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Plugging and Abandonment Plan for Wells and Coreholes at Oak Ridge National Laboratory, Oak Ridge, Tennessee

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EXECUTIVE SUMMARY

Site environmental characterization and remediation require data obtained from the installation and sampling of wells and coreholes. When these wells and coreholes are no longer needed, are not producing reliable information, or are damaged and can act as conduits for contaminant migration, they should be identified and properly decommissioned. This is most important for wells of sufficient depth to create the potential for exchange of fluids between different hydrologic units.

The need for a uniform well and corehole plugging and abandonment (P&A) program for the Oak Ridge National Laboratory (ORNL) was discussed in the ORNL Corrective Action Plan written in response to the ORNL Tiger Team Report. Details were identified in the Department of Energy (DOE) Environmental Survey of 1987, the DOE Oak Ridge Operations Environmental Protection and Quality Assurance (QA) Appraisal of August and September 1988, and again in the DOE Environmental, Safety, Health, and Quality Assurance (ESH&QA) Appraisal of April 1990. An organizational basis for an ORNL P&A program was suggested in the draft ORNL Groundwater Protection Program Management Plan as a functional responsibility of the Groundwater Protection Program Manager.

This plan presents the strategy and detailed approach for the well and corehole P&A plan for most of the areas for which ORNL has responsibility. Although wells in Waste Area Grouping (WAG) 5 and WAG 10 are not specifically addressed in this plan, these wells will be incorporated into the decommissioning program in FY 1993. The plan does not include WAG 6, for which a separate P&A plan has been prepared. A well and corehole inventory conducted by the Environmental Sciences Division (ESD) during late 1991 and 1992 has found 1036 wells and coreholes within the areas included in this plan. The inventory shows that 182 of these ORNL wells are located in non-WAG areas. Sixty-eight of these 182 are installed on West Chestnut Ridge (WCR), 24 are located in the WBW area, and 90 are scattered throughout ORNL and not within or adjacent to a WAG boundary. This plan also encompasses all of these non-WAG wells. Figure 1 shows the WCR and WBW areas and the boundaries of all 12 WAGs encompassed by this plan; all are shown superimposed on a geologic map of the Oak Ridge Reservation. An inventory of WAG 5 and WAG 10 wells will be conducted in 1993 as part of remedial investigation activities.

Section 2 provides very brief background information on affected ORNL WAGs that is helpful in understanding the placement of wells and coreholes at ORNL. Limited background information is also provided on the geology in order to promote an understanding of the effects of the P&A methods. P&A methods for ORNL are discussed in Sect. 3, and specific plugging procedures are presented in Appendix C for the various types of well installations and subsurface conditions.

All ORNL wells will be evaluated in accordance with criteria provided in this P&A plan to determine whether they should be maintained or plugged and abandoned. The ORNL Environmental Restoration (ER) Program will be responsible for the administration of the P&A program and will consult with the ORNL Groundwater Program Coordinator (GPC) for technical oversight and independent review. For ORNL personnel with responsibility for wells or an interest in the data obtained from them, the ORNL ER Program and the GPC

will sponsor workshops to determine which wells will be maintained and which will be decommissioned. These workshops should be held in a timely manner, and the results of the workshops should be documented.

All wells and coreholes are intended to be decommissioned with essentially all subsurface well materials remaining in place; however, procedures for the removal of well screens and casings are presented in Appendix C in the event that a well requires decommissioning by this method.

Wells within the waste burial trenches will be plugged with coarse granular bentonite. The quantities of water in these wells is not anticipated to be great enough that placement of coarse granular bentonite will displace well water upward to the ground surface; containment and disposal of contaminated well water should therefore be unnecessary. Bentonite will be placed to fill the well to a level 3 ft below the ground surface. Type 1 cement grout will then be added to bring the plug to a level 1 ft below the ground surface. After 24 h, the casing will be removed to a depth of only 1 ft below the ground surface to avoid encountering contaminated waste. The excavation will be backfilled with excavated soil.

Wells to be decommissioned that are installed in the regolith (i.e., do not penetrate bedrock) and are not within the burial trenches will be grouted with Type 1 cement/bentonite grout or microfine cement grout. Grout will be placed by the tremie method and will displace well water from the top of the well as the grout is pumped into the bottom of the well. Water and water-diluted grout will be contained and disposed of properly. Prior to grouting, if records do not document the placement of a grout seal when the well was constructed, wells with casings longer than 10 ft will be perforated or slit from the top of the well screen to within 10 ft of the ground surface to ensure that the annulus will be securely sealed with grout. Microfine cement grout will be used in wells that require slitting or perforating and in the screened sections of wells with filter packs longer than 10 ft. After grouting, the upper 3 ft of the well casing will be removed and the excavation backfilled with the excavated soil and properly tamped.

Wells that penetrate firm bedrock may be plugged with two types of grout. If the records do not document the placement of a grout seal when the well was constructed, then, before grouting begins, the casing will be perforated or slit from a depth of 10 ft below the ground surface to the bottom of the casing to ensure that the annulus will be securely sealed. Grouting of natural fractures or openings in the rock away from the corehole is not required during decommissioning; therefore, if the casing is split or requires perforating, two types of grout mixes may be used. Type 1 cement/bentonite grout will be tremied into the exposed bedrock portion of the well, and a more penetrating grout made of microfine cement will be placed in the cased portion. If the casing is not to be slit or perforated, the well will be grouted with Type 1 cement/bentonite grout only. Grout will be placed by the tremie method and will displace well water from the top of the well as the grout is pumped into the bottom of the well. Water and water-diluted grout will be contained and disposed of properly. After grouting, the casing will be removed to a depth of 3 ft below the ground. The excavation will be backfilled with excavated soil and properly tamped. Bedrock wells that were completed with well screens will be decommissioned using the same procedures as for cased and screened wells in unconsolidated material.

1. INTRODUCTION

Site environmental characterization and remediation require data obtained from the installation and sampling of wells. When these wells are no longer needed, are not producing reliable information, or are damaged and can act as conduits for contaminant migration, they should be identified and properly decommissioned. This is most important for wells of sufficient depth to create the potential for exchange of fluids between different hydrologic units.

1.1 PURPOSE AND SCOPE

The need for a uniform well and corehole plugging and abandonment (P&A) program for the Oak Ridge National Laboratory (ORNL) was discussed in the ORNL Corrective Action Plan written in response to the Tiger Team Report. Details were identified in the Department of Energy (DOE) Environmental Survey of 1987, the DOE Oak Ridge Operations Environmental Protection and Quality Assurance (QA) Appraisal of August and September 1988, and again in the DOE Environmental, Safety, Health, and Quality Assurance (ESH & QA) Appraisal of April 1990. An organizational basis for an ORNL P&A program was suggested in the draft ORNL Groundwater Protection Program Management Plan as a functional responsibility of the Groundwater Protection Program Manager. Starting in September 1992, any new wells or coreholes will be required to have an approved and funded P&A plan prior to construction.

While this report provides a well decommissioning (P&A) plan for most of the areas for which ORNL has responsibility (see Fig. 1), it does not specifically address WAG 5 and WAG 10 wells. These wells will be inventoried in FY 1993 as part of remedial investigation activities and will then be incorporated into the P&A Program. The plan does not include Waste Area Grouping (WAG) 6, for which a separate P&A plan has been prepared (Stansfield and Huff 1992).

1.2 OBJECTIVE

The objective of this P&A plan is to provide the basis for effectively decommissioning unneeded wells at ORNL to eliminate potential well corehole pathways for contaminant migration. In meeting this objective, the plan provides

- background information promoting an understanding of the plan;
- maps showing locations of wells by WAG boundaries and areal geology;
- an inventory listing of known wells and coreholes at ORNL that will be updated as additional nonlisted wells and coreholes are found in an ongoing field effort and as new ones are constructed;
- construction descriptions of known existing well types;

- criteria for the selection and prioritization of wells to be plugged and abandoned;
- the process for implementation of the P&A program;
- detailed field procedures for P&A of wells at ORNL; and
- procedures for documentation of well and corehole P&A.

2. BACKGROUND INFORMATION

For almost half a century, radioactive and hazardous materials have been handled at ORNL. During this period, research and development activities and waste management practices have resulted in residual contamination of facilities and the environment (Voorhees et al. 1989). This section provides background information helpful in understanding the placement of wells and coreholes at ORNL and the geologic environment in which they are constructed.

2.1 WASTE AREA GROUPINGS

2.1.1 Concept

Because of the large number (>200) of remediation sites at ORNL, many of which are located close to one another, and the proven hydrologic interconnections between many of these sites, individual monitoring and assessment were impractical. Therefore, by 1987, the remediation sites were grouped into WAGs with boundaries established primarily on geographical location and hydrologic information. Since then, the ORNL monitoring strategy has been to develop a system of wells that adequately monitor groundwater flow and possible contaminant migration across WAG boundaries (Trabalka and Myrick 1987).

2.1.2 WAGs and Other Areas with Wells and Coreholes Encompassed by Plan

This plan encompasses all wells and coreholes at 12 different WAGS. Most, but not all, wells and coreholes fall within or are adjacent to a WAG boundary. The inventory compiled by Environmental Sciences Division (ESD) for this plan and presented in Appendixes A and B lists a total of 1036 wells and coreholes. Additional wells and coreholes will be added to this list as they are located. Presently, the inventory shows that 182 of these wells and coreholes are located in non-WAG areas. Sixty-eight of these 182 are installed on WCR, 24 are located in the WBW area, and 90 are scattered throughout ORNL but are not within or adjacent to a WAG boundary. This plan also encompasses all these non-WAG wells and coreholes. Fig. 1 shows the WCR and WBW areas and the boundaries of all 12 WAGs encompassed by this plan.

2.1.3 Identification of WAGs and Areas Involved in Plan

Each WAG and area covered by this plan in which wells or coreholes have been constructed is briefly identified below. Subsurface information on the named valleys (see Fig. 2) in which these WAGs and areas are found is described in Subsect. 2.2.2. A complete description of each of the WAGs can be found in the Resource Conservation and Recovery Act (RCRA) Facilities Assessment (ORNL 1987) for the ORNL.

- WAG 1 encompasses the main plant area of ORNL and lies in Bethel Valley. Remediation sites within this WAG include storage tanks, pond impoundments, contaminated soil sites, waste treatment facilities, and radioactive and chemical solid waste storage areas. Boundaries of WAG 1 and locations of its 211 associated wells and coreholes (see Appendix B) are shown in Figs. 3(a) and 3(b).

waste storage areas. Boundaries of WAG 1 and locations of its 211 associated wells and coreholes (see Appendix B) are shown in Figs. 3(a) and 3(b).

- WAG 2 consists of White Oak Lake and portions of White Oak Creek and its tributaries and floodplains that are not in WAG 1. It lies mostly in Melton Valley, but meets WAG 1 at the gap in Haw Ridge. This WAG receives drainage from several solid waste storage areas (SWSAs) in other WAGs and from many of the reactor facilities in Melton Valley. Sediments include both radioactive and chemical contaminants. The boundaries of WAG 2 and locations of its 168 associated wells (see Appendix B) are shown in Figs. 4(a) and 4(b).

- WAG 3 lies in Bethel Valley slightly more than 1/2 mile west of the entrance to the main plant area (WAG 1). It consists of three landfills, two of which have received radioactive contaminated waste in the past. The boundaries of WAG 3 and locations of its 82 associated wells (see Appendix B) are shown in Fig. 5.

- WAG 4 lies in Melton Valley and includes SWSA 4 and a decommissioned low-level radioactive waste (LLW) line. Buried radioactive wastes in this WAG include biological wastes. The boundaries of WAG 4 and locations of its 91 associated wells (see Appendix B) are shown in Fig. 6.

- WAG 7 is located in Melton Valley. It includes three spill sites and seven pits and trenches used for disposal of LLW. It also includes a decontamination facility, a storage area for shielded transfer tanks, and fuel-well cells holding acid solutions containing enriched uranium. The boundaries of WAG 7 and locations of its 175 associated wells (see Appendix B) are shown in Fig. 7.

- WAG 8 is located in Melton Valley and includes the sites of the Molten Salt Reactor Experiment (MSRE) and the High Flux Isotope Reactor (HFIR). This WAG has been identified as a source of radioactive contamination to surface water. The boundaries of WAG 8 and locations of its 28 associated wells (see Appendix B) are shown in Fig. 8.

- WAG 9 is located in Melton Valley and includes a decommissioned impoundment containing sediments with contaminants from cooling waters from the Homogeneous Reactor Experiment (HRE). The boundaries of WAG 9 and locations of its 14 associated wells (see Appendix B) are shown in Fig. 9.

