
Plutonium-239	pCi/g	0.0340	J						
Plutonium-240	pCi/g	0.0430	UJ						
Potassium-40	pCi/g	13.0000		28.00		31.0000			
Radium-226	pCi/g	1.8000		1.60		1.7000			
Ruthenium-103	pCi/g	0.0110	U	0.01	U	0.0100	U		
Strontium-90	pCi/g	3.7000	U						
Thorium-228	pCi/g	0.9500	J	1.40	J	1.1000	J		
Thorium-230	pCi/g	0.8200	J	0.95	J	0.7900	J		
Thorium-232	pCi/g	1.1000	J	1.40	J	1.2000	J		
Thorium-234	pCi/g	1.0000		0.98		0.9100			
Total Uranium	pCi/g	1.3000	J						
Uranium-233/234	pCi/g	0.8800	J	0.82	J	0.7600	J		
Uranium-235	pCi/g	0.0880	J	0.04	J	0.0470	J		
Uranium-235 (gamma)	pCi/g	0.0648		0.05		0.0396			
Uranium-236	pCi/g	0.0610	UJ	0.02	UJ	0.0190	UJ		
Uranium-238	pCi/g	0.7400	J	0.93	J	0.8900	J		
Zinc-65	pCi/g	0.0200	U	0.02	U	0.0230	U		
Zirconium-95	pCi/g	0.0170	U	0.01	U	0.0200	U		

Table E.1 (continued)

Analysis	Units	A horizon Result	Qualifier	B horizon Result	Qualifier	C horizon Result	Qualifier	A lab split Result	Qualifier
Location=AND; Formation=DISMAL GAP; Site=9,10,19; Sample type=Field Duplicate; A=7038; B=7041; C=7044; A lab split=' '; Phase=1									
Americium-241	pCi/g	0.0300	U	0.03	U	0.0290	U		
Barium-133	pCi/g	0.0086	U	0.01	U	0.0074	U		
Cesium-137	pCi/g	1.3000		0.02		0.0073	U		
Chromium-51	pCi/g	0.0510	U	0.04	U	0.0460	U		
Cobalt-57	pCi/g	0.0058	U	0.01	U	0.0057	U		
Cobalt-60	pCi/g	0.0071	U	0.01	U	0.0074	U		
Curium-243	pCi/g	0.0460	U						
Curium-245	pCi/g	0.0770	U						
Curium-247	pCi/g	0.0080	U						
Europium-152	pCi/g	0.0370	U	0.04	U	0.0380	U		
Europium-154	pCi/g	0.0120	U	0.01	U	0.0120	U		
Hafnium-181	pCi/g	0.0074	U	0.01	U	0.0062	U		
Iridium-192	pCi/g	0.0060	U	0.00	U	0.0053	U		
Neptunium-237	pCi/g	0.0750	J						
Niobium-95	pCi/g	0.0076	U	0.01	U	0.0077	U		
Plutonium-238	pCi/g	0.0350	J						
Plutonium-239/240	pCi/g	0.0440	UJ						
Potassium-40	pCi/g	13.0000		16.00		20.0000			
Radium-226	pCi/g	1.6000		1.90		1.9000			
Ruthenium-103	pCi/g	0.0066	U	0.01	U	0.0057	U		
Strontium-90	pCi/g	1.6000	U						
Thorium-228	pCi/g	0.9600	J	1.30	J	1.0000	J		
Thorium-230	pCi/g	1.8000	J	1.80	J	0.9800	J		
Thorium-232	pCi/g	0.8000	J	1.40	J	1.2000	J		
Thorium-234	pCi/g	0.8400		1.20		1.1000			
Total Uranium	pCi/g	1.0000	J						
Uranium-233/234	pCi/g	0.9400	J	1.10	J	1.1000	J		
Uranium-235	pCi/g	0.0480	UJ	0.05	UJ	0.0530	UJ		
Uranium-235 (gamma)	pCi/g	0.0470		0.04		0.0592			
Uranium-236	pCi/g	0.0210	UJ	0.04	UJ	0.0230	UJ		
Uranium-238	pCi/g	0.8800	J	1.20	J	1.1000	J		
Zinc-65	pCi/g	0.0180	U	0.02	U	0.0180	U		
Zirconium-95	pCi/g	0.0130	U	0.01	U	0.0130	U		

Table E.1 (continued)

Analysis	Units	A horizon Result	Qualifier	B horizon Result	Qualifier	C horizon Result	Qualifier	A lab split Result	Qualifier
Location=ORR; Formation=CHEPULTEPEC; Site=50,66,73; Sample type=Regular; A=5167; B=5171; C=5182; A lab split=5168; Phase=2									
Americium-241	pCi/g	0.1160	U	0.11	U	0.0583	U	0.1020	U
Barium-133	pCi/g	0.0423	U	0.03	U	0.0202	U	0.0380	U
Cesium-137	pCi/g	0.9800		0.04	U	0.0179	U	0.9410	
Chromium-51	pCi/g	0.2530	U	0.22	U	0.4410	U	0.2280	U
Cobalt-57	pCi/g	0.0206	U	0.02	U	0.0124	U	0.0179	U
Cobalt-60	pCi/g	0.0421	U	0.04	U	0.0179	U	0.0343	U
Curium-243	pCi/g	0.2030	U					0.1760	U
Curium-245	pCi/g	0.2800	U					0.2530	U
Curium-247	pCi/g	0.0411	U					0.0357	U
Europium-152	pCi/g	0.2360	U	0.21	U	0.1100	U	0.2070	U
Europium-154	pCi/g	0.0429	U	0.04	U	0.0228	U	0.0380	U
Hafnium-181	pCi/g	0.0386	U	0.03	U	0.0401	U	0.0334	U
Iridium-192	pCi/g	0.0309	U	0.02	U	0.0227	U	0.0265	U
Neptunium-237	pCi/g	0.0321	J					0.0750	J
Neptunium-237 (gamma)	pCi/g	4.5500	U	3.99	U	2.4000	U	3.9900	U
Niobium-95	pCi/g	0.0399	U	0.04	U	0.0508	U	0.0353	U
Plutonium-238	pCi/g	0.0360	UJ					0.1840	J
Plutonium-239/240	pCi/g	0.0377	J					0.0415	UJ
Potassium-40	pCi/g	3.7100		9.46		11.0000		3.2500	
Radium-226	pCi/g	1.2500		6.55		1.3200		1.1400	
Ruthenium-103	pCi/g	0.0356	U	0.03	U	0.0394	U	0.0286	U
Strontium-90	pCi/g	1.2100	U					0.7700	U
Thorium-228	pCi/g	0.8990	J	1.12	J	1.4600	J	0.6230	J
Thorium-230	pCi/g	1.0900	J	1.56	J	1.4900	J	0.7580	J
Thorium-232	pCi/g	1.3100	J	1.19	J	1.3800	J	0.6180	J
Thorium-234	pCi/g	1.1700	UJ	1.00	UJ	0.7630	UJ	0.9550	UJ
Total Uranium	pCi/g	0.9720	J					5.5600	J
Uranium-233/234	pCi/g	1.2300	J	1.42	J	1.6900	J	1.1600	J
Uranium-235	pCi/g	0.2170	J	0.18	J	0.0809	J	0.1870	J
Uranium-235 (gamma)	pCi/g	0.1790	U	0.17	U	0.1450	U	0.1600	U
Uranium-236	pCi/g	0.0267	UJ	0.01	UJ	0.0186	UJ	0.0269	UJ
Uranium-238	pCi/g	1.1600	J	1.63	J	1.8200	J	1.2600	J
Uranium-238 (gamma)	pCi/g	7.9000	U	6.61	U	1.8800	U	6.6900	U
Zinc-65	pCi/g	0.0879	U	0.07	U	0.0444	U	0.0741	U
Zirconium-95	pCi/g	0.0673	U	0.06	U	0.0581	U	0.0624	U

Table E.1 (continued)

Analysis	Units	A horizon Result	Qualifier	B horizon Result	Qualifier	C horizon Result	Qualifier	A lab split Result	Qualifier
Location=ORR; Formation=CHEPULTEPEC; Site=50,66,73; Sample type=Field Duplicate; A=5175; B=5179; C=5185; A lab split=5176; Phase=2									
Americium-241	pCi/g	0.1030	U	0.10	U	0.0807	U	0.0927	U
Barium-133	pCi/g	0.0395	U	0.04	U	0.0270	U	0.0351	U
Cesium-137	pCi/g	1.1800		0.03	U	0.0251	U	1.2000	
Chromium-51	pCi/g	0.2400	U	0.21	U	0.6120	U	0.2080	U
Cobalt-57	pCi/g	0.0185	U	0.02	U	0.0175	U	0.0202	U
Cobalt-60	pCi/g	0.0356	U	0.03	U	0.0263	U	0.0304	U
Curium-243	pCi/g	0.1880	U					0.1740	U
Curium-245	pCi/g	0.2570	U					0.2690	U
Curium-247	pCi/g	0.0372	U					0.0307	U
Europium-152	pCi/g	0.2000	U	0.20	U	0.1390	U	0.1780	U
Europium-154	pCi/g	0.0386	U	0.04	U	0.0324	U	0.0430	U
Hafnium-181	pCi/g	0.0357	U	0.03	U	0.0516	U	0.0311	U
Iridium-192	pCi/g	0.0276	U	0.02	U	0.0312	U	0.0230	U
Neptunium-237	pCi/g	0.0713	J					0.0549	UJ
Neptunium-237 (gamma)	pCi/g	4.2600	U	3.87	U	3.4700	U	4.3100	U
Niobium-95	pCi/g	0.0366	U	0.03	U	0.0771	U	0.0337	U
Plutonium-238	pCi/g	0.0513	J					0.0732	J
Plutonium-239/240	pCi/g	0.0193	UJ					0.0146	UJ
Potassium-40	pCi/g	2.9800		9.03		11.2000		4.3400	
Radium-226	pCi/g	1.1800		1.65		1.5100		1.1200	
Ruthenium-103	pCi/g	0.0341	U	0.03	U	0.0513	U	0.0273	U
Strontium-90	pCi/g	0.7600	U					1.1200	U
Thorium-228	pCi/g	0.6530	J	1.26	J	1.0700	J	0.7890	J
Thorium-230	pCi/g	0.9060	J	1.63	J	1.5300	J	0.9720	J
Thorium-232	pCi/g	0.5560	J	1.27	J	1.1200	J	0.7720	J
Thorium-234	pCi/g	2.6900	J	2.18	J	2.2800	J	0.9060	UJ
Total Uranium	pCi/g	1.8500	J					0.9040	J
Uranium-233/234	pCi/g	1.0500	J	1.46	J	1.8800	J	1.0200	J
Uranium-235	pCi/g	0.0638	J	0.09	J	0.0725	J	0.0574	J
Uranium-235 (gamma)	pCi/g	0.1720	U	0.16	U	0.1440	U	0.0020	U
Uranium-236	pCi/g	0.0270	UJ	0.03	UJ	0.0462	UJ	0.0107	UJ
Uranium-238	pCi/g	1.3500	J	1.77	J	1.9000	J	1.1200	J
Uranium-238 (gamma)	pCi/g	6.7900	U	6.41	U	22.3000	U	6.1200	U
Zinc-65	pCi/g	0.0768	U	0.08	U	0.0608	U	0.0689	U
Zirconium-95	pCi/g	0.0598	U	0.06	U	0.0766	U	0.0537	U

Table E.1 (continued)

Analysis	Units	A horizon Result	Qualifier	B horizon Result	Qualifier	C horizon Result	Qualifier	A lab split Result	Qualifier
Location=ORR; Formation=CHEPULTEPEC; Site=52,53,78; Sample type=Regular; A=5128; B=5131; C=5134; A lab split=' '; Phase=2									
Americium-241	pCi/g	0.0768	U	0.10	U	0.1020	U		
Barium-133	pCi/g	0.0271	U	0.04	U	0.0334	U		
Cesium-137	pCi/g	0.9260		0.03	U	0.0320	U		
Chromium-51	pCi/g	0.1700	U	0.24	U	0.2060	U		
Cobalt-57	pCi/g	0.0145	U	0.02	U	0.0180	U		
Cobalt-60	pCi/g	0.0253	U	0.04	U	0.0255	U		
Curium-243	pCi/g	0.1400	U						
Curium-245	pCi/g	0.1970	U						
Curium-247	pCi/g	0.0259	U						
Europium-152	pCi/g	0.1400	U	0.19	U	0.1510	U		
Europium-154	pCi/g	0.0308	U	0.04	U	0.0378	U		
Hafnium-181	pCi/g	0.0225	U	0.03	U	0.0284	U		
Iridium-192	pCi/g	0.0191	U	0.03	U	0.0237	U		
Neptunium-237	pCi/g	0.0786	J						
Neptunium-237 (gamma)	pCi/g			4.50	U	3.8100	U		
Niobium-95	pCi/g	0.0277	U	0.04	U	0.0306	U		
Plutonium-238	pCi/g	0.1150	UJ						
Plutonium-239/240	pCi/g	0.0823	UJ						
Potassium-40	pCi/g	3.4500		1.37	U	1.2200	U		
Radium-226	pCi/g	1.0700		1.20		1.3100			
Ruthenium-103	pCi/g	0.0218	U	0.03	U	0.0261	U		
Strontium-90	pCi/g	0.8040	U						
Thorium-228	pCi/g	0.6740	J	1.01	J	1.0800	J		
Thorium-230	pCi/g	0.7370	J	1.13	J	1.9100	J		
Thorium-232	pCi/g	0.6370	J	1.14	J	1.1400	J		
Thorium-234	pCi/g	0.7480	UJ	1.19	UJ	1.0500	UJ		
Total Uranium	pCi/g	1.2900	J						
Uranium-233/234	pCi/g	1.1900	J	1.34	J	1.0800	J		
Uranium-235	pCi/g	0.0808	UJ	0.11	UJ	0.0834	J		
Uranium-235 (gamma)	pCi/g			0.18	U	0.1610	U		
Uranium-236	pCi/g	0.0316	UJ	0.03	UJ	0.0312	UJ		
Uranium-238	pCi/g	1.1700	J	1.55	J	1.2500	J		
Uranium-238 (gamma)	pCi/g	4.5400	U	7.06	U	5.4400	U		
Zinc-65	pCi/g	0.0526	U	0.08	U	0.0595	U		
Zirconium-95	pCi/g	0.0398	U	0.06	U	0.0509	U		

Table E.1 (continued)

Analysis	Units	A horizon Result	Qualifier	B horizon Result	Qualifier	C horizon Result	Qualifier	A lab split Result	Qualifier
Location=ORR; Formation=CHEPULTEPEC; Site=68; Sample type=Regular; A=4272; B=' '; C=' '; A lab split=' '; Phase=2									
Technetium-99	pCi/g	1.1400	U						
Location=ORR; Formation=CHEPULTEPEC; Site=68,74,90; Sample type=Regular; A=5156; B=5160; C=5163; A lab split=5157; Phase=2									
Americium-241	pCi/g	0.0752	U	0.09	U	0.0682	U	0.0766	U
Barium-133	pCi/g	0.0273	U	0.03	U	0.0232	U	0.0286	U
Cesium-137	pCi/g	1.0200		0.03	U	0.0217	U	1.0600	
Chromium-51	pCi/g	0.1600	U	0.21	U	0.1400	U	0.1730	U
Cobalt-57	pCi/g	0.0140	U	0.02	U	0.0126	U	0.0146	U
Cobalt-60	pCi/g	0.0230	U	0.03	U	0.0203	U	0.0230	U
Curium-243	pCi/g	0.1300	U					0.1400	U
Curium-245	pCi/g	0.1910	U					0.1980	U
Curium-247	pCi/g	0.0221	U					0.0363	U
Europium-152	pCi/g	0.1290	U	0.17	U	0.1220	U	0.1370	U
Europium-154	pCi/g	0.0293	U	0.04	U	0.0267	U	0.0308	U
Hafnium-181	pCi/g	0.0218	U	0.03	U	0.0193	U	0.0233	U
Iridium-192	pCi/g	0.0183	U	0.02	U	0.0161	U	0.0197	U
Neptunium-237	pCi/g	0.0863	J					0.0707	J
Neptunium-237 (gamma)	pCi/g	3.1900	U	3.94	U	2.8100	U	3.1800	U
Niobium-95	pCi/g	0.0263	U	0.03	U	0.0210	U	0.0232	U
Plutonium-238	pCi/g	0.1070	J					0.1160	J
Plutonium-239/240	pCi/g	0.0322	UJ					0.1170	UJ
Potassium-40	pCi/g	3.4500		13.10		10.8000		2.3400	
Radium-226	pCi/g	0.0546	U	1.30		1.4500		1.0500	
Ruthenium-103	pCi/g	0.0188	U	0.03	U	0.0183	U	0.0224	U
Strontium-90	pCi/g	0.8720	U					0.9710	U
Thorium-228	pCi/g	0.4070	J	1.17	J	1.3900	J	0.5840	J
Thorium-230	pCi/g	0.6670	J	1.28	J	1.2600	J	0.7000	J
Thorium-232	pCi/g	0.4970	J	1.38	J	1.3900	J	0.6250	J
Thorium-234	pCi/g	0.7130	UJ	1.06	UJ	0.9650	UJ	1.0900	UJ
Uranium-233/234	pCi/g	1.2000	J	1.17	J	1.4000	J	1.0700	J
Uranium-235	pCi/g	0.0783	J	7.72	J	0.0413	UJ	0.0718	J
Uranium-235 (gamma)	pCi/g	0.1310	U	0.17	U	0.1410	U	0.1740	U
Uranium-236	pCi/g	0.0469	UJ	0.04	UJ	0.0412	UJ	0.0358	UJ
Uranium-238	pCi/g	1.2000	J	1.42	J	1.2800	J	1.1600	J
Uranium-238 (gamma)	pCi/g	4.4600	U	5.80	U	5.2000	U	4.7200	U
Zinc-65	pCi/g	0.0461	U	0.07	U	0.0452	U	0.0503	U
Zirconium-95	pCi/g	0.0394	U	0.05	U	0.0332	U	0.0388	U

Table E.1 (continued)

Analysis	Units	A horizon Result	Qualifier	B horizon Result	Qualifier	C horizon Result	Qualifier	A lab split Result	Qualifier
Location=ORR; Formation=CHEPULTEPEC; Site=73; Sample type=Regular; A=4273; B=' '; C=' '; A lab split=' '; Phase=2									
Technetium-99	pCi/g	1.0900	U						
Location=ORR; Formation=CHEPULTEPEC; Site=74; Sample type=Regular; A=4274; B=' '; C=' '; A lab split=' '; Phase=2									
Technetium-99	pCi/g	1.0200	U						
Location=ORR; Formation=CHEPULTEPEC; Site=77; Sample type=Regular; A=4276; B=' '; C=' '; A lab split=' '; Phase=2									
Technetium-99	pCi/g	0.9990	U						
Location=ORR; Formation=CHEPULTEPEC; Site=77,85,86; Sample type=Regular; A=5137; B=5140; C=5143; A lab split=' '; Phase=2									
Americium-241	pCi/g	0.0786	U	0.08	U	0.0616	U		
Barium-133	pCi/g	0.0305	U	0.03	U	0.0202	U		
Cesium-137	pCi/g	1.0900		0.03	U	0.0195	U		
Chromium-51	pCi/g	0.1730	U	0.16	U	0.1280	U		
Cobalt-57	pCi/g	0.0154	U	0.02	U	0.0120	U		
Cobalt-60	pCi/g	0.0267	U	0.03	U	0.0201	U		
Curium-243	pCi/g	0.1460	U						
Curium-245	pCi/g	0.2090	U						
Curium-247	pCi/g	0.2720	U						
Europium-152	pCi/g	0.1470	U	0.15	U	0.1050	U		
Europium-154	pCi/g	0.0321	U	0.04	U	0.0253	U		
Hafnium-181	pCi/g	0.0258	U	0.02	U	0.0178	U		
Iridium-192	pCi/g	0.0204	U	0.20	U	0.0150	U		
Neptunium-237	pCi/g	0.0459	UJ						
Neptunium-237 (gamma)	pCi/g	3.3800	U	3.60	U	2.6300	U		
Niobium-95	pCi/g	0.0270	U	0.03	U	0.0227	U		
Plutonium-238	pCi/g	0.0837	UJ						
Plutonium-239/240	pCi/g	0.0204	UJ						
Potassium-40	pCi/g	2.0500		9.45		0.8230	U		

Table E.1 (continued)

Analysis	Units	A horizon Result	Qualifier	B horizon Result	Qualifier	C horizon Result	Qualifier	A lab split Result	Qualifier
Radium-226	pCi/g	0.8590		0.83		0.8850			
Ruthenium-103	pCi/g	0.0242	U	0.02	U	0.0159	U		
Strontium-90	pCi/g	0.8210	U						
Thorium-228	pCi/g	0.5480	J	1.00	J	1.1000	J		
Thorium-230	pCi/g	0.8570	J	0.97	J	1.1300	J		
Thorium-232	pCi/g	0.5390	J	1.01	J	1.1000	J		
Thorium-234	pCi/g	1.1200	UJ	0.80	UJ	0.7000	UJ		
Total Uranium	pCi/g	2.2600	J						
Uranium-233/234	pCi/g	1.1100	J	1.69	J	0.9720	J		
Uranium-235	pCi/g	0.0834	J	0.11	J	0.2110	J		
Uranium-235 (gamma)	pCi/g	0.1820	U	0.14	U	0.0950	U		
Uranium-236	pCi/g	0.0312	UJ	0.03	UJ	0.0331	UJ		
Uranium-238	pCi/g	0.9460	J	1.89	J	0.9610	J		
Uranium-238 (gamma)	pCi/g	5.1800	U	4.17	U	3.0100	U		
Zinc-65	pCi/g	0.0558	U	0.04	U	0.0441	U		
Zirconium-95	pCi/g	0.0428	U	0.05	U	0.0329	U		
Location=ORR; Formation=CHEPULTEPEC; Site=77,85,86; Sample type=Field Duplicate; A=5146; B=5149; C=5152; A lab split=' '; Phase=2									
Americium-241	pCi/g	0.0646	U	0.06	U	0.0739	U		
Barium-133	pCi/g	0.0259	U	0.02	U	0.0291	U		
Cesium-137	pCi/g	0.8300		0.02	U	0.0279	U		
Chromium-51	pCi/g	0.1600	U	0.13	U	0.1750	U		
Cobalt-57	pCi/g	0.0136	U	0.01	U	0.0150	U		
Cobalt-60	pCi/g	0.0218	U	0.02	U	0.0271	U		
Curium-243	pCi/g	0.1290	U						
Curium-245	pCi/g	0.1830	U						
Curium-247	pCi/g	0.0228	U						
Europium-152	pCi/g	0.1390	U	0.12	U	0.1460	U		
Europium-154	pCi/g	0.0289	U	0.02	U	0.0318	U		
Hafnium-181	pCi/g	0.0218	U	0.02	U	0.0247	U		
Iridium-192	pCi/g	0.0181	U	0.02	U	0.0200	U		
Neptunium-237	pCi/g	0.1580	UJ	2.60	UJ				
Neptunium-237 (gamma)	pCi/g	2.8400	U			3.3500	U		
Niobium-95	pCi/g	0.0207	U	0.02	U	0.0288	U		
Plutonium-238	pCi/g	0.1060	J						
Plutonium-239/240	pCi/g	0.0331	J						
Potassium-40	pCi/g	3.4500		7.68		10.6000	U		
Radium-226	pCi/g	0.8400		1.10		1.1600			
Ruthenium-103	pCi/g	0.0212	U	0.02	U	0.0223	U		

Table E.1 (continued)

Analysis	Units	A horizon Result	Qualifier	B horizon Result	Qualifier	C horizon Result	Qualifier	A lab split Result	Qualifier
Strontium-90	pCi/g	0.7730	U						
Thorium-228	pCi/g	0.5390	J	0.87	J	1.0200	J		
Thorium-230	pCi/g	0.6710	J	0.97	J	1.2500	J		
Thorium-232	pCi/g	0.4870	J	0.83	J	1.0900	J		
Thorium-234	pCi/g	0.0865	UJ	0.85	UJ	0.8930	UJ		
Total Uranium	pCi/g	2.5000	J						
Uranium-233/234	pCi/g	0.8680	J	0.98	J	1.0500	J		
Uranium-235	pCi/g	0.0307	UJ	0.08	J	0.1140	J		
Uranium-235 (gamma)	pCi/g	0.1640	U	0.15	U	0.1570	U		
Uranium-236	pCi/g	0.0306	UJ	0.04	UJ	0.0263	UJ		
Uranium-238	pCi/g	0.9390	J	1.12	J	0.9570	J		
Uranium-238 (gamma)	pCi/g	4.0800	U	3.70	U	4.8900	U		
Zinc-65	pCi/g	0.0462	U	0.04	U	0.0561	U		
Zirconium-95	pCi/g	0.0357	U	0.04	U	0.0454	U		
Location=ORR; Formation=CHEPULTEPEC; Site=78; Sample type=Regular; A=4277; B=' '; C=' '; A lab split=' '; Phase=2									
Technetium-99	pCi/g	1.0200	U						
Location=ORR; Formation=CHEPULTEPEC; Site=86; Sample type=Regular; A=4278; B=' '; C=' '; A lab split=4279; Phase=2									
Technetium-99	pCi/g	1.0800	U					1.0300	U
Location=ORR; Formation=CHICKAMAUGA Bethel V; Site=99; Sample type=Regular; A=4280; B=' '; C=' '; A lab split=' '; Phase=2									
Technetium-99	pCi/g	2.5600							
Location=ORR; Formation=CHICKAMAUGA Bethel V; Site=101; Sample type=Regular; A=4281; B=' '; C=' '; A lab split=4282; Phase=2									
Technetium-99	pCi/g	1.5300	U					1.5000	U
Location=ORR; Formation=CHICKAMAUGA Bethel V; Site=93,99,100; Sample type=Regular; A=5188; B=5191; C=5194; A lab split=' '; Phase=2									
Americium-241	pCi/g	0.0917	U	0.08	U	0.0697	U		
Barium-133	pCi/g	0.0349	U	0.03	U	0.0238	U		
Cesium-137	pCi/g	1.2500		0.03	U	0.0231	U		

Table E.1 (continued)

Analysis	Units	A horizon Result	Qualifier	B horizon Result	Qualifier	C horizon Result	Qualifier	A lab split Result	Qualifier
Chromium-51	pCi/g	1.0200	U	0.87	U	0.7220	U		
Cobalt-57	pCi/g	0.0235	U	0.02	U	0.0176	U		
Cobalt-60	pCi/g	0.0350	U	0.03	U	0.0262	U		
Europium-152	pCi/g	0.1740	U	0.14	U	0.1270	U		
Europium-154	pCi/g	0.0428	U	0.03	U	0.3160	U		
Hafnium-181	pCi/g	0.0877	U	0.07	U	0.0586	U		
Iridium-192	pCi/g	0.0426	U	0.04	U	0.0313	U		
Neptunium-237 (gamma)	pCi/g	4.3300	U	3.02	U	3.1000	U		
Niobium-95	pCi/g	0.1190	U	0.10	U	0.0922	U		
Potassium-40	pCi/g	15.4000		24.30		23.0000			
Radium-226	pCi/g	0.7470		0.77		0.7880			
Ruthenium-103	pCi/g	0.0860	U	0.07	U	0.0606	U		
Thorium-228	pCi/g	1.3200	J	1.48	J	1.4900	J		
Thorium-230	pCi/g	1.0300	J	1.25	J	0.9660	J		
Thorium-232	pCi/g	1.3000	J	1.33	J	1.4800	J		
Thorium-234	pCi/g	0.9620	UJ	0.83	UJ	0.7040	UJ		
Uranium-233/234	pCi/g	1.0900	J	0.87	J	0.9080	J		
Uranium-235	pCi/g	0.1360	J	0.14	J	0.4630	J		
Uranium-235 (gamma)	pCi/g	0.1760	U	0.13	U	0.1270	U		
Uranium-236	pCi/g	0.0117	UJ	0.03	UJ	0.0477	UJ		
Uranium-238	pCi/g	1.1900	J	1.04	J	0.6870	J		
Uranium-238 (gamma)	pCi/g	6.3100	U	35.10	U	4.5400	U		
Zinc-65	pCi/g	0.0846	U	0.08	U	0.0695	U		
Zirconium-95	pCi/g	0.1110	U	0.09	U	0.0845	U		
Location=ORR; Formation=CHICKAMAUGA Bethel V; Site=101,102,103; Sample type=Regular; A=5197; B=5200; C=5203; A lab split=' '; Phase=2									
Americium-241	pCi/g	0.0068	U	0.05	U	0.0330	U		
Barium-133	pCi/g	0.0187	U	0.01	U	0.0084	U		
Cesium-137	pCi/g	2.0900		0.06		0.0080	U		
Chromium-51	pCi/g	1.0700	U	0.77	U	0.5120	U		
Cobalt-57	pCi/g	0.0123	U	0.01	U	0.0081	U		
Cobalt-60	pCi/g	0.0170	U	0.01	U	0.0071	U		
Curium-243	pCi/g	0.0880	U	0.07	U	0.0488	U		
Curium-245	pCi/g	0.1280	U	0.11	U	0.0864	U		
Curium-247	pCi/g	0.0172	U	0.01	U	0.0067	U		
Europium-152	pCi/g	0.0781	U	0.06	U	0.0473	U		
Europium-154	pCi/g	0.0209	U	0.02	U	0.0138	U		
Hafnium-181	pCi/g	0.0732	U	0.05	U	0.0312	U		
Iridium-192	pCi/g	0.0290	U	0.02	U	0.0140	U		
Neptunium-237	pCi/g	0.0770	J						

Table E.1 (continued)

Analysis	Units	A horizon Result	Qualifier	B horizon Result	Qualifier	C horizon Result	Qualifier	A lab split Result	Qualifier
Neptunium-237 (gamma)	pCi/g	2.0200	U	1.64	U	1.3600	U		
Niobium-95	pCi/g	0.1010	U	0.08	U	0.0571	U		
Plutonium-238	pCi/g	0.1030	J						
Plutonium-239/240	pCi/g	0.0717	UJ						
Potassium-40	pCi/g	23.9000		27.10		3.7200			
Radium-226	pCi/g	1.9800		1.97		3.0800			
Ruthenium-103	pCi/g	0.0737	U	0.05	U	0.0312	U		
Strontium-90	pCi/g	0.8330	U						
Thorium-228	pCi/g	1.2900	J	1.37	J	0.9390	J		
Thorium-230	pCi/g	0.9980	J	1.05	J	1.4100	J		
Thorium-232	pCi/g	1.2800	J	1.39	J	0.9740	J		
Thorium-234 (gamma)	pCi/g	1.4500		1.07		1.8200			
Total Uranium	pCi/g	2.0200	J						
Uranium-233/234	pCi/g	0.9170	J	0.82	J	1.3300	J		
Uranium-235	pCi/g	0.0338	J	0.03	J	0.0397	J		
Uranium-235 (gamma)	pCi/g	0.0750	U	0.64	U	0.0554	U		
Uranium-236	pCi/g	0.0126	UJ	0.01	UJ	0.0149	UJ		
Uranium-238	pCi/g	1.0000	J	1.07	J	1.5800	J		
Uranium-238 (gamma)	pCi/g	2.6000	U	2.41	U	45.7000			
Zinc-65	pCi/g	0.0480	U	0.04	U	0.0199	U		
Zirconium-95	pCi/g	0.0750	U	0.06	U	0.0356	U		
Location=ORR; Formation=CHICKAMAUGA Bethel V; Site=102; Sample type=Regular; A=4283; B=' '; C=' '; A lab split=' '; Phase=2									
Technetium-99	pCi/g	1.8200	U						
Location=ORR; Formation=CHICKAMAUGA Bethel V; Site=103; Sample type=Regular; A=4284; B=' '; C=' '; A lab split=' '; Phase=2									
Technetium-99	pCi/g	1.4200	U						

Table E.1 (continued)

Analysis	Units	A horizon Result	Qualifier	B horizon Result	Qualifier	C horizon Result	Qualifier	A lab split Result	Qualifier
Location=ORR; Formation=CHICKAMAUGA Bethel V; Site=104,108,110; Sample type=Regular; A=5206; B=5209; C=5212; A lab split=' '; Phase=2									
Americium-241	pCi/g	0.1110	U	0.34	U	0.0874	U		
Barium-133	pCi/g	0.0426	U	0.13	U	0.0316	U		
Cesium-137	pCi/g	1.3600		0.15	U	0.0315	U		
Chromium-51	pCi/g	0.7750	U	0.05	U	0.5750	U		
Cobalt-57	pCi/g	0.0224	U	0.07	U	0.0216	U		
Cobalt-60	pCi/g	0.0396	U	0.11	U	0.0329	U		
Curium-243	pCi/g	0.1940	U						
Curium-244	pCi/g	7.5400	UJ						
Curium-245	pCi/g	0.2700	U						
Curium-247	pCi/g	0.0397	U						
Europium-152	pCi/g	0.2170	U	0.75	U	0.1610	U		
Europium-154	pCi/g	0.0419	U	0.14	U	0.0411	U		
Hafnium-181	pCi/g	0.0764	U	0.20	U	0.0547	U		
Iridium-192	pCi/g	0.0430	U	0.13	U	0.0333	U		
Neptunium-237	pCi/g	0.1410	J						
Neptunium-237 (gamma)	pCi/g	4.3400	U	13.70	U	3.9600	U		
Niobium-95	pCi/g	0.0971	U	0.30	U	0.0777	U		
Plutonium-238	pCi/g	0.0692	UJ						
Plutonium-239/240	pCi/g	0.0289	J						
Potassium-40	pCi/g	13.7000		19.20		23.6000			
Radium-226	pCi/g	0.9750		1.07		0.7740			
Ruthenium-103	pCi/g	0.0749	U	0.21	U	0.0545	U		
Strontium-90	pCi/g	1.3500	U						
Thorium-228	pCi/g	1.1900	J	1.69	J	1.4700	J		
Thorium-230	pCi/g	1.1000	J	1.10	J	0.9380	J		
Thorium-232	pCi/g	1.0400	J	1.71	J	1.8800	J		
Thorium-234	pCi/g	1.1200	UJ	0.34	UJ	0.9340	UJ		
Total Uranium	pCi/g	0.9720	J						
Uranium-233/234	pCi/g	0.9770	J	1.02	J	0.9230	J		
Uranium-235	pCi/g	0.1430	J	0.07	J	0.0493	J		
Uranium-235 (gamma)	pCi/g	0.1750	U	0.58	U	0.1790	U		
Uranium-236	pCi/g	0.0095	UJ	0.01	UJ	0.0105	UJ		
Uranium-238	pCi/g	0.9510	J	1.11	J	0.9870	J		
Uranium-238 (gamma)	pCi/g	26.7000	U	74.80	U	21.7000	U		
Zinc-65	pCi/g	0.0991	U	0.29	U	0.0812	U		
Zirconium-95	pCi/g	0.1140	U	0.33	U	0.0917	U		

Table E.1 (continued)

Analysis	Units	A horizon Result	Qualifier	B horizon Result	Qualifier	C horizon Result	Qualifier	A lab split Result	Qualifier
Location=ORR; Formation=CHICKAMAUGA Bethel V; Site=115,116,117; Sample type=Regular; A=5218; B=5223; C=5226; A lab split=5219; Phase=2									
Americium-241	pCi/g	0.1110	U	0.08	U	0.1140	U	0.1000	U
Barium-133	pCi/g	0.0395	U	0.03	U	0.0391	U	0.0389	U
Cesium-137	pCi/g	0.9770		0.03	U	0.0415	U	0.8980	
Chromium-51	pCi/g	0.7290	U	0.50	U	0.7680	U	0.6440	U
Cobalt-57	pCi/g	0.0218	U	0.02	U	0.0220	U	0.0200	U
Cobalt-60	pCi/g	0.0431	U	0.03	U	0.0448	U	0.0346	U
Curium-243	pCi/g	0.2350	U					0.1780	U
Curium-244	pCi/g	0.0683	UJ					0.0300	UJ
Curium-245	pCi/g	0.2560	U					0.2410	U
Curium-247	pCi/g	0.0385	U					0.0354	U
Europium-152	pCi/g	0.2050	U	0.14	U	0.2160	U	0.1920	U
Europium-154	pCi/g	0.0415	U	0.04	U	0.0409	U	0.0383	U
Hafnium-181	pCi/g	0.0713	U	0.05	U	0.0754	U	0.0683	U
Iridium-192	pCi/g	0.0412	U	0.03	U	0.0400	U	0.0395	U
Neptunium-237	pCi/g	0.0672	J					0.0828	J
Neptunium-237 (gamma)	pCi/g	4.3100	U	3.67	U	4.2200	U	3.8500	U
Niobium-95	pCi/g	0.0945	U	0.03	U	0.1020	U	0.0878	U
Plutonium-238	pCi/g	0.0915	UJ					0.1330	J
Plutonium-239/240	pCi/g	0.0765	J					0.0377	UJ
Potassium-40	pCi/g	10.7000		20.80		21.6000		10.2000	
Radium-226	pCi/g	1.0000		0.82		1.1100		0.8690	
Ruthenium-103	pCi/g	0.0729	U	0.05	U	0.0710	U	0.0656	U
Strontium-90	pCi/g	1.0500	U					0.9770	U
Thorium-228	pCi/g	1.1400	J	1.48	J	1.9000	J	1.5800	J
Thorium-230	pCi/g	1.0200	J	0.90	J	1.0700	J	1.1900	J
Thorium-232	pCi/g	1.2500	J	1.16	J	1.5600	J	1.5600	J
Thorium-234	pCi/g	1.1400	UJ	0.92	UJ	1.1300	UJ	1.0100	UJ
Total Uranium	pCi/g	0.2690						1.7000	
Uranium-233/234	pCi/g	1.1400	J	0.88	J	1.1000	J	1.0100	J
Uranium-235	pCi/g	0.0850	J	0.16	J	0.2380	J	0.1430	J
Uranium-235 (gamma)	pCi/g	0.1750	U	0.15	U	0.1870	U	0.1550	U
Uranium-236	pCi/g	0.0106	UJ	0.01	UJ	0.0117	UJ	0.0097	UJ
Uranium-238	pCi/g	1.1600	J	1.00	J	1.1100	J	1.0900	J
Uranium-238 (gamma)	pCi/g	25.1000	U	18.80	U	28.3000	U	22.1000	U
Zinc-65	pCi/g	0.0926	U	0.07	U	0.1070	U	0.0773	U
Zirconium-95	pCi/g	0.1040	U	0.08	U	0.1130	U	0.0916	U

Table E.1 (continued)

Analysis	Units	A horizon Result	Qualifier	B horizon Result	Qualifier	C horizon Result	Qualifier	A lab split Result	Qualifier
Location=ORR; Formation=CHICKAMAUGA Bethel V; Site=116; Sample type=Regular; A=4285; B=' '; C=' '; A lab split=' '; Phase=2									
Technetium-99	pCi/g	2.0300							
Location=ORR; Formation=CHICKAMAUGA Bethel V; Site=117; Sample type=Regular; A=4286; B=' '; C=' '; A lab split=' '; Phase=2									
Technetium-99	pCi/g	1.5000	U						
Location=ORR; Formation=CHICKAMAUGA K-25; Site=118,122,124; Sample type=Regular; A=5242; B=5247; C=5250; A lab split=5243; Phase=2									
Americium-241	pCi/g	0.0816	U	0.07	U	0.0861	U	0.0721	U
Barium-133	pCi/g	0.0319	U	0.02	U	0.0284	U	0.0241	U
Cesium-137	pCi/g	1.3100		0.03	U	0.0268	U	1.3500	
Chromium-51	pCi/g	0.5700	U	0.12	U	0.5560	U	0.4710	U
Cobalt-57	pCi/g	0.0184	U	0.02	U	0.0178	U	0.0151	U
Cobalt-60	pCi/g	0.0278	U	0.02	U	0.0265	U	0.0215	U
Curium-243	pCi/g	0.1580	U					0.1220	U
Curium-244	pCi/g	0.1220	UJ					A	UJ
Curium-245	pCi/g	0.2200	U					0.1840	U
Curium-247	pCi/g	0.0292	U					0.0229	U
Europium-152	pCi/g	0.1470	U	0.12	U	0.1250	U	0.1230	U
Europium-154	pCi/g	0.0353	U	0.03	U	0.0336	U	0.0287	U
Hafnium-181	pCi/g	0.0571	U	0.04	U	0.0520	U	0.0453	U
Iridium-192	pCi/g	0.0331	U	0.03	U	0.0309	U	0.0260	U
Neptunium-237	pCi/g	0.0807	J					0.0845	J
Neptunium-237 (gamma)	pCi/g	3.5700	U	2.97	U	3.3700	U	2.9800	U
Niobium-95	pCi/g	0.0694	U	0.06	U	0.0685	U	0.0599	U
Plutonium-238	pCi/g	0.0598	J					0.0688	J
Plutonium-239/240	pCi/g	0.0317	J					0.0373	J
Potassium-40	pCi/g	12.0000		24.80		1.4500	U	12.4000	
Radium-226	pCi/g	0.9280		0.92		0.8590		0.9770	
Ruthenium-103	pCi/g	0.0549	U	0.04	U	0.0511	U	0.0438	U
Strontium-90	pCi/g	0.9950	U					0.6110	U
Thorium-228	pCi/g	1.7200	J	1.59	J	2.6100	J	1.2100	J
Thorium-230	pCi/g	0.9750	J	1.13	J	1.4800	J	1.1300	J
Thorium-232	pCi/g	1.4900	J	1.74	J	2.4700	J	1.2500	J
Thorium-234	pCi/g	1.1900	UJ	0.72	UJ	0.3120	UJ	0.7170	UJ
Total Uranium	pCi/g	0.1600	J					1.1600	J

Table E.1 (continued)

Analysis	Units	A horizon Result	Qualifier	B horizon Result	Qualifier	C horizon Result	Qualifier	A lab split Result	Qualifier
Uranium-233/234	pCi/g	1.3400	J	1.19	J	1.0200	J	1.4700	J
Uranium-235	pCi/g	0.1780	J	0.31	J	0.0730	J	0.0664	J
Uranium-235 (gamma)	pCi/g	0.1740	U	0.12	U	0.1430	U	0.1010	U
Uranium-236	pCi/g	0.0234	UJ	0.01	UJ	0.0427	UJ	0.0241	UJ
Uranium-238	pCi/g	1.3900	J	1.15	J	1.2500	J	1.3600	J
Uranium-238 (gamma)	pCi/g	19.4000	U	17.30	U	19.3000	U	1.5700	U
Zinc-65	pCi/g	0.0691	U	0.06	U	0.0655	U	0.0517	U
Zirconium-95	pCi/g	0.0773	U	0.07	U	0.0791	U	0.0634	U
Location=ORR; Formation=CHICKAMAUGA K-25; Site=119; Sample type=Regular; A=4287; B=' '; C=' '; A lab split=' '; Phase=2									
Technetium-99	pCi/g	1.7500							
Location=ORR; Formation=CHICKAMAUGA K-25; Site=119,123,127; Sample type=Regular; A=5254; B=5258; C=5261; A lab split=5255; Phase=2									
Americium-241	pCi/g	0.1120	U	0.09	U	0.1960	U	0.1190	U
Barium-133	pCi/g	0.0411	U	0.03	U	0.0957	U	0.0418	U
Cesium-137	pCi/g	1.6800		0.03	U	0.0944	U	1.7200	
Chromium-51	pCi/g	0.6500	U	0.55	U	0.5550	U	0.6890	U
Cobalt-57	pCi/g	0.0219	U	0.02	U	0.0501	U	0.0234	U
Cobalt-60	pCi/g	0.0423	U	0.03	U	0.0943	U	0.0370	U
Curium-243	pCi/g	0.1940	U					0.2040	U
Curium-244	pCi/g	0.0607	UJ					0.0914	UJ
Curium-245	pCi/g	0.2620	U					0.2790	U
Curium-247	pCi/g	0.0405	U					0.0407	U
Europium-152	pCi/g	0.2120	U	0.16	U	0.5000	U	0.2070	U
Europium-154	pCi/g	0.0421	U	0.04	U	0.0963	U	0.0453	U
Hafnium-181	pCi/g	0.0724	U	0.05	U	0.1760	U	0.0701	U
Iridium-192	pCi/g	0.0407	U	0.03	U	0.1020	U	0.0433	U
Neptunium-237	pCi/g	0.1130	J					0.1470	J
Neptunium-237 (gamma)	pCi/g	4.2400	U	4.04	U	9.9100	U	4.6500	U
Niobium-95	pCi/g	0.0879	U	0.08	U	0.2450	U	0.0855	U
Plutonium-238	pCi/g	0.0554	UJ					0.0947	J
Plutonium-239/240	pCi/g	0.0384	UJ					0.0379	J
Potassium-40	pCi/g	13.3000		26.10		63.4000		13.8000	
Radium-226	pCi/g	0.9830		0.94		3.0400		0.9920	
Ruthenium-103	pCi/g	0.0675	U	0.05	U	0.1780	U	0.0702	U

Table E.1 (continued)

Analysis	Units	A horizon Result	Qualifier	B horizon Result	Qualifier	C horizon Result	Qualifier	A lab split Result	Qualifier
Strontium-90	pCi/g	1.0400	U					0.7450	U
Thorium-228	pCi/g	1.3500	J	1.46	J	1.9000	J	1.0200	J
Thorium-230	pCi/g	1.1500	J	1.40	UJ	1.2300	J	1.2600	J
Thorium-232	pCi/g	1.2900	J	2.77	J	1.9000	J	1.4200	J
Thorium-234 (gamma)	pCi/g	1.1300	U	0.88	U	2.0200	U	1.2700	U
Total Uranium	pCi/g	0.3270						0.9880	
Uranium-233/234	pCi/g	1.4600	J	1.13	J	1.2100	J	1.4900	J
Uranium-235	pCi/g	0.0757	J	0.06	J	0.1070	J	0.0797	J
Uranium-235 (gamma)	pCi/g	0.1820	U	0.16	U	0.4290	U	0.2220	U
Uranium-236	pCi/g	0.0238	J	0.01	UJ	0.0019	J	0.0095	UJ
Uranium-238	pCi/g	1.4000	J	1.38	J	1.3800	J	1.3500	J
Uranium-238 (gamma)	pCi/g	22.6000	U	20.90	U	16.0000	U	22.0000	U
Zinc-65	pCi/g	0.0940	U	0.08	U	0.2310	U	0.0943	U
Zirconium-95	pCi/g	0.1020	U	0.09	U	0.2690	U	0.1040	U
Location=ORR; Formation=CHICKAMAUGA K-25; Site=120,126,129; Sample type=Regular; A=5230; B=5235; C=5238; A lab split=5231; Phase=2									
Americium-241	pCi/g	0.0621	U	0.09	U	0.0741	U	0.0725	U
Barium-133	pCi/g	0.0225	U	0.03	U	0.0234	U	0.0248	U
Cesium-137	pCi/g	0.9710		0.03	U	0.0238	U	1.0100	
Chromium-51	pCi/g	0.3830	U	0.58	U	0.2020	U	0.1350	U
Cobalt-57	pCi/g	0.0135	U	0.02	U	0.0142	U	0.0150	U
Cobalt-60	pCi/g	0.0196	U	0.03	U	0.0238	U	0.0219	U
Curium-243	pCi/g	0.1110	U					0.1250	U
Curium-244	pCi/g	0.0296	UJ					0.7950	UJ
Curium-245	pCi/g	0.1610	U					0.1850	U
Curium-247	pCi/g	0.0215	U					0.0232	U
Europium-152	pCi/g	0.1170	U	0.15	U	0.1190	U	0.1240	U
Europium-154	pCi/g	0.0257	U	0.04	U	0.0291	U	0.0291	U
Hafnium-181	pCi/g	0.0395	U	0.05	U	0.0257	U	0.0395	U
Iridium-192	pCi/g	0.0242	U	0.03	U	0.0190	U	0.0258	U
Neptunium-237	pCi/g	0.1240	J					0.0620	UJ
Neptunium-237 (gamma)	pCi/g	2.6300	U	3.64	U	3.0200	U	3.0900	U
Niobium-95	pCi/g	0.0423	U	0.07	U	0.0478	U	0.0528	U
Plutonium-238	pCi/g	0.2030	J					0.0648	UJ
Plutonium-239/240	pCi/g	0.0777	UJ					0.0406	J
Potassium-40	pCi/g	0.3060	U	17.40		26.1000		6.7200	
Radium-226	pCi/g	0.9250		1.05		0.9790		0.9800	
Ruthenium-103	pCi/g	0.0391	U	0.06	U	0.0235	U	0.0375	U
Strontium-90	pCi/g	0.7250	U					0.7260	U

Table E.1 (continued)

Analysis	Units	A horizon Result	Qualifier	B horizon Result	Qualifier	C horizon Result	Qualifier	A lab split Result	Qualifier
Thorium-228	pCi/g	0.6050	J	1.52	J	1.8100	J	1.1600	J
Thorium-230	pCi/g	0.8180	J	1.06	J	1.0600	J	1.2200	J
Thorium-232	pCi/g	0.5860	J	1.46	J	1.7500	J	1.0900	J
Thorium-234	pCi/g	0.8450	UJ	0.93	UJ	0.8110	UJ	1.9000	J
Total Uranium	pCi/g	1.8500	J					2.2200	J
Uranium-233/234	pCi/g	0.8380	J	1.36	J	1.2700	J	1.2800	J
Uranium-235	pCi/g	0.0438	J	0.13	J	0.1040	J	0.0492	J
Uranium-235 (gamma)	pCi/g	0.1430	U	0.14	U	0.1180	U	0.1260	U
Uranium-236	pCi/g	0.0109	UJ	0.05	UJ	0.0142	UJ	0.0123	UJ
Uranium-238	pCi/g	0.9940	J	1.29	J	1.2600	J	1.4300	J
Uranium-238 (gamma)	pCi/g	12.4000	U	19.40	U	6.5700	U	12.8000	U
Zinc-65	pCi/g	0.0466	U	0.07	U	0.0569	U	0.0482	U
Zirconium-95	pCi/g	0.0552	U	0.08	U	0.0478	U	0.0580	U
Location=ORR; Formation=CHICKAMAUGA K-25; Site=121; Sample type=Regular; A=4288; B=' '; C=' '; A lab split=' '; Phase=2									
Technetium-99	pCi/g	1.3900							
Location=ORR; Formation=CHICKAMAUGA K-25; Site=121,125,128; Sample type=Regular; A=5265; B=5269; C=5272; A lab split=5266; Phase=2									
Americium-241	pCi/g	0.0769	U	0.09	U	0.0924	U	0.1040	U
Barium-133	pCi/g	0.0289	U	0.03	U	0.0327	U	0.0376	U
Cesium-137	pCi/g	0.6610		0.02	U	0.0336	U	0.5780	
Chromium-51	pCi/g	0.4520	U	0.52	U	0.5820	U	0.6640	U
Cobalt-57	pCi/g	0.0183	U	0.02	U	0.0215	U	0.0203	U
Cobalt-60	pCi/g	0.0285	U	0.03	U	0.0350	U	0.0334	U
Curium-243	pCi/g	0.1450	U					0.1860	U
Curium-244	pCi/g	0.3080	UJ					0.0380	UJ
Curium-245	pCi/g	0.2210	U					0.2530	U
Curium-247	pCi/g	0.0263	U					0.0343	U
Europium-152	pCi/g	0.1510	U	0.17	U	0.1640	U	0.1820	U
Europium-154	pCi/g	0.0349	U	0.03	U	0.0413	U	0.0401	U
Hafnium-181	pCi/g	0.0468	U	0.05	U	0.0569	U	0.0644	U
Iridium-192	pCi/g	0.0290	U	0.03	U	0.0342	U	0.0389	U
Neptunium-237	pCi/g	0.1050	J					0.0721	J
Neptunium-237 (gamma)	pCi/g	3.5900	U	3.64	U	4.1400	U	4.1200	U
Niobium-95	pCi/g	0.0641	U	0.07	U	0.0803	U	0.0841	U
Plutonium-238	pCi/g	0.0777	J					0.1040	UJ
Plutonium-239/240	pCi/g	0.0167	UJ					0.0216	UJ

Table E.1 (continued)

Analysis	Units	A horizon Result	Qualifier	B horizon Result	Qualifier	C horizon Result	Qualifier	A lab split Result	Qualifier
Potassium-40	pCi/g	8.6700		23.80		24.6000		7.2400	
Radium-226	pCi/g	0.7420		0.90		0.7790		0.9330	
Ruthenium-103	pCi/g	0.0469	U	0.05	U	0.0547	U	0.0649	U
Strontium-90	pCi/g	0.7740	U					0.9530	U
Thorium-228	pCi/g	1.1400	J	1.55	J	1.7800	J	0.9730	J
Thorium-230	pCi/g	0.8400	J	1.09	J	1.2600	J	0.9550	J
Thorium-232	pCi/g	1.0800	J	1.38	J	0.8900	J	0.8270	J
Thorium-234 (gamma)	pCi/g	0.8090	U	0.78	U	0.9470	U	1.0700	U
Total Uranium	pCi/g	0.9040						0.7410	
Uranium-233/234	pCi/g	1.0400	J	1.12	J	1.1500	J	0.9690	J
Uranium-235	pCi/g	0.0120	UJ	0.05	J	0.0409	J	0.0455	J
Uranium-235 (gamma)	pCi/g	0.1440	U	0.15	U	0.1700	U	0.1690	U
Uranium-236	pCi/g	0.0383	UJ	0.01	UJ	0.0434	UJ	0.0170	UJ
Uranium-238	pCi/g	1.0400	J	1.22	J	1.1200	J	0.8670	J
Uranium-238 (gamma)	pCi/g	4.2100	U	19.40	U	22.2000	U	A	U
Zinc-65	pCi/g	0.0700	U	0.08	U	0.0896	U	0.0785	U
Zirconium-95	pCi/g	0.0707	U	0.08	U	0.0894	U	0.0947	U
Location=ORR; Formation=CHICKAMAUGA K-25; Site=124; Sample type=Regular; A=4289; B=' '; C=' '; A lab split=' '; Phase=2									
Technetium-99	pCi/g	1.9300							
Location=ORR; Formation=CHICKAMAUGA K-25; Site=127; Sample type=Regular; A=4290; B=' '; C=' '; A lab split=' '; Phase=2									
Technetium-99	pCi/g	0.9960	U						
Location=ORR; Formation=CHICKAMAUGA K-25; Site=128; Sample type=Regular; A=4291; B=' '; C=' '; A lab split=' '; Phase=2									
Technetium-99	pCi/g	1.1600	U						
Location=ORR; Formation=CHICKAMAUGA K-25; Site=129; Sample type=Regular; A=4292; B=' '; C=' '; A lab split=' '; Phase=2									
Technetium-99	pCi/g	1.2400	U						

Table E.1 (continued)

Analysis	Units	A horizon Result	Qualifier	B horizon Result	Qualifier	C horizon Result	Qualifier	A lab split Result	Qualifier
Location=ORR; Formation=COPPER RIDGE; Site=45,60,75; Sample type=Regular; A=5110; B=5113; C=5116; A lab split=' '; Phase=2									
Americium-241	pCi/g	0.1010	U	0.07	U	0.1000	U		
Barium-133	pCi/g	0.0419	U	0.02	U	0.0330	U		
Cesium-137	pCi/g	1.1000		0.04		0.0296	U		
Chromium-51	pCi/g	0.2500	U	0.14	U	0.1960	U		
Cobalt-57	pCi/g	0.0208	U	0.01	U	0.0174	U		
Cobalt-60	pCi/g	0.0363	U	0.02	U	0.0265	U		
Curium-243	pCi/g	0.2000	U						
Curium-245	pCi/g	0.2870	U						
Curium-247	pCi/g	0.0383	U						
Europium-152	pCi/g	0.1880	U	0.11	U	0.1540	U		
Europium-154	pCi/g	0.0434	U	0.03	U	0.0367	U		
Hafnium-181	pCi/g	0.0359	U	0.02	U	0.0277	U		
Iridium-192	pCi/g	0.0302	U	0.02	U	0.0228	U		
Neptunium-237	pCi/g	0.0979	J						
Neptunium-237 (gamma)	pCi/g	4.5600	U	2.72	U	3.7500	U		
Niobium-95	pCi/g	0.0286	U	0.03	U	0.0295	U		
Plutonium-238	pCi/g	0.0526	UJ						
Plutonium-239/240	pCi/g	0.0260	J						
Potassium-40	pCi/g	4.1200		7.66		5.6000			
Radium-226	pCi/g	1.1500		1.23		1.3600			
Ruthenium-103	pCi/g	0.0344	U	0.02	U	0.0261	U		
Strontium-90	pCi/g	0.9310	U						
Thorium-228	pCi/g	0.6760	J	1.01	J	1.2100	J		
Thorium-230	pCi/g	0.9110	J	1.35	J	1.4400	J		
Thorium-232	pCi/g	0.6250	J	1.28	J	1.0800	J		
Total Uranium	pCi/g	2.4500	J						
Uranium-233/234	pCi/g	1.8600	J	1.38	J	1.6800	J		
Uranium-235	pCi/g	0.1930	J	0.17	J	0.1650	J		
Uranium-235 (gamma)	pCi/g	0.1910	U	0.15	U	0.1600	U		
Uranium-236	pCi/g	0.0218	J	0.01	UJ	0.0478	UJ		
Uranium-238	pCi/g	1.5700	J	1.65	J	1.9600	J		
Uranium-238 (gamma)	pCi/g	0.4580	U	3.82	U	5.4200	U		
Zinc-65	pCi/g	0.0789	U	0.04	U	0.0576	U		
Zirconium-95	pCi/g	0.0633	U	0.03	U	0.0503	U		

Table E.1 (continued)

Analysis	Units	A horizon Result	Qualifier	B horizon Result	Qualifier	C horizon Result	Qualifier	A lab split Result	Qualifier
Location=ORR; Formation=COPPER RIDGE; Site=51; Sample type=Regular; A=4267; B=' '; C=' '; A lab split=' '; Phase=2									
Technetium-99	pCi/g	1.2200	U						
Location=ORR; Formation=COPPER RIDGE; Site=51,55,62; Sample type=Regular; A=5101; B=5103; C=5107; A lab split=' '; Phase=2									
Americium-241	pCi/g	0.0537	U	0.07	U	0.0811	U		
Barium-133	pCi/g	0.0183	U	0.02	U	0.0282	U		
Cesium-137	pCi/g	0.7440		0.02	U	0.0259	U		
Chromium-51	pCi/g	0.1130	U	0.13	U	0.1680	U		
Cobalt-57	pCi/g	0.0113	U	0.01	U	0.0147	U		
Cobalt-60	pCi/g	0.0194	U	0.02	U	0.0234	U		
Curium-243	pCi/g	0.0980	U						
Curium-245	pCi/g	0.1500	U						
Curium-247	pCi/g	0.0188	U						
Europium-152	pCi/g	0.1310	U	0.11	U	0.1580	U		
Europium-154	pCi/g	0.0235	U	0.03	U	0.0318	U		
Hafnium-181	pCi/g	0.0169	U	0.02	U	0.0234	U		
Iridium-192	pCi/g	0.0135	U	0.02	U	0.0196	U		
Neptunium-237	pCi/g	0.0685	J						
Neptunium-237 (gamma)	pCi/g	2.3400	U	2.79	U	3.2500	U		
Niobium-95	pCi/g	0.0197	U	0.02	U	0.0258	U		
Plutonium-238	pCi/g	0.0168	J						
Plutonium-239/240	pCi/g	0.0210	J						
Potassium-40	pCi/g	3.7400		4.77		6.7500			
Radium-226	pCi/g	1.2600		1.30		1.6100			
Ruthenium-103	pCi/g	0.0146	U	0.02	U	0.0218	U		
Strontium-90	pCi/g	0.8500	U						
Thorium-228	pCi/g	0.6090	J	1.14	J	1.0500	J		
Thorium-230	pCi/g	0.9440	J	1.42	J	1.4900	J		
Thorium-232	pCi/g	0.6550	J	1.14	J	1.2200	J		
Thorium-234	pCi/g	1.8600	J	1.78	J	1.2600	UJ		
Total Uranium	pCi/g	2.2600	J						
Uranium-233/234	pCi/g	1.1700	J	1.67	J	1.7800	J		
Uranium-235	pCi/g	0.1870	J	0.16	J	0.1200	J		
Uranium-235 (gamma)	pCi/g	0.1330	U	0.11	U	0.1790	U		
Uranium-236	pCi/g	0.0114	UJ	0.01	UJ	0.0200	UJ		
Uranium-238	pCi/g	1.1000	J	1.79	J	2.0900	J		
Uranium-238 (gamma)	pCi/g	3.9500	U	3.85	U	4.9500	U		

Table E.1 (continued)

Analysis	Units	A horizon Result	Qualifier	B horizon Result	Qualifier	C horizon Result	Qualifier	A lab split Result	Qualifier
Zinc-65	pCi/g	0.0399	U	0.04	U	0.0522	U		
Zirconium-95	pCi/g	0.0315	U	0.03	U	0.0426	U		
Location=ORR; Formation=COPPER RIDGE; Site=54; Sample type=Regular; A=4268; B=' '; C=' '; A lab split=' '; Phase=2									
Technetium-99	pCi/g	1.0200	U						
Location=ORR; Formation=COPPER RIDGE; Site=54,64,83; Sample type=Regular; A=5119; B=5122; C=5125; A lab split=' '; Phase=2									
Americium-241	pCi/g	0.0889	U	0.07	U	0.0980	U		
Barium-133	pCi/g	0.0318	U	0.02	U	0.0377	U		
Cesium-137	pCi/g	0.9320		0.02	U	0.0356	U		
Chromium-51	pCi/g	0.1900	U	0.15	U	0.2320	U		
Cobalt-57	pCi/g	0.0167	U	0.01	U	0.0199	U		
Cobalt-60	pCi/g	0.0259	U	0.02	U	0.0338	U		
Curium-243	pCi/g	0.1550	U						
Curium-245	pCi/g	0.2190	U						
Curium-247	pCi/g	0.0287	U						
Europium-152	pCi/g	0.1630	U	0.14	U	0.1940	U		
Europium-154	pCi/g	0.0354	U	0.03	U	0.0415	U		
Hafnium-181	pCi/g	0.0257	U	0.02	U	0.0323	U		
Iridium-192	pCi/g	0.0229	U	0.02	U	0.0262	U		
Neptunium-237	pCi/g	0.0672	J						
Neptunium-237 (gamma)	pCi/g	3.7600	U	0.03	U	4.3100	U		
Niobium-95	pCi/g	0.0313	U	3.03	U	0.0372	U		
Plutonium-238	pCi/g	0.0298	J						
Plutonium-239/240	pCi/g	0.0397	J						
Potassium-40	pCi/g	4.2600		7.94		5.2800			
Radium-226	pCi/g	1.3700		1.74		1.5600			
Ruthenium-103	pCi/g	0.0244	U	0.02	U	0.0298	U		
Strontium-90	pCi/g	1.0500	U						
Thorium-228	pCi/g	0.7860	J	1.24	J	1.1000	J		
Thorium-230	pCi/g	1.1900	J	1.72	J	1.7500	J		
Thorium-232	pCi/g	0.7730	J	1.11	J	1.1800	J		
Thorium-234	pCi/g	2.1800	J	2.31	J	1.1300	UJ		
Total Uranium	pCi/g	3.3000	J						
Uranium-233/234	pCi/g	1.4000	J	2.02	J	1.7500	J		

Table E.1 (continued)

Analysis	Units	A horizon Result	Qualifier	B horizon Result	Qualifier	C horizon Result	Qualifier	A lab split Result	Qualifier
Uranium-235	pCi/g	0.0562	J	0.11	J	0.2130	J		
Uranium-235 (gamma)	pCi/g	0.1400	U	0.16	U	0.2730			
Uranium-236	pCi/g	0.0093	UJ	0.01	UJ	0.0312	UJ		
Uranium-238	pCi/g	1.4600	J	2.09	J	1.7600	J		
Uranium-238 (gamma)	pCi/g	5.4100	U	4.91	U	6.3700	U		
Zinc-65	pCi/g	0.0600	U	0.05	U	0.0730	U		
Zirconium-95	pCi/g	0.0434	U	0.04	U	0.0587	U		
Location=ORR; Formation=COPPER RIDGE; Site=58,59,91; Sample type=Regular; A=5092; B=5095; C=5098; A lab split=' '; Phase=2									
Americium-241	pCi/g	0.1060	U	0.14	U	0.1320	U		
Barium-133	pCi/g	0.0383	U	0.05	U	0.0459	U		
Cesium-137	pCi/g	0.6590		0.05	U	0.0463	U		
Chromium-51	pCi/g	0.2270	U	0.31	U	0.2840	U		
Cobalt-57	pCi/g	0.0178	U	0.02	U	0.0276	U		
Cobalt-60	pCi/g	0.0373	U	0.05	U	0.0474	U		
Curium-243	pCi/g	0.1740	U						
Curium-245	pCi/g	0.2520	U						
Curium-247	pCi/g	0.0376	U						
Europium-152	pCi/g	0.2180	U	0.27	U	0.2550	U		
Europium-154	pCi/g	0.0378	U	0.05	U	0.0578	U		
Hafnium-181	pCi/g	0.0360	U	0.04	U	0.0408	U		
Iridium-192	pCi/g	0.0276	U	0.03	U	0.0327	U		
Neptunium-237	pCi/g	0.1110	J						
Neptunium-237 (gamma)	pCi/g	4.0500	U	5.71	U	6.0200	U		
Niobium-95	pCi/g	0.0412	U	0.05	U	0.0498	U		
Plutonium-238	pCi/g	0.0270	J						
Plutonium-239/240	pCi/g	0.0102	UJ						
Potassium-40	pCi/g	4.2900		6.46		10.9000			
Radium-226	pCi/g	1.1200		1.78		1.9900			
Ruthenium-103	pCi/g	0.0323	U	0.04	U	0.0373	U		
Strontium-90	pCi/g	1.0200	U						
Thorium-228	pCi/g	0.0443	UJ	1.29	J	1.7900	J		
Thorium-230	pCi/g	1.4700	J	1.76	J	1.9300	J		
Thorium-232	pCi/g	0.6700	J	1.38	J	1.5600	J		
Thorium-234	pCi/g	0.9820	UJ	1.49	UJ	1.4400	UJ		
Total Uranium	pCi/g	2.9500	J						
Uranium-233/234	pCi/g	1.4500	J	1.98	J	2.5600	J		
Uranium-235	pCi/g	0.1210	J	0.32	J	0.3460	J		

Table E.1 (continued)

Analysis	Units	A horizon Result	Qualifier	B horizon Result	Qualifier	C horizon Result	Qualifier	A lab split Result	Qualifier
Uranium-235 (gamma)	pCi/g	0.1620	U	0.24	U	0.2370	U		
Uranium-236	pCi/g	0.0302	UJ	0.03	UJ	0.0431	UJ		
Uranium-238	pCi/g	1.4400	J	1.84	J	2.7100	J		
Uranium-238 (gamma)	pCi/g	6.5400	U	8.17	U	7.2200	U		
Zinc-65	pCi/g	0.0767	U	0.10	U	0.0942	U		
Zirconium-95	pCi/g	0.0633	U	0.08	U	0.0781	U		
Location=ORR; Formation=COPPER RIDGE; Site=60; Sample type=Regular; A=4269; B=' '; C=' '; A lab split=' '; Phase=2									
Technetium-99	pCi/g	1.0600	U						
Location=ORR; Formation=COPPER RIDGE; Site=62; Sample type=Regular; A=4270; B=' '; C=' '; A lab split=' '; Phase=2									
Technetium-99	pCi/g	1.5400	U						
Location=ORR; Formation=COPPER RIDGE; Site=64; Sample type=Regular; A=4271; B=' '; C=' '; A lab split=' '; Phase=2									
Technetium-99	pCi/g	1.6400	U						
Location=ORR; Formation=COPPER RIDGE; Site=74; Sample type=Regular; A=4275; B=' '; C=' '; A lab split=' '; Phase=2									
Technetium-99	pCi/g	1.2300	U						

Table E.1 (continued)