- WAG 11 is a 30-acre site located on the western end of East Fork Ridge; it consists of the White Wing Scrap Yard, in which radioactive contaminated construction equipment, metal tanks and scrap, from ORNL, the K-25 Site, and the Y-12 Plant have been stored. The boundaries of WAG 11 and locations of its 26 associated wells (see Appendix B) are shown in Fig. 10.

- WAG 12 lies in Melton Valley about 1-1/2 miles southeast of the ORNL main site (WAG 1). This is the site of a closed landfill that received construction materials; disabled construction equipment is stored there. The boundaries of WAG 12 and locations of its six associated wells (see Appendix B) are shown in Fig. 11.

- WAG 13, the westernmost WAG in Melton Valley, is located on the floodplain of the Clinch River. It includes two remediation sites about 1200 ft apart that were sites for experiments concerning the movement of ^{137}Cs resulting from nuclear weapons fallout. The boundaries of WAG 13 and locations of its nine associated wells (see Appendix B) are shown in Fig. 12.

- WAG 17, the easternmost WAG in Bethel Valley, is about one mile from the main plant (WAG 1). It includes the ORNL Services Area of shipping and receiving departments, major craft and machine shop areas, garage equipment repair area, material storage area, and fuel and oil storage tanks. It encompasses eight remediation sites. The boundaries of WAG 17 and locations of its 32 associated wells (see Appendix B) are shown in Fig. 13.

- WAG 18 is the eastern-most WAG in Melton Valley and is the site of the Robotics and Process Systems Complex. There have been no known contaminant releases from this site. The boundaries of WAG 18 and locations of its six associated wells (see Appendix B) are shown in Fig. 14.

- WAG 19 consists of two separate clusters of a total of six remediation sites. Both clusters lie in Melton Valley, but are separated by a distance of more than 2000 ft. One cluster contains permitted hazardous and mixed waste storage, and the other cluster contains facilities that treat or dispose of reactive or gaseous hazardous wastes. There is no record of contaminant releases at either of the two clusters. The boundaries of the southernmost cluster of WAG 19 and locations of its three associated wells (see Appendix B) are shown in Fig. 15. There are no known wells associated with the northern cluster of WAG 19.

- The WCR area is not a designated WAG, and there is no record of activities that could have resulted in contaminant releases. In the past it was considered as a site for a SWSA and received intensive investigation. The boundaries of the WCR area and locations of its 68 associated wells (see Appendix B) are shown in Fig. 16.

- The WBW area is not a designated WAG. It is considered to be a relatively pristine area and is used for ecological studies. The boundaries of the WBW and locations of its 24 associated wells (see Appendix B) are shown in Fig. 17.

- Ninety-three wells drilled at ORNL are neither within nor adjacent to any WAG nor within the WCR and WBW areas. No contaminant releases are suspected at any of the well-site locations which are shown in Figs. 18(a) and 18(b). Most of these wells were installed to obtain water level measurements or, as in the case of the corehole (Joy-2), to obtain geologic (stratigraphic and structural) information.

2.2. GEOLOGY

Only basic geologic information that promotes an understanding of the subsurface environment of the well installations at the Oak Ridge Reservation (ORR) and the effects of the decommissioning methods prescribed in this plan is presented in this subsection. Stockdale (1951) and McMaster et al. (1965) provide detailed geologic information on the area.

2.2.1 Regional Geology

ORR lies in the Valley and Ridge Physiographic Province. In Tennessee, the province consists of northeast-southwest striking strata of carbonate rocks (limestones and dolomites) and clastics (sandstones, siltstones, mudstones, and shales) extending from the Georgia-Alabama border on the south, to the Virginia border on the north. As a result of tectonic-compressional forces applied from the southeast at the end of the Paleozoic Age, a series of thrust faults tilted the strata and resulted in a repetition of formations in the northwest direction, with older formations overlying younger formations at each thrust fault. This structural arrangement has resulted in erosion-resistant strata forming parallel ridges and less resistant strata eroding to become intervening valley floors.

2.2.2 Site Physiography and Geology

The main plant facilities of ORR lie essentially within four subparallel valleys (see Fig. 2). Starting from the northwest and moving southeast, these are named East Fork, Bear Creek, Bethel, and Melton valleys. Pine Ridge separates the west end of East Fork Valley, in which the K-25 Site is located, from Bear Creek Valley. Bear Creek and Bethel Valleys are separated by Chestnut Ridge, and Haw Ridge rises between Bethel and Melton Valleys. The main plant facilities of ORNL are situated in Bethel Valley. Copper Ridge bounds Melton Valley on the southeast side, while Black Oak Ridge borders the East Fork Valley on the northwest. Topographic relief between valleys and ridges reaches slightly more than 400 ft.

The areal geology of ORR is shown in Fig. 1. Bedrock strata, underlying all of the valleys and ridges, commonly dip at angles ranging from 30 to 40° southeast and have an average strike of N 56° E. Locally, however, the strike and dip may vary, with dips ranging from horizontal to vertical having been observed in excavations (Davis and Stansfield 1984). Because of the repetition of beds due to thrust faulting as described above, most of the ORR is underlain by one of the four bedrock groups listed below in descending stratigraphic order:

- Chickamauga Group: Limestone with some interbedded calcareous siltstone and shale;
- Knox Group: Dolomitic limestone with prominent chert zones;
- Conasauga Group: Limestone and interbedded limestone and shale in the upper portion, with shale predominating in the lower portion; and
- Rome Formation: Sandstone and shale with variegated colors and dolomitic limestone lenses.

The Chickamauga Group underlies East Fork Valley, where the K-25 Site and the northwest portion of WAG 11 (in McNew Hollow) are situated, and Bethel Valley, where the main ORNL complex is located. Although solution-widened bedding planes and joints are not uncommon in the Chickamauga limestone beds, large cavities have not been encountered (Stockdale 1951). Clay soils overlie the Chickamauga and range in depth from 2 ft to commonly less than 15 ft. The contact between the residual soil and relatively unweathered rock is generally distinct

The Knox group forms Black Oak, Chestnut, and Copper ridges. Cavities within the dolomitic rock and surface sink holes are common in this group. Springs are prevalent at the base of the ridges underlain by the Knox and are the headwaters for some of the area's streams. Residual clay soils, with zones containing considerable amounts of chert, reach depths of over 100 ft on the ridges, and the underlying bedrock surface is typically irregular.

The Conasauga Group underlies Bear Creek Valley, where the Y-12 Plant is located. It also underlies Melton Valley, where several SWSAs and other ORNL facilities are situated. In the early 1950s, of all the geologic units underlying ORR, the Conasauga Group was perceived as providing the most suitable subsurface conditions for burial of wastes. Overlying residual silty clay soils are commonly thin. However, saprolite (intensely weathered rock that preserves all the structural features of the parent bedrock) depths of 15 to 20 ft are common, with depths of over 60 ft found at the higher elevations.

The Rome Formation forms Haw and Pine Ridges. This formation underlies the southeast portion of WAG 11, located in McNew Hollow near the base of the northwest flank of Pine Ridge, and is crossed by pipelines in Haw Ridge. The regolith is generally less than 15 ft thick.

2.2.3 Hydrogeology

Shallow groundwater at ORNL is under unconfined (water table) conditions, and the groundwater surface is generally a subdued replica of the topography. Groundwater movement tends to be from topographically high to topographically low areas. Depth to the water-saturated zone is largely dependent on the thickness of soils or saprolite, as the water table is commonly encountered near the base of these materials.

Bedrock and parts of the regolith underlying ORNL have only secondary permeability—that is, groundwater flow is only through fractures and along bedding planes in the rock mass, as the bedrock has insignificant intergranular permeability. Drill cores have shown that the fracture frequency decreases with increasing depth, which results in a decreasing of hydraulic conductivity with depth.

Moore (1989, p. 3) states "The land surface is very permeable in the ORNL area, and nearly all precipitation (an average of 132 cm/yr) infiltrates. . . .The majority of the infiltration (76 cm/yr) replenishes soil water within the root zone of vegetation and is later consumed by evapotranspiration. A majority of the remaining water (56 cm/yr) moves through the ground to discharge locations at nearby seeps, springs and streams."

Also according to Moore (1988), groundwater at ORNL occurs and moves in four zones that can be described as follows. The stormflow zone is a zone 1-6 ft in depth (includes the

root zone for vegetation) below the ground surface, in which 90-95% of all groundwater flows to discharge at nearby springs or streams during, or for a short period after, intense precipitation events. The vadose zone (unsaturated) separates the stormflow zone from the underlying shallow saturated zone, but is absent near major streams and may be absent on steep hillsides. The shallow saturated zone extends to a depth of 60 to 200 ft; and from 5 to 10% percent of all groundwater discharges to streams from this zone. The deep saturated zone extends to the base of the fresh water at a depth of 500 ft or more, and only 1% of all groundwater at ORNL is estimated to move through this zone.

2.3 SUMMARY OF EXISTING WELL TYPES AT ORNL

There has been no central control or organizational responsibility for installation, custody, and maintenance of wells at ORNL. Specific construction data are not available or are meager for most of the wells installed prior to 1985, the year that the Remedial Action Program (RAP), now the Environmental Restoration (ER) Program, was initiated by the DOE. To help meet the needs of the ER Program, a Data and Information Management System (DIMS) has been developed at ESD. Available construction data on existing wells have been entered into one of the components of this system, the Numeric Data Base, which contains eight different data sets on wells at ORNL. The well inventory in Appendixes A and B contains information from the Numeric Data Base and from a field inventory conducted by ESD during late 1991 and 1992 to verify and update the Numeric Data Base. A field search for unknown, existing wells will be continued, but at a lower degree of effort. When such wells are found, available data will be entered into the DIMS, and the wells will become candidates for P&A under this P&A Plan. All well data, upon verification, will be stored in the Oak Ridge Environmental Information System (OREIS).

In the inventory, all wells installed prior to 1983 are classified only as "pre-RAP" (pre-Remedial Action Program), and wells installed by the U.S. Geological Survey (USGS) are classified as "USGS." Neither the description "pre-RAP" nor "USGS" indicates a particular type of construction or the purpose of the well. Non-USGS wells constructed since 1983 are listed by a named type that indicates the purpose for which they were installed.

2.3.1 Pre-RAP Wells

There were 456 wells installed during the period of 1949 through 1983, and these are classified as pre-RAP wells in the inventory in Appendixes A and B. As stated above, specific construction data is unavailable or meager for most of these wells. Several types of wells were constructed during that period. Many have casings of 6-5/8-in.-diam corrugated steel, perforated from or near the ground surface to the total depth. The annulus between the well casing and corehole was commonly filled with gravel and/or drill cuttings. A representative diagram of such a pre-RAP well construction is shown in Fig. 19(a). Other wells consist of 5-1/2-in.-diam steel casing set into bedrock, through which the corehole was advanced deeper into bedrock. The bedrock portion of the well below the casing was left uncased and referred to as the "open interval." Fig. 19(b) is a representative diagram for such a bedrock well. A third, and later, type of well construction consists of a 3-in.-diam polyvinyl chloride (PVC) casing with the lower portion slotted as a well screen. The PVC/corehole annulus was filled with sand from the bottom of the corehole to near the ground surface, and cement grout was

placed in the top few feet of the corehole annulus. A representative diagram of this type of well construction is shown in Fig. 19(c).

2.3.2 USGS Wells

These 26 wells were installed by the USGS during 1985-1987 for the purpose of obtaining water-level measurements and sampling for water chemistry analysis. Zehner (1989) indicates that these wells had three basic installation types. Nine of the wells, completed in the regolith by the auger drilling method, had stainless steel screens (each approximately 3 ft in length) attached to the bottom of steel casing. Essentially, the annulus between the corehole and well casing in these augered coreholes was not sealed, being backfilled only with drill cuttings. The remainder of the wells were completed by the rotary drilling method. The seven shallowest of these rotary-drilled wells (UA1, UB1, UC1, UF1, UG1, UH1, and UL1) were constructed with steel casings and stainless steel screens, each screen approximately 5 ft in length. In these wells, the annulus between the steel casing and the corehole was sealed with cement grout (Zehner 1989). All of the rest of the rotary drilled wells were constructed by drilling through steel casing that had been set into bedrock, with the lower portion of corehole left uncased and unscreened (open interval). In the cased portion of these wells, the casing/corehole annulus was sealed with cement grout in both the regolith and bedrock.

Any wells installed by the USGS prior to 1985 would be in the inventory as pre-RAP wells and therefore are not identifiable from the inventory as having been constructed by USGS. It appears from well construction diagrams presented by Webster and Bradley (1988) that some of the early USGS wells were similar in construction to the pre-RAP wells previously described.