Analysis	Units	A horizon Result	Qualifier	B horizon Result	Qualifier	C horizon Result	Qualifier	A lab split Result	Qualifier
Location=ORR; Formation=DISMAL GAP; Site=10,33,35; Sample type=Regular; A=5020; B=5023; C=5026; A lab split=' '; Phase=1									
Americium-241	pCi/g	0.0320	U						
Barium-133	pCi/g	0.0085	U						
Cesium-137	pCi/g	0.6500							
Chromium-51	pCi/g	0.0500	U						
Cobalt-57	pCi/g	0.0061	U						
Cobalt-60	pCi/g	0.0076	U						
Curium-243	pCi/g	0.0470	U						
Curium-244	pCi/g	0.1000	UJ						
Curium-245	pCi/g	0.0210	U						
Curium-247	pCi/g	0.0270	U						
Europium-152	pCi/g	0.0410	U						
Europium-154	pCi/g	0.0130	U						
Hafnium-181	pCi/g	0.0070	U						
Iridium-192	pCi/g	0.0061	U						
Niobium-95	pCi/g	0.0079	U						
Plutonium-238	pCi/g	0.0700	UJ						
Plutonium-239/240	pCi/g	0.0390	UJ						
Potassium-40	pCi/g	15.0000							
Radium-226	pCi/g	0.7000		0.63		0.7000			
Ruthenium-103	pCi/g	0.0065	U						
Strontium-90	pCi/g	0.8200	U						
Thorium-228	pCi/g	0.9400	J	0.81	J	1.1000	J		
Thorium-230	pCi/g	0.8300	J	0.53	J	0.6900	J		
Thorium-232	pCi/g	0.9700	J	0.83	J	1.1000	J		
Thorium-234	pCi/g	1.6000	J	1.00	J	1.0100	J		
Total Uranium	pCi/g	1.2000	J						
Uranium-233/234	pCi/g	1.1000	J	0.52	J	0.5600	J		
Uranium-235	pCi/g	0.0650	J	0.03	J	0.0300	J		
Uranium-235 (gamma)	pCi/g	0.0569		0.07		0.0678			
Uranium-236	pCi/g	0.0200	J	0.03	UJ	0.0120	UJ		
Uranium-238	pCi/g	0.9900	J	0.68	J	0.6200	J		
Zinc-65	pCi/g	0.0180	U						
Zirconium-95	pCi/g	0.0140	U						

Table E.1 (continued)

Analysis	Units	A horizon Result	Qualifier	B horizon Result	Qualifier	C horizon Result	Qualifier	A lab split Result	Qualifier
Location=ORR; Formation=DISMAL GAP; Site=11,27,41; Sample type=Regular; A=5002; B=5005; C=5008; A lab split=' '; Phase=1									
Americium-241	pCi/g	0.0510	U	0.04	U	0.0420	U		
Barium-133	pCi/g	0.0140	U	0.01	U	0.0110	U		
Cesium-137	pCi/g	0.9000		0.03		0.0110	U		
Chromium-51	pCi/g	0.0870	U	0.07	U	0.0690	U		
Cobalt-57	pCi/g	0.0084	U	0.01	U	0.0082	U		
Cobalt-60	pCi/g	0.0120	U	0.01	U	0.0110	U		
Curium-243	pCi/g	0.0750	U	0.06	U	0.0640	U		
Curium-244	pCi/g	3.5000	UJ						
Curium-245	pCi/g	0.1100	U	0.11	U	0.1100	U		
Curium-247	pCi/g	0.0140	U	0.01	U	0.0100	U		
Europium-152	pCi/g	0.0660	U	0.06	U	0.0570	U		
Europium-154	pCi/g	0.0180	U	0.02	U	0.0180	U		
Hafnium-181	pCi/g	0.0120	U	0.01	U	0.0095	U		
Iridium-192	pCi/g	0.0100	U	0.01	U	0.0080	U		
Niobium-95	pCi/g	0.0140	U	0.01	U	0.0110	U		
Plutonium-238	pCi/g	0.1100	UJ	0.08	J	0.0910	UJ		
Plutonium-239/240	pCi/g	0.0290	J	0.03	UJ	0.0210	UJ		
Potassium-40	pCi/g	14.0000		22.00		28.0000			
Radium-226	pCi/g	0.8600		0.92		0.7900			
Ruthenium-103	pCi/g	0.0110	U	0.01	U	0.0087	U		
Strontium-90	pCi/g	1.1000		1.00	NA	0.9600	NA		
Thorium-228	pCi/g	0.5000	J	3.40	J	2.0000	J		
Thorium-230	pCi/g	0.3100	J	2.30	J	0.9400	J		
Thorium-232	pCi/g	0.4100	J	3.20	J	2.3000	J		
Thorium-234	pCi/g	1.5000		1.10		1.2000			
Total Uranium	pCi/g	2.5000	J	0.12	J	0.0690	J		
Uranium-233/234	pCi/g	1.0000	J	0.74	J	0.5400	J		
Uranium-235	pCi/g	0.0410	J	0.07	UJ	0.0390	UJ		
Uranium-235 (gamma)	pCi/g	0.1198		0.07		0.0527			
Uranium-236	pCi/g	0.0330	UJ	0.06	UJ	0.0140	UJ		
Uranium-238	pCi/g	1.1000	J	0.63	J	0.5300	J		
Zinc-65	pCi/g	0.0290	U	0.03	U	0.0270	U		
Zirconium-95	pCi/g	0.0220	U	0.02	U	0.0200	U		

Table E.1 (continued)

Analysis	Units	A horizon Result	Qualifier	B horizon Result	Qualifier	C horizon Result	Qualifier	A lab split Result	Qualifier
Location=ORR; Formation=DISMAL GAP; Site=19,22,32; Sample type=Regular; A=5011; B=5014; C=5017; A lab split=' '; Phase=1									
Americium-241	pCi/g	0.0400	U	0.01	U	0.0430	U		
Barium-133	pCi/g	0.0110	U	0.01	U	0.0110	U		
Cesium-137	pCi/g	0.5400		0.01	U	0.0260			
Chromium-51	pCi/g	0.0660	U	0.08	U	0.0710	U		
Cobalt-57	pCi/g	0.0077	U	0.00	U	0.0084	U		
Cobalt-60	pCi/g	0.0098	U	0.01	U	0.0120	U		
Curium-243	pCi/g	0.0600	U	0.04	U	0.0640	U		
Curium-244	pCi/g	0.0870	UJ						
Curium-245	pCi/g	0.1000	U	0.06	U	0.1100	U		
Curium-247	pCi/g	0.0100	U	0.01	U	0.0110	U		
Europium-152	pCi/g	0.0540	U	0.04	U	0.0570	U		
Europium-154	pCi/g	0.0160	U	0.01	U	0.0180	U		
Hafnium-181	pCi/g	0.0091	U	0.01	U	0.0096	U		
Iridium-192	pCi/g	0.0076	U	0.01	U	0.0081	U		
Niobium-95	pCi/g	0.0110	U	82000.00	U	0.0120	U		
Plutonium-238	pCi/g	0.0690	UJ	0.10	J	0.0700	UJ		
Plutonium-239/240	pCi/g	0.0300	UJ	0.03	J	0.0200	UJ		
Potassium-40	pCi/g	17.0000		0.19	U	22.0000			
Radium-226	pCi/g	0.8200		1.10	U	0.7700			
Ruthenium-103	pCi/g	0.0083	U	0.01	U	0.0089	U		
Strontium-90	pCi/g	0.8800	NA	1.00	NA	1.0000	NA		
Thorium-228	pCi/g	0.7700	J	0.53	J	0.0710	UJ		
Thorium-230	pCi/g	0.6500	J	0.36	J	0.1900	J		
Thorium-232	pCi/g	0.7300	J	0.44	J	0.1800	J		
Thorium-234	pCi/g	1.7000		0.23	U	1.2000			
Total Uranium	pCi/g	0.2300	J	0.83	J	1.3000	J		
Uranium-233/234	pCi/g	0.6100	J	3.20	J	0.5800	J		
Uranium-235	pCi/g	0.0540	UJ	0.24	J	0.0500	J		
Uranium-235 (gamma)	pCi/g	0.0698				0.0244			
Uranium-236	pCi/g	0.0350	UJ	0.17	J	0.0130	UJ		
Uranium-238	pCi/g	0.7500	J	2.60	J	0.5800	J		
Zinc-65	pCi/g	0.0230	U	0.02	U	0.0260	U		
Zirconium-95	pCi/g	0.0170	U	0.01	U	0.0200	U		

Table E.1 (continued)

Analysis	Units	A horizon Result	Qualifier	B horizon Result	Qualifier	C horizon Result	Qualifier	A lab split Result	Qualifier
Location=ORR; Formation=DISMAL GAP; Site=2; Sample type=Regular; A=4255; B=' '; C=' '; A lab split=' '; Phase=2									
Technetium-99	pCi/g	1.7500	U						
Location=ORR; Formation=DISMAL GAP; Site=2,26,43; Sample type=Regular; A=5029; B=5032; C=5035; A lab split=' '; Phase=1									
Americium-241	pCi/g	0.0380	U	0.04	U	0.0350	U		
Barium-133	pCi/g	0.0097	U	0.01	U	0.0099	U		
Cesium-137	pCi/g	0.7900		0.93		1.4000			
Chromium-51	pCi/g	0.0590	U	0.07	U	0.0600	U		
Cobalt-57	pCi/g	0.0070	U	0.01	U	0.0068	U		
Cobalt-60	pCi/g	0.0093	U	0.01	U	0.0081	U		
Curium-243	pCi/g	0.0530	U						
Curium-244	pCi/g	1.9000	UJ						
Curium-245	pCi/g	0.0930	U						
Curium-247	pCi/g	0.0088	U						
Europium-152	pCi/g	0.0460	U	0.05	U	0.0460	U		
Europium-154	pCi/g	0.0150	U	0.02	U	0.0140	U		
Hafnium-181	pCi/g	0.0082	U	0.01	U	0.0086	U		
Iridium-192	pCi/g	0.0068	U	0.01	U	0.0070	U		
Niobium-95	pCi/g	0.0091	U	0.01	U	0.0085	U		
Plutonium-238	pCi/g	0.0830	J						
Plutonium-239/240	pCi/g	0.0190	UJ						
Potassium-40	pCi/g	18.0000		16.00		12.0000			
Radium-226	pCi/g	0.7000		0.81		0.7700			
Ruthenium-103	pCi/g	0.0075	U	0.01	U	0.0077	U		
Strontium-90	pCi/g	0.9900	U						
Thorium-228	pCi/g	0.7800	J	0.85	J	1.2000	J		
Thorium-230	pCi/g	0.7000	J	0.64	J	0.8700	J		
Thorium-232	pCi/g	0.7300	J	0.99	J	1.1000	J		
Thorium-234	pCi/g	1.9000		1.80		1.3000			
Total Uranium	pCi/g	6.5000	J						
Uranium-233/234	pCi/g	1.4000	J	1.40	J	1.1000	J		
Uranium-235	pCi/g	0.1500	J	0.10	J	0.0650	J		
Uranium-235 (gamma)	pCi/g	0.0861		0.08		0.0356			
Uranium-236	pCi/g	0.0360	UJ	0.04	UJ	0.0310	UJ		
Uranium-238	pCi/g	1.7000	J	1.50	J	0.9700	J		
Zinc-65	pCi/g	0.0210	U	0.02	U	0.0190	U		
Zirconium-95	pCi/g	0.0160	U	0.02	U	0.0150	U		

Table E.1 (continued)

Analysis	Units	A horizon Result	Qualifier	B horizon Result	Qualifier	C horizon Result	Qualifier	A lab split Result	Qualifier
Location=ORR; Formation=DISMAL GAP; Site=2,26,43; Sample type=Field Duplicate; A=5038; B=5041; C=5044; A lab split=' '; Phase=1									
Americium-241	pCi/g	0.0610	U	0.04	U	0.0320	U		
Barium-133	pCi/g	0.0120	U	0.01	U	0.0079	U		
Cesium-137	pCi/g	0.0210		0.02		0.0350			
Chromium-51	pCi/g	0.0750	U	0.06	U	0.0520	U		
Cobalt-57	pCi/g	0.0080	U	0.01	U	0.0061	U		
Cobalt-60	pCi/g	0.0110	U	0.01	U	0.0078	U		
Curium-243	pCi/g	0.0670	U						
Curium-245	pCi/g	0.1100	U						
Curium-247	pCi/g	0.0110	U						
Europium-152	pCi/g	0.0560	U	0.05	U	0.0460	U		
Europium-154	pCi/g	0.0170	U	0.01	U	0.0130	U		
Hafnium-181	pCi/g	0.0100	U	0.01	U	0.0066	U		
Iridium-192	pCi/g	0.0086	U	0.01	U	0.0058	U		
Niobium-95	pCi/g	0.0120	U	0.01	U	0.0088	U		
Plutonium-238	pCi/g	0.1300	UJ						
Plutonium-239/240	pCi/g	0.0350	UJ						
Potassium-40	pCi/g	22.0000		20.00		12.0000			
Radium-226	pCi/g	0.8500		0.75		0.8200			
Ruthenium-103	pCi/g	0.0091	U	0.01	U	0.0060	U		
Strontium-90	pCi/g	1.2000	U						
Thorium-228	pCi/g	0.6500	J	0.68	J	1.0000	J		
Thorium-230	pCi/g	0.5200	J	0.63	J	0.8600	J		
Thorium-232	pCi/g	0.7700	J	0.87	J	1.1000	J		
Thorium-234	pCi/g	1.6000		1.20		1.2000			
Total Uranium	pCi/g	2.1000	J						
Uranium-233/234	pCi/g	0.9000	J	1.10	J	1.1000	J		
Uranium-235	pCi/g	0.0390	UJ	0.11	UJ	0.0460	UJ		
Uranium-235 (gamma)	pCi/g	0.0791		0.05		0.0452			
Uranium-236	pCi/g	0.0140	UJ	0.04	UJ	0.0300	UJ		
Uranium-238	pCi/g	1.0000	J	1.30	J	1.1000	J		
Zinc-65	pCi/g	0.0240	U	0.02	U	0.0170	U		
Zirconium-95	pCi/g	0.0200	U	0.02	U	0.0140	U		
Location=ORR; Formation=DISMAL GAP; Site=26; Sample type=Regular; A=4260; B=' '; C=' '; A lab split=' '; Phase=2									
Technetium-99	pCi/g	1.8000	U						

Table E.1 (continued)

Analysis	Units	A horizon Result	Qualifier	B horizon Result	Qualifier	C horizon Result	Qualifier	A lab split Result	Qualifier
Location=ORR; Formation=DISMAL GAP; Site=27; Sample type=Regular; A=4261; B=' '; C=' '; A lab split=' '; Phase=2									
Technetium-99	pCi/g	4.0700	U						
Location=ORR; Formation=DISMAL GAP; Site=32; Sample type=Regular; A=4263; B=' '; C=' '; A lab split=' '; Phase=2									
Technetium-99	pCi/g	2.1900	U						
Location=ORR; Formation=DISMAL GAP; Site=33; Sample type=Regular; A=4264; B=' '; C=' '; A lab split=' '; Phase=2									
Technetium-99	pCi/g	2.3100	U						
Location=ORR; Formation=DISMAL GAP; Site=43; Sample type=Regular; A=4265; B=' '; C=' '; A lab split=' '; Phase=2									
Technetium-99	pCi/g	2.1400	U						
Location=ORR; Formation=NOLICHUCKY; Site=13; Sample type=Regular; A=4254; B=' '; C=' '; A lab split=' '; Phase=2									
Technetium-99	pCi/g	1.4100	U						
Location=ORR; Formation=NOLICHUCKY; Site=15; Sample type=Regular; A=4256; B=' '; C=' '; A lab split=' '; Phase=2									
Technetium-99	pCi/g	1.6700	U						

Table E.1 (continued)

Analysis	Units	A horizon Result	Qualifier	B horizon Result	Qualifier	C horizon Result	Qualifier	A lab split Result	Qualifier
Location=ORR; Formation=NOLICHUCKY; Site=15,23,25; Sample type=Regular; A=5056; B=5059; C=5062; A lab split=' '; Phase=1									
Americium-241	pCi/g	0.0240	U	0.05	U	0.0380	U		
Barium-133	pCi/g	0.0064	U	0.01	U	0.0098	U		
Cesium-137	pCi/g	0.3800		0.01		0.0098	U		
Chromium-51	pCi/g	0.0390	U	0.08	U	0.0600	U		
Cobalt-57	pCi/g	0.0041	U	0.01	U	0.0074	U		
Cobalt-60	pCi/g	0.0055	U	0.01	U	0.0099	U		
Curium-243	pCi/g	0.0350	U						
Curium-245	pCi/g	0.0560	U						
Curium-247	pCi/g	0.0060	U						
Europium-152	pCi/g	0.0350	U	0.06	U	0.0460	U		
Europium-154	pCi/g	0.0088	U	0.02	U	0.0160	U		
Plutonium-238	pCi/g	0.1200	UJ						
Plutonium-239/240	pCi/g	0.0280	UJ						
Potassium-40	pCi/g	14.0000		18.00		28.0000			
Radium-226	pCi/g	0.8200		1.10		0.7800			
Ruthenium-103	pCi/g	0.0050	U	0.01	U	0.0074	U		
Strontium-90	pCi/g	0.6300	U						
Thorium-228	pCi/g	2.2000	J	1.80	J	1.5000	J		
Thorium-230	pCi/g	1.2000	J	0.95	J	0.7000	J		
Thorium-232	pCi/g	2.0000	J	1.70	J	1.4000	J		
Thorium-234	pCi/g	1.4000		1.20		1.1000			
Total Uranium	pCi/g	0.7500	J						
Uranium-233/234	pCi/g	2.9000	UJ	2.30	UJ	2.3000	UJ		
Uranium-235	pCi/g	0.1300	UJ	0.09	UJ	0.0670	UJ		
Uranium-235 (gamma)	pCi/g	0.0684		0.05		0.0605			
Uranium-236	pCi/g	0.0200	UJ	0.01	UJ	0.0270	UJ		
Uranium-238	pCi/g	3.5000	UJ	2.40	UJ	2.4000	UJ		
Zinc-65	pCi/g	0.0120	U	0.03	U	0.0220	U		
Zirconium-95	pCi/g	0.0100	U	0.02	U	0.0180	U		

Table E.1 (continued)

Analysis	Units	A horizon Result	Qualifier	B horizon Result	Qualifier	C horizon Result	Qualifier	A lab split Result	Qualifier
Location=ORR; Formation=NOLICHUCKY; Site=16,28,42; Sample type=Regular; A=5065; B=5068; C=5071; A lab split=' '; Phase=1									
Americium-241	pCi/g	0.0220	U	0.02	U	0.0230	U		
Barium-133	pCi/g	0.0062	U	0.01	U	0.0059	U		
Cesium-137	pCi/g	0.5100		0.01	U	0.0060	U		
Chromium-51	pCi/g	0.0370	U	0.03	U	0.0370	U		
Cobalt-57	pCi/g	0.0043	U	0.00	U	0.0038	U		
Cobalt-60	pCi/g	0.0060	U	0.01	U	0.0058	U		
Curium-243	pCi/g	0.0340	U						
Curium-245	pCi/g	0.0580	U						
Curium-247	pCi/g	0.0056	U						
Europium-152	pCi/g	0.0370	U	0.03	U	0.0320	U		
Europium-154	pCi/g	0.0093	U	0.01	U	0.0082	U		
Neptunium-237	pCi/g	0.0770	J						
Plutonium-238	pCi/g	0.1200	UJ						
Plutonium-239/240	pCi/g	0.0650	UJ						
Potassium-40	pCi/g	16.0000		16.00		24.0000			
Radium-226	pCi/g	0.6700		0.35		1.1000			
Ruthenium-103	pCi/g	0.0049	U	0.00	U	0.0046	U		
Strontium-90	pCi/g	0.7600	U						
Thorium-228	pCi/g	1.2000	J	1.60	J	1.7000	J		
Thorium-230	pCi/g	0.8500	J	1.10	J	0.9500	J		
Thorium-232	pCi/g	1.3000	J	1.50	J	1.6000	J		
Thorium-234	pCi/g	1.5000		1.30		0.9800			
Total Uranium	pCi/g	1.5000	J						
Uranium-233/234	pCi/g	2.4000	UJ	2.10	UJ	2.5000	UJ		
Uranium-235	pCi/g	0.1000	UJ	0.09	UJ	0.0930	UJ		
Uranium-235 (gamma)	pCi/g	0.0901		0.08		0.0327			
Uranium-236	pCi/g	0.0320	UJ	0.03	UJ	0.0150	UJ		
Uranium-238	pCi/g	2.5000	UJ	2.20	UJ	2.3000	UJ		
Zinc-65	pCi/g	0.0140	U	0.01	U	0.0140	U		
Zirconium-95	pCi/g	0.0100	U	0.01	U	0.0100	U		
Location=ORR; Formation=NOLICHUCKY; Site=21; Sample type=Regular; A=4257; B=' '; C=' '; A lab split=' '; Phase=2									
Technetium-99	pCi/g	2.7900							

Table E.1 (continued)

Analysis	Units	A horizon Result	Qualifier	B horizon Result	Qualifier	C horizon Result	Qualifier	A lab split Result	Qualifier
Location=ORR; Formation=NOLICHUCKY; Site=24; Sample type=Regular; A=4258; B=' '; C=' '; A lab split=4259; Phase=2									
Technetium-99	pCi/g	1.5000	U					2.0400	U
Location=ORR; Formation=NOLICHUCKY; Site=28; Sample type=Regular; A=4262; B=' '; C=' '; A lab split=' '; Phase=2									
Technetium-99	pCi/g	2.2000	U						
Location=ORR; Formation=NOLICHUCKY; Site=3,13,24; Sample type=Regular; A=5083; B=5086; C=5089; A lab split=' '; Phase=1									
Americium-241	pCi/g	0.0580	U	0.02	U	0.0260	U		
Barium-133	pCi/g	0.0140	U	0.01	U	0.0063	U		
Cesium-137	pCi/g	0.5600		0.01		0.0063	U		
Chromium-51	pCi/g	0.0890	U	0.03	U	0.0380	U		
Cobalt-57	pCi/g	0.0085	U	0.00	U	0.0042	U		
Cobalt-60	pCi/g	0.0140	U	0.01	U	0.0062	U		
Curium-243	pCi/g	0.0740	U						
Curium-245	pCi/g	0.1100	U						
Curium-247	pCi/g	0.0070							
Europium-152	pCi/g	0.0680	U	0.03	U	0.0330	U		
Europium-154	pCi/g	0.0180	U	0.01	U	0.0090	U		
Plutonium-238	pCi/g	0.0410	UJ						
Plutonium-239/240	pCi/g	0.0110	UJ						
Potassium-40	pCi/g	17.0000		19.00		26.0000			
Radium-226	pCi/g	0.3900		1.30		1.2000			
Ruthenium-103	pCi/g	0.1100	U	0.00	U	0.0049	U		
Strontium-90	pCi/g	0.8000	U						
Thorium-228	pCi/g	1.4000	J	1.60	J	1.7000	J		
Thorium-230	pCi/g	0.9400	J	1.00	J	0.9900	J		
Thorium-232	pCi/g	1.6000	J	1.40	J	1.2000	J		
Thorium-234	pCi/g	1.5000		0.94		1.2000			
Total Uranium	pCi/g	1.1000	J						
Uranium-233/234	pCi/g	2.5000	UJ	2.20	UJ	2.3000	UJ		
Uranium-235	pCi/g	0.1100	UJ	0.08	UJ	0.1300	UJ		
Uranium-235 (gamma)	pCi/g	0.0969		0.02		0.0467			
Uranium-236	pCi/g	0.0130	UJ	0.03	UJ	0.0470	UJ		
Uranium-238	pCi/g	2.6000	UJ	2.20	UJ	2.5000	UJ		
Zinc-65	pCi/g	0.0320	U	0.01	U	0.0130	U		
Zirconium-95	pCi/g	0.0240	U	0.01	U	0.0100	U		

Table E.1 (continued)

Analysis	Units	A horizon Result	Qualifier	B horizon Result	Qualifier	C horizon Result	Qualifier	A lab split Result	Qualifier
Location=ORR; Formation=NOLICHUCKY; Site=5; Sample type=Regular; A=4253; B=' '; C=' '; A lab split=' '; Phase=2									
Technetium-99	pCi/g	1.7100	U						
Location=ORR; Formation=NOLICHUCKY; Site=5,21,31; Sample type=Regular; A=5074; B=5077; C=5080; A lab split=' '; Phase=1									
Americium-241	pCi/g	0.0270	U	0.03	U	0.0230	U		
Barium-133	pCi/g	0.0069	U	0.01	U	0.0059	U		
Cesium-137	pCi/g	0.7100		0.01		0.0060	U		
Chromium-51	pCi/g	0.0420	U	0.04	U	0.0370	U		
Cobalt-57	pCi/g	0.0044	U	0.00	U	0.0040	U		
Cobalt-60	pCi/g	0.0059	U	0.01	U	0.0056	U		
Curium-243	pCi/g	0.0380	U						
Curium-245	pCi/g	0.0580	U						
Curium-247	pCi/g	0.0053							
Europium-152	pCi/g	0.0340	U	0.03	U	0.0320	U		
Europium-154	pCi/g	0.0091	U	0.01	U	0.0084	U		
Neptunium-237	pCi/g	0.2300	J						
Plutonium-238	pCi/g	0.0630	UJ						
Plutonium-239/240	pCi/g	0.0430	UJ						
Potassium-40	pCi/g	14.0000		14.00		23.0000			
Radium-226	pCi/g	1.4000		1.20		0.8600			
Ruthenium-103	pCi/g	0.0053	U	0.00	U	0.0046	U		
Strontium-90	pCi/g	0.6700	U						
Thorium-228	pCi/g	1.4000	J	1.40	J	1.4000	J		
Thorium-230	pCi/g	0.9100	J	0.97	J	0.9000	J		
Thorium-232	pCi/g	1.2000	J	1.40	J	1.3000	J		
Thorium-234	pCi/g	1.3000		1.00		1.0000			
Total Uranium	pCi/g	1.4000	J						
Uranium-233/234	pCi/g	2.5000	UJ	2.10	UJ	2.5000	UJ		
Uranium-235	pCi/g	0.1200	UJ	0.04	UJ	0.1700	UJ		
Uranium-235 (gamma)	pCi/g	0.0432		0.04		0.0541			
Uranium-236	pCi/g	0.0140	UJ	0.01	UJ	0.0130	UJ		
Uranium-238	pCi/g	2.8000	UJ	2.30	UJ	2.8000	UJ		
Zinc-65	pCi/g	0.0130	U	0.01	U	0.0130	U		
Zirconium-95	pCi/g	0.0100	U	0.01	U	0.0099	U		

Table E.1 (continued)

Analysis	Units	A horizon Result	Qualifier	B horizon Result	Qualifier	C horizon Result	Qualifier	A lab split Result	Qualifier
Location=ROA; Formation=COPPER RIDGE; Site=33; Sample type=Regular; A=6093; B=' '; C=' '; A lab split=' '; Phase=2									
Technetium-99	pCi/g	1.4800	U						
Location=ROA; Formation=COPPER RIDGE; Site=33,35,44; Sample type=Regular; A=6047; B=6050; C=6053; A lab split=' '; Phase=2									
Americium-241	pCi/g	0.0683	U	0.05	U	0.0596	U		
Barium-133	pCi/g	0.0247	U	0.02	U	0.0234	U		
Cesium-137	pCi/g	0.9760		0.02	U	0.0219	U		
Chromium-51	pCi/g	0.1490	U	0.12	U	0.1380	U		
Cobalt-57	pCi/g	0.0128	U	0.01	U	0.0117	U		
Cobalt-60	pCi/g	0.0204	U	0.02	U	0.0198	U		
Curium-243	pCi/g	0.1200	U						
Curium-244	pCi/g	0.0847	UJ						
Curium-245	pCi/g	0.1700	U						
Curium-247	pCi/g	0.0230	U						
Europium-152	pCi/g	0.1290	U	0.11	U	0.1330	U		
Europium-154	pCi/g	0.0274	U	0.02	U	0.0259	U		
Hafnium-181	pCi/g	0.0206	U	0.02	U	0.0185	U		
Iridium-192	pCi/g	0.0176	U	0.01	U	0.0159	U		
Neptunium-237	pCi/g	0.0399	UJ						
Neptunium-237 (gamma)	pCi/g	2.8400	U	2.30	U	2.6500	U		
Niobium-95	pCi/g	0.0198	U	0.02	U	0.0206	U		
Plutonium-238	pCi/g	0.0462	UJ						
Plutonium-239/240	pCi/g	0.0370	UJ						
Potassium-40	pCi/g	3.2100		4.51		5.5000			
Radium-226	pCi/g	1.0800		0.96		1.3400			
Ruthenium-103	pCi/g	0.0196	U	0.02	U	0.0182	U		
Strontium-90	pCi/g	0.7120	U						
Thorium-228	pCi/g	0.8520	J	1.19	J	1.8600	J		
Thorium-230	pCi/g	1.0200	J	1.44	J	1.8500	J		
Thorium-232	pCi/g	0.6570	J	1.12	J	1.7700	J		
Thorium-234	pCi/g	0.9080	UJ	0.78	UJ	3.0700	J		
Total Uranium	pCi/g	1.5300							
Uranium-233/234	pCi/g	0.7870	J	1.05	J	1.3500	J		
Uranium-235	pCi/g	0.0477	J	0.07	J	0.0408	UJ		
Uranium-235 (gamma)	pCi/g	0.1570	U	0.14	U	0.1470	U		
Uranium-236	pCi/g	0.0095	UJ	0.01	UJ	0.0127	UJ		

Table E.1 (continued)

Analysis	Units	A horizon Result	Qualifier	B horizon Result	Qualifier	C horizon Result	Qualifier	A lab split Result	Qualifier
Uranium-238	pCi/g	0.7870	J	1.04	J	1.5500	J		
Uranium-238 (gamma)	pCi/g	4.2600	U	3.47	U	4.0000	U		
Zinc-65	pCi/g	0.0422	U	0.04	U	0.0442	U		
Zirconium-95	pCi/g	0.0380	U	0.03	U	0.0371	U		
Location=ROA; Formation=COPPER RIDGE; Site=34; Sample type=Regular; A=6094; B=' '; C=' '; A lab split=' '; Phase=2									
Technetium-99	pCi/g	1.3400	U						
Location=ROA; Formation=COPPER RIDGE; Site=34,39,41; Sample type=Regular; A=6083; B=6088; C=6091; A lab split=6085; Phase=2									
Americium-241	pCi/g	0.0282	U	0.04	U	0.0355	U	0.0285	U
Barium-133	pCi/g	0.0085	U	0.01	U	0.0092	U	0.0081	U
Cesium-137	pCi/g	1.4100		0.01	U	0.0083	U	1.3900	
Chromium-51	pCi/g	0.5230	U	0.65	U	0.5580	U	0.4850	U
Cobalt-57	pCi/g	0.0071	U	0.01	U	0.0077	U	0.0070	U
Cobalt-60	pCi/g	0.0065	U	0.01	U	0.0077	U	0.0063	U
Curium-243	pCi/g	0.0400	U					0.0436	U
Curium-245	pCi/g	0.0744	U					0.0741	U
Curium-247	pCi/g	0.0081	U					0.0077	U
Europium-152	pCi/g	0.0447	U	0.05	U	0.0482	U	0.0423	U
Europium-154	pCi/g	0.0120	U	0.02	U	0.0131	U	0.0119	U
Hafnium-181	pCi/g	0.0341	U	0.04	U	0.0336	U	0.0324	U
Iridium-192	pCi/g	0.0139	U	0.02	U	0.0155	U	0.0134	U
Neptunium-237	pCi/g	0.0616	J					0.0581	J
Neptunium-237 (gamma)	pCi/g	1.2200	U	1.46	U	1.3200	U	1.1800	U
Niobium-95	pCi/g	0.0456	U	0.06	U	0.0579	U	0.0456	U
Plutonium-238	pCi/g	0.0590	UJ					0.9280	J
Plutonium-239/240	pCi/g	0.0308	J					1.3700	J
Potassium-40	pCi/g	2.5300		29.60		3.5600		2.6000	
Radium-226	pCi/g	0.8490		1.84		3.2500		0.8320	
Ruthenium-103	pCi/g	0.0333	U	0.04	U	0.0341	U	0.0309	U
Strontium-90	pCi/g	1.1200	U					1.0300	U
Thorium-228	pCi/g	0.5090	J	1.59	J	1.1000	J	0.5250	J
Thorium-230	pCi/g	0.8380	J	1.02	J	1.5400	J	0.8670	J
Thorium-232	pCi/g	0.5000	J	1.51	J	1.2200	J	0.4860	J
Thorium-234 (gamma)	pCi/g	1.1200		1.29		1.7300		1.1500	

Table E.1 (continued)

Analysis	Units	A horizon Result	Qualifier	B horizon Result	Qualifier	C horizon Result	Qualifier	A lab split Result	Qualifier
Total Uranium	pCi/g	1.3000	J					1.0500	J
Uranium-233/234	pCi/g	0.9600	J	0.84	J	1.4000	J	0.7350	J
Uranium-235	pCi/g	0.0309	UJ	0.06	J	0.0706	J	0.0284	J
Uranium-235 (gamma)	pCi/g	0.0500	U	0.05	U	0.1270		0.0470	U
Uranium-236	pCi/g	0.0097	UJ	0.01	UJ	0.0132	UJ	0.0106	UJ
Uranium-238	pCi/g	1.0000	J	0.96	J	1.6400	J	0.8940	J
Uranium-238 (gamma)	pCi/g	18.5000	U	25.40	U	20.7000	U	17.4000	U
Zinc-65	pCi/g	0.0179	U	0.03	U	0.0203	U	0.0170	U
Zirconium-95	pCi/g	0.0313	U	0.05	U	0.0393	U	0.0287	U
Location=ROA; Formation=COPPER RIDGE; Site=35; Sample type=Regular; A=6095; B=' '; C=' '; A lab split=' '; Phase=2									
Technetium-99	pCi/g	1.1100	U						
Location=ROA; Formation=COPPER RIDGE; Site=40,42,43; Sample type=Regular; A=6056; B=6059; C=6062; A lab split=' '; Phase=2									
Americium-241	pCi/g	0.0550	U	0.04	U	0.0404	U		
Barium-133	pCi/g	0.0208	U	0.01	U	0.0143	U		
Cesium-137	pCi/g	0.8050		0.01	U	0.0129	U		
Chromium-51	pCi/g	0.1220	U	0.08	U	0.0830	U		
Cobalt-57	pCi/g	0.0101	U	0.01	U	0.0074	U		
Cobalt-60	pCi/g	0.0166	U	0.01	U	0.0120	U		
Curium-243	pCi/g	0.0975	U						
Curium-245	pCi/g	0.1370	U						
Curium-247	pCi/g	0.0184	U						
Europium-152	pCi/g	0.0985	U	0.08	U	0.0820	U		
Europium-154	pCi/g	0.0215	U	0.02	U	0.0161	U		
Hafnium-181	pCi/g	0.0173	U	0.01	U	0.0116	U		
Iridium-192	pCi/g	0.0145	U	0.01	U	0.0097	U		
Neptunium-237	pCi/g	0.0660	J						
Neptunium-237 (gamma)	pCi/g	2.2200	U	1.83	U	1.8100	U		
Niobium-95	pCi/g	0.0177	U	0.01	U	0.0135	U		
Potassium-40	pCi/g	2.2600		2.75		2.7900			
Radium-226	pCi/g	0.7240		0.77		0.7970			
Ruthenium-103	pCi/g	0.0157	U	0.01	U	0.0111	U		
Strontium-90	pCi/g	0.7960	U						
Thorium-228	pCi/g	0.4930	J	0.70	J	1.1800	J		

Table E.1 (continued)

Analysis	Units	A horizon Result	Qualifier	B horizon Result	Qualifier	C horizon Result	Qualifier	A lab split Result	Qualifier
Thorium-230	pCi/g	0.6920	J	0.77	J	1.1600	J		
Thorium-232	pCi/g	0.4270	J	0.51	J	1.0800	J		
Thorium-234	pCi/g	0.8550	UJ	0.54	UJ	0.7530	UJ		
Total Uranium	pCi/g	3.2100							
Uranium-233/234	pCi/g	3.2100	J	0.82	J	0.9040	J		
Uranium-235	pCi/g	0.0175	J	0.06	J	0.0302	J		
Uranium-235 (gamma)	pCi/g	0.1510	U	0.10	U	0.1010	U		
Uranium-236	pCi/g	0.0087	UJ	0.03	UJ	0.0113	UJ		
Uranium-238	pCi/g	0.6370	J	0.83	J	1.2000	J		
Uranium-238 (gamma)	pCi/g	3.5300	U	2.98	U	2.7100	U		
Zinc-65	pCi/g	0.0379	U	0.03	U	0.0269	U		
Zirconium-95	pCi/g	0.0287	U	0.03	U	0.0217	U		
Location=ROA; Formation=COPPER RIDGE; Site=45,46,47; Sample type=Regular; A=6074; B=6071; C=6065; A lab split=' '; Phase=2									
Americium-241	pCi/g	0.1120	U	0.11	U	0.0690	U		
Barium-133	pCi/g	0.0426	U	0.05	U	0.0276	U		
Cesium-137	pCi/g	0.8130		0.05	U	0.0271	U		
Chromium-51	pCi/g	0.2480	U	0.27	U	0.1660	U		
Cobalt-57	pCi/g	0.0204	U	0.02	U	0.0166	U		
Cobalt-60	pCi/g	0.0429	U	0.04	U	0.0284	U		
Curium-243	pCi/g	0.1990	U						
Curium-245	pCi/g	0.2720	U						
Curium-247	pCi/g	0.0379	U						
Europium-152	pCi/g	0.2270	U	0.22	U	0.1550	U		
Europium-154	pCi/g	0.0431	U	0.05	U	0.0347	U		
Hafnium-181	pCi/g	0.0386	U	0.04	U	0.0234	U		
Iridium-192	pCi/g	0.0298	U	0.03	U	0.0193	U		
Neptunium-237	pCi/g	0.0366	UJ						
Neptunium-237 (gamma)	pCi/g	4.4400	U	5.12	U	3.5400	U		
Niobium-95	pCi/g	0.0430	U	0.04	U	0.0290	U		
Plutonium-238	pCi/g	0.0482	J						
Plutonium-239/240	pCi/g	0.0362	UJ						
Potassium-40	pCi/g	3.3700		1.32	U	3.6700			
Radium-226	pCi/g	1.0900		1.17		0.9360			
Ruthenium-103	pCi/g	0.0339	U	0.04	U	0.0226	U		
Strontium-90	pCi/g	2.3300							
Thorium-228	pCi/g	0.6800	J	1.14	J	1.0100	J		
Thorium-230	pCi/g	0.8780	J	1.18	J	1.2100	J		
Thorium-232	pCi/g	0.6260	J	1.13	J	1.0000	J		

Table E.1 (continued)

Analysis	Units	A horizon Result	Qualifier	B horizon Result	Qualifier	C horizon Result	Qualifier	A lab split Result	Qualifier
Thorium-234	pCi/g	1.0300	UJ	1.14	UJ	0.8030	UJ		
Total Uranium	pCi/g	2.2500	J						
Uranium-233/234	pCi/g	1.1700	J			1.0300	J		
Uranium-235	pCi/g	0.0941	J			0.9360	J		
Uranium-235 (gamma)	pCi/g	0.1790	U	0.21	U	0.1450	U		
Uranium-236	pCi/g	0.0104	UJ			0.0157	J		
Uranium-238	pCi/g	1.0200	J			1.3400	J		
Uranium-238 (gamma)	pCi/g	6.9800	U	7.63	U	5.2700	U		
Zinc-65	pCi/g	0.0832	U	0.09	U	0.0549	U		
Zirconium-95	pCi/g	0.0689	U	0.07	U	0.0461	U		
Location=ROA; Formation=COPPER RIDGE; Site=45,46,47; Sample type=Field Duplicate; A=6077; B=6080; C=6068; A lab split=' '; Phase=2									
Americium-241	pCi/g	0.0985	U	0.11	U	0.0747	U		
Barium-133	pCi/g	0.0374	U	0.04	U	0.0255	U		
Cesium-137	pCi/g	0.6660		0.04	U	0.0241	U		
Chromium-51	pCi/g	0.2300	U	0.23	U	0.1590	U		
Cobalt-57	pCi/g	0.0186	U	0.02	U	0.0144	U		
Cobalt-60	pCi/g	0.0348	U	0.03	U	0.0228	U		
Curium-243	pCi/g	0.1780	U						
Curium-245	pCi/g	0.2470	U						
Curium-247	pCi/g	0.0355	U						
Europium-152	pCi/g	0.1830	U	0.02	U	0.1250	U		
Europium-154	pCi/g	0.0388	U	0.04	U	0.0307	U		
Hafnium-181	pCi/g	0.0325	U	0.03	U	0.0216	U		
Iridium-192	pCi/g	0.0267	U	0.03	U	0.0179	U		
Neptunium-237	pCi/g	0.0574	J						
Neptunium-237 (gamma)	pCi/g	3.9400	U	4.35	U	3.1200	U		
Niobium-95	pCi/g	0.0335	U	0.04	U	0.0263	U		
Plutonium-238	pCi/g	0.2060	UJ						
Plutonium-239/240	pCi/g	0.0258	UJ						
Potassium-40	pCi/g	2.7100		0.98	U	3.5700			
Radium-226	pCi/g	1.0100		1.09		1.1100			
Ruthenium-103	pCi/g	0.0297	U	0.03	U	0.0184	U		
Strontium-90	pCi/g	0.9690	U						
Thorium-228	pCi/g	0.6410	J	0.98	J	0.9970	J		
Thorium-230	pCi/g	0.9770	J	0.97	J	0.9590	J		
Thorium-232	pCi/g	0.6400	J	0.77	J	1.0200	J		
Thorium-234	pCi/g	0.9130	UJ	1.26	UJ	0.8290	UJ		
Total Uranium	pCi/g	2.4500	J						
Uranium-233/234	pCi/g	0.9810	J			1.2600	J		

Table E.1 (continued)

Analysis	Units	A horizon Result	Qualifier	B horizon Result	Qualifier	C horizon Result	Qualifier	A lab split Result	Qualifier
Uranium-235	pCi/g	0.0648	J			0.1000	J		
Uranium-235 (gamma)	pCi/g	0.1580	U	0.16	U	0.1080	U		
Uranium-236	pCi/g	0.0108	UJ			0.0369	UJ		
Uranium-238	pCi/g	1.0400	J			1.3600	J		
Uranium-238 (gamma)	pCi/g	6.2300	U	6.09	U	4.4500	U		
Zinc-65	pCi/g	0.0727	U	0.07	U	0.0462	U		
Zirconium-95	pCi/g	0.0580	U	0.06	U	0.0406	U		
Location=ROA; Formation=DISMAL GAP; Site=10,13,14; Sample type=Regular; A=6029; B=6032; C=6035; A lab split=' '; Phase=1									
Americium-241	pCi/g	0.0520	U	0.04	U	0.0340	U		
Barium-133	pCi/g	0.0110	U	0.01	U	0.0079	U		
Cesium-137	pCi/g	0.8700		0.01		0.0084	U		
Chromium-51	pCi/g	0.0640	U	0.06	U	0.0500	U		
Cobalt-57	pCi/g	0.0067	U	0.01	U	0.0055	U		
Cobalt-60	pCi/g	0.0080	U	0.01	U	0.0073	U		
Curium-243	pCi/g	0.0560	U						
Curium-245	pCi/g	0.0910	U						
Curium-247	pCi/g	0.0099	U						
Europium-152	pCi/g	0.0460	U	0.04	U	0.0370	U		
Europium-154	pCi/g	0.0140	U	0.01	U	0.0120	U		
Hafnium-181	pCi/g	0.0089	U	0.01	U	0.0065	U		
Iridium-192	pCi/g	0.0075	U	0.01	U	0.0057	U		
Niobium-95	pCi/g	0.0093	U	0.01	U	0.0077	U		
Plutonium-238	pCi/g	0.0590	UJ						
Plutonium-239/240	pCi/g	0.0490	UJ						
Potassium-40	pCi/g	9.5000		17.00		22.0000			
Radium-226	pCi/g	0.7200		0.71		0.6200			
Ruthenium-103	pCi/g	0.0081	U	0.01	U	0.0048			
Strontium-90	pCi/g	1.2000	U						
Thorium-228	pCi/g	0.9400	J	1.40	J	1.1000	J		
Thorium-230	pCi/g	0.7300	J	0.90	J	0.6500	J		
Thorium-232	pCi/g	0.9800	J	1.40	J	1.2000	J		
Thorium-234	pCi/g	0.9400		0.88		0.7800			
Total Uranium	pCi/g	2.5000	J						
Uranium-233/234	pCi/g	0.8300	J	0.93	J	1.0000	J		
Uranium-235	pCi/g	0.0900	UJ	0.05	UJ	0.1500	J		
Uranium-235 (gamma)	pCi/g	0.0757		0.07		0.0280			
Uranium-236	pCi/g	0.0320	UJ	0.05	UJ	0.1100	UJ		
Uranium-238	pCi/g	0.8200	J	1.00	J	0.8900	J		
Zinc-65	pCi/g	0.0180	U	0.02	U	0.0170	U		
Zirconium-95	pCi/g	0.0150	U	0.01	U	0.0130	U		

Table E.1 (continued)

Analysis	Units	A horizon Result	Qualifier	B horizon Result	Qualifier	C horizon Result	Qualifier	A lab split Result	Qualifier
Location=ROA; Formation=DISMAL GAP; Site=10,13,14; Sample type=Field Duplicate; A=6038; B=6041; C=6044; A lab split=' '; Phase=1									
Americium-241	pCi/g	0.0190		0.03	U	0.0510	U		
Barium-133	pCi/g	0.0110	U	0.01	U	0.0120	U		
Cesium-137	pCi/g	1.0000		0.01		0.0120	U		
Chromium-51	pCi/g	0.0690	U	0.05	U	0.0770	U		
Cobalt-57	pCi/g	0.0070	U	0.01	U	0.0075	U		
Cobalt-60	pCi/g	0.0088	U	0.01	U	0.0120	U		
Curium-243	pCi/g	0.0600	U						
Curium-245	pCi/g	0.0930	U						
Curium-247	pCi/g	0.0100	U						
Europium-152	pCi/g	0.0500	U	0.04	U	0.0580	U		
Europium-154	pCi/g	0.0150	U	0.01	U	0.0160	U		
Hafnium-181	pCi/g	0.0095	U	0.01	U	0.0110	U		
Iridium-192	pCi/g	0.0079	U	0.01	U	0.0086	U		
Niobium-95	pCi/g	0.0093	U	0.01	U	0.0130	U		
Plutonium-238	pCi/g	0.1100	J						
Plutonium-239/240	pCi/g	0.0510	UJ						
Potassium-40	pCi/g	11.0000		20.00		24.0000			
Radium-226	pCi/g	0.8200		0.71		0.7000			
Ruthenium-103	pCi/g	0.0089	U	0.01	U	0.0098	U		
Strontium-90	pCi/g	1.3000	U						
Thorium-228	pCi/g	1.4000	J	0.80	J	0.6800	J		
Thorium-230	pCi/g	0.9200	J	0.32	J	0.4200	J		
Thorium-232	pCi/g	1.5000	J	0.89	J	0.6700	J		
Thorium-234	pCi/g	1.5000		1.00		2.1000			
Total Uranium	pCi/g	1.8000	J						
Uranium-233/234	pCi/g	0.8200	J	1.00	J	1.1000	J		
Uranium-235	pCi/g	0.0680	J	0.05	J	0.0930	UJ		
Uranium-235 (gamma)	pCi/g	0.0792		0.06		0.0570			
Uranium-236	pCi/g	0.0150	UJ	0.03	UJ	0.0930	UJ		
Uranium-238	pCi/g	0.9500	J	1.20	J	0.9700	J		
Zinc-65	pCi/g	0.0190	U	0.02	U	0.0290	U		
Zirconium-95	pCi/g	0.0170	U	0.02	U	0.0220	U		
Location=ROA; Formation=DISMAL GAP; Site=19; Sample type=Regular; A=6096; B=' '; C=' '; A lab split=' '; Phase=2									
Technetium-99	pCi/g	1.2100	U						

Table E.1 (continued)

Analysis	Units	A horizon Result	Qualifier	B horizon Result	Qualifier	C horizon Result	Qualifier	A lab split Result	Qualifier
Location=ROA; Formation=DISMAL GAP; Site=20; Sample type=Regular; A=6097; B=' '; C=' '; A lab split=' '; Phase=2									
Technetium-99	pCi/g	0.9320	U						
Location=ROA; Formation=DISMAL GAP; Site=21; Sample type=Regular; A=6098; B=' '; C=' '; A lab split=' '; Phase=2									
Technetium-99	pCi/g	1.3800	U						
Location=ROA; Formation=DISMAL GAP; Site=3,7,21; Sample type=Regular; A=6020; B=6023; C=6026; A lab split=' '; Phase=1									
Americium-241	pCi/g	0.0410	U	0.04	U	0.0390	U		
Barium-133	pCi/g	0.0097	U	0.01	U	0.0094	U		
Cesium-137	pCi/g	0.0094	U	0.01		0.0094	U		
Chromium-51	pCi/g	0.0600	U	0.06	U	0.0590	U		
Cobalt-57	pCi/g	0.0065	U	0.01	U	0.0072	U		
Cobalt-60	pCi/g	0.0088	U	0.01	U	0.0097	U		
Curium-243	pCi/g	0.0550	U						
Curium-245	pCi/g	0.0880	U						
Curium-247	pCi/g	0.0091	U						
Europium-152	pCi/g	0.0460	U	0.05	U	0.0500	U		
Europium-154	pCi/g	0.0140	U	0.01	U	0.0150	U		
Hafnium-181	pCi/g	0.0081	U	0.01	U	0.0078	U		
Iridium-192	pCi/g	0.0069	U	0.01	U	0.0068	U		
Niobium-95	pCi/g	0.0090	U	0.01	U	0.0098	U		
Plutonium-238	pCi/g	0.2500	J						
Plutonium-239/240	pCi/g	0.0600	UJ						
Potassium-40	pCi/g	22.0000		27.00		21.0000			
Radium-226	pCi/g	0.7900		0.79		0.8000			
Ruthenium-103	pCi/g	0.0074	U	0.01	U	0.0073	U		
Strontium-90	pCi/g	1.5000	U						
Thorium-228	pCi/g	0.7000	J	0.17	J	1.1000	J		
Thorium-230	pCi/g	0.4400	J	0.89	J	1.1000	J		
Thorium-232	pCi/g	0.7200	J	1.40	J	1.1000	J		
Thorium-234	pCi/g	1.4000		1.20		1.3000			
Total Uranium	pCi/g	1.2000	J						
Uranium-233/234	pCi/g	1.1000	J	1.10	J	0.9500	J		
Uranium-235	pCi/g	0.0610	J	0.04	J	0.0710	UJ		

Table E.1 (continued)

Analysis	Units	A horizon Result	Qualifier	B horizon Result	Qualifier	C horizon Result	Qualifier	A lab split Result	Qualifier
Uranium-235 (gamma)	pCi/g	0.0907		0.03		0.0708			
Uranium-236	pCi/g	0.0840	UJ	0.03	UJ	0.0700	UJ		
Uranium-238	pCi/g	1.2000	J	1.00	J	1.2000	J		
Zinc-65	pCi/g	0.0210	U	0.02	U	0.0220	U		
Zirconium-95	pCi/g	0.0160	U	0.02	U	0.0170	U		
Location=ROA; Formation=DISMAL GAP; Site=8,20,22; Sample type=Regular; A=6011; B=6014; C=6017; A lab split=' '; Phase=1									
Americium-241	pCi/g	0.0510	U	0.04	U	0.0430	U		
Barium-133	pCi/g	0.0093	U	0.01	U	0.0110	U		
Cesium-137	pCi/g	1.3000		0.01		0.0099	U		
Chromium-51	pCi/g	0.0570	U	0.07	U	0.0660	U		
Cobalt-57	pCi/g	0.0063	U	0.01	U	0.0071	U		
Cobalt-60	pCi/g	0.0069	U	0.01	U	0.0097	U		
Curium-243	pCi/g	0.1900	U						
Curium-244	pCi/g	0.0690	UJ						
Curium-245	pCi/g	0.0440	U						
Curium-247	pCi/g	0.0250	U						
Europium-152	pCi/g	0.0380	U	0.05	U	0.0480	U		
Europium-154	pCi/g	0.0130	U	0.02	U	0.0150	U		
Hafnium-181	pCi/g	0.0078	U	0.01	U	0.0087	U		
Iridium-192	pCi/g	0.0065	U	0.01	U	0.0076	U		
Niobium-95	pCi/g	0.0079	U	0.01	U	0.0099	U		
Plutonium-238	pCi/g	0.0890	UJ						
Plutonium-239/240	pCi/g	0.0570	UJ						
Potassium-40	pCi/g	8.1000		17.00		27.0000			
Radium-226	pCi/g	0.7900		1.00		0.7700			
Ruthenium-103	pCi/g	0.0070	U	0.01	U	0.0081	U		
Strontium-90	pCi/g	0.7100	NA						
Thorium-228	pCi/g	1.2000	J	1.10	J	0.4700	J		
Thorium-230	pCi/g	0.8900	J	0.95	J	0.2700	J		
Thorium-232	pCi/g	0.9100	J	1.40	J	0.3400	J		
Thorium-234	pCi/g	1.3000	NA	1.60	NA	1.1000	NA		
Total Uranium	pCi/g	1.4000	J						
Uranium-233/234	pCi/g	0.8400	J	0.59	J	0.3900	J		
Uranium-235	pCi/g	0.0530	J	0.04	UJ	0.0400	UJ		
Uranium-235 (gamma)	pCi/g	0.0664		0.08		0.0796			
Uranium-236	pCi/g	0.0140	UJ	0.01	UJ	0.0120	UJ		
Uranium-238	pCi/g	0.9800	J	0.61	J	0.4400	J		
Zinc-65	pCi/g	0.0140	U	0.02	U	0.0220	U		
Zirconium-95	pCi/g	0.0130	U	0.02	U	0.0180	U		

Table E.1 (continued)

Analysis	Units	A horizon Result	Qualifier	B horizon Result	Qualifier	C horizon Result	Qualifier	A lab split Result	Qualifier
Location=ROA; Formation=DISMAL GAP; Site=9,17,19; Sample type=Regular; A=6005; B=6002; C=6008; A lab split=' '; Phase=1									
Americium-241	pCi/g	0.0440	U	0.04	U	0.0620	U		
Barium-133	pCi/g	0.0110	U	0.01	U	0.0120	U		
Cesium-137	pCi/g	0.9000		0.02		0.0110	U		
Chromium-51	pCi/g	0.0690	U	0.06	U	0.0760	U		
Cobalt-57	pCi/g	0.0070	U	0.01	U	0.0083	U		
Cobalt-60	pCi/g	0.0084	U	0.01	U	0.0110	U		
Curium-243	pCi/g	0.0610	U	0.05	U	0.0680	U		
Curium-244	pCi/g	0.9100	UJ	0.83	UJ				
Curium-245	pCi/g	0.0950	U	0.09	U	0.1100	U		
Curium-247	pCi/g	0.0110	U	0.01	U	0.0110	U		
Europium-152	pCi/g	0.0510	U	0.05	U	0.0560	U		
Europium-154	pCi/g	0.0150	U	0.02	U	0.0180	U		
Hafnium-181	pCi/g	0.0096	U	0.01	U	0.0100	U		
Iridium-192	pCi/g	0.0080	U	0.01	U	0.0088	U		
Niobium-95	pCi/g	0.0091	U	0.01	U	0.0260	U		
Plutonium-238	pCi/g	0.1100	J	0.10	J	0.0950	UJ		
Plutonium-239/240	pCi/g	0.0440	UJ	0.07	UJ	0.0250	J		
Potassium-40	pCi/g	8.3000		13.00		23.0000			
Radium-226	pCi/g	1.0000		1.00		0.9400			
Ruthenium-103	pCi/g	0.0086	U	0.01	U	0.0095	U		
Strontium-90	pCi/g	1.2000	NA	1.20	NA	1.2000	NA		
Thorium-228	pCi/g	0.9700	J	1.40	J	0.5600	J		
Thorium-230	pCi/g	0.9600	J	1.10	J	0.4200	J		
Thorium-232	pCi/g	0.9800	J	1.20	J	0.6100	J		
Thorium-234	pCi/g	1.7000		1.90		1.3000			
Total Uranium	pCi/g	0.0660	UJ	0.45	J	1.3000	J		
Uranium-233/234	pCi/g	1.0000	J	0.55	J	0.5200	J		
Uranium-235	pCi/g	0.0510	J	0.04	J	0.0500	UJ		
Uranium-235 (gamma)	pCi/g	0.0747		0.11		0.0642			
Uranium-236	pCi/g	0.0160	UJ	0.01	UJ	0.0130	UJ		
Uranium-238	pCi/g	0.9300	J	0.69	J	0.6200	J		
Zinc-65	pCi/g	0.0180	U	0.02	U	0.0260	U		
Zirconium-95	pCi/g	0.0160	U	0.02	U	0.0200	U		

Table E.2. Tritium analysis results for noncomposited soil samples

Location	Formation	Site	Horizon	Units	Sample id	Phase	Field Duplicate	A horizon Result	Qualifier
AND	COPPER RIDGE	32	A	pCi/g	2260	2		0.049	UJ
AND	COPPER RIDGE	33	A	pCi/g	2263	2		0.048	UJ
AND	COPPER RIDGE	34	A	pCi/g	2266	2		0.061	UJ
AND	COPPER RIDGE	35	A	pCi/g	2269	2		0.060	UJ
ORR	CHEPULTEPEC	50	A	pCi/g	1549	2		0.100	UJ
ORR	CHEPULTEPEC	66	A	pCi/g	1739	2		0.100	UJ
ORR	CHEPULTEPEC	74	A	pCi/g	1747	2		0.100	UJ
ORR	CHEPULTEPEC	85	A	pCi/g	1607	2		0.200	UJ
ORR	CHICKAMAUGA Bethel V	93	A	pCi/g	4216	2		0.130	UJ
ORR	CHICKAMAUGA Bethel V	99	A	pCi/g	4217	2		0.110	UJ
ORR	CHICKAMAUGA Bethel V	100	A	pCi/g	4218	2		0.140	UJ
ORR	CHICKAMAUGA Bethel V	101	A	pCi/g	4219	2		0.120	J
ORR	CHICKAMAUGA Bethel V	102	A	pCi/g	4220	2		0.220	J
ORR	CHICKAMAUGA Bethel V	103	A	pCi/g	4221	2		0.200	J
ORR	CHICKAMAUGA Bethel V	104	A	pCi/g	1965	2		0.120	UJ
ORR	CHICKAMAUGA Bethel V	108	A	pCi/g	1968	2		0.110	UJ
ORR	CHICKAMAUGA Bethel V	110	A	pCi/g	1971	2		0.130	UJ
ORR	CHICKAMAUGA Bethel V	115	A	pCi/g	1974	2		0.120	UJ
ORR	CHICKAMAUGA Bethel V	116	A	pCi/g	1977	2		0.090	UJ
ORR	CHICKAMAUGA Bethel V	117	A	pCi/g	1980	2		0.110	UJ
ORR	CHICKAMAUGA K-25	118	A	pCi/g	4096	2		0.092	UJ
ORR	CHICKAMAUGA K-25	120	A	pCi/g	4093	2		0.071	UJ
ORR	CHICKAMAUGA K-25	122	A	pCi/g	4106	2		0.072	UJ
ORR	CHICKAMAUGA K-25	124	A	pCi/g	4116	2		0.068	UJ
ORR	CHICKAMAUGA K-25	126	A	pCi/g	4090	2		0.088	UJ
ORR	CHICKAMAUGA K-25	129	A	pCi/g	4087	2		0.058	UJ
ORR	COPPER RIDGE	62	A	pCi/g	1481	2		0.015	J
ORR	COPPER RIDGE	64	A	pCi/g	1484	2		0.012	J
ORR	COPPER RIDGE	75	A	pCi/g	1478	2		0.023	J
ORR	COPPER RIDGE	83	A	pCi/g	1475	2		0.024	J
ORR	COPPER RIDGE	91	A	pCi/g	1472	2		0.019	UJ
ORR	DISMAL GAP	11	A	pCi/g	1079	1		0.042	UJ
ORR	DISMAL GAP	2	A	pCi/g	1189	1		0.061	UJ
ORR	DISMAL GAP	2	A	pCi/g	1198	1	FIELD DUPLICATE	0.036	UJ
ORR	DISMAL GAP	22	A	pCi/g	1123	1		0.048	J
ORR	DISMAL GAP	26	A	pCi/g	1214	1		0.036	J
ORR	DISMAL GAP	27	A	pCi/g	1071	1		0.017	UJ
ORR	DISMAL GAP	32	A	pCi/g	1124	1		0.051	J
ORR	DISMAL GAP	33	A	pCi/g	1125	1		0.062	J
ORR	DISMAL GAP	35	A	pCi/g	1126	1		0.042	J
ORR	DISMAL GAP	41	A	pCi/g	1063	1		0.020	UJ
ROA	COPPER RIDGE	34	A	pCi/g	3330	2		0.300	UJ
ROA	COPPER RIDGE	40	A	pCi/g	3327	2		0.200	UJ
ROA	COPPER RIDGE	41	A	pCi/g	3328	2		0.200	UJ

Table E.2 (continued)

Location	Formation	Site	Horizon	Units	Sample id	Phase	Field Duplicate	A horizon Result	Qualifier
ROA	DISMAL GAP	17	A	pCi/g	3016	1		0.046	UJ
ROA	DISMAL GAP	20	A	pCi/g	3045	1		0.048	UJ
ROA	DISMAL GAP	22	A	pCi/g	3057	1		0.041	UJ
ROA	DISMAL GAP	3	A	pCi/g	3098	1		0.040	UJ
ROA	DISMAL GAP	7	A	pCi/g	3084	1		0.075	UJ
ROA	DISMAL GAP	8	A	pCi/g	3071	1		0.040	UJ
ROA	DISMAL GAP	9	A	pCi/g	3004	1		0.053	UJ

Appendix F

RELATION OF SAMPLE NUMBERS TO LABORATORY SAMPLE DELIVERY GROUPS (SDGs)

Table F.1. Relation of sample numbers to laboratory sample delivery groups (SDGs)

SDG number	Sample number
	Inorganics
042260	5001, 5004, 5007
0422260, 0430260/0508260/05111260	5001, 5004, 5007, 5010, 5013, 5016, 5019, 5022, 5025, 6001, 6004, 6007, 6010, 6013, 6016
0430260	6001, 6004, 6007
0508260	5010, 5013, 5016, 5019, 5022, 5025
0511260	6010, 6013, 6016
0514260	5028, 5031, 5034, 5037, 5040, 5043, 6019, 6022, 6025
519260	3144, 6028, 6031, 6034, 6037, 6040, 6043
0727260/0728260/0729260	5055, 5058, 5061, 5064, 5067, 5070, 5073, 5076, 5079, 5082, 5085, 5088
0722260/0723260	7001, 7001D, 7001, 7004, 7007, 7010, 7013, 7016, 7019, 7022, 7025, 7028, 7031, 7034, 7037FD,[a] 7040FD, 7043FD
0803260	1468
0909260/0915260	6046, 6049, 6052, 6055, 6058, 6061
0924260/1002260/1009260	5091, 5094, 5097, 1502, 5100, 5104, 5106, 5109, 5112, 5115
1015260/1016260/1020260/1023260	6064, 6067, 6070 ;6073 ,6076, 6079, 5118, 5121, 5124, 5127, 5130, 5133, 5136, 5139, 5142, 5145, 5148, 5151, 1735
1030260/1109260/1113260	5154, 5155, 5159, 5162, 5165, 5166 ,5170, 5173, 5174, 5178, 5181, 5184
1118260/1120260/1124260	3361, 3367, 6082, 6084, 6087, 6090, 5187, 5190, 5193, 5196, 5199, 5202
1204260/1209260/1211260	5205, 5208, 5211, 5216, 5217, 5222, 5225, 7046, 7047, 7051, 7054, 7057, 7060, 7063, 5228, 5229, 5234, 5237
1216260/1217260/1218260/	5240, 5241, 5246, 5249, 7066, 7069, 7072, 7075, 7078, 7081, 5252, 5253, 5257, 5260, 5263, 5264, 5268, 5271
0108260	4229, 4230, 4236, 4238, 4239
	Pesticides/PCBs
0523260	1296, 1292, 1298, 1300, 1301, 1302, 1293, 1294, 1297, 1299, 1303, 1295
0508260	1181, 1190, 1201FD, 1213
0511260	3058, 3099, 3072, 3085
042260	3018, 1064, 1072, 1080, 3003
0424260	1099, 1106, 1107, 1108, 1115
0430260	1127, 3032

Table F.1 (continued)

SDG number	Sample number
0514260	3113, 3046, 1231, 3148, 3113RE,[b] 3046RE, 1231RE, 3148RE
0519260	3127, 3139, 3168
0722260	2070, 2059, 2157, 2090, 2101, 2120, 2116, 2080, 2112, 2143, 2130, 2149, 2039
0828260	3223, 3225, 3227, 3229, 3231, 3235, 3233-FD
0827260	3203, 3206, 3211, 3214, 3217, 3209
0911260/0916260	1471, 1474, 1477, 1480, 1483, 1487, 1491, 1493, 1495, 1497
1015260/1016260/1020260/1023260	1744, 1746, 1749, 1738, 1741, 1734
1118260/1120260/1124260	3358, 3364, 1891, 1894, 1897, 1900, 1903, 1906
1204260/1209260/1211260	1964, 1967, 1970, 1973, 1976, 1979, 2257, 2259, 2262, 2265, 2268, 2271, 2273, 2275, 2277, 2279, 2281, 2283, 4086, 4089, 4092, 4095, 4105, 4115, 4124
1216260/1217260/1218260	4127, 4129, 4131, 4133, 4135, 4137
0108260	4227, 4233
	Chlorinated Herbicides
0508260	1190, 1201FD, 1213
0042260	1072, 1080, 3003, 1064
0424260	1099, 1106, 1107, 1108, 1115, 3018
0430260	1127, 3032
0511260	3046, 3058, 3085, 3099, 3072
0828260	3223, 3225, 3227, 3229, 3231, 3235, 3223-FD
0827260	3203, 3206, 3211, 3214, 3217, 3209
1015260/1016260/1020260/1023260	1738, 1741, 1734
1118260/1120260/1124260	3359, 3365, 1891, 1897, 1903, 1964, 1970, 1976
1204260/1209260/1211260	2257, 2259, 2262, 2265, 2268, 2271, 2273, 2275, 2277, 2279, 2281, 2283, 4086, 4092, 4095, 4105, 4115, 4124
0108260	4228, 4235

Table F.1 (continued)

SDG number	Sample number
	Polynuclear Aromatic Hydorcarbons
0422260	1064, 1072, 1080, 3003, 1009, 1106, 1107, 1108, 1115, 3018
0430260	1127, 3032
0508260	1190, 1201FD, 1213
0511260	3046, 3058, 3099, 3072, 3085
0514260	1231, 3113
0519260	3127, 3139, 3148, 3168
0523260	1292, 1293, 1294, 1295, 1296, 1297, 1298, 1299, 1300, 1301, 1302, 1303
0722260	2157RE, 2101RE, 2070RE, 2080RE, 2039RE, 2120RE, 2116RE, 2112RE, 2143RE, 2130RE, 2149RE, 2059RE, 2090
072260/0723260	2116, 2112, 2143, 2059, 2090, 2070, 2080, 2039, 2120, 2157, 2149, 2130, 2101
0828260	3223, 3225, 3227, 3229, 3231, 3235, 3233-FD
0827260	3203, 3206, 3211, 3214, 3217, 3209
0911260/0916260	1471, 1474, 1477, 1480, 1483, 1487, 1491, 1493, 1495, 1497
0924260/1002260/1009260	1542, 1544, 1546, 1548, 1551, 1553
1015260/1016260/1020260/1023260	1744, 1746, 1749, 1738, 1741, 1734
1118260/1120260/1124260	3360, 3366, 1891, 1894, 1897, 1900, 1903, 1906
1204260/1209260/1211260	1964, 1967, 1970, 1973, 1976, 1979, 2257, 2259, 2262, 2265, 2268, 2271, 2273, 2275, 2277, 2279, 2281, 2283, 4086, 4089, 4092, 4095, 4105, 4115, 4124
1216260/1217260/1218260	4127, 4129, 4131, 4133, 4135, 4137
0108260	4226, 4234
	Uranium Isotopes by Alpha Spectroscopy
2684	1469
2633	7002, 7011, 7020, 7029, 7005, 7008, 7014, 7017, 7023, 7026, 7032, 7035
2391	5020, 5023, 5026
2419	5029, 5038, 6020, 5032, 5041, 6023, 5035, 5044, 6026
2423	6029, 6038, 6032, 6041, 6035, 6044
2638	7038FD, 7041FD, 7044FD

Table F.1 (continued)

SDG number	Sample number
2658	5056, 5065, 5074, 5083, 5059, 5062, 5068, 5071, 5077, 5080, 5086, 5089
2847	6047, 6050, 6053
2924	5098, 5092, 5095,
2970	5101, 5103, 5107
21003	5110, 5113, 5116
21046	5119, 5122, 5125
21366	5242, 5243, 5247, 5250
21299	5206, 5209, 5212
21345	7048, 7049, 7058, 5230, 5231, 7052, 7055, 7061, 7064, 5235, 5238
21123	5156, 5157, 5160, 5163
21058	5128, 5131, 5134
21034	6074, 6077, 6065, 6068, 6071, 6080
2878	6056, 6059, 6062
21081	5137, 5146, 5140, 5143, 5149, 5152
21383	5254, 5255, 5265, 5266, 5258, 5261, 5269, 5272
21328	5218, 5219, 5223, 5226
21377	7067, 7070, 7073, 7076, 7079, 7082
30044	4240
21169	5167, 5168, 5175, 5176, 5171, 5179
21205	5182, 5185
21247	5188, 5191, 5194
21262	5197, 5200, 5203
21232	6083, 6085, 6088, 6091
	Neptunium-237 by Alpha Spectroscopy
2658	5056, 5065, 5074, 5083
2391	5020
2684	1469
2419	5029, 5038, 6020
2633	7002, 7011, 7020, 7029
2638	7038FD
2423	6029, 6038

Table F.1 (continued)

SDG number	Sample number
2970	5101
21046	5119
21366	5242, 5243
21299	5206
21345	7048, 7049, 7058, 5230, 5231
21123	5156, 5157
21003	5110
21058	5128
21034	6074, 6077
2878	6056
21081	5137, 5146
21383	5254, 5255, 5265, 5266
21328	5218, 5219
2924	5092
21377	7067, 7076
30044	4240
21169	5167, 5168, 5175, 5176
2847	6047
21262	5197
21232	6083, 6085
	Plutonium Isotopes by Alpha Spectroscopy
2419	5029, 5038, 6020, 5032, 5041, 6023, 5035, 5044, 6026
2658	5056, 5065, 5074, 5083
2638	7038FD
2391	5020
2633	7002, 7011, 7020, 7029
2684	1469
2423	6029, 6038
2970	5101
21046	5119
21366	5242, 5243
21299	5206

Table F.1 (continued)

SDG number	Sample number
21345	7048, 7049, 7058, 5230, 5231
21123	5156, 5157
21003	5110
21058	5128
21034	6074, 6077
2878	6056
21081	5137, 5146
21383	5254, 5255, 5265, 5266
21328	5218, 5219
2924	5092
21377	7067, 7076
30044	4240
21169	5167, 5168, 5175, 5176
2847	6047
21262	5197
21232	6083, 6085
	Thorium Isotopes by Alpha Spectroscopy
2684	1469
2638	7038FD, 7041FD, 7044FD
2633	7002, 7011, 7020, 7029, 7005, 7008, 7014, 7017, 7023, 7026, 7032, 7035
2658	5056, 5065, 5074, 5083, 5059, 5062, 5068, 5071, 5077, 5080, 5086, 5089
2419	5029, 5038, 6020, 5032, 5041, 6023, 5035, 5044, 6026
2423	6029, 6038, 6032, 6041, 6035, 6044
2970	5101, 5103, 5107
21046	5119, 5122, 5125
21366	5242, 5243, 5247, 5250
21299	5206, 5209, 5212
21345	7048, 7049, 7058, 5230, 5231, 7052, 7055, 7061, 7064, 5235, 5238
21123	5156, 5157, 5160, 5163
21003	5110, 5113, 5116
21058	5128, 5131, 5134

Table F.1 (continued)

SDG number	Sample number
21034	6074, 6077, 6065, 6068, 6071, 6080, 6071
2878	6056, 6059, 6062
21081	5137, 5146, 5140, 5143, 5149, 5152
21383	5254, 5255, 5265, 5266, 5258, 5261, 5269, 5272,5261
21328	5128, 5129, 5223, 5226
2924	5092, 5095, 5098
21377	7067, 7070, 7073, 7076, 7079, 7082
30044	4240
21169	5167, 5168, 5175, 5176, 5171, 5179
2847	6047, 6050, 6053
21247	5188, 5191, 5194
21205	5182, 5185
21262	5197, 5200, 5203
21232	6083, 6085, 6088, 6091
	Strontium-89/90 by Gas Flow Proportional Counter
2419	5029, 5038, 6020
2423	6029, 6038
2633	7002, 7011, 7020, 7029
2638	7038FD
2658	5056, 5065, 5074, 5083
2684	1469
2970	5101
21046	5119
21366	5242, 5243
21299	5206
21345	7048, 7049, 7058, 5230, 5231
21123	5156, 5157
21003	5110
21058	5128
21034	6074, 6077
2878	6056
21081	5137, 5146

Table F.1 (continued)

SDG number	Sample number
21328	5218, 5219
21383	5254, 5255, 5265, 5266
2924	5092
21377	7067, 7076
30044	4240
21169	5167, 5168, 5175, 5176
2847	6047
21262	5197
21232	6083, 6085
	Gamma Spectroscopy
2638	7038FD, 7041FD
2684	1469
2658	5056, 5065, 5074, 5083, 5059, 5062, 5068, 5071, 5077, 5080, 5086, 5089
2423	6029, 6038, 6032, 6041, 6035, 6044
2633	7002, 7011, 7020, 7029, 7005, 7008, 7014, 7014, 7017, 7023, 7026, 7032, 7035
2419	5029, 5038, 6020, 5032, 5041, 6023, 5035, 5044, 6026
2970	5101, 5103, 5107
21046	5119, 5122, 5125
21366	5242, 5243, 5247, 5250
21299	5206, 5209, 5212
21345	7048, 7049, 7058, 5230, 5231, 7052, 7055, 7061, 5235, 5238, 7064
21123	5156, 5157, 5160, 5163
21003	5110, 5113, 5116
21058	5128, 5131, 5134
21205	5128, 5185
21247	5188, 5191, 5194
21034	6074, 6077, 6065, 6068, 6071, 6080
2878	6056, 6059, 6062
21081	5137, 5146, 5140, 5143, 5149, 5152
21383	5254, 5255, 5265, 5266, 5258, 5261, 5269, 5272
21328	5218, 5219, 5232, 5226

Table F.1 (continued)

SDG number	Sample number
2924	5092, 5093, 5098
21377	7067, 7070, 7073, 7076, 7079, 7082
30044	4240
21169	5167, 5168, 5175, 5176, 5171, 5179
2847	6047, 6050, 6053
21262	5197, 5200, 5203
21232	6083, 6058, 6088, 6091
	Total Uranium by Pulse Laser Phosphorimetry
2423	6029, 6038, 6020
2684	1469
2658	5056, 5065, 5074, 5083
2638	7038FD
2633	7002, 7011, 7020, 7029
2970	5101
21046	5119
21366	5242, 5243
21299	5206
21345	7048, 7049, 7058, 5230, 5231
21123	5156, 5157
21003	5110
21058	5128
21034	6074, 6077
2878	6056
21081	5137, 5146
21383	5254, 5255, 5265, 5266
21328	5218, 5219
2924	5092
21377	7067, 7076
30044	4240
21169	5167, 5168, 5175, 5176
2847	6047
21262	5197

Table F.1 (continued)

SDG number	Sample number
21232	6083, 6085
	Curium-243 by Alpha Spectroscopy
2970	5101
21046	5119
21366	5242, 5243
21299	5206
21345	7048, 7049, 7058, 5230, 5231
21123	5156, 5157
21003	5110
21058	5128
21034	6074, 6077
2878	6056
21081	5137, 5146
21383	5254, 5255, 5265, 5266
21328	5218, 5219
2924	5092
21377	7067, 7076
21169	5167, 5168, 5175, 5176
30044	4240
21262	5197
21232	6083, 6085
2847	6047
	Technetium-99
2419	5029, 5038, 6020
2684	1469
2419/2423	6029, 6038, 5029, 5038, 6020
2638/2633/2658	7002, 7011, 7020, 7029, 7038FD, 5056, 5065, 5074, 5083
30584	4253, 4254, 4255, 4256, 4257, 4258, 4259, 4260, 4261, 4262, 4263, 4264, 4265, 4266,
30625	4267, 4268, 4269, 4270, 4271, 4272, 4273, 4274, 4275, 4276, 4277, 4278, 4279, 6093,
	6094, 6095, 6096, 6097, 6098, 7084, 7085, 7086, 7087, 7088, 7088-FD

Table F.1 (continued)

SDG number	Sample number
30670	4280, 4281, 4282, 4283, 4284, 4285, 4286, 4287, 4288, 4289, 4290, 4291, 4292
	Tritium
2369	1063, 1071, 1079, 1122, 1125, 3004, 3031, 1123, 1124, 1126, 1128, 3016
2391	1180, 1189, 1198FD, 1214
2399	3071, 3084, 3098, 3045, 3057, 3082
30044	4216, 4217, 4218, 4219, 4220, 4221
2970	1549
21299	1965, 1968, 1971, 1974, 1977, 1980
21345	4087, 4090, 4093, 4096, 4106, 4116, 2260, 2263, 2266, 2269
21003	1607
21081	1747, 1739
21205	3327, 3328, 3329, 3330
21247	1892, 1895, 1898, 1901, 1904, 1907
2858	1472, 1475, 1478, 1481, 1484

[a]FD = field duplicate sample.
[b]RE = reanalyzed sample.