2.3.3 RCRA Compliance Wells

The locations of these 124 wells were chosen specifically to comply with RCRA regulations for groundwater monitoring. The well casings and screens are made of stainless steel and range from 2 to 4 in. in diameter. There are three variations of this type of well. All water quality wells completed in the regolith have well screens surrounded by a filter pack sealed at the top with bentonite. The remainder of the casing/corehole annulus is filled with cement grout. Although some wells installed in bedrock have well screens, others are completed with the well casings cemented into the bedrock and the lower portion of the corehole left open. Those bedrock wells with screens are similar in construction to the wells in the regolith, but have a second outer casing that extends to the top of the bedrock. The outer casing/corehole annulus is also filled with cement grout. Open-interval bedrock wells have the inner casing (well riser pipe) grouted into bedrock, with the well completed by drilling through the inner casing; the lower portion is left open in the bedrock. Fig. 20 illustrates these three variations.

2.3.4 CERCLA Wells

In early 1985, nine wells were installed during the first investigations undertaken due to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Construction of these wells is essentially the same as the construction of a RCRA compliance well in the regolith, as described in Subsect. 2.3.3, except that some of the well screens and casings are made of fiberglass rather than stainless steel.

2.3.5 Water Quality Wells

Twenty wells were installed during environmental assessment investigations to gain further water quality information. Construction of these wells was essentially the same as described for the RCRA compliance wells in Subsect. 2.3.3.

2.3.6 Piezometer Wells

The inventory lists 346 wells as piezometer type wells. It would be more accurate to classify these installations as water-level observation wells, as that is the function they serve. A true piezometer measures the change in pressure of a subsurface material subjected to hydrostatic pressure. A large majority of these well installations are similar in construction to the screened RCRA compliance wells described in Subsect. 2.3.3, except that the casings and screens are made of PVC. However, some of the piezometer well installations, including the 24 wells at WBW, more closely resemble the pre-RAP wells described in Subsect. 2.3.1.

2.3.7 Hydraulic Head Wells

Eighteen wells were installed in groups of three closely-spaced wells to determine the water levels at three successively deeper levels. All wells in a group were completed with the bottom 20-ft interval left open to the bedrock. The deepest wells are constructed with three diameters of telescoping steel casing, all of which were enveloped in cement grout to prohibit migrations of fluids along the outside of the casings. The three representative types of installation for the shallow, medium depth, and deep wells are shown in Fig. 21.

2.3.8 Drive Point Wells

Sixteen wells were constructed with drive-point screens in SWSA 4 within or adjacent to contaminated-waste burial trenches. The installations consist of steel screen (with drive points) and casing, all 1-1/4-in. nominal diameter. These were driven into the ground so that there is no open annulus around the screen or casing.

2.3.9 Coreholes

Twelve exploratory coreholes have been drilled that have not yet been plugged with grout. These borings were drilled for the primary purpose of obtaining stratigraphic information. The corehole in rock is slightly over 3 in. in diameter, but larger diameter borings were advanced through the regolith to accept the steel casing that was set to the top of bedrock. One of these coreholes (Joy-2) is reported to be 2718 ft deep.

3. PLUGGING AND ABANDONMENT PROGRAM

The principles, applications, and implementation of the P&A program are addressed in this section.

3.1 STRATEGY

All wells and coreholes will be evaluated in accordance with criteria provided in this P&A plan regarding whether they should be plugged and abandoned or maintained. The ORNL ER Program will be responsible for the administration of the P&A program and will consult with the ORNL Groundwater Program Coordinator (GPC) for technical oversight and independent review. For ORNL personnel having responsibility for wells and coreholes, or an interest in the data obtained from them, the ORNL ER Program and the GPC will sponsor workshops to determine which wells will be maintained and which will be decommissioned. These workshops should be held in a timely manner, and the results of the workshops should be documented.

Guidelines for well security and maintenance inspections, recordkeeping, and required actions are not part of the P&A plan and, therefore, are not addressed in this document. They will be the subject of other documents developed under the direction of the ORNL GPC.

3.2 CRITERIA FOR SELECTION AND PRIORITIZATION OF WELLS FOR P&A

3.2.1 Criteria for Selection of Wells and Coreholes for P&A

- All wells and coreholes that are located in a WAG but are not needed to support remediation activities of the WAG will be decommissioned prior to, or concurrent with, remediation of the WAG. Of the wells or coreholes in WAGs, the only one that will be kept are those that are needed, undamaged, and documented as having been constructed to avoid providing pathways (via well, well casing/corehole annulus or corehole) for migration of fluids, either from the ground surface into the well or corehole installation or from one subsurface hydrostatic unit to another.

- Wells in both contaminated and noncontaminated areas will be decommissioned if they are no longer needed for the purpose for which they were installed. Even if they are in use, wells in these areas will also be decommissioned if they are damaged, constructed, or placed so that they have the potential of adversely affecting the quality of the groundwater.

- Any well or open corehole that would be under the site of new construction or would be destroyed or irreparably damaged by construction activities of new facilities will be decommissioned prior to such construction.

- All open coreholes in both contaminated and noncontaminated areas will be plugged if they have served the purpose for which they were drilled. Further, a corehole will be

plugged and abandoned unless it is documented that intermixing of fluid from one hydrostatic unit to another cannot take place through the corehole. Such documentation should include the measurements of vertical flow by an in-hole flowmeter.

3.2.2 Criteria for Prioritization of Well and Corehole P&A

Prioritization will ensure that any well will be properly plugged and abandoned before it can be affected by any construction activity that would destroy or irreparably damage it to the degree that its integrity could be questioned. Realistically, logistics will also be an important consideration in prioritization. It generally will not be environmentally sound or cost effective to mobilize a contractor's equipment for individual wells at widely-separated areas. Within these guidelines, wells will be prioritized for P&A using the following criteria listed in descending order of significance:

- wells or coreholes open at the ground surface so that overland runoff could enter the well, with increasing priority with depth and level of contamination;
- deep-bedrock wells with open intervals or bedrock coreholes, with increasing priority with increased level of contamination;
- wells with perforated casings, with increasing priority with depth and level of contamination;
- other pre-RAP wells not included under the above criteria, with increasing priority with depth and level of contamination; and
- all other wells which are no longer being used to fill a required specific need.

3.3 ESD WELL INVENTORY

Field verification of the 1036 wells and coreholes listed in various data bases or the literature was conducted by ESD during December of 1991 and early 1992. The pertinent information available for each well installation is presented in the inventory list provided in Appendixes A and B. It should be noted that field verification inspection was limited to visual observation of the surface characteristics of the well or corehole installation. This inventory will change as new wells are installed or as new information on existing well installations comes to light. Wells in Appendix A are sorted in numerical and alpha-numerical order of the well identification, while Appendix B, containing identical information, is sorted by WAG and area. These two lists are provided for ease of the user, who may either be seeking information on a particular well number or searching for installations in or near a particular WAG. In this P&A plan, wells or coreholes lying outside of a WAG's boundaries, but in its vicinity, have been arbitrarily associated with that WAG for location purposes and are identified in both lists by a dash before the WAG number.

3.3.1 Wells Not Found

In addition to two wells that are listed as plugged and abandoned, 119 wells are listed in the inventory as "not found," meaning that they were not located during the ESD field verification effort. Of these 119 wells, 22 were reportedly constructed with PVC casing, and 60 with metal casing; the casing material is unknown for 37 wells. Engineering surveys, localized application of a geophysical method, or shallow excavation will be implemented to attempt to find each of the 119 wells that were not found in the ESD field verification and that are not located within burial trenches.

3.3.2 Data Gaps in the Well Inventory

Well depth, casing diameter, casing material, and length of screened or open section of the well are important well characteristics in preparing contract specifications for well decommissioning. Prior to decommissioning wells in a WAG or area, further efforts will be made to obtain missing data by additional literature searches, personal interviews, and by intrusive inspections of wells where needed. This effort will apply only to wells that are selected to be decommissioned.

3.4 PLUGGING AND ABANDONMENT METHODS

The best option for closing heavily contaminated wells that are no longer needed is decommissioning in place (Renz 1989). This is particularly true for SWSAs and LLW trench areas. Methods that involve removal of well casings and screens from wells in contact with contaminated wastes would displace not only contaminated groundwater, but also other materials, such as drilling fluid, drilled-out casing, and cement seals. This process could create both a health and safety problem to field personnel and a disposal problem, because capacity for disposal of wastes at ORNL is limited.

Although contingency procedures are provided in Appendix C for complete removal of the well casing, it is planned that wells and coreholes will be decommissioned with essentially all subsurface well materials left in place except for near-surface casings to depths of 3 ft or less. Specific procedures will vary depending on the location and depth of the installation and whether or not the casing/corehole annulus is documented as having been sealed with grout when constructed. Well diameter and casing material will determine the equipment used in the process.

3.4.1 Well Plugging Materials

Materials that will be used for plugging wells include coarse granular bentonite, Type 1 cement grout, Type 1 cement/bentonite grout, and microfine cement grout.

3.4.1.1 Coarse granular bentonite

Coarse granular bentonite (equal, or similar, to "Holeplug^{tm}," a product produced by Baroid Drilling Fluids, Inc.) will be used to plug the 27 aluminum-cased (3-in.-diam) wells and wells in the waste-burial trenches. These bentonite chips, available from producers in 3/8- and 3/4-in. nominal sizes, will be poured slowly into the well bore from the ground surface. When

poured slowly, they will settle through the water found in some of the trench wells, and will pack to a density such that subsidence of the bentonite within the well casing should not be a problem. This material will not adversely affect any remedial action alternatives presently under consideration for the trenches.

3.4.1.3 Type 1 cement grout

Type 1 cement grout will consist only of Type 1 portland cement and water. It will be used in the upper 3 ft of the wells in the waste-burial trenches. These trenches will be covered with a cap when the SWSAs are closed, so minor shrinkage cracks that may occur in a cement grout not containing bentonite is of no concern. Also, these wells will be plugged with bentonite beneath the cement grout. Grout mixing will be facilitated for these wells because a shear mixer, necessary for proper mixture of a Type 1 cement/bentonite grout, will not be required for Type 1 cement grout.

3.4.1.4 Type 1 cement/bentonite grout

Type 1 cement/bentonite grout with 4% (by weight) powdered bentonite will be used in the open-hole sections of some bedrock wells and in all wells that have screens 10 ft or less in length and in which, according to records, the well casing/corehole annulus was properly sealed during installation.

3.4.1.5 Microfine cement grout

Microfine cement grout has the ability to infiltrate finer openings and materials than does grout made with Type 1 cement, and its use will give greater assurance that decommissioning grouting is effectively penetrating to the voids in materials outside the casing through slits or perforations, and to the filter packs of the longer length screens. (The microfine cement should be similar or equal to MC-500 microfine cement distributed by Geochemical Corporation, Ridgewood, New Jersey.) Microfine cement grout will be used in well installations in which the well casing/corehole annulus is not documented as having been properly sealed during installation and in which the well casing is more than 10 ft in length. In these wells, the casing will be split or perforated. Also, microfine cement grout will be used in wells which, although they were properly grouted at the time of installation, have screens greater than 10 ft in length, so that the permeability of the longer length filter packs may be reduced by penetration of the microfine cement particles through the well screen into the well's filter pack.

3.4.2 P&A Methods for All Well Types

As previously stated, decommissioning of wells and coreholes is planned to be accomplished by grouting or plugging with the casings left in place. Where encountered, obstructions in the well will be removed (except in wells within the burial trenches, and in any of the 27 shallow aluminum-cased wells) so that grouting or plugging can proceed. Obstruction removal will be accomplished by redrilling or percussion methods inside of existing well casings and screens with nominal diameters that range from ~1 to 7 in. The P&A methods that will be applied to specific groups of wells are described below, and specific procedures for each group are provided in Appendix C.

3.4.2.1 Shallow aluminum-cased wells

The inventory indicates that there are 27 aluminum-cased (3-in-diam) wells listed as pre-RAP type that commonly range from 3 to 8 ft in depth. These wells were installed by the hand auger method in areas of shallow groundwater depth where radiation exposure has been measured at more than 10 mrem/h. Therefore, the method for plugging these wells should be one that limits personnel exposure time in the area. Also, the high water table may make it difficult for equipment and supplies to gain access to the well sites. These wells are so shallow that they pose little additional threat of introduction of contaminants into the groundwater, particularly if the casing is plugged to prevent the entrance of surface water. Therefore, their casing will be plugged with coarse granular bentonite and capped with a short plug of commercial, nonshrink grout (equal, or similar to MASTERFLOW 928™, a product of Master Builders Technology, Inc.). The well casings will be cut off at ground level in order to eliminate the need for excavating of possibly contaminated soil and preparing access for excavating equipment. The use of the bentonite rather than grout will reduce the amount of water that may be discharged from the well by displacement during the plugging procedure. Also, the materials and tools to be utilized are those most easily transported to the site, as no mechanized mixing or pumping equipment will be needed. Further, this is the method that will result in the least time exposure for personnel.