Appendix G

SUMMARY OF STATISTICALLY TREATED DATA AND THE SIGNIFICANCE LEVEL OF DIFFERENCES IN THE DATA

NOTE ON SIGNIFICANCE LEVELS

Chi-square likelihood ratio tests for comparing formation-locations are discussed in Sect. 5.2.3. The following notation is used in Tables G.3 through G.5 to denote significance levels for these tests:

P-ALL	for testing that all formation-locations and all sampling areas are the same against the alternative that they may all differ.
P-DG	for testing that all Dismal Gap locations are the same against the alternative that they may all differ.
P-CR	for testing that all Copper Ridge locations are the same against the alternative that they may all differ.
P-ORR	for testing that all ORR formation-locations are the same against the alternative that they may all differ.
P-CHICK	for testing that the two Chickamauga locations are the same against the alternative that they may differ.
P-DGN	for testing that the ORR Dismal Gap and Nolichucky formations are the same against the alternative that they may differ.
P-CRC	for testing that the ORR Copper Ridge and Chepultepec formations are the same against the alternative that they may differ.
P-GRP	for testing that on the ORR, the Chickamauga, Knox, and Conasauga groups are all the same, against the alternative that these groups may differ, although formations within them may not.

Table G.1. Summary statistics for NAA data[a]
(Estimates and confidence bounds are in milligrams per kilogram.)

Horizon	Formation-location	N	I	D	Median	UCB95	X95	LTB9595
					ALUMINUM			
A	DG-AND	4	0	4	68000	169000	419000	159000
A	DG-ROA	4	0	4	53600	133000	330000	125000
A	DG-ORR	4	0	4	31000	76900	191000	72300
A	NL-ORR	4	0	4	53400	132000	329000	124000
A	CHI-BV	4	0	4	39400	97700	243000	91800
A	CHI-K25	4	0	4	31400	78000	194000	73300
A	CHE-ORR	4	0	4	17000	42100	105000	39600
A	CR-ORR	4	0	4	23100	57200	142000	53800
A	CR-AND	4	0	4	25700	63800	158000	60000
A	CR-ROA	4	0	3	2820	7030	17400	6590
B	DG-AND	4	0	4	92300	105000	119000	104000
B	DG-ROA	4	0	4	78900	89500	101000	88800
B	DG-ORR	4	0	4	79100	89700	102000	89000
B	NL-ORR	4	0	4	89900	102000	116000	101000
B	CHI-BV	4	0	4	80100	90800	103000	90100
B	CHI-K25	4	0	4	113000	128000	145000	127000
B	CHE-ORR	4	0	4	59400	67400	76400	66800
B	CR-ORR	4	0	4	52200	59200	67100	58700
B	CR-AND	4	0	4	53600	60800	69000	60300
B	CR-ROA	4	0	4	42700	48400	54900	48000
C	DG-AND	4	0	4	102000	140000	192000	137000
C	DG-ROA	4	0	4	98900	136000	186000	133000
C	DG-ORR	4	0	4	94000	129000	177000	126000
C	NL-ORR	4	0	4	95800	131000	180000	129000
C	CHI-BV	4	0	4	94600	130000	178000	127000
C	CHI-K25	4	0	4	112000	153000	210000	150000
C	CHE-ORR	4	0	4	73400	101000	138000	98500
C	CR-ORR	4	0	4	88100	121000	166000	118000
C	CR-AND	3	0	3	69800	101000	131000	89500
C	CR-ROA	4	0	4	56000	76800	105000	75200
					ANTIMONY			
A	DG-AND	4	0	4	0.439	0.500	0.569	0.496
A	DG-ROA	4	0	4	0.532	0.606	0.690	0.601
A	DG-ORR	4	0	4	0.474	0.540	0.615	0.536
A	NL-ORR	4	0	4	0.509	0.580	0.661	0.575
A	CHI-BV	4	0	4	0.576	0.656	0.748	0.651
A	CHI-K25	4	0	4	0.708	0.807	0.919	0.800
A	CHE-ORR	4	0	4	0.611	0.696	0.793	0.690
A	CR-ORR	4	0	4	0.865	0.986	1.120	0.977
A	CR-AND	3	0	3	0.764	0.888	0.991	0.846
A	CR-ROA	4	0	4	0.749	0.853	0.971	0.845
B	DG-AND	4	0	3	0.331	0.467	0.653	0.454
B	DG-ROA	4	0	4	0.528	0.741	1.040	0.723
B	DG-ORR	4	1	3	0.267	0.377	0.526	0.364
B	NL-ORR	4	0	4	0.426	0.598	0.839	0.583
B	CHI-BV	4	0	4	0.377	0.530	0.744	0.517
B	CHI-K25	3	0	3	0.707	1.050	1.390	0.922
B	CHE-ORR	4	0	4	0.979	1.370	1.930	1.340
B	CR-ORR	4	0	4	1.420	1.990	2.790	1.940
B	CR-AND	4	0	4	1.130	1.580	2.220	1.540
B	CR-ROA	4	0	4	0.985	1.380	1.940	1.350
C	DG-AND	4	0	2	0.123	0.170	0.213	0.154
C	DG-ROA	4	1	3	0.333	0.440	0.578	0.430
C	DG-ORR	4	1	3	0.261	0.346	0.453	0.336
C	NL-ORR	4	0	4	0.367	0.484	0.638	0.475
C	CHI-BV	4	0	4	0.447	0.589	0.776	0.578
C	CHI-K25	4	0	4	0.620	0.817	1.080	0.801
C	CHE-ORR	4	0	4	0.935	1.230	1.620	1.210
C	CR-ORR	4	0	4	1.910	2.510	3.310	2.470
C	CR-AND	4	0	4	0.940	1.240	1.630	1.210
C	CR-ROA	4	0	4	1.490	1.970	2.590	1.930

Table G.1 (continued)

Horizon	Formation-location	N	I	D	Median	UCB95	X95	LTB9595
					ARSENIC			
A	DG-AND	4	0	4	4.67	5.76	7.09	5.68
A	DG-ROA	4	0	4	5.68	7.00	8.63	6.91
A	DG-ORR	4	0	4	5.18	6.38	7.86	6.29
A	NL-ORR	4	0	4	5.49	6.76	8.33	6.67
A	CHI-BV	4	0	4	8.32	10.30	12.60	10.10
A	CHI-K25	4	0	4	8.54	10.50	13.00	10.40
A	CHE-ORR	4	0	4	7.85	9.68	11.90	9.54
A	CR-ORR	4	0	4	20.30	25.00	30.80	24.60
A	CR-AND	3	0	3	14.60	18.60	22.20	17.20
A	CR-ROA	4	0	4	10.60	13.00	16.00	12.80
B	DG-AND	4	0	4	5.73	7.56	9.97	7.42
B	DG-ROA	4	0	4	6.53	8.62	11.40	8.46
B	DG-ORR	4	0	4	5.12	6.76	8.92	6.63
B	NL-ORR	4	0	4	6.96	9.18	12.10	9.01
B	CHI-BV	4	0	4	11.30	14.90	19.60	14.60
B	CHI-K25	3	0	3	9.82	13.50	17.10	12.20
B	CHE-ORR	4	0	4	20.60	27.20	35.90	26.70
B	CR-ORR	4	0	4	48.40	63.90	84.40	62.70
B	CR-AND	4	0	4	12.90	17.00	22.40	16.70
B	CR-ROA	4	0	4	16.20	21.30	28.10	20.90
C	DG-AND	4	0	4	3.93	4.92	6.16	4.85
C	DG-ROA	4	0	4	5.61	7.02	8.78	6.92
C	DG-ORR	4	0	4	4.63	5.80	7.25	5.71
C	NL-ORR	4	0	4	6.05	7.58	9.48	7.47
C	CHI-BV	4	0	4	11.80	14.80	18.50	14.60
C	CHI-K25	4	0	4	8.00	10.00	12.50	9.87
C	CHE-ORR	4	0	4	23.60	29.50	36.90	29.10
C	CR-ORR	4	0	4	79.20	99.10	124.00	97.70
C	CR-AND	4	0	4	27.80	34.80	43.60	34.30
C	CR-ROA	4	0	4	32.70	40.90	51.20	40.30
					BARIUM			
A	DG-AND	4	0	4	404.0	1150	3300	1080
A	DG-ROA	4	0	4	3450.0	9860	28200	9210
A	DG-ORR	4	0	4	123.0	350	1000	327
A	NL-ORR	4	0	4	1280.0	3650	10400	3410
A	CHI-BV	4	0	4	7950.0	22700	64900	21200
A	CHI-K25	4	0	4	202.0	578	1650	540
A	CHE-ORR	4	0	4	380.0	1080	3100	1010
A	CR-ORR	4	0	4	265.0	756	2160	706
A	CR-AND	4	0	4	307.0	876	2500	818
A	CR-ROA	4	0	4	67.5	193	551	180
B	DG-AND	4	0	4	375.0	744	1480	711
B	DG-ROA	4	0	4	7010.0	13900	27600	13300
B	DG-ORR	4	0	4	235.0	465	923	445
B	NL-ORR	4	0	4	806.0	1600	3170	1530
B	CHI-BV	4	0	4	6160.0	12200	24300	11700
B	CHI-K25	4	0	4	317.0	628	1250	601
B	CHE-ORR	4	0	4	251.0	498	988	476
B	CR-ORR	4	0	4	82.3	163	324	156
B	CR-AND	4	0	4	118.0	234	463	223
B	CR-ROA	4	0	4	123.0	244	484	233
C	DG-AND	4	0	4	333.0	765	1760	725
C	DG-ROA	4	0	4	4130.0	9500	21800	9000
C	DG-ORR	4	0	4	244.0	559	1280	530
C	NL-ORR	4	0	4	2810.0	6450	14800	6110
C	CHI-BV	4	0	4	2920.0	6710	15400	6350
C	CHI-K25	4	0	4	354.0	814	1870	771
C	CHE-ORR	4	0	4	510.0	1170	2690	1110
C	CR-ORR	4	0	4	124.0	286	657	271
C	CR-AND	4	0	4	149.0	343	788	325
C	CR-ROA	4	0	4	71.6	164	378	156

Table G.1 (continued)

Horizon	Formation-location	N	I	D	Median	UCB95	X95	LTB9595
					CERIUM			
A	DG-AND	3	0	3	55.8	68.4	79.3	64.1
A	DG-ROA	4	0	4	57.8	68.9	82.1	68.1
A	DG-ORR	4	0	4	48.0	57.1	68.1	56.5
A	NL-ORR	4	0	4	54.6	65.1	77.5	64.3
A	CHI-BV	4	0	4	71.0	84.6	101.0	83.6
A	CHI-K25	4	0	4	63.4	75.5	90.0	74.7
A	CHE-ORR	4	0	4	32.0	38.2	45.5	37.7
A	CR-ORR	4	0	4	46.1	54.9	65.4	54.2
A	CR-AND	4	0	4	56.1	66.8	79.6	66.0
A	CR-ROA	4	0	4	34.5	41.1	49.0	40.7
B	DG-AND	4	0	4	70.4	90.4	116.0	88.9
B	DG-ROA	4	0	4	69.2	88.8	114.0	87.4
B	DG-ORR	4	0	4	65.5	84.0	108.0	82.7
B	NL-ORR	4	0	4	64.3	82.6	106.0	81.2
B	CHI-BV	4	0	4	89.3	115.0	147.0	113.0
B	CHI-K25	4	0	4	76.9	98.7	127.0	97.1
B	CHE-ORR	4	0	4	30.6	39.2	50.3	38.6
B	CR-ORR	4	0	4	35.0	45.0	57.7	44.2
B	CR-AND	4	0	4	32.3	41.4	53.1	40.7
B	CR-ROA	4	0	4	23.2	29.7	38.2	29.3
C	DG-AND	4	0	4	90.8	118.0	152.0	115.0
C	DG-ROA	4	0	4	81.0	105.0	136.0	103.0
C	DG-ORR	4	0	4	64.0	82.9	107.0	81.4
C	NL-ORR	3	0	3	95.4	129.0	160.0	117.0
C	CHI-BV	4	0	4	107.0	138.0	179.0	136.0
C	CHI-K25	4	0	4	90.5	117.0	152.0	115.0
C	CHE-ORR	4	0	4	34.6	44.8	58.0	44.0
C	CR-ORR	4	0	4	46.8	60.6	78.4	59.5
C	CR-AND	4	0	4	35.3	45.7	59.1	44.9
C	CR-ROA	4	0	4	29.9	38.7	50.1	38.0
					CESIUM			
A	DG-AND	3	0	3	3.15	3.67	4.10	3.49
A	DG-ROA	4	0	4	2.89	3.30	3.77	3.27
A	DG-ORR	4	0	4	2.68	3.06	3.50	3.04
A	NL-ORR	4	0	4	2.95	3.37	3.85	3.34
A	CHI-BV	4	0	4	2.58	2.94	3.36	2.92
A	CHI-K25	4	0	4	3.11	3.55	4.05	3.52
A	CHE-ORR	4	0	4	1.42	1.62	1.85	1.61
A	CR-ORR	4	0	4	2.09	2.39	2.73	2.37
A	CR-AND	4	0	4	2.02	2.31	2.64	2.29
A	CR-ROA	4	0	4	1.88	2.14	2.45	2.12
B	DG-AND	4	0	4	4.78	5.37	6.04	5.33
B	DG-ROA	4	0	4	4.44	4.99	5.60	4.95
B	DG-ORR	4	0	4	4.59	5.15	5.79	5.11
B	NL-ORR	4	0	4	5.17	5.81	6.53	5.77
B	CHI-BV	4	0	4	5.63	6.33	7.11	6.28
B	CHI-K25	4	0	4	7.28	8.18	9.19	8.12
B	CHE-ORR	4	0	4	4.88	5.48	6.16	5.44
B	CR-ORR	4	0	4	4.85	5.45	6.12	5.41
B	CR-AND	4	0	4	3.96	4.45	5.00	4.42
B	CR-ROA	4	0	4	2.88	3.24	3.64	3.22
C	DG-AND	4	0	4	4.41	4.92	5.49	4.89
C	DG-ROA	4	0	4	5.50	6.14	6.85	6.10
C	DG-ORR	4	0	4	4.51	5.03	5.61	4.99
C	NL-ORR	3	0	3	6.81	7.73	8.48	7.42
C	CHI-BV	4	0	4	6.06	6.76	7.54	6.71
C	CHI-K25	4	0	4	7.38	8.24	9.19	8.18
C	CHE-ORR	4	0	4	4.67	5.21	5.82	5.18
C	CR-ORR	4	0	4	4.93	5.50	6.13	5.46
C	CR-AND	4	0	4	4.14	4.61	5.15	4.58
C	CR-ROA	4	0	4	4.14	4.62	5.15	4.59

Table G.1 (continued)

Horizon	Formation-location	N	I	D	Median	UCB95	X95	LTB9595
					CHROMIUM			
A	DG-AND	3	0	3	63.1	72.2	79.7	69.2
A	DG-ROA	4	0	4	65.8	73.9	83.1	73.3
A	DG-ORR	4	0	4	60.4	67.9	76.3	67.4
A	NL-ORR	4	0	4	67.6	75.9	85.3	75.3
A	CHI-BV	4	0	4	51.7	58.1	65.3	57.7
A	CHI-K25	4	0	4	48.6	54.6	61.4	54.2
A	CHE-ORR	4	0	4	28.9	32.5	36.5	32.2
A	CR-ORR	4	0	4	37.1	41.7	46.9	41.4
A	CR-AND	4	0	4	33.3	37.4	42.0	37.1
A	CR-ROA	4	0	4	30.3	34.1	38.3	33.8
B	DG-AND	4	0	4	84.2	95.7	109.0	94.9
B	DG-ROA	4	0	4	79.0	89.9	102.0	89.1
B	DG-ORR	4	0	4	83.8	95.3	108.0	94.5
B	NL-ORR	4	0	4	85.6	97.4	111.0	96.6
B	CHI-BV	4	0	4	72.7	82.7	94.0	82.0
B	CHI-K25	4	0	4	68.9	78.3	89.1	77.7
B	CHE-ORR	4	0	4	56.5	64.3	73.1	63.8
B	CR-ORR	4	0	4	50.3	57.2	65.1	56.7
B	CR-AND	4	0	4	51.3	58.4	66.4	57.9
B	CR-ROA	4	0	4	34.6	39.3	44.7	39.0
C	DG-AND	4	0	4	84.8	97.3	112.0	96.4
C	DG-ROA	4	0	4	92.7	106.0	122.0	105.0
C	DG-ORR	4	0	4	83.7	96.1	110.0	95.2
C	NL-ORR	3	0	3	103.0	121.0	135.0	115.0
C	CHI-BV	4	0	4	74.0	85.0	97.5	84.2
C	CHI-K25	4	0	4	69.6	79.9	91.7	79.2
C	CHE-ORR	4	0	4	72.9	83.7	96.0	82.9
C	CR-ORR	4	0	4	70.7	81.1	93.1	80.4
C	CR-AND	4	0	4	53.5	61.4	70.4	60.8
C	CR-ROA	4	0	4	52.9	60.7	69.6	60.1
					COBALT			
A	DG-AND	3	0	3	13.90	19.60	25.20	17.60
A	DG-ROA	4	0	4	18.90	25.40	34.30	24.90
A	DG-ORR	4	0	4	15.30	20.60	27.80	20.20
A	NL-ORR	4	0	4	15.20	20.50	27.60	20.10
A	CHI-BV	4	0	4	17.60	23.80	32.00	23.30
A	CHI-K25	4	0	4	17.70	23.80	32.10	23.40
A	CHE-ORR	4	0	4	11.30	15.30	20.60	15.00
A	CR-ORR	4	0	4	8.29	11.20	15.00	10.90
A	CR-AND	4	0	4	15.30	20.70	27.80	20.30
A	CR-ROA	4	0	4	5.84	7.86	10.60	7.71
B	DG-AND	4	0	4	16.10	23.00	32.90	22.50
B	DG-ROA	4	0	4	15.70	22.40	32.00	21.90
B	DG-ORR	4	0	4	12.50	17.90	25.60	17.50
B	NL-ORR	4	0	4	17.00	24.30	34.70	23.70
B	CHI-BV	4	0	4	17.10	24.40	34.90	23.80
B	CHI-K25	4	0	4	12.20	17.50	25.00	17.10
B	CHE-ORR	4	0	4	4.59	6.56	9.38	6.41
B	CR-ORR	4	0	4	4.63	6.62	9.46	6.47
B	CR-AND	4	0	4	8.66	12.40	17.70	12.10
B	CR-ROA	4	0	4	4.19	5.98	8.54	5.84
C	DG-AND	4	0	4	18.70	29.10	45.30	28.30
C	DG-ROA	4	0	4	15.20	23.60	36.70	22.90
C	DG-ORR	4	0	4	15.10	23.40	36.40	22.70
C	NL-ORR	3	0	3	21.20	35.20	51.20	30.00
C	CHI-BV	4	0	4	23.90	37.20	57.80	36.10
C	CHI-K25	4	0	4	13.70	21.40	33.20	20.70
C	CHE-ORR	4	0	4	8.77	13.60	21.20	13.20
C	CR-ORR	4	0	4	4.78	7.44	11.60	7.22
C	CR-AND	4	0	4	7.45	11.60	18.00	11.20
C	CR-ROA	4	0	4	5.07	7.89	12.30	7.66

Table G.1 (continued)

Horizon	Formation-location	N	I	D	Median	UCB95	X95	LTB9595
					EUROPIUM			
A	DG-AND	3	0	3	0.606	0.756	0.889	0.704
A	DG-ROA	4	0	4	0.613	0.743	0.900	0.733
A	DG-ORR	4	0	4	0.585	0.709	0.859	0.700
A	NL-ORR	4	0	4	0.577	0.699	0.847	0.690
A	CHI-BV	4	0	4	0.998	1.210	1.460	1.190
A	CHI-K25	4	0	4	0.812	0.984	1.190	0.971
A	CHE-ORR	4	0	4	0.539	0.653	0.791	0.645
A	CR-ORR	4	0	4	0.581	0.703	0.852	0.694
A	CR-AND	4	0	4	0.743	0.901	1.090	0.889
A	CR-ROA	4	0	4	0.480	0.581	0.704	0.574
B	DG-AND	4	0	4	0.713	0.870	1.060	0.859
B	DG-ROA	4	0	4	0.693	0.845	1.030	0.834
B	DG-ORR	4	0	4	0.718	0.875	1.070	0.864
B	NL-ORR	4	0	4	0.746	0.910	1.110	0.898
B	CHI-BV	4	0	4	1.330	1.620	1.970	1.600
B	CHI-K25	4	0	4	1.120	1.370	1.670	1.350
B	CHE-ORR	4	0	4	0.389	0.475	0.579	0.468
B	CR-ORR	4	0	4	0.385	0.469	0.572	0.463
B	CR-AND	4	0	4	0.380	0.464	0.566	0.458
B	CR-ROA	4	0	4	0.338	0.412	0.503	0.407
C	DG-AND	4	0	4	1.180	1.440	1.760	1.420
C	DG-ROA	4	0	4	0.836	1.020	1.240	1.000
C	DG-ORR	4	0	4	0.733	0.893	1.090	0.881
C	NL-ORR	3	0	3	0.833	1.050	1.240	0.972
C	CHI-BV	4	0	4	1.700	2.070	2.530	2.050
C	CHI-K25	4	0	4	1.230	1.500	1.830	1.480
C	CHE-ORR	4	0	4	0.413	0.503	0.613	0.496
C	CR-ORR	4	0	4	0.392	0.477	0.581	0.471
C	CR-AND	4	0	4	0.342	0.417	0.508	0.412
C	CR-ROA	4	0	4	0.333	0.405	0.494	0.400
					GALLIUM			
A	DG-AND	4	0	4	13.30	17.10	21.90	16.80
A	DG-ROA	4	0	4	13.60	17.50	22.40	17.20
A	DG-ORR	4	0	4	12.00	15.40	19.80	15.20
A	NL-ORR	4	0	4	15.40	19.80	25.40	19.40
A	CHI-BV	4	0	4	16.00	20.50	26.30	20.20
A	CHI-K25	4	0	4	14.70	18.80	24.20	18.50
A	CHE-ORR	4	0	4	7.45	9.57	12.30	9.41
A	CR-ORR	4	0	4	5.44	7.00	8.99	6.88
A	CR-AND	3	0	3	11.70	15.60	19.30	14.20
A	CR-ROA	4	0	4	17.00	21.80	28.00	21.40
B	DG-AND	4	0	4	15.60	18.80	22.60	18.50
B	DG-ROA	4	0	4	18.20	22.00	26.50	21.70
B	DG-ORR	4	0	4	20.10	24.20	29.20	23.90
B	NL-ORR	4	0	4	21.90	26.40	31.90	26.10
B	CHI-BV	4	0	4	17.50	21.20	25.50	20.90
B	CHI-K25	3	0	3	34.20	42.40	49.70	39.60
B	CHE-ORR	4	0	4	15.00	18.10	21.80	17.90
B	CR-ORR	4	0	4	14.40	17.30	20.90	17.10
B	CR-AND	4	0	4	13.30	16.00	19.30	15.80
B	CR-ROA	4	0	4	16.20	19.50	23.60	19.30
C	DG-AND	4	0	4	19.70	24.60	30.80	24.30
C	DG-ROA	4	0	4	29.00	36.20	45.20	35.70
C	DG-ORR	4	0	4	22.00	27.50	34.40	27.10
C	NL-ORR	4	0	4	28.70	35.80	44.80	35.30
C	CHI-BV	4	0	4	21.10	26.30	32.90	25.90
C	CHI-K25	4	0	4	32.80	41.00	51.20	40.40
C	CHE-ORR	4	0	4	14.40	18.00	22.50	17.80
C	CR-ORR	4	0	4	15.90	19.90	24.90	19.60
C	CR-AND	4	0	4	12.20	15.20	19.00	15.00
C	CR-ROA	4	0	4	18.90	23.60	29.50	23.30

Table G.1 (continued)

Horizon	Formation-location	N	I	D	Median	UCB95	X95	LTB9595
					GOLD			
A	DG-AND	4	1	0	.	.	.	.
A	REMAINDER	35	0	0	.	.	.	.
B	DG-ROA	4	0	1	.000969	0.01400	0.02750	0.00220
B	CR-AND	4	0	2	.005300	0.03840	0.15000	0.01250
B	REMAINDER	31	0	0	.	.	.	.
C	CHE-ORR	4	0	2	.003070	0.00426	0.00502	0.00342
C	CR-ORR	4	0	1	.004780	0.00691	0.00781	0.00546
C	CR-ROA	4	0	2	.001470	0.00208	0.00241	0.00157
C	REMAINDER	28	0	0	.	.	.	.
					HAFNIUM			
A	DG-AND	3	0	3	9.54	10.70	11.60	10.30
A	DG-ROA	4	0	4	10.60	11.70	12.90	11.60
A	DG-ORR	4	0	4	9.80	10.80	11.90	10.70
A	NL-ORR	4	0	4	10.00	11.00	12.20	11.00
A	CHI-BV	4	0	4	10.00	11.10	12.20	11.00
A	CHI-K25	4	0	4	9.64	10.60	11.70	10.60
A	CHE-ORR	4	0	4	7.39	8.15	8.99	8.10
A	CR-ORR	4	0	4	7.38	8.15	8.99	8.09
A	CR-AND	4	0	4	7.56	8.34	9.21	8.29
A	CR-ROA	4	0	4	5.86	6.46	7.13	6.42
B	DG-AND	4	0	4	8.08	9.78	11.80	9.65
B	DG-ROA	4	0	4	8.73	10.60	12.80	10.40
B	DG-ORR	4	0	4	6.73	8.14	9.86	8.04
B	NL-ORR	4	0	4	6.67	8.07	9.76	7.97
B	CHI-BV	4	0	4	6.41	7.75	9.38	7.66
B	CHI-K25	4	0	4	5.46	6.60	7.99	6.52
B	CHE-ORR	4	0	4	4.75	5.75	6.96	5.68
B	CR-ORR	4	0	4	5.52	6.67	8.08	6.59
B	CR-AND	4	0	4	6.03	7.30	8.83	7.21
B	CR-ROA	4	0	4	4.08	4.94	5.98	4.88
C	DG-AND	4	0	4	6.18	7.24	8.48	7.16
C	DG-ROA	4	0	4	6.14	7.19	8.43	7.12
C	DG-ORR	4	0	4	6.16	7.21	8.45	7.14
C	NL-ORR	3	0	3	6.58	7.89	9.02	7.45
C	CHI-BV	4	0	4	5.16	6.04	7.07	5.98
C	CHI-K25	4	0	4	4.68	5.48	6.42	5.43
C	CHE-ORR	4	0	4	2.64	3.09	3.62	3.05
C	CR-ORR	4	0	4	2.85	3.34	3.91	3.30
C	CR-AND	4	0	4	4.74	5.55	6.50	5.49
C	CR-ROA	4	0	4	3.71	4.34	5.09	4.30
					IRON			
A	DG-AND	3	0	3	29800	35600	40600	33700
A	DG-ROA	4	0	4	28500	33300	38800	32900
A	DG-ORR	4	0	4	26400	30800	35900	30500
A	NL-ORR	4	0	4	29300	34100	39800	33800
A	CHI-BV	4	0	4	30900	36100	42100	35700
A	CHI-K25	4	0	4	28900	33700	39400	33400
A	CHE-ORR	4	0	4	11700	13700	15900	13500
A	CR-ORR	4	0	4	15900	18500	21600	18300
A	CR-AND	4	0	4	14600	17000	19800	16800
A	CR-ROA	4	0	4	13800	16100	18700	15900
B	DG-AND	4	0	4	45500	50000	55000	49700
B	DG-ROA	4	0	4	39500	43500	47800	43200
B	DG-ORR	4	0	4	39000	42900	47200	42700
B	NL-ORR	4	0	4	47000	51700	56800	51300
B	CHI-BV	4	0	4	53900	59300	65200	58900
B	CHI-K25	4	0	4	55600	61200	67300	60800

Table G.1 (continued)

Horizon	Formation-location	N	I	D	Median	UCB95	X95	LTB9595
B	CHE-ORR	4	0	4	33500	36800	40500	36600
B	CR-ORR	4	0	4	33300	36600	40300	36400
B	CR-AND	4	0	4	26600	29200	32100	29000
B	CR-ROA	4	0	4	21600	23800	26100	23600
C	DG-AND	4	0	4	50100	54800	59800	54400
C	DG-ROA	4	0	4	51300	56000	61200	55700
C	DG-ORR	4	0	4	40200	43900	48000	43700
C	NL-ORR	3	0	3	58600	64900	70000	62800
C	CHI-BV	4	0	4	57000	62200	68000	61900
C	CHI-K25	4	0	4	55300	60400	66000	60100
C	CHE-ORR	4	0	4	35500	38700	42300	38500
C	CR-ORR	4	0	4	45900	50100	54700	49800
C	CR-AND	4	0	4	32100	35100	38300	34900
C	CR-ROA	4	0	4	41600	45500	49700	45200
LANTHANUM								
A	DG-AND	4	0	4	31.8	37.1	43.4	36.7
A	DG-ROA	4	0	4	29.9	35.0	40.9	34.6
A	DG-ORR	4	0	4	30.5	35.7	41.8	35.3
A	NL-ORR	4	0	4	32.1	37.6	43.9	37.2
A	CHI-BV	4	0	4	37.6	43.9	51.3	43.5
A	CHI-K25	4	0	4	32.0	37.4	43.7	37.0
A	CHE-ORR	4	0	4	17.3	20.2	23.7	20.0
A	CR-ORR	4	0	4	21.1	24.7	28.8	24.4
A	CR-AND	3	0	3	24.7	29.6	33.8	28.0
A	CR-ROA	4	0	4	17.3	20.2	23.6	20.0
B	DG-AND	4	0	4	39.1	46.8	55.9	46.2
B	DG-ROA	4	0	4	36.5	43.7	52.2	43.1
B	DG-ORR	4	0	4	41.4	49.5	59.2	48.9
B	NL-ORR	4	0	4	40.4	48.3	57.8	47.7
B	CHI-BV	4	0	4	48.3	57.8	69.1	57.1
B	CHI-K25	3	0	3	43.6	53.6	62.4	50.2
B	CHE-ORR	4	0	4	22.0	26.3	31.4	25.9
B	CR-ORR	4	0	4	28.7	34.4	41.1	33.9
B	CR-AND	4	0	4	11.9	14.3	17.1	14.1
B	CR-ROA	4	0	4	14.0	16.7	20.0	16.5
C	DG-AND	4	0	4	43.2	49.7	57.2	49.3
C	DG-ROA	4	0	4	43.2	49.7	57.2	49.2
C	DG-ORR	4	0	4	41.0	47.2	54.4	46.8
C	NL-ORR	4	0	4	46.7	53.7	61.9	53.2
C	CHI-BV	4	0	4	52.5	60.5	69.6	59.9
C	CHI-K25	4	0	4	45.1	51.9	59.8	51.5
C	CHE-ORR	4	0	4	24.6	28.3	32.6	28.1
C	CR-ORR	4	0	4	38.2	43.9	50.6	43.5
C	CR-AND	4	0	4	19.5	22.5	25.8	22.2
C	CR-ROA	4	0	4	19.9	22.9	26.3	22.6
LUTETIUM								
A	DG-AND	3	0	3	0.320	0.377	0.425	0.358
A	DG-ROA	4	0	4	0.364	0.420	0.484	0.416
A	DG-ORR	4	0	4	0.340	0.392	0.452	0.388
A	NL-ORR	4	0	4	0.351	0.404	0.466	0.400
A	CHI-BV	4	0	4	0.272	0.314	0.361	0.311
A	CHI-K25	4	0	4	0.340	0.392	0.452	0.388
A	CHE-ORR	4	0	4	0.257	0.296	0.341	0.293
A	CR-ORR	4	0	4	0.271	0.312	0.360	0.309
A	CR-AND	4	0	4	0.264	0.304	0.350	0.301
A	CR-ROA	4	0	4	0.186	0.215	0.247	0.213
B	DG-AND	4	0	4	0.319	0.399	0.499	0.393
B	DG-ROA	4	0	4	0.372	0.465	0.581	0.458
B	DG-ORR	4	0	4	0.292	0.365	0.456	0.360
B	NL-ORR	4	0	4	0.230	0.288	0.361	0.284

Table G.1 (continued)

Horizon	Formation-location	N	I	D	Median	UCB95	X95	LTB9595
B	CHI-BV	4	0	4	0.378	0.473	0.592	0.466
B	CHI-K25	4	0	4	0.381	0.476	0.595	0.469
B	CHE-ORR	4	0	4	0.218	0.273	0.341	0.269
B	CR-ORR	4	0	4	0.211	0.264	0.330	0.260
B	CR-AND	4	0	4	0.212	0.266	0.332	0.262
B	CR-ROA	4	0	4	0.138	0.173	0.217	0.171
C	DG-AND	4	0	4	0.342	0.420	0.516	0.414
C	DG-ROA	4	0	4	0.287	0.353	0.433	0.348
C	DG-ORR	4	0	4	0.262	0.322	0.396	0.318
C	NL-ORR	3	0	3	0.402	0.510	0.606	0.472
C	CHI-BV	4	0	4	0.418	0.513	0.630	0.506
C	CHI-K25	4	0	4	0.361	0.444	0.545	0.438
C	CHE-ORR	4	0	4	0.146	0.180	0.221	0.177
C	CR-ORR	4	0	4	0.186	0.229	0.281	0.226
C	CR-AND	4	0	4	0.168	0.207	0.254	0.204
C	CR-ROA	4	0	4	0.157	0.193	0.237	0.191
					MAGNESIUM			
A	DG-AND	4	0	4	5940	10600	18900	10200
A	DG-ROA	4	0	4	4200	7510	13400	7210
A	DG-ORR	4	0	4	3290	5880	10500	5650
A	NL-ORR	4	0	4	4440	7930	14200	7610
A	CHI-BV	4	1	3	3090	5530	9850	5280
A	CHI-K25	4	0	4	2300	4110	7340	3950
A	CHE-ORR	4	1	3	1240	2220	3970	2130
A	CR-ORR	4	0	4	1430	2550	4550	2450
A	CR-AND	4	0	3	2090	3890	6650	3460
A	CR-ROA	4	0	3	324	581	1030	557
B	DG-AND	4	0	4	7710	8880	10200	8800
B	DG-ROA	4	0	4	6420	7390	8510	7320
B	DG-ORR	4	0	4	8180	9410	10800	9330
B	NL-ORR	4	0	4	7930	9130	10500	9040
B	CHI-BV	4	0	4	7010	8070	9300	8000
B	CHI-K25	4	0	4	8620	9920	11400	9830
B	CHE-ORR	4	0	4	4670	5370	6190	5330
B	CR-ORR	4	0	4	2940	3390	3900	3360
B	CR-AND	4	0	4	2940	3380	3890	3350
B	CR-ROA	4	0	4	2210	2540	2930	2520
C	DG-AND	4	0	4	8390	11700	16300	11400
C	DG-ROA	4	0	4	8610	12000	16700	11700
C	DG-ORR	4	0	4	8790	12300	17100	12000
C	NL-ORR	4	0	4	8420	11700	16400	11500
C	CHI-BV	4	0	4	8560	11900	16600	11700
C	CHI-K25	4	0	4	8730	12200	17000	11900
C	CHE-ORR	4	0	4	5650	7880	11000	7700
C	CR-ORR	4	0	4	5180	7220	10100	7060
C	CR-AND	3	0	3	3620	5310	7030	4700
C	CR-ROA	4	0	4	2530	3530	4920	3450
					MANGANESE			
A	DG-AND	4	0	4	701.0	2220	7030	2050
A	DG-ROA	4	0	4	960.0	3040	9630	2810
A	DG-ORR	4	0	4	490.0	1550	4920	1430
A	NL-ORR	4	0	4	608.0	1920	6100	1780
A	CHI-BV	4	0	4	869.0	2750	8710	2540
A	CHI-K25	4	0	4	968.0	3060	9700	2830
A	CHE-ORR	4	0	4	807.0	2560	8100	2360
A	CR-ORR	4	0	4	1030.0	3250	10300	3000
A	CR-AND	4	0	4	1920.0	6090	19300	5630
A	CR-ROA	4	0	3	59.0	188	592	173
B	DG-AND	4	0	4	210.0	320	487	311
B	DG-ROA	4	0	4	309.0	471	717	458

Table G.1 (continued)

Horizon	Formation-location	N	I	D	Median	UCB95	X95	LTB9595
B	DG-ORR	4	0	4	231.0	352	536	342
B	NL-ORR	4	0	4	271.0	413	629	401
B	CHI-BV	4	0	4	346.0	528	804	514
B	CHI-K25	4	0	4	332.0	505	770	491
B	CHE-ORR	4	0	4	89.9	137	209	133
B	CR-ORR	4	0	4	136.0	208	316	202
B	CR-AND	4	0	4	367.0	559	851	544
B	CR-ROA	4	0	4	149.0	227	345	220
C	DG-AND	4	0	4	722.0	1360	2570	1310
C	DG-ROA	4	0	4	260.0	490	924	470
C	DG-ORR	4	0	4	443.0	837	1580	803
C	NL-ORR	4	0	4	394.0	744	1400	713
C	CHI-BV	4	0	4	571.0	1080	2030	1030
C	CHI-K25	4	0	4	412.0	777	1470	746
C	CHE-ORR	4	0	4	218.0	412	777	395
C	CR-ORR	4	0	4	112.0	211	398	203
C	CR-AND	4	0	4	273.0	516	973	495
C	CR-ROA	4	0	4	69.8	132	249	126
MERCURY								
A	CHI-K25	4	1	0	.	.	.	.
A	REMAINDER	35	0	0	.	.	.	.
B	REMAINDER	40	0	0	.	.	.	.
C	DG-AND	4	1	0	.	.	.	.
C	NL-ORR	3	0	1	.	.	.	.
C	CR-ROA	4	0	1	.	.	.	.
C	REMAINDER	28	0	0	.	.	.	.
POTASSIUM								
A	DG-AND	4	0	4	26500	31800	38200	31400
A	DG-ROA	4	0	4	11200	13400	16200	13300
A	DG-ORR	4	0	4	15100	18200	21800	17900
A	NL-ORR	4	0	4	16000	19300	23200	19000
A	CHI-BV	4	0	4	13600	16300	19600	16100
A	CHI-K25	4	0	4	10100	12100	14500	11900
A	CHE-ORR	4	0	4	3020	3630	4360	3590
A	CR-ORR	4	0	4	3630	4360	5240	4310
A	CR-AND	3	0	3	4610	5700	6650	5320
A	CR-ROA	4	0	4	3210	3860	4630	3810
B	DG-AND	4	0	4	28300	43800	67900	42500
B	DG-ROA	4	0	4	15200	23600	36500	22900
B	DG-ORR	4	0	4	21100	32700	50700	31700
B	NL-ORR	4	0	4	21300	32900	51000	31900
B	CHI-BV	4	0	4	22000	34100	52800	33000
B	CHI-K25	3	0	3	23900	39600	57300	33600
B	CHE-ORR	4	0	4	7950	12300	19100	11900
B	CR-ORR	4	0	4	5060	7840	12100	7600
B	CR-AND	4	0	3	2380	3690	5700	3570
B	CR-ROA	4	0	4	2810	4350	6740	4220
C	DG-AND	4	0	4	31600	36000	41000	35700
C	DG-ROA	4	0	4	24800	28200	32200	28000
C	DG-ORR	4	0	4	22600	25800	29400	25600
C	NL-ORR	4	0	4	30600	34900	39800	34600
C	CHI-BV	4	0	4	24000	27300	31100	27100
C	CHI-K25	4	0	4	27800	31600	36000	31400
C	CHE-ORR	4	0	4	10300	11800	13400	11700
C	CR-ORR	4	0	4	7730	8810	10000	8740
C	CR-AND	4	0	4	6660	7590	8650	7530
C	CR-ROA	4	0	4	3880	4420	5030	4380

Table G.1 (continued)

Horizon	Formation-location	N	I	D	Median	UCB95	X95	LTB9595
					RUBIDIUM			
A	CHI-BV	4	0	1	360	714	821	421
A	CHI-K25	4	0	1	381	734	869	408
A	REMAINDER	31	0	0	.	.	.	.
B	CR-ROA	4	1	0	.	.	.	.
B	REMAINDER	36	0	0	.	.	.	.
C	CHI-BV	4	0	1	498	730	756	497
C	REMAINDER	36	0	0	.	.	.	.
					SCANDIUM			
A	DG-AND	3	0	3	8.99	10.30	11.40	9.87
A	DG-ROA	4	0	4	7.79	8.77	9.86	8.70
A	DG-ORR	4	0	4	7.85	8.83	9.93	8.76
A	NL-ORR	4	0	4	8.36	9.41	10.60	9.33
A	CHI-BV	4	0	4	8.15	9.16	10.30	9.09
A	CHI-K25	4	0	4	7.98	8.98	10.10	8.91
A	CHE-ORR	4	0	4	2.84	3.20	3.60	3.17
A	CR-ORR	4	0	4	3.73	4.19	4.72	4.16
A	CR-AND	4	0	4	4.16	4.68	5.27	4.64
A	CR-ROA	4	0	4	3.17	3.56	4.01	3.54
B	DG-AND	4	0	4	13.30	15.00	16.90	14.90
B	DG-ROA	4	0	4	10.70	12.10	13.60	12.00
B	DG-ORR	4	0	4	12.00	13.60	15.30	13.50
B	NL-ORR	4	0	4	12.50	14.10	15.90	13.90
B	CHI-BV	4	0	4	16.00	18.00	20.30	17.90
B	CHI-K25	4	0	4	16.20	18.30	20.60	18.20
B	CHE-ORR	4	0	4	7.95	8.97	10.10	8.90
B	CR-ORR	4	0	4	7.42	8.37	9.44	8.30
B	CR-AND	4	0	4	8.04	9.06	10.20	8.99
B	CR-ROA	4	0	4	4.86	5.49	6.19	5.44
C	DG-AND	4	0	4	17.90	20.50	23.50	20.30
C	DG-ROA	4	0	4	15.10	17.30	19.80	17.10
C	DG-ORR	4	0	4	13.60	15.60	17.90	15.50
C	NL-ORR	3	0	3	16.90	19.80	22.20	18.80
C	CHI-BV	4	0	4	18.00	20.70	23.70	20.50
C	CHI-K25	4	0	4	18.10	20.70	23.80	20.60
C	CHE-ORR	4	0	4	10.30	11.80	13.60	11.70
C	CR-ORR	4	0	4	11.80	13.60	15.60	13.40
C	CR-AND	4	0	4	10.10	11.50	13.20	11.40
C	CR-ROA	4	0	4	8.83	10.10	11.60	10.00
					SILVER			
A	DG-AND	3	0	3	2.220	2.95	3.62	2.69
A	DG-ROA	4	0	4	1.870	2.39	3.05	2.35
A	DG-ORR	4	0	4	1.230	1.57	2.01	1.55
A	NL-ORR	4	0	4	1.030	1.31	1.68	1.29
A	CHI-BV	4	0	4	1.660	2.12	2.70	2.08
A	CHI-K25	4	0	4	1.210	1.54	1.97	1.51
A	CHE-ORR	4	0	4	0.919	1.17	1.50	1.15
A	CR-ORR	4	0	4	1.230	1.57	2.00	1.54
A	CR-AND	4	0	4	1.540	1.97	2.51	1.93
A	CR-ROA	4	0	4	0.824	1.05	1.34	1.04
B	DG-AND	4	0	4	2.780	3.80	5.19	3.72
B	DG-ROA	4	0	4	2.150	2.93	4.01	2.87
B	DG-ORR	4	0	4	1.230	1.68	2.30	1.65
B	NL-ORR	4	0	4	1.220	1.66	2.27	1.63
B	CHI-BV	4	0	4	2.170	2.96	4.05	2.90
B	CHI-K25	4	0	4	2.720	3.72	5.08	3.64
B	CHE-ORR	4	0	4	1.450	1.98	2.71	1.94
B	CR-ORR	4	0	4	2.220	3.03	4.14	2.97

Table G.1 (continued)

Horizon	Formation-location	N	I	D	Median	UCB95	X95	LTB9595
B	CR-AND	4	0	4	1.890	2.59	3.54	2.54
B	CR-ROA	4	0	4	1.310	1.79	2.45	1.76
C	DG-AND	4	0	4	2.820	3.38	4.07	3.34
C	DG-ROA	4	0	4	2.600	3.13	3.76	3.09
C	DG-ORR	4	0	4	1.640	1.97	2.37	1.95
C	NL-ORR	3	0	3	1.950	2.41	2.82	2.26
C	CHI-BV	4	0	4	2.230	2.68	3.23	2.65
C	CHI-K25	4	0	4	2.260	2.72	3.27	2.69
C	CHE-ORR	4	0	4	1.610	1.93	2.32	1.91
C	CR-ORR	4	0	4	1.880	2.26	2.72	2.23
C	CR-AND	4	0	4	2.200	2.64	3.18	2.61
C	CR-ROA	4	0	4	1.430	1.72	2.07	1.70
					SODIUM			
A	DG-AND	4	0	4	828	1030	1280	1010
A	DG-ROA	4	0	4	540	672	836	662
A	DG-ORR	4	0	4	1020	1270	1580	1250
A	NL-ORR	4	0	4	404	503	626	496
A	CHI-BV	4	0	4	1430	1770	2210	1750
A	CHI-K25	4	0	4	784	976	1210	962
A	CHE-ORR	4	0	4	391	486	605	479
A	CR-ORR	4	0	4	434	540	672	532
A	CR-AND	3	0	3	526	677	814	625
A	CR-ROA	4	0	4	404	502	625	495
B	DG-AND	4	0	4	624	998	1590	967
B	DG-ROA	4	0	4	472	755	1210	731
B	DG-ORR	4	0	4	964	1540	2460	1490
B	NL-ORR	4	0	4	345	551	880	534
B	CHI-BV	4	0	4	2020	3230	5160	3130
B	CHI-K25	3	0	3	1330	2290	3410	1930
B	CHE-ORR	4	0	4	212	339	541	328
B	CR-ORR	4	0	4	248	396	633	384
B	CR-AND	4	0	4	104	167	267	162
B	CR-ROA	4	0	4	200	319	511	310
C	DG-AND	4	0	4	806	1080	1440	1060
C	DG-ROA	4	0	4	599	801	1070	786
C	DG-ORR	4	0	4	1080	1440	1920	1410
C	NL-ORR	4	0	4	383	512	685	503
C	CHI-BV	4	0	4	2170	2910	3880	2850
C	CHI-K25	4	0	4	1540	2060	2750	2020
C	CHE-ORR	4	0	4	147	197	263	193
C	CR-ORR	4	0	4	150	201	269	197
C	CR-AND	4	0	4	183	245	327	240
C	CR-ROA	4	0	4	162	216	289	212
					TERBIUM			
A	DG-AND	3	0	3	0.352	0.475	0.591	0.432
A	DG-ROA	4	0	4	0.493	0.639	0.827	0.628
A	DG-ORR	4	0	4	0.535	0.692	0.896	0.680
A	NL-ORR	4	0	4	0.355	0.460	0.595	0.452
A	CHI-BV	4	0	4	0.917	1.190	1.540	1.170
A	CHI-K25	4	0	4	0.722	0.935	1.210	0.919
A	CHE-ORR	4	0	4	0.547	0.708	0.917	0.696
A	CR-ORR	4	0	4	0.486	0.630	0.816	0.619
A	CR-AND	4	0	4	0.496	0.642	0.832	0.631
A	CR-ROA	4	0	4	0.465	0.602	0.780	0.592
B	DG-AND	4	0	4	0.319	0.441	0.609	0.431
B	DG-ROA	4	0	4	0.532	0.735	1.010	0.718
B	DG-ORR	4	1	3	0.581	0.804	1.110	0.782
B	NL-ORR	4	0	2	0.300	0.437	0.573	0.390
B	CHI-BV	4	0	3	1.050	1.450	1.990	1.410
B	CHI-K25	4	0	4	0.718	0.991	1.370	0.968

Table G.1 (continued)

Horizon	Formation-location	N	I	D	Median	UCB95	X95	LTB9595
B	CHE-ORR	4	1	3	0.405	0.561	0.773	0.544
B	CR-ORR	4	0	3	0.307	0.445	0.585	0.395
B	CR-AND	4	0	4	0.281	0.388	0.535	0.378
B	CR-ROA	4	0	4	0.283	0.391	0.540	0.382
C	DG-AND	4	0	4	0.717	0.922	1.190	0.904
C	DG-ROA	4	0	4	0.467	0.601	0.773	0.589
C	DG-ORR	4	1	3	0.282	0.367	0.467	0.352
C	NL-ORR	3	0	2	0.364	0.501	0.603	0.433
C	CHI-BV	4	0	4	1.560	2.010	2.580	1.970
C	CHI-K25	4	0	4	0.576	0.742	0.954	0.727
C	CHE-ORR	4	0	4	0.299	0.385	0.496	0.378
C	CR-ORR	4	0	3	0.283	0.376	0.469	0.348
C	CR-AND	4	0	2	0.318	0.433	0.526	0.384
C	CR-ROA	4	0	2	0.243	0.325	0.403	0.299
					THORIUM-232			
A	DG-AND	3	0	3	10.10	11.10	11.90	10.80
A	DG-ROA	4	0	4	10.90	11.80	12.80	11.80
A	DG-ORR	4	0	4	9.74	10.60	11.50	10.50
A	NL-ORR	4	0	4	11.70	12.70	13.70	12.60
A	CHI-BV	4	0	4	10.00	10.90	11.80	10.80
A	CHI-K25	4	0	4	9.91	10.80	11.70	10.70
A	CHE-ORR	4	0	4	5.18	5.62	6.10	5.59
A	CR-ORR	4	0	4	6.51	7.06	7.65	7.02
A	CR-AND	4	0	4	6.53	7.08	7.68	7.04
A	CR-ROA	4	0	4	5.11	5.54	6.01	5.51
B	DG-AND	4	0	4	13.30	14.70	16.10	14.60
B	DG-ROA	4	0	4	13.30	14.60	16.10	14.50
B	DG-ORR	4	0	4	12.30	13.50	14.80	13.40
B	NL-ORR	4	0	4	15.00	16.40	18.10	16.30
B	CHI-BV	4	0	4	14.10	15.50	17.00	15.40
B	CHI-K25	4	0	4	14.60	16.10	17.70	16.00
B	CHE-ORR	4	0	4	9.91	10.90	12.00	10.80
B	CR-ORR	4	0	4	10.30	11.30	12.40	11.20
B	CR-AND	4	0	4	9.15	10.10	11.10	10.00
B	CR-ROA	4	0	4	6.64	7.30	8.03	7.26
C	DG-AND	4	0	4	13.20	14.60	16.20	14.50
C	DG-ROA	4	0	4	15.00	16.60	18.30	16.50
C	DG-ORR	4	0	4	12.30	13.60	15.10	13.50
C	NL-ORR	3	0	3	17.60	19.80	21.60	19.10
C	CHI-BV	4	0	4	13.90	15.40	17.10	15.30
C	CHI-K25	4	0	4	14.40	16.00	17.70	15.90
C	CHE-ORR	4	0	4	10.20	11.30	12.50	11.20
C	CR-ORR	4	0	4	13.30	14.80	16.30	14.70
C	CR-AND	4	0	4	10.80	12.00	13.30	11.90
C	CR-ROA	4	0	4	11.40	12.60	13.90	12.50
					TITANIUM			
A	DG-AND	4	0	4	5280	11900	26700	11200
A	DG-ROA	4	1	3	8080	18200	40900	17200
A	DG-ORR	4	0	4	3280	7380	16600	6980
A	NL-ORR	4	0	4	7010	15800	35500	14900
A	CHI-BV	4	0	4	5570	12500	28200	11800
A	CHI-K25	4	0	4	4440	10000	22500	9460
A	CHE-ORR	4	0	4	4120	9270	20800	8770
A	CR-ORR	4	0	4	4410	9910	22300	9380
A	CR-AND	4	0	4	5150	11600	26000	10900
A	CR-ROA	4	0	3	783	1770	3960	1670
B	DG-AND	4	0	4	5750	8660	13100	8430
B	DG-ROA	4	0	3	2470	3750	5610	3620
B	DG-ORR	4	0	4	5460	8220	12400	8000
B	NL-ORR	4	0	4	7460	11200	16900	10900

Table G.1 (continued)

Horizon	Formation-location	N	I	D	Median	UCB95	X95	LTB9595
B	CHI-BV	4	0	4	5070	7640	11500	7430
B	CHI-K25	4	0	4	5840	8800	13300	8560
B	CHE-ORR	4	0	4	4130	6220	9370	6050
B	CR-ORR	4	0	4	4580	6900	10400	6710
B	CR-AND	4	0	4	4590	6920	10400	6730
B	CR-ROA	4	0	4	4160	6260	9430	6090
C	DG-AND	4	0	4	4750	6790	9700	6630
C	DG-ROA	4	1	3	6910	9880	14100	9640
C	DG-ORR	4	0	4	4680	6690	9560	6530
C	NL-ORR	4	0	4	8310	11900	17000	11600
C	CHI-BV	4	0	4	4700	6710	9590	6550
C	CHI-K25	4	0	4	5540	7910	11300	7730
C	CHE-ORR	4	0	4	3170	4530	6480	4420
C	CR-ORR	4	0	4	3320	4740	6770	4630
C	CR-AND	3	0	3	4300	6490	8780	5690
C	CR-ROA	4	0	4	3130	4470	6380	4360
URANIUM-235								
A	DG-AND	4	0	4	0.0225	0.0240	0.0256	0.0239
A	DG-ROA	4	0	4	0.0228	0.0243	0.0259	0.0242
A	DG-ORR	4	0	4	0.0269	0.0287	0.0306	0.0286
A	NL-ORR	4	0	4	0.0255	0.0271	0.0289	0.0270
A	CHI-BV	4	0	4	0.0252	0.0268	0.0286	0.0267
A	CHI-K25	4	0	4	0.0315	0.0336	0.0358	0.0334
A	CHE-ORR	4	0	4	0.0255	0.0272	0.0290	0.0271
A	CR-ORR	4	0	4	0.0313	0.0334	0.0356	0.0332
A	CR-AND	4	0	4	0.0286	0.0305	0.0325	0.0304
A	CR-ROA	4	0	4	0.0219	0.0233	0.0248	0.0232
B	DG-AND	4	0	4	0.0233	0.0252	0.0273	0.0251
B	DG-ROA	4	0	4	0.0238	0.0257	0.0279	0.0256
B	DG-ORR	4	0	4	0.0214	0.0232	0.0252	0.0231
B	NL-ORR	4	0	4	0.0222	0.0240	0.0260	0.0239
B	CHI-BV	4	0	4	0.0236	0.0256	0.0277	0.0254
B	CHI-K25	4	0	4	0.0273	0.0296	0.0321	0.0295
B	CHE-ORR	4	0	4	0.0306	0.0331	0.0359	0.0330
B	CR-ORR	4	0	4	0.0366	0.0397	0.0430	0.0395
B	CR-AND	4	0	4	0.0382	0.0414	0.0449	0.0412
B	CR-ROA	4	0	4	0.0275	0.0298	0.0323	0.0297
C	DG-AND	4	0	4	0.0221	0.0245	0.0272	0.0244
C	DG-ROA	4	0	4	0.0214	0.0237	0.0263	0.0236
C	DG-ORR	4	0	4	0.0190	0.0210	0.0233	0.0209
C	NL-ORR	4	0	4	0.0205	0.0227	0.0252	0.0226
C	CHI-BV	4	0	4	0.0223	0.0247	0.0274	0.0246
C	CHI-K25	4	0	4	0.0249	0.0276	0.0305	0.0274
C	CHE-ORR	4	0	4	0.0340	0.0377	0.0418	0.0374
C	CR-ORR	4	0	4	0.0449	0.0497	0.0551	0.0494
C	CR-AND	4	0	4	0.0405	0.0448	0.0497	0.0445
C	CR-ROA	4	0	4	0.0324	0.0359	0.0398	0.0357
URANIUM-238								
A	DG-AND	4	0	4	2.78	3.10	3.46	3.08
A	DG-ROA	4	0	4	3.18	3.55	3.96	3.52
A	DG-ORR	4	0	4	3.99	4.45	4.96	4.42
A	NL-ORR	4	0	4	3.84	4.29	4.78	4.25
A	CHI-BV	4	0	4	3.60	4.02	4.48	3.99
A	CHI-K25	4	0	4	4.67	5.20	5.81	5.17
A	CHE-ORR	4	0	4	4.11	4.59	5.12	4.55
A	CR-ORR	4	0	4	4.52	5.04	5.62	5.00
A	CR-AND	3	0	3	4.82	5.47	6.00	5.25
A	CR-ROA	4	0	4	3.23	3.60	4.02	3.57

Table G.1 (continued)

Horizon	Formation-location	N	I	D	Median	UCB95	X95	LTB9595
B	DG-AND	4	0	4	2.94	3.59	4.40	3.54
B	DG-ROA	4	0	4	3.49	4.27	5.23	4.21
B	DG-ORR	4	0	4	3.28	4.02	4.92	3.96
B	NL-ORR	4	0	4	3.15	3.86	4.72	3.81
B	CHI-BV	4	0	4	3.23	3.95	4.84	3.90
B	CHI-K25	3	0	3	4.16	5.25	6.23	4.88
B	CHE-ORR	4	0	4	4.14	5.07	6.21	5.00
B	CR-ORR	4	0	4	5.22	6.39	7.82	6.30
B	CR-AND	4	0	4	6.52	7.98	9.77	7.88
B	CR-ROA	4	0	4	3.33	4.08	4.99	4.02
C	DG-AND	4	0	4	2.67	3.23	3.92	3.19
C	DG-ROA	4	0	4	3.22	3.90	4.73	3.85
C	DG-ORR	4	0	4	2.69	3.26	3.96	3.22
C	NL-ORR	4	0	4	3.36	4.07	4.93	4.02
C	CHI-BV	4	0	4	3.14	3.80	4.61	3.75
C	CHI-K25	4	0	4	3.59	4.35	5.27	4.30
C	CHE-ORR	4	0	4	4.35	5.27	6.39	5.21
C	CR-ORR	4	0	4	4.95	6.00	7.27	5.93
C	CR-AND	4	0	4	5.42	6.57	7.96	6.48
C	CR-ROA	4	0	4	5.04	6.10	7.40	6.03
					VANADIUM			
A	DG-AND	4	0	4	75.40	168.0	375.0	159.0
A	DG-ROA	4	0	4	64.40	144.0	320.0	136.0
A	DG-ORR	4	0	4	35.40	79.1	176.0	74.8
A	NL-ORR	4	0	4	57.00	127.0	284.0	120.0
A	CHI-BV	4	0	4	52.20	116.0	260.0	110.0
A	CHI-K25	4	0	4	44.20	98.7	220.0	93.4
A	CHE-ORR	4	0	4	32.50	72.5	162.0	68.6
A	CR-ORR	4	0	4	40.70	90.8	203.0	85.9
A	CR-AND	4	0	4	40.60	90.7	202.0	85.8
A	CR-ROA	4	0	3	6.35	14.2	31.6	13.4
B	DG-AND	4	0	4	101.00	111.0	122.0	110.0
B	DG-ROA	4	0	4	85.40	93.8	103.0	93.2
B	DG-ORR	4	0	4	86.30	94.7	104.0	94.1
B	NL-ORR	4	0	4	93.10	102.0	112.0	102.0
B	CHI-BV	4	0	4	96.60	106.0	116.0	105.0
B	CHI-K25	4	0	4	129.00	142.0	156.0	141.0
B	CHE-ORR	4	0	4	91.40	100.0	110.0	99.7
B	CR-ORR	4	0	4	89.90	98.6	108.0	98.0
B	CR-AND	4	0	4	85.90	94.2	103.0	93.7
B	CR-ROA	4	0	4	77.70	85.3	93.6	84.8
C	DG-AND	4	0	4	104.00	140.0	189.0	137.0
C	DG-ROA	4	0	4	92.70	125.0	169.0	123.0
C	DG-ORR	4	0	4	93.90	127.0	171.0	124.0
C	NL-ORR	4	0	4	91.90	124.0	168.0	122.0
C	CHI-BV	4	0	4	104.00	141.0	190.0	138.0
C	CHI-K25	4	0	4	117.00	158.0	214.0	155.0
C	CHE-ORR	4	0	4	104.00	141.0	190.0	138.0
C	CR-ORR	4	0	4	130.00	175.0	236.0	172.0
C	CR-AND	3	0	3	97.50	138.0	178.0	123.0
C	CR-ROA	4	1	3	98.30	133.0	179.0	130.0

Table G.1 (continued)

Horizon	Formation-location	N	I	D	Median	UCB95	X95	LTB9595
					YTTERBIUM			
A	DG-AND	3	0	3	2.600	3.18	3.69	2.980
A	DG-ROA	4	0	4	3.800	4.53	5.39	4.470
A	DG-ORR	4	0	4	1.900	2.26	2.69	2.240
A	NL-ORR	4	0	4	2.900	3.46	4.11	3.420
A	CHI-BV	4	0	4	3.130	3.72	4.43	3.680
A	CHI-K25	4	0	4	2.960	3.53	4.20	3.490
A	CHE-ORR	4	0	4	2.630	3.13	3.73	3.100
A	CR-ORR	4	0	4	2.300	2.74	3.26	2.710
A	CR-AND	4	0	4	2.360	2.80	3.34	2.770
A	CR-ROA	4	0	4	1.660	1.97	2.35	1.950
B	DG-AND	4	0	4	3.320	5.67	9.69	5.430
B	DG-ROA	4	1	3	2.230	3.88	6.51	3.630
B	DG-ORR	4	1	3	1.440	2.53	4.21	2.320
B	NL-ORR	4	0	3	1.280	2.30	3.74	2.020
B	CHI-BV	4	0	2	0.583	1.23	1.70	0.786
B	CHI-K25	4	0	4	2.560	4.38	7.47	4.190
B	CHE-ORR	4	1	3	2.010	3.48	5.85	3.260
B	CR-ORR	4	0	3	2.110	3.72	6.16	3.400
B	CR-AND	4	0	4	1.440	2.46	4.21	2.360
B	CR-ROA	4	1	2	1.180	2.06	3.43	1.900
C	DG-AND	4	0	2	1.270	2.69	4.31	2.000
C	DG-ROA	4	0	3	1.680	3.22	5.71	2.880
C	DG-ORR	4	1	2	1.310	2.54	4.46	2.230
C	NL-ORR	3	0	3	2.360	4.77	8.01	3.790
C	CHI-BV	4	0	4	1.040	1.92	3.55	1.830
C	CHI-K25	4	0	4	2.400	4.43	8.17	4.220
C	CHE-ORR	4	1	3	1.180	2.25	4.02	2.040
C	CR-ORR	4	0	3	2.260	4.33	7.70	3.890
C	CR-AND	4	0	3	0.633	1.23	2.15	1.070
C	CR-ROA	4	1	3	0.723	1.34	2.46	1.270
					ZINC			
A	DG-AND	3	0	2	52.9	75.3	96.6	66.5
A	DG-ROA	4	0	4	77.1	104.0	141.0	101.0
A	NL-ORR	2	0	2	62.6	95.8	114.0	73.1
A	CHI-K25	4	0	4	73.5	99.3	134.0	96.4
A	CHE-ORR	3	0	3	61.3	86.9	112.0	77.1
A	CR-ORR	4	0	4	65.7	88.8	120.0	86.3
A	CR-AND	4	0	4	68.3	92.2	125.0	89.6
A	CR-ROA	4	0	4	43.2	58.3	78.8	56.6
B	DG-AND	4	0	4	96.4	125.0	161.0	122.0
B	DG-ROA	4	0	4	76.1	98.4	127.0	96.2
B	NL-ORR	2	0	2	73.9	106.0	124.0	84.5
B	CHI-K25	4	0	4	162.0	209.0	270.0	204.0
B	CHE-ORR	3	0	3	183.0	247.0	307.0	223.0
B	CR-ORR	4	0	4	133.0	172.0	222.0	168.0
B	CR-AND	4	0	4	113.0	146.0	189.0	143.0
B	CR-ROA	4	0	4	50.8	65.7	84.9	64.2
C	DG-AND	4	0	2	50.7	74.1	105.0	70.4
C	DG-ROA	4	0	4	102.0	147.0	212.0	142.0
C	NL-ORR	2	0	2	113.0	189.0	234.0	136.0
C	CHI-BV	1	0	1	120.0	248.0	248.0	118.0
C	CHI-K25	4	0	4	128.0	184.0	265.0	178.0
C	CHE-ORR	3	0	3	257.0	391.0	531.0	339.0
C	CR-ORR	4	0	4	251.0	361.0	520.0	349.0
C	CR-AND	4	0	4	141.0	203.0	292.0	196.0
C	CR-ROA	4	0	4	71.2	102.0	147.0	98.9

[a]N = number of observations, possibly averages over replicates at sites; I = number of interval censored observations (see text); D = number of true detects (see text); UCB95 = 95% upper confidence bound for median; X95 = estimate of 95th percentile; LTB9595 = 95% lower confidence bound for 95th percentile; REMAINDER refers to the remaining observations—no detects.

Table G.2. Summary statistics for ICP/MS data[a]
(Estimates and confidence bounds are in milligrams per kilogram.)

Horizon	Formation-location	N	I	D	Median	UCB95	X95	LTB9595
				ALUMINUM				
A	DG-AND	4	0	4	20000	22800	26000	22600
A	DG-ROA	3	0	3	17100	19900	22300	19000
A	DG-ORR	3	0	3	19700	22900	25600	21800
A	NL-ORR	4	0	4	13700	15700	17900	15500
A	CHI-BV	4	0	4	17800	20300	23100	20100
A	CHI-K25	4	0	4	18200	20800	23700	20600
A	CHE-ORR	4	0	4	8540	9740	11100	9650
A	CR-ORR	4	0	4	9330	10600	12100	10500
A	CR-AND	4	0	4	13700	15600	17800	15500
A	CR-ROA	4	0	4	9190	10500	12000	10400
B	DG-AND	4	0	4	30800	36700	43700	36200
B	DG-ROA	3	0	3	26100	32000	37100	30000
B	DG-ORR	3	0	3	33600	41200	47800	38600
B	NL-ORR	4	0	4	23000	27400	32600	27100
B	CHI-BV	4	0	4	34400	41100	48900	40600
B	CHI-K25	4	0	4	35100	41900	49900	41400
B	CHE-ORR	4	0	4	16900	20200	24000	19900
B	CR-ORR	4	0	4	12800	15300	18200	15100
B	CR-AND	4	0	4	18700	22300	26500	22000
B	CR-ROA	4	0	4	15400	18300	21900	18100
C	DG-AND	4	0	4	33400	40700	49600	40100
C	DG-ROA	3	0	3	30100	37800	44700	35100
C	DG-ORR	3	0	3	38500	48400	57200	45000
C	NL-ORR	4	0	4	24300	29600	36100	29200
C	CHI-BV	4	0	4	37400	45500	55500	44900
C	CHI-K25	4	0	4	33000	40300	49000	39700
C	CHE-ORR	4	0	4	17100	20800	25400	20500
C	CR-ORR	4	0	4	11800	14400	17600	14200
C	CR-AND	4	0	4	20100	24500	29900	24200
C	CR-ROA	4	0	4	14000	17000	20700	16800
				ANTIMONY				
A	CR-ORR	4	0	1	0.184	0.283	0.281	0.192
A	REMAINDER	34	0	0	.	.	.	.
B	CHE-ORR	4	1	0	.	.	.	.
B	REMAINDER	34	0	0	.	.	.	.
C	CR-ROA	4	1	0	.	.	.	.
C	REMAINDER	34	0	0	.	.	.	.
				ARSENIC				
A	DG-AND	4	0	4	3.15	3.82	4.64	3.77
A	DG-ROA	3	0	3	4.11	5.14	6.06	4.79
A	DG-ORR	3	0	3	3.50	4.37	5.16	4.07
A	NL-ORR	4	0	4	3.94	4.78	5.80	4.72
A	CHI-BV	4	0	4	5.22	6.34	7.70	6.26
A	CHI-K25	4	0	4	5.36	6.51	7.91	6.43
A	CHE-ORR	4	0	4	6.88	8.35	10.10	8.24
A	CR-ORR	4	0	4	14.60	17.70	21.60	17.50
A	CR-AND	4	0	4	12.50	15.20	18.50	15.00
A	CR-ROA	4	0	4	7.63	9.26	11.20	9.14
B	DG-AND	4	0	4	3.43	4.26	5.29	4.20
B	DG-ROA	3	0	3	4.50	5.77	6.93	5.33
B	DG-ORR	3	0	3	3.57	4.58	5.50	4.23
B	NL-ORR	4	0	4	3.84	4.77	5.92	4.69
B	CHI-BV	4	0	4	5.11	6.35	7.88	6.26
B	CHI-K25	4	0	4	5.27	6.54	8.12	6.44

Table G.2 (continued)

Horizon	Formation-location	N	I	D	Median	UCB95	X95	LTB9595
B	CHE-ORR	4	0	4	17.40	21.60	26.80	21.30
B	CR-ORR	4	0	4	30.70	38.20	47.40	37.60
B	CR-AND	4	0	4	16.90	21.00	26.10	20.70
B	CR-ROA	4	0	4	13.90	17.30	21.50	17.00
C	DG-AND	4	0	4	2.78	3.56	4.56	3.50
C	DG-ROA	3	0	3	3.15	4.19	5.17	3.83
C	DG-ORR	3	0	3	3.06	4.07	5.02	3.72
C	NL-ORR	4	0	4	3.03	3.89	4.98	3.82
C	CHI-BV	4	0	4	5.64	7.23	9.26	7.11
C	CHI-K25	4	0	4	4.15	5.31	6.80	5.22
C	CHE-ORR	4	0	4	20.40	26.10	33.50	25.70
C	CR-ORR	4	0	4	43.60	55.90	71.60	54.90
C	CR-AND	4	0	4	20.70	26.50	33.90	26.00
C	CR-ROA	4	0	4	18.90	24.30	31.10	23.80
BARIUM								
A	DG-AND	4	0	4	76.80	102.0	134.0	99.6
A	DG-ROA	3	0	3	81.70	113.0	143.0	102.0
A	DG-ORR	3	0	3	94.20	130.0	165.0	117.0
A	NL-ORR	4	0	4	62.70	83.0	110.0	81.4
A	CHI-BV	4	0	4	80.10	106.0	140.0	104.0
A	CHI-K25	4	0	4	74.40	98.5	130.0	96.6
A	CHE-ORR	4	0	4	55.70	73.7	97.6	72.3
A	CR-ORR	4	0	4	70.10	92.7	123.0	91.0
A	CR-AND	4	0	4	107.00	141.0	187.0	138.0
A	CR-ROA	4	0	4	52.70	69.8	92.4	68.4
B	DG-AND	4	0	4	69.90	88.1	111.0	86.7
B	DG-ROA	3	0	3	88.10	115.0	140.0	106.0
B	DG-ORR	3	0	3	104.00	136.0	165.0	125.0
B	NL-ORR	4	0	4	68.80	86.7	109.0	85.3
B	CHI-BV	4	0	4	125.00	157.0	198.0	154.0
B	CHI-K25	4	0	4	84.60	107.0	134.0	105.0
B	CHE-ORR	4	0	4	38.20	48.2	60.7	47.4
B	CR-ORR	4	0	4	31.20	39.3	49.5	38.7
B	CR-AND	4	0	4	38.90	49.1	61.8	48.3
B	CR-ROA	4	0	4	32.80	41.3	52.1	40.7
C	DG-AND	4	0	4	72.90	99.4	136.0	97.3
C	DG-ROA	3	0	3	82.10	118.0	153.0	105.0
C	DG-ORR	3	0	3	125.00	179.0	232.0	159.0
C	NL-ORR	4	0	4	63.70	86.9	119.0	85.0
C	CHI-BV	4	0	4	164.00	224.0	306.0	220.0
C	CHI-K25	4	0	4	75.90	104.0	141.0	101.0
C	CHE-ORR	4	0	4	18.70	25.5	34.8	25.0
C	CR-ORR	4	0	4	8.24	11.2	15.3	11.0
C	CR-AND	4	0	4	25.80	35.2	48.0	34.5
C	CR-ROA	4	0	4	12.60	17.2	23.5	16.9
BERYLLIUM								
A	DG-AND	4	0	4	0.832	1.020	1.260	1.010
A	DG-ROA	3	0	3	0.669	0.851	1.010	0.788
A	DG-ORR	3	0	3	0.752	0.956	1.140	0.885
A	NL-ORR	4	0	4	0.547	0.673	0.829	0.664
A	CHI-BV	4	0	4	0.973	1.200	1.470	1.180
A	CHI-K25	4	0	4	0.809	0.996	1.230	0.982
A	CHE-ORR	4	0	4	0.406	0.500	0.615	0.493
A	CR-ORR	4	0	4	0.474	0.584	0.719	0.576
A	CR-AND	4	0	4	0.628	0.773	0.952	0.762
A	CR-ROA	4	0	4	0.440	0.541	0.666	0.534

Table G.2 (continued)

Horizon	Formation-location	N	I	D	Median	UCB95	X95	LTB9595
B	DG-AND	4	0	4	1.050	1.400	1.870	1.370
B	DG-ROA	3	0	3	0.741	1.040	1.330	0.930
B	DG-ORR	3	0	3	0.870	1.220	1.560	1.090
B	NL-ORR	4	0	4	0.641	0.858	1.150	0.840
B	CHI-BV	4	0	4	1.500	2.000	2.680	1.960
B	CHI-K25	4	0	4	1.200	1.610	2.160	1.580
B	CHE-ORR	4	0	4	0.473	0.634	0.848	0.620
B	CR-ORR	4	0	4	0.289	0.387	0.518	0.379
B	CR-AND	4	0	4	0.399	0.534	0.714	0.522
B	CR-ROA	4	1	2	0.256	0.349	0.458	0.332
C	DG-AND	4	0	4	1.170	1.520	1.980	1.490
C	DG-ROA	3	0	3	0.909	1.230	1.540	1.120
C	DG-ORR	3	0	3	1.070	1.450	1.810	1.310
C	NL-ORR	4	0	4	0.791	1.030	1.340	1.010
C	CHI-BV	4	0	4	2.070	2.700	3.510	2.640
C	CHI-K25	4	0	4	1.280	1.670	2.180	1.640
C	CHE-ORR	4	0	4	0.643	0.838	1.090	0.822
C	CR-ORR	4	0	4	0.346	0.450	0.587	0.442
C	CR-AND	4	0	4	0.466	0.607	0.791	0.595
C	CR-ROA	4	0	2	0.240	0.320	0.407	0.303
CADMIUM								
A	REMAINDER	38	0	0	.	.	.	.
B	REMAINDER	38	0	0	.	.	.	.
C	REMAINDER	38	0	0	.	.	.	.
CHROMIUM								
A	DG-AND	4	0	4	25.9	29.9	34.4	29.6
A	DG-ROA	3	0	3	33.0	38.8	43.8	36.8
A	DG-ORR	3	0	3	30.2	35.5	40.0	33.7
A	NL-ORR	4	0	4	29.3	33.8	38.9	33.4
A	CHI-BV	4	0	4	32.2	37.1	42.7	36.7
A	CHI-K25	4	0	4	29.1	33.5	38.6	33.2
A	CHE-ORR	4	0	4	13.2	15.3	17.6	15.1
A	CR-ORR	4	0	4	16.4	18.9	21.8	18.8
A	CR-AND	4	0	4	24.2	27.9	32.1	27.6
A	CR-ROA	4	0	4	14.5	16.7	19.2	16.5
B	DG-AND	4	0	4	34.2	38.8	44.0	38.5
B	DG-ROA	3	0	3	47.1	54.5	60.6	52.0
B	DG-ORR	3	0	3	39.6	45.8	50.9	43.7
B	NL-ORR	4	0	4	34.5	39.1	44.4	38.8
B	CHI-BV	4	0	4	38.4	43.5	49.3	43.1
B	CHI-K25	4	0	4	35.6	40.3	45.7	40.0
B	CHE-ORR	4	0	4	31.9	36.2	41.0	35.9
B	CR-ORR	4	0	4	28.4	32.2	36.6	32.0
B	CR-AND	4	0	4	28.1	31.8	36.1	31.5
B	CR-ROA	4	0	4	25.5	28.9	32.7	28.6
C	DG-AND	4	0	4	31.2	35.2	39.7	34.9
C	DG-ROA	3	0	3	45.3	52.0	57.6	49.7
C	DG-ORR	3	0	3	43.0	49.4	54.7	47.3
C	NL-ORR	4	0	4	35.7	40.3	45.4	39.9
C	CHI-BV	4	0	4	36.9	41.7	47.0	41.3
C	CHI-K25	4	0	4	30.5	34.5	38.9	34.2
C	CHE-ORR	4	0	4	29.5	33.3	37.5	33.0
C	CR-ORR	4	0	4	27.2	30.6	34.6	30.4
C	CR-AND	4	0	4	29.9	33.7	38.0	33.4
C	CR-ROA	4	0	4	31.2	35.2	39.7	34.9

Table G.2 (continued)

Horizon	Formation-location	N	I	D	Median	UCB95	X95	LTB9595
					COBALT			
A	DG-AND	4	0	4	13.40	17.30	22.50	17.00
A	DG-ROA	3	0	3	18.80	25.40	31.60	23.10
A	DG-ORR	3	0	3	16.20	21.80	27.20	19.80
A	NL-ORR	4	0	4	14.60	18.90	24.60	18.60
A	CHI-BV	4	0	4	19.50	25.30	32.80	24.80
A	CHI-K25	4	0	4	17.30	22.50	29.20	22.10
A	CHE-ORR	4	0	4	11.30	14.70	19.00	14.40
A	CR-ORR	4	0	4	9.03	11.70	15.20	11.50
A	CR-AND	4	0	4	17.10	22.20	28.80	21.80
A	CR-ROA	4	0	4	5.27	6.84	8.87	6.72
B	DG-AND	4	0	4	10.70	16.50	25.70	16.10
B	DG-ROA	3	0	3	11.80	19.60	28.40	16.70
B	DG-ORR	3	0	3	14.00	23.20	33.70	19.80
B	NL-ORR	4	0	4	9.46	14.70	22.80	14.20
B	CHI-BV	4	0	4	15.90	24.70	38.40	24.00
B	CHI-K25	4	0	4	12.40	19.20	29.70	18.60
B	CHE-ORR	4	0	4	3.89	6.04	9.37	5.86
B	CR-ORR	4	0	4	2.88	4.47	6.93	4.33
B	CR-AND	4	0	4	9.60	14.90	23.10	14.40
B	CR-ROA	4	0	4	3.13	4.85	7.53	4.71
C	DG-AND	4	0	4	15.60	27.00	46.60	26.00
C	DG-ROA	3	0	3	11.80	22.20	35.20	18.20
C	DG-ORR	3	0	3	14.60	27.30	43.40	22.30
C	NL-ORR	4	0	4	16.40	28.20	48.80	27.20
C	CHI-BV	4	0	4	26.50	45.70	78.90	44.00
C	CHI-K25	4	0	4	13.10	22.60	39.10	21.80
C	CHE-ORR	4	0	4	6.78	11.70	20.20	11.30
C	CR-ORR	4	0	4	2.26	3.91	6.74	3.76
C	CR-AND	4	0	4	7.13	12.30	21.20	11.80
C	CR-ROA	4	0	4	2.04	3.52	6.07	3.39
					COPPER			
A	DG-AND	4	0	4	19.00	24.20	30.80	23.80
A	DG-ROA	3	0	3	15.40	20.40	24.90	18.60
A	DG-ORR	3	0	3	17.70	23.40	28.60	21.40
A	NL-ORR	4	0	4	11.90	15.10	19.20	14.80
A	CHI-BV	4	0	4	13.50	17.20	21.80	16.90
A	CHI-K25	4	0	4	12.30	15.60	19.80	15.30
A	CHE-ORR	4	0	4	5.94	7.55	9.60	7.43
A	CR-ORR	4	0	4	6.99	8.88	11.30	8.73
A	CR-AND	4	0	4	9.27	11.80	15.00	11.60
A	CR-ROA	4	0	4	5.76	7.32	9.31	7.20
B	DG-AND	4	0	4	22.80	28.70	36.20	28.30
B	DG-ROA	3	0	3	18.90	24.70	30.10	22.70
B	DG-ORR	3	0	3	23.20	30.30	36.90	27.90
B	NL-ORR	4	0	4	18.50	23.40	29.50	23.00
B	CHI-BV	4	0	4	24.80	31.30	39.40	30.80
B	CHI-K25	4	0	4	19.30	24.40	30.80	24.00
B	CHE-ORR	4	0	4	18.30	23.00	29.00	22.70
B	CR-ORR	4	0	4	16.70	21.00	26.50	20.70
B	CR-AND	4	0	4	23.50	29.70	37.40	29.20
B	CR-ROA	4	0	4	12.90	16.30	20.50	16.00
C	DG-AND	4	0	4	29.10	36.70	46.30	36.10
C	DG-ROA	3	0	3	26.70	34.90	42.40	32.00
C	DG-ORR	3	0	3	26.50	34.60	42.20	31.80
C	NL-ORR	4	0	4	24.50	30.90	38.90	30.40
C	CHI-BV	4	0	4	30.70	38.70	48.80	38.10
C	CHI-K25	4	0	4	20.80	26.20	33.10	25.80
C	CHE-ORR	4	0	4	25.60	32.30	40.70	31.80
C	CR-ORR	4	0	4	24.90	31.40	39.70	30.90
C	CR-AND	4	0	4	30.80	38.80	48.90	38.20
C	CR-ROA	4	0	4	15.80	19.90	25.10	19.60

Table G.2 (continued)

Horizon	Formation-location	N	I	D	Median	UCB95	X95	LTB9595
					LEAD			
A	DG-AND	4	0	4	28.6	33.3	38.8	32.9
A	DG-ROA	3	0	3	24.1	28.8	32.7	27.2
A	DG-ORR	3	0	3	17.0	20.3	23.2	19.2
A	NL-ORR	4	0	4	18.2	21.2	24.7	21.0
A	CHI-BV	4	0	4	39.8	46.4	54.1	45.9
A	CHI-K25	4	0	4	31.4	36.6	42.7	36.2
A	CHE-ORR	4	0	4	17.6	20.5	23.9	20.3
A	CR-ORR	4	0	4	26.9	31.4	36.6	31.0
A	CR-AND	4	0	4	36.1	42.0	49.0	41.6
A	CR-ROA	4	0	4	20.6	24.0	28.0	23.8
B	DG-AND	4	0	4	20.7	27.4	36.3	26.9
B	DG-ROA	3	0	3	17.8	24.6	31.2	22.2
B	DG-ORR	3	0	3	16.2	22.4	28.4	20.2
B	NL-ORR	4	0	4	12.1	16.1	21.3	15.7
B	CHI-BV	4	0	4	28.8	38.1	50.5	37.4
B	CHI-K25	4	0	4	19.0	25.1	33.3	24.6
B	CHE-ORR	4	0	4	12.1	16.0	21.2	15.7
B	CR-ORR	4	0	4	15.7	20.7	27.5	20.3
B	CR-AND	4	0	4	16.5	21.9	29.0	21.4
B	CR-ROA	4	0	4	11.8	15.6	20.7	15.3
C	DG-AND	4	0	4	25.5	36.1	51.1	35.2
C	DG-ROA	3	0	3	15.0	22.5	30.1	19.7
C	DG-ORR	3	0	3	18.4	27.5	36.9	24.2
C	NL-ORR	4	0	4	15.8	22.4	31.7	21.8
C	CHI-BV	4	0	4	43.6	61.7	87.3	60.2
C	CHI-K25	4	0	4	19.9	28.2	39.9	27.5
C	CHE-ORR	4	0	4	20.3	28.7	40.6	28.0
C	CR-ORR	4	0	4	27.9	39.5	56.0	38.6
C	CR-AND	4	0	4	21.8	30.8	43.6	30.1
C	CR-ROA	4	0	4	15.1	21.4	30.3	20.9
					MANGANESE			
A	DG-AND	4	0	4	717.0	945	1250	928
A	DG-ROA	3	0	3	1370.0	1880	2370	1700
A	DG-ORR	3	0	3	954.0	1310	1660	1190
A	NL-ORR	4	0	4	749.0	987	1300	969
A	CHI-BV	4	0	4	1080.0	1430	1880	1400
A	CHI-K25	4	0	4	1430.0	1880	2480	1840
A	CHE-ORR	4	0	4	936.0	1230	1630	1210
A	CR-ORR	4	0	4	1380.0	1820	2400	1790
A	CR-AND	4	0	4	2360.0	3110	4100	3050
A	CR-ROA	4	0	4	825.0	1090	1430	1070
B	DG-AND	4	0	4	241.0	396	652	383
B	DG-ROA	3	0	3	341.0	605	922	504
B	DG-ORR	3	0	3	353.0	627	955	522
B	NL-ORR	4	0	4	206.0	339	557	327
B	CHI-BV	4	0	4	447.0	735	1210	710
B	CHI-K25	4	0	4	266.0	437	719	422
B	CHE-ORR	4	0	4	113.0	186	305	179
B	CR-ORR	4	0	4	93.9	154	254	149
B	CR-AND	4	0	4	334.0	549	902	530
B	CR-ROA	4	0	4	108.0	178	292	172
C	DG-AND	4	0	4	647.0	1220	2310	1170
C	DG-ROA	3	0	3	223.0	465	797	368
C	DG-ORR	3	0	3	418.0	871	1490	689
C	NL-ORR	4	0	4	374.0	707	1340	677
C	CHI-BV	4	0	4	760.0	1440	2710	1370
C	CHI-K25	4	0	4	342.0	646	1220	618
C	CHE-ORR	4	0	4	177.0	334	631	320
C	CR-ORR	4	0	4	87.8	166	314	159
C	CR-AND	4	0	4	257.0	485	916	464
C	CR-ROA	4	0	4	56.0	106	200	101

Table G.2 (continued)

Horizon	Formation-location	N	I	D	Median	UCB95	X95	LTB9595
					NICKEL			
A	DG-AND	4	0	4	18.90	23.90	30.20	23.50
A	DG-ROA	3	0	3	16.10	21.10	25.70	19.30
A	DG-ORR	3	0	3	20.80	27.30	33.20	25.00
A	NL-ORR	4	0	4	12.20	15.50	19.50	15.20
A	CHI-BV	4	0	4	12.60	15.90	20.10	15.60
A	CHI-K25	4	0	4	19.20	24.30	30.60	23.90
A	CHE-ORR	4	0	4	7.27	9.19	11.60	9.04
A	CR-ORR	4	0	4	7.33	9.26	11.70	9.11
A	CR-AND	4	0	4	9.39	11.90	15.00	11.70
A	CR-ROA	4	0	4	4.80	6.06	7.66	5.97
B	DG-AND	4	0	4	21.40	28.40	37.60	27.80
B	DG-ROA	3	0	3	19.70	27.20	34.60	24.50
B	DG-ORR	3	0	3	22.40	31.00	39.40	27.90
B	NL-ORR	4	0	4	16.20	21.40	28.40	21.00
B	CHI-BV	4	0	4	22.80	30.20	40.00	29.60
B	CHI-K25	4	0	4	22.20	29.40	39.00	28.90
B	CHE-ORR	4	0	4	11.30	15.00	19.90	14.70
B	CR-ORR	4	0	4	7.94	10.50	14.00	10.30
B	CR-AND	4	0	4	13.20	17.50	23.20	17.20
B	CR-ROA	4	0	4	7.87	10.40	13.80	10.20
C	DG-AND	4	0	4	23.60	31.30	41.60	30.70
C	DG-ROA	3	0	3	28.00	38.80	49.20	34.90
C	DG-ORR	3	0	3	26.60	36.80	46.80	33.20
C	NL-ORR	4	0	4	19.20	25.50	33.80	25.00
C	CHI-BV	4	0	4	33.80	44.80	59.50	44.00
C	CHI-K25	4	0	4	23.30	31.00	41.10	30.40
C	CHE-ORR	4	0	4	18.20	24.20	32.10	23.70
C	CR-ORR	4	0	4	11.40	15.20	20.10	14.90
C	CR-AND	4	0	4	17.00	22.50	29.90	22.10
C	CR-ROA	4	0	4	7.61	10.10	13.40	9.90
					SELENIUM			
A	DG-AND	4	0	3	0.366	0.469	0.595	0.449
A	DG-ROA	3	1	2	0.391	0.522	0.635	0.462
A	DG-ORR	3	1	1	0.346	0.464	0.562	0.408
A	NL-ORR	4	0	4	0.315	0.401	0.511	0.384
A	CHE-ORR	2	0	2	0.673	0.949	1.090	0.752
A	CR-ORR	1	0	1	0.680	1.100	1.100	0.665
A	CR-ROA	1	0	1	0.475	0.772	0.772	0.464
B	DG-AND	4	0	4	0.346	0.424	0.521	0.410
B	DG-ROA	3	0	3	0.584	0.739	0.879	0.673
B	DG-ORR	3	1	0	0.220	0.293	0.331	0.247
B	NL-ORR	4	0	4	0.417	0.512	0.628	0.495
B	CHE-ORR	2	0	2	0.721	0.963	1.090	0.793
B	CR-ORR	1	0	1	0.930	1.400	1.400	0.913
B	CR-ROA	1	0	1	0.485	0.731	0.731	0.476
C	DG-AND	4	0	2	0.248	0.341	0.440	0.311
C	DG-ROA	3	0	2	0.239	0.340	0.424	0.287
C	DG-ORR	3	0	1	0.265	0.386	0.471	0.319
C	NL-ORR	4	0	3	0.306	0.411	0.543	0.383
C	CHE-ORR	2	0	2	0.629	0.945	1.120	0.707
C	CR-ORR	1	0	1	0.500	0.888	0.888	0.482
C	CR-ROA	1	0	1	0.575	1.020	1.020	0.554

Table G.2 (continued)

Horizon	Formation-location	N	I	D	Median	UCB95	X95	LTB9595
					SILVER			
A	REMAINDER	38	0	0	.	.	.	.
B	REMAINDER	38	0	0	.	.	.	.
C	REMAINDER	38	0	0	.	.	.	.
					THALLIUM			
A	CHI-BV	4	0	1	0.198	0.274	0.319	0.232
A	CHI-K25	4	0	2	0.225	0.297	0.363	0.263
A	CR-ORR	4	0	1	0.169	0.240	0.273	0.195
A	CR-AND	4	1	2	0.267	0.347	0.430	0.313
A	REMAINDER	22	0	0	.	.	.	.
B	DG-AND	4	1	1	0.208	0.253	0.281	0.231
B	DG-ROA	3	0	2	0.239	0.286	0.322	0.266
B	DG-ORR	3	1	2	0.243	0.292	0.327	0.269
B	NL-ORR	4	0	2	0.213	0.252	0.286	0.240
B	CHI-BV	4	0	3	0.250	0.291	0.336	0.285
B	CHI-K25	4	0	4	0.284	0.329	0.382	0.324
B	CHE-ORR	4	1	3	0.253	0.296	0.341	0.287
B	CR-ORR	4	0	2	0.224	0.264	0.302	0.255
B	CR-AND	4	0	4	0.316	0.367	0.426	0.361
B	CR-ROA	4	1	2	0.237	0.278	0.319	0.269
C	DG-AND	4	0	1	0.201	0.257	0.288	0.225
C	DG-ROA	3	0	3	0.245	0.302	0.351	0.281
C	DG-ORR	3	0	3	0.270	0.332	0.387	0.309
C	NL-ORR	4	0	2	0.218	0.268	0.312	0.252
C	CHI-BV	4	0	2	0.230	0.282	0.331	0.269
C	CHI-K25	4	0	4	0.295	0.353	0.423	0.346
C	CHE-ORR	4	0	3	0.252	0.304	0.361	0.296
C	CR-ORR	4	0	2	0.231	0.282	0.332	0.270
C	CR-AND	4	0	4	0.332	0.398	0.476	0.390
C	CR-ROA	4	0	2	0.211	0.259	0.303	0.245
					ZINC			
A	DG-AND	4	0	4	46.2	59.6	76.8	58.5
A	DG-ROA	3	0	3	38.5	51.7	64.0	47.0
A	DG-ORR	3	0	3	41.3	55.4	68.6	50.4
A	NL-ORR	4	0	4	25.5	32.8	42.3	32.3
A	CHI-BV	4	0	4	36.2	46.6	60.1	45.8
A	CHI-K25	4	0	4	39.2	50.5	65.1	49.6
A	CHE-ORR	4	0	4	34.8	44.9	57.9	44.1
A	CR-ORR	4	0	4	24.4	31.5	40.6	30.9
A	CR-AND	4	0	4	39.9	51.4	66.3	50.6
A	CR-ROA	4	0	4	24.6	31.7	40.9	31.2
B	DG-AND	4	0	4	46.2	62.0	83.4	60.8
B	DG-ROA	3	0	3	41.6	58.5	75.2	52.5
B	DG-ORR	3	0	3	50.5	71.0	91.2	63.7
B	NL-ORR	4	0	4	31.4	42.2	56.8	41.4
B	CHI-BV	4	0	4	50.3	67.6	90.9	66.3
B	CHI-K25	4	0	4	59.9	80.5	108.0	78.8
B	CHE-ORR	4	0	4	101.0	135.0	182.0	132.0
B	CR-ORR	4	0	4	49.9	67.1	90.1	65.7
B	CR-AND	4	0	4	58.9	79.2	106.0	77.6
B	CR-ROA	4	0	4	35.2	47.3	63.6	46.4
C	DG-AND	4	0	4	47.1	62.7	83.5	61.4
C	DG-ROA	3	0	3	49.5	68.9	87.8	62.0
C	DG-ORR	3	0	3	52.4	73.0	93.0	65.6

Table G.2 (continued)

Horizon	Formation-location	N	I	D	Median	UCB95	X95	LTB9595
C	NL-ORR	4	0	4	32.6	43.4	57.9	42.6
C	CHI-BV	4	0	4	75.3	100.0	134.0	98.3
C	CHI-K25	4	0	4	54.5	72.6	96.7	71.2
C	CHE-ORR	4	0	4	164.0	218.0	290.0	214.0
C	CR-ORR	4	0	4	88.4	118.0	157.0	115.0
C	CR-AND	4	0	4	75.6	101.0	134.0	98.8
C	CR-ROA	4	0	4	39.0	51.9	69.2	50.9

[a]N = number of observations, possibly averages over replicates at sites; I = number of interval censored observations (see text); D = number of true detects (see text); UCB95 = 95% upper confidence bound for median; X95 = estimate of 95th percentile; LTB9595 = 95% lower confidence bound for 95th percentile; REMAINDER refers to the remaining observations—no detects.

Table G.3. Significance levels for comparing inorganics[a]
(Selected analytes were deleted because of insufficient detection.)

Analysis	Horizon	N	D	P-ALL	P-DG	P-CR	P-ORR	P-CHICK	P-DGN	P-CRC	P-GRP
Aluminum	A	40	40	.0000	.0008	.0013	.0000	.9974	.4820	.0357	.0000
Aluminum	B	40	40	.0000	.0013	.0922	.0000	.1320	.2864	.4391	.0000
Aluminum	C	40	40	.0000	.0001	.1204	.0000	.7900	.7825	.9180	.0000
Arsenic	A	39	39	.0000	.2008	.0002	.0000	.3517	.9558	.0008	.0000
Arsenic	B	38	37	.0000	.0255	.0039	.0000	.8421	.4869	.0127	.0000
Arsenic	C	39	37	.0000	.0044	.0275	.0000	.8035	.0655	.0513	.0000
Barium	A	40	40	.1073	.6577	.0189	.2108	.8701	.2270	.1969	.1323
Barium	B	40	40	.0000	.0601	.1774	.0000	.1000	.4117	.4305	.0000
Barium	C	40	40	.0000	.3493	.0148	.0000	.0327	.2875	.0049	.0000
Beryllium	A	40	37	.0000	.3360	.0213	.0000	.5341	.9679	.0763	.0000
Beryllium	B	40	36	.0000	.1433	.1569	.0000	.9781	.1408	.7586	.0000
Beryllium	C	40	37	.0000	.2024	.3085	.0000	.1284	.4744	.1733	.0000
Calcium	A	35	35	.0001	.9639	.0919	.0000	.2674	.1029	.6405	.0000
Calcium	B	34	34	.0000	.9169	.5150	.0000	.0430	.7081	.1426	.0000
Calcium	C	34	34	.0000	.0491	.1227	.0000	.0003	.4311	.2942	.0000
Chromium	A	39	38	.0000	.6438	.0107	.0000	.7641	.4253	.7173	.0000
Chromium	B	39	39	.1152	.8241	.3101	.4152	.9810	.9582	.9340	.0823
Chromium	C	40	40	.0019	.3715	.4125	.0001	.4205	.2767	.6486	.0000
Cobalt	A	40	38	.0000	.0824	.0002	.0076	.8173	.9829	.1114	.0014
Cobalt	B	40	31	.0000	.7194	.0003	.0000	.8774	.3007	.5433	.0000
Cobalt	C	40	33	.0001	.8067	.0083	.0012	.3911	.7297	.0182	.0010
Copper	A	40	34	.0000	.1679	.0738	.0000	.0958	.1256	.0559	.0000
Copper	B	39	38	.0347	.0862	.0057	.5382	.1324	.7468	.5625	.4964
Copper	C	40	39	.0338	.5866	.0022	.0970	.0274	.4426	.0633	.6539
Iron	A	40	40	.0000	.4468	.0737	.0000	.2517	.6789	.1870	.0000
Iron	B	40	40	.0000	.1911	.0054	.0000	.2555	.2289	.8212	.0000
Iron	C	40	40	.0000	.4203	.0743	.0001	.8421	.7186	.0405	.0000
Lead	A	38	38	.0638	.4463	.0466	.0208	.6766	.6098	.0075	.0556
Lead	B	39	39	.0531	.2013	.0243	.0960	.4901	.9863	.0301	.1212
Lead	C	39	39	.1319	.6057	.0768	.0601	.0177	.1822	.1781	.3855
Lithium	A	36	29	.0000	.1174	.0002	.0000	.4630	.0929	.1008	.0000
Lithium	B	37	36	.0000	.7490	.0161	.0000	.6565	.7285	.0298	.0000
Lithium	C	37	34	.0000	.4819	.0001	.0000	.9191	.4866	.0003	.0000
Magnesium	A	40	40	.0000	.0009	.0076	.0000	.1318	.0322	.1550	.0000
Magnesium	B	40	40	.0000	.0015	.0022	.0000	.9434	.1689	.0101	.0000
Magnesium	C	40	40	.0000	.0620	.0001	.0000	.0290	.0993	.0026	.0000
Manganese	A	40	40	.0011	.0078	.0026	.0541	.0936	.1235	.5841	.0616
Manganese	B	40	40	.0510	.8868	.0070	.0985	.7692	.9131	.6683	.0111
Manganese	C	40	40	.0193	.5073	.0307	.0575	.3226	.9122	.1890	.0180
Mercury	A	40	31	.0000	.0000	.0337	.0000	.0000	.0004	.1679	.0016
Mercury	B	40	20	.0004	.0018	.1083	.0039	.0104	.0013	.8062	.6109
Mercury	C	40	24	.0000	.0144	.0741	.0000	.0396	.8944	.0056	.0000
Molybdenum	B	37	11	.2365	1.000	.0847	.1834	.8057	.9997	.1706	.0608
Molybdenum	C	37	11	.0010	1.000	.1520	.0002	1.000	1.000	.0154	.0001
Nickel	A	40	30	.0000	.1962	.0107	.0000	.1886	.1049	.1988	.0000
Nickel	B	40	35	.0000	.2591	.0348	.0002	.8335	.6299	.6924	.0000
Nickel	C	40	38	.0004	.9179	.1370	.0341	.1276	.4252	.2856	.0175
Potassium	A	39	34	.0000	.0000	.0175	.0000	.6133	.1488	.0037	.0000
Potassium	B	39	39	.0000	.0000	.0016	.0000	.0015	.0148	.0001	.0000
Potassium	C	39	39	.0000	.0002	.0001	.0000	.0016	.0007	.0023	.0000
Selenium	A	38	27	.0021	.0036	.0023	.0113	.8721	.0181	.1515	.0262
Selenium	B	39	28	.0008	.0006	.0974	.0001	.6019	.0004	.0031	.0617
Selenium	C	39	25	.0000	.0001	.2597	.0000	.5137	.0000	.0330	.2522
Silicon	A	32	32	.0000	.0000	.0183	.0000	.0316	.0000	.2262	.0002

Table G.3 (continued)

Analysis	Horizon	N	D	P-ALL	P-DG	P-CR	P-ORR	P-CHICK	P-DGN	P-CRC	P-GRP
Silicon	B	32	32	.0000	.0000	.2060	.0000	.0044	.0000	.5131	.0000
Silicon	C	32	32	.0000	.0000	.3368	.0000	.0042	.0000	.6241	.0003
Sodium	A	25	23	.0015	1.000	.0981	.0019	.1337	1.000	.0873	.0009
Sodium	B	25	24	.0007	1.000	.3744	.0002	.1534	1.000	.0680	.0001
Sodium	C	25	24	.0099	1.000	.6896	.0079	.5264	1.000	.2107	.0010
Strontium	A	36	34	.0004	.2929	.1656	.0000	.0303	.0651	.1620	.0001
Strontium	B	37	34	.0001	.2037	.4723	.0000	.0760	.3514	.2706	.0000
Strontium	C	37	31	.0000	.0647	.0000	.0000	.9377	.1653	.0078	.0000
Sulfate	A	39	39	.0000	.0000	.0745	.0000	.0326	.0000	.5937	.0002
Sulfate	B	40	40	.0005	.0005	.6491	.0021	.0599	.3579	.9335	.0007
Thallium	A	38	2	.6741	.6354	.1466	.8130	1.000	.3296	1.000	.5211
Thallium	B	38	5	.8626	.4175	.6219	.8422	1.000	.8994	.4403	.4873
Thallium	C	38	8	.0820	.4808	.1077	.0794	1.000	.0684	.3435	.0624
Sulfate	C	40	35	.0000	.0000	.0019	.0000	.6366	.0021	.4277	.0000
Vanadium	A	40	40	.0111	.6029	.0050	.0679	.9834	.6531	.2860	.0115
Vanadium	B	39	39	.0005	.4041	.0733	.0007	.1038	.2217	.8019	.0002
Vanadium	C	40	40	.0000	.0139	.0295	.0000	.3769	.2136	.0027	.0000
Zinc	A	40	40	.6155	.4195	.4519	.3643	.8914	.1170	.5165	.2764
Zinc	B	40	40	.0017	.5332	.0279	.0028	.4098	.5154	.0696	.0010
Zinc	C	40	39	.0001	.7204	.0076	.0000	.3329	.1944	.2553	.0000

[a]N = number of observations; D = number of detects. See "Note on Significance Levels" at beginning of this appendix for definitions of significance levels P-ALL through P-GRP.

Table G.4. Significance levels for comparing PAHs[a]
(Dismal Gap and Nolichucky data excluded)

Analysis	N	D	P-ALL	P-CR	P-ORR	P-CHICK	P-CRC	P-GRP
Acenaphthene	25	11	0.0960	0.3413	0.0517	0.0223	0.1437	0.5664
Acenaphthylene	61	5	0.0033	0.0074	0.0023	1.000	0.0181	0.0116
Anthracene	44	39	0.2485	0.4729	0.2316	0.1345	0.2230	0.7280
Benzo[a]anthracene	60	60	0.0001	0.1210	0.0001	0.3603	0.5492	0.0000
Benzo[a]pyrene	61	60	0.0000	0.0073	0.0515	0.1662	0.4871	0.0684
Benzo[b]fluoranthene	52	47	0.0050	0.3834	0.0443	0.9141	0.4641	0.0231
Benzo[g,h,i]perylene	53	52	0.0051	0.2631	0.0748	0.2602	0.7158	0.0635
Benzo[k]fluoranthene	61	61	0.0000	0.1393	0.0076	0.2458	0.6917	0.0054
Chrysene	36	23	0.0311	0.0955	0.1427	0.8623	0.0732	0.3339
Dibenzo[a,h]anthracene	33	27	0.9138	0.8686	0.7798	0.7161	0.9920	0.6199
Fluoranthene	56	56	0.0610	0.0875	0.0925	0.2968	0.0395	0.5540
Fluorene	34	20	0.0158	0.1654	0.0101	0.2484	0.1152	0.0222
Indeno[1,2,3-c,d]pyrene	64	27	0.2847	0.0681	0.2109	0.5841	0.2298	0.2499
Naphthalene	32	19	0.1016	0.3923	0.0526	0.0267	0.8000	0.2584
Phenanthrene	67	67	0.0026	0.5975	0.0090	0.7508	0.3534	0.0049
Pyrene	59	59	0.0000	0.0138	0.0046	0.3421	0.2464	0.0045

[a]N = number of observations; D = number of detects. See "Note on Significance Levels" at beginning of this appendix for definitions of significance levels P-ALL through P-GRP.

Table G.5. Significance levels for comparisons of selected[a] radionuclides (by type of analysis)

Analysis	Horizon	N	D	P-ALL	P-DG	P-CR	P-ORR	P-CHICK	P-DGN	P-CRC	P-GRP
ALPHA											
Neptunium-237	A	29	23	.0942	1.000	.1020	.3136	.9793	1.000	.3293	.0832
Plutonium-238	A	38	9	.0075	.0068	.0077	.0235	.9635	.2395	.0077	.1006
Plutonium-239/240	A	38	7	.0736	.3350	.0716	.3805	.6793	.1852	.8842	.1861
Radium-226	A	40	38	.1201	.0223	.0720	.6498	.6498	.8503	.2967	.3674
Radium-226	B	40	39	.0212	.0031	.4751	.0249	.6121	.5117	.8167	.0024
Radium-226	C	40	40	.0221	.0016	.5727	.0523	.9598	.2954	.3240	.0116
Thorium-228	A	40	39	.0013	.2394	.0154	.0002	.6625	.0178	.0620	.0004
Thorium-228	B	40	40	.2339	.3850	.9371	.4273	.9447	.1127	.7555	.3173
Thorium-228	C	40	39	.0700	.2298	.9823	.0344	.2878	.0078	.8687	.1360
Thorium-230	A	40	40	.0037	.0139	.2130	.0008	.9050	.0013	.0257	.0363
Thorium-230	B	40	39	.0473	.4295	.1362	.0388	.9692	.1355	.2680	.0155
Thorium-230	C	40	40	.0000	.0696	.6691	.0003	.5068	.0528	.5515	.0001
Thorium-232	A	40	40	.0000	.0045	.0247	.0000	.3421	.0000	.4984	.0001
Thorium-232	B	40	40	.2009	.5377	.3934	.1466	.2406	.0693	.7807	.1702
Thorium-232	C	40	40	.1281	.2541	.8969	.2569	.6125	.0776	.9175	.2038
Total Uranium	A	38	37	.2438	.3682	.1372	.2986	.5574	.7756	.5032	.0739
Uranium-233/234	A	40	40	.1374	.9967	.4057	.1222	.2585	.0593	.1007	.4590
Uranium-233/234	B	39	39	.0029	.1616	.0055	.0349	.1320	.7710	.1497	.0214
Uranium-233/234	C	40	40	.0000	.1540	.0141	.0000	.5381	.0016	.0142	.0003
Uranium-235	A	40	29	.0084	.4178	.0006	.0512	.1222	.9693	.0757	.0600
Uranium-235	B	39	32	.0215	.4823	.2400	.0627	.7454	.6232	.4017	.0089
Uranium-235	C	40	29	.0342	.9956	.1941	.0318	.3751	.6193	.0681	.0188
Uranium-238	A	40	40	.0000	.3195	.0000	.0323	.1652	.0235	.0368	.4380
Uranium-238	B	39	39	.0002	.1986	.0009	.0087	.2907	.7214	.2924	.0014
Uranium-238	C	40	40	.0000	.2419	.0348	.0000	.2578	.0018	.0037	.0001
BETA											
Technetium-99	A	46	9	.0010	.0011	.0036	.0447	.7280	.2997	1.000	.0062
GAMMA											
Cesium-137	A	40	37	.1313	.1259	.8531	.8041	.7671	.8635	.8176	.3423
Cesium-137	B	39	16	.0812	.2877	.1263	.2715	.1893	.2404	.2965	.3303
Cesium-137	C	39	4	.0277	.0418	1.000	.0813	1.000	.0166	1.000	.1320
Potassium-40	A	40	40	.0000	.0060	.0665	.0000	.0102	.6614	.1189	.0000
Potassium-40	B	36	36	.0000	.3252	.8216	.0001	.9845	.5517	.1099	.0000
Potassium-40	C	36	36	.0000	.7842	.0663	.0000	.0024	.3416	.1266	.0001
Uranium-235	A	39	16	.0970	.2040	1.000	.8745	.9998	.5033	1.000	.5056
Uranium-235	B	39	15	.7760	.6458	1.000	.6640	1.000	.0825	1.000	.8961
Uranium-235	C	40	18	.0208	.0463	.0596	.0095	1.000	.6945	.0285	.0059
TRITIUM											
Tritium	A	50	12	.0009	.2047	.8898	.0012	.0008	1.000	.9071	.0117

[a]N = number of observations; D = number of detects. See "Note on Significance Levels" at beginning of this appendix for definitions of significance levels P-ALL through P-GRP.

Table G.6. Comparisons of horizons for inorganics
(Estimates and standard errors are in milligrams per kilogram.)

Formation-location	Difference estimate	Standard error	Significance level
Analysis=Aluminum	**Comparison: A-B**	**Area-differences P=.0002**	
DG-AND	-12425.00	2071.01	.0001
DG-ROA	-8700.00	2071.01	.0001
DG-ORR	-9975.00	2071.01	.0001
NL-ORR	-12925.00	2071.01	.0001
CHI-BV	-13450.00	2071.01	.0001
CHI-K25	-18150.00	2071.01	.0001
CHE-ORR	-10037.50	2071.01	.0001
CR-ORR	-6805.00	2071.01	.0010
CR-AND	-5675.00	2071.01	.0061
CR-ROA	-6248.75	2071.01	.0026
Analysis=Aluminum	**Comparison: B-C**	**Area-differences P=.0355**	
DG-AND	-3450.00	1731.09	.0463
DG-ROA	-987.50	1731.09	.5684
DG-ORR	-7675.00	1731.09	.0001
NL-ORR	-3050.00	1731.09	.0781
CHI-BV	-3625.00	1731.09	.0363
CHI-K25	425.00	1731.09	.8061
CHE-ORR	862.50	1731.09	.6183
CR-ORR	-950.00	1731.09	.5832
CR-AND	-2025.00	1731.09	.2421
CR-ROA	-1725.00	1731.09	.3190
Analysis=Aluminum	**Comparison: A-C**	**Area-differences P=.0001**	
DG-AND	-15875.00	1995.80	.0001
DG-ROA	-9687.50	1995.80	.0001
DG-ORR	-17650.00	1995.80	.0001
NL-ORR	-15975.00	1995.80	.0001
CHI-BV	-17075.00	1995.80	.0001
CHI-K25	-17725.00	1995.80	.0001
CHE-ORR	-9175.00	1995.80	.0001
CR-ORR	-7755.00	1995.80	.0001
CR-AND	-7700.00	1995.80	.0001
CR-ROA	-7973.75	1995.80	.0001
Analysis=Arsenic	**Comparison: A-B**	**Area-differences P=.0001**	
DG-AND	0.30	1.97	.8785
DG-ROA	-1.34	1.96	.4950
DG-ORR	-3.05	1.96	.1197
NL-ORR	-0.30	2.26	.8945
CHI-BV	-1.08	1.96	.5834
CHI-K25	0.05	1.96	.9796
CHE-ORR	-9.28	1.96	.0001
CR-ORR	-14.23	2.26	.0001
CR-AND	-9.74	1.96	.0001
CR-ROA	-8.14	1.96	.0001

Table G.6 (continued)

Formation-location	Difference estimate	Standard error	Significance level
Analysis=Arsenic	Comparison: B-C	Area-differences P=.2523	
DG-AND	0.26	11.23	.9814
DG-ROA	-0.30	11.22	.9787
DG-ORR	-4.56	11.22	.6843
NL-ORR	-1.87	12.96	.8855
CHI-BV	-0.28	11.22	.9805
CHI-K25	0.43	11.22	.9698
CHE-ORR	-38.04	11.22	.0007
CR-ORR	-24.43	12.96	.0594
CR-AND	-4.65	11.22	.6786
CR-ROA	-12.06	11.22	.2824
Analysis=Arsenic	Comparison: A-C	Area-differences P=.0186	
DG-AND	0.57	11.15	.9589
DG-ROA	-1.64	11.15	.8833
DG-ORR	-7.61	11.15	.4948
NL-ORR	-2.17	12.88	.8664
CHI-BV	-1.35	11.15	.9036
CHI-K25	0.48	11.15	.9660
CHE-ORR	-47.31	11.15	.0001
CR-ORR	-38.67	12.88	.0027
CR-AND	-14.39	11.15	.1970
CR-ROA	-20.20	11.15	.0701
Analysis=Barium	Comparison: A-B	Area-differences P=.0001	
DG-AND	4.40	12.36	.7218
DG-ROA	27.30	12.36	.0271
DG-ORR	5.70	12.36	.6446
NL-ORR	-9.83	12.36	.4265
CHI-BV	-34.05	12.36	.0059
CHI-K25	-13.23	12.36	.2845
CHE-ORR	26.40	12.36	.0326
CR-ORR	31.80	12.36	.0101
CR-AND	78.61	12.36	.0001
CR-ROA	26.85	12.36	.0298
Analysis=Barium	Comparison: B-C	Area-differences P=.0001	
DG-AND	-8.35	9.24	.3663
DG-ROA	-4.18	9.24	.6515
DG-ORR	-12.65	9.24	.1711
NL-ORR	5.88	9.24	.5250
CHI-BV	-30.90	9.24	.0008
CHI-K25	4.78	9.24	.6054
CHE-ORR	-9.23	9.24	.3183
CR-ORR	28.40	9.24	.0021
CR-AND	19.98	9.24	.0307
CR-ROA	20.83	9.24	.0243
Analysis=Barium	Comparison: A-C	Area-differences P=.0001	
DG-AND	-3.95	13.06	.7624
DG-ROA	23.13	13.06	.0767
DG-ORR	-6.95	13.06	.5947
NL-ORR	-3.95	13.06	.7624
CHI-BV	-64.95	13.06	.0001
CHI-K25	-8.45	13.06	.5178
CHE-ORR	17.18	13.06	.1886
CR-ORR	60.20	13.06	.0001
CR-AND	98.59	13.06	.0001
CR-ROA	47.68	13.06	.0003

Table G.6 (continued)

Formation-location	Difference estimate	Standard error	Significance level
Analysis=Beryllium	Comparison: A-B	Area-differences	P=.0001
DG-AND	-0.14	0.09	.1127
DG-ROA	-0.02	0.09	.8386
DG-ORR	0.08	0.09	.3670
NL-ORR	-0.23	0.09	.0088
CHI-BV	-0.45	0.09	.0001
CHI-K25	-0.58	0.09	.0001
CHE-ORR	-0.17	0.12	.1519
CR-ORR	-0.03	0.10	.7871
CR-AND	0.09	0.09	.3016
CR-ROA	0.01	0.09	.8689
Analysis=Beryllium	Comparison: B-C	Area-differences	P=.0091
DG-AND	-0.22	0.09	.0169
DG-ROA	-0.20	0.09	.0263
DG-ORR	-0.27	0.09	.0032
NL-ORR	-0.16	0.09	.0710
CHI-BV	-0.48	0.09	.0001
CHI-K25	0.04	0.09	.6368
CHE-ORR	-0.04	0.13	.7531
CR-ORR	-0.23	0.10	.0269
CR-AND	-0.05	0.09	.6171
CR-ROA	-0.13	0.09	.1419
Analysis=Beryllium	Comparison: A-C	Area-differences	P=.0001
DG-AND	-0.35	0.11	.0009
DG-ROA	-0.22	0.11	.0401
DG-ORR	-0.19	0.11	.0768
NL-ORR	-0.39	0.11	.0003
CHI-BV	-0.92	0.11	.0001
CHI-K25	-0.54	0.11	.0001
CHE-ORR	-0.21	0.15	.1523
CR-ORR	-0.26	0.12	.0357
CR-AND	0.04	0.11	.6797
CR-ROA	-0.12	0.11	.2778
Analysis=Boron	Comparison: A-B	Area-differences	P=.0002
DG-AND	0.21	6.17	.9726
DG-ROA	12.55	2.30	.0001
DG-ORR	-5.30	2.67	.0469
NL-ORR	-0.21	5.84	.9718
CHI-BV	0.00	3.78	1.000
CHI-K25	0.13	2.83	.9623
CHE-ORR	-1.47	2.58	.5685
CR-ORR	-0.05	2.79	.9856
CR-AND	0.19	2.77	.9459
CR-ROA	0.03	5.46	.9963
Analysis=Boron	Comparison: B-C	Area-differences	P=.6958
DG-AND	-0.11	5.30	.9831
DG-ROA	-7.08	2.59	.0063
DG-ORR	-3.92	2.53	.1222
NL-ORR	0.06	5.29	.9902
CHI-BV	-0.03	4.15	.9952
CHI-K25	0.06	3.00	.9836
CHE-ORR	-1.01	2.80	.7185
CR-ORR	-0.09	3.05	.9777
CR-AND	-0.04	2.97	.9901
CR-ROA	-0.18	6.01	.9768

Table G.6 (continued)

Formation-location	Difference estimate	Standard error	Significance level
Analysis=Boron	Comparison: A-C	Area-differences P=.0024	
DG-AND	0.10	6.26	.9872
DG-ROA	5.13	2.22	.0209
DG-ORR	-12.25	2.72	.0001
NL-ORR	-0.14	5.70	.9804
CHI-BV	-0.03	3.81	.9947
CHI-K25	0.20	2.82	.9447
CHE-ORR	-2.36	2.53	.3507
CR-ORR	-0.14	2.83	.9619
CR-AND	0.15	2.79	.9568
CR-ROA	-0.15	5.58	.9786
Analysis=Calcium	Comparison: A-B	Area-differences P=.0001	
DG-AND	644.50	151.53	.0001
DG-ROA	1226.00	303.06	.0001
DG-ORR	355.00	303.06	.2414
NL-ORR	-140.00	214.29	.5136
CHI-BV	-308.75	151.53	.0416
CHI-K25	213.13	151.53	.1596
CHE-ORR	-67.13	151.53	.6578
CR-ORR	185.00	151.53	.2221
CR-AND	524.13	151.53	.0005
CR-ROA	278.75	151.53	.0658
Analysis=Calcium	Comparison: B-C	Area-differences P=.0001	
DG-AND	338.75	275.12	.2182
DG-ROA	185.00	550.24	.7367
DG-ORR	113.50	389.08	.7705
NL-ORR	-109.50	389.08	.7784
CHI-BV	-2497.50	275.12	.0001
CHI-K25	-558.25	275.12	.0424
CHE-ORR	262.38	275.12	.3402
CR-ORR	172.00	317.68	.5882
CR-AND	74.75	275.12	.7859
CR-ROA	59.63	275.12	.8284
Analysis=Calcium	Comparison: A-C	Area-differences P=.0001	
DG-AND	983.25	255.59	.0001
DG-ROA	1411.00	511.17	.0058
DG-ORR	389.33	295.13	.1871
NL-ORR	-368.00	511.17	.4716
CHI-BV	-2806.25	255.59	.0001
CHI-K25	-345.13	255.59	.1769
CHE-ORR	195.25	255.59	.4449
CR-ORR	328.67	295.13	.2654
CR-AND	598.88	255.59	.0191
CR-ROA	338.38	255.59	.1855
Analysis=Chromium	Comparison: A-B	Area-differences P=.0017	
DG-AND	-7.05	2.84	.0132
DG-ROA	-11.81	2.84	.0001
DG-ORR	-12.41	2.84	.0001
NL-ORR	-9.60	3.28	.0035
CHI-BV	0.11	2.84	.9684
CHI-K25	-2.49	2.84	.3816
CHE-ORR	-14.58	2.86	.0001
CR-ORR	-13.45	2.84	.0001
CR-AND	-11.51	2.84	.0001
CR-ROA	-12.25	2.84	.0001

Table G.6 (continued)

Formation-location	Difference estimate	Standard error	Significance level
Analysis=Chromium	Comparison: B-C	Area-differences P=.0001	
DG-AND	-3.06	4.12	.4573
DG-ROA	0.26	4.12	.9492
DG-ORR	-8.99	4.12	.0292
NL-ORR	-26.07	4.76	.0001
CHI-BV	1.48	4.12	.7204
CHI-K25	5.68	4.12	.1684
CHE-ORR	2.63	4.12	.5241
CR-ORR	0.28	4.12	.9468
CR-AND	-3.20	4.12	.4374
CR-ROA	-11.01	4.12	.0075
Analysis=Chromium	Comparison: A-C	Area-differences P=.0001	
DG-AND	-10.11	4.35	.0200
DG-ROA	-11.55	4.35	.0079
DG-ORR	-21.40	4.35	.0001
NL-ORR	-35.67	5.02	.0001
CHI-BV	1.59	4.35	.7149
CHI-K25	3.19	4.35	.4633
CHE-ORR	-12.00	4.36	.0059
CR-ORR	-13.18	4.35	.0024
CR-AND	-14.71	4.35	.0007
CR-ROA	-23.26	4.35	.0001
Analysis=Cobalt	Comparison: A-B	Area-differences P=.1829	
DG-AND	-0.86	3.73	.8171
DG-ROA	12.30	3.73	.0010
DG-ORR	6.26	3.73	.0931
NL-ORR	-2.55	3.73	.4942
CHI-BV	5.01	3.73	.1790
CHI-K25	3.65	3.73	.3278
CHE-ORR	8.92	3.76	.0178
CR-ORR	7.02	3.75	.0615
CR-AND	6.33	3.73	.0899
CR-ROA	2.46	3.81	.5187
Analysis=Cobalt	Comparison: B-C	Area-differences P=.1959	
DG-AND	-1.61	4.79	.7361
DG-ROA	0.11	4.79	.9812
DG-ORR	-3.70	4.79	.4394
NL-ORR	0.83	4.79	.8631
CHI-BV	-11.43	4.79	.0170
CHI-K25	-1.80	4.79	.7068
CHE-ORR	-14.91	4.81	.0019
CR-ORR	-0.07	4.84	.9892
CR-AND	1.20	4.79	.8020
CR-ROA	1.11	4.86	.8189
Analysis=Cobalt	Comparison: A-C	Area-differences P=.0293	
DG-AND	-2.48	4.24	.5596
DG-ROA	12.41	4.24	.0034
DG-ORR	2.56	4.24	.5458
NL-ORR	-1.73	4.24	.6843
CHI-BV	-6.41	4.24	.1306
CHI-K25	1.85	4.24	.6627
CHE-ORR	-5.92	4.24	.1631
CR-ORR	7.02	4.26	.0991
CR-AND	7.53	4.24	.0761
CR-ROA	3.59	4.30	.4037

Table G.6 (continued)

Formation-location	Difference estimate	Standard error	Significance level
Analysis=Copper	Comparison: A-B	Area-differences P=.0001	
DG-AND	-4.09	2.05	.0465
DG-ROA	-3.35	2.05	.1028
DG-ORR	-4.37	2.37	.0656
NL-ORR	-7.93	2.05	.0001
CHI-BV	-6.99	2.05	.0007
CHI-K25	-6.05	2.05	.0032
CHE-ORR	-13.36	2.12	.0001
CR-ORR	-12.69	2.10	.0001
CR-AND	-14.33	2.05	.0001
CR-ROA	-6.39	2.13	.0027
Analysis=Copper	Comparison: B-C	Area-differences P=.3259	
DG-AND	-9.89	2.93	.0008
DG-ROA	-10.45	2.93	.0004
DG-ORR	-6.25	3.39	.0651
NL-ORR	-5.68	2.93	.0531
CHI-BV	-5.45	2.93	.0632
CHI-K25	-1.15	2.93	.6951
CHE-ORR	-5.01	3.26	.1242
CR-ORR	-11.53	2.93	.0001
CR-AND	-8.40	2.93	.0042
CR-ROA	-4.95	2.96	.0941
Analysis=Copper	Comparison: A-C	Area-differences P=.0100	
DG-AND	-13.98	3.43	.0001
DG-ROA	-13.80	3.43	.0001
DG-ORR	-12.64	3.43	.0002
NL-ORR	-13.60	3.43	.0001
CHI-BV	-12.44	3.43	.0003
CHI-K25	-7.20	3.43	.0358
CHE-ORR	-18.46	3.86	.0001
CR-ORR	-24.91	3.51	.0001
CR-AND	-22.73	3.43	.0001
CR-ROA	-11.14	3.44	.0012
Analysis=Cyanide	Comparison: A-B	Area-differences P=.1157	
DG-AND	0.06	0.05	.2940
DG-ROA	0.29	0.06	.0001
DG-ORR	0.01	0.06	.8330
NL-ORR	-0.00	0.06	.9833
Analysis=Cyanide	Comparison: B-C	Area-differences P=.7807	
DG-AND	0.07	0.04	.0895
DG-ROA	0.00	0.08	.9770
DG-ORR	-0.06	0.03	.0894
NL-ORR	-0.00	0.06	1.000
Analysis=Cyanide	Comparison: A-C	Area-differences P=.0071	
DG-AND	0.11	0.05	.0244
DG-ROA	0.30	0.06	.0001
DG-ORR	-0.06	0.05	.2668
NL-ORR	-0.00	0.06	.9824

Table G.6 (continued)