3.4.2.2 Waste trench wells

Wells within the waste-burial trenches will be plugged with coarse granular bentonite. Such products require a longer time to hydrate and swell than do bentonite pellets and can be placed at such a rate that they will fall through the existing water in trench wells without bridging and blocking the well. Based on the estimated quantities of water in these wells, placement of coarse granular bentonite should not displace well water upward to the ground surface; therefore, containment and disposal of contaminated well water should be unnecessary. The coarse granular bentonite will be placed to fill the well to a level 3.5 ft below the ground surface, followed by the addition of powdered bentonite to a level 3 ft below the ground surface. In wells within the burial trenches, Type 1 cement grout will then be added to bring the plug to a level 1 ft below the ground surface. (The powdered bentonite will prevent the infiltration and loss of the cement grout through the interstices of the nonhydrated, coarse granular bentonite.) After 24 h, the upper part of the casing will be removed to a depth of 1 ft below the ground surface. The casing will be removed only to a depth of 1 ft in order to guard against the removal of potentially contaminated material, as the burial trenches are commonly covered with approximately 2 ft of noncontaminated soil. The excavation for the casing removal will be backfilled with excavated soil and properly tamped. All of the plugging materials will be placed in the well from the ground surface (rather than through a tremie pipe) as the well depths do not exceed 20 ft or so.

3.4.2.3 Wells in the regolith

Wells that are installed in unconsolidated strata (i.e., do not penetrate bedrock) and are not within the waste burial trenches will be grouted with a particulate (cement/bentonite or microfine cement) grout. Unless records document that a well's casing/corehole annulus was properly grouted during installation, well casings (2-in. nominal diameter or greater) more than 10 ft in length will be perforated or slit from a depth of 10 ft below the ground surface to the top of the well screen in order to provide pathways for the grout to seal possible voids

in the casing/corehole annulus. Grout will be pumped through a tremie pipe initially lowered to the bottom of the well, and pumping will continue until undiluted grout flows from the top of the well. Therefore, well water and diluted grout will be displaced to the surface and will have to be contained and disposed of properly. Microfine cement grout will be used in all wells in which the casing is slit or perforated and in wells where the screened sections are longer than 10 ft. Type 1 cement/bentonite grout will be used in wells in unconsolidated material that do not meet the foregoing criteria for grouting with microfine cement grout. After grouting, the casing will be removed to a depth of 3 ft below the ground surface. The excavation will be backfilled with the excavated soil and properly tamped.

3.4.2.4 Non-screened bedrock wells

Wells penetrating firm bedrock with an open-hole interval rather than a well screen may be plugged with two types of grout. Unless records document that a well's casing/corehole annulus was properly grouted during installation, wells (2-in. nominal diameter or greater) with casings more than 10 ft in length will be perforated or slit from a depth of 10 ft below the ground surface to the bottom of the casing in order to provide pathways for the grout to seal possible voids in the casing/corehole annulus. It is not the purpose of grouting to grout the natural fractures or openings in the rock at any distance away from the corehole. Therefore, if a well's casing is split or perforated, two types of grout mixes may be used; Type 1 cement/bentonite grout will be placed in the exposed bedrock portion, and the more penetrating microfine cement grout will be placed in the cased portion. If the casing is not slit or perforated, only Type 1 cement/bentonite grout will be used in the well, and it will be placed by tremie pipe initially lowered to the bottom of the well. Grout will be pumped through the tremie pipe until undiluted grout flows from the top of the well, causing well water and diluted grout to be displaced to the surface, which will have to be contained and disposed of properly. However, in wells where casings have to be slit or perforated and microfine cement is required in the cased portion, it will be pumped through a tremie pipe lowered to the top of the firm Type 1 cement/bentonite grout in a second operation following a 24-h minimum waiting period to allow the Type 1 cement/bentonite grout to set. After grouting, the casing will be removed to a depth of 3 ft below the ground. The excavation will be backfilled with the excavated soil and properly tamped.

3.4.2.5 Screened bedrock wells

Bedrock wells that were completed with well screens will be decommissioned using the same procedures as for cased and screened wells in the regolith.

3.4.2.6 Wells in LLW pits and trenches

Until remedial actions are designed for the LLW pits and trenches, only normal maintenance action should be taken on existing wells in these facilities. Asphaltic concrete caps have been constructed over these pits and trenches, and the wells depths do not penetrate their bottoms. Therefore, the wells pose no additional threat to the groundwater, and they likely will serve an important function in remedial actions to be designed and implemented for these facilities.

3.5 PROGRAM IMPLEMENTATION

3.5.1 Administration

The Well Plugging and Abandonment Field Operations Planning Form (see Appendix D) will be completed for wells and coreholes that are to be decommissioned and submitted to the GPC for approval before fieldwork begins. The submittal must identify any wells and coreholes to be abandoned, methods of abandonment, health and safety considerations, waste management considerations, and the responsible organizations performing the work and field oversight. Any modifications to the approved Field Operations Planning Form will be approved by the ER Program project manager and the GPC and recorded prior to implementation.

An ORNL project field supervisor will coordinate activities with the field personnel, schedule fieldwork, and make field decisions as necessary. The Oak Ridge Hydrology Support Program will arrange for technical assistance to the field supervisor, if requested. A technical oversight individual (geologist or qualified engineer) will be present at each well site to document that the P&A procedures and guidelines provided in this plan are being followed.

Martin Marietta Energy Systems will provide for safety, security, and environmental orientations for the field personnel prior to the start of work.

Additional roles and responsibilities for well P&A will be defined in separate documents (including a project Q&A plan) prepared under the leadership of the ER Program project manager.

3.5.2 Field Operations

The field supervisor will obtain a copy of the approved Well P&A Field Operations Planning Form for the wells selected for P&A and a map that indicates the exact location of each well scheduled to be decommissioned. The wells will be flagged with surveyor's tape, or in an equally appropriate manner, so that they may be quickly identified in the field.

3.5.2.1 Health and safety

P&A of some wells will generate contaminated fluids and other materials. Proper Occupation Health and Safety Administration (OSHA) safety training and equipment is a basic requirement for hazardous materials work. Additionally, work will be performed in accordance with appropriate procedures and standards including Superfund Amendments and Reauthorization Act/OSHA, Hazardous Waste Operations and Emergency Response, and Standard Practice Procedure X-ESH-1, "Interim Plan for Worker Health and Safety for ORNL Hazardous Waste Operations." Applicable Site Health and Safety Plan, Project Waste Management Pland, and Comprehensive Work Plan requirements will be met.

3.5.2.2 Equipment and materials

The well closure contractor will use equipment appropriate to site conditions, drilling depth, and other project requirements. The drill rigs will be outfitted with the necessary equipment to safely and properly abandon wells. All necessary support equipment (water truck, pumps, mud pan, grouting equipment, excavating equipment, supplies, etc.) and a downhole camera will be provided by the well closure contractor.

3.5.2.3 Site preparation

Any downhole equipment and sampling devices will be removed from the well. Where present, guard posts will be removed to allow plugging equipment access to the well. The well should then be ready for either logging with the downhole camera or abandonment as required. Plastic sheeting will be placed appropriately to cover the ground surface at the well site during all field operations. If possible, sampling equipment will be salvaged for use by ORNL.

3.5.2.4 Well inspection by down-hole camera and surface-geophysical methods

Wells with diameters 2 in. or greater (except for wells in the waste-burial trenches and any of the 27 shallow aluminum-cased wells) found to have obstructions that do not permit the placement of the grout tremie pipe to the bottom of the well will be inspected with a downhole camera and logged. Use of the camera may help determine the cause of the blockage and how best to remove it. As wells with screened intervals longer than 10 ft will be grouted with microfine cement grout rather than with Type 1 cement/bentonite grout, the camera will be used in any well in which the length of the well screen is not documented in the records. Also, the camera will be used in any open-hole bedrock well in which the cased portion is to be slit or perforated and the records do not indicate the length of either the open-hole or the cased portion of the well. Findings of the camera inspection will be submitted with the P&A report for that well.

Searches will be made by localized application of a surface-geophysical method at surveyed locations of steel-cased wells that are shown in the inventory as "not found" and that are not located within waste burial trenches. No other geophysical methods are planned for use in the P&A of wells and coreholes.

3.5.2.5 Decontamination of downhole equipment

Upon completion of work at a well site, all tools and equipment that entered the well will be screened for radioactive contamination. Tools and equipment determined to be contaminated shall be decontaminated by the use of high pressure hot-water cleaners or by scrubbing or wiping with potable water and detergent, followed by a distilled water rinse. Where needed, the distilled water rinse should be preceded by an alcohol or acid rinse. Water and other materials used for decontamination will be contained for proper disposal as outlined in the Project Waste Management Plan. Radioactive contamination will be reduced to prescribed limits.

3.5.2.6 Site cleanup and waste management

A Project Waste Management Plan will be prepared and approved prior to the commencement of P&A operations. This plan will ensure that proper site cleanup is performed. Materials generated during P&A may be classified as hazardous or radioactive and will be collected and disposed of properly, in accordance with this plan. Minimization of wastes generated shall be an important aspect of the well P&A operation. Whenever possible, innovative methods shall be used to reduce or eliminate waste generation.

3.6 REPORTING REQUIREMENTS

The contractor shall document in a bound field logbook well-specific procedures used during P&A, including all dates, times, calculations, logs, pertinent notes, and measurements for the decommissioning of each well. The contractor shall also submit an ORNL Well Plugging and Abandonment Report (Appendix E) to ORNL project personnel within a specified time after the P&A of each well. After verification of the accuracy and completeness of content, the P&A report will be provided to the GPC within a specified time. The P&A contractor shall enter the verified data and information contained in this report into a computer data base system that is suitable for electronic transfer to the GPC's system and shall transfer the data to the GPC within a specified time.

Prior regulatory approval is not required for decommissioning of wells; however, for information purposes, ER Program will provide well P&A documentation to the Tennessee Department of Environment and Conservation and the U. S. Environmental Protection Agency.

Annually, the ER Program will prepare and submit a formal report to DOE to document the P&A process. This annual report will include an evaluation of effectiveness of field methods and, if appropriate, describe changes or additions to procedures that improve field operations.