Formation-location	Difference estimate	Standard error	Significance level
Analysis=Iron	Comparison: A-B	Area-differences P=.0003	
DG-AND	-13650.00	2787.30	.0001
DG-ROA	-7762.50	2787.30	.0054
DG-ORR	-7575.00	2787.30	.0066
NL-ORR	-14825.00	2787.30	.0001
CHI-BV	-12925.00	2787.30	.0001
CHI-K25	-23475.00	2787.30	.0001
CHE-ORR	-18687.50	2787.30	.0001
CR-ORR	-21025.00	2787.30	.0001
CR-AND	-13987.50	2787.30	.0001
CR-ROA	-12096.25	2787.30	.0001
Analysis=Iron	Comparison: B-C	Area-differences P=.0001	
DG-AND	-3325.00	2385.76	.1634
DG-ROA	-5500.00	2385.76	.0211
DG-ORR	-5787.50	2385.76	.0153
NL-ORR	1100.00	2385.76	.6447
CHI-BV	-3700.00	2385.76	.1209
CHI-K25	1325.00	2385.76	.5786
CHE-ORR	-962.50	2385.76	.6866
CR-ORR	-8825.00	2385.76	.0002
CR-AND	-4450.00	2385.76	.0621
CR-ROA	-15087.50	2385.76	.0001
Analysis=Iron	Comparison: A-C	Area-differences P=.0002	
DG-AND	-16975.00	3050.83	.0001
DG-ROA	-13262.50	3050.83	.0001
DG-ORR	-13362.50	3050.83	.0001
NL-ORR	-13725.00	3050.83	.0001
CHI-BV	-16625.00	3050.83	.0001
CHI-K25	-22150.00	3050.83	.0001
CHE-ORR	-19650.00	3050.83	.0001
CR-ORR	-29850.00	3050.83	.0001
CR-AND	-18437.50	3050.83	.0001
CR-ROA	-27183.75	3050.83	.0001
Analysis=Lead	Comparison: A-B	Area-differences P=.4906	
DG-AND	9.81	10.37	.3441
DG-ROA	13.14	10.37	.2052
DG-ORR	9.44	10.37	.3628
NL-ORR	5.20	11.97	.6641
CHI-BV	16.57	11.97	.1665
CHI-K25	14.98	10.37	.1487
CHE-ORR	7.65	10.37	.4607
CR-ORR	40.20	10.37	.0001
CR-AND	6.69	10.37	.5190
CR-ROA	8.69	10.37	.4022
Analysis=Lead	Comparison: B-C	Area-differences P=.0118	
DG-AND	-2.32	5.99	.6987
DG-ROA	-5.43	5.18	.2953
DG-ORR	-3.40	5.18	.5119
NL-ORR	-23.87	5.99	.0001
CHI-BV	-16.80	5.18	.0012
CHI-K25	0.40	5.18	.9385
CHE-ORR	-15.45	5.18	.0029
CR-ORR	-15.10	5.18	.0036
CR-AND	0.43	5.18	.9347
CR-ROA	-5.59	5.18	.2810

Table G.6 (continued)

Formation-location	Difference estimate	Standard error	Significance level
Analysis=Lead	Comparison: A-C	Area-differences P=.5296	
DG-AND	4.23	14.02	.7626
DG-ROA	7.71	12.14	.5252
DG-ORR	6.04	12.14	.6189
NL-ORR	-18.67	14.02	.1830
CHI-BV	-5.00	14.02	.7213
CHI-K25	15.38	12.14	.2053
CHE-ORR	-7.80	12.14	.5205
CR-ORR	25.10	12.14	.0387
CR-AND	7.11	12.14	.5579
CR-ROA	3.10	12.14	.7984
Analysis=Lithium	Comparison: A-B	Area-differences P=.0001	
DG-AND	-8.96	1.83	.0001
DG-ROA	-9.00	2.08	.0001
DG-ORR	-5.10	2.12	.0160
NL-ORR	-12.78	1.83	.0001
CHI-BV	-17.65	2.59	.0001
CHI-K25	-18.81	1.83	.0001
CHE-ORR	-8.26	1.94	.0001
CR-ORR	-4.35	1.86	.0197
CR-AND	-5.31	1.83	.0038
CR-ROA	-6.20	2.12	.0034
Analysis=Lithium	Comparison: B-C	Area-differences P=.0633	
DG-AND	-1.90	2.08	.3603
DG-ROA	-5.11	2.08	.0138
DG-ORR	-5.24	2.08	.0117
NL-ORR	0.18	2.08	.9329
CHI-BV	-8.25	2.94	.0050
CHI-K25	-4.38	2.08	.0352
CHE-ORR	-2.10	2.45	.3912
CR-ORR	2.44	2.08	.2410
CR-AND	-0.65	2.08	.7543
CR-ROA	-2.07	2.40	.3889
Analysis=Lithium	Comparison: A-C	Area-differences P=.0001	
DG-AND	-10.86	2.71	.0001
DG-ROA	-14.43	2.96	.0001
DG-ORR	-11.55	3.13	.0002
NL-ORR	-12.60	2.71	.0001
CHI-BV	-25.90	3.83	.0001
CHI-K25	-23.19	2.71	.0001
CHE-ORR	-8.95	2.92	.0021
CR-ORR	-1.87	2.73	.4948
CR-AND	-5.96	2.71	.0276
CR-ROA	-8.27	3.13	.0082
Analysis=Magnesium	Comparison: A-B	Area-differences P=.0056	
DG-AND	-176.25	244.55	.4711
DG-ROA	-407.50	244.55	.0957
DG-ORR	-198.75	244.55	.4164
NL-ORR	-725.00	244.55	.0030
CHI-BV	-937.50	244.55	.0001
CHI-K25	-1266.13	244.55	.0001
CHE-ORR	-457.81	244.55	.0612
CR-ORR	-121.25	244.55	.6200
CR-AND	-168.13	244.55	.4918
CR-ROA	-154.38	244.55	.5279

Table G.6 (continued)

Formation-location	Difference estimate	Standard error	Significance level
Analysis=Magnesium Comparison: B-C Area-differences P=.0001			
DG-AND	-680.00	150.62	.0001
DG-ROA	-1081.25	150.62	.0001
DG-ORR	-1130.00	150.62	.0001
NL-ORR	-655.00	150.62	.0001
CHI-BV	-932.50	150.62	.0001
CHI-K25	25.00	150.62	.8682
CHE-ORR	84.75	150.62	.5737
CR-ORR	111.50	150.62	.4591
CR-AND	6.00	150.62	.9682
CR-ROA	98.75	150.62	.5121
Analysis=Magnesium Comparison: A-C Area-differences P=.0001			
DG-AND	-856.25	269.44	.0015
DG-ROA	-1488.75	269.44	.0001
DG-ORR	-1328.75	269.44	.0001
NL-ORR	-1380.00	269.44	.0001
CHI-BV	-1870.00	269.44	.0001
CHI-K25	-1241.13	269.44	.0001
CHE-ORR	-373.06	269.44	.1662
CR-ORR	-9.75	269.44	.9711
CR-AND	-162.13	269.44	.5474
CR-ROA	-55.63	269.44	.8364
Analysis=Manganese Comparison: A-B Area-differences P=.0011			
DG-AND	389.00	246.03	.1138
DG-ROA	1526.88	246.03	.0001
DG-ORR	760.50	246.03	.0020
NL-ORR	344.25	246.03	.1617
CHI-BV	703.25	246.03	.0043
CHI-K25	1333.75	246.03	.0001
CHE-ORR	974.33	246.03	.0001
CR-ORR	923.85	246.03	.0002
CR-AND	1581.33	246.03	.0001
CR-ROA	805.14	246.03	.0011
Analysis=Manganese Comparison: B-C Area-differences P=.4209			
DG-AND	-275.63	227.61	.2259
DG-ROA	64.18	227.61	.7780
DG-ORR	-165.38	227.61	.4675
NL-ORR	-38.25	227.61	.8665
CHI-BV	-286.75	227.61	.2077
CHI-K25	-356.00	227.61	.1178
CHE-ORR	-501.80	227.61	.0275
CR-ORR	76.35	227.61	.7373
CR-AND	203.85	227.61	.3705
CR-ROA	69.66	227.61	.7596
Analysis=Manganese Comparison: A-C Area-differences P=.0001			
DG-AND	113.38	244.80	.6433
DG-ROA	1591.05	244.80	.0001
DG-ORR	595.13	244.80	.0151
NL-ORR	306.00	244.80	.2113
CHI-BV	416.50	244.80	.0889
CHI-K25	977.75	244.80	.0001
CHE-ORR	472.53	244.80	.0536
CR-ORR	1000.20	244.80	.0001
CR-AND	1785.18	244.80	.0001
CR-ROA	874.80	244.80	.0004

Table G.6 (continued)

Formation-location	Difference estimate	Standard error	Significance level
Analysis=Mercury	Comparison: A-B	Area-differences P=.0001	
DG-AND	0.03	0.05	.5308
DG-ROA	0.04	0.04	.3203
DG-ORR	0.18	0.03	.0001
NL-ORR	0.13	0.04	.0004
CHI-BV	0.11	0.04	.0016
CHI-K25	0.42	0.03	.0001
CHE-ORR	0.03	0.03	.4657
CR-ORR	0.05	0.03	.1079
CR-AND	-0.02	0.03	.4277
CR-ROA	-0.04	0.03	.2669
Analysis=Mercury	Comparison: B-C	Area-differences P=.0001	
DG-AND	-0.00	0.09	.9733
DG-ROA	0.01	0.03	.6606
DG-ORR	0.10	0.03	.0010
NL-ORR	0.00	0.09	.9735
CHI-BV	-0.05	0.03	.1598
CHI-K25	-0.02	0.02	.2686
CHE-ORR	-0.07	0.02	.0017
CR-ORR	-0.15	0.02	.0001
CR-AND	-0.05	0.02	.0226
CR-ROA	-0.09	0.02	.0001
Analysis=Mercury	Comparison: A-C	Area-differences P=.0001	
DG-AND	0.02	0.05	.7026
DG-ROA	0.05	0.05	.3577
DG-ORR	0.24	0.05	.0001
NL-ORR	0.13	0.04	.0024
CHI-BV	0.08	0.04	.0557
CHI-K25	0.39	0.04	.0001
CHE-ORR	-0.05	0.04	.2444
CR-ORR	-0.10	0.04	.0112
CR-AND	-0.07	0.04	.0688
CR-ROA	-0.12	0.04	.0018
Analysis=Molybdenum	Comparison: A-B	Area-differences P=.0360	
DG-AND	-0.40	0.44	.3658
DG-ROA	-5.67	.	.
DG-ORR	-6.09	.	.
NL-ORR	-0.94	0.46	.0421
CHI-BV	-1.44	1.70	.3960
CHI-K25	-1.59	1.45	.2712
CHE-ORR	-1.39	1.91	.4660
CR-ORR	-2.17	0.25	.0001
CR-AND	-2.11	0.38	.0001
CR-ROA	-0.94	0.54	.0859
Analysis=Molybdenum	Comparison: B-C	Area-differences P=.0077	
DG-AND	-0.18	0.39	.6405
DG-ROA	-4.62	.	.
DG-ORR	-5.16	.	.
NL-ORR	0.75	0.56	.1829
CHI-BV	1.41	1.10	.2012
CHI-K25	1.51	0.94	.1068
CHE-ORR	-0.01	0.57	.9855
CR-ORR	-0.66	0.30	.0290
CR-AND	0.26	0.38	.4948
CR-ROA	-1.68	0.45	.0002

Table G.6 (continued)

Formation-location	Difference estimate	Standard error	Significance level
Analysis=Molybdenum Comparison: A-C Area-differences P=.0276			
DG-AND	-0.52	0.44	.2336
DG-ROA	-4.93	.	.
DG-ORR	-5.52	.	.
NL-ORR	-0.05	1.71	.9767
CHI-BV	-0.00	71.12	1.000
CHI-K25	0.02	86.72	.9998
CHE-ORR	-1.33	1.18	.2574
CR-ORR	-2.71	0.30	.0001
CR-AND	-1.78	0.69	.0096
CR-ROA	-2.12	0.42	.0001
Analysis=Nickel Comparison: A-B Area-differences P=.0171			
DG-AND	-3.43	1.99	.0852
DG-ROA	-1.13	1.99	.5718
DG-ORR	1.95	1.99	.3270
NL-ORR	-3.60	1.99	.0704
CHI-BV	-9.13	1.99	.0001
CHI-K25	-3.98	1.99	.0457
CHE-ORR	-6.38	2.92	.0287
CR-ORR	-4.08	2.05	.0473
CR-AND	-6.50	2.02	.0013
CR-ROA	-4.84	2.24	.0306
Analysis=Nickel Comparison: B-C Area-differences P=.0001			
DG-AND	-5.04	1.83	.0059
DG-ROA	-9.14	1.83	.0001
DG-ORR	-6.09	1.83	.0009
NL-ORR	-3.75	1.83	.0405
CHI-BV	-9.33	1.83	.0001
CHI-K25	-1.18	1.83	.5209
CHE-ORR	-17.40	2.08	.0001
CR-ORR	-4.05	1.83	.0269
CR-AND	-2.43	1.83	.1852
CR-ROA	-2.94	2.04	.1502
Analysis=Nickel Comparison: A-C Area-differences P=.0018			
DG-AND	-8.46	2.93	.0038
DG-ROA	-10.26	2.93	.0005
DG-ORR	-4.14	2.93	.1576
NL-ORR	-7.35	2.93	.0121
CHI-BV	-18.45	2.93	.0001
CHI-K25	-5.15	2.93	.0786
CHE-ORR	-19.35	3.10	.0001
CR-ORR	-8.45	3.01	.0050
CR-AND	-9.04	2.95	.0022
CR-ROA	-7.33	3.12	.0187
Analysis=Potassium Comparison: A-B Area-differences P=.0001			
DG-AND	73.75	212.77	.7289
DG-ROA	-461.75	212.77	.0300
DG-ORR	-196.25	212.77	.3564
NL-ORR	-755.00	212.77	.0004
CHI-BV	-837.50	212.77	.0001
CHI-K25	-2202.50	212.77	.0001
CHE-ORR	-954.21	217.42	.0001
CR-ORR	-233.25	212.77	.2730
CR-AND	-347.13	212.77	.1028
CR-ROA	-214.41	246.09	.3836

Table G.6 (continued)

Formation-location	Difference estimate	Standard error	Significance level
Analysis=Potassium	Comparison: B-C	Area-differences P=.0001	
DG-AND	-711.25	180.51	.0001
DG-ROA	-693.75	180.51	.0001
DG-ORR	-551.25	180.51	.0023
NL-ORR	-1315.00	180.51	.0001
CHI-BV	-80.00	180.51	.6576
CHI-K25	130.00	180.51	.4714
CHE-ORR	-128.25	180.51	.4774
CR-ORR	-206.50	180.51	.2526
CR-AND	-157.25	180.51	.3837
CR-ROA	-10.00	208.44	.9617
Analysis=Potassium	Comparison: A-C	Area-differences P=.0001	
DG-AND	-637.50	239.35	.0077
DG-ROA	-1155.50	239.35	.0001
DG-ORR	-747.50	239.35	.0018
NL-ORR	-2070.00	239.35	.0001
CHI-BV	-917.50	239.35	.0001
CHI-K25	-2072.50	239.35	.0001
CHE-ORR	-1083.71	243.45	.0001
CR-ORR	-439.75	239.35	.0662
CR-AND	-504.38	239.35	.0351
CR-ROA	-224.27	276.72	.4177
Analysis=Silicon	Comparison: A-B	Area-differences P=.0081	
DG-AND	-20.00	28.23	.4786
DG-ROA	-39.50	28.23	.1617
DG-ORR	0.63	28.23	.9823
NL-ORR	1.50	28.23	.9576
CHI-BV	-43.00	39.92	.2814
CHI-K25	-154.13	28.23	.0001
CHE-ORR	-61.63	28.23	.0290
CR-ORR	-30.00	56.46	.5951
CR-AND	-54.88	28.23	.0519
CR-ROA	-1.00	56.46	.9859
Analysis=Silicon	Comparison: B-C	Area-differences P=.5950	
DG-AND	25.75	42.60	.5456
DG-ROA	99.13	42.60	.0200
DG-ORR	-11.13	42.60	.7940
NL-ORR	-46.75	42.60	.2725
CHI-BV	56.00	60.25	.3527
CHI-K25	39.00	42.60	.3600
CHE-ORR	13.88	42.60	.7447
CR-ORR	26.00	85.21	.7603
CR-AND	1.25	42.60	.9766
CR-ROA	-16.00	85.21	.8511
Analysis=Silicon	Comparison: A-C	Area-differences P=.0250	
DG-AND	5.75	31.63	.8558
DG-ROA	59.63	31.63	.0594
DG-ORR	-10.50	31.63	.7399
NL-ORR	-45.25	31.63	.1526
CHI-BV	13.00	44.73	.7713
CHI-K25	-115.13	31.63	.0003
CHE-ORR	-47.75	31.63	.1311
CR-ORR	-4.00	63.26	.9496
CR-AND	-53.63	31.63	.0900
CR-ROA	-17.00	63.26	.7881

Table G.6 (continued)

Formation-location	Difference estimate	Standard error	Significance level
Analysis=Sodium	Comparison: A-B	Area-differences	P=.3239
DG-AND	0.00	0.00	.
DG-ROA	-121.59	391926	.9998
DG-ORR	0.00	0.00	.
NL-ORR	0.00	0.00	.
CHI-BV	-24.88	16.78	.1383
CHI-K25	-28.13	16.78	.0938
CHE-ORR	4.25	16.78	.8001
CR-ORR	-1.39	17.63	.9371
CR-AND	23.38	16.78	.1637
CR-ROA	7.13	16.78	.6712
Analysis=Sodium	Comparison: B-C	Area-differences	P=.8503
DG-AND	0.00	0.00	.
DG-ROA	-99.87	336833	.9998
DG-ORR	0.00	0.00	.
NL-ORR	0.00	0.00	.
CHI-BV	-4.50	16.48	.7848
CHI-K25	18.50	16.48	.2615
CHE-ORR	-11.75	16.48	.4758
CR-ORR	-2.00	16.48	.9034
CR-AND	-5.50	16.48	.7385
CR-ROA	-16.25	16.48	.3240
Analysis=Sodium	Comparison: A-C	Area-differences	P=.6495
DG-AND	0.00	0.00	.
DG-ROA	-99.04	378275	.9998
DG-ORR	0.00	0.00	.
NL-ORR	0.00	0.00	.
CHI-BV	-29.38	16.44	.0740
CHI-K25	-9.63	16.44	.5583
CHE-ORR	-7.50	16.44	.6483
CR-ORR	-4.72	17.52	.7875
CR-AND	17.88	16.44	.2769
CR-ROA	-9.13	16.44	.5789
Analysis=Strontium	Comparison: A-B	Area-differences	P=.0063
DG-AND	1.95	1.76	.2674
DG-ROA	0.53	1.76	.7652
DG-ORR	1.43	2.03	.4802
NL-ORR	-1.10	1.76	.5315
CHI-BV	-1.43	2.49	.5666
CHI-K25	-7.23	1.76	.0001
CHE-ORR	-0.81	1.81	.6570
CR-ORR	1.54	1.76	.3806
CR-AND	2.64	1.76	.1336
CR-ROA	1.23	2.03	.5435
Analysis=Strontium	Comparison: B-C	Area-differences	P=.0004
DG-AND	0.38	1.37	.7846
DG-ROA	0.45	1.37	.7430
DG-ORR	-1.55	1.37	.2587
NL-ORR	0.20	1.37	.8841
CHI-BV	-6.40	1.94	.0010
CHI-K25	5.50	1.37	.0001
CHE-ORR	2.30	1.40	.1010
CR-ORR	1.77	1.38	.1986
CR-AND	0.99	1.37	.4729
CR-ROA	0.85	1.58	.5917

Table G.6 (continued)

Formation-location	Difference estimate	Standard error	Significance level
Analysis=Vanadium	Comparison: B-C	Area-differences P=.0001	
DG-AND	2.19	3.26	.5023
DG-ROA	4.34	3.26	.1834
DG-ORR	-8.23	3.77	.0288
NL-ORR	4.68	3.26	.1516
CHI-BV	2.50	3.26	.4433
CHI-K25	7.75	3.26	.0175
CHE-ORR	3.78	3.26	.2470
CR-ORR	-15.78	3.26	.0001
CR-AND	-6.33	3.26	.0524
CR-ROA	-31.59	3.26	.0001
Analysis=Vanadium	Comparison: A-C	Area-differences P=.0001	
DG-AND	-12.38	4.61	.0073
DG-ROA	-2.74	4.61	.5528
DG-ORR	-12.66	4.61	.0060
NL-ORR	-8.98	4.61	.0516
CHI-BV	-5.21	4.61	.2583
CHI-K25	-9.53	4.61	.0389
CHE-ORR	-26.81	4.61	.0001
CR-ORR	-52.88	4.61	.0001
CR-AND	-29.08	4.61	.0001
CR-ROA	-58.94	4.61	.0001
Analysis=Zinc	Comparison: A-B	Area-differences P=.0001	
DG-AND	-1.35	12.98	.9172
DG-ROA	-0.55	12.98	.9662
DG-ORR	1.18	12.98	.9279
NL-ORR	-6.68	12.98	.6072
CHI-BV	-13.91	12.98	.2839
CHI-K25	-24.13	12.98	.0632
CHE-ORR	-97.04	12.98	.0001
CR-ORR	-43.58	12.98	.0008
CR-AND.	-35.29	12.98	.0066
CR-ROA	-8.95	12.98	.4906
Analysis=Zinc	Comparison: B-C	Area-differences P=.0001	
DG-AND	-8.61	8.97	.3369
DG-ROA	-9.96	8.97	.2666
DG-ORR	-10.14	8.97	.2583
NL-ORR	-0.38	8.97	.9666
CHI-BV	-24.45	8.97	.0064
CHI-K25	6.23	8.97	.4876
CHE-ORR	-72.08	8.97	.0001
CR-ORR	-53.42	9.71	.0001
CR-AND	-11.33	8.97	.2067
CR-ROA	-14.78	8.97	.0994
Analysis=Zinc	Comparison: A-C	Area-differences P=.0001	
DG-AND	-9.96	19.73	.6136
DG-ROA	-10.51	19.73	.5941
DG-ORR	-8.96	19.73	.6496
NL-ORR	-7.05	19.73	.7208
CHI-BV	-38.36	19.73	.0518
CHI-K25	-17.90	19.73	.3643
CHE-ORR	-169.11	19.73	.0001
CR-ORR	-94.59	20.67	.0001
CR-AND	-46.61	19.73	.0181
CR-ROA	-23.73	19.73	.2292

Table G.6 (continued)

Formation-location	Difference estimate	Standard error	Significance level
Analysis=Strontium	Comparison: A-C	Area-differences P=.0001	
DG-AND	2.33	0.84	.0059
DG-ROA	0.98	0.84	.2478
DG-ORR	-0.40	0.97	.6813
NL-ORR	-0.90	0.84	.2860
CHI-BV	-7.83	1.19	.0001
CHI-K25	-1.73	0.84	.0409
CHE-ORR	1.53	0.88	.0810
CR-ORR	3.31	0.85	.0001
CR-AND	3.62	0.84	.0001
CR-ROA	2.08	0.97	.0325
Analysis=Sulfate	Comparison: A-B	Area-differences P=.0225	
DG-AND	-27.75	34.90	.4265
DG-ROA	-64.96	34.90	.0627
DG-ORR	-12.63	40.30	.7539
NL-ORR	-103.55	34.90	.0030
CHI-BV	22.65	34.90	.5163
CHI-K25	48.38	34.90	.1657
CHE-ORR	25.41	34.90	.4665
CR-ORR	25.18	34.90	.4707
CR-AND	60.33	34.90	.0839
CR-ROA	-1.69	34.90	.9614
Analysis=Sulfate	Comparison: B-C	Area-differences P=.2732	
DG-AND	24.83	32.89	.4504
DG-ROA	87.45	32.89	.0078
DG-ORR	-30.15	32.89	.3593
NL-ORR	84.03	32.89	.0106
CHI-BV	36.30	32.89	.2697
CHI-K25	84.78	32.89	.0099
CHE-ORR	33.84	32.90	.3037
CR-ORR	35.29	32.91	.2837
CR-AND	19.00	32.89	.5635
CR-ROA	52.44	32.90	.1110
Analysis=Sulfate	Comparison: A-C	Area-differences P=.0001	
DG-AND	-2.93	20.33	.8856
DG-ROA	22.49	20.33	.2686
DG-ORR	-42.47	23.47	.0704
NL-ORR	-19.53	20.33	.3368
CHI-BV	58.95	20.33	.0037
CHI-K25	133.15	20.33	.0001
CHE-ORR	59.24	20.35	.0036
CR-ORR	60.38	20.36	.0030
CR-AND	79.33	20.33	.0001
CR-ROA	50.67	20.34	.0127
Analysis=Vanadium	Comparison: A-B	Area-differences P=.0001	
DG-AND	-14.56	3.69	.0001
DG-ROA	-7.08	3.69	.0549
DG-ORR	-4.28	4.26	.3142
NL-ORR	-13.65	3.69	.0002
CHI-BV	-7.71	3.69	.0364
CHI-K25	-17.28	3.69	.0001
CHE-ORR	-30.59	3.69	.0001
CR-ORR	-37.10	3.69	.0001
CR-AND	-22.75	3.69	.0001
CR-ROA	-27.35	3.69	.0001

Table G.7. Comparisons of horizons for selected radionuclides
(Estimates and standard errors are in picocuries per gram.)

Formation-location	Difference estimate	Standard error	Significance level
Analysis=CESIUM-137 Type=GAMMA Comparison: A-B Area-differences P=.0348			
DG-AND	0.29	0.24	.2322
DG-ROA	0.78	0.24	.0014
DG-ORR	0.44	0.28	.1117
NL-ORR	0.53	0.24	.0285
CHI-BV	1.37	0.24	.0001
CHI-K25	1.15	0.24	.0001
CHE-ORR	0.98	0.24	.0001
CR-ORR	0.84	0.24	.0005
CR-AND	0.45	0.24	.0600
CR-ROA	0.97	0.24	.0001
Analysis=CESIUM-137 Type=GAMMA Comparison: B-C Area-differences P=.9698			
DG-AND	0.05	0.15	.7106
DG-ROA	0.00	0.15	.9740
DG-ORR	-0.08	0.17	.6426
NL-ORR	0.01	0.15	.9635
CHI-BV	0.03	0.15	.8548
CHI-K25	-0.01	0.15	.9546
CHE-ORR	0.00	0.15	.9819
CR-ORR	0.00	0.15	.9824
CR-AND	0.25	0.15	.0921
CR-ROA	0.00	0.15	.9896
Analysis=CESIUM-137 Type=GAMMA Comparison: A-C Area-differences P=.0242			
DG-AND	0.34	0.22	.1256
DG-ROA	0.78	0.22	.0005
DG-ORR	0.37	0.26	.1582
NL-ORR	0.54	0.22	.0168
CHI-BV	1.40	0.22	.0001
CHI-K25	1.14	0.22	.0001
CHE-ORR	0.99	0.22	.0001
CR-ORR	0.84	0.22	.0002
CR-AND	0.70	0.22	.0017
CR-ROA	0.97	0.22	.0001
Analysis=POTASSIUM-40 Type=GAMMA Comparison: A-B Area-differences P=.0557			
DG-AND	-6.50	2.54	.0106
DG-ROA	-6.71	2.54	.0083
DG-ORR	-3.00	3.60	.4041
NL-ORR	-1.50	2.54	.5553
CHI-BV	-6.99	2.54	.0060
CHI-K25	-12.92	2.54	.0001
CHE-ORR	-7.23	2.94	.0138
CR-ORR	-2.61	2.54	.3056
CR-AND	-2.77	2.54	.2760
CR-ROA	-9.61	2.94	.0011
Analysis=POTASSIUM-40 Type=GAMMA Comparison: B-C Area-differences P=.0111			
DG-AND	3.63	4.08	.3742
DG-ROA	-4.63	4.08	.2569
DG-ORR	0.00	5.77	1.000
NL-ORR	-8.50	4.08	.0372
CHI-BV	4.87	4.08	.2325
CHI-K25	-15.60	4.71	.0009
CHE-ORR	0.22	5.77	.9692
CR-ORR	-0.43	4.08	.9170
CR-AND	0.93	4.08	.8206
CR-ROA	8.34	4.71	.0767

Table G.7 (continued)

Formation-location	Difference estimate	Standard error	Significance level
Analysis=POTASSIUM-40 Type=GAMMA Comparison: A-C Area-differences P=.0002			
DG-AND	-2.88	4.00	.4721
DG-ROA	-11.34	4.00	.0046
DG-ORR	-3.67	4.62	.4271
NL-ORR	-10.00	4.00	.0124
CHI-BV	-2.12	4.00	.5964
CHI-K25	-28.63	4.62	.0001
CHE-ORR	-7.72	5.65	.1723
CR-ORR	-3.03	4.00	.4485
CR-AND	-1.85	4.00	.6445
CR-ROA	-1.10	4.00	.7835
Analysis=RADIUM-226 Type=ALPHA Comparison: A-B Area-differences P=.2614			
DG-AND	0.11	0.30	.7099
DG-ROA	-0.04	0.30	.9013
DG-ORR	0.06	0.31	.8585
NL-ORR	-0.17	0.30	.5796
CHI-BV	0.00	0.30	.9918
CHI-K25	-0.02	0.30	.9492
CHE-ORR	-0.98	0.30	.0011
CR-ORR	-0.29	0.30	.3417
CR-AND	-0.58	0.30	.0558
CR-ROA	-0.25	0.30	.4021
Analysis=RADIUM-226 Type=ALPHA Comparison: B-C Area-differences P=.4204			
DG-AND	0.04	0.31	.9027
DG-ROA	0.08	0.31	.7879
DG-ORR	-0.03	0.32	.9181
NL-ORR	0.00	0.31	.9935
CHI-BV	-0.28	0.31	.3578
CHI-K25	-0.46	0.31	.1315
CHE-ORR	0.59	0.31	.0535
CR-ORR	-0.12	0.31	.7016
CR-AND	0.18	0.31	.5507
CR-ROA	-0.43	0.31	.1653
Analysis=RADIUM-226 Type=ALPHA Comparison: A-C Area-differences P=.4828			
DG-AND	0.15	0.27	.5821
DG-ROA	0.05	0.27	.8689
DG-ORR	0.03	0.27	.9269
NL-ORR	-0.17	0.27	.5450
CHI-BV	-0.28	0.27	.3063
CHI-K25	-0.48	0.27	.0772
CHE-ORR	-0.39	0.27	.1508
CR-ORR	-0.41	0.27	.1374
CR-AND	-0.40	0.27	.1467
CR-ROA	-0.68	0.27	.0128
Analysis=THORIUM-228 Type=ALPHA Comparison: A-B Area-differences P=.2079			
DG-AND	0.18	0.25	.4678
DG-ROA	0.07	0.25	.7869
DG-ORR	-0.65	0.25	.0098
NL-ORR	-0.05	0.25	.8413
CHI-BV	-0.22	0.25	.3891
CHI-K25	-0.38	0.25	.1252
CHE-ORR	-0.46	0.25	.0641
CR-ORR	-0.65	0.25	.0096
CR-AND	-0.36	0.25	.1503
CR-ROA	-0.50	0.25	.0434

Table G.7 (continued)

Formation-location	Difference estimate	Standard error	Significance level
Analysis=THORIUM-228 Type=ALPHA Comparison: B-C Area-differences P=.3373			
DG-AND	-0.05	0.21	.7982
DG-ROA	0.19	0.21	.3611
DG-ORR	0.32	0.21	.1224
NL-ORR	0.03	0.21	.9031
CHI-BV	0.06	0.21	.7878
CHI-K25	-0.50	0.21	.0159
CHE-ORR	-0.12	0.21	.5491
CR-ORR	-0.12	0.21	.5671
CR-AND	0.02	0.21	.9156
CR-ROA	-0.15	0.21	.4620
Analysis=THORIUM-228 Type=ALPHA Comparison: A-C Area-differences P=.0002			
DG-AND	0.13	0.20	.5250
DG-ROA	0.26	0.20	.2081
DG-ORR	-0.33	0.20	.1052
NL-ORR	-0.03	0.20	.9018
CHI-BV	-0.16	0.20	.4303
CHI-K25	-0.88	0.20	.0001
CHE-ORR	-0.59	0.20	.0039
CR-ORR	-0.76	0.20	.0002
CR-AND	-0.34	0.20	.0958
CR-ROA	-0.66	0.20	.0012
Analysis=THORIUM-230 Type=ALPHA Comparison: A-B Area-differences P=.3873			
DG-AND	-0.05	0.19	.7907
DG-ROA	-0.11	0.19	.5714
DG-ORR	-0.36	0.19	.0637
NL-ORR	-0.03	0.19	.8759
CHI-BV	-0.02	0.19	.9295
CHI-K25	-0.03	0.20	.8699
CHE-ORR	-0.47	0.19	.0155
CR-ORR	-0.43	0.19	.0240
CR-AND	-0.50	0.19	.0090
CR-ROA	-0.20	0.19	.2901
Analysis=THORIUM-230 Type=ALPHA Comparison: B-C Area-differences P=.0461			
DG-AND	0.16	0.16	.2991
DG-ROA	0.31	0.16	.0504
DG-ORR	0.29	0.16	.0686
NL-ORR	0.12	0.16	.4432
CHI-BV	-0.02	0.16	.8945
CHI-K25	-0.20	0.17	.2515
CHE-ORR	-0.22	0.16	.1533
CR-ORR	-0.09	0.16	.5652
CR-AND	-0.06	0.16	.6991
CR-ROA	-0.33	0.16	.0337
Analysis=THORIUM-230 Type=ALPHA Comparison: A-C Area-differences P=.0001			
DG-AND	0.11	0.15	.4592
DG-ROA	0.20	0.15	.1898
DG-ORR	-0.07	0.15	.6362
NL-ORR	0.09	0.15	.5502
CHI-BV	-0.04	0.15	.8021
CHI-K25	-0.21	0.15	.1554
CHE-ORR	-0.69	0.15	.0001
CR-ORR	-0.52	0.15	.0005
CR-AND	-0.56	0.15	.0002
CR-ROA	-0.54	0.15	.0004

Table G.7 (continued)

Formation-location	Difference estimate	Standard error	Significance level
Analysis=THORIUM-232 Type=ALPHA Comparison: A-B Area-differences P=.3434			
DG-AND	-0.06	0.24	.8160
DG-ROA	-0.32	0.24	.1707
DG-ORR	-0.64	0.24	.0072
NL-ORR	0.03	0.24	.9158
CHI-BV	-0.14	0.24	.5501
CHI-K25	-0.71	0.24	.0027
CHE-ORR	-0.54	0.24	.0234
CR-ORR	-0.55	0.24	.0207
CR-AND	-0.41	0.24	.0829
CR-ROA	-0.47	0.24	.0475
Analysis=THORIUM-232 Type=ALPHA Comparison: B-C Area-differences P=.1332			
DG-AND	0.02	0.17	.9289
DG-ROA	0.54	0.17	.0013
DG-ORR	0.18	0.17	.2842
NL-ORR	0.13	0.17	.4570
CHI-BV	-0.08	0.17	.6511
CHI-K25	0.09	0.17	.6130
CHE-ORR	-0.05	0.17	.7587
CR-ORR	-0.03	0.17	.8467
CR-AND	0.08	0.17	.6341
CR-ROA	-0.25	0.17	.1383
Analysis=THORIUM-232 Type=ALPHA Comparison: A-C Area-differences P=.0033			
DG-AND	-0.04	0.20	.8426
DG-ROA	0.22	0.20	.2832
DG-ORR	-0.46	0.20	.0239
NL-ORR	0.15	0.20	.4566
CHI-BV	-0.22	0.20	.2810
CHI-K25	-0.62	0.20	.0020
CHE-ORR	-0.59	0.20	.0036
CR-ORR	-0.58	0.20	.0040
CR-AND	-0.33	0.20	.1016
CR-ROA	-0.72	0.20	.0004
Analysis=THORIUM-234 Type=BETA Comparison: A-B Area-differences P=.0001			
DG-AND	0.02	0.22	.9289
DG-ROA	0.09	0.26	.7182
DG-ORR	0.70	0.22	.0017
NL-ORR	0.32	0.22	.1597
CHI-BV	0.23	0.49	.6416
CHI-K25	0.46	0.49	.3419
CHE-ORR	-0.19	0.40	.6286
CR-ORR	-0.03	0.31	.9192
CR-AND	-1.56	0.25	.0001
CR-ROA	0.09	0.49	.8554
Analysis=THORIUM-234 Type=BETA Comparison: B-C Area-differences P=.0047			
DG-AND	0.02	0.33	.9434
DG-ROA	0.00	0.39	1.000
DG-ORR	-0.23	0.33	.4845
NL-ORR	0.04	0.33	.9048
CHI-BV	-0.12	0.50	.8030
CHI-K25	0.15	0.57	.7995
CHE-ORR	0.03	0.44	.9503
CR-ORR	1.21	0.47	.0090
CR-AND	1.17	0.35	.0009
CR-ROA	-1.08	0.43	.0118

Table G.7 (continued)

Formation-location	Difference estimate	Standard error	Significance level
Analysis=THORIUM-234 Type=BETA Comparison: A-C Area-differences P=.0001			
DG-AND	0.04	0.21	.8323
DG-ROA	0.09	0.24	.6957
DG-ORR	0.47	0.21	.0222
NL-ORR	0.36	0.21	.0858
CHI-BV	0.09	0.67	.8884
CHI-K25	0.54	0.42	.1992
CHE-ORR	-0.17	0.38	.6412
CR-ORR	1.07	0.31	.0005
CR-AND	-0.68	0.26	.0076
CR-ROA	-1.13	0.26	.0001
Analysis=URANIUM-233/234 Type=ALPHA Comparison: A-B Area-differences P=.1805			
DG-AND	0.02	0.29	.9521
DG-ROA	0.14	0.29	.6306
DG-ORR	-0.46	0.29	.1121
NL-ORR	0.24	0.29	.4186
CHI-BV	0.12	0.29	.6827
CHI-K25	0.04	0.29	.9019
CHE-ORR	-0.21	0.29	.4628
CR-ORR	-0.29	0.29	.3150
CR-AND	-0.52	0.29	.0740
CR-ROA	0.71	0.34	.0342
Analysis=URANIUM-233/234 Type=ALPHA Comparison: B-C Area-differences P=.0567			
DG-AND	0.04	0.21	.8382
DG-ROA	0.07	0.21	.7232
DG-ORR	0.73	0.21	.0004
NL-ORR	-0.10	0.21	.6246
CHI-BV	-0.17	0.21	.4156
CHI-K25	0.04	0.21	.8571
CHE-ORR	0.00	0.21	.9923
CR-ORR	-0.18	0.21	.3873
CR-AND	0.21	0.21	.3248
CR-ROA	-0.32	0.24	.1901
Analysis=URANIUM-233/234 Type=ALPHA Comparison: A-C Area-differences P=.2651			
DG-AND	0.06	0.23	.7948
DG-ROA	0.21	0.23	.3542
DG-ORR	0.27	0.23	.2419
NL-ORR	0.13	0.23	.5625
CHI-BV	-0.05	0.23	.8267
CHI-K25	0.07	0.23	.7505
CHE-ORR	-0.21	0.23	.3587
CR-ORR	-0.47	0.23	.0406
CR-AND	-0.32	0.23	.1720
CR-ROA	0.28	0.23	.2245
Analysis=URANIUM-235 Type=ALPHA Comparison: A-B Area-differences P=.2395			
DG-AND	-0.01	0.53	.9814
DG-ROA	0.02	0.53	.9670
DG-ORR	-0.04	0.53	.9393
NL-ORR	0.01	0.53	.9895
CHI-BV	0.00	0.53	.9931
CHI-K25	-0.07	0.53	.8943
CHE-ORR	-1.93	0.53	.0003
CR-ORR	-0.05	0.53	.9230
CR-AND	-0.12	0.53	.8270
CR-ROA	-0.03	0.61	.9551

Table G.7 (continued)

Formation-location	Difference estimate	Standard error	Significance level
Analysis=URANIUM-235 Type=ALPHA Comparison: B-C Area-differences P=.2433			
DG-AND	0.01	0.54	.9859
DG-ROA	-0.01	0.54	.9833
DG-ORR	0.06	0.54	.9125
NL-ORR	0.00	0.54	.9945
CHI-BV	-0.10	0.54	.8587
CHI-K25	0.06	0.54	.9150
CHE-ORR	1.92	0.54	.0003
CR-ORR	-0.02	0.54	.9695
CR-AND	0.01	0.54	.9874
CR-ROA	0.02	0.62	.9703
Analysis=URANIUM-235 Type=ALPHA Comparison: A-C Area-differences P=.3855			
DG-AND	-0.00	0.05	.9551
DG-ROA	0.01	0.05	.8307
DG-ORR	0.02	0.05	.7192
NL-ORR	0.01	0.05	.8362
CHI-BV	-0.09	0.05	.0793
CHI-K25	-0.01	0.05	.7988
CHE-ORR	-0.01	0.05	.8246
CR-ORR	-0.07	0.05	.1658
CR-AND	-0.11	0.05	.0375
CR-ROA	-0.12	0.05	.0221
Analysis=URANIUM-235 Type=GAMMA Comparison: A-B Area-differences P=.9938			
DG-AND	0.01	0.01	.6541
DG-ROA	0.01	0.01	.6032
DG-ORR	0.02	0.02	.2926
NL-ORR	0.03	0.01	.0411
CHI-BV	-0.02	0.48	.9587
CHI-K25	0.01	2.82	.9979
CHE-ORR	-0.01	8.38	.9992
CR-ORR	0.01	2.48	.9972
CR-AND	-0.04	0.19	.8396
CR-ROA	-0.00	0.05	.9586
Analysis=URANIUM-235 Type=GAMMA Comparison: B-C Area-differences P=.0001			
DG-AND	0.02	0.01	.1078
DG-ROA	0.01	0.01	.5974
DG-ORR	0.02	0.01	.2126
NL-ORR	-0.00	0.01	.9037
CHI-BV	0.03	0.64	.9566
CHI-K25	-0.00	8.57	1.000
CHE-ORR	0.01	75.25	.9999
CR-ORR	-0.13	0.02	.0001
CR-AND	0.01	5.31	.9986
CR-ROA	-0.08	0.02	.0001
Analysis=URANIUM-235 Type=GAMMA Comparison: A-C Area-differences P=.0001			
DG-AND	0.02	0.01	.0241
DG-ROA	0.01	0.01	.2280
DG-ORR	0.04	0.01	.0009
NL-ORR	0.03	0.01	.0155
CHI-BV	0.01	0.14	.9422
CHI-K25	0.01	45.24	.9999
CHE-ORR	0.00	56.07	1.000
CR-ORR	-0.14	0.02	.0001
CR-AND	-0.03	0.26	.9098
CR-ROA	-0.09	0.02	.0001

Table G.7 (continued)

Formation-location	Difference estimate	Standard error	Significance level
Analysis=URANIUM-238 Type=ALPHA Comparison: A-B Area-differences P=.0820			
DG-AND	-0.08	0.19	.6735
DG-ROA	0.15	0.19	.4405
DG-ORR	-0.28	0.19	.1465
NL-ORR	0.24	0.19	.2221
CHI-BV	0.01	0.19	.9524
CHI-K25	-0.03	0.19	.8718
CHE-ORR	-0.42	0.19	.0314
CR-ORR	-0.45	0.19	.0196
CR-AND	-0.48	0.19	.0123
CR-ROA	-0.15	0.22	.4892
Analysis=URANIUM-238 Type=ALPHA Comparison: B-C Area-differences P=.0034			
DG-AND	0.10	0.19	.5889
DG-ROA	0.05	0.19	.7766
DG-ORR	0.64	0.19	.0006
NL-ORR	-0.10	0.19	.5820
CHI-BV	-0.04	0.19	.8458
CHI-K25	0.01	0.19	.9677
CHE-ORR	0.21	0.19	.2645
CR-ORR	-0.29	0.19	.1203
CR-AND	0.34	0.19	.0662
CR-ROA	-0.52	0.21	.0151
Analysis=URANIUM-238 Type=ALPHA Comparison: A-C Area-differences P=.0001			
DG-AND	0.02	0.12	.8804
DG-ROA	0.20	0.12	.1062
DG-ORR	0.36	0.12	.0042
NL-ORR	0.13	0.12	.2835
CHI-BV	-0.02	0.12	.8441
CHI-K25	-0.02	0.12	.8496
CHE-ORR	-0.21	0.12	.0942
CR-ORR	-0.74	0.12	.0001
CR-AND	-0.14	0.12	.2527
CR-ROA	-0.58	0.12	.0001

Table G.8. Summary statistics for ORR inorganics—overall[a,b]
(Estimates and confidence bounds are in milligrams per kilogram.)

Horizon	N	I	D	Median	UCB95	X95	LTB9595
				Aluminum			
A	24	0	24	14900	17000	27800	22900
B	24	0	24	26500	29600	45500	38400
C	24	0	24	28500	32200	51800	42900
				Antimony			
A	24	0	1	0.0812	0.622	0.338	0.172
B	24	0	4	0.1280	0.365	0.808	0.413
C	24	0	5	0.1860	0.365	0.785	0.466
				Arsenic			
A	23	0	23	9.04	11.1	24.4	17.8
B	22	0	22	11.20	14.6	38.7	25.8
C	23	0	22	13.00	18.8	75.4	42.8
				Barium			
A	24	0	24	74.8	84.0	132	110
B	24	0	24	70.2	82.5	156	121
C	24	0	24	56.0	78.1	285	171
				Beryllium			
A	24	0	21	0.704	0.81	1.38	1.11
B	24	0	21	0.884	1.05	1.98	1.53
C	24	0	21	1.080	1.26	2.24	1.78
				Boron			
A	21	2	1	1.55	5.48	11.1	5.13
B	22	1	4	1.64	6.18	28.9	9.76
C	22	1	5	2.19	6.50	33.9	12.10
				Cadmium			
A	24	0	0	.	.	.	.
B	24	0	0				
C	24	0	0				
				Calcium			
A	21	0	21	893	1140	2700	1860
B	21	0	21	798	1070	3000	1930
C	21	0	21	829	1280	6110	3130
				Chromium			
A	23	1	22	23.3	27.0	46.7	37.3
B	23	0	23	33.3	35.6	45.6	41.2
C	24	0	24	35.2	39.2	60.0	50.7
				Cobalt			
A	24	0	24	13.80	15.80	27.5	22.1
B	24	1	18	6.78	9.52	34.0	20.0
C	24	0	20	9.39	14.10	65.1	34.5
				Copper			
A	24	1	20	9.89	11.9	24.3	18.2
B	23	0	23	19.30	20.9	28.0	24.9
C	24	0	23	25.40	27.6	38.3	33.7

Table G.8 (continued)

Horizon	N	I	D	Median	UCB95	X95	LTB9595
				Cyanide			
A	21	0	1	0.0179	0.528	0.305	0.071
B	22	0	2	0.0572	0.287	0.538	0.192
C	21	0	2	0.0499	0.321	0.619	0.198
				Iron			
A	24	0	24	23200	27100	49400	39000
B	24	0	24	40900	44100	59200	52700
C	24	0	24	44000	46800	59700	54300
				Lead			
A	22	0	22	25.5	30.7	60.3	45.6
B	23	0	23	14.5	16.8	30.0	23.8
C	24	0	24	23.4	28.2	58.4	43.9
				Lithium			
A	21	1	16	7.3	9.93	28.9	17.8
B	22	0	21	17.1	21.60	50.8	35.5
C	22	1	19	17.0	23.20	72.3	44.6
				Magnesium			
A	24	0	24	1070	1380	3770	2540
B	24	0	24	1680	2110	5160	3630
C	24	0	24	1820	2440	7620	4870
				Manganese			
A	24	0	24	1020	1190	2140	1700
B	24	0	24	229	291	740	513
C	24	0	24	284	408	1670	959
				Mercury			
A	24	1	22	0.210	0.252	0.506	0.382
B	24	0	12	0.104	0.116	0.157	0.137
C	24	0	15	0.120	0.146	0.279	0.211
				Molybdenum			
A	22	0	1	1.15	1.92	1.80	1.36
B	22	0	7	1.88	2.55	4.67	3.25
C	22	1	5	1.64	2.46	4.81	3.14
				Nickel			
A	24	1	19	12.8	15.4	31.4	23.4
B	24	0	21	17.5	20.1	33.8	27.4
C	24	0	23	23.3	26.4	42.6	35.2
				Osmium			
A	2	0	0	.	.	.	.
B	3	0	0				
C	3	0	0				
				Potassium			
A	24	0	20	1030	1480	5880	3330
B	24	0	24	1970	2490	6160	4310
C	24	0	24	2290	2860	6820	4840
				Selenium			
A	22	1	16	0.605	0.677	0.992	0.836
B	23	0	16	0.628	0.720	1.150	0.934
C	23	0	14	0.526	0.679	1.560	1.070

Table G.8 (continued)

Horizon	N	I	D	Median	UCB95	X95	LTB9595
				Silicon			
A	19	0	19	468	538	859	694
B	19	0	19	504	592	1020	798
C	19	0	19	507	586	950	762
				Silver			
A	24	0	0	.	.	.	.
B	24	0	0				
C	24	0	0				
				Sodium			
A	16	0	15	372	391	456	421
B	16	0	16	383	407	490	446
C	16	0	16	383	406	484	443
				Strontium			
A	21	0	19	5.00	6.48	16.1	10.8
B	22	0	19	5.06	7.02	23.0	13.8
C	22	0	16	2.44	5.02	61.7	19.8
				Sulfate			
A	23	0	23	70.3	92.8	267	174
B	24	0	24	75.4	92.9	210	152
C	24	1	20	31.4	45.0	178	102
				Thallium			
A	22	0	1	0.0449	1.420	0.428	0.148
B	22	0	4	0.3010	0.420	0.604	0.459
C	22	1	6	0.3780	0.463	0.684	0.549
				Vanadium			
A	24	0	24	32.5	34.9	46.2	41.4
B	23	0	23	51.0	55.2	74.2	65.8
C	24	0	24	50.7	55.4	78.2	68.3
				Zinc			
A	24	0	24	42.0	46.5	69.2	59.1
B	24	0	24	66.4	76.4	132.0	107.0
C	24	0	23	81.7	98.8	205.0	153.0

[a]N = number of observations, possibly averages over replicates at sites; I = number of interval censored observations (see text); D = number of true detects (see text); UCB95 = 95% upper confidence bound for median; X95 = estimate of 95th percentile; LTB9595 = 95% lower confidence bound for 95th percentile; REMAINDER refers to the remaining observations—no detects.

[b]May be inappropriate when areas have different median analyte concentrations. Because of the statistical sampling design, it is important not to use combined results when the data from the different formation-locations are significantly different, because the error estimates will be inflated. If P-ORR < 0.01 or P-GRP < 0.01 ORR overall results should not be used. If P-CHICK < .01, or P-DGN 0.01, or P-CRC < 0.01, then neither group nor the overall ORR results should be used. If P-CHICK > 0.01 but P-DGN < 0.01, one might be justified in combining the Chickamauga data, but not as it has been done here, because the Dismal Gap and Nolichucky data are also combined. How to combine the data is complex, and should be done on an ad hoc, analyte-by-analyte basis.

Table G.9. Summary statistics for ORR radionuclides—overall[a,b]
(Estimates and confidence bounds are in picocuries per gram.)

Horizon	N	I	D	Median	UCB95	X95	LTB9595
				Cesium-137 (Gamma)			
A	23	0	23	0.82200	0.9870	1.5400	1.26000
B	23	0	6	0.00697	0.0185	0.0911	0.03550
C	23	0	2	0.00007	0.0516	0.0751	0.00506
				Curium-247 (Gamma)			
A	23	0	2	0.00552	0.00649	0.00716	0.00579
B	3	0	0	.	.	.	.
C	3	0	0	.	.	.	.
				Neptunium-237 (Alpha)			
A	17	2	14	0.0885	0.102	0.155	0.126
B	1	0	0	.	.	.	.
				Plutonium-238 (Alpha)			
A	23	7	6	0.0494	0.0626	0.125	0.0907
B	2	0	2	0.0853	0.0991	0.105	0.0838
C	2	0	0	.	.	.	.
				Plutonium-239/240 (Alpha)			
A	22	5	6	0.0231	0.028	0.0454	0.0346
B	2	0	1	.	.	.	
C	2	0	0	.	.	.	
				Potassium-40 (Gamma)			
A	24	0	24	8.82	11.1	27.4	19.2
B	21	0	21	14.90	17.8	33.9	25.7
C	20	0	20	16.10	20.8	50.6	34.1
				Radium-226 (Alpha)			
A	24	1	23	0.924	1.03	1.57	1.33
B	24	0	23	1.080	1.26	2.28	1.81
C	24	0	24	1.140	1.31	2.24	1.81
				Strontium-90 (Beta)			
A	22	0	1	0.27	1.49	0.823	0.501
				Technetium-99 (Beta)			
A	35	0	6	0.684	1.17	2.32	1.6
				Thorium-228 (Alpha)			
A	24	0	23	0.824	1.06	2.83	1.91
B	24	0	24	1.290	1.45	2.30	1.92
C	24	0	23	1.270	1.59	3.88	2.71
				Thorium-230 (Alpha)			
A	24	0	24	0.895	0.99	1.47	1.26
B	24	0	23	1.080	1.23	2.02	1.66
C	24	0	24	1.080	1.26	2.29	1.81
				Thorium-232 (Alpha)			
A	24	0	24	0.917	1.05	1.75	1.43
B	24	0	24	1.320	1.50	2.44	2.01
C	24	0	24	1.270	1.49	2.79	2.18
				Thorium-234 (Beta)			
A	20	2	10	1.070	1.310	2.39	1.77
B	20	1	9	0.703	0.998	2.50	1.55
C	20	1	8	0.769	0.964	1.67	1.24

Table G.9 (continued)

Horizon	N	I	D	Median	UCB95	X95	LTB9595
Thorium-234 (Gamma)							
A	3	0	1	0.909	1.68	1.76	0.893
B	3	0	1	0.739	1.20	1.24	0.728
C	3	0	1	1.010	2.27	2.49	0.989
Total Uranium (Alpha)							
A	22	0	22	1.430	1.810	4.26	2.980
B	2	0	2	0.316	0.972	1.55	0.276
C	2	0	2	0.299	1.650	3.35	0.244
Tritium (Tritium)							
A	33	3	9	0.0275	0.0381	0.0978	0.0656
Uranium-233/234 (Alpha)							
A	24	0	24	1.16	1.24	1.64	1.47
B	24	0	24	1.19	1.35	2.16	1.79
C	24	0	24	1.14	1.30	2.12	1.75
Uranium-235 (Alpha)							
A	24	3	19	0.0721	0.0871	0.179	0.134
B	24	1	21	0.1030	0.1530	0.698	0.381
C	24	1	21	0.0767	0.1010	0.291	0.191
Uranium-235 (Gamma)							
A	23	0	8	0.0725	0.0850	0.117	0.0940
B	23	0	7	0.0503	0.0661	0.107	0.0748
C	24	0	9	0.0497	0.0672	0.132	0.0901
Uranium-236 (Alpha)							
A	24	1	2	0.007310	0.0136	0.0207	0.013500
B	24	0	1	0.000004	3.5600	0.0134	0.000305
C	24	0	1	.	.	.	.
Uranium-238 (Alpha)							
A	24	0	24	1.18	1.25	1.57	1.44
B	24	0	24	1.28	1.43	2.18	1.84
C	24	0	24	1.18	1.35	2.30	1.87
Uranium-238 (Gamma)							
A	16	0	0	.	.	.	.
B	16	0	0	.	.	.	.
C	16	0	1	0.0341	274	12.9	0.727

[a]N = number of observations, possibly averages over replicates at sites; I = number of interval censored observations (see text); D = number of true detects (see text); UCB95 = 95% upper confidence bound for median; X95 = estimate of 95th percentile; LTB9595 = 95% lower confidence bound for 95th percentile; REMAINDER refers to the remaining observations—no detects.

[b]May be inappropriate when areas have different median analyte concentrations. Because of the statistical sampling design, it is important not to use combined results when the data from the different formation-locations are significantly different, because the error estimates will be inflated. If P-ORR < 0.01 or P-GRP < 0.01 ORR overall results should not be used. If P-CHICK < .01, or P-DGN 0.01, or P-CRC < 0.01, then neither group nor the overall ORR results should be used. If P-CHICK > 0.01 but P-DGN < 0.01, one might be justified in combining the Chickamauga data, but not as it has been done here, because the Dismal Gap and Nolichucky data are also combined. How to combine the data is complex, and should be done on an ad hoc, analyte-by-analyte basis.

Table G.10. Summary statistics for ORR PAHs—overall[a,b] (Estimates and confidence bounds are in micrograms per kilogram.)

Analysis	N	I	D	Median	UCB95	X95	LTB9595
Acenaphthene	14	0	8	1.420	1.89	3.31	2.21
Acenaphthylene	41	0	4	0.715	28.40	227.00	45.00
Anthracene	27	0	25	0.880	1.16	3.51	2.31
Benzo[a]anthracene	37	0	37	3.080	3.87	12.30	8.69
Benzo[a]pyrene	39	0	39	3.740	4.43	10.70	8.28
Benzo[b]fluoranthene	32	0	30	3.580	4.45	12.00	8.64
Benzo[g,h,i]perylene	32	0	32	3.500	4.26	10.60	7.85
Benzo[k]fluoranthene	40	0	40	2.040	2.43	6.03	4.64
Chrysene	23	0	17	4.080	5.36	13.90	9.26
Dibenzo[a,h]anthracene	19	0	16	0.909	1.24	3.16	1.99
Fluoranthene	38	0	38	5.280	6.56	20.10	14.40
Fluorene	21	0	14	0.994	1.44	4.40	2.60
Indeno[1,2,3-c,d]pyrene	42	0	16	9.200	11.70	26.70	20.30
Naphthalene	24	0	19	4.790	7.27	31.30	17.10
Phenanthrene	43	0	43	5.220	6.13	14.90	11.70
Pyrene	37	0	37	6.470	8.14	26.20	18.40

[a]N = number of observations, possibly averages over replicates at sites; I = number of interval censored observations (see text); D = number of true detects (see text); UCB95 = 95% upper confidence bound for median; X95 = estimate of 95th percentile; LTB9595 = 95% lower confidence bound for 95th percentile; REMAINDER refers to the remaining observations—no detects.

[b]May be inappropriate when areas have different median analyte concentrations. Because of the statistical sampling design, it is important not to use combined results when the data from the different formation-locations are significantly different, because the error estimates will be inflated. If P-ORR < 0.01 or P-GRP < 0.01 ORR overall results should not be used. If P-CHICK < .01, or P-DGN 0.01, or P-CRC < 0.01, then neither group nor the overall ORR results should be used. If P-CHICK > 0.01 but P-DGN < 0.01, one might be justified in combining the Chickamauga data, but not as it has been done here, because the Dismal Gap and Nolichucky data are also combined. How to combine the data is complex, and should be done on an ad hoc, analyte-by-analyte basis.

Appendix H

NEUTRON ACTIVATION ANALYSIS (NAA) DATA

Table H.1. NAA analysis results for composite soil samples

Analysis	Units	A horizon result	Qualifier	B horizon result	Qualifier	C horizon result	Qualifier	A lab split result	Qualifier
Location=AND; Formation=COPPER RIDGE; Site=31,32,36; Sample type=Regular; A=7059; B=7062; C=7065; A lab split=' '									
Aluminum	mg/kg	19700.00		42900.00		69600.00			
Antimony	mg/kg			0.89		0.95			
Arsenic	mg/kg			21.60	J	24.10	J		
Barium	mg/kg	100.00	J	100.00	J	53.10	J		
Cerium	mg/kg	35.60	J	20.80	J	21.00	J		
Cesium	mg/kg	1.60		3.71		3.51			
Chromium	mg/kg	28.80	J	40.00	J	47.60	J		
Cobalt	mg/kg	8.65	J	4.02	J	3.01	J		
Europium	mg/kg	0.55		0.32		0.27			
Gallium	mg/kg			15.30	J	16.80	J		
Gold	mg/kg			0.01	U	0.01	U		
Hafnium	mg/kg	6.80	J	5.84	J	3.80	J		
Iron	mg/kg	10600.00	J	23100.00	J	25300.00	J		
Lanthanum	mg/kg			15.20	J	17.00	J		
Lutetium	mg/kg	0.22	J	0.24	J	0.16	J		
Magnesium	mg/kg	1680.00		2670.00		3760.00			
Manganese	mg/kg	1280.00		115.00		77.00			
Mercury	mg/kg	0.71	U	0.92	U	0.95	U		
Potassium	mg/kg			6330.00		7430.00			
Rubidium	mg/kg	798.00	U	404.00	U	407.00	U		
Scandium	mg/kg	3.18		7.07		8.52			
Silver	mg/kg	1.35	J	1.91	J	2.02	J		
Sodium	mg/kg			205.00		148.00			
Terbium	mg/kg	0.22		0.19		0.30			
Thorium-232	mg/kg	5.19	J	7.72	J	8.48	J		
Titanium	mg/kg	4210.00		3790.00		3850.00			
Uranium-235	mg/kg	0.02		0.03		0.03			
Uranium-238	mg/kg			4.83		4.78			
Vanadium	mg/kg	31.80		68.10		91.80			
Ytterbium	mg/kg	1.66		1.27		1.18	U		
Zinc	mg/kg	56.20		97.10		124.00			
Location=AND; Formation=COPPER RIDGE; Site=33,34,35; Sample type=Regular; A=7050; B=7053; C=7056; A lab split=' '									
Aluminum	mg/kg	22300.00		59900.00		66800.00			
Antimony	mg/kg	0.87		0.89		1.16			
Arsenic	mg/kg	15.60	J	20.10	J	30.90	J		
Barium	mg/kg	495.00	J	76.30	J	80.50	J		
Cerium	mg/kg	41.10	J	24.70	J	26.60	J		
Cesium	mg/kg	1.66		3.78		4.10			
Chromium	mg/kg	32.80	J	44.80	J	52.40	J		
Cobalt	mg/kg	9.39	J	5.58	J	4.15	J		
Europium	mg/kg	0.50		0.31		0.25			
Gallium	mg/kg	7.45	J	15.80	J	16.00	J		
Gold	mg/kg	0.01	U	0.01	U	0.01	U		
Hafnium	mg/kg	7.74	J	5.20	J	4.18	J		
Iron	mg/kg	15500.00	J	23900.00	J	33400.00	J		
Lanthanum	mg/kg	17.00	J	15.10	J	20.90	J		
Lutetium	mg/kg	0.23	J	0.16	J	0.13	J		
Magnesium	mg/kg	2960.00		2240.00		3350.00			
Manganese	mg/kg	1440.00		303.00		121.00			
Mercury	mg/kg	0.73	U	0.82	U	0.96	U		
Potassium	mg/kg	3730.00		5360.00		5690.00			
Rubidium	mg/kg	1430.00	U	498.00	U	628.00	U		
Scandium	mg/kg	3.63		6.89		8.78			
Silver	mg/kg	1.41	J	1.73	J	2.01	J		
Sodium	mg/kg	435.00		256.00		168.00			
Terbium	mg/kg	0.44		0.22		0.37	U		
Thorium-232	mg/kg	6.50	J	7.94	J	10.20	J		
Titanium	mg/kg	5160.00		4720.00		3980.00			
Uranium-235	mg/kg	0.03		0.03		0.03			
Uranium-238	mg/kg	4.45		3.54		4.04			
Vanadium	mg/kg	39.10		86.80		97.00			
Ytterbium	mg/kg	1.88		1.02		2.17			
Zinc	mg/kg	57.10		96.80		127.00			

Table H.1 (continued)

Analysis	Units	A horizon result	Qualifier	B horizon result	Qualifier	C horizon result	Qualifier	A lab split result	Qualifier
Location=AND; Formation=COPPER RIDGE; Site=37,38,41; Sample type=Regular; A=7077; B=7080; C=7083; A lab split=' '									
Aluminum	mg/kg	31600.00		58900.00					
Antimony	mg/kg	0.60		5.14		1.45			
Arsenic	mg/kg	14.30	J	3.03	J	38.00	J		
Barium	mg/kg	707.00	J	167.00	J	1260.00	J		
Cerium	mg/kg	80.70	J	59.70	J	91.80	J		
Cesium	mg/kg	2.28		4.23		4.78			
Chromium	mg/kg	33.60	J	46.10	J	55.30	J		
Cobalt	mg/kg	46.10	J	25.60	J	35.30	J		
Europium	mg/kg	1.08		0.50		0.56			
Gallium	mg/kg	14.50	J	9.11	J	10.30	J		
Gold	mg/kg	0.01	U	0.19		0.01	U		
Hafnium	mg/kg	7.06	J	5.89	J	5.22	J		
Iron	mg/kg	15700.00	J	30500.00	J	39600.00	J		
Lanthanum	mg/kg	26.40	J	5.76	J	27.70	J		
Lutetium	mg/kg	0.30	J	0.20	J	0.18	J		
Magnesium	mg/kg	2440.00		3470.00					
Manganese	mg/kg	2360.00		755.00		1460.00			
Mercury	mg/kg	0.94	U	0.95	U	1.39	U		
Potassium	mg/kg	4950.00		189.00	U	8380.00			
Rubidium	mg/kg	2120.00	U	614.00	U	998000.00	U		
Scandium	mg/kg	4.84		11.00		16.60			
Silver	mg/kg	1.79	J	1.93	J	2.87	J		
Sodium	mg/kg	520.00		6.88		208.00			
Terbium	mg/kg	0.64		0.36		0.53	U		
Thorium-232	mg/kg	6.78	J	11.00	J	14.10	J		
Titanium	mg/kg	5740.00		4690.00					
Uranium-235	mg/kg	0.03		0.05		0.06			
Uranium-238	mg/kg	4.96		17.20		7.89			
Vanadium	mg/kg	44.90		89.30					
Ytterbium	mg/kg	2.20		2.03		0.08			
Zinc	mg/kg	101.00		200.00		276.00			
Location=AND; Formation=COPPER RIDGE; Site=39,40,42; Sample type=Regular; A=7068; B=7071; C=7074; A lab split=' '									
Aluminum	mg/kg	31500.00		54600.00		73200.00			
Antimony	mg/kg	0.85		0.40		0.49			
Arsenic	mg/kg	14.00	J	20.90	J	21.20	J		
Barium	mg/kg	253.00	J	151.00	J	92.10	J		
Cerium	mg/kg	83.70	J	35.30	J	30.20	J		
Cesium	mg/kg	2.77		4.15		4.25			
Chromium	mg/kg	38.60	J	84.10	J	59.20	J		
Cobalt	mg/kg	14.80	J	9.79	J	6.99	J		
Europium	mg/kg	1.02		0.41		0.36			
Gallium	mg/kg	14.70	J	14.10	J	7.89	J		
Gold	mg/kg	0.01	U	0.00		0.00	U		
Hafnium	mg/kg	8.79	J	7.39	J	6.08	J		
Iron	mg/kg	17400.00	J	29600.00	J	31700.00	J		
Lanthanum	mg/kg	33.70	J	15.30	J	14.70	J		
Lutetium	mg/kg	0.33	J	0.27	J	0.22	J		
Magnesium	mg/kg	3410.00	U	3580.00		3760.00			
Manganese	mg/kg	3150.00		688.00		411.00			
Mercury	mg/kg	0.88	U	1.04	U	1.01	U		
Potassium	mg/kg	5300.00		5510.00		5570.00			
Rubidium	mg/kg	2490.00	U	1150.00	U	495.00	U		
Scandium	mg/kg	5.37		7.78		8.26			
Silver	mg/kg	1.65	J	2.02	J	2.00	J		
Sodium	mg/kg	643.00		330.00		217.00			
Terbium	mg/kg	0.98		0.42		0.41			
Thorium-232	mg/kg	7.93	J	10.40	J	11.20	J		
Titanium	mg/kg	5620.00		5300.00		5190.00			
Uranium-235	mg/kg	0.03		0.04		0.04			
Uranium-238	mg/kg	5.07		6.16		5.65			
Vanadium	mg/kg	48.90		103.00		104.00			
Ytterbium	mg/kg	4.49		1.65		1.79			
Zinc	mg/kg	67.00		86.50		90.80			

Table H.1 (continued)

Analysis	Units	A horizon result	Qualifier	B horizon result	Qualifier	C horizon result	Qualifier	A lab split result	Qualifier
Location=AND; Formation=DISMAL GAP; Site=1,20,22; Sample type=Regular; A=7030; B=7033; C=7036; A lab split=' '									
Aluminum	mg/kg	67900.00		93300.00		101000.00			
Antimony	mg/kg	0.42		0.49		0.16	U		
Arsenic	mg/kg	5.54	J	5.35	J	3.44	J		
Barium	mg/kg	323.00	J	336.00	J	307.00	J		
Cerium	mg/kg	54.70	J	91.10	J	111.00	J		
Cesium	mg/kg	3.26		4.59		4.02			
Chromium	mg/kg	62.40	J	89.30	J	79.80	J		
Cobalt	mg/kg	10.30	J	30.30	J	20.00	J		
Europium	mg/kg	0.61		0.91		1.71			
Gallium	mg/kg	16.20	J	10.40	J	17.00	J		
Gold	mg/kg	0.01	U	0.01	U	0.01	U		
Hafnium	mg/kg	9.58	J	15.10	J	7.66	J		
Iron	mg/kg	31300.00	J	43600.00	J	47300.00	J		
Lanthanum	mg/kg	31.40	J	41.10	J	47.40	J		
Lutetium	mg/kg	0.36	J	0.39	J	0.34	J		
Magnesium	mg/kg	5610.00		7960.00		7710.00			
Manganese	mg/kg	877.00		307.00		865.00			
Mercury	mg/kg	1.29	U	1.77	U	1.52	U		
Potassium	mg/kg	22300.00		25000.00		29800.00			
Rubidium	mg/kg	1050.00	U	856.00	U	1000.00	U		
Scandium	mg/kg	9.00		12.90		16.20			
Silver	mg/kg	2.20	J	3.10	J	2.80	J		
Sodium	mg/kg	703.00		615.00		1600.00			
Terbium	mg/kg	0.24		0.49		1.52			
Thorium-232	mg/kg	10.40	J	14.80	J	12.50	J		
Titanium	mg/kg	5270.00		5470.00		5370.00			
Uranium-235	mg/kg	0.02		0.02		0.02			
Uranium-238	mg/kg	3.40		2.83		2.21			
Vanadium	mg/kg	83.80		100.00		105.00			
Ytterbium	mg/kg	2.87		3.21		1.18			
Zinc	mg/kg	101.00		128.00		25.10	U		
Location=AND; Formation=DISMAL GAP; Site=3,5,11; Sample type=Regular; A=7012; B=7015; C=7018; A lab split=' '									
Aluminum	mg/kg	69400.00		107000.00		115000.00			
Antimony	mg/kg	0.45		0.47		0.08			
Arsenic	mg/kg	4.26	J	7.46	J	3.77	J		
Barium	mg/kg	544.00	J	402.00	J	313.00	J		
Cerium	mg/kg			64.50	J	80.80	J		
Cesium	mg/kg			5.28		5.47			
Chromium	mg/kg			90.20	J	95.50	J		
Cobalt	mg/kg			14.10	J	12.90	J		
Europium	mg/kg			0.60		0.92			
Gallium	mg/kg	8.58	J	14.70	J	21.20	J		
Gold	mg/kg	0.01	U	0.01	U	0.01	U		
Hafnium	mg/kg			5.60	J	4.39	J		
Iron	mg/kg			53600.00	J	52400.00	J		
Lanthanum	mg/kg	34.00	J	42.10	J	42.90	J		
Lutetium	mg/kg			0.25	J	0.26	J		
Magnesium	mg/kg	6030.00		8810.00		10700.00			
Manganese	mg/kg	581.00		194.00		464.00			
Mercury	mg/kg			1.53	U	1.71	U		
Potassium	mg/kg	34600.00		35300.00		35900.00			
Rubidium	mg/kg	766.00	U	601.00	U	752.00	U		
Scandium	mg/kg			13.90		19.00			
Silver	mg/kg			2.82	J	3.13	J		
Sodium	mg/kg	1110.00		840.00		1390.00			
Terbium	mg/kg			0.12		0.48			
Thorium-232	mg/kg			14.40	J	14.60	J		
Titanium	mg/kg	4570.00		5870.00		4170.00			
Uranium-235	mg/kg	0.02		0.02		0.02			
Uranium-238	mg/kg	2.32		3.30		2.69			
Vanadium	mg/kg	73.10		112.00		114.00			
Ytterbium	mg/kg			2.73		3.15	U		
Zinc	mg/kg			56.80		102.00			

Table H.1 (continued)

Analysis	Units	A horizon result	Qualifier	B horizon result	Qualifier	C horizon result	Qualifier	A lab split result	Qualifier
Location=AND; Formation=DISMAL GAP; Site=4,12,21; Sample type=Regular; A=7021; B=7024; C=7027; A lab split=' '									
Aluminum	mg/kg	79000.00		91400.00		92800.00			
Antimony	mg/kg	0.43		0.14	U	0.15	U		
Arsenic	mg/kg	3.53	J	4.07	J	3.31	J		
Barium	mg/kg	601.00	J	530.00	J	677.00	J		
Cerium	mg/kg	52.30	J	60.30	J	81.30	J		
Cesium	mg/kg	3.20		4.38		3.90			
Chromium	mg/kg	63.20	J	76.60	J	74.00	J		
Cobalt	mg/kg	13.80	J	9.08	J	17.60	J		
Europium	mg/kg	0.56		0.64		0.94			
Gallium	mg/kg	16.10	J	23.70	J	21.50	J		
Gold	mg/kg	0.01	U	0.01	U	0.01	U		
Hafnium	mg/kg	8.54	J	6.40	J	6.70	J		
Iron	mg/kg	29900.00	J	44100.00	J	50600.00	J		
Lanthanum	mg/kg	30.00	J	34.30	J	38.90	J		
Lutetium	mg/kg	0.29	J	0.35	J	0.35	J		
Magnesium	mg/kg	6670.00		7810.00		7890.00			
Manganese	mg/kg	504.00		126.00		594.00			
Mercury	mg/kg	1.28	U	1.45	U	1.64	U		
Potassium	mg/kg	36300.00		35700.00		38500.00			
Rubidium	mg/kg	764.00	U	556.00	U	792.00	U		
Scandium	mg/kg	9.23		13.80		17.40			
Silver	mg/kg	2.25	J	2.68	J	3.09	J		
Sodium	mg/kg	1130.00		696.00		651.00			
Terbium	mg/kg	0.56		0.39		0.45			
Thorium-232	mg/kg	10.10	J	12.20	J	12.40	J		
Titanium	mg/kg	5730.00		5750.00		4330.00			
Uranium-235	mg/kg	0.02		0.02		0.02			
Uranium-238	mg/kg	2.29		2.26		2.68			
Vanadium	mg/kg	75.40		96.10		91.30			
Ytterbium	mg/kg	2.71		3.52		2.58	U		
Zinc	mg/kg	79.10		119.00		26.70	U		
Location=AND; Formation=DISMAL GAP; Site=9,10,19; Sample type=Regular; A=7003; B=7006; C=7009; A lab split=' '									
Aluminum	mg/kg	56000.00		76400.00		104000.00			
Antimony	mg/kg	0.45		0.36		0.34			
Arsenic	mg/kg	5.72	J	6.25	J	5.17	J		
Barium	mg/kg	280.00	J	247.00	J	244.00	J		
Cerium	mg/kg	59.80	J	69.50	J	82.10	J		
Cesium	mg/kg	2.73		4.74		4.55			
Chromium	mg/kg	61.30	J	81.00	J	100.00	J		
Cobalt	mg/kg	16.00	J	20.00	J	22.90	J		
Europium	mg/kg	0.65		0.80		1.11			
Gallium	mg/kg	16.20	J	11.70	J	21.20	J		
Gold	mg/kg	0.01	U	0.01	U	0.01	U		
Hafnium	mg/kg	10.60	J	8.05	J	6.22	J		
Iron	mg/kg	26600.00	J	41000.00	J	50100.00	J		
Lanthanum	mg/kg	31.50	J	39.20	J	39.80	J		
Lutetium	mg/kg	0.34	J	0.32	J	0.36	J		
Magnesium	mg/kg	4880.00		6420.00		7090.00			
Manganese	mg/kg	913.00		311.00		755.00			
Mercury	mg/kg	1.27	U	1.36	U	0.49	U		
Potassium	mg/kg	16700.00		20200.00		24800.00			
Rubidium	mg/kg	685.00	U	522.00	U	974.00	U		
Scandium	mg/kg	8.47		12.50		18.50			
Silver	mg/kg	2.32	J	2.47	J	0.95	J		
Sodium	mg/kg	541.00		422.00		284.00			
Terbium	mg/kg	0.34		0.46		1.15			
Thorium-232	mg/kg	9.68	J	12.10	J	13.30	J		
Titanium	mg/kg	5480.00		5870.00		5470.00			
Uranium-235	mg/kg	0.02		0.03		0.02			
Uranium-238	mg/kg	3.28		3.29		3.23			
Vanadium	mg/kg	65.50		96.10		109.00			
Ytterbium	mg/kg	2.36		3.92		3.31			
Zinc	mg/kg	21.30	U	93.90		121.00			

Table H.1 (continued)

Analysis	Units	A horizon result	Qualifier	B horizon result	Qualifier	C horizon result	Qualifier	A lab split result	Qualifier
Location=AND; Formation=DISMAL GAP; Site=9,10,19; Sample type=Field Duplicate; A=7039; B=7042; C=7045; A lab split=' '									
Aluminum	mg/kg	58900.00		82400.00		97100.00			
Antimony	mg/kg	0.48		0.50		0.17			
Arsenic	mg/kg	5.73	J	6.99	J	5.96	J		
Barium	mg/kg	225.00	J	306.00	J	135.00	J		
Cerium	mg/kg	61.90	J	69.40	J	104.00	J		
Cesium	mg/kg	3.24		5.13		4.30			
Chromium	mg/kg	66.00	J	81.90	J	83.10	J		
Cobalt	mg/kg	21.80	J	14.70	J	31.20	J		
Europium	mg/kg	0.65		0.70		1.55			
Gallium	mg/kg	11.60	J	20.80	J	17.80	J		
Gold	mg/kg	0.00		0.01	U	0.01	U		
Hafnium	mg/kg	10.60	J	7.69	J	6.73	J		
Iron	mg/kg	30100.00	J	42200.00	J	50500.00	J		
Lanthanum	mg/kg	32.00	J	39.50	J	48.10	J		
Lutetium	mg/kg	0.31	J	0.28	J	0.52	J		
Magnesium	mg/kg	6140.00		6510.00		8120.00			
Manganese	mg/kg	964.00		205.00		1520.00			
Mercury	mg/kg	1.29	U	1.47	U	0.76			
Potassium	mg/kg	18500.00		20400.00		23700.00			
Rubidium	mg/kg	923.00	U	386.00	U	1370.00	U		
Scandium	mg/kg	9.05		12.70		19.60			
Silver	mg/kg	2.12	J	2.64	J	3.69	J		
Sodium	mg/kg	524.00		423.00		300.00			
Terbium	mg/kg	0.30		0.44		0.47			
Thorium-232	mg/kg	9.93	J	12.30	J	13.70	J		
Titanium	mg/kg	5810.00		5990.00		5050.00			
Uranium-235	mg/kg	0.02		0.03		0.03			
Uranium-238	mg/kg	3.33		3.75		3.13			
Vanadium	mg/kg	74.50		97.20		103.00			
Ytterbium	mg/kg	2.17		3.98		0.70			
Zinc	mg/kg	20.40	U	106.00		163.00			
Location=ORR; Formation=CHEPULTEPEC; Site=50,66,73; Sample type=Regular; A=5169; B=5172; C=5183; A lab split=5215									
Aluminum	mg/kg	14400.00		58400.00		75000.00		17200.00	
Antimony	mg/kg	0.71		1.07		1.21			
Arsenic	mg/kg	10.90	J	21.60	J	40.20	J		
Barium	mg/kg	6280.00	J	3950.00	J	3940.00	J	5930.00	J
Cerium	mg/kg	24.90	J	13.80	J	32.10	J	21.40	J
Cesium	mg/kg	1.44		5.14		5.41		1.35	
Chromium	mg/kg	32.70	J	59.10	J	69.90	J	24.00	J
Cobalt	mg/kg	10.40		3.85		5.60		8.48	
Europium	mg/kg	0.35		0.38		0.35		0.30	
Gallium	mg/kg	6.34	J	16.80	J	16.80	J		
Gold	mg/kg	0.00	U	0.01	U	0.00			
Hafnium	mg/kg	9.70	J	5.58	J	3.14	J	8.59	J
Iron	mg/kg	14200.00	J	32800.00	J	38900.00	J	7920.00	J
Lanthanum	mg/kg	12.50	J	17.50	J	19.60	J		
Lutetium	mg/kg	0.24	J	0.21	J	0.11	J	0.21	J
Magnesium	mg/kg	883.00	U	5080.00		6090.00		1160.00	
Manganese	mg/kg	552.00		77.90		94.30		528.00	
Mercury	mg/kg	0.58	U	0.78	U	0.93	U	0.45	U
Potassium	mg/kg	3140.00		7970.00		12800.00			
Rubidium	mg/kg	471.00	U	390.00	U	405.00	U	458.00	U
Scandium	mg/kg	2.94		9.23		12.70		2.57	
Silver	mg/kg	1.02	J	1.57	J	1.94	J	0.79	J
Sodium	mg/kg	349.00		182.00		169.00			
Terbium	mg/kg	0.80		0.80		0.24		0.46	
Thorium-232	mg/kg	5.53	J	11.30	J	11.60	J	4.63	J
Titanium	mg/kg	3590.00		4220.00		3220.00		4180.00	
Uranium-235	mg/kg	0.03		0.03		0.04		0.02	
Uranium-238	mg/kg	3.54		3.13		4.02			
Vanadium	mg/kg	32.30		94.70		107.00		25.80	
Ytterbium	mg/kg	2.48		0.69		0.09		1.05	

Table H.1 (continued)

Analysis	Units	A horizon result	Qualifier	B horizon result	Qualifier	C horizon result	Qualifier	A lab split result	Qualifier
Location=ORR; Formation=CHEPULTEPEC; Site=50,66,73; Sample type=Field Duplicate; A=5177; B=5180; C=5186; A lab split=5214									
Aluminum	mg/kg	16800.00		67700.00		75200.00		16200.00	
Antimony	mg/kg	0.69		1.11		0.95		0.57	
Arsenic	mg/kg	9.33	J	21.50	J	23.70	J	9.67	J
Barium	mg/kg	5430.00	J	3580.00	J	5430.00	J	4860.00	J
Cerium	mg/kg	23.70	J	23.50	J	45.40	J	22.00	J
Cesium	mg/kg	1.41		4.82		4.57		1.25	
Chromium	mg/kg	31.80	J	63.20	J	71.40	J	27.20	J
Cobalt	mg/kg	11.40		4.15		18.70		11.20	
Europium	mg/kg	0.41		0.30		0.50		0.34	
Gallium	mg/kg	9.85	J	17.40	J	14.70	J	10.30	J
Gold	mg/kg	0.00	U	0.01	U	0.00		0.00	U
Hafnium	mg/kg	9.84	J	6.96	J	3.78	J	8.69	J
Iron	mg/kg	12800.00	J	32100.00	J	34400.00	J	12200.00	J
Lanthanum	mg/kg	12.60	J	18.10	J	16.00	J	10.90	J
Lutetium	mg/kg	0.14	J	0.22	J	0.09	J	0.23	J
Magnesium	mg/kg	1270.00		5080.00		4910.00		909.00	
Manganese	mg/kg	485.00		68.20		335.00		526.00	
Mercury	mg/kg	0.58	U	0.80	U	0.87	U	0.16	U
Potassium	mg/kg	3270.00		8070.00		11100.00		2300.00	
Rubidium	mg/kg	411.00	U	359.00	U	488.00	U	398.00	U
Scandium	mg/kg	2.94		8.83		12.40		2.62	
Silver	mg/kg	1.01	J	1.58	J	1.81	J	0.28	J
Sodium	mg/kg	365.00		201.00		159.00		341.00	
Terbium	mg/kg	0.51		0.39	U	0.20		0.60	
Thorium-232	mg/kg	5.76	J	11.10	J	11.20	J	5.07	J
Titanium	mg/kg	4400.00		4770.00		3450.00		4320.00	
Uranium-235	mg/kg	0.03		0.03		0.04		0.02	
Uranium-238	mg/kg	3.56		3.70		5.17		3.57	
Vanadium	mg/kg	33.20		108.00		113.00		43.80	
Ytterbium	mg/kg	1.38		2.15	U	2.32	U	2.32	
Location=ORR; Formation=CHEPULTEPEC; Site=52,53,78; Sample type=Regular; A=5129; B=5132; C=5135; A lab split=' '									
Aluminum	mg/kg	15400.00		48700.00		69900.00			
Antimony	mg/kg	0.59		0.99		1.09			
Arsenic	mg/kg	7.95	J	27.10	J	41.70	J		
Barium	mg/kg	102.00	J	94.20	J	419.00	J		
Cerium	mg/kg	32.60	J	20.50	J	19.50	J		
Cesium	mg/kg	1.31		4.05		4.52			
Chromium	mg/kg	26.10	J	64.10	J	145.00	J		
Cobalt	mg/kg	7.89		2.98		4.96			
Europium	mg/kg	0.46		0.31		0.31			
Gallium	mg/kg	2.76	J	13.60	J	19.30	J		
Gold	mg/kg	0.00	U	0.00	U	0.00			
Hafnium	mg/kg	7.49	J	5.18	J	2.83	J		
Iron	mg/kg	9870.00	J	33600.00	J	39300.00	J		
Lanthanum	mg/kg	15.60	J	17.60	J	26.60	J		
Lutetium	mg/kg	0.24	J	0.20	J	0.14	J		
Magnesium	mg/kg	1450.00		3670.00		6590.00			
Manganese	mg/kg	905.00		68.00		88.00			
Mercury	mg/kg	0.61	U	0.77	U	0.89	U		
Potassium	mg/kg	2880.00		6720.00		12400.00			
Rubidium	mg/kg	661.00	U	416.00	U	1710.00	U		
Scandium	mg/kg	2.72		6.21		10.20			
Silver	mg/kg	0.90	J	1.27	J	1.52	J		
Sodium	mg/kg	385.00		213.00		163.00			
Terbium	mg/kg	0.44		0.29		0.33			
Thorium-232	mg/kg	4.94	J	9.01	J	10.50	J		
Titanium	mg/kg	3840.00		4290.00		3490.00			
Uranium-235	mg/kg	0.03		0.03		0.04			
Uranium-238	mg/kg	4.01		5.08		5.69			
Vanadium	mg/kg	32.00		80.80		117.00			
Ytterbium	mg/kg	2.60		2.26		2.34			
Zinc	mg/kg	44.60		126.00		282.00			

Table H.1 (continued)

Analysis	Units	A horizon result	Qualifier	B horizon result	Qualifier	C horizon result	Qualifier	A lab split result	Qualifier
Location=ORR; Formation=CHEPULTEPEC; Site=68,74,90; Sample type=Regular; A=5158; B=5161; C=5164; A lab split=' '									
Aluminum	mg/kg	15700.00		69600.00		87900.00			
Antimony	mg/kg	0.59		1.01		1.11			
Arsenic	mg/kg	7.39	J	20.80	J	20.30	J		
Barium	mg/kg	148.00	J	94.10	J	111.00	J		
Cerium	mg/kg	24.90	J	21.00	J	26.70	J		
Cesium	mg/kg	1.39		5.38		6.39			
Chromium	mg/kg	36.60	J	54.40	J	65.20	J		
Cobalt	mg/kg	12.20		3.06		3.54			
Europium	mg/kg	0.41		0.33		0.36			
Gallium	mg/kg	10.10	J	20.90	J	20.40	J		
Gold	mg/kg	0.00	U	0.01	U	0.01	U		
Hafnium	mg/kg	7.01	J	4.12	J	2.85	J		
Iron	mg/kg	14600.00	J	33400.00	J	40700.00	J		
Lanthanum	mg/kg	13.00	J	20.70	J	25.80	J		
Lutetium	mg/kg	0.23	J	0.15	J	0.14	J		
Magnesium	mg/kg	945.00		5600.00		5980.00			
Manganese	mg/kg	446.00		63.40		67.50			
Mercury	mg/kg	0.66	U	0.88	U	1.04	U		
Potassium	mg/kg	2660.00		9250.00		11600.00			
Rubidium	mg/kg	453.00	U	458.00	U	587.00	U		
Scandium	mg/kg	2.68		8.14		11.30			
Silver	mg/kg	0.98	J	1.46	J	1.72	J		
Sodium	mg/kg	355.00		200.00		165.00			
Terbium	mg/kg	0.33		0.31		0.22			
Thorium-232	mg/kg	5.29	J	10.70	J	12.70	J		
Titanium	mg/kg	4390.00		4100.00		3450.00			
Uranium-235	mg/kg	0.02		0.03		0.03			
Uranium-238	mg/kg	4.49		4.68		4.56			
Vanadium	mg/kg	31.80		106.00		116.00			
Ytterbium	mg/kg	2.84		2.25		0.60			
Zinc	mg/kg	40.60		132.00		169.00			
Location=ORR; Formation=CHEPULTEPEC; Site=77,85,86; Sample type=Regular; A=5138; B=5141; C=5144; A lab split=' '									
Aluminum	mg/kg	19200.00		61900.00		58300.00			
Antimony	mg/kg			0.75		0.80			
Arsenic	mg/kg			13.40	J	15.20	J		
Barium	mg/kg	320.00	J	101.00	J	460.00	J		
Cerium	mg/kg	50.70	J	87.60	J	71.30	J		
Cesium	mg/kg	1.68		5.32		4.39			
Chromium	mg/kg	24.20	J	46.20	J	60.30	J		
Cobalt	mg/kg	13.50		9.64		22.30			
Europium	mg/kg	1.24		0.64		0.72			
Gallium	mg/kg			5.64	J	10.10	J		
Gold	mg/kg			0.01	U	0.01	U		
Hafnium	mg/kg	6.06	J	3.80	J	2.22	J		
Iron	mg/kg	10500.00	J	32800.00	J	34600.00	J		
Lanthanum	mg/kg			32.50	J	38.60	J		
Lutetium	mg/kg	0.36	J	0.33	J	0.34	J		
Magnesium	mg/kg	2290.00		4480.00		5180.00			
Manganese	mg/kg	2100.00		168.00		1070.00			
Mercury	mg/kg	0.68	U	0.92	U	0.89	U		
Potassium	mg/kg			8110.00		8450.00			
Rubidium	mg/kg	1830.00	U	574.00	U	1410.00	U		
Scandium	mg/kg	3.16		8.71		9.93			
Silver	mg/kg	1.01	J	1.54	J	1.51	J		
Sodium	mg/kg			244.00		142.00			
Terbium	mg/kg	0.91		0.52		0.54			
Thorium-232	mg/kg	4.91	J	8.91	J	9.21	J		
Titanium	mg/kg	4410.00		3700.00		1960.00			
Uranium-235	mg/kg	0.03		0.03		0.03			
Uranium-238	mg/kg			3.89		3.97			
Vanadium	mg/kg	34.70		82.60		75.80			
Ytterbium	mg/kg	3.27		3.52		3.17			
Zinc	mg/kg	122.00		362.00		430.00			

Table H.1 (continued)

Analysis	Units	A horizon result	Qualifier	B horizon result	Qualifier	C horizon result	Qualifier	A lab split result	Qualifier
Location=ORR; Formation=CHEPULTEPEC; Site=77,85,86; Sample type=Field Duplicate; A=5147; B=5150; C=5153; A lab split=' '									
Aluminum	mg/kg	23200.00		54600.00		67400.00			
Antimony	mg/kg	0.62		0.93		0.37			
Arsenic	mg/kg	6.50	J	16.20	J	7.67	J		
Barium	mg/kg	169.00	J	137.00	J	162.00	J		
Cerium	mg/kg	62.10	J	130.00	J	70.40	J		
Cesium	mg/kg	1.62		5.13		2.23			
Chromium	mg/kg	26.30	J	49.70	J	24.20	J		
Cobalt	mg/kg	19.70		14.80		33.10			
Europium	mg/kg	1.33		0.72		0.50			
Gallium	mg/kg	12.50	J	15.20	J	3.92	J		
Gold	mg/kg	0.01	U	0.01	U	0.00	U		
Hafnium	mg/kg	6.25	J	3.82	J	1.24	J		
Iron	mg/kg	11700.00	J	36100.00	J	19300.00	J		
Lanthanum	mg/kg	36.90	J	39.10	J	21.40	J		
Lutetium	mg/kg	0.42	J	0.38	J	0.16	J		
Magnesium	mg/kg	1430.00		4620.00		4220.00			
Manganese	mg/kg	1930.00		246.00		2500.00			
Mercury	mg/kg	0.72	U	0.89	U	0.72	U		
Potassium	mg/kg	3750.00		7910.00		4820.00			
Rubidium	mg/kg	1170.00	U	521.00	U	2370.00	U		
Scandium	mg/kg	3.33		8.81		5.69			
Silver	mg/kg	1.09	J	1.49	J	1.22	J		
Sodium	mg/kg	485.00		251.00		71.50			
Terbium	mg/kg	1.20		0.77		0.47			
Thorium-232	mg/kg	5.61	J	8.92	J	5.12	J		
Titanium	mg/kg	3890.00		3660.00		3080.00			
Uranium-235	mg/kg	0.03		0.03		0.03			
Uranium-238	mg/kg	4.46		3.38		2.04			
Vanadium	mg/kg	30.30		78.00		81.90			
Ytterbium	mg/kg	3.93		3.17		1.05			
Zinc	mg/kg	133.00		381.00		281.00			
Location=ORR; Formation=CHICKAMAUGA Bethel V; Site=101,102,103; Sample type=Regular; A=5198; B=5201; C=5204; A lab split=' '									
Aluminum	mg/kg	45900.00		86200.00		96900.00			
Antimony	mg/kg	0.68		0.43		0.64			
Arsenic	mg/kg	9.64	J	13.30	J	23.80	J		
Barium	mg/kg	10600.00	J	7670.00	J	10700.00	J		
Cerium	mg/kg	96.40	J	93.50	J	117.00	J		
Cesium	mg/kg	3.79		5.59		6.08			
Chromium	mg/kg	53.90	J	71.00	J	75.40	J		
Cobalt	mg/kg	18.60		15.80		36.30			
Europium	mg/kg	1.32		2.42		1.86			
Gallium	mg/kg	11.70	J	17.50	J	13.10	J		
Gold	mg/kg	0.01	U	0.01	U	0.01	U		
Hafnium	mg/kg	9.14	J	4.78	J	4.31	J		
Iron	mg/kg	36100.00	J	55500.00	J	56500.00	J		
Lanthanum	mg/kg	48.00	J	61.10	J	56.50	J		
Lutetium	mg/kg	0.42	J	0.58	J	0.37	J		
Magnesium	mg/kg	3540.00		9030.00		10800.00			
Manganese	mg/kg	1260.00		499.00		645.00			
Mercury	mg/kg	1.01	U	1.10	U	1.08	U		
Potassium	mg/kg	25800.00		26000.00		26000.00			
Rubidium	mg/kg	562.00		706.00	U	1110.00	U		
Scandium	mg/kg	11.20		17.40		19.20			
Silver	mg/kg	2.04	J	2.33	J	2.25	J		
Sodium	mg/kg	2320.00		2520.00		3190.00			
Terbium	mg/kg	0.91		3.59		1.36			
Thorium-232	mg/kg	11.00	J	13.10	J	13.90	J		
Titanium	mg/kg	4920.00		4530.00		3980.00			
Uranium-235	mg/kg	0.02		0.02		0.02			
Uranium-238	mg/kg	3.86		2.72		2.82			
Vanadium	mg/kg	50.40		98.00		105.00			
Ytterbium	mg/kg	2.52		3.27		0.45			

Table H.1 (continued)

Analysis	Units	A horizon result	Qualifier	B horizon result	Qualifier	C horizon result	Qualifier	A lab split result	Qualifier
Location=ORR; Formation=CHICKAMAUGA Bethel V; Site=104,108,110; Sample type=Regular; A=5207; B=5210; C=5213; A lab split=' '									
Aluminum	mg/kg	35300.00		87500.00		80500.00			
Antimony	mg/kg	0.41		0.40		0.19			
Arsenic	mg/kg	7.55	J	9.49	J	7.72	J		
Barium	mg/kg	5120.00	J	5430.00	J	6580.00	J		
Cerium	mg/kg	55.20	J	92.50	J	98.40	J		
Cesium	mg/kg	1.91		5.88		5.82			
Chromium	mg/kg	47.60	J	78.40	J	76.50	J		
Cobalt	mg/kg	14.30		14.60		16.70			
Europium	mg/kg	0.91		1.19		1.70			
Gallium	mg/kg	13.90	J	20.90	J	22.00	J		
Gold	mg/kg	0.01	U	0.01	U	0.01	U		
Hafnium	mg/kg	11.30	J	6.91	J	5.99	J		
Iron	mg/kg	24700.00	J	56800.00	J	58500.00	J		
Lanthanum	mg/kg	28.80	J	43.30	J	50.60	J		
Lutetium	mg/kg	0.23	J	0.22	J	0.48	J		
Magnesium	mg/kg	2680.00		7630.00		7350.00			
Manganese	mg/kg	459.00		199.00		549.00			
Mercury	mg/kg	0.66	U	1.00	U	1.05	U		
Potassium	mg/kg	10300.00		18100.00		20100.00			
Rubidium	mg/kg	443.00	U	532.00	U	616.00	U		
Scandium	mg/kg	6.17		15.60		17.20			
Silver	mg/kg	1.27	J	2.07	J	2.14	J		
Sodium	mg/kg	1080.00		1800.00		1900.00			
Terbium	mg/kg	0.77		1.32		1.98			
Thorium-232	mg/kg	8.60	J	14.20	J	14.70	J		
Titanium	mg/kg	5530.00		5100.00		4940.00			
Uranium-235	mg/kg	0.03		0.02		0.02			
Uranium-238	mg/kg	2.91		3.81		2.51			
Vanadium	mg/kg	44.40		102.00		93.50			
Ytterbium	mg/kg	2.51		0.11		3.41			
Location=ORR; Formation=CHICKAMAUGA Bethel V; Site=115,116,117; Sample type=Regular; A=5220; B=5224; C=5227; A lab split=5221									
Aluminum	mg/kg	35400.00		82700.00		118000.00		34000.00	
Antimony	mg/kg	0.59		0.20		0.69		0.63	
Arsenic	mg/kg	7.67	J	14.90	J	11.90	J	7.93	J
Barium	mg/kg	6560.00	J	5600.00	J	203.00	J	14700.00	J
Cerium	mg/kg	60.40	J	87.80	J	140.00	J	50.60	J
Cesium	mg/kg	2.01		6.17		6.32		1.90	
Chromium	mg/kg	47.80	J	73.10	J	67.60	J	49.90	J
Cobalt	mg/kg	14.50		20.20		33.60	J	16.20	
Europium	mg/kg	0.74		0.96		1.94		0.75	
Gallium	mg/kg	16.50	J	20.90	J	25.90	J	17.60	J
Gold	mg/kg	0.01	U	0.01	U	0.01	U	0.01	U
Hafnium	mg/kg	9.76	J	7.06	J	4.97	J	8.40	J
Iron	mg/kg	29300.00	J	56300.00	J	57100.00	J	30100.00	J
Lanthanum	mg/kg	31.70	J	46.00	J	52.20	J	34.50	J
Lutetium	mg/kg	0.35	J	0.54	J	0.45	J	0.26	J
Magnesium	mg/kg	3500.00		6480.00		9190.00		2410.00	U
Manganese	mg/kg	788.00		277.00		640.00		1730.00	
Mercury	mg/kg	0.73	U	1.06	U	1.25	U	0.70	U
Potassium	mg/kg	7760.00		20200.00		22800.00		7980.00	
Rubidium	mg/kg	579.00	U	533.00	U	666.00		1260.00	U
Scandium	mg/kg	6.93		16.40		17.30		6.48	
Silver	mg/kg	1.41	J	2.16	J	2.27	J	1.38	J
Sodium	mg/kg	984.00		1790.00		1590.00		1050.00	
Terbium	mg/kg	1.38		0.53	U	1.00		1.04	
Thorium-232	mg/kg	9.54	J	15.50	J	13.10	J	9.11	J
Titanium	mg/kg	6190.00		5600.00		5990.00		6770.00	
Uranium-235	mg/kg	0.02		0.03		0.02		0.03	
Uranium-238	mg/kg	3.18		3.38		4.54		3.39	
Vanadium	mg/kg	57.80		105.00		124.00		61.40	
Ytterbium	mg/kg	3.54		2.65	U	3.26		4.48	
Zinc	mg/kg					120.00			

Table H.1 (continued)

Analysis	Units	A horizon result	Qualifier	B horizon result	Qualifier	C horizon result	Qualifier	A lab split result	Qualifier
Location=ORR; Formation=CHICKAMAUGA Bethel V; Site=93,99,100; Sample type=Regular; A=5189; B=5192; C=5195; A lab split=' '									
Aluminum	mg/kg	42700.00		65900.00		86900.00			
Antimony	mg/kg	0.64		0.58		0.49			
Arsenic	mg/kg	8.46	J	8.54	J	8.95	J		
Barium	mg/kg	6920.00	J	6190.00	J	5080.00	J		
Cerium	mg/kg	86.00	J	83.70	J	80.90	J		
Cesium	mg/kg	3.12		4.97		6.02			
Chromium	mg/kg	57.00	J	68.60	J	77.00	J		
Cobalt	mg/kg	23.70		18.30		16.00			
Europium	mg/kg	1.11		1.12		1.37			
Gallium	mg/kg	23.40	J	12.40	J	26.40	J		
Gold	mg/kg	0.01	U	0.01	U	0.01	U		
Hafnium	mg/kg	10.80	J	7.22	J	5.51	J		
Iron	mg/kg	34500.00	J	47600.00	J	55800.00	J		
Lanthanum	mg/kg	43.50	J	44.80	J	51.10	J		
Lutetium	mg/kg	0.18	J	0.30	J	0.38	J		
Magnesium	mg/kg	4160.00		5420.00		7370.00			
Manganese	mg/kg	783.00		524.00		469.00			
Mercury	mg/kg	1.06	U	1.08	U	1.10	U		
Potassium	mg/kg	16300.00		24600.00		27700.00			
Rubidium	mg/kg	616.00	U	574.00	U	499.00	U		
Scandium	mg/kg	9.51		14.70		18.40			
Silver	mg/kg	2.09	J	2.12	J	2.27	J		
Sodium	mg/kg	1620.00		2050.00		2320.00			
Terbium	mg/kg	0.84		0.56		2.20			
Thorium-232	mg/kg	11.50	J	13.70	J	14.00	J		
Titanium	mg/kg	5440.00		5120.00		4130.00			
Uranium-235	mg/kg	0.03		0.02		0.02			
Uranium-238	mg/kg	4.55		3.10		3.01			
Vanadium	mg/kg	55.50		83.00		96.80			
Ytterbium	mg/kg	3.76		4.57	U	0.24			
Location=ORR; Formation=CHICKAMAUGA K-25; Site=118,122,124; Sample type=Regular; A=5244; B=5248; C=5251; A lab split=5245									
Aluminum	mg/kg	65800.00		116000.00		121000.00			
Antimony	mg/kg	0.91				0.59		0.79	
Arsenic	mg/kg	10.30	J			7.33	J	11.70	J
Barium	mg/kg	166.00	J	320.00	J	390.00	J		
Cerium	mg/kg	67.50	J	93.00	J	155.00	J	66.50	J
Cesium	mg/kg	3.48		6.98		7.09		3.84	
Chromium	mg/kg	55.80	J	68.10	J	69.90	J	52.80	J
Cobalt	mg/kg	15.80	J	19.50	J	27.30	J	15.10	J
Europium	mg/kg	0.88		1.16		1.39		0.84	
Gallium	mg/kg	13.10	J			29.90	J	17.90	J
Gold	mg/kg	0.01	U			0.01	U	0.01	U
Hafnium	mg/kg	7.43	J	4.73	J	4.43	J	7.48	J
Iron	mg/kg	37800.00	J	54800.00	J	51800.00	J	35800.00	J
Lanthanum	mg/kg	35.00	J			47.50	J	34.40	J
Lutetium	mg/kg	0.30	J	0.39	J	0.42	J	0.31	J
Magnesium	mg/kg	3350.00		9090.00		8470.00			
Manganese	mg/kg	1080.00		305.00		359.00			
Mercury	mg/kg	0.22		1.43	U	1.58	U	1.23	U
Potassium	mg/kg	12600.00				26800.00		11800.00	
Rubidium	mg/kg	1690.00	U	838.00	U	690.00	U		
Scandium	mg/kg	10.00		17.90		19.80		10.30	
Silver	mg/kg	2.25	J	3.06	J	3.41	J	0.97	J
Sodium	mg/kg	1050.00				1940.00		1040.00	
Terbium	mg/kg	0.54		0.82		0.84		0.65	
Thorium-232	mg/kg	11.10	J	14.60	J	14.10	J	11.30	J
Titanium	mg/kg	5790.00		5690.00		5390.00			
Uranium-235	mg/kg	0.03		0.03		0.02		0.03	
Uranium-238	mg/kg	5.00				2.89		4.01	
Vanadium	mg/kg	75.90		128.00		121.00			
Ytterbium	mg/kg	2.43		4.69		3.07		3.06	
Zinc	mg/kg	112.00		186.00		117.00		123.00	

Table H.1 (continued)

Analysis	Units	A horizon result	Qualifier	B horizon result	Qualifier	C horizon result	Qualifier	A lab split result	Qualifier
Location=ORR; Formation=CHICKAMAUGA K-25; Site=119,123,127; Sample type=Regular; A=5256; B=5259; C=5262; A lab split=' '									
Aluminum	mg/kg	56200.00		129000.00		24200.00			
Antimony	mg/kg	0.73		0.71		0.71			
Arsenic	mg/kg	9.85	J	9.59	J	9.62	J		
Barium	mg/kg	350.00	J	330.00	J	71.80	J		
Cerium	mg/kg	70.40	J	92.20	J	92.50	J		
Cesium	mg/kg	3.57		7.45		7.47			
Chromium	mg/kg	55.10	J	73.00	J	73.20	J		
Cobalt	mg/kg	18.50	J	11.70	J	11.80	J		
Europium	mg/kg	0.90		1.60		1.61			
Gallium	mg/kg	14.00	J	50.40	J	50.50	J		
Gold	mg/kg	0.01	U	0.01	U	0.01	U		
Hafnium	mg/kg	8.89	J	5.45	J	5.46	J		
Iron	mg/kg	35000.00	J	54900.00	J	55100.00	J		
Lanthanum	mg/kg	34.80	J	49.70	J	49.90	J		
Lutetium	mg/kg	0.34	J	0.45	J	0.46	J		
Magnesium	mg/kg	4980.00		7580.00		1690.00			
Manganese	mg/kg	2070.00		562.00		392.00			
Mercury	mg/kg	1.10	U	1.39	U	1.39	U		
Potassium	mg/kg	13000.00		26500.00		26600.00			
Rubidium	mg/kg	690.00		1780.00	U	428.00	U		
Scandium	mg/kg	9.05		16.80		16.80			
Silver	mg/kg	0.48	J	2.87	J	2.88	J		
Sodium	mg/kg	847.00		1470.00		1470.00			
Terbium	mg/kg	0.83		0.58		0.58			
Thorium-232	mg/kg	10.30	J	15.10	J	15.20	J		
Titanium	mg/kg	6940.00		5690.00		1280.00			
Uranium-235	mg/kg	0.03		0.03		0.03			
Uranium-238	mg/kg	5.47		3.91		3.92			
Vanadium	mg/kg	65.60		145.00		25.70			
Ytterbium	mg/kg	2.60		2.70		2.71			
Zinc	mg/kg	74.30		194.00		195.00			
Location=ORR; Formation=CHICKAMAUGA K-25; Site=120,126,129; Sample type=Regular; A=5232; B=5236; C=5239; A lab split=5233									
Aluminum	mg/kg	35800.00		104000.00		113000.00		37600.00	
Antimony	mg/kg	0.79		0.93		0.61		0.71	
Arsenic	mg/kg	7.97	J	13.90	J	9.46	J	8.72	J
Barium	mg/kg	134.00	J	298.00	J	427.00	J	426.00	J
Cerium	mg/kg	63.90	J	60.80	J	66.00	J	67.30	J
Cesium	mg/kg	2.67		7.54		7.32		2.98	
Chromium	mg/kg	43.50	J	74.30	J	72.90	J	48.20	J
Cobalt	mg/kg	16.90	J	8.99	J	5.35	J	18.60	J
Europium	mg/kg	0.85		0.82		1.00		0.77	
Gallium	mg/kg	12.00	J	33.60	J	29.70	J	18.40	J
Gold	mg/kg	0.01	U	0.01	U	0.01	U	0.01	U
Hafnium	mg/kg	13.10	J	6.92	J	5.34	J	13.20	J
Iron	mg/kg	22600.00	J	62100.00	J	64500.00	J	24200.00	J
Lanthanum	mg/kg	29.80	J	37.90	J	42.70	J	29.80	J
Lutetium	mg/kg	0.34	J	0.31	J	0.29	J	0.39	J
Magnesium	mg/kg	2670.00		6460.00		8890.00		3000.00	
Manganese	mg/kg	1420.00		262.00		124.00		1550.00	
Mercury	mg/kg	0.90	U	1.20	U	1.34	U	0.91	U
Potassium	mg/kg	7580.00		19800.00		29800.00		7050.00	
Rubidium	mg/kg	1040.00	U	878.00	U	779.00	U	1150.00	U
Scandium	mg/kg	6.55		13.90		17.40		6.63	
Silver	mg/kg	1.44	J	2.14	J	2.48	J	1.50	J
Sodium	mg/kg	693.00		1380.00		1900.00		688.00	
Terbium	mg/kg	0.84		0.75		0.36		0.91	
Thorium-232	mg/kg	9.14	J	14.80	J	14.80	J	9.52	J
Titanium	mg/kg	7390.00		6760.00		6310.00		7320.00	
Uranium-235	mg/kg	0.03		0.03		0.03		0.04	
Uranium-238	mg/kg	4.82		5.06		3.89		4.89	
Vanadium	mg/kg	63.80		140.00		136.00		60.10	
Ytterbium	mg/kg	3.27		1.68		2.22		2.90	
Zinc	mg/kg	52.60		116.00		83.90		52.40	

Table H.1 (continued)

Analysis	Units	A horizon result	Qualifier	B horizon result	Qualifier	C horizon result	Qualifier	A lab split result	Qualifier
Location=ORR; Formation=CHICKAMAUGA K-25; Site=121,125,128; Sample type=Regular; A=5267; B=5270; C=5273; A lab split=' '									
Aluminum	mg/kg	7180.00		104000.00		473000.00			
Antimony	mg/kg	0.54		0.54		0.59			
Arsenic	mg/kg	5.87	J	7.11	J	6.15	J		
Barium	mg/kg	103.00	J	320.00	J	1320.00	J		
Cerium	mg/kg	52.20	J	67.20	J	70.80	J		
Cesium	mg/kg	2.53		7.17		7.67			
Chromium	mg/kg	40.70	J	60.90	J	63.00	J		
Cobalt	mg/kg	19.30	J	10.90	J	20.70	J		
Europium	mg/kg	0.70		1.05		1.03			
Gallium	mg/kg	14.00	J	23.60	J	25.80	J		
Gold	mg/kg	0.01	U	0.01	U	0.01	U		
Hafnium	mg/kg	9.89	J	4.97	J	3.72	J		
Iron	mg/kg	23200.00	J	51300.00	J	50900.00	J		
Lanthanum	mg/kg	29.00	J	44.00	J	40.90	J		
Lutetium	mg/kg	0.36	J	0.39	J	0.31	J		
Magnesium	mg/kg	593.00		12400.00		45700.00			
Manganese	mg/kg	264.00		269.00		1650.00			
Mercury	mg/kg	0.96	U	1.38	U	0.51	U		
Potassium	mg/kg	8820.00		25900.00		28000.00			
Rubidium	mg/kg	298.00	U	1360.00	U	3330.00	U		
Scandium	mg/kg	6.70		16.60		18.50			
Silver	mg/kg	1.87	J	2.92	J	1.08	J		
Sodium	mg/kg	619.00		1170.00		1040.00			
Terbium	mg/kg	0.64		0.75		0.63			
Thorium-232	mg/kg	8.97	J	14.10	J	13.60	J		
Titanium	mg/kg	1320.00		5320.00		21600.00			
Uranium-235	mg/kg	0.03		0.03		0.02			
Uranium-238	mg/kg	3.96		3.64		3.77			
Vanadium	mg/kg	12.40		107.00		446.00			
Ytterbium	mg/kg	3.51		2.03		1.80			
Zinc	mg/kg	63.70		164.00		141.00			
Location=ORR; Formation=COPPER RIDGE; Site=45,60,75; Sample type=Regular; A=5111; B=5114; C=5117; A lab split=' '									
Aluminum	mg/kg	18800.00		43600.00		72400.00			
Antimony	mg/kg	0.77		1.15		1.81			
Arsenic	mg/kg	15.90	J	29.50	J	84.90	J		
Barium	mg/kg	202.00	J	113.00	J	81.20	J		
Cerium	mg/kg	41.70	J	28.00	J	41.30	J		
Cesium	mg/kg	2.16		4.18		4.11			
Chromium	mg/kg	32.90	J	50.30	J	74.50	J		
Cobalt	mg/kg	5.44		4.29		4.22			
Europium	mg/kg	0.54		0.32		0.34			
Gallium	mg/kg	3.34	J	12.60	J	19.30	J		
Gold	mg/kg	0.01	U	0.01	U	0.01	U		
Hafnium	mg/kg	7.23	J	6.09	J	2.28	J		
Iron	mg/kg	14700.00	J	27700.00	J	41400.00	J		
Lanthanum	mg/kg	20.50	J	20.40	J	35.80	J		
Lutetium	mg/kg	0.28	J	0.21	J	0.10	J		
Magnesium	mg/kg	660.00		2750.00		4810.00			
Manganese	mg/kg	797.00		135.00		87.10			
Mercury	mg/kg	0.67	U	0.76	U	0.94	U		
Potassium	mg/kg	3110.00		3710.00		6270.00			
Rubidium	mg/kg	750.00	U	400.00	U	430.00	U		
Scandium	mg/kg	3.45		6.23		10.60			
Silver	mg/kg	1.03	J	1.26	J	1.67	J		
Sodium	mg/kg	392.00		240.00		128.00			
Terbium	mg/kg	0.46		0.26		0.19			
Thorium-232	mg/kg	6.02	J	9.68	J	12.10	J		
Titanium	mg/kg	4150.00		4750.00		2800.00			
Uranium-235	mg/kg	0.03		0.03		0.04			
Uranium-238	mg/kg	4.58		4.80		2.96			
Vanadium	mg/kg	34.30		78.20		108.00			
Ytterbium	mg/kg	2.78		2.57		2.10			
Zinc	mg/kg	58.90		99.40		249.00			

Table H.1 (continued)

Analysis	Units	A horizon result	Qualifier	B horizon result	Qualifier	C horizon result	Qualifier	A lab split result	Qualifier
Location=ORR; Formation=COPPER RIDGE; Site=51,55,62; Sample type=Regular; A=5102; B=5105; C=5108; A lab split=' '									
Aluminum	mg/kg	24200.00		42300.00		79900.00			
Antimony	mg/kg	0.61		1.37		1.77			
Arsenic	mg/kg	13.00	J	42.80	J	59.50	J		
Barium	mg/kg	129.00	J	38.30	J	83.80	J		
Cerium	mg/kg	44.30	J	36.70	J	46.20	J		
Cesium	mg/kg	1.84		5.74		4.88			
Chromium	mg/kg	29.80	J	46.10	J	58.50	J		
Cobalt	mg/kg	7.06	J	3.83		5.89			
Europium	mg/kg	0.57		0.34		0.39			
Gallium	mg/kg	8.35	J	16.10	J	17.00	J		
Gold	mg/kg	0.00	U	0.01	U	0.01	U		
Hafnium	mg/kg	8.17	J	5.54	J	3.80	J		
Iron	mg/kg	12300.00	J	32700.00	J	45100.00	J		
Lanthanum	mg/kg	20.00	J	25.50	J	38.90	J		
Lutetium	mg/kg	0.24	J	0.17	J	0.27	J		
Magnesium	mg/kg	2420.00		2340.00		4540.00			
Manganese	mg/kg	825.00		82.10		139.00			
Mercury	mg/kg	0.82	U	3.27	U	0.90	U		
Potassium	mg/kg	3330.00		4830.00		6980.00			
Rubidium	mg/kg	711.00	U	357.00	U	365.00	U		
Scandium	mg/kg	3.36		6.57		10.10			
Silver	mg/kg	1.28	J	5.60	J	1.54	J		
Sodium	mg/kg	432.00		216.00		157.00			
Terbium	mg/kg	0.45		1.05	U	0.35			
Thorium-232	mg/kg	5.89	J	9.59	J	13.50	J		
Titanium	mg/kg	4390.00		3900.00		4180.00			
Uranium-235	mg/kg	0.03		0.04		0.04			
Uranium-238	mg/kg	3.47		6.05		4.97			
Vanadium	mg/kg	37.80		81.90		124.00			
Ytterbium	mg/kg	2.84		1.95		3.07			
Zinc	mg/kg	51.80		121.00		250.00			
Location=ORR; Formation=COPPER RIDGE; Site=54,64,83; Sample type=Regular; A=5120; B=5123; C=5126; A lab split=' '									
Aluminum	mg/kg	23800.00		63300.00		92200.00			
Antimony	mg/kg	0.83		1.40		1.69			
Arsenic	mg/kg	20.50	J	54.70	J	72.80	J		
Barium	mg/kg	558.00	J	98.90	J	318.00	J		
Cerium	mg/kg	49.10	J	38.30	J	54.90	J		
Cesium	mg/kg	2.13		4.35		4.77			
Chromium	mg/kg	32.60	J	48.00	J	66.20	J		
Cobalt	mg/kg	16.90		6.47		5.17			
Europium	mg/kg	0.55		0.49		0.50			
Gallium	mg/kg	3.56	J	15.30	J	22.90	J		
Gold	mg/kg	0.01	U	0.01	U	0.01			
Hafnium	mg/kg	6.37	J	4.90	J	2.36	J		
Iron	mg/kg	13400.00	J	33700.00	J	44300.00	J		
Lanthanum	mg/kg	23.00	J	46.40	J	36.60	J		
Lutetium	mg/kg	0.24	J	0.20	J	0.19	J		
Magnesium	mg/kg	1490.00		3260.00		5730.00			
Manganese	mg/kg	1420.00		192.00		120.00			
Mercury	mg/kg	0.72	U	0.86	U	1.02	U		
Potassium	mg/kg	4310.00		5990.00		9410.00			
Rubidium	mg/kg	1650.00	U	439.00	U	1350.00	U		
Scandium	mg/kg	3.93		8.09		12.70			
Silver	mg/kg	1.10	J	1.49	J	1.83	J		
Sodium	mg/kg	464.00		271.00		151.00			
Terbium	mg/kg	0.50		0.34		0.35			
Thorium-232	mg/kg	6.47	J	9.98	J	12.20	J		
Titanium	mg/kg	4380.00		4820.00		2800.00			
Uranium-235	mg/kg	0.03		0.04		0.05			
Uranium-238	mg/kg	5.63		4.52		6.36			
Vanadium	mg/kg	43.10		88.50		126.00			
Ytterbium	mg/kg	1.75		2.95		2.91			
Zinc	mg/kg	83.90		169.00		263.00			

Table H.1 (continued)

Analysis	Units	A horizon result	Qualifier	B horizon result	Qualifier	C horizon result	Qualifier	A lab split result	Qualifier
Location=ORR; Formation=COPPER RIDGE; Site=58,59,91; Sample type=Regular; A=5093; B=5096; C=5099; A lab split=' '									
Aluminum	mg/kg	26100.00		63400.00		113000.00			
Antimony	mg/kg	1.44		1.82		2.45			
Arsenic	mg/kg	40.00	J	79.70	J	107.00	J		
Barium	mg/kg	338.00	J	107.00	J	111.00	J		
Cerium	mg/kg	49.60	J	38.30	J	45.70	J		
Cesium	mg/kg	2.26		5.32		6.17			
Chromium	mg/kg	59.20	J	57.60	J	86.60	J		
Cobalt	mg/kg	7.26	J	4.34	J	4.07	J		
Europium	mg/kg	0.68		0.41		0.36			
Gallium	mg/kg	8.85	J	13.80	J	8.60	J		
Gold	mg/kg	0.00	U	0.01	U	0.01	U		
Hafnium	mg/kg	7.89	J	5.60	J	3.23	J		
Iron	mg/kg	26300.00	J	40300.00	J	53500.00	J		
Lanthanum	mg/kg	21.00	J	28.20	J	41.60	J		
Lutetium	mg/kg	0.34	J	0.27	J	0.24	J		
Magnesium	mg/kg	1740.00		3570.00		5750.00			
Manganese	mg/kg	1190.00		162.00		108.00			
Mercury	mg/kg	0.98	U	1.31	U	1.48	U		
Potassium	mg/kg	3890.00		6110.00		8690.00			
Rubidium	mg/kg	941.00	U	337.00	U	403.00	U		
Scandium	mg/kg	4.24		9.16		14.40			
Silver	mg/kg	1.56	J	2.29	J	2.66	J		
Sodium	mg/kg	451.00		269.00		169.00			
Terbium	mg/kg	0.55		0.34		0.48	U		
Thorium-232	mg/kg	7.81	J	12.00	J	15.80	J		
Titanium	mg/kg	4730.00		4940.00		3690.00			
Uranium-235	mg/kg	0.03		0.04		0.05			
Uranium-238	mg/kg	4.66		5.65		6.42			
Vanadium	mg/kg	49.00		115.00		168.00			
Ytterbium	mg/kg	2.04		2.37	U	2.73	U		
Zinc	mg/kg	73.00		154.00		243.00			
Location=ORR; Formation=DISMAL GAP; Site=10,33,35; Sample type=Regular; A=5021; B=5024; C=5027; A lab split=' '									
Aluminum	mg/kg	49100.00		77900.00		90700.00			
Antimony	mg/kg	0.48		0.20		0.33			
Arsenic	mg/kg	5.34	J	5.33	J	4.93	J		
Barium	mg/kg	138.00	J	254.00	J	243.00	J		
Cerium	mg/kg	43.00	J	55.10	J	55.90	J		
Cesium	mg/kg	2.55		4.22		4.36			
Chromium	mg/kg	55.50	J	78.20	J	80.30	J		
Cobalt	mg/kg	12.30	J	9.60	J	11.70	J		
Europium	mg/kg	0.56		0.54		0.54			
Gallium	mg/kg	8.93	J	16.60	J	24.80	J		
Gold	mg/kg	0.01	U	0.01	U	0.01	U		
Hafnium	mg/kg	9.67	J	7.42	J	5.59	J		
Iron	mg/kg	25800.00	J	38200.00	J	37900.00	J		
Lanthanum	mg/kg	28.30	J	37.40	J	36.60	J		
Lutetium	mg/kg	0.35	J	0.29	J	0.29	J		
Magnesium	mg/kg	5300.00		6800.00		7810.00			
Manganese	mg/kg	607.00		173.00		264.00			
Mercury	mg/kg	0.60	U	0.77	U	0.74	U		
Potassium	mg/kg	14600.00		19600.00		21400.00			
Rubidium	mg/kg	440.00	U	423.00	U	391.00	U		
Scandium	mg/kg	7.38		10.90		12.70			
Silver	mg/kg	1.15	J	1.52	J	1.50	J		
Sodium	mg/kg	2710.00		2260.00		2890.00			
Terbium	mg/kg	0.35		0.40		0.26			
Thorium-232	mg/kg	9.40	J	11.90	J	12.00	J		
Titanium	mg/kg	5230.00		5740.00		5260.00			
Uranium-235	mg/kg	0.03		0.02		0.02			
Uranium-238	mg/kg	4.14		3.11		1.48			
Vanadium	mg/kg	56.50		85.50		93.70			
Ytterbium	mg/kg	1.47		2.38		1.51			

Table H.1 (continued)

Analysis	Units	A horizon result	Qualifier	B horizon result	Qualifier	C horizon result	Qualifier	A lab split result	Qualifier
Location=ORR; Formation=DISMAL GAP; Site=11,27,41; Sample type=Regular; A=5003; B=5006; C=5009; A lab split=' '									
Aluminum	mg/kg	45200.00		77000.00		103000.00			
Antimony	mg/kg	0.52		0.36		0.28			
Arsenic	mg/kg	5.49	J	4.44	J	4.02	J		
Barium	mg/kg	142.00	J	245.00	J	267.00	J		
Cerium	mg/kg	41.90	J	54.80	J	66.90	J		
Cesium	mg/kg	2.31		4.55		4.89			
Chromium	mg/kg	62.90	J	84.50	J	95.80	J		
Cobalt	mg/kg	15.30	J	8.77	J	9.62	J		
Europium	mg/kg	0.49		0.52		0.65			
Gallium	mg/kg	11.60	J	22.10	J	22.30	J		
Gold	mg/kg	0.01	U	0.01	U	0.01	U		
Hafnium	mg/kg	9.69	J	6.66	J	5.98	J		
Iron	mg/kg	27100.00	J	36700.00	J	45200.00	J		
Lanthanum	mg/kg	27.70	J	38.20	J	45.50	J		
Lutetium	mg/kg	0.24	J	0.30	J	0.25	J		
Magnesium	mg/kg	4060.00		8050.00		10600.00			
Manganese	mg/kg	627.00		129.00		117.00			
Mercury	mg/kg	0.61	U	0.24	U	0.82	U		
Potassium	mg/kg	13000.00		19700.00		26500.00			
Rubidium	mg/kg	425.00	U	248.00	U	312.00	U		
Scandium	mg/kg	7.20		11.10		15.10			
Silver	mg/kg	1.18	J	0.49	J	1.70	J		
Sodium	mg/kg	535.00		549.00		466.00			
Terbium	mg/kg	0.35		0.58		0.27			
Thorium-232	mg/kg	9.41	J	11.40	J	12.90	J		
Titanium	mg/kg	5030.00		5410.00		5480.00			
Uranium-235	mg/kg	0.03		0.02		0.02			
Uranium-238	mg/kg	3.87		3.96		3.39			
Vanadium	mg/kg	48.60		84.10		109.00			
Ytterbium	mg/kg	1.94		2.46		1.78			
Location=ORR; Formation=DISMAL GAP; Site=19,22,32; Sample type=Regular; A=5012; B=5015; C=5018; A lab split=' '									
Aluminum	mg/kg	8330.00		90400.00		94000.00			
Antimony	mg/kg	0.45		0.39		0.28			
Arsenic	mg/kg	4.84	J	5.69	J	4.61	J		
Barium	mg/kg	31.80	J	231.00	J	196.00	J		
Cerium	mg/kg	56.70	J	78.80	J	72.10	J		
Cesium	mg/kg	3.17		4.80		4.39			
Chromium	mg/kg	61.40	J	82.50	J	80.10	J		
Cobalt	mg/kg	15.70	J	22.50	J	13.40	J		
Europium	mg/kg	0.73		0.92		1.00			
Gallium	mg/kg	13.80	J	20.20	J	23.00	J		
Gold	mg/kg	0.01	U	0.01	U	0.01	U		
Hafnium	mg/kg	9.91	J	6.24	J	5.83	J		
Iron	mg/kg	26900.00	J	41900.00	J	40000.00	J		
Lanthanum	mg/kg	34.50	J	41.50	J	41.30	J		
Lutetium	mg/kg	0.43	J	0.20	J	0.23	J		
Magnesium	mg/kg	1140.00		9000.00		7790.00			
Manganese	mg/kg	148.00		379.00		771.00			
Mercury	mg/kg	0.65	U	0.78	U	0.78	U		
Potassium	mg/kg	16500.00		21200.00		22200.00			
Rubidium	mg/kg	172.00	U	447.00	U	1140.00	U		
Scandium	mg/kg	8.51		13.00		14.40			
Silver	mg/kg	1.26	J	1.56	J	1.58	J		
Sodium	mg/kg	888.00		1040.00		1260.00			
Terbium	mg/kg	0.92		0.69		0.32			
Thorium-232	mg/kg	10.50	J	13.00	J	12.00	J		
Titanium	mg/kg	834.00		5050.00		3460.00			
Uranium-235	mg/kg	0.03		0.02		0.02			
Uranium-238	mg/kg	3.33		2.74		3.03			
Vanadium	mg/kg	9.92		89.80		92.30			
Ytterbium	mg/kg	1.91		0.82		1.72	U		

Table H.1 (continued)

Analysis	Units	A horizon result	Qualifier	B horizon result	Qualifier	C horizon result	Qualifier	A lab split result	Qualifier
Location=ORR; Formation=DISMAL GAP; Site=2,26,43; Sample type=Regular; A=5030; B=5033; C=5036; A lab split=' '									
Aluminum	mg/kg	52000.00		76200.00		84500.00			
Antimony	mg/kg	0.51		0.26		0.19	U		
Arsenic	mg/kg	4.53	J	6.23	J	4.95	J		
Barium	mg/kg	546.00	J	159.00	J	246.00	J		
Cerium	mg/kg	56.00	J	53.60	J	70.00	J		
Cesium	mg/kg	2.84		4.64		4.57			
Chromium	mg/kg	64.20	J	77.70	J	87.50	J		
Cobalt	mg/kg	19.00	J	11.40	J	50.40	J		
Europium	mg/kg	0.60		0.65		0.94			
Gallium	mg/kg	15.20	J	15.90	J	19.10	J		
Gold	mg/kg	0.01	U	0.01	U	0.01	U		
Hafnium	mg/kg	10.10	J	7.32	J	7.14	J		
Iron	mg/kg	26400.00	J	37200.00	J	42700.00	J		
Lanthanum	mg/kg	32.80	J	40.40	J	44.40	J		
Lutetium	mg/kg	0.43	J	0.32	J	0.25	J		
Magnesium	mg/kg	4120.00		10400.00		8490.00			
Manganese	mg/kg	1060.00		217.00		2900.00			
Mercury	mg/kg	0.70	U	1.01	U	0.97	U		
Potassium	mg/kg	17300.00		21200.00		22000.00			
Rubidium	mg/kg	1080.00	U	1240.00	U	1750.00	U		
Scandium	mg/kg	8.48		11.70		14.20			
Silver	mg/kg	1.33	J	2.04	J	1.93	J		
Sodium	mg/kg	836.00		716.00		843.00			
Terbium	mg/kg	0.42		0.41	U	0.39	U		
Thorium-232	mg/kg	9.74	J	12.40	J	13.40	J		
Titanium	mg/kg	5900.00		5820.00		4340.00			
Uranium-235	mg/kg	0.03		0.02		0.02			
Uranium-238	mg/kg	4.74		2.60		3.48			
Vanadium	mg/kg	56.10		94.30		76.20			
Ytterbium	mg/kg	1.47		2.62	U	1.69			
Location=ORR; Formation=DISMAL GAP; Site=2,26,43; Sample type=Field Duplicate; A=5039; B=5042; C=5045; A lab split=' '									
Aluminum	mg/kg	47800.00		68400.00		93000.00			
Antimony	mg/kg	0.40		0.20	U	0.23			
Arsenic	mg/kg	5.60	J	3.99	J	5.11	J		
Barium	mg/kg	179.00	J	262.00	J	307.00	J		
Cerium	mg/kg	47.50	J	101.00	J	54.40	J		
Cesium	mg/kg	2.71		4.96		4.24			
Chromium	mg/kg	60.00	J	103.00	J	72.10	J		
Cobalt	mg/kg	18.40	J	14.70	J	17.90	J		
Europium	mg/kg	0.58		1.41		0.71			
Gallium	mg/kg	13.90	J	28.20	J	18.00	J		
Gold	mg/kg	0.01	U	0.01	U	0.01	U		
Hafnium	mg/kg	9.74	J	5.99	J	7.62	J		
Iron	mg/kg	25300.00	J	41800.00	J	33600.00	J		
Lanthanum	mg/kg	31.60	J	58.60	J	37.90	J		
Lutetium	mg/kg	0.32	J	0.53	J	0.31	J		
Magnesium	mg/kg	5470.00		7750.00		10000.00			
Manganese	mg/kg	993.00		456.00		348.00			
Mercury	mg/kg	0.72	U	0.98	U	0.84	U		
Potassium	mg/kg	16000.00		27300.00		19800.00			
Rubidium	mg/kg	512.00	U	424.00	U	410.00	U		
Scandium	mg/kg	8.29		14.90		10.90			
Silver	mg/kg	1.38	J	1.95	J	1.65	J		
Sodium	mg/kg	830.00		621.00		733.00			
Terbium	mg/kg	1.00		1.24		0.39			
Thorium-232	mg/kg	9.65	J	13.20	J	11.40	J		
Titanium	mg/kg	4670.00		5500.00		5300.00			
Uranium-235	mg/kg	0.03		0.02		0.01			
Uranium-238	mg/kg	4.73		4.27		3.44			
Vanadium	mg/kg	59.60		77.20		88.60			
Ytterbium	mg/kg	3.33		0.49		2.24	U		

Table H.1 (continued)

Analysis	Units	A horizon result	Qualifier	B horizon result	Qualifier	C horizon result	Qualifier	A lab split result	Qualifier
Location=ORR; Formation=NOLICHUCKY; Site=15,23,25; Sample type=Regular; A=5057; B=5060; C=5063; A lab split=' '									
Aluminum	mg/kg	57100.00		90500.00		89000.00			
Antimony	mg/kg	0.62		0.41		0.33			
Arsenic	mg/kg	6.83	J	6.69	J	5.60	J		
Barium	mg/kg	195.00	J	115.00	J	183.00	J		
Cerium	mg/kg	49.00	J	51.30	J	78.30	J		
Cesium	mg/kg	3.43		6.56		5.67			
Chromium	mg/kg	75.10	J	90.10	J	93.40	J		
Cobalt	mg/kg	12.60	J	9.49	J	13.50	J		
Europium	mg/kg	0.55		0.79		0.73			
Gallium	mg/kg	13.70	J	28.00	J	41.00	J		
Gold	mg/kg	0.01	U	0.01	U	0.01	U		
Hafnium	mg/kg	9.17	J	5.94	J	5.02	J		
Iron	mg/kg	34200.00	J	47400.00	J	52800.00	J		
Lanthanum	mg/kg	32.70	J	38.70	J	43.00	J		
Lutetium	mg/kg	0.37	J	0.22	J	0.36	J		
Magnesium	mg/kg	4730.00		7360.00		7970.00			
Manganese	mg/kg	494.00		134.00		243.00			
Mercury	mg/kg	0.74	U	0.90	U	0.34			
Potassium	mg/kg	16100.00		20900.00		28400.00			
Rubidium	mg/kg	382.00	U	364.00	U	403.00	U		
Scandium	mg/kg	8.74		12.70		15.10			
Silver	mg/kg	1.41	J	1.81	J	2.13	J		
Sodium	mg/kg	356.00		298.00		343.00			
Terbium	mg/kg	0.21		0.37	U	0.43	U		
Thorium-232	mg/kg	11.70	J	15.10	J	15.80	J		
Titanium	mg/kg	4920.00		5060.00		4610.00			
Uranium-235	mg/kg	0.03		0.02		0.02			
Uranium-238	mg/kg	4.51		2.69		3.20			
Vanadium	mg/kg	67.00		99.70		84.60			
Ytterbium	mg/kg	3.19		2.48	U	1.41			
Location=ORR; Formation=NOLICHUCKY; Site=16,28,42; Sample type=Regular; A=5066; B=5069; C=5072; A lab split=' '									
Aluminum	mg/kg	42800.00		72700.00		85200.00			
Antimony	mg/kg	0.48		0.31		0.34			
Arsenic	mg/kg	5.96	J	7.98	J	5.57	J		
Barium	mg/kg	186.00	J	108.00	J	7860.00	J		
Cerium	mg/kg	48.60	J	56.80	J	73.00	J		
Cesium	mg/kg	2.36		4.32		6.28			
Chromium	mg/kg	75.90	J	85.30	J	90.80	J		
Cobalt	mg/kg	14.10	J	18.40	J	25.00	J		
Europium	mg/kg	0.61		0.62		0.60			
Gallium	mg/kg	16.40	J	15.00	J	21.50	J		
Gold	mg/kg	0.01	U	0.01	U	0.01	U		
Hafnium	mg/kg	10.80	J	7.23	J	5.96	J		
Iron	mg/kg	30900.00	J	49100.00	J	54700.00	J		
Lanthanum	mg/kg	32.30	J	40.80	J	40.10	J		
Lutetium	mg/kg	0.33	J	0.15	J	0.29	J		
Magnesium	mg/kg	3730.00		6660.00		7840.00			
Manganese	mg/kg	579.00		387.00		655.00			
Mercury	mg/kg	0.79	U	0.97	U	1.23	U		
Potassium	mg/kg	16000.00		20100.00		28100.00			
Rubidium	mg/kg	366.00	U	401.00	U	661.00	U		
Scandium	mg/kg	8.47		12.10		14.10			
Silver	mg/kg	1.50	J	1.89	J	1.18	J		
Sodium	mg/kg	367.00		337.00		317.00			
Terbium	mg/kg	0.40		0.39	U	0.29			
Thorium-232	mg/kg	11.90	J	15.80	J	14.40	J		
Titanium	mg/kg	4920.00		5510.00		9880.00			
Uranium-235	mg/kg	0.03		0.02		0.02			
Uranium-238	mg/kg	3.11		3.04		2.84			
Vanadium	mg/kg	50.00		83.70		89.10			
Ytterbium	mg/kg	2.29		0.28		2.40			
Zinc	mg/kg					88.50			