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FIGURES

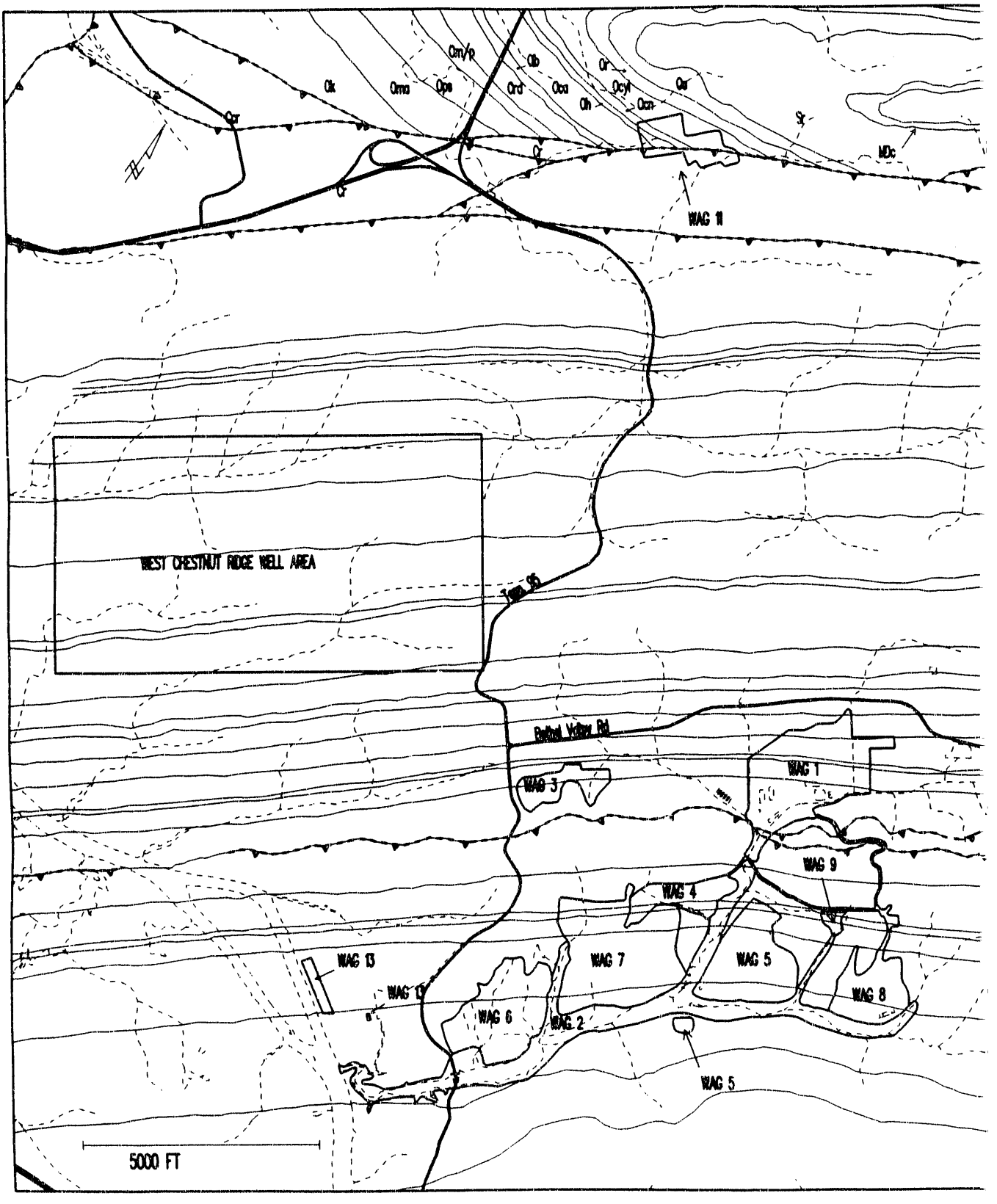
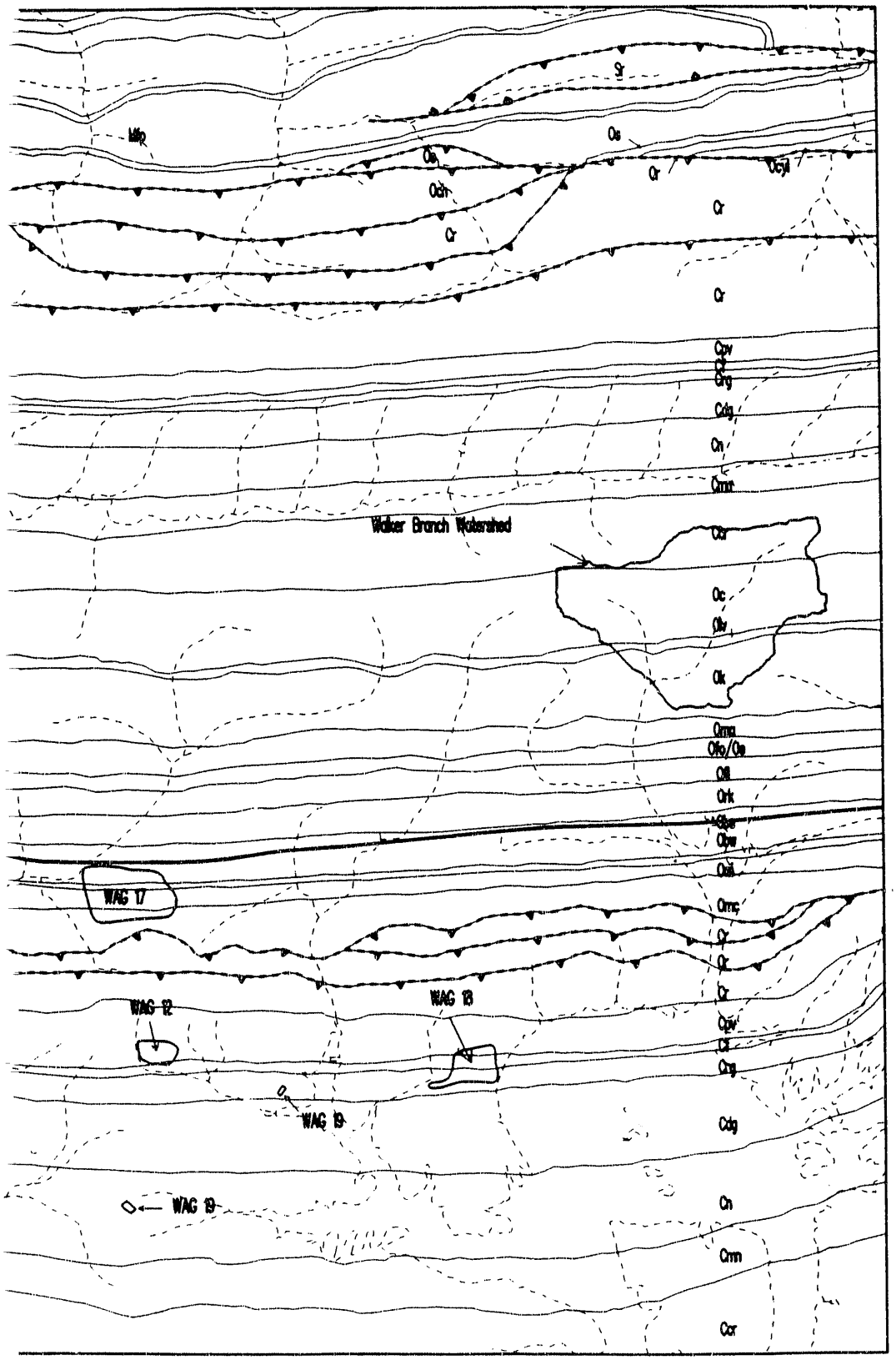


Fig. 1. ORNL WAG boundarie



Placement of Waste Area Groupings and Other Areas Relative to Geology

Mfp	Fort Payne Formation
MDc	Chattanooga Shale
Sr	Rockwood Formation
Os	Sequatchie Formation
Or	Reedsville Shale
Och	Chickamauga (undivided)
Ocyl	Catheys Formation and Leipers Formation
Ocn	Cannon Limestone
Oh	Hermitage Formation
Oca	Carters Limestone
Omc	Moccasin Formation
Olb	Lebanon Limestone
Owi	Witten Formation
Ord	Ridley Limestone
Obw	Bowen Formation
Om/p	Murfreesboro/Pierce Limestone
Obe	Benbolt Formation
Ops	Pond Spring Formation
Ork	Rockdell Formation
Ofl	Fleanor Shale Member
Oe/Ofo	Five Oaks Formation/ Eidson Member
OCk	Knox Group (undivided)
Osma	Mascot Dolomite
Ok	Kingsport Formation
Olv	Longview Dolomite
Oc	Chepultepec Dolomite
Ccr	Copper Ridge Dolomite
Cc	Conasauga Group (undivided)
Cmn	Maynardville Limestone
Cn	Nolichucky Shale
Cdg	Dismal Gap Formation (provisional name, formally Maryville Limestone)
Crg	Rogersville Shale
Cf	Friendship Formation (provisional name, formally Rutledge Limestone)
Cpv	Pumpkin Valley Formation
Cr	Rome Formation

Thrust Fault

Water Body

Geology from "Provisional Geologic Map, Oak Ridge Area, 1992" by P. J. Lemiszki, R. D. Hatcher, Jr., and R. H. Ketelle

superimposed on geologic map.

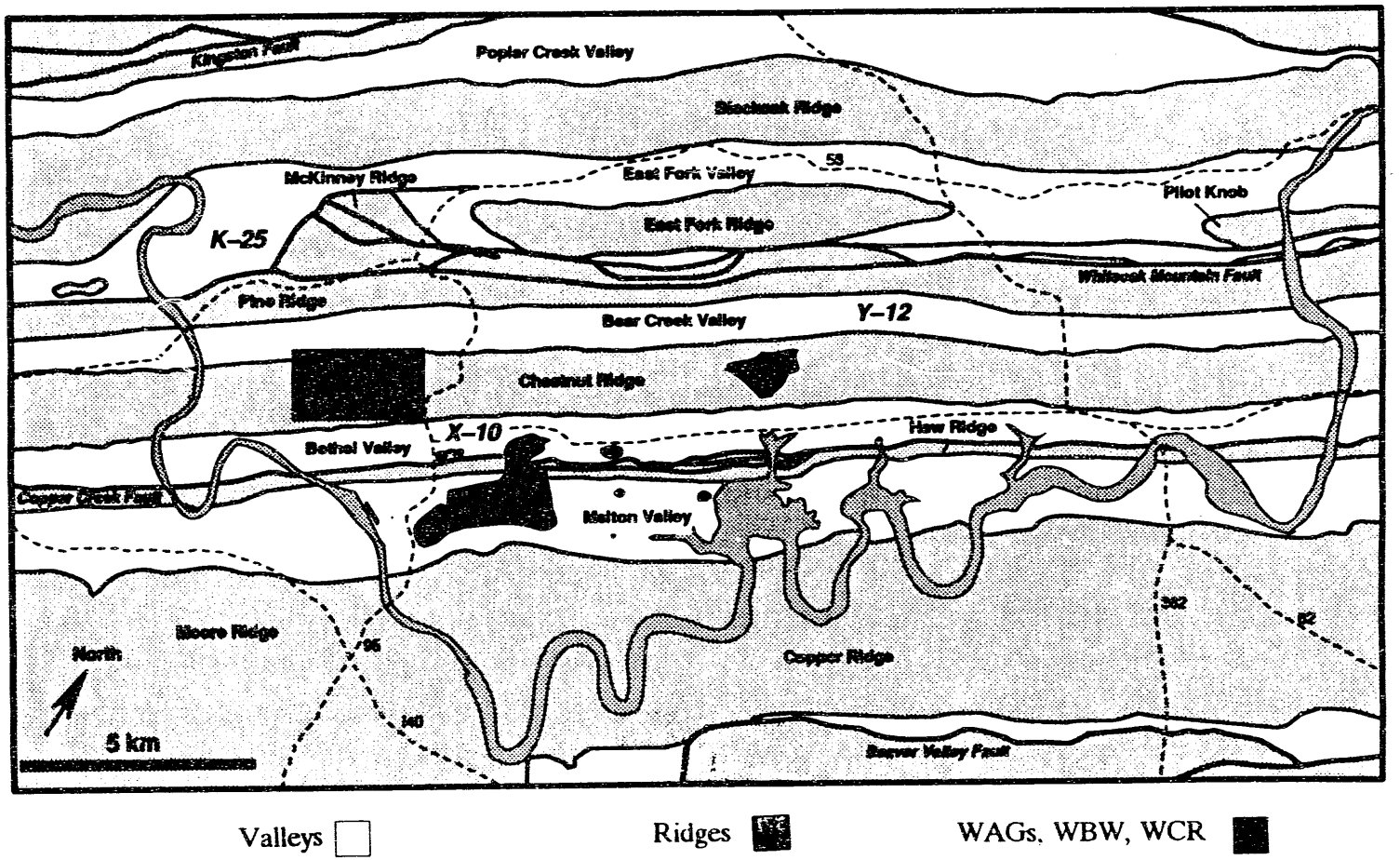


Fig. 2. Physiographic map of ORR showing location of WAGs and other well areas with respect to named valleys and ridges.

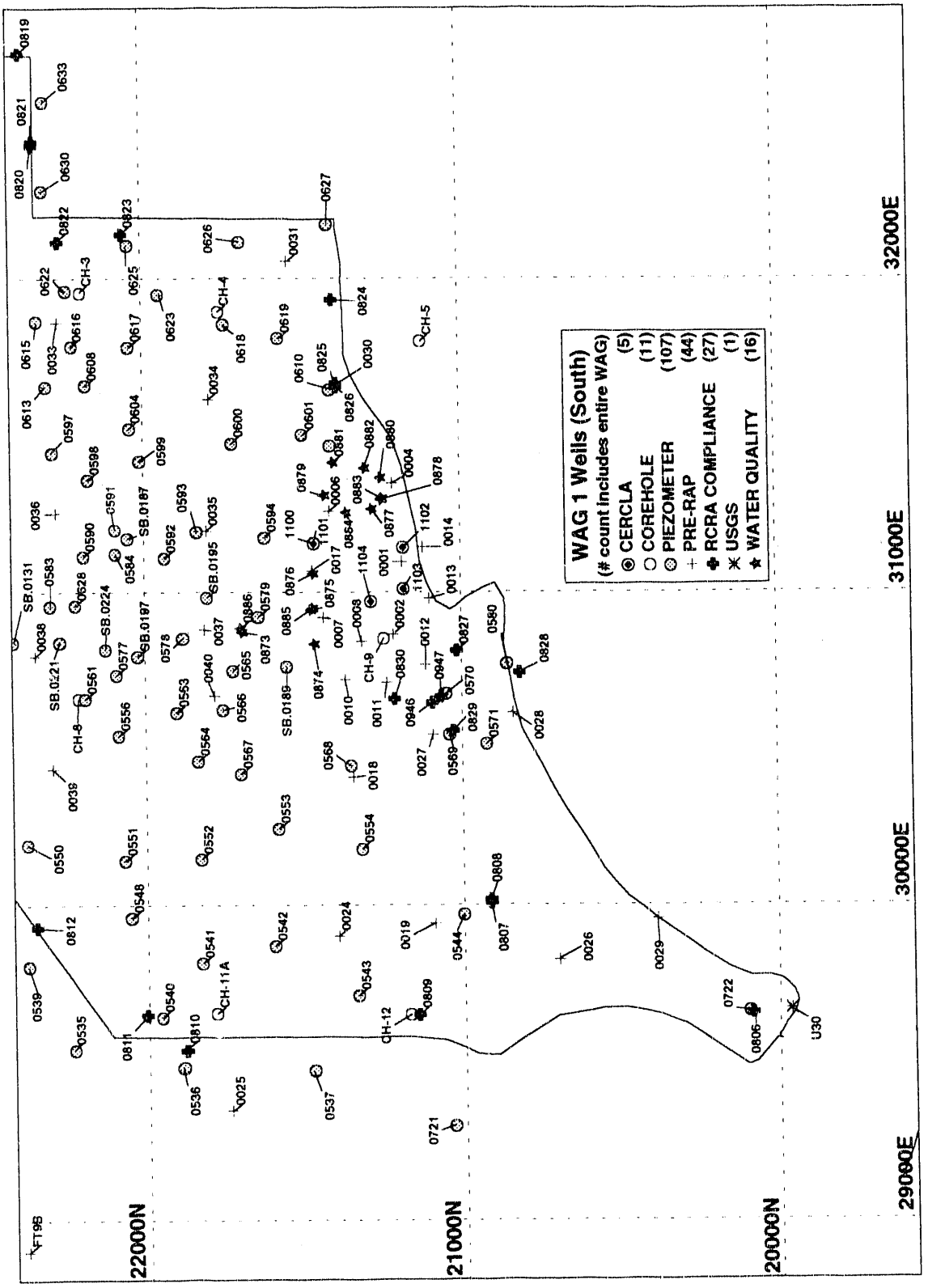


Fig. 3(a). Locations of wells and coreholes associated with WAG 1 (south).

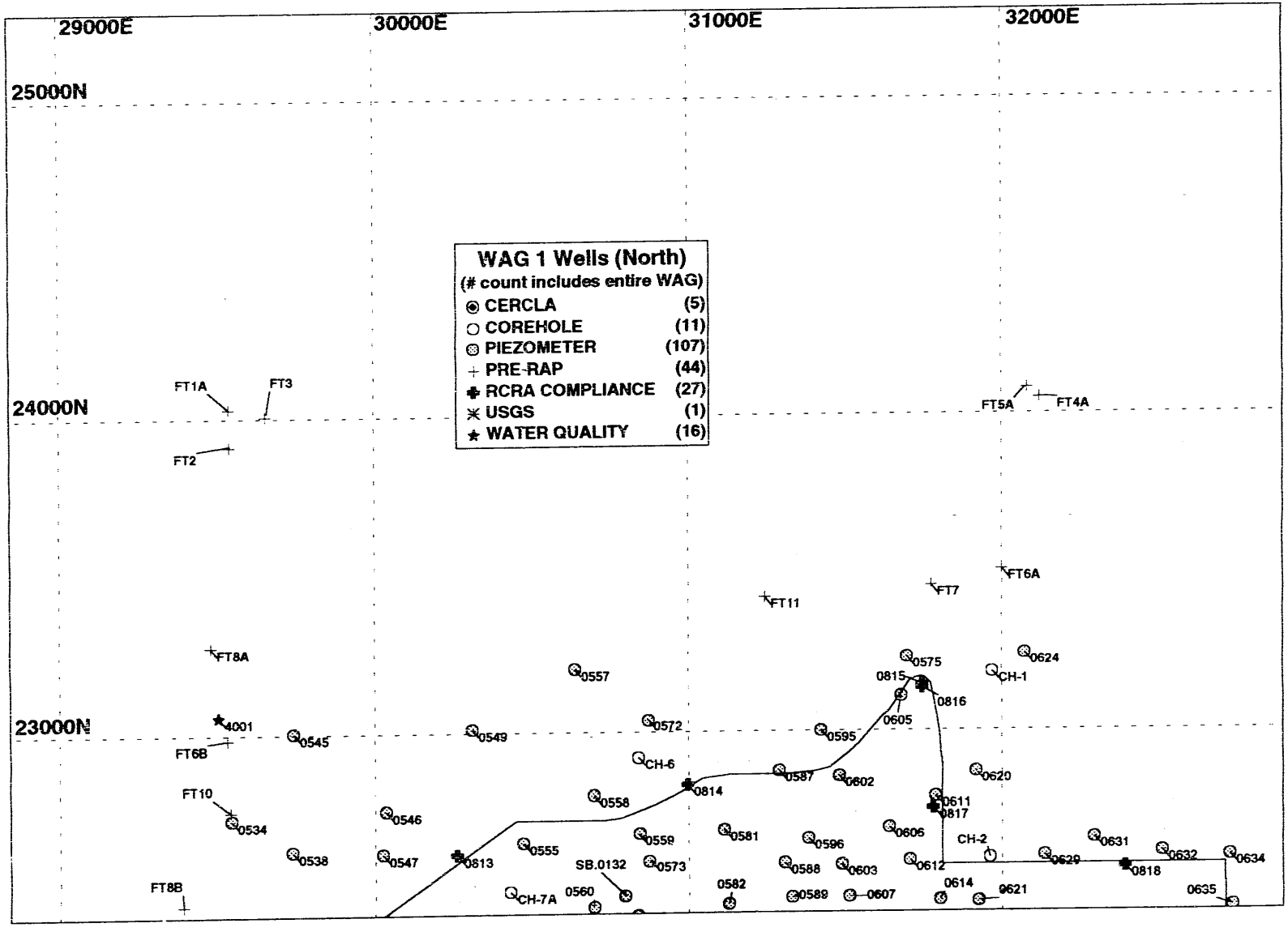


Fig. 3(b). Locations of wells and coreholes associated with WAG 1 (north).

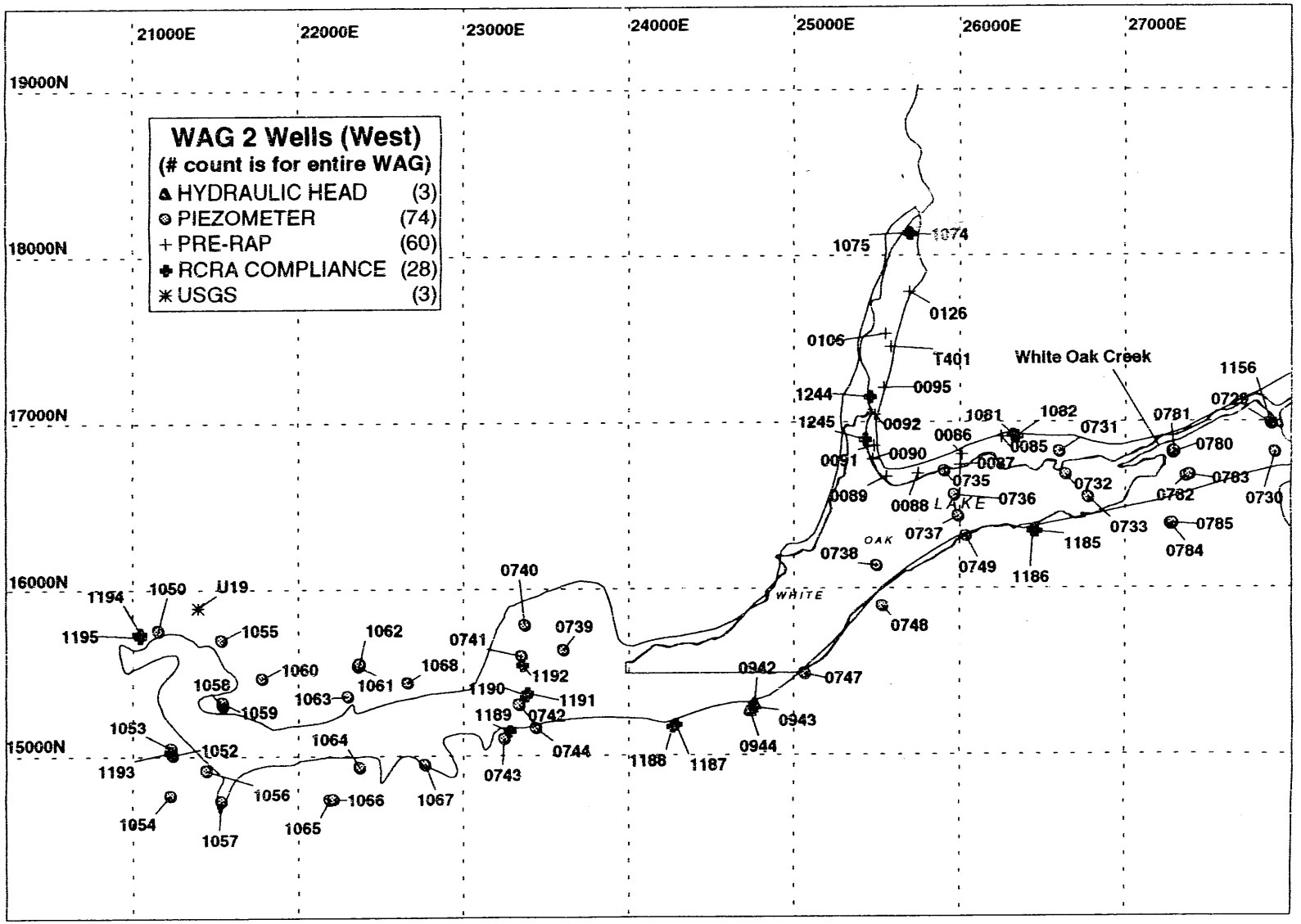


Fig. 4(a). Locations of wells associated with WAG 2 (west).

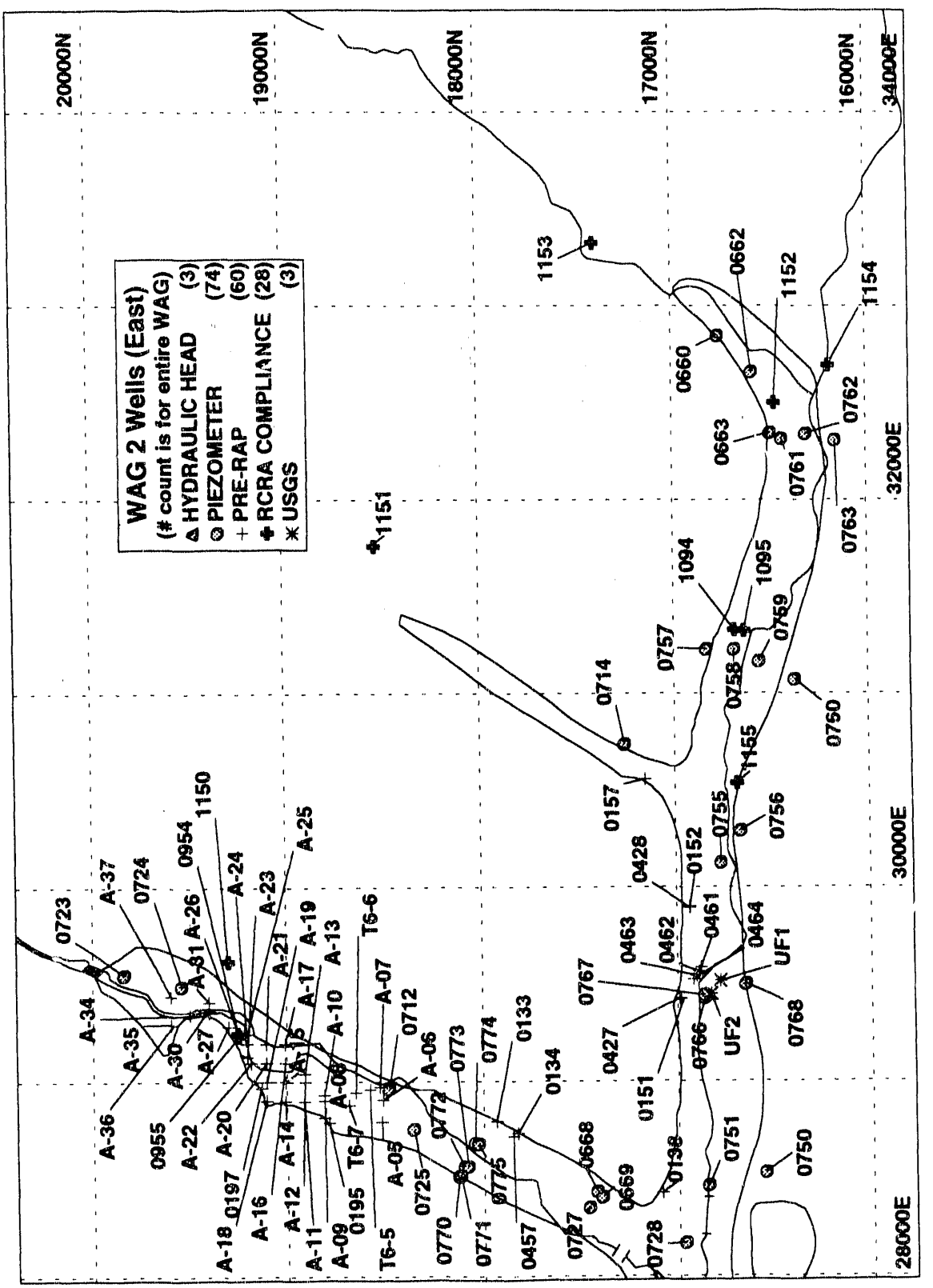


Fig. 4(b). Locations of wells associated with WAG 2 (east).