Table H.1 (continued)

Analysis	Units	A horizon result	Qualifier	B horizon result	Qualifier	C horizon result	Qualifier	A lab split result	Qualifier
Location=ORR; Formation=NOLICHUCKY; Site=3,13,24; Sample type=Regular; A=5084; B=5087; C=5090; A lab split=' '									
Aluminum	mg/kg	50400.00		114000.00		103000.00			
Antimony	mg/kg	0.51		0.63		0.62			
Arsenic	mg/kg	4.51	J	7.42	J	7.81	J		
Barium	mg/kg	13100.00	J	6260.00	J	5740.00	J		
Cerium	mg/kg	59.30	J	79.50	J	152.00	J		
Cesium	mg/kg	3.08		5.76		8.88			
Chromium	mg/kg	58.00	J	86.40	J	128.00	J		
Cobalt	mg/kg	18.20	J	37.80	J	28.10	J		
Europium	mg/kg	0.51		0.75		1.31			
Gallium	mg/kg	18.10	J	26.10	J	38.30	J		
Gold	mg/kg	0.01	U	0.01	U	0.01	U		
Hafnium	mg/kg	11.10	J	6.75	J	9.51	J		
Iron	mg/kg	25300.00	J	48600.00	J	69700.00	J		
Lanthanum	mg/kg	31.20	J	41.70	J	63.90	J		
Lutetium	mg/kg	0.33	J	0.27	J	0.62	J		
Magnesium	mg/kg	4760.00		10400.00		9230.00			
Manganese	mg/kg	770.00		402.00		332.00			
Mercury	mg/kg	1.10	U	1.28	U	1.64	U		
Potassium	mg/kg	16600.00		23800.00		42800.00			
Rubidium	mg/kg	896.00	U	541.00	U	491.00	U		
Scandium	mg/kg	7.88		13.20		22.60			
Silver	mg/kg	1.10	J	2.25	J	2.96	J		
Sodium	mg/kg	442.00		342.00		484.00			
Terbium	mg/kg	0.42		0.36		0.54			
Thorium-232	mg/kg	11.40	J	15.00	J	24.00	J		
Titanium	mg/kg	9230.00		9560.00		8800.00			
Uranium-235	mg/kg	0.02		0.02		0.02			
Uranium-238	mg/kg	4.13		3.58		5.16			
Vanadium	mg/kg	47.30		99.50		88.60			
Ytterbium	mg/kg	3.14		3.52		3.86			
Zinc	mg/kg	58.20		73.10		144.00			
Location=ORR; Formation=NOLICHUCKY; Site=5,21,31; Sample type=Regular; A=5075; B=5078; C=5081; A lab split=' '									
Aluminum	mg/kg	65900.00		87200.00		108000.00			
Antimony	mg/kg	0.45		0.41		0.26			
Arsenic	mg/kg	4.94	J	5.91	J	5.51	J		
Barium	mg/kg	5640.00	J	5430.00	J	7530.00	J		
Cerium	mg/kg	63.00	J	74.00	J				
Cesium	mg/kg	3.04		4.39					
Chromium	mg/kg	63.00	J	81.00	J				
Cobalt	mg/kg	16.60	J	12.60	J				
Europium	mg/kg	0.65		0.84					
Gallium	mg/kg	13.80	J	21.10	J	20.10	J		
Gold	mg/kg	0.01	U	0.01	U	0.01	U		
Hafnium	mg/kg	9.11	J	6.81	J				
Iron	mg/kg	27400.00	J	43100.00	J				
Lanthanum	mg/kg	32.30	J	40.40	J	43.10	J		
Lutetium	mg/kg	0.37	J	0.31	J				
Magnesium	mg/kg	4630.00		7750.00		8700.00			
Manganese	mg/kg	620.00		258.00		457.00			
Mercury	mg/kg	0.28	U	1.02	U				
Potassium	mg/kg	15500.00		20400.00		25800.00			
Rubidium	mg/kg	471.00	U	464.00	U	637.00	U		
Scandium	mg/kg	8.38		11.90					
Silver	mg/kg	0.48	J	0.29	J				
Sodium	mg/kg	463.00		411.00		410.00			
Terbium	mg/kg	0.45		0.36					
Thorium-232	mg/kg	11.70	J	14.00	J				
Titanium	mg/kg	10800.00		11600.00		11900.00			
Uranium-235	mg/kg	0.03		0.02		0.02			
Uranium-238	mg/kg	3.76		3.38		2.71			
Vanadium	mg/kg	66.60		90.50		107.00			
Ytterbium	mg/kg	3.10		2.55					
Zinc	mg/kg	67.30		74.80					

Table H.1 (continued)

Analysis	Units	A horizon result	Qualifier	B horizon result	Qualifier	C horizon result	Qualifier	A lab split result	Qualifier
Location=ROA; Formation=COPPER RIDGE; Site=33,35,44; Sample type=Regular; A=6048; B=6051; C=6054; A lab split=' '									
Aluminum	mg/kg	12.00	U	45100.00		95700.00			
Antimony	mg/kg	0.73		0.99		1.76			
Arsenic	mg/kg	13.10	J	20.50	J	38.20	J		
Barium	mg/kg	1.68	J	164.00	J	110.00	J		
Cerium	mg/kg	38.40	J	33.20	J	46.00	J		
Cesium	mg/kg	2.00		3.53		4.84			
Chromium	mg/kg	29.90	J	46.70	J	61.00	J		
Cobalt	mg/kg	10.30	J	8.42	J	8.71	J		
Europium	mg/kg	0.60		0.48		0.48			
Gallium	mg/kg	16.50	J	15.90	J	24.60	J		
Gold	mg/kg	0.01	U	0.01	U	0.00			
Hafnium	mg/kg	5.24	J	5.37	J	3.90	J		
Iron	mg/kg	16900.00	J	27800.00	J	49300.00	J		
Lanthanum	mg/kg	19.70	J	19.40	J	26.60	J		
Lutetium	mg/kg	0.20	J	0.21	J	0.21	J		
Magnesium	mg/kg	16.20	U	2520.00		3460.00			
Manganese	mg/kg	0.06	U	209.00		107.00			
Mercury	mg/kg	0.71	U	0.94	U	0.39			
Potassium	mg/kg	4340.00		4780.00		4610.00			
Rubidium	mg/kg			401.00	U	471.00	U		
Scandium	mg/kg	3.61		7.54		12.40			
Silver	mg/kg	1.18	J	1.67	J	1.88	J		
Sodium	mg/kg	426.00		313.00		169.00			
Terbium	mg/kg	0.47		0.31		0.29			
Thorium-232	mg/kg	5.48	J	8.77	J	13.20	J		
Titanium	mg/kg	6.31	U	4240.00		4480.00			
Uranium-235	mg/kg	0.02		0.03		0.04			
Uranium-238	mg/kg	2.86		4.48		5.58			
Vanadium	mg/kg	0.05	U	77.70		146.00			
Ytterbium	mg/kg	2.25		2.32		1.34			
Zinc	mg/kg	55.20		92.50		122.00			
Location=ROA; Formation=COPPER RIDGE; Site=34,39,41; Sample type=Regular; A=6086; B=6089; C=6092; A lab split=' '									
Aluminum	mg/kg	20400.00		50800.00		66100.00			
Antimony	mg/kg	0.86		1.07		1.64			
Arsenic	mg/kg	17.10	J	14.60	J	47.40	J		
Barium	mg/kg	302.00	J	113.00	J	60.40	J		
Cerium	mg/kg	28.60	J	17.00	J	35.80	J		
Cesium	mg/kg	1.74		1.81		3.37			
Chromium	mg/kg	27.90	J	20.30	J	49.50	J		
Cobalt	mg/kg	5.54	J	2.61	J	4.47	J		
Europium	mg/kg	0.40		0.21		0.37			
Gallium	mg/kg	15.60	J	12.50	J	20.00	J		
Gold	mg/kg	0.01	U	0.00	U	0.01	U		
Hafnium	mg/kg	4.96	J	1.90	J	3.07	J		
Iron	mg/kg	13400.00	J	17300.00	J	47800.00	J		
Lanthanum	mg/kg	15.20	J	10.80	J	29.90	J		
Lutetium	mg/kg	0.16	J	0.06	J	0.17	J		
Magnesium	mg/kg	936.00		2170.00		2700.00			
Manganese	mg/kg	959.00		233.00		122.00			
Mercury	mg/kg	0.22	U	0.52	U	1.04	U		
Potassium	mg/kg	3050.00		1340.00		3720.00			
Rubidium	mg/kg	798.00	U	299.00	U	250.00	U		
Scandium	mg/kg	3.47		3.73		10.80			
Silver	mg/kg	0.36	J	0.89	J	1.81	J		
Sodium	mg/kg	354.00		90.20		147.00			
Terbium	mg/kg	0.38		0.17		0.32	U		
Thorium-232	mg/kg	4.45	J	4.36	J	11.00	J		
Titanium	mg/kg	3970.00		3660.00		2850.00			
Uranium-235	mg/kg	0.02		0.03		0.04			
Uranium-238	mg/kg	3.77		2.02		6.07			
Vanadium	mg/kg	34.80		93.10		115.00			
Ytterbium	mg/kg	1.49		0.77	U	0.14			
Zinc	mg/kg	58.50		53.60		122.00			

Table H.1 (continued)

Analysis	Units	A horizon result	Qualifier	B horizon result	Qualifier	C horizon result	Qualifier	A lab split result	Qualifier
Location=ROA; Formation=COPPER RIDGE; Site=40,42,43; Sample type=Regular; A=6057; B=6060; C=6063; A lab split=' '									
Aluminum	mg/kg	16300.00		42000.00		60300.00			
Antimony	mg/kg	0.58		0.85		1.18			
Arsenic	mg/kg	4.50	J	12.40	J	22.80	J		
Barium	mg/kg	132.00	J	86.50	J	92.50	J		
Cerium	mg/kg	27.90	J	19.80	J	17.20	J		
Cesium	mg/kg	1.65		3.25		3.55			
Chromium	mg/kg	23.80	J	37.30	J	48.00	J		
Cobalt	mg/kg	2.59	J	3.95	J	4.27	J		
Europium	mg/kg	0.39		0.35		0.21			
Gallium	mg/kg	15.20	J	17.50	J	15.00	J		
Gold	mg/kg	0.01	U	0.01	U	0.00			
Hafnium	mg/kg	6.63	J	5.06	J	3.14	J		
Iron	mg/kg	8370.00	J	20600.00	J	35000.00	J		
Lanthanum	mg/kg	14.80	J	12.70	J	11.80	J		
Lutetium	mg/kg	0.17	J	0.16	J	0.08	J		
Magnesium	mg/kg	818.00		2170.00		3200.00			
Manganese	mg/kg	232.00		78.50		53.50			
Mercury	mg/kg	0.61	U	0.79	U	0.78	U		
Potassium	mg/kg	2960.00		3150.00		3160.00			
Rubidium	mg/kg	253.00	U	263.00	U	413.00	U		
Scandium	mg/kg	2.52		4.33		5.99			
Silver	mg/kg	0.94	J	1.33	J	1.32	J		
Sodium	mg/kg	431.00		224.00		148.00			
Terbium	mg/kg	0.42		0.42		0.24	U		
Thorium-232	mg/kg	4.28	J	6.88	J	9.76	J		
Titanium	mg/kg	3920.00		4510.00		3550.00			
Uranium-235	mg/kg	0.02		0.02		0.03			
Uranium-238	mg/kg	2.80		3.88		3.79			
Vanadium	mg/kg	30.00		76.70		113.00			
Ytterbium	mg/kg	1.35		1.34		1.42			
Zinc	mg/kg	34.20		51.10		42.10			
Location=ROA; Formation=COPPER RIDGE; Site=45,46,47; Sample type=Regular; A=6075; B=6072; C=6066; A lab split=' '									
Aluminum	mg/kg	18400.00		34900.00		217.00			
Antimony	mg/kg	0.56		1.27		1.69			
Arsenic	mg/kg	6.07	J	23.00	J	31.70	J		
Barium	mg/kg	353.00	J	168.00	J	3.39	J		
Cerium	mg/kg	42.90	J	25.60	J	33.20	J		
Cesium	mg/kg	2.20		3.32		5.74			
Chromium	mg/kg	28.40	J	43.90	J	65.10	J		
Cobalt	mg/kg	7.17	J	3.90	J	4.60	J		
Europium	mg/kg	0.58		0.40		0.37			
Gallium	mg/kg	21.00	J	19.10	J	17.30	J		
Gold	mg/kg	0.01	U	0.01	U	0.01	U		
Hafnium	mg/kg	6.69	J	5.46	J	6.08	J		
Iron	mg/kg	9830.00	J	23400.00	J	42600.00	J		
Lanthanum	mg/kg	19.80	J	14.40	J	19.20	J		
Lutetium	mg/kg	0.23	J	0.17	J	0.25	J		
Magnesium	mg/kg	956.00		2020.00		38.20			
Manganese	mg/kg	1260.00		139.00		0.12			
Mercury	mg/kg	0.73	U	0.74	U	0.33	U		
Potassium	mg/kg	2690.00		3200.00		5080.00			
Rubidium	mg/kg	936.00	U	396.00	U	13.20	U		
Scandium	mg/kg	3.08		4.45		8.94			
Silver	mg/kg	1.15	J	1.19	J	0.56	J		
Sodium	mg/kg	414.00		270.00		217.00			
Terbium	mg/kg	0.59		0.32		0.31			
Thorium-232	mg/kg	5.16	J	7.41	J	13.90	J		
Titanium	mg/kg	5140.00		4340.00		25.70			
Uranium-235	mg/kg	0.02		0.03		0.03			
Uranium-238	mg/kg	3.20		3.41		5.95			
Vanadium	mg/kg	36.60		65.00		0.06	U		
Ytterbium	mg/kg	2.07		1.77		1.65			
Zinc	mg/kg	31.50		35.30		55.10			

Table H.1 (continued)

Analysis	Units	A horizon result	Qualifier	B horizon result	Qualifier	C horizon result	Qualifier	A lab split result	Qualifier
Location=ROA; Formation=COPPER RIDGE; Site=45,46,47; Sample type=Field Duplicate; A=6078; B=6081; C=6069 A lab split=' '									
Aluminum	mg/kg	20600.00		34100.00		51300.00			
Antimony	mg/kg	1.19		0.83		1.22			
Arsenic	mg/kg	18.70	J	13.70	J	23.70	J		
Barium	mg/kg	268.00	J	117.00	J	81.90	J		
Cerium	mg/kg	49.90	J	26.10	J	23.00	J		
Cesium	mg/kg	2.13		3.35		4.43			
Chromium	mg/kg	56.90	J	36.70	J	42.60	J		
Cobalt	mg/kg	8.55	J	3.18	J	3.36	J		
Europium	mg/kg	0.57		0.35		0.28			
Gallium	mg/kg	21.40	J	20.60	J	17.20	J		
Gold	mg/kg	0.01	U	0.01	U	0.01	U		
Hafnium	mg/kg	6.96	J	5.32	J	3.97	J		
Iron	mg/kg	28100.00	J	20700.00	J	30100.00	J		
Lanthanum	mg/kg	20.40	J	14.30	J	13.90	J		
Lutetium	mg/kg	0.22	J	0.18	J	0.16	J		
Magnesium	mg/kg	1120.00		2000.00		2710.00			
Manganese	mg/kg	1150.00		117.00		67.90			
Mercury	mg/kg	0.77	U	1.07	U	0.79	U		
Potassium	mg/kg	2740.00		2980.00		3290.00			
Rubidium	mg/kg	858.00	U	79.20		339.00	U		
Scandium	mg/kg	3.31		4.75		6.22			
Silver	mg/kg	1.19	J	1.82	J	1.30	J		
Sodium	mg/kg	403.00		235.00		154.00			
Terbium	mg/kg	0.67		0.25		0.29			
Thorium-232	mg/kg	7.87	J	7.40	J	9.57	J		
Titanium	mg/kg	4070.00		4200.00		4190.00			
Uranium-235	mg/kg	0.02		0.03		0.03			
Uranium-238	mg/kg	3.98		3.62		4.07			
Vanadium	mg/kg	35.50		66.60		98.20			
Ytterbium	mg/kg	1.27		1.46	U	1.01	U		
Zinc	mg/kg	31.30		17.30		27.00			
Location=ROA; Formation=DISMAL GAP; Site=10,13,14; Sample type=Regular; A=6030; B=6033; C=6036; A lab split=' '									
Aluminum	mg/kg	48700.00		94800.00		97000.00			
Antimony	mg/kg	0.57		0.42		0.27			
Arsenic	mg/kg	7.05	J	6.80	J	5.53	J		
Barium	mg/kg	10900.00	J	1880.00	J	5200.00	J		
Cerium	mg/kg	60.60	J	80.40	J	87.40	J		
Cesium	mg/kg	2.58		5.64		5.51			
Chromium	mg/kg	70.00	J	94.70	J	96.70	J		
Cobalt	mg/kg	31.00	J	14.40	J	17.10	J		
Europium	mg/kg	0.72		0.78		0.97			
Gallium	mg/kg	15.60	J	30.20	J	31.30	J		
Gold	mg/kg	0.01	U	0.01	U	0.01	U		
Hafnium	mg/kg	9.68	J	5.95	J	5.09	J		
Iron	mg/kg	31800.00	J	54500.00	J	52300.00	J		
Lanthanum	mg/kg	30.40	J	44.50	J	45.80	J		
Lutetium	mg/kg	0.36	J	0.42	J	0.33	J		
Magnesium	mg/kg	4580.00		8730.00		8890.00			
Manganese	mg/kg	1430.00		196.00		326.00			
Mercury	mg/kg	1.11	U	1.26	U	1.40	U		
Potassium	mg/kg	11400.00		22100.00		27800.00			
Rubidium	mg/kg	925.00	U	436.00	U	441.00	U		
Scandium	mg/kg	7.13		13.80		15.70			
Silver	mg/kg	1.85	J	2.22	J	2.50	J		
Sodium	mg/kg	630.00		471.00		836.00			
Terbium	mg/kg	0.49		0.53		0.67			
Thorium-232	mg/kg	10.90	J	14.70	J	15.30	J		
Titanium	mg/kg	1460.00	U	10200.00		637.00	U		
Uranium-235	mg/kg	0.02		0.02		0.02			
Uranium-238	mg/kg	2.90		3.29		2.86			
Vanadium	mg/kg	51.90		91.70		86.70			
Ytterbium	mg/kg	4.86		0.20		0.41			
Zinc	mg/kg	83.10		89.00		97.80			

Table H.1 (continued)

Analysis	Units	A horizon result	Qualifier	B horizon result	Qualifier	C horizon result	Qualifier	A lab split result	Qualifier
Location=ROA; Formation=DISMAL GAP; Site=10,13,14; Sample type=Field Duplicate; A=6039; B=6042; C=6045; A lab split=' '									
Aluminum	mg/kg	61600.00		108000.00		78300.00			
Antimony	mg/kg	0.64		0.43		0.16	U		
Arsenic	mg/kg	7.14	J	6.62	J	5.01	J		
Barium	mg/kg	15300.00	J	6300.00	J	229.00	J		
Cerium	mg/kg	63.60	J	81.20	J	97.70	J		
Cesium	mg/kg	3.00		5.41		5.81			
Chromium	mg/kg	65.00	J	97.30	J	96.30	J		
Cobalt	mg/kg	38.40	J	13.50	J	25.50	J		
Europium	mg/kg	0.65		0.74		1.12			
Gallium	mg/kg	8.85	J	22.60	J	27.10	J		
Gold	mg/kg	0.01	U	0.01	U	0.01	U		
Hafnium	mg/kg	9.65	J	4.99	J	4.62	J		
Iron	mg/kg	32400.00	J	53700.00	J	51800.00	J		
Lanthanum	mg/kg	30.80	J	45.40	J	48.30	J		
Lutetium	mg/kg	0.37	J	0.26	J	0.27	J		
Magnesium	mg/kg	5440.00		8030.00		7900.00			
Manganese	mg/kg	1610.00		233.00		620.00			
Mercury	mg/kg	1.20	U	1.28	U	1.54	U		
Potassium	mg/kg	12200.00		23900.00		29200.00			
Rubidium	mg/kg	1280.00	U	552.00	U	578.00	U		
Scandium	mg/kg	7.57		14.70		17.40			
Silver	mg/kg	1.98	J	2.28	J	2.94	J		
Sodium	mg/kg	641.00		445.00		1070.00			
Terbium	mg/kg	0.64		0.46		0.40			
Thorium-232	mg/kg	11.40	J	14.70	J	15.80	J		
Titanium	mg/kg	11100.00		10600.00		3730.00			
Uranium-235	mg/kg	0.02		0.02		0.02			
Uranium-238	mg/kg	3.24		2.79		2.87			
Vanadium	mg/kg	73.80		96.80		74.80			
Ytterbium	mg/kg	3.37		2.45	U	3.21			
Zinc	mg/kg	85.80		97.80		173.00			
Location=ROA; Formation=DISMAL GAP; Site=3,7,21; Sample type=Regular; A=6021; B=6024; C=6027; A lab split=' '									
Aluminum	mg/kg	61900.00		64100.00		93300.00			
Antimony	mg/kg	0.55		0.54		0.48			
Arsenic	mg/kg	5.38	J	5.81	J	6.25	J		
Barium	mg/kg	12400.00	J	6510.00	J	3550.00	J		
Cerium	mg/kg	62.60	J	63.00	J	76.20	J		
Cesium	mg/kg	3.14		3.82		5.54			
Chromium	mg/kg	73.00	J	63.70	J	92.10	J		
Cobalt	mg/kg	19.50	J	22.50	J	9.55	J		
Europium	mg/kg	0.65		0.64		0.88			
Gallium	mg/kg	16.90	J	13.80	J	30.80	J		
Gold	mg/kg	0.01	U	0.01	U	0.01	U		
Hafnium	mg/kg	10.30	J	11.10	J	7.64	J		
Iron	mg/kg	31900.00	J	31700.00	J	53700.00	J		
Lanthanum	mg/kg	31.70	J	31.80	J	41.40	J		
Lutetium	mg/kg	0.36	J	0.47	J	0.25	J		
Magnesium	mg/kg	6060.00		4500.00		7930.00			
Manganese	mg/kg	1150.00		718.00		131.00			
Mercury	mg/kg	1.13	U	1.08	U	1.34	U		
Potassium	mg/kg	14300.00		12200.00		21800.00			
Rubidium	mg/kg	997.00	U	561.00	U	387.00	U		
Scandium	mg/kg	8.94		8.87		14.50			
Silver	mg/kg	1.91	J	1.82	J	2.39	J		
Sodium	mg/kg	536.00		543.00		546.00			
Terbium	mg/kg	0.45		0.62		0.49			
Thorium-232	mg/kg	11.60	J	12.10	J	15.00	J		
Titanium	mg/kg	9810.00		980.00	U	10200.00			
Uranium-235	mg/kg	0.02		0.03		0.02			
Uranium-238	mg/kg	3.37		3.15		4.24			
Vanadium	mg/kg	72.60		71.60		95.50			
Ytterbium	mg/kg	3.14		2.40		2.19			
Zinc	mg/kg	72.40		62.40		82.50			

Table H.1 (continued)

Analysis	Units	A horizon result	Qualifier	B horizon result	Qualifier	C horizon result	Qualifier	A lab split result	Qualifier
Location=ROA; Formation=DISMAL GAP; Site=8,20,22; Sample type=Regular; A=6012; B=6015; C=6018; A lab split=' '									
Aluminum	mg/kg	42900.00		106000.00		124000.00			
Antimony	mg/kg	0.46		0.56		0.27			
Arsenic	mg/kg	4.41	J	6.05	J	4.30	J		
Barium	mg/kg	5640.00	J	8490.00	J	5960.00	J		
Cerium	mg/kg	48.40	J	68.20	J	78.40	J		
Cesium	mg/kg	2.23		5.44		5.63			
Chromium	mg/kg	56.80	J	84.10	J	92.40	J		
Cobalt	mg/kg	10.70	J	8.95	J	9.43	J		
Europium	mg/kg	0.51		0.66		0.80			
Gallium	mg/kg	9.16	J	21.20	J	30.70	J		
Gold	mg/kg	0.01	U	0.01		0.01	U		
Hafnium	mg/kg	12.90	J	9.30	J	5.94	J		
Iron	mg/kg	23600.00	J	43000.00	J	49900.00	J		
Lanthanum	mg/kg	25.40	J	37.60	J	43.30	J		
Lutetium	mg/kg	0.37	J	0.32	J	0.29	J		
Magnesium	mg/kg	2760.00		6630.00		9560.00			
Manganese	mg/kg	589.00		88.40		116.00			
Mercury	mg/kg	0.94	U	1.34	U	1.52	U		
Potassium	mg/kg	8230.00		16100.00		26200.00			
Rubidium	mg/kg	462.00	U	938.00	U	554.00	U		
Scandium	mg/kg	6.45		11.60		15.20			
Silver	mg/kg	1.57	J	2.37	J	2.72	J		
Sodium	mg/kg	437.00		356.00		399.00			
Terbium	mg/kg	0.50		0.42		0.64			
Thorium-232	mg/kg	9.57	J	13.70	J	14.50	J		
Titanium	mg/kg	10300.00		383.00		10600.00			
Uranium-235	mg/kg	0.02		0.02		0.02			
Uranium-238	mg/kg	3.11		3.90		2.65			
Vanadium	mg/kg	48.20		102.00		104.00			
Ytterbium	mg/kg	4.85		3.35		1.84			
Zinc	mg/kg	55.10		82.20		108.00			
Location=ROA; Formation=DISMAL GAP; Site=9,17,19; Sample type=Regular; A=6006; B=6003; C=6009; A lab split=' '									
Aluminum	mg/kg	56400.00		56300.00		94200.00			
Antimony	mg/kg	0.53		0.61		0.51			
Arsenic	mg/kg	6.20	J	7.72	J	6.98	J		
Barium	mg/kg	155.00	J	10700.00	J	5090.00	J		
Cerium	mg/kg	59.40	J	66.10	J	77.90	J		
Cesium	mg/kg	3.57		3.39		5.20			
Chromium	mg/kg	66.80	J	75.90	J	90.10	J		
Cobalt	mg/kg	17.60	J	21.60	J	27.60	J		
Europium	mg/kg	0.63		0.72		0.66			
Gallium	mg/kg	18.00	J	14.30	J	25.50	J		
Gold	mg/kg	0.01	U	0.01	U	0.01	U		
Hafnium	mg/kg	9.72	J	10.30	J	6.46	J		
Iron	mg/kg	27400.00	J	33100.00	J	49600.00	J		
Lanthanum	mg/kg	32.50	J	33.00	J	41.20	J		
Lutetium	mg/kg	0.36	J	0.37	J	0.32	J		
Magnesium	mg/kg	3730.00		6780.00		8630.00			
Manganese	mg/kg	826.00		668.00		631.00			
Mercury	mg/kg	1.09	U	1.25	U	1.47	U		
Potassium	mg/kg	11300.00		11900.00		23200.00			
Rubidium	mg/kg	1300.00	U	897.00	U	630.00	U		
Scandium	mg/kg	8.71		8.95		14.10			
Silver	mg/kg	2.14	J	2.19	J	2.60	J		
Sodium	mg/kg	571.00		562.00		621.00			
Terbium	mg/kg	0.46		0.62		0.29			
Thorium-232	mg/kg	11.50	J	12.90	J	14.80	J		
Titanium	mg/kg	7130.00		11600.00		10300.00			
Uranium-235	mg/kg	0.03		0.03		0.02			
Uranium-238	mg/kg	3.19		3.97		3.34			
Vanadium	mg/kg	78.00		77.40		91.90			
Ytterbium	mg/kg	3.34		3.38		2.20	U		
Zinc	mg/kg	105.00		70.10		90.60			

Table H.1 (continued)

Analysis	Units	A horizon result	Qualifier	B horizon result	Qualifier	C horizon result	Qualifier	A lab split result	Qualifier
Location=AND; Formation=COPPER RIDGE; Site=31,32,36; Sample type=Regular; A=7059; B=7062; C=7065; A lab split=' '									
Potassium-40	pCi/g			5.2761		6.1929			
Thorium-232	pCi/g	0.5761	J	0.8569	J	0.9413	J		
Uranium-235	pCi/g	0.0527		0.0716		0.0705			
Uranium-238	pCi/g			1.6132		1.5965			
Location=AND; Formation=COPPER RIDGE; Site=33,34,35; Sample type=Regular; A=7050; B=7053; C=7056; A lab split=' '									
Potassium-40	pCi/g	3.1090		4.4676		4.7426			
Thorium-232	pCi/g	0.7215	J	0.8813	J	1.1322	J		
Uranium-235	pCi/g	0.0581		0.0688		0.0748			
Uranium-238	pCi/g	1.4863		1.1824		1.3494			
Location=AND; Formation=COPPER RIDGE; Site=37,38,41; Sample type=Regular; A=7077; B=7080; C=7083; A lab split=' '									
Potassium-40	pCi/g	4.1258		0.1575	U	6.9847			
Thorium-232	pCi/g	0.7526	J	1.2210	J	1.5651	J		
Uranium-235	pCi/g	0.0656		0.1047		0.1320			
Uranium-238	pCi/g	1.6566		5.7448		2.6353			
Location=AND; Formation=COPPER RIDGE; Site=39,40,42; Sample type=Regular; A=7068; B=7071; C=7074; A lab split=' '									
Potassium-40	pCi/g	4.4176		4.5926		4.6426			
Thorium-232	pCi/g	0.8802	J	1.1544	J	1.2432	J		
Uranium-235	pCi/g	0.0716		0.0884		0.0821			
Uranium-238	pCi/g	1.6934		2.0574		1.8871			
Location=AND; Formation=DISMAL GAP; Site=1,20,22; Sample type=Regular; A=7030; B=7033; C=7036; A lab split=' '									
Potassium-40	pCi/g	18.5870		20.8375		24.8383			
Thorium-232	pCi/g	1.1544	J	1.6428	J	1.3875	J		
Uranium-235	pCi/g	0.0510		0.0516		0.0456			
Uranium-238	pCi/g	1.1356		0.9452		0.7381			
Location=AND; Formation=DISMAL GAP; Site=3,5,11; Sample type=Regular; A=7012; B=7015; C=7018; A lab split=' '									
Potassium-40	pCi/g	28.8391		29.4225		29.9226			
Thorium-232	pCi/g			1.5984	J	1.6206	J		
Uranium-235	pCi/g	0.0449		0.0484		0.0449			
Uranium-238	pCi/g	0.7749		1.1022		0.8985			
Location=AND; Formation=DISMAL GAP; Site=4,12,21; Sample type=Regular; A=7021; B=7024; C=7027; A lab split=' '									
Potassium-40	pCi/g	30.2560		29.7560		32.0898			
Thorium-232	pCi/g	1.1211	J	1.3542	J	1.3764	J		
Uranium-235	pCi/g	0.0467		0.0454		0.0467			
Uranium-238	pCi/g	0.7649		0.7548		0.8951			

Table H.1 (continued)

Analysis	Units	A horizon result	Qualifier	B horizon result	Qualifier	C horizon result	Qualifier	A lab split result	Qualifier
Location=AND; Formation=DISMAL GAP; Site=9,10,19; Sample type=Regular; A=7003; B=7006; C=7009; A lab split=' '									
Potassium-40	pCi/g	13.9195		16.8367		20.6708			
Thorium-232	pCi/g	1.0745	J	1.3431	J	1.4763	J		
Uranium-235	pCi/g	0.0522		0.0548		0.0518			
Uranium-238	pCi/g	1.0955		1.0989		1.0788			
Location=AND; Formation=DISMAL GAP; Site=9,10,19; Sample type=Field Duplicate; A=7039; B=7042; C=7045; A lab split=' '									
Potassium-40	pCi/g	15.4198		17.0034		19.7539			
Thorium-232	pCi/g	1.1022	J	1.3653	J	1.5207	J		
Uranium-235	pCi/g	0.0507		0.0555		0.0557			
Uranium-238	pCi/g	1.1122		1.2525		1.0454			
Location=ORR; Formation=CHEPULTEPEC; Site=50,66,73; Sample type=Regular; A=5169; B=5172; C=5183; A lab split=5215									
Potassium-40	pCi/g	2.6172		6.6430		10.6688			
Thorium-232	pCi/g	0.6138	J	1.2543	J	1.2876	J	0.51393	J
Uranium-235	pCi/g	0.0563		0.0727		0.0813		0.04730	
Uranium-238	pCi/g	1.1824		1.0454		1.3427			
Location=ORR; Formation=CHEPULTEPEC; Site=50,66,73; Sample type=Field Duplicate; A=5177; B=5180; C=5186; A lab split=5214									
Potassium-40	pCi/g	2.7255		6.7263		9.2519		1.91705	
Thorium-232	pCi/g	0.6394	J	1.2321	J	1.2432	J	0.56277	J
Uranium-235	pCi/g	0.0572		0.0729		0.0806		0.05268	
Uranium-238	pCi/g	1.1890		1.2358		1.7268		1.19238	
Location=ORR; Formation=CHEPULTEPEC; Site=52,53,78; Sample type=Regular; A=5129; B=5132; C=5135; A lab split=' '									
Potassium-40	pCi/g	2.4005		5.6011		10.3354			
Thorium-232	pCi/g	0.5483	J	1.0001	J	1.1655	J		
Uranium-235	pCi/g	0.0563		0.0705		0.0875			
Uranium-238	pCi/g	1.3393		1.6967		1.9005			
Location=ORR; Formation=CHEPULTEPEC; Site=68,74,90; Sample type=Regular; A=5158; B=5161; C=5164; A lab split=' '									
Potassium-40	pCi/g	2.2171		7.7099		9.6686			
Thorium-232	pCi/g	0.5872	J	1.1877	J	1.4097	J		
Uranium-235	pCi/g	0.0531		0.0643		0.0688			
Uranium-238	pCi/g	1.4997		1.5631		1.5230			
Location=ORR; Formation=CHEPULTEPEC; Site=77,85,86; Sample type=Regular; A=5138; B=5141; C=5144; A lab split=' '									
Potassium-40	pCi/g			6.7597		7.0431			
Thorium-232	pCi/g	0.5450	J	0.9890	J	1.0223	J		
Uranium-235	pCi/g	0.0550		0.0557		0.0542			
Uranium-238	pCi/g			1.2993		1.3260			

Table H.1 (continued)

Analysis	Units	A horizon result	Qualifier	B horizon result	Qualifier	C horizon result	Qualifier	A lab split result	Qualifier
Location=ORR; Formation=CHEPULTEPEC; Site=77,85,86; Sample type=Field Duplicate; A=5147; B=5150; C=5153; A lab split=' '									
Potassium-40	pCi/g	3.1256		6.5930		4.0175			
Thorium-232	pCi/g	0.6227	J	0.9901	J	0.5683	J		
Uranium-235	pCi/g	0.0585		0.0574		0.0630			
Uranium-238	pCi/g	1.4896		1.1289		0.6814			
Location=ORR; Formation=CHICKAMAUGA Bethel V; Site=101,102,103; Sample type=Regular; A=5198; B=5201; C=5204; A lab split=' '									
Potassium-40	pCi/g	21.5043		21.6710		21.6710			
Thorium-232	pCi/g	1.2210	J	1.4541	J	1.5429	J		
Uranium-235	pCi/g	0.0527		0.0462		0.0441			
Uranium-238	pCi/g	1.2892		0.9085		0.9419			
Location=ORR; Formation=CHICKAMAUGA Bethel V; Site=104,108,110; Sample type=Regular; A=5207; B=5210; C=5213; A lab split=' '									
Potassium-40	pCi/g	8.5851		15.0864		16.7533			
Thorium-232	pCi/g	0.9546	J	1.5762	J	1.6317	J		
Uranium-235	pCi/g	0.0565		0.0490		0.0482			
Uranium-238	pCi/g	0.9719		1.2725		0.8383			
Location=ORR; Formation=CHICKAMAUGA Bethel V; Site=115,116,117; Sample type=Regular; A=5220; B=5224; C=5227; A lab split=5221									
Potassium-40	pCi/g	6.4680		16.8367		19.0038		6.65133	
Thorium-232	pCi/g	1.0589	J	1.7205	J	1.4541	J	1.01121	J
Uranium-235	pCi/g	0.0490		0.0585		0.0535		0.05397	
Uranium-238	pCi/g	1.0621		1.1289		1.5164		1.13226	
Location=ORR; Formation=CHICKAMAUGA Bethel V; Site=93,99,100; Sample type=Regular; A=5189; B=5192; C=5195; A lab split=' '									
Potassium-40	pCi/g	13.5861		20.5041		23.0880			
Thorium-232	pCi/g	1.2765	J	1.5207	J	1.5540	J		
Uranium-235	pCi/g	0.0559		0.0499		0.0467			
Uranium-238	pCi/g	1.5197		1.0354		1.0053			
Location=ORR; Formation=CHICKAMAUGA K-25; Site=118,122,124; Sample type=Regular; A=5244; B=5248; C=5251; A lab split=5245									
Potassium-40	pCi/g	10.5021				22.3378		9.83530	
Thorium-232	pCi/g	1.2321	J	1.6206	J	1.5651	J	1.25430	J
Uranium-235	pCi/g	0.0690		0.0587		0.0499		0.06987	
Uranium-238	pCi/g	1.6700				0.9653		1.33934	
Location=ORR; Formation=CHICKAMAUGA K-25; Site=119,123,127; Sample type=Regular; A=5256; B=5259; C=5262; A lab split=' '									
Potassium-40	pCi/g	10.8355		22.0877		22.1711			
Thorium-232	pCi/g	1.1433	J	1.6761	J	1.6872	J		
Uranium-235	pCi/g	0.0725		0.0589		0.0602			
Uranium-238	pCi/g	1.8270		1.3059		1.3093			

Table H.1 (continued)

Analysis	Units	A horizon result	Qualifier	B horizon result	Qualifier	C horizon result	Qualifier	A lab split result	Qualifier
Location=ORR; Formation=CHICKAMAUGA K-25; Site=120,126,129; Sample type=Regular A=5232; B=5236; C=5239; A lab split=5233									
Potassium-40	pCi/g	6.3179		16.5033		24.8383		5.87618	
Thorium-232	pCi/g	1.0145	J	1.6428	J	1.6428	J	1.05672	J
Uranium-235	pCi/g	0.0742		0.0641		0.0578		0.07546	
Uranium-238	pCi/g	1.6099		1.6900		1.2993		1.63326	
Location=ORR; Formation=CHICKAMAUGA K-25; Site=121,125,128; Sample type=Regular; A=5267; B=5270; C=5273; A lab split=' '									
Potassium-40	pCi/g	7.3515		21.5876		23.3380			
Thorium-232	pCi/g	0.9957	J	1.5651	J	1.5096	J		
Uranium-235	pCi/g	0.0559		0.0538		0.0471			
Uranium-238	pCi/g	1.3226		1.2158		1.2592			
Location=ORR; Formation=COPPER RIDGE; Site=45,60,75; Sample type=Regular; A=5111; B=5114; C=5117; A lab split=' '									
Potassium-40	pCi/g	2.5922		3.0923		5.2260			
Thorium-232	pCi/g	0.6682	J	1.0745	J	1.3431	J		
Uranium-235	pCi/g	0.0677		0.0675		0.0813			
Uranium-238	pCi/g	1.5297		1.6032		0.9886			
Location=ORR; Formation=COPPER RIDGE; Site=51,55,62; Sample type=Regular; A=5102; B=5105; C=5108; A lab split=' '									
Potassium-40	pCi/g	2.7756		4.0258		5.8178			
Thorium-232	pCi/g	0.6538	J	1.0645	J	1.4985	J		
Uranium-235	pCi/g	0.0578		0.0763		0.0931			
Uranium-238	pCi/g	1.1590		2.0207		1.6600			
Location=ORR; Formation=COPPER RIDGE; Site=54,64,83; Sample type=Regular; A=5120; B=5123; C=5126; A lab split=' '									
Potassium-40	pCi/g	3.5924		4.9927		7.8432			
Thorium-232	pCi/g	0.7182	J	1.1078	J	1.3542	J		
Uranium-235	pCi/g	0.0740		0.0836		0.1056			
Uranium-238	pCi/g	1.8804		1.5097		2.1242			
Location=ORR; Formation=COPPER RIDGE; Site=58,59,91; Sample type=Regular; A=5093; B=5096; C=5099; A lab split=' '									
Potassium-40	pCi/g	3.2423		5.0927		7.2431			
Thorium-232	pCi/g	0.8669	J	1.3320	J	1.7538	J		
Uranium-235	pCi/g	0.0709		0.0890		0.1086			
Uranium-238	pCi/g	1.5564		1.8871		2.1443			
Location=ORR; Formation=DISMAL GAP; Site=10,33,35; Sample type=Regular; A=5021; B=5024; C=5027; A lab split=' '									
Potassium-40	pCi/g	12.1691		16.3366		17.8369			
Thorium-232	pCi/g	1.0434	J	1.3209	J	1.3320	J		
Uranium-235	pCi/g	0.0568		0.0456		0.0393			
Uranium-238	pCi/g	1.3828		1.0387		0.4943			

Table H.1 (continued)

Analysis	Units	A horizon result	Qualifier	B horizon result	Qualifier	C horizon result	Qualifier	A lab split result	Qualifier
Location=ORR; Formation=DISMAL GAP; Site=11,27,41; Sample type=Regular; A=5003; B=5006; C=5009; A lab split=' '									
Potassium-40	pCi/g	10.8355		16.4199		22.0877			
Thorium-232	pCi/g	1.0445	J	1.2654	J	1.4319	J		
Uranium-235	pCi/g	0.0581		0.0439		0.0419			
Uranium-238	pCi/g	1.2926		1.3226		1.1323			
Location=ORR; Formation=DISMAL GAP; Site=19,22,32; Sample type=Regular; A=5012; B=5015; C=5018; A lab split=' '									
Potassium-40	pCi/g	13.7528		17.6702		18.5037			
Thorium-232	pCi/g	1.1655	J	1.4430	J	1.3320	J		
Uranium-235	pCi/g	0.0538		0.0452		0.0417			
Uranium-238	pCi/g	1.1122		0.9152		1.0120			
Location=ORR; Formation=DISMAL GAP; Site=2,26,43; Sample type=Regular; A=5030; B=5033; C=5036; A lab split=' '									
Potassium-40	pCi/g	14.4196		17.6702		18.3370			
Thorium-232	pCi/g	1.0811	J	1.3764	J	1.4874	J		
Uranium-235	pCi/g	0.0643		0.0499		0.0495			
Uranium-238	pCi/g	1.5832		0.8684		1.1623			
Location=ORR; Formation=DISMAL GAP; Site=2,26,43; Sample type=Field Duplicate; A=5039; B=5042; C=5045; A lab split=' '									
Potassium-40	pCi/g	13.3360		22.7545		16.5033			
Thorium-232	pCi/g	1.0711	J	1.4652	J	1.2654	J		
Uranium-235	pCi/g	0.0624		0.0499		0.0310			
Uranium-238	pCi/g	1.5798		1.4262		1.1490			
Location=ORR; Formation=NOLICHUCKY; Site=15,23,25; Sample type=Regular; A=5057; B=5060; C=5063; A lab split=' '									
Potassium-40	pCi/g	13.4194		17.4202		23.6714			
Thorium-232	pCi/g	1.2987	J	1.6761	J	1.7538	J		
Uranium-235	pCi/g	0.0542		0.0439		0.0417			
Uranium-238	pCi/g	1.5063		0.8985		1.0688			
Location=ORR; Formation=NOLICHUCKY; Site=16,28,42; Sample type=Regular; A=5066; B=5069; C=5072; A lab split=' '									
Potassium-40	pCi/g	13.3360		16.7533		23.4213			
Thorium-232	pCi/g	1.3209	J	1.7538	J	1.5984	J		
Uranium-235	pCi/g	0.0572		0.0520		0.0434			
Uranium-238	pCi/g	1.0387		1.0154		0.9486			
Location=ORR; Formation=NOLICHUCKY; Site=3,13,24; Sample type=Regular; A=5084; B=5087; C=5090; A lab split=' '									
Potassium-40	pCi/g	13.8361		19.8373		35.6738			
Thorium-232	pCi/g	1.2654	J	1.6650	J	2.6640	J		
Uranium-235	pCi/g	0.0533		0.0488		0.0460			
Uranium-238	pCi/g	1.3794		1.1957		1.7234			

Table H.1 (continued)

Analysis	Units	A horizon result	Qualifier	B horizon result	Qualifier	C horizon result	Qualifier	A lab split result	Qualifier
Location=ORR; Formation=NOLICHUCKY; Site=5,21,31; Sample type=Regular; A=5075; B=5078; C=5081; A lab split=' '									
Potassium-40	pCi/g	12.9193		17.0034		21.5043			
Thorium-232	pCi/g	1.2987	J	1.5540	J				
Uranium-235	pCi/g	0.0544		0.0464		0.0452			
Uranium-238	pCi/g	1.2558		1.1289		0.9051			
Location=ROA; Formation=COPPER RIDGE; Site=33,35,44; Sample type=Regular; A=6048; B=6051; C=6054; A lab split=' '									
Potassium-40	pCi/g	3.6174		3.9841		3.8424			
Thorium-232	pCi/g	0.6083	J	0.9735	J	1.4652	J		
Uranium-235	pCi/g	0.0497		0.0658		0.0830			
Uranium-238	pCi/g	0.9552		1.4963		1.8637			
Location=ROA; Formation=COPPER RIDGE; Site=34,39,41; Sample type=Regular; A=6086; B=6089; C=6092; A lab split=' '									
Potassium-40	pCi/g	2.5422		1.1169		3.1006			
Thorium-232	pCi/g	0.4940	J	0.4840	J	1.2210	J		
Uranium-235	pCi/g	0.0492		0.0686		0.0828			
Uranium-238	pCi/g	1.2592		0.6747		2.0274			
Location=ROA; Formation=COPPER RIDGE; Site=40,42,43; Sample type=Regular; A=6057; B=6060; C=6063; A lab split=' '									
Potassium-40	pCi/g	2.4672		2.6255		2.6339			
Thorium-232	pCi/g	0.4751	J	0.7637	J	1.0834	J		
Uranium-235	pCi/g	0.0402		0.0495		0.0565			
Uranium-238	pCi/g	0.9352		1.2959		1.2659			
Location=ROA; Formation=COPPER RIDGE; Site=45,46,47; Sample type=Regular; A=6075; B=6072; C=6066; A lab split=' '									
Potassium-40	pCi/g	2.2421		2.6672		4.2342			
Thorium-232	pCi/g	0.5728	J	0.8225	J	1.5429	J		
Uranium-235	pCi/g	0.0469		0.0544		0.0608			
Uranium-238	pCi/g	1.0688		1.1389		1.9873			
Location=ROA; Formation=COPPER RIDGE; Site=45,46,47; Sample type=Field Duplicate; A=6078; B=6081; C=6069; A lab split=' '									
Potassium-40	pCi/g	2.2838		2.4838		2.7422			
Thorium-232	pCi/g	0.8736	J	0.8214	J	1.0623	J		
Uranium-235	pCi/g	0.0522		0.0553		0.0602			
Uranium-238	pCi/g	1.3293		1.2091		1.3594			
Location=ROA; Formation=DISMAL GAP; Site=10,13,14; Sample type=Regular; A=6030; B=6033; C=6036; A lab split=' '									
Potassium-40	pCi/g	9.5019		18.4204		23.1713			
Thorium-232	pCi/g	1.2099	J	1.6317	J	1.6983	J		
Uranium-235	pCi/g	0.0452		0.0471		0.0419			
Uranium-238	pCi/g	0.9686		1.0989		0.9552			

Table H.1 (continued)

Analysis	Units	A horizon result	Qualifier	B horizon result	Qualifier	C horizon result	Qualifier	A lab split result	Qualifier
Location=ROA; Formation=DISMAL GAP; Site=10,13,14; Sample type=Field Duplicate; A=6039; B=6042; C=6045; A lab split=' '									
Potassium-40	pCi/g	10.1687		19.9207		24.3382			
Thorium-232	pCi/g	1.2654	J	1.6317	J	1.7538	J		
Uranium-235	pCi/g	0.0452		0.0445		0.0452			
Uranium-238	pCi/g	1.0822		0.9319		0.9586			
Location=ROA; Formation=DISMAL GAP; Site=3,7,21; Sample type=Regular; A=6021; B=6024; C=6027; A lab split=' '									
Potassium-40	pCi/g	11.9191		10.1687		18.1703			
Thorium-232	pCi/g	1.2876	J	1.3431	J	1.6650	J		
Uranium-235	pCi/g	0.0467		0.0546		0.0497			
Uranium-238	pCi/g	1.1256		1.0521		1.4162			
Location=ROA; Formation=DISMAL GAP; Site=8,20,22; Sample type=Regular; A=6012; B=6015; C=6018; A lab split=' '									
Potassium-40	pCi/g	6.8597		13.4194		21.8377			
Thorium-232	pCi/g	1.0623	J	1.5207	J	1.6095	J		
Uranium-235	pCi/g	0.0497		0.0497		0.0426			
Uranium-238	pCi/g	1.0387		1.3026		0.8851			
Location=ROA; Formation=DISMAL GAP; Site=9,17,19; Sample type=Regular; A=6006; B=6003; C=6009; A lab split=' '									
Potassium-40	pCi/g	9.4186		9.9187		19.3372			
Thorium-232	pCi/g	1.2765	J	1.4319	J	1.6428	J		
Uranium-235	pCi/g	0.0555		0.0548		0.0488			
Uranium-238	pCi/g	1.0655		1.3260		1.1156			

Appendix I

ICP/MS ANALYSIS DATA

Table I.1. ICP/MS metals results for composite soil samples

Analysis	Units	A horizon result	Qualifier	B horizon result	Qualifier	C horizon result	Qualifier	A lab split result	Qualifier
Location=AND; Formation=COPPER RIDGE; Phase=2; Site=31,32,36; Sample type=Regular; A=7057; B=7060; C=7063; A lab split=' '									
Aluminum	mg/kg	9200.00		12100.00		10000.00			
Antimony	mg/kg	0.24	U	0.22	U	0.21	U		
Arsenic	mg/kg	13.70		15.40		18.30			
Barium	mg/kg	47.10	B	22.40	B	11.00	B		
Beryllium	mg/kg	0.40	B	0.29	B	0.32	B		
Cadmium	mg/kg	0.24	U	0.22	U	0.21	U		
Chromium	mg/kg	28.60		21.90		22.90			
Cobalt	mg/kg	10.60	B	3.40	B	2.40	B		
Copper	mg/kg	6.40		17.70		23.60			
Lead	mg/kg	26.70		9.00		10.10			
Manganese	mg/kg	1600.00		72.30		55.50			
Nickel	mg/kg	5.30	B	8.30	B	9.60			
Silver	mg/kg	0.24	U	0.22	U	0.21	U		
Thallium	mg/kg	0.24	U	0.24	B	0.21	B		
Zinc	mg/kg	29.10		54.70		76.70			
Location=AND; Formation=COPPER RIDGE; Phase=2; Site=33,34,35; Sample type=Regular; A=7046; B=7051; C=7054; A lab split=7047									
Aluminum	mg/kg	11200.00		15100.00		15300.00		11700.00	
Antimony	mg/kg	0.23	U	0.20	U	0.22	U	0.23	U
Arsenic	mg/kg	9.40		14.30		21.60		10.60	
Barium	mg/kg	88.50		32.90	B	18.90	B	98.00	
Beryllium	mg/kg	0.44	B	0.28	B	0.35	B	0.50	B
Cadmium	mg/kg	0.23	U	0.20	U	0.22	U	0.23	U
Chromium	mg/kg	20.80		24.30		30.70		21.30	
Cobalt	mg/kg	9.70	B	4.40	B	2.70	B	14.40	
Copper	mg/kg	7.20		19.10		28.50		7.20	
Lead	mg/kg	31.20		9.60		10.40		26.90	
Manganese	mg/kg	1620.00		216.00		85.90		2630.00	
Nickel	mg/kg	6.80	B	8.50		11.10		6.90	B
Silver	mg/kg	0.23	U	0.20	U	0.22	U	0.23	U
Thallium	mg/kg	0.23	U	0.25	B	0.27	B	0.25	B
Zinc	mg/kg	30.50		44.30		64.10		34.60	
Location=AND; Formation=COPPER RIDGE; Phase=2; Site=37,38,41; Sample type=Regular; A=7075; B=7078; C=7081; A lab split=' '									
Aluminum	mg/kg	16500.00		24200.00		36200.00			
Antimony	mg/kg	0.25	U	0.21	U	0.22	U		
Arsenic	mg/kg	12.80		20.00		27.00			
Barium	mg/kg	144.00		55.60		46.30			
Beryllium	mg/kg	0.88	B	0.74	B	1.00	B		
Cadmium	mg/kg	0.25	U	0.21	U	0.22	U		
Chromium	mg/kg	21.90		30.30		35.20			
Cobalt	mg/kg	38.70		64.50		44.70			
Copper	mg/kg	14.70		39.50		65.50			
Lead	mg/kg	53.80		48.30		78.20			
Manganese	mg/kg	2150.00		1420.00		1630.00			
Nickel	mg/kg	15.00		25.20		43.40			
Silver	mg/kg	0.25	U	0.21	U	0.22	U		
Thallium	mg/kg	0.35	B	0.46	B	0.65	B		
Zinc	mg/kg	69.20		110.00		160.00			
Location=AND; Formation=COPPER RIDGE; Phase=2; Site=39,40,42; Sample type=Regular; A=7066; B=7069; C=7072; A lab split=' '									
Aluminum	mg/kg	20400.00		27500.00		29700.00			
Antimony	mg/kg	0.23	U	0.22	U	0.22	U		
Arsenic	mg/kg	14.10		18.60		17.10			
Barium	mg/kg	204.00		56.10		46.00			
Beryllium	mg/kg	0.94	B	0.42	B	0.42	B		
Cadmium	mg/kg	0.23	U	0.22	U	0.22	U		

Table I.1 (continued)

Analysis	Units	A horizon result	Qualifier	B horizon result	Qualifier	C horizon result	Qualifier	A lab split result	Qualifier
Chromium	mg/kg	26.00		38.40		32.20			
Cobalt	mg/kg	17.30		8.80	B	8.90	B		
Copper	mg/kg	10.90		23.00		20.30			
Lead	mg/kg	40.50		17.80		27.30			
Manganese	mg/kg	4250.00		558.00		558.00			
Nickel	mg/kg	14.30		17.10		17.90			
Silver	mg/kg	0.23	U	0.22	U	0.22	U		
Thallium	mg/kg	0.37	B	0.36	B	0.33	B		
Zinc	mg/kg	38.70		45.20		41.60			
Location=AND; Formation=DISMAL GAP; Phase=1; Site=1,20,22; Sample type=Regular; A=7028; B=7031; C=7034; A lab split=' '									
Aluminum	mg/kg	21100.00		30900.00		32300.00			
Antimony	mg/kg	0.25	U	0.24	U	0.25	U		
Arsenic	mg/kg	3.50		3.60		2.90			
Barium	mg/kg	88.80		67.20		84.80			
Beryllium	mg/kg	0.82	B	1.10	B	1.10	B		
Cadmium	mg/kg	0.25	U	0.24	U	0.25	U		
Chromium	mg/kg	24.90		33.70		29.00			
Cobalt	mg/kg	13.00		10.30	B	17.50			
Copper	mg/kg	19.60		20.60		19.10			
Lead	mg/kg	31.40		17.30		13.90			
Manganese	mg/kg	927.00		462.00		744.00			
Nickel	mg/kg	17.40		21.70		24.60			
Selenium	mg/kg	0.48	B	0.57	B	0.25	B		
Silver	mg/kg	0.25	U	0.24	U	0.25	U		
Thallium	mg/kg	0.25	U	0.24	U	0.25	U		
Zinc	mg/kg	44.40		45.40		43.80			
Location=AND; Formation=DISMAL GAP; Phase=1; Site=3,5,11; Sample type=Regular; A=7010; B=7013; C=7016; A lab split=' '									
Aluminum	mg/kg	21300.00		32400.00		34300.00			
Antimony	mg/kg	0.23	U	0.24	U	0.23	U		
Arsenic	mg/kg	3.20		3.90		2.80			
Barium	mg/kg	71.30		73.00		58.20			
Beryllium	mg/kg	0.91	B	1.00	B	1.00	B		
Cadmium	mg/kg	0.23	U	0.24	U	0.23	U		
Chromium	mg/kg	28.90		38.40		35.80			
Cobalt	mg/kg	14.00		11.30	B	9.70	B		
Copper	mg/kg	22.10		25.90		26.70			
Lead	mg/kg	25.30		22.80		24.50			
Manganese	mg/kg	535.00		251.00		330.00			
Nickel	mg/kg	20.90		24.70		21.60			
Selenium	mg/kg	0.33	B	0.24	B	0.23	U		
Silver	mg/kg	0.23	U	0.24	U	0.23	U		
Thallium	mg/kg	0.23	U	0.26	B	0.25	B		
Zinc	mg/kg	53.80		62.50		51.40			
Location=AND; Formation=DISMAL GAP; Phase=1; Site=4,12,21; Sample type=Regular; A=7019; B=7022; C=7025; A lab split=' '									
Aluminum	mg/kg	18600.00		33300.00		33700.00			
Antimony	mg/kg	0.24	U	0.23	U	0.24	U		
Arsenic	mg/kg	2.30	B	2.30		2.20	B		
Barium	mg/kg	72.50		60.90		54.40			
Beryllium	mg/kg	0.85	B	1.30		1.40			
Cadmium	mg/kg	0.24	U	0.23	U	0.24	U		
Chromium	mg/kg	23.20		31.90		25.60			
Cobalt	mg/kg	12.80		6.70	B	15.90			
Copper	mg/kg	20.20		22.80		29.60			
Lead	mg/kg	27.80		18.10		43.80			
Manganese	mg/kg	559.00		95.80		595.00			
Nickel	mg/kg	18.00		20.50		21.30			
Selenium	mg/kg	0.24	U	0.24	B	0.24	U		

Table I.1 (continued)

Analysis	Units	A horizon result	Qualifier	B horizon result	Qualifier	C horizon result	Qualifier	A lab split result	Qualifier
Silver	mg/kg	0.24	U	0.23	U	0.24	U		
Thallium	mg/kg	0.24	U	0.23	U	0.24	U		
Zinc	mg/kg	44.40		38.50		41.70			
Location=AND; Formation=DISMAL GAP; Phase=1; Site=9,10,19; Sample type=Field duplicate; A=7037; B=7040; C=7043; A lab split=' '									
Aluminum	mg/kg	15900.00		23600.00		30500.00			
Antimony	mg/kg	0.24	U	0.23	U	0.23	U		
Arsenic	mg/kg	3.70		4.40		3.40			
Barium	mg/kg	71.80		75.80		108.00			
Beryllium	mg/kg	0.68	B	0.83	B	1.20			
Cadmium	mg/kg	0.24	U	0.23	U	0.23	U		
Chromium	mg/kg	24.00		32.50		32.50			
Cobalt	mg/kg	12.90		17.40		26.60			
Copper	mg/kg	14.80		21.50		52.40			
Lead	mg/kg	32.50		26.30		28.80			
Manganese	mg/kg	947.00		296.00		1510.00			
Nickel	mg/kg	16.70		17.20		27.20			
Selenium	mg/kg	0.55	B	0.29	B	0.40	B		
Silver	mg/kg	0.24	U	0.23	U	0.23	U		
Thallium	mg/kg	0.24	U	0.23	U	0.23	U		
Zinc	mg/kg	38.30		36.60		50.50			
Location=AND; Formation=DISMAL GAP; Phase=1; Site=9,10,19; Sample type=Regular; A=7001; B=7004; C=7007; A lab split=' '									
Aluminum	mg/kg	22200.00		30100.00		36100.00			
Antimony	mg/kg	0.25	U	0.23	U	0.25	U		
Arsenic	mg/kg	3.90		4.20		3.30			
Barium	mg/kg	79.40		83.90		102.00			
Beryllium	mg/kg	0.83	B	0.84	B	1.20	B		
Cadmium	mg/kg	0.25	U	0.23	U	0.25	U		
Chromium	mg/kg	30.30		34.10		38.60			
Cobalt	mg/kg	14.50		15.80		17.70			
Copper	mg/kg	15.30		22.70		42.30			
Lead	mg/kg	27.70		25.00		27.80			
Manganese	mg/kg	963.00		311.00		893.00			
Nickel	mg/kg	22.30		21.00		27.80			
Selenium	mg/kg	0.53	B	0.58	B	0.52	B		
Silver	mg/kg	0.25	U	0.23	U	0.25	U		
Thallium	mg/kg	0.25	U	0.25	B	0.25	U		
Zinc	mg/kg	47.60		46.50		53.90			
Location=ORR; Formation=CHEPULTEPEC; Phase=2; Site=50,66,73; Sample type=Field duplicate; A=5173; B=5178; C=5184; A lab split=5174									
Aluminum	mg/kg	8010.00		20900.00		17900.00		7650.00	
Antimony	mg/kg	0.21	U	0.22	U	0.21	U	0.22	U
Arsenic	mg/kg	15.50		16.00		17.90		7.50	
Barium	mg/kg	29.20	B	38.30	B	19.90	B	34.30	B
Beryllium	mg/kg	0.25	B	0.32	B	0.42	B	0.23	B
Cadmium	mg/kg	0.21	U	0.22	U	0.21	U	0.22	U
Chromium	mg/kg	27.30		36.50		32.30		13.30	
Cobalt	mg/kg	10.50	B	2.70	B	22.40		11.40	
Copper	mg/kg	4.90	B	21.30		24.40		5.30	B
Lead	mg/kg	16.50		9.90		30.50		14.90	
Manganese	mg/kg	734.00		62.80		378.00		510.00	
Nickel	mg/kg	5.50	B	10.90		14.10		5.80	B
Silver	mg/kg	0.21	U	0.22	U	0.21	U	0.22	U
Thallium	mg/kg	0.21	U	0.30	B	0.26	B	0.22	U
Zinc	mg/kg	27.30		97.20		163.00		29.10	

Table L1 (continued)

Analysis	Units	A horizon result	Qualifier	B horizon result	Qualifier	C horizon result	Qualifier	A lab split result	Qualifier
Location=ORR; Formation=CHEPULTEPEC; Phase=2; Site=50,66,73; Sample type=Regular; A=5165; B=5170; C=5181; A lab split=5166									
Aluminum	mg/kg	8550.00		18300.00		20700.00		9000.00	
Antimony	mg/kg	0.23	U	0.20	U	0.20	U	0.22	U
Arsenic	mg/kg	10.70		15.70		25.80		17.30	
Barium	mg/kg	37.20	B	56.50		27.50	B	33.40	B
Beryllium	mg/kg	0.27	B	0.38	B	0.54	B	0.32	B
Cadmium	mg/kg	0.23	U	0.20	U	0.20	U	0.22	U
Chromium	mg/kg	25.80		31.90		29.90		28.10	
Cobalt	mg/kg	9.80	B	2.10	B	5.00	B	9.20	B
Copper	mg/kg	8.50		17.50		27.60		6.70	
Lead	mg/kg	15.50		8.40		19.40		16.90	
Manganese	mg/kg	615.00		55.60		105.00		717.00	
Nickel	mg/kg	6.10	B	10.60		19.80		5.40	B
Silver	mg/kg	0.23	U	0.20	U	0.20	U	0.22	U
Thallium	mg/kg	0.23	U	0.27	B	0.26	B	0.22	U
Zinc	mg/kg	34.80		118.00		178.00		32.80	
Location=ORR; Formation=CHEPULTEPEC; Phase=2; Site=52,53,78; Sample type=Regular; A=5127; B=5130; C=5133; A lab split=' '									
Aluminum	mg/kg	8410.00		13600.00		12800.00			
Antimony	mg/kg	0.21	U	0.22	U	0.22	U		
Arsenic	mg/kg	6.80		21.50		36.90			
Barium	mg/kg	64.70		28.60	B	10.30	B		
Beryllium	mg/kg	0.37	B	0.37	B	0.61	B		
Cadmium	mg/kg	0.21	U	0.22	U	0.22	U		
Chromium	mg/kg	12.00		28.90		32.20			
Cobalt	mg/kg	8.80	B	3.20	B	3.60	B		
Copper	mg/kg	5.90		19.20		32.50			
Lead	mg/kg	18.50		9.30		15.30			
Manganese	mg/kg	1000.00		133.00		58.20			
Nickel	mg/kg	7.40	B	7.90	B	18.20			
Selenium	mg/kg	0.63	B	0.80	B	0.60	B		
Silver	mg/kg	0.21	U	0.22	U	0.22	U		
Thallium	mg/kg	0.21	U	0.23	B	0.22	U		
Zinc	mg/kg	27.60		66.60		163.00			
Location=ORR; Formation=CHEPULTEPEC; Phase=2; Site=68,74,90; Sample type=Regular; A=5154; B=5159; C=5162; A lab split=5155									
Aluminum	mg/kg	7600.00		18800.00		20900.00		8480.00	
Antimony	mg/kg	0.20	U	0.21	U	0.23	U	0.18	U
Arsenic	mg/kg	4.60		18.70		16.70		7.00	
Barium	mg/kg	30.50	B	27.90	B	12.00	B	31.60	B
Beryllium	mg/kg	0.25	B	0.31	B	0.39	B	0.33	B
Cadmium	mg/kg	0.20	U	0.21	U	0.23	U	0.18	U
Chromium	mg/kg	8.70		33.90		30.40		12.80	
Cobalt	mg/kg	12.00		2.30	B	1.90	B	10.10	
Copper	mg/kg	4.20	B	14.90		17.60		4.80	
Lead	mg/kg	15.20		9.70		11.80		15.80	
Manganese	mg/kg	597.00		46.00		76.90		475.00	
Nickel	mg/kg	5.00	B	9.90		12.10		5.10	B
Silver	mg/kg	0.20	U	0.21	U	0.23	U	0.18	U
Thallium	mg/kg	0.20	U	0.25	B	0.24	B	0.18	U
Zinc	mg/kg	18.10		54.20		77.30		21.60	
Location=ORR; Formation=CHEPULTEPEC; Phase=2; Site=77,85,86; Sample type=Field duplicate; A=5145; B=5148; C=5151; A lab split=' '									
Aluminum	mg/kg	9290.00		15900.00		17200.00			
Antimony	mg/kg	0.21	U	0.41	B	0.21	U		
Arsenic	mg/kg	4.50		18.40		13.10			
Barium	mg/kg	141.00		68.60		57.30			
Beryllium	mg/kg	0.95	B	1.10		1.60			

Table I.1 (continued)

Analysis	Units	A horizon result	Qualifier	B horizon result	Qualifier	C horizon result	Qualifier	A lab split result	Qualifier
Cadmium	mg/kg	0.21	U	0.21	U	0.21	U		
Chromium	mg/kg	9.60		37.80		24.70			
Cobalt	mg/kg	17.20		17.70		31.70			
Copper	mg/kg	7.20		19.80		34.00			
Lead	mg/kg	20.90		35.60		54.30			
Manganese	mg/kg	2250.00		669.00		1360.00			
Nickel	mg/kg	13.60		18.70		37.80			
Selenium	mg/kg	0.77	B	0.72	B	0.73	B		
Silver	mg/kg	0.21	U	0.21	U	0.21	U		
Thallium	mg/kg	0.21	U	0.40	B	0.42	B		
Zinc	mg/kg	82.00		223.00		371.00			
Location=ORR; Formation=CHEPULTEPEC; Phase=2; Site=77,85,86; Sample type=Regular; A=5136; B=5139; C=5142; A lab split=' '									
Aluminum	mg/kg	9690.00		16700.00		15900.00			
Antimony	mg/kg	0.22	U	0.21	U	0.23	U		
Arsenic	mg/kg	4.40		10.20		12.60			
Barium	mg/kg	145.00		44.20		26.00	B		
Beryllium	mg/kg	0.94	B	1.40		1.40			
Cadmium	mg/kg	0.22	U	0.21	U	0.23	U		
Chromium	mg/kg	10.60		24.10		24.90			
Cobalt	mg/kg	15.60		8.30	B	13.30			
Copper	mg/kg	7.60		20.30		23.70			
Lead	mg/kg	21.00		16.50		20.70			
Manganese	mg/kg	2190.00		228.00		447.00			
Nickel	mg/kg	12.70		20.10		21.60			
Selenium	mg/kg	0.67	B	0.58	B	0.59	B		
Silver	mg/kg	0.22	U	0.21	U	0.23	U		
Thallium	mg/kg	0.22	U	0.21	U	0.25	B		
Zinc	mg/kg	91.10		304.00		295.00			
Location=ORR; Formation=CHICKAMAUGA Bethel V; Phase=2; Site=101,102,103; Sample type=Regular; A=5196; B=5199; C=5202; A lab split=' '									
Aluminum	mg/kg	22400.00		40000.00		41700.00			
Antimony	mg/kg	0.22	U	0.22	U	0.22	U		
Arsenic	mg/kg	4.50		5.90		12.80			
Barium	mg/kg	113.00		189.00		145.00			
Beryllium	mg/kg	1.30		2.40		2.10			
Cadmium	mg/kg	0.22	U	0.22	U	0.22	U		
Chromium	mg/kg	25.40		37.70		37.40			
Cobalt	mg/kg	17.90		16.50		45.90			
Copper	mg/kg	19.70		28.90		37.10			
Lead	mg/kg	36.90		25.60		50.00			
Manganese	mg/kg	1760.00		762.00		818.00			
Nickel	mg/kg	19.60		35.20		43.10			
Silver	mg/kg	0.22	U	0.22	U	0.22	U		
Thallium	mg/kg	0.22	U	0.28	B	0.28	B		
Zinc	mg/kg	46.90		61.70		95.00			
Location=ORR; Formation=CHICKAMAUGA Bethel V; Phase=2; Site=104,108,110; Sample type=Regular; A=5205; B=5208; C=5211; A lab split=' '									
Aluminum	mg/kg	14500.00		29700.00		32200.00			
Antimony	mg/kg	0.22	U	0.21	U	0.23	U		
Arsenic	mg/kg	5.80		5.00		4.50			
Barium	mg/kg	68.50		102.00		176.00			
Beryllium	mg/kg	0.98	B	1.40		1.90			
Cadmium	mg/kg	0.22	U	0.21	U	0.23	U		
Chromium	mg/kg	35.10		41.30		37.50			
Cobalt	mg/kg	18.30		15.00		20.30			
Copper	mg/kg	8.30		21.80		26.40			
Lead	mg/kg	37.00		31.70		41.50			
Manganese	mg/kg	672.00		368.00		845.00			
Nickel	mg/kg	8.60	B	17.20		25.90			

Table I.1 (continued)

Analysis	Units	A horizon result	Qualifier	B horizon result	Qualifier	C horizon result	Qualifier	A lab split result	Qualifier
Silver	mg/kg	0.22	U	0.21	U	0.23	U		
Thallium	mg/kg	0.22	U	0.26	B	0.23	U		
Zinc	mg/kg	24.70		39.50		58.30			
Location=ORR; Formation=CHICKAMAUGA Bethel V; Phase=2; Site=115,116,117; Sample type=Regular; A=5216; B=5222; C=5225; A lab split=5217									
Aluminum	mg/kg	14700.00		29200.00		34000.00		14400.00	
Antimony	mg/kg	0.23	U	0.22	U	0.23	U	0.23	U
Arsenic	mg/kg	4.20		5.80		5.50		5.30	
Barium	mg/kg	63.10		80.00		150.00		70.50	
Beryllium	mg/kg	0.68	B	0.93	B	2.70		0.77	B
Cadmium	mg/kg	0.23	U	0.22	U	0.23	U	0.23	U
Chromium	mg/kg	35.30		36.10		33.50		46.20	
Cobalt	mg/kg	15.10		15.10		38.80		16.60	
Copper	mg/kg	11.40		19.90		25.80		10.90	
Lead	mg/kg	34.50		28.10		52.30		42.60	
Manganese	mg/kg	852.00		307.00		823.00		1180.00	
Nickel	mg/kg	9.70		14.00		30.90		9.30	
Silver	mg/kg	0.23	U	0.22	U	0.23	U	0.23	U
Thallium	mg/kg	0.23	U	0.22	U	0.23	U	0.23	U
Zinc	mg/kg	32.80		36.00		65.80		31.40	
Location=ORR; Formation=CHICKAMAUGA Bethel V; Phase=2; Site=93,99,100; Sample type=Regular; A=5187; B=5190; C=5193; A lab split=' '									
Aluminum	mg/kg	21200.00		40500.00		42700.00			
Antimony	mg/kg	0.22	U	0.22	U	0.23	U		
Arsenic	mg/kg	6.00		4.00		3.20			
Barium	mg/kg	79.60		156.00		191.00			
Beryllium	mg/kg	0.97	B	1.60		1.70			
Cadmium	mg/kg	0.22	U	0.22	U	0.23	U		
Chromium	mg/kg	29.50		38.50		39.60			
Cobalt	mg/kg	27.70		17.30		13.60			
Copper	mg/kg	18.20		30.10		35.00			
Lead	mg/kg	47.60		30.10		33.20			
Manganese	mg/kg	1150.00		463.00		586.00			
Nickel	mg/kg	15.60		31.70		37.80			
Silver	mg/kg	0.22	U	0.22	U	0.23	U		
Thallium	mg/kg	0.32	B	0.27	B	0.27	B		
Zinc	mg/kg	46.00		73.10		88.20			
Location=ORR; Formation=CHICKAMAUGA K-25; Phase=2; Site=118,122,124; Sample type=Regular; A=5240; B=5246; C=5249; A lab split=5241									
Aluminum	mg/kg	20000.00		36900.00		40900.00		18600.00	
Antimony	mg/kg	0.26	U	0.22	U	0.22	U	0.26	U
Arsenic	mg/kg	6.90		5.60		3.70		6.90	
Barium	mg/kg	82.00		77.50		86.30		74.00	
Beryllium	mg/kg	0.96	B	2.00		2.00		0.91	B
Cadmium	mg/kg	0.26	U	0.22	U	0.22	U	0.26	U
Chromium	mg/kg	28.80		34.30		34.10		28.00	
Cobalt	mg/kg	15.00		26.70		31.60		15.10	
Copper	mg/kg	20.50		25.50		25.10		19.50	
Lead	mg/kg	39.90		24.70		28.40		35.80	
Manganese	mg/kg	1070.00		255.00		384.00		997.00	
Nickel	mg/kg	27.30		30.40		33.80		25.00	
Silver	mg/kg	0.26	U	0.22	U	0.22	U	0.26	U
Thallium	mg/kg	0.26	U	0.26	B	0.34	B	0.26	U
Zinc	mg/kg	55.90		67.40		68.10		54.20	

Table L1 (continued)

Analysis	Units	A horizon result	Qualifier	B horizon result	Qualifier	C horizon result	Qualifier	A lab split result	Qualifier
Location=ORR; Formation=CHICKAMAUGA K-25; Phase=2; Site=119,123,127; Sample type=Regular; A=5252; B=5257; C=5260; A lab split=5253									
Aluminum	mg/kg	27900.00		40100.00		42200.00		23200.00	
Antimony	mg/kg	0.24	U	0.22	U	0.22	U	0.24	U
Arsenic	mg/kg	6.30		5.30		5.20		6.40	
Barium	mg/kg	107.00		130.00		193.00		93.70	
Beryllium	mg/kg	1.30		1.70		2.00		1.20	B
Cadmium	mg/kg	0.24	U	0.22	U	0.22	U	0.24	U
Chromium	mg/kg	32.90		39.10		40.30		36.30	
Cobalt	mg/kg	15.70		13.20		17.70		21.40	
Copper	mg/kg	12.60		16.50		18.60		12.20	
Lead	mg/kg	32.60		20.00		18.20		39.30	
Manganese	mg/kg	1820.00		535.00		1830.00		1980.00	
Nickel	mg/kg	22.30		24.30		29.60		23.00	
Silver	mg/kg	0.24	U	0.22	U	0.22	U	0.24	U
Thallium	mg/kg	0.33	B	0.33	B	0.37	B	0.26	B
Zinc	mg/kg	51.70		74.90		66.70		50.60	
Location=ORR; Formation=CHICKAMAUGA K-25; Phase=2; Site=120,126,129; Sample type=Regular; A=5228; B=5234; C=5237; A lab split=5229									
Aluminum	mg/kg	14400.00		26400.00		21300.00		14500.00	
Antimony	mg/kg	0.23	U	0.21	U	0.22	U	0.23	U
Arsenic	mg/kg	4.80		7.20		4.80		5.00	
Barium	mg/kg	72.50		61.10		33.50	B	76.40	
Beryllium	mg/kg	0.54	B	0.56	B	0.70	B	0.58	B
Cadmium	mg/kg	0.23	U	0.21	U	0.22	U	0.23	U
Chromium	mg/kg	27.50		40.80		27.30		27.40	
Cobalt	mg/kg	17.50		6.90	B	3.80	B	17.70	
Copper	mg/kg	10.30		18.10		23.40		10.40	
Lead	mg/kg	31.80		14.90		17.10		34.20	
Manganese	mg/kg	1660.00		193.00		90.70		1880.00	
Nickel	mg/kg	17.60		14.60		14.90		20.80	
Silver	mg/kg	0.23	U	0.21	U	0.22	U	0.23	U
Thallium	mg/kg	0.24	B	0.26	B	0.24	B	0.27	B
Zinc	mg/kg	30.20		49.30		43.20		30.50	
Location=ORR; Formation=CHICKAMAUGA K-25; Phase=2; Site=121,125,128; Sample type=Regular; A=5263; B=5268; C=5271; A lab split=5264									
Aluminum	mg/kg	15000.00		39000.00		32400.00		16000.00	
Antimony	mg/kg	0.22	U	0.22	U	0.21	U	0.22	U
Arsenic	mg/kg	3.40		3.60		3.20		4.30	
Barium	mg/kg	53.50		83.40		59.40		51.80	
Beryllium	mg/kg	0.65	B	1.10		0.97	B	0.66	B
Cadmium	mg/kg	0.22	U	0.22	U	0.21	U	0.22	U
Chromium	mg/kg	20.10		29.20		23.20		33.20	
Cobalt	mg/kg	19.40		9.60	B	13.90		17.40	
Copper	mg/kg	8.80		18.40		17.10		8.80	
Lead	mg/kg	21.40		17.60		17.70		22.00	
Manganese	mg/kg	1210.00		189.00		214.00		1170.00	
Nickel	mg/kg	11.90		22.50		19.90		12.00	
Silver	mg/kg	0.22	U	0.22	U	0.21	U	0.22	U
Thallium	mg/kg	0.22	U	0.29	B	0.25	B	0.22	U
Zinc	mg/kg	27.70		51.60		45.00		27.40	
Location=ORR; Formation=COPPER RIDGE; Phase=2; Site=45,60,75; Sample type=Regular; A=5109; B=5112; C=5115; A lab split=' '									
Aluminum	mg/kg	10200.00		13900.00		8490.00			
Antimony	mg/kg	0.21	U	0.21	U	0.21	U		
Arsenic	mg/kg	13.20		20.20		34.50			
Barium	mg/kg	89.30		33.30	B	5.90	B		
Beryllium	mg/kg	0.52	B	0.21	B	0.26	B		
Cadmium	mg/kg	0.21	U	0.21	U	0.21	U		
Chromium	mg/kg	19.00		35.40		18.70			

Table I.1 (continued)

Analysis	Units	A horizon result	Qualifier	B horizon result	Qualifier	C horizon result	Qualifier	A lab split result	Qualifier
Cobalt	mg/kg	7.50	B	3.00	B	1.80	B		
Copper	mg/kg	6.20		10.60		18.90			
Lead	mg/kg	24.00		10.90		31.80			
Manganese	mg/kg	1520.00		119.00		86.50			
Nickel	mg/kg	6.80	B	5.60	B	8.30	B		
Silver	mg/kg	0.21	U	0.21	U	0.21	U		
Thallium	mg/kg	0.21	U	0.21	B	0.21	U		
Zinc	mg/kg	22.20		32.00		81.20			
Location=ORR; Formation=COPPER RIDGE; Phase=2; Site=51,55,62; Sample type=Regular; A=5100; B=5104; C=5106; A lab split=' '									
Aluminum	mg/kg	8920.00		9260.00		10100.00			
Antimony	mg/kg	0.21	U	0.20	U	0.23	U		
Arsenic	mg/kg	12.10		22.40		32.10			
Barium	mg/kg	57.60		28.70	B	7.30	B		
Beryllium	mg/kg	0.52	B	0.23	B	0.32	B		
Cadmium	mg/kg	0.21	U	0.20	U	0.23	U		
Chromium	mg/kg	15.80		22.30		28.50			
Cobalt	mg/kg	8.80	B	1.80	B	2.60	B		
Copper	mg/kg	5.00	B	13.60		24.90			
Lead	mg/kg	27.00		14.50		22.20			
Manganese	mg/kg	1530.00		63.50		85.40			
Nickel	mg/kg	6.90	B	5.40	B	9.30			
Silver	mg/kg	0.21	U	0.20	U	0.23	U		
Thallium	mg/kg	0.21	U	0.20	U	0.23	U		
Zinc	mg/kg	20.50		44.40		87.10			
Location=ORR; Formation=COPPER RIDGE; Phase=2; Site=54,64,83; Sample type=Regular; A=5118; B=5121; C=5124; A lab split=' '									
Aluminum	mg/kg	9660.00		19500.00		17500.00			
Antimony	mg/kg	0.26	B	0.22	U	0.22	U		
Arsenic	mg/kg	24.20		52.40		54.00			
Barium	mg/kg	68.90		42.20	B	11.40	B		
Beryllium	mg/kg	0.48	B	0.50	B	0.49	B		
Cadmium	mg/kg	0.22	U	0.22	U	0.22	U		
Chromium	mg/kg	17.40		25.60		34.00			
Cobalt	mg/kg	20.60		4.90	B	3.50	B		
Copper	mg/kg	12.00		31.40		29.80			
Lead	mg/kg	38.80		24.10		33.30			
Manganese	mg/kg	1570.00		89.30		104.00			
Nickel	mg/kg	9.90		18.00		20.00			
Selenium	mg/kg	0.68	B	0.93	B	0.50	B		
Silver	mg/kg	0.22	U	0.22	U	0.22	U		
Thallium	mg/kg	0.23	B	0.34	B	0.34	B		
Zinc	mg/kg	38.10		83.20		97.10			
Location=ORR; Formation=COPPER RIDGE; Phase=2; Site=58,59,91; Sample type=Regular; A=5091; B=5094; C=5097; A lab split=' '									
Aluminum	mg/kg	8630.00		10800.00		13100.00			
Antimony	mg/kg	0.23	U	0.23	U	0.24	U		
Arsenic	mg/kg	11.80		37.60		60.50			
Barium	mg/kg	68.00		23.40	B	9.40	B		
Beryllium	mg/kg	0.39	B	0.29	B	0.35	B		
Cadmium	mg/kg	0.23	U	0.23	U	0.24	U		
Chromium	mg/kg	14.00		32.30		30.00			
Cobalt	mg/kg	4.90	B	2.60	B	1.60	B		
Copper	mg/kg	6.40		17.10		27.50			
Lead	mg/kg	20.80		15.80		25.80			
Manganese	mg/kg	1000.00		115.00		77.40			
Nickel	mg/kg	6.20	B	7.30	B	11.10			
Silver	mg/kg	0.23	U	0.23	U	0.24	U		
Thallium	mg/kg	0.23	U	0.23	U	0.24	B		
Zinc	mg/kg	20.50		52.40		89.00			

Table I.1 (continued)

Analysis	Units	A horizon result	Qualifier	B horizon result	Qualifier	C horizon result	Qualifier	A lab split result	Qualifier
Location=ORR; Formation=DISMAL GAP; Phase=1; Site=10,33,35; Sample type=Regular; A=5019; B=5022; C=5025; A lab split=' '									
Aluminum	mg/kg	18800.00		32700.00		36900.00			
Antimony	mg/kg	0.22	U	0.23	U	0.23	U		
Arsenic	mg/kg	5.00		3.10		3.20			
Barium	mg/kg	87.30		94.30		104.00			
Beryllium	mg/kg	0.73	B	0.77	B	1.00	B		
Cadmium	mg/kg	0.22	U	0.23	U	0.23	U		
Chromium	mg/kg	36.40		39.90		45.30			
Cobalt	mg/kg	14.60		9.30	B	10.20	B		
Copper	mg/kg	20.00		20.70		23.30			
Lead	mg/kg	21.40		17.80		25.30			
Manganese	mg/kg	919.00		207.00		213.00			
Nickel	mg/kg	19.80		20.00		23.20			
Selenium	mg/kg	0.22	U	0.23	U	0.23	U		
Silver	mg/kg	0.22	U	0.23	U	0.23	U		
Thallium	mg/kg	0.22	U	0.23	B	0.26	B		
Zinc	mg/kg	42.30		46.30		50.40			
Location=ORR; Formation=DISMAL GAP; Phase=1; Site=19,22,32; Sample type=Regular; A=5010; B=5013; C=5016; A lab split=' '									
Aluminum	mg/kg	19700.00		36700.00		39600.00			
Antimony	mg/kg	0.21	U	0.22	U	0.22	U		
Arsenic	mg/kg	2.80		3.40		2.80			
Barium	mg/kg	92.60		127.00		147.00			
Beryllium	mg/kg	0.76	B	0.99	B	1.10			
Cadmium	mg/kg	0.21	U	0.22	U	0.22	U		
Chromium	mg/kg	26.40		39.40		40.80			
Cobalt	mg/kg	14.10		16.90		12.00			
Copper	mg/kg	15.10		21.00		22.90			
Lead	mg/kg	13.20		14.00		13.90			
Manganese	mg/kg	772.00		477.00		554.00			
Nickel	mg/kg	19.20		22.20		23.60			
Selenium	mg/kg	0.60	B	0.22	U	0.22	U		
Silver	mg/kg	0.21	U	0.22	U	0.22	U		
Thallium	mg/kg	0.21	U	0.28	B	0.28	B		
Zinc	mg/kg	36.10		58.10		48.50			
Location=ORR; Formation=DISMAL GAP; Phase=1; Site=2,26,43; Sample type=Field duplicate; A=5037; B=5040; C=5043; A lab split=' '									
Aluminum	mg/kg	20400.00		29000.00		38300.00			
Antimony	mg/kg	0.23	U	0.23	U	0.24	U		
Arsenic	mg/kg	2.80		3.50		3.00			
Barium	mg/kg	95.50		102.00		136.00			
Beryllium	mg/kg	0.77	B	0.91	B	1.20			
Cadmium	mg/kg	0.23	U	0.23	U	0.24	U		
Chromium	mg/kg	29.00		38.10		46.00			
Cobalt	mg/kg	21.50		17.90		14.20			
Copper	mg/kg	17.50		26.10		30.10			
Lead	mg/kg	16.20		15.10		15.00			
Manganese	mg/kg	1220.00		581.00		262.00			
Nickel	mg/kg	22.60		26.00		34.60			
Selenium	mg/kg	0.23	U	0.23	U	0.81	B		
Silver	mg/kg	0.23	U	0.23	U	0.24	U		
Thallium	mg/kg	0.23	U	0.23	U	0.27	B		
Zinc	mg/kg	43.40		49.50		59.80			
Location=ORR; Formation=DISMAL GAP; Phase=1; Site=2,26,43; Sample type=Regular; A=5028; B=5031; C=5034; A lab split=' '									
Aluminum	mg/kg	20700.00		34300.00		40000.00			
Antimony	mg/kg	0.23	U	0.24	U	0.24	U		

Table L1 (continued)

Analysis	Units	A horizon result	Qualifier	B horizon result	Qualifier	C horizon result	Qualifier	A lab split result	Qualifier
Arsenic	mg/kg	3.30		5.10		3.40			
Barium	mg/kg	111.00		86.90		118.00			
Beryllium	mg/kg	0.76	B	0.82	B	1.00	B		
Cadmium	mg/kg	0.23	U	0.24	U	0.24	U		
Chromium	mg/kg	28.20		40.80		40.10			
Cobalt	mg/kg	19.50		17.00		36.20			
Copper	mg/kg	19.40		31.50		39.60			
Lead	mg/kg	18.80		18.90		20.50			
Manganese	mg/kg	1230.00		309.00		974.00			
Nickel	mg/kg	24.90		24.50		33.90			
Selenium	mg/kg	0.61	B	0.57	B	0.35	B		
Silver	mg/kg	0.23	U	0.24	U	0.24	U		
Thallium	mg/kg	0.23	U	0.30	B	0.27	B		
Zinc	mg/kg	48.80		46.20		57.90			
Location=ORR; Formation=NOLICHUCKY; Phase=1; Site=15,23,25; Sample type=Regular; A=5055; B=5058; C=5061; A lab split=' '									
Aluminum	mg/kg	16500.00		26400.00		23300.00			
Antimony	mg/kg	0.22	U	0.23	U	0.23	U		
Arsenic	mg/kg	4.00		4.00		2.80			
Barium	mg/kg	47.70		59.40		57.50			
Beryllium	mg/kg	0.53	B	0.61	B	0.80	B		
Cadmium	mg/kg	0.22	U	0.23	U	0.23	U		
Chromium	mg/kg	36.10		39.20		39.60			
Cobalt	mg/kg	11.90		6.80	B	9.00	B		
Copper	mg/kg	13.90		19.80		24.10			
Lead	mg/kg	18.90		11.80		13.50			
Manganese	mg/kg	558.00		124.00		208.00			
Nickel	mg/kg	10.90		13.40		15.20			
Selenium	mg/kg	0.31	B	0.50	B	0.23	U		
Silver	mg/kg	0.22	U	0.23	U	0.23	U		
Thallium	mg/kg	0.22	U	0.25	B	0.24	B		
Zinc	mg/kg	24.50		29.20		28.00			
Location=ORR; Formation=NOLICHUCKY; Phase=1; Site=16,28,42; Sample type=Regular; A=5064; B=5067; C=5070; A lab split=' '									
Aluminum	mg/kg	12800.00		21000.00		22600.00			
Antimony	mg/kg	0.22	U	0.23	U	0.24	U		
Arsenic	mg/kg	3.40		5.00		2.90			
Barium	mg/kg	54.30		64.50		62.50			
Beryllium	mg/kg	0.57	B	0.64	B	0.79	B		
Cadmium	mg/kg	0.22	U	0.23	U	0.24	U		
Chromium	mg/kg	28.40		37.50		35.20			
Cobalt	mg/kg	12.80		10.50	B	15.40			
Copper	mg/kg	10.70		18.80		19.40			
Lead	mg/kg	13.60		12.20		10.90			
Manganese	mg/kg	668.00		284.00		328.00			
Nickel	mg/kg	10.70		13.40		16.40			
Selenium	mg/kg	0.29	B	0.45	B	0.36	B		
Silver	mg/kg	0.22	U	0.23	U	0.24	U		
Thallium	mg/kg	0.22	U	0.23	U	0.24	U		
Zinc	mg/kg	20.00		25.70		26.90			
Location=ORR; Formation=NOLICHUCKY; Phase=1; Site=3,13,24; Sample type=Regular; A=5082; B=5085; C=5088; A lab split=' '									
Aluminum	mg/kg	12300.00		25600.00		27900.00			
Antimony	mg/kg	0.23	U	0.21	U	0.24	U		
Arsenic	mg/kg	4.10		3.10		2.90			
Barium	mg/kg	101.00		91.00		69.00			
Beryllium	mg/kg	0.51	B	0.83	B	0.97	B		
Cadmium	mg/kg	0.23	U	0.21	U	0.24	U		
Chromium	mg/kg	24.30		32.10		31.30			
Cobalt	mg/kg	18.10		14.40		13.20			

Table L1 (continued)

Analysis	Units	A horizon result	Qualifier	B horizon result	Qualifier	C horizon result	Qualifier	A lab split result	Qualifier
Copper	mg/kg	11.90		23.20		28.80			
Lead	mg/kg	21.30		12.60		18.00			
Manganese	mg/kg	1020.00		307.00		313.00			
Nickel	mg/kg	13.70		22.00		21.90			
Selenium	mg/kg	0.39	B	0.48	B	0.33	B		
Silver	mg/kg	0.23	U	0.21	U	0.24	U		
Thallium	mg/kg	0.23	U	0.22	B	0.24	U		
Zinc	mg/kg	30.00		38.30		36.80			
Location=ORR; Formation=NOLICHUCKY; Phase=1; Site=5,21,31; Sample type=Regular; A=5073; B=5076; C=5079; A lab split=' '									
Aluminum	mg/kg	13700.00		19600.00		23800.00			
Antimony	mg/kg	0.23	U	0.23	U	0.24	U		
Arsenic	mg/kg	4.30		3.50		3.60			
Barium	mg/kg	59.20		64.10		66.30			
Beryllium	mg/kg	0.58	B	0.52	B	0.64	B		
Cadmium	mg/kg	0.23	U	0.23	U	0.24	U		
Chromium	mg/kg	29.60		30.00		37.20			
Cobalt	mg/kg	16.50		7.80	B	39.20			
Copper	mg/kg	11.20		13.70		26.60			
Lead	mg/kg	20.00		11.90		23.50			
Manganese	mg/kg	828.00		166.00		919.00			
Nickel	mg/kg	14.00		17.30		24.80			
Selenium	mg/kg	0.28	B	0.28	B	0.39	B		
Silver	mg/kg	0.23	U	0.23	U	0.24	U		
Thallium	mg/kg	0.23	U	0.23	U	0.25	B		
Zinc	mg/kg	28.60		33.90		40.80			
Location=ROA; Formation=COPPER RIDGE; Phase=2; Site=33,35,44; Sample type=Regular; A=6046; B=6049; C=6052; A lab split=' '									
Aluminum	mg/kg	7180.00		12800.00		13900.00			
Antimony	mg/kg	0.22	U	0.22	U	0.23	U		
Arsenic	mg/kg	5.60		13.00		20.30			
Barium	mg/kg	58.10		27.80	B	11.00	B		
Beryllium	mg/kg	0.36	B	0.29	B	0.24	B		
Cadmium	mg/kg	0.22	U	0.22	U	0.23	U		
Chromium	mg/kg	11.00		25.90		40.20			
Cobalt	mg/kg	7.50	B	5.10	B	3.30	B		
Copper	mg/kg	5.80		18.00		19.70			
Lead	mg/kg	22.70		20.30		30.40			
Manganese	mg/kg	1100.00		173.00		79.30			
Nickel	mg/kg	4.50	B	10.10		10.50			
Silver	mg/kg	0.22	U	0.22	U	0.23	U		
Thallium	mg/kg	0.22	U	0.25	B	0.25	B		
Zinc	mg/kg	24.00		42.20		59.90			
Location=ROA; Formation=COPPER RIDGE; Phase=2; Site=34,39,41; Sample type=Regular; A=6082; B=6087; C=6090; A lab split=6084									
Aluminum	mg/kg	9820.00		24300.00		21200.00		10600.00	
Antimony	mg/kg	0.23	U	0.20	U	0.21	U	0.23	U
Arsenic	mg/kg	13.30		31.60		36.00		12.40	
Barium	mg/kg	56.60		31.70	B	12.20	B	56.50	
Beryllium	mg/kg	0.41	B	0.44	B	0.45	B	0.42	B
Cadmium	mg/kg	0.23	U	0.20	U	0.21	U	0.23	U
Chromium	mg/kg	12.80		28.40		30.50		13.90	
Cobalt	mg/kg	5.50	B	3.80	B	3.40	B	5.40	B
Copper	mg/kg	10.50		26.00		30.00		15.20	
Lead	mg/kg	28.80		17.60		23.90		28.50	
Manganese	mg/kg	887.00		121.00		109.00		895.00	
Nickel	mg/kg	6.60	B	13.80		14.20		7.10	B
Silver	mg/kg	0.23	U	0.20	U	0.21	U	0.23	U
Thallium	mg/kg	0.23	U	0.33	B	0.24	B	0.23	U
Zinc	mg/kg	44.50		92.10		100.00		50.70	

Table I.1 (continued)

Analysis	Units	A horizon result	Qualifier	B horizon result	Qualifier	C horizon result	Qualifier	A lab split result	Qualifier
Location=ROA; Formation=COPPER RIDGE; Phase=2; Site=40,42,43; Sample type=Regular; A=6055; B=6058; C=6061; A lab split=' '									
Aluminum	mg/kg	8970.00		12300.00		9930.00			
Antimony	mg/kg	0.21	U	0.22	U	0.22	U		
Arsenic	mg/kg	8.10		7.70		9.70			
Barium	mg/kg	27.90	B	24.50	B	9.70	B		
Beryllium	mg/kg	0.51	B	0.22	U	0.22	U		
Cadmium	mg/kg	0.21	U	0.22	U	0.22	U		
Chromium	mg/kg	20.30		17.40		23.30			
Cobalt	mg/kg	2.70	B	1.80	B	1.10	B		
Copper	mg/kg	2.90	B	5.60		7.70			
Lead	mg/kg	17.10		6.20		6.90			
Manganese	mg/kg	379.00		66.80		24.40	B		
Nickel	mg/kg	2.80	B	3.70	B	3.30	B		
Silver	mg/kg	0.21	U	0.22	U	0.22	U		
Thallium	mg/kg	0.21	U	0.22	U	0.22	U		
Zinc	mg/kg	13.60		18.00		19.00			
Location=ROA; Formation=COPPER RIDGE; Phase=2; Site=45,46,47; Sample type=Field duplicate; A=6076; B=6079; C=6067; A lab split=' '									
Aluminum	mg/kg	11100.00		14100.00		13300.00			
Antimony	mg/kg	0.21	U	0.21	U	0.35	B		
Arsenic	mg/kg	6.10		11.60		19.20			
Barium	mg/kg	88.30		46.60		20.20	B		
Beryllium	mg/kg	0.51	B	0.21	U	0.22	U		
Cadmium	mg/kg	0.21	U	0.21	U	0.22	U		
Chromium	mg/kg	15.00		25.40		35.90			
Cobalt	mg/kg	7.60	B	2.60	B	1.50	B		
Copper	mg/kg	5.00	B	10.60		13.70			
Lead	mg/kg	16.30		8.10		10.60			
Manganese	mg/kg	1310.00		74.80		51.50			
Nickel	mg/kg	6.20	B	7.00	B	6.80	B		
Selenium	mg/kg	0.47	B	0.56	B	0.71	B		
Silver	mg/kg	0.21	U	0.21	U	0.22	U		
Thallium	mg/kg	0.21	U	0.21	U	0.22	U		
Zinc	mg/kg	23.00		21.20		20.20			
Location=ROA; Formation=COPPER RIDGE; Phase=2; Site=45,46,47; Sample type=Regular; A=6073; B=6070; C=6064; A lab split=' '									
Aluminum	mg/kg	10600.00		15200.00		12600.00			
Antimony	mg/kg	0.21	U	0.22	U	0.22	U		
Arsenic	mg/kg	5.50		12.20		17.10			
Barium	mg/kg	80.20		60.30		18.90	B		
Beryllium	mg/kg	0.47	B	0.27	B	0.22	U		
Cadmium	mg/kg	0.21	U	0.22	U	0.22	U		
Chromium	mg/kg	14.50		40.20		30.20			
Cobalt	mg/kg	6.40	B	2.90	B	1.30	B		
Copper	mg/kg	5.20		10.50		13.60			
Lead	mg/kg	16.10		9.30		10.10			
Manganese	mg/kg	1180.00		120.00		41.50			
Nickel	mg/kg	6.10	B	7.90	B	6.80	B		
Selenium	mg/kg	0.48	B	0.41	B	0.44	B		
Silver	mg/kg	0.21	U	0.22	U	0.22	U		
Thallium	mg/kg	0.21	U	0.23	B	0.22	U		
Zinc	mg/kg	24.10		22.80		20.40			
Location=ROA; Formation=DISMAL GAP; Phase=1; Site=10,13,14; Sample type=Field duplicate; A=6037; B=6040; C=6043; A lab split=' '									
Aluminum	mg/kg	16300.00		37500.00		31000.00			
Antimony	mg/kg	0.25	U	0.24	U	0.23	U		
Arsenic	mg/kg	4.40		6.20		3.80			

Table I.1 (continued)

Analysis	Units	A horizon result	Qualifier	B horizon result	Qualifier	C horizon result	Qualifier	A lab split result	Qualifier
Barium	mg/kg	115.00		222.00		111.00			
Beryllium	mg/kg	0.84	B	1.10	B	1.20			
Cadmium	mg/kg	0.25	U	0.24	U	0.23	U		
Chromium	mg/kg	33.70		71.90		43.40			
Cobalt	mg/kg	26.40		16.90		26.60			
Copper	mg/kg	14.30		25.30		23.00			
Lead	mg/kg	25.70		32.40		17.50			
Manganese	mg/kg	1730.00		869.00		823.00			
Nickel	mg/kg	19.40		26.20		35.90			
Selenium	mg/kg	0.25	U	0.81	B	0.23	U		
Silver	mg/kg	0.25	U	0.24	U	0.23	U		
Thallium	mg/kg	0.25	U	0.33	B	0.25	B		
Zinc	mg/kg	43.90		49.80		57.00			
Location=ROA; Formation=DISMAL GAP; Phase=1; Site=10,13,14; Sample type=Regular; A=6028; B=6031; C=6034; A lab split=' '									
Aluminum	mg/kg	17300.00		31900.00		30100.00			
Antimony	mg/kg	0.25	U	0.23	U	0.22	U		
Arsenic	mg/kg	4.50		4.20		3.30			
Barium	mg/kg	117.00		94.20		103.00			
Beryllium	mg/kg	0.80	B	0.93	B	1.10			
Cadmium	mg/kg	0.25	U	0.23	U	0.22	U		
Chromium	mg/kg	30.20		44.40		45.70			
Cobalt	mg/kg	26.90		13.50		14.60			
Copper	mg/kg	15.40		21.50		24.90			
Lead	mg/kg	26.70		16.50		14.50			
Manganese	mg/kg	1860.00		225.00		300.00			
Nickel	mg/kg	20.00		25.30		36.50			
Selenium	mg/kg	0.36	B	0.58	B	0.22	U		
Silver	mg/kg	0.25	U	0.23	U	0.22	U		
Thallium	mg/kg	0.25	U	0.25	B	0.24	B		
Zinc	mg/kg	46.70		47.40		58.60			
Location=ROA; Formation=DISMAL GAP; Phase=1; Site=3,7,21; Sample type=Regular; A=6019; B=6022; C=6025; A lab split=' '									
Aluminum	mg/kg	19000.00		17100.00		28300.00			
Antimony	mg/kg	0.23	U	0.22	U	0.22	U		
Arsenic	mg/kg	4.10		3.80		4.00			
Barium	mg/kg	77.10		60.40		71.30			
Beryllium	mg/kg	0.73	B	0.58	B	0.76	B		
Cadmium	mg/kg	0.23	U	0.22	U	0.22	U		
Chromium	mg/kg	36.90		33.30		42.90			
Cobalt	mg/kg	22.10		15.10		9.80	B		
Copper	mg/kg	18.60		14.80		32.40			
Lead	mg/kg	25.40		18.80		18.60			
Manganese	mg/kg	1500.00		603.00		199.00			
Nickel	mg/kg	18.40		16.40		20.70			
Selenium	mg/kg	0.52	B	0.55	B	0.27	B		
Silver	mg/kg	0.23	U	0.22	U	0.22	U		
Thallium	mg/kg	0.23	U	0.22	U	0.24	B		
Zinc	mg/kg	41.30		35.60		43.00			
Location=ROA; Formation=DISMAL GAP; Phase=1; Site=8,20,22; Sample type=Regular; A=6010; B=6013; C=6016; A lab split=' '									
Aluminum	mg/kg	15700.00		30000.00		31500.00			
Antimony	mg/kg	0.22	U	0.22	U	0.22	U		
Arsenic	mg/kg	3.80		4.60		2.20	B		
Barium	mg/kg	60.90		71.60		72.50			
Beryllium	mg/kg	0.50	B	0.69	B	0.86	B		
Cadmium	mg/kg	0.22	U	0.22	U	0.22	U		
Chromium	mg/kg	30.40		54.00		48.50			
Cobalt	mg/kg	11.30		7.20	B	8.20	B		
Copper	mg/kg	13.30		19.50		24.40			

Table L1 (continued)

Analysis	Units	A horizon result	Qualifier	B horizon result	Qualifier	C horizon result	Qualifier	A lab split result	Qualifier
Lead	mg/kg	21.00		12.30		11.40			
Manganese	mg/kg	949.00		120.00		99.40			
Nickel	mg/kg	11.50		18.00		29.20			
Selenium	mg/kg	0.44	B	0.52	B	0.29	B		
Silver	mg/kg	0.22	U	0.22	U	0.22	U		
Thallium	mg/kg	0.22	U	0.24	B	0.25	B		
Zinc	mg/kg	30.60		41.60		48.70			

Appendix J

OCCURRENCES OF REJECTED DATA

Table J.1. Occurrences of rejected data

Analysis type	Analysis	Location	Formation	Matrix	Horizon	Count
H-3	Tritium	ORR	DISMAL GAP	SOIL	A	2
		ROA	COPPER RIDGE	SOIL	A	1
		ROA	DISMAL GAP	SOIL	A	1
H-3	Tritium					4
H-3						4
INORGANICS	Boron	ORR	CHICKAMAUGA Bethel V	SOIL	A	2
		ORR	CHICKAMAUGA Bethel V	SOIL	B	2
		ORR	CHICKAMAUGA Bethel V	SOIL	C	2
		ROA	COPPER RIDGE	SOIL	A	4
		ROA	COPPER RIDGE	SOIL	B	2
		ROA	COPPER RIDGE	SOIL	C	3
INORGANICS	Boron					15
INORGANICS	Cyanide	ORR	CHEPULTEPEC	SOIL	A	6
		ORR	CHEPULTEPEC	SOIL	B	3
		ORR	CHEPULTEPEC	SOIL	C	3
INORGANICS	Cyanide					12
INORGANICS	Lead	ORR	CHICKAMAUGA Bethel V	SOIL	A	2
INORGANICS	Lithium	ORR	CHICKAMAUGA Bethel V	SOIL	A	2
		ORR	CHICKAMAUGA Bethel V	SOIL	B	2
		ORR	CHICKAMAUGA Bethel V	SOIL	C	2
		ROA	COPPER RIDGE	SOIL	A	2
		ROA	COPPER RIDGE	SOIL	B	1
		ROA	COPPER RIDGE	SOIL	C	1
INORGANICS	Lithium					10
INORGANICS	Molybdenum	ORR	CHICKAMAUGA Bethel V	SOIL	A	2
		ORR	CHICKAMAUGA Bethel V	SOIL	B	2
		ORR	CHICKAMAUGA Bethel V	SOIL	C	2
		ROA	COPPER RIDGE	SOIL	A	2
		ROA	COPPER RIDGE	SOIL	B	1
		ROA	COPPER RIDGE	SOIL	C	1
INORGANICS	Molybdenum					10
INORGANICS	Osmium	AND	COPPER RIDGE	SOIL	A	5
		AND	COPPER RIDGE	SOIL	B	4
		AND	COPPER RIDGE	SOIL	C	4
		AND	DISMAL GAP	SOIL	A	5
		AND	DISMAL GAP	SOIL	B	5
		AND	DISMAL GAP	SOIL	C	5
		ORR	CHEPULTEPEC	SOIL	A	9
		ORR	CHEPULTEPEC	SOIL	B	6
		ORR	CHEPULTEPEC	SOIL	C	6
		ORR	CHICKAMAUGA Bethel V	SOIL	A	5
		ORR	CHICKAMAUGA Bethel V	SOIL	B	4
		ORR	CHICKAMAUGA Bethel V	SOIL	C	4
		ORR	CHICKAMAUGA K-25	SOIL	A	8
		ORR	CHICKAMAUGA K-25	SOIL	B	4
		ORR	CHICKAMAUGA K-25	SOIL	C	4
		ORR	COPPER RIDGE	SOIL	A	4
		ORR	COPPER RIDGE	SOIL	B	4
		ORR	COPPER RIDGE	SOIL	C	4
		ORR	DISMAL GAP	SOIL	A	2
		ORR	DISMAL GAP	SOIL	B	2
		ORR	DISMAL GAP	SOIL	C	2
		ORR	NOLICHUCKY	SOIL	A	4
		ORR	NOLICHUCKY	SOIL	B	4
		ORR	NOLICHUCKY	SOIL	C	4
		ROA	COPPER RIDGE	SOIL	A	6
		ROA	COPPER RIDGE	SOIL	B	5
		ROA	COPPER RIDGE	SOIL	C	5
		ROA	DISMAL GAP	SOIL	A	3
		ROA	DISMAL GAP	SOIL	B	3
		ROA	DISMAL GAP	SOIL	C	3

Table J.1 (continued)

Analysis type	Analysis	Location	Formation	Matrix	Horizon	Count
INORGANICS	Osmium					133
INORGANICS	Potassium	ORR	CHEPULTEPEC	SOIL	B	1
		ROA	COPPER RIDGE	SOIL	A	2
		ROA	COPPER RIDGE	SOIL	B	1
		ROA	COPPER RIDGE	SOIL	C	1
INORGANICS	Potassium					5
INORGANICS	Selenium	ORR	CHEPULTEPEC	SOIL	A	6
		ORR	CHEPULTEPEC	SOIL	B	2
		ORR	CHEPULTEPEC	SOIL	C	2
INORGANICS	Selenium					10
INORGANICS	Silicon	ORR	CHICKAMAUGA Bethel V	SOIL	A	2
		ORR	CHICKAMAUGA Bethel V	SOIL	B	2
		ORR	CHICKAMAUGA Bethel V	SOIL	C	2
		ORR	COPPER RIDGE	SOIL	A	3
		ORR	COPPER RIDGE	SOIL	B	3
		ORR	COPPER RIDGE	SOIL	C	3
		ROA	COPPER RIDGE	SOIL	A	4
		ROA	COPPER RIDGE	SOIL	B	3
		ROA	COPPER RIDGE	SOIL	C	3
INORGANICS	Silicon					25
INORGANICS	Strontium	ORR	CHICKAMAUGA Bethel V	SOIL	A	2
		ORR	CHICKAMAUGA Bethel V	SOIL	B	2
		ORR	CHICKAMAUGA Bethel V	SOIL	C	2
		ROA	COPPER RIDGE	SOIL	A	2
		ROA	COPPER RIDGE	SOIL	B	1
		ROA	COPPER RIDGE	SOIL	C	1
INORGANICS	Strontium					10
INORGANICS	Thallium	ORR	CHEPULTEPEC	SOIL	A	6
		ORR	CHEPULTEPEC	SOIL	B	3
		ORR	CHEPULTEPEC	SOIL	C	3
INORGANICS	Thallium					12
INORGANICS						244
ORGANICS	alpha-BHC	ORR	CHICKAMAUGA K-25	SOIL	A	1
ORGANICS	alpha-Chlordane	ORR	CHICKAMAUGA K-25	SOIL	A	1
ORGANICS	beta-BHC	ORR	CHICKAMAUGA K-25	SOIL	A	1
ORGANICS	delta-BHC	ORR	CHICKAMAUGA K-25	SOIL	A	1
ORGANICS	gamma-Chlordane	ORR	CHICKAMAUGA K-25	SOIL	A	1
ORGANICS	Acenaphthene	AND	COPPER RIDGE	SOIL	A	10
		AND	DISMAL GAP	SOIL	A	3
		ORR	CHEPULTEPEC	SOIL	A	3
		ORR	CHICKAMAUGA Bethel V	SOIL	A	11
		ORR	CHICKAMAUGA K-25	SOIL	A	9
		ORR	COPPER RIDGE	SOIL	A	6
		ORR	DISMAL GAP	SOIL	A	1
		ROA	COPPER RIDGE	SOIL	A	4
		ROA	DISMAL GAP	SOIL	A	1
ORGANICS	Acenaphthene					48
ORGANICS	Acenaphthylene	AND	DISMAL GAP	SOIL	A	13
		ORR	COPPER RIDGE	SOIL	A	2
		ORR	DISMAL GAP	SOIL	A	1
		ROA	COPPER RIDGE	SOIL	A	4

Table J.1 (continued)

Analysis type	Analysis	Location	Formation	Matrix	Horizon	Count
		ROA	DISMAL GAP	SOIL	A	1
ORGANICS	Acenaphthylene					21
ORGANICS	Aldrin	ORR	CHICKAMAUGA K-25	SOIL	A	1
ORGANICS	Anthracene	AND	COPPER RIDGE	SOIL	A	5
		AND	DISMAL GAP	SOIL	A	11
		ORR	CHEPULTEPEC	SOIL	A	3
		ORR	CHICKAMAUGA Bethel V	SOIL	A	7
		ORR	CHICKAMAUGA K-25	SOIL	A	2
		ORR	COPPER RIDGE	SOIL	A	4
		ORR	DISMAL GAP	SOIL	A	1
		ROA	COPPER RIDGE	SOIL	A	2
		ROA	DISMAL GAP	SOIL	A	1
ORGANICS	Anthracene					36
ORGANICS	Benzo(a)anthracene	AND	COPPER RIDGE	SOIL	A	1
		AND	DISMAL GAP	SOIL	A	13
		ORR	CHICKAMAUGA Bethel V	SOIL	A	6
		ORR	DISMAL GAP	SOIL	A	1
		ORR	NOLICHUCKY	SOIL	A	10
		ROA	DISMAL GAP	SOIL	A	3
ORGANICS	Benzo(a)anthracene					34
ORGANICS	Benzo(a)pyrene	AND	COPPER RIDGE	SOIL	A	2
		AND	DISMAL GAP	SOIL	A	2
		ORR	CHEPULTEPEC	SOIL	A	2
		ORR	COPPER RIDGE	SOIL	A	2
		ORR	DISMAL GAP	SOIL	A	1
		ROA	DISMAL GAP	SOIL	A	1
ORGANICS	Benzo(a)pyrene					10
ORGANICS	Benzo(b)fluoranthene	AND	COPPER RIDGE	SOIL	A	4
		AND	DISMAL GAP	SOIL	A	4
		ORR	CHEPULTEPEC	SOIL	A	3
		ORR	CHICKAMAUGA Bethel V	SOIL	A	4
		ORR	COPPER RIDGE	SOIL	A	4
		ORR	DISMAL GAP	SOIL	A	1
		ROA	DISMAL GAP	SOIL	A	1
ORGANICS	Benzo(b)fluoranthene					21
ORGANICS	Benzo(ghi)perylene	AND	COPPER RIDGE	SOIL	A	2
		AND	DISMAL GAP	SOIL	A	23
		ORR	CHEPULTEPEC	SOIL	A	1
		ORR	CHICKAMAUGA Bethel V	SOIL	A	7
		ORR	COPPER RIDGE	SOIL	A	3
		ORR	DISMAL GAP	SOIL	A	1
		ROA	COPPER RIDGE	SOIL	A	1
		ROA	DISMAL GAP	SOIL	A	1
ORGANICS	Benzo(ghi)perylene					39
ORGANICS	Benzo(k)fluoranthene	AND	COPPER RIDGE	SOIL	A	3
		AND	DISMAL GAP	SOIL	A	12
		ORR	CHEPULTEPEC	SOIL	A	2
		ORR	COPPER RIDGE	SOIL	A	1
		ORR	DISMAL GAP	SOIL	A	1
		ROA	DISMAL GAP	SOIL	A	1
ORGANICS	Benzo(k)fluoranthene					20
ORGANICS	Chrysene	AND	COPPER RIDGE	SOIL	A	11
		AND	DISMAL GAP	SOIL	A	16
		ORR	CHEPULTEPEC	SOIL	A	4
		ORR	CHICKAMAUGA Bethel V	SOIL	A	7

Table J.1 (continued)

Analysis type	Analysis	Location	Formation	Matrix	Horizon	Count
		ORR	CHICKAMAUGA K-25	SOIL	A	6
		ORR	COPPER RIDGE	SOIL	A	3
		ORR	DISMAL GAP	SOIL	A	1
		ORR	NOLICHUCKY	SOIL	A	10
		ROA	COPPER RIDGE	SOIL	A	1
		ROA	DISMAL GAP	SOIL	A	3
ORGANICS	Chrysene					62
ORGANICS	Dalapon	AND	COPPER RIDGE	SOIL	A	3
		ORR	CHICKAMAUGA Bethel V	SOIL	A	3
		ORR	DISMAL GAP	SOIL	A	9
		ROA	DISMAL GAP	SOIL	A	3
ORGANICS	Dalapon					18
ORGANICS	Dibenzo(a,h)anthracene	AND	COPPER RIDGE	SOIL	A	10
		AND	DISMAL GAP	SOIL	A	24
		ORR	CHEPULTEPEC	SOIL	A	2
		ORR	CHICKAMAUGA Bethel V	SOIL	A	9
		ORR	CHICKAMAUGA K-25	SOIL	A	9
		ORR	COPPER RIDGE	SOIL	A	4
		ORR	DISMAL GAP	SOIL	A	1
		ROA	DISMAL GAP	SOIL	A	1
ORGANICS	Dibenzo(a,h)anthracene					60
ORGANICS	Dicamba	AND	COPPER RIDGE	SOIL	A	3
		ORR	CHICKAMAUGA Bethel V	SOIL	A	3
ORGANICS	Dicamba					6
ORGANICS	Dichlorprop	AND	COPPER RIDGE	SOIL	A	3
		ORR	CHICKAMAUGA Bethel V	SOIL	A	3
ORGANICS	Dichlorprop					6
ORGANICS	Dieldrin	ORR	CHICKAMAUGA K-25	SOIL	A	1
ORGANICS	Dinoseb	AND	COPPER RIDGE	SOIL	A	3
		ORR	CHICKAMAUGA Bethel V	SOIL	A	3
ORGANICS	Dinoseb					6
ORGANICS	Endosulfan sulfate	ORR	CHICKAMAUGA K-25	SOIL	A	1
ORGANICS	Endosulfan I	ORR	CHICKAMAUGA K-25	SOIL	A	1
		ORR	COPPER RIDGE	SOIL	A	1
ORGANICS	Endosulfan I					2
ORGANICS	Endosulfan II	ORR	CHICKAMAUGA K-25	SOIL	A	1
ORGANICS	Endrin	ORR	CHICKAMAUGA K-25	SOIL	A	1
ORGANICS	Endrin aldehyde	ORR	CHICKAMAUGA K-25	SOIL	A	1
ORGANICS	Endrin ketone	ORR	CHICKAMAUGA K-25	SOIL	A	1
ORGANICS	Fluoranthene	AND	COPPER RIDGE	SOIL	A	6
		AND	DISMAL GAP	SOIL	A	13
		ORR	CHICKAMAUGA Bethel V	SOIL	A	4
		ORR	CHICKAMAUGA K-25	SOIL	A	1
		ORR	DISMAL GAP	SOIL	A	10
		ORR	NOLICHUCKY	SOIL	A	12
		ROA	DISMAL GAP	SOIL	A	12
ORGANICS	Fluoranthene					58
ORGANICS	Fluorene	AND	COPPER RIDGE	SOIL	A	9

Table J.1 (continued)

Analysis type	Analysis	Location	Formation	Matrix	Horizon	Count
		AND	DISMAL GAP	SOIL	A	14
		ORR	CHEPULTEPEC	SOIL	A	1
		ORR	CHICKAMAUGA Bethel V	SOIL	A	10
		ORR	CHICKAMAUGA K-25	SOIL	A	5
		ORR	COPPER RIDGE	SOIL	A	6
		ORR	DISMAL GAP	SOIL	A	1
		ROA	COPPER RIDGE	SOIL	A	3
		ROA	DISMAL GAP	SOIL	A	1
ORGANICS	Fluorene					50
ORGANICS	Heptachlor	ORR	CHICKAMAUGA K-25	SOIL	A	1
ORGANICS	Heptachlor epoxide	ORR	CHICKAMAUGA K-25	SOIL	A	1
ORGANICS	Indeno(1,2,3-cd)pyrene	AND	DISMAL GAP	SOIL	A	15
		ORR	CHICKAMAUGA Bethel V	SOIL	A	1
		ORR	DISMAL GAP	SOIL	A	1
		ROA	COPPER RIDGE	SOIL	A	2
		ROA	DISMAL GAP	SOIL	A	1
ORGANICS	Indeno(1,2,3-cd)pyrene					20
ORGANICS	Lindane	ORR	CHICKAMAUGA K-25	SOIL	A	1
ORGANICS	Methoxychlor	ORR	CHICKAMAUGA K-25	SOIL	A	1
ORGANICS	MCPA	AND	COPPER RIDGE	SOIL	A	3
		ORR	CHICKAMAUGA Bethel V	SOIL	A	3
ORGANICS	MCPA					6
ORGANICS	MCPP	AND	COPPER RIDGE	SOIL	A	3
		ORR	CHICKAMAUGA Bethel V	SOIL	A	3
ORGANICS	MCPP					6
ORGANICS	Naphthalene	AND	COPPER RIDGE	SOIL	A	12
		AND	DISMAL GAP	SOIL	A	10
		ORR	CHEPULTEPEC	SOIL	A	3
		ORR	CHICKAMAUGA Bethel V	SOIL	A	5
		ORR	CHICKAMAUGA K-25	SOIL	A	6
		ORR	COPPER RIDGE	SOIL	A	5
		ORR	DISMAL GAP	SOIL	A	1
		ROA	COPPER RIDGE	SOIL	A	5
ORGANICS	Naphthalene					47
ORGANICS	Phenanthrene	AND	DISMAL GAP	SOIL	A	2
		ORR	DISMAL GAP	SOIL	A	1
		ROA	DISMAL GAP	SOIL	A	1
ORGANICS	Phenanthrene					4
ORGANICS	Pyrene	AND	COPPER RIDGE	SOIL	A	2
		AND	DISMAL GAP	SOIL	A	6
		ORR	CHICKAMAUGA Bethel V	SOIL	A	6
		ORR	DISMAL GAP	SOIL	A	1
		ROA	DISMAL GAP	SOIL	A	1
ORGANICS	Pyrene					16
ORGANICS	PCB-1016	ORR	CHICKAMAUGA K-25	SOIL	A	1
ORGANICS	PCB-1221	ORR	CHICKAMAUGA K-25	SOIL	A	1
ORGANICS	PCB-1232	ORR	CHICKAMAUGA K-25	SOIL	A	1
ORGANICS	PCB-1242	ORR	CHICKAMAUGA K-25	SOIL	A	1

Table J.1 (continued)

Analysis type	Analysis	Location	Formation	Matrix	Horizon	Count
ORGANICS	PCB-1248	ORR	CHICKAMAUGA K-25	SOIL	A	1
ORGANICS	PCB-1254	ORR	CHICKAMAUGA K-25	SOIL	A	1
ORGANICS	PCB-1260	ORR	CHICKAMAUGA K-25	SOIL	A	1
ORGANICS	Silvex	AND	COPPER RIDGE	SOIL	A	3
		ORR	CHICKAMAUGA Bethel V	SOIL	A	3
ORGANICS	Silvex					6
ORGANICS	Toxaphene	ORR	CHICKAMAUGA K-25	SOIL	A	1
ORGANICS	2,4-D	AND	COPPER RIDGE	SOIL	A	3
		ORR	CHICKAMAUGA Bethel V	SOIL	A	3
ORGANICS	2,4-D					6
ORGANICS	2,4-DB	AND	COPPER RIDGE	SOIL	A	3
		ORR	CHICKAMAUGA Bethel V	SOIL	A	3
ORGANICS	2,4-DB					6
ORGANICS	2,4,5-T	AND	COPPER RIDGE	SOIL	A	3
		ORR	CHICKAMAUGA Bethel V	SOIL	A	3
ORGANICS	2,4,5-T					6
ORGANICS	4,4'-DDD	ORR	CHICKAMAUGA K-25	SOIL	A	1
ORGANICS	4,4'-DDE	ORR	CHICKAMAUGA K-25	SOIL	A	1
ORGANICS	4,4'-DDT	ORR	CHICKAMAUGA K-25	SOIL	A	1
ORGANICS						647
RADIONUCLIDES	Curium-244	AND	COPPER RIDGE	SOIL	A	2
		AND	DISMAL GAP	SOIL	A	4
		ORR	CHEPULTEPEC	SOIL	A	9
		ORR	CHICKAMAUGA Bethel V	SOIL	A	1
		ORR	COPPER RIDGE	SOIL	A	4
		ORR	DISMAL GAP	SOIL	A	1
		ORR	DISMAL GAP	SOIL	B	2
		ORR	DISMAL GAP	SOIL	C	2
		ROA	COPPER RIDGE	SOIL	A	5
		ROA	DISMAL GAP	SOIL	A	1
		ROA	DISMAL GAP	SOIL	C	1
RADIONUCLIDES	Curium-244					32
RADIONUCLIDES	Europium-155	AND	COPPER RIDGE	SOIL	A	5
		AND	COPPER RIDGE	SOIL	B	4
		AND	COPPER RIDGE	SOIL	C	4
		AND	DISMAL GAP	SOIL	A	5
		AND	DISMAL GAP	SOIL	B	5
		AND	DISMAL GAP	SOIL	C	5
		ORR	CHEPULTEPEC	SOIL	A	9
		ORR	CHEPULTEPEC	SOIL	B	6
		ORR	CHEPULTEPEC	SOIL	C	6
		ORR	CHICKAMAUGA Bethel V	SOIL	A	5
		ORR	CHICKAMAUGA Bethel V	SOIL	B	4
		ORR	CHICKAMAUGA Bethel V	SOIL	C	4
		ORR	CHICKAMAUGA K-25	SOIL	A	8
		ORR	CHICKAMAUGA K-25	SOIL	B	4
		ORR	CHICKAMAUGA K-25	SOIL	C	4
		ORR	COPPER RIDGE	SOIL	A	4
		ORR	COPPER RIDGE	SOIL	B	4
		ORR	COPPER RIDGE	SOIL	C	4
		ORR	DISMAL GAP	SOIL	A	5
		ORR	DISMAL GAP	SOIL	B	4

Table J.1 (continued)

Analysis type	Analysis	Location	Formation	Matrix	Horizon	Count
		ORR	DISMAL GAP	SOIL	C	4
		ORR	NOLICHUCKY	SOIL	A	4
		ORR	NOLICHUCKY	SOIL	B	4
		ORR	NOLICHUCKY	SOIL	C	4
		ROA	COPPER RIDGE	SOIL	A	6
		ROA	COPPER RIDGE	SOIL	B	5
		ROA	COPPER RIDGE	SOIL	C	5
		ROA	DISMAL GAP	SOIL	A	5
		ROA	DISMAL GAP	SOIL	B	5
		ROA	DISMAL GAP	SOIL	C	5
RADIONUCLIDES	Europium-155					146
RADIONUCLIDES	Neptunium-237	AND	DISMAL GAP	SOIL	A	1
		ORR	DISMAL GAP	SOIL	A	5
		ORR	DISMAL GAP	SOIL	B	2
		ORR	DISMAL GAP	SOIL	C	2
		ORR	NOLICHUCKY	SOIL	A	2
		ROA	DISMAL GAP	SOIL	A	5
		ROA	DISMAL GAP	SOIL	B	1
		ROA	DISMAL GAP	SOIL	C	1
RADIONUCLIDES	Neptunium-237					19
RADIONUCLIDES	Plutonium-238	ROA	COPPER RIDGE	SOIL	A	1
RADIONUCLIDES	Plutonium-239/240	ROA	COPPER RIDGE	SOIL	A	1
RADIONUCLIDES	Technetium-99	AND	COPPER RIDGE	SOIL	A	5
		AND	DISMAL GAP	SOIL	A	5
		ORR	CHEPULTEPEC	SOIL	A	9
		ORR	CHICKAMAUGA Bethel V	SOIL	A	4
		ORR	CHICKAMAUGA K-25	SOIL	A	8
		ORR	COPPER RIDGE	SOIL	A	4
		ORR	DISMAL GAP	SOIL	A	5
		ORR	DISMAL GAP	SOIL	B	2
		ORR	DISMAL GAP	SOIL	C	2
		ORR	NOLICHUCKY	SOIL	A	4
		ROA	COPPER RIDGE	SOIL	A	6
		ROA	DISMAL GAP	SOIL	A	5
		ROA	DISMAL GAP	SOIL	B	1
		ROA	DISMAL GAP	SOIL	C	1
RADIONUCLIDES	Technetium-99					61
RADIONUCLIDES						260
NAA	Cadmium	AND	COPPER RIDGE	SOIL	A	3
		AND	COPPER RIDGE	SOIL	B	4
		AND	COPPER RIDGE	SOIL	C	4
		AND	DISMAL GAP	SOIL	A	5
		AND	DISMAL GAP	SOIL	B	5
		AND	DISMAL GAP	SOIL	C	5
		ORR	CHEPULTEPEC	SOIL	A	6
		ORR	CHEPULTEPEC	SOIL	B	6
		ORR	CHEPULTEPEC	SOIL	C	6
		ORR	CHICKAMAUGA Bethel V	SOIL	A	5
		ORR	CHICKAMAUGA Bethel V	SOIL	B	4
		ORR	CHICKAMAUGA Bethel V	SOIL	C	4
		ORR	CHICKAMAUGA K-25	SOIL	A	6
		ORR	CHICKAMAUGA K-25	SOIL	B	3
		ORR	CHICKAMAUGA K-25	SOIL	C	4
		ORR	COPPER RIDGE	SOIL	A	4
		ORR	COPPER RIDGE	SOIL	B	4
		ORR	COPPER RIDGE	SOIL	C	4
		ORR	DISMAL GAP	SOIL	A	5
		ORR	DISMAL GAP	SOIL	B	5
		ORR	DISMAL GAP	SOIL	C	5
		ORR	NOLICHUCKY	SOIL	A	4
		ORR	NOLICHUCKY	SOIL	B	4
		ORR	NOLICHUCKY	SOIL	C	4

Table J.1 (continued)

Analysis type	Analysis	Location	Formation	Matrix	Horizon	Count
		ROA	COPPER RIDGE	SOIL	A	5
		ROA	COPPER RIDGE	SOIL	B	5
		ROA	COPPER RIDGE	SOIL	C	5
		ROA	DISMAL GAP	SOIL	A	5
		ROA	DISMAL GAP	SOIL	B	5
		ROA	DISMAL GAP	SOIL	C	5
NAA	Cadmium					139
NAA	Samarium	AND	COPPER RIDGE	SOIL	A	3
		AND	COPPER RIDGE	SOIL	B	4
		AND	COPPER RIDGE	SOIL	C	4
		AND	DISMAL GAP	SOIL	A	5
		AND	DISMAL GAP	SOIL	B	5
		AND	DISMAL GAP	SOIL	C	5
		ORR	CHEPULTEPEC	SOIL	A	6
		ORR	CHEPULTEPEC	SOIL	B	6
		ORR	CHEPULTEPEC	SOIL	C	6
		ORR	CHICKAMAUGA Bethel V	SOIL	A	5
		ORR	CHICKAMAUGA Bethel V	SOIL	B	4
		ORR	CHICKAMAUGA Bethel V	SOIL	C	4
		ORR	CHICKAMAUGA K-25	SOIL	A	6
		ORR	CHICKAMAUGA K-25	SOIL	B	3
		ORR	CHICKAMAUGA K-25	SOIL	C	4
		ORR	COPPER RIDGE	SOIL	A	4
		ORR	COPPER RIDGE	SOIL	B	4
		ORR	COPPER RIDGE	SOIL	C	4
		ORR	DISMAL GAP	SOIL	A	5
		ORR	DISMAL GAP	SOIL	B	5
		ORR	DISMAL GAP	SOIL	C	5
		ORR	NOLICHUCKY	SOIL	A	4
		ORR	NOLICHUCKY	SOIL	B	4
		ORR	NOLICHUCKY	SOIL	C	4
		ROA	COPPER RIDGE	SOIL	A	5
		ROA	COPPER RIDGE	SOIL	B	5
		ROA	COPPER RIDGE	SOIL	C	5
		ROA	DISMAL GAP	SOIL	A	5
		ROA	DISMAL GAP	SOIL	B	5
		ROA	DISMAL GAP	SOIL	C	5
NAA	Samarium					139
NAA	Selenium	AND	COPPER RIDGE	SOIL	A	4
		AND	COPPER RIDGE	SOIL	B	4
		AND	COPPER RIDGE	SOIL	C	4
		AND	DISMAL GAP	SOIL	A	4
		AND	DISMAL GAP	SOIL	B	5
		AND	DISMAL GAP	SOIL	C	5
		ORR	CHEPULTEPEC	SOIL	A	8
		ORR	CHEPULTEPEC	SOIL	B	6
		ORR	CHEPULTEPEC	SOIL	C	6
		ORR	CHICKAMAUGA Bethel V	SOIL	A	5
		ORR	CHICKAMAUGA Bethel V	SOIL	B	4
		ORR	CHICKAMAUGA Bethel V	SOIL	C	4
		ORR	CHICKAMAUGA K-25	SOIL	A	6
		ORR	CHICKAMAUGA K-25	SOIL	B	4
		ORR	CHICKAMAUGA K-25	SOIL	C	4
		ORR	COPPER RIDGE	SOIL	A	4
		ORR	COPPER RIDGE	SOIL	B	4
		ORR	COPPER RIDGE	SOIL	C	4
		ORR	DISMAL GAP	SOIL	A	5
		ORR	DISMAL GAP	SOIL	B	5
		ORR	DISMAL GAP	SOIL	C	5
		ORR	NOLICHUCKY	SOIL	A	4
		ORR	NOLICHUCKY	SOIL	B	4
		ORR	NOLICHUCKY	SOIL	C	3
		ROA	COPPER RIDGE	SOIL	A	5
		ROA	COPPER RIDGE	SOIL	B	5
		ROA	COPPER RIDGE	SOIL	C	5
		ROA	DISMAL GAP	SOIL	A	5

Table J.1 (continued)

Analysis type	Analysis	Location	Formation	Matrix	Horizon	Count
		ROA	DISMAL GAP	SOIL	B	5
		ROA	DISMAL GAP	SOIL	C	5
NAA	Selenium					141
NAA	Tungsten	AND	COPPER RIDGE	SOIL	A	3
		AND	COPPER RIDGE	SOIL	B	4
		AND	COPPER RIDGE	SOIL	C	4
		AND	DISMAL GAP	SOIL	A	5
		AND	DISMAL GAP	SOIL	B	5
		AND	DISMAL GAP	SOIL	C	5
		ORR	CHEPULTEPEC	SOIL	A	6
		ORR	CHEPULTEPEC	SOIL	B	6
		ORR	CHEPULTEPEC	SOIL	C	6
		ORR	CHICKAMAUGA Bethel V	SOIL	A	5
		ORR	CHICKAMAUGA Bethel V	SOIL	B	4
		ORR	CHICKAMAUGA Bethel V	SOIL	C	4
		ORR	CHICKAMAUGA K-25	SOIL	A	6
		ORR	CHICKAMAUGA K-25	SOIL	B	3
		ORR	CHICKAMAUGA K-25	SOIL	C	4
		ORR	COPPER RIDGE	SOIL	A	4
		ORR	COPPER RIDGE	SOIL	B	4
		ORR	COPPER RIDGE	SOIL	C	4
		ORR	DISMAL GAP	SOIL	A	5
		ORR	DISMAL GAP	SOIL	B	5
		ORR	DISMAL GAP	SOIL	C	5
		ORR	NOLICHUCKY	SOIL	A	4
		ORR	NOLICHUCKY	SOIL	B	4
		ORR	NOLICHUCKY	SOIL	C	4
		ROA	COPPER RIDGE	SOIL	A	5
		ROA	COPPER RIDGE	SOIL	B	5
		ROA	COPPER RIDGE	SOIL	C	5
		ROA	DISMAL GAP	SOIL	A	5
		ROA	DISMAL GAP	SOIL	B	5
		ROA	DISMAL GAP	SOIL	C	5
NAA	Tungsten					139
NAA	Zinc	ORR	CHEPULTEPEC	SOIL	A	4
		ORR	CHEPULTEPEC	SOIL	B	2
		ORR	CHEPULTEPEC	SOIL	C	2
		ORR	CHICKAMAUGA Bethel V	SOIL	A	5
		ORR	CHICKAMAUGA Bethel V	SOIL	B	4
		ORR	CHICKAMAUGA Bethel V	SOIL	C	3
		ORR	DISMAL GAP	SOIL	A	5
		ORR	DISMAL GAP	SOIL	B	5
		ORR	DISMAL GAP	SOIL	C	5
		ORR	NOLICHUCKY	SOIL	A	2
		ORR	NOLICHUCKY	SOIL	B	2
		ORR	NOLICHUCKY	SOIL	C	1
NAA	Zinc					40
NAA						598
						1753

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