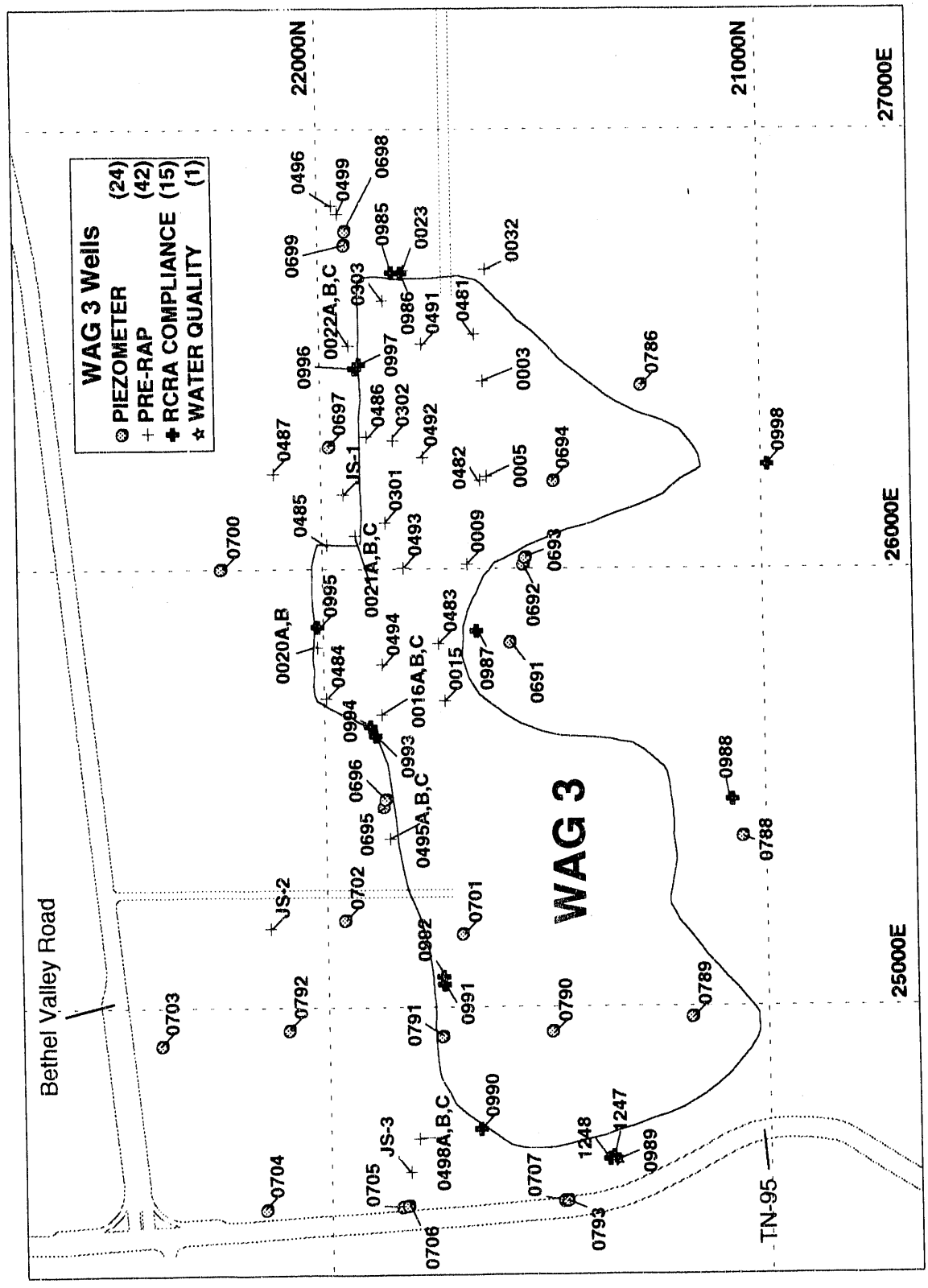


Fig. 5. Locations of wells associated with WAG 3.

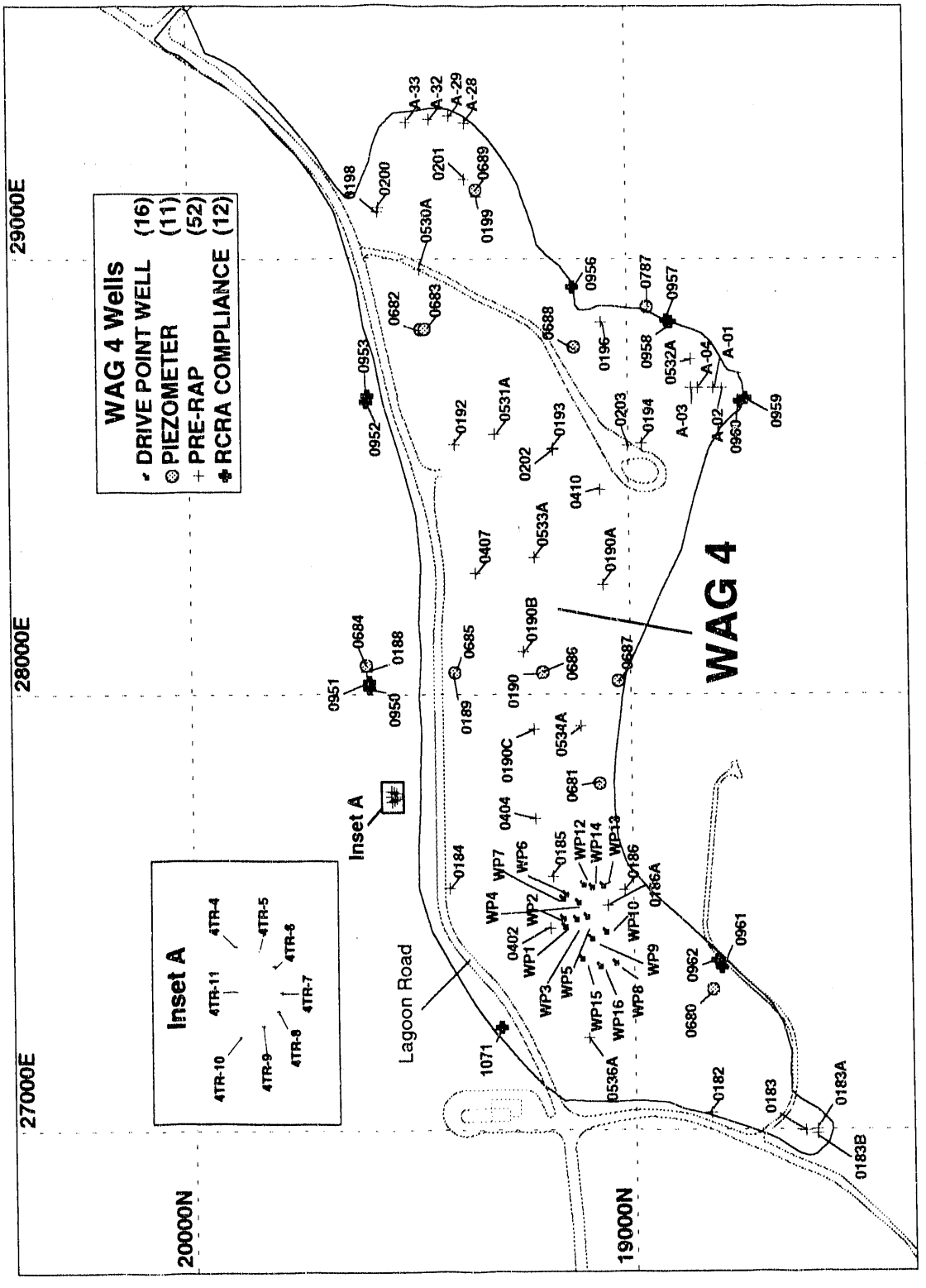


Fig. 6. Locations of wells associated with WAG 4.

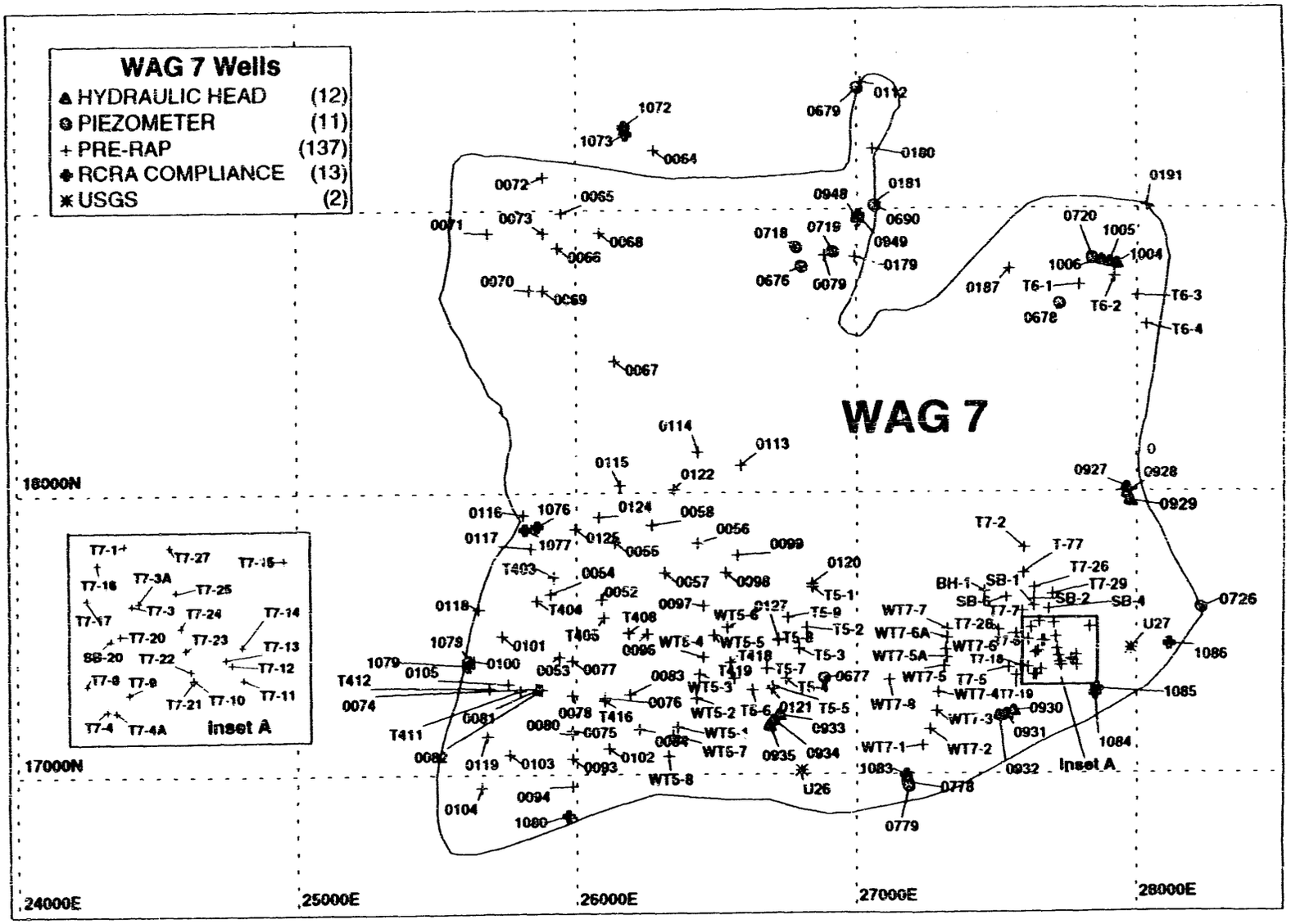


Fig. 7. Locations of wells associated with WAG 7.

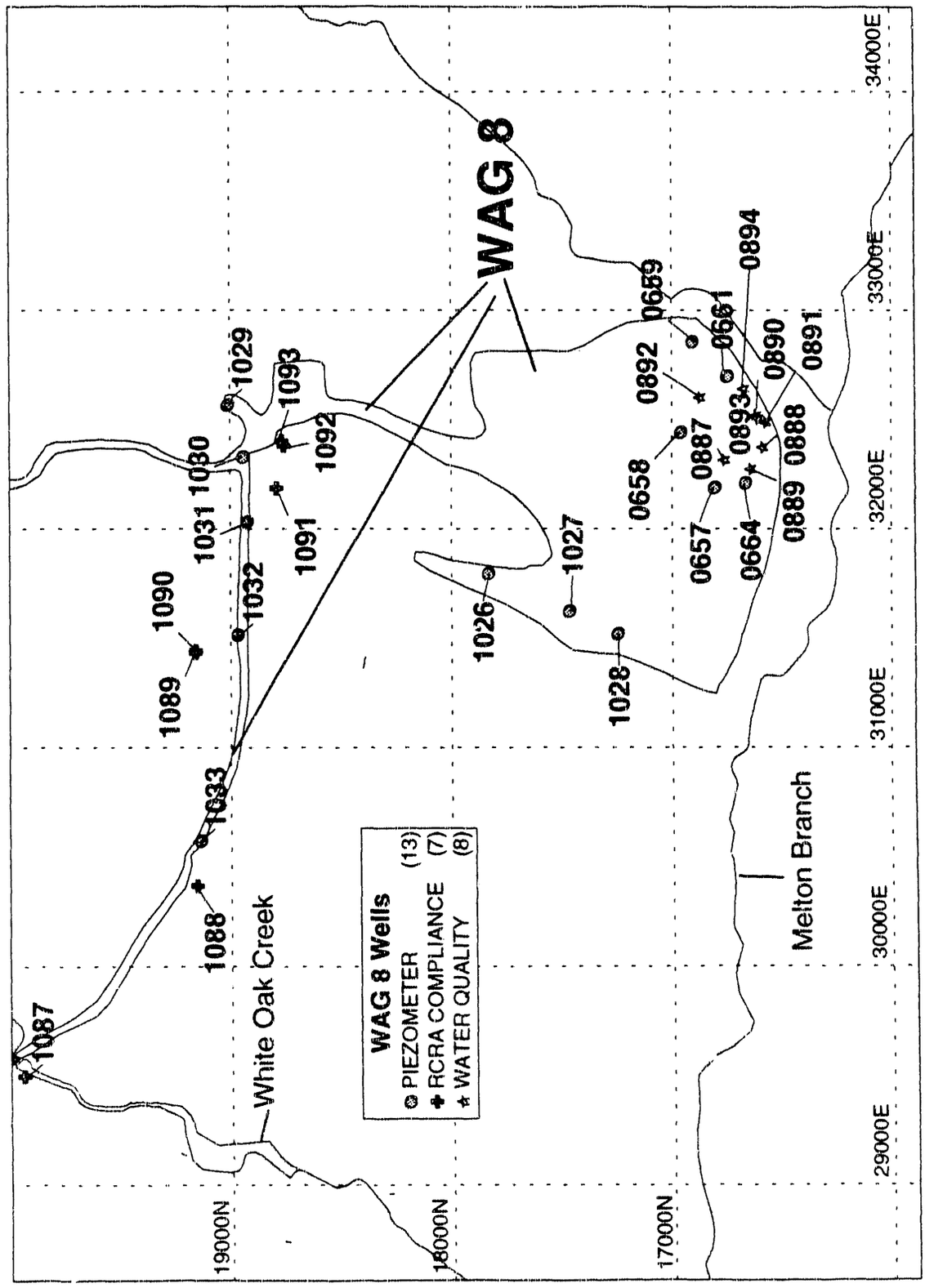


Fig. 8. Locations of wells associated with WAG 8.

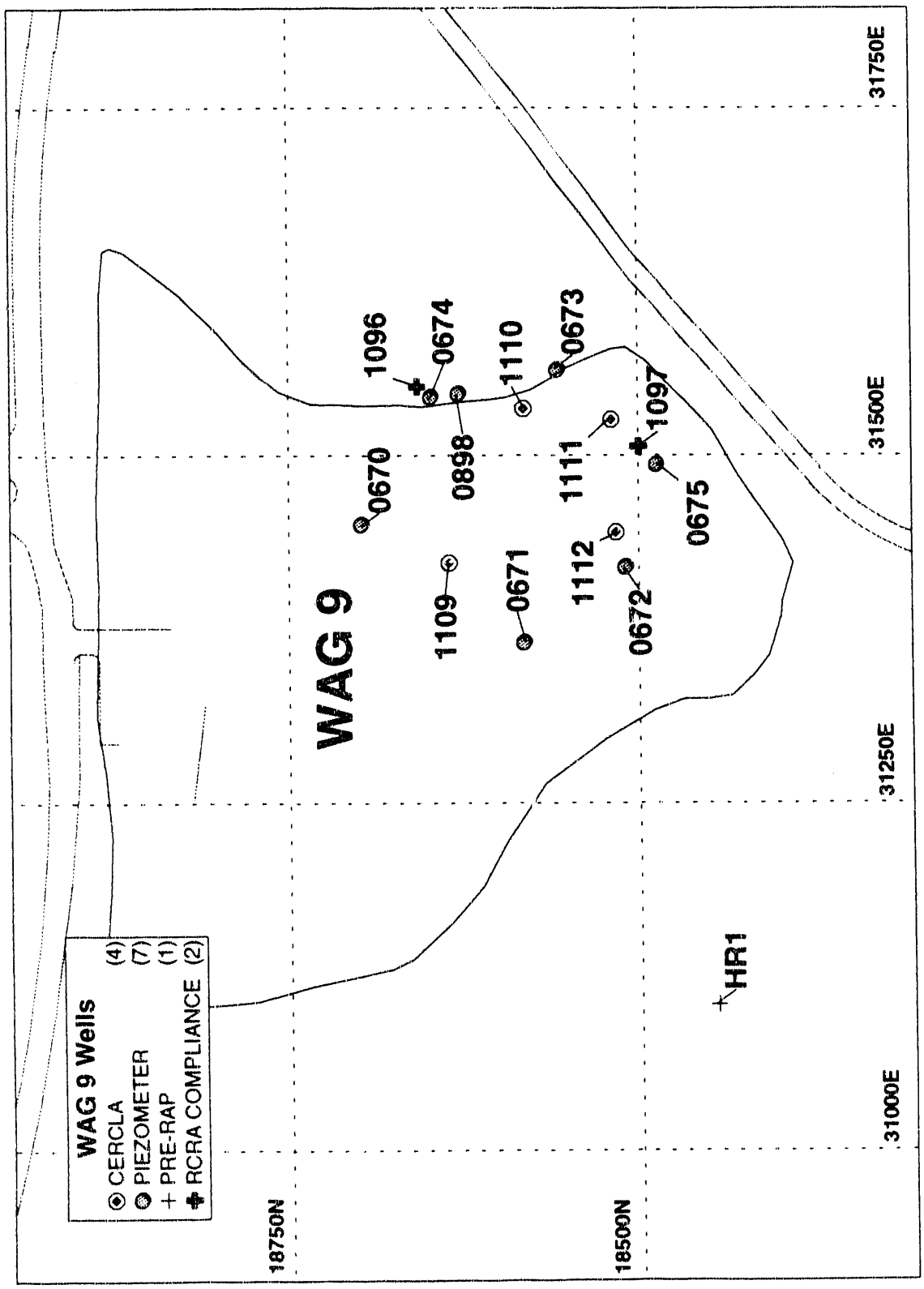


Fig. 9. Locations of wells associated with WAG 9.

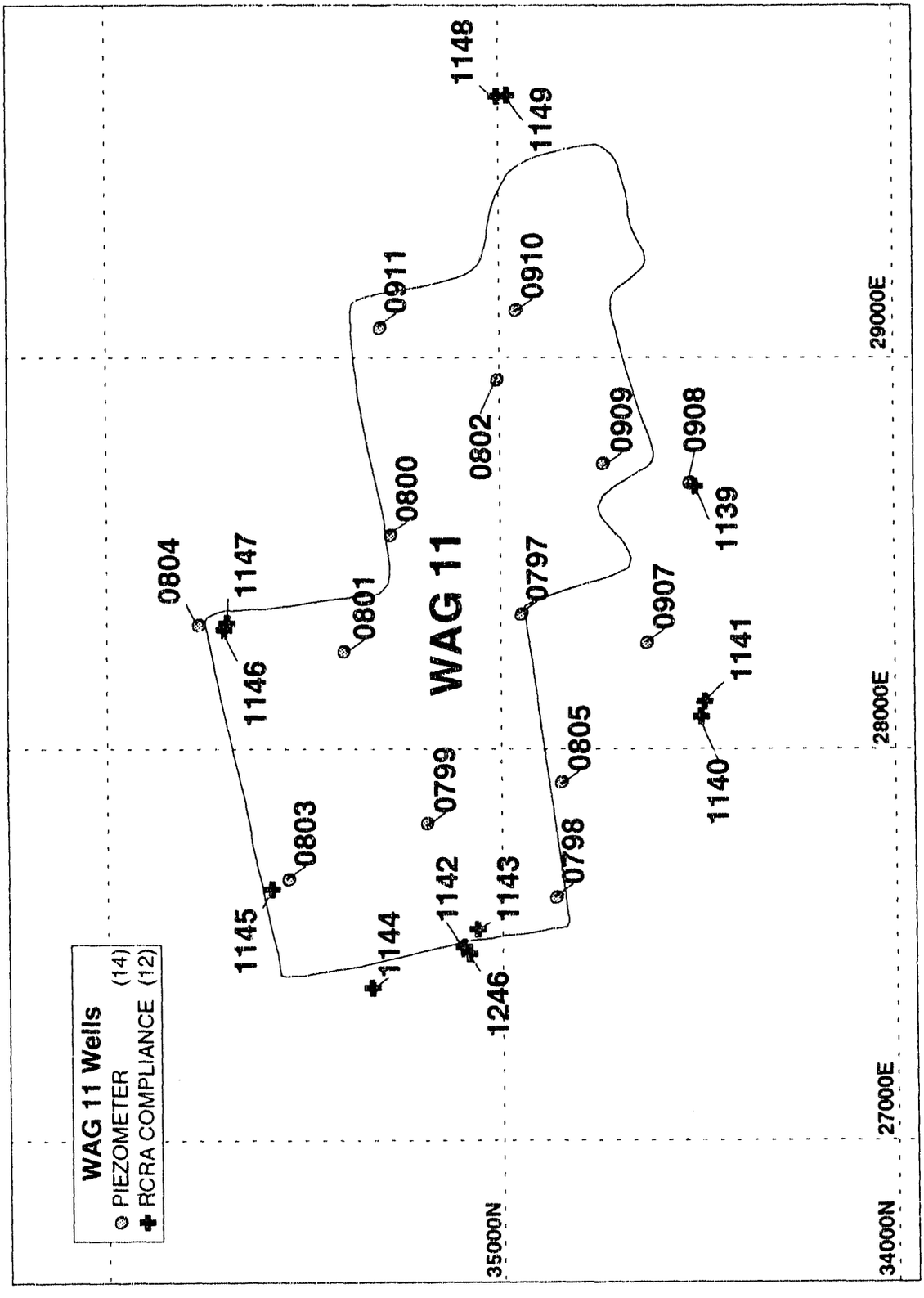


Fig. 10. Locations of wells associated with WAG 11.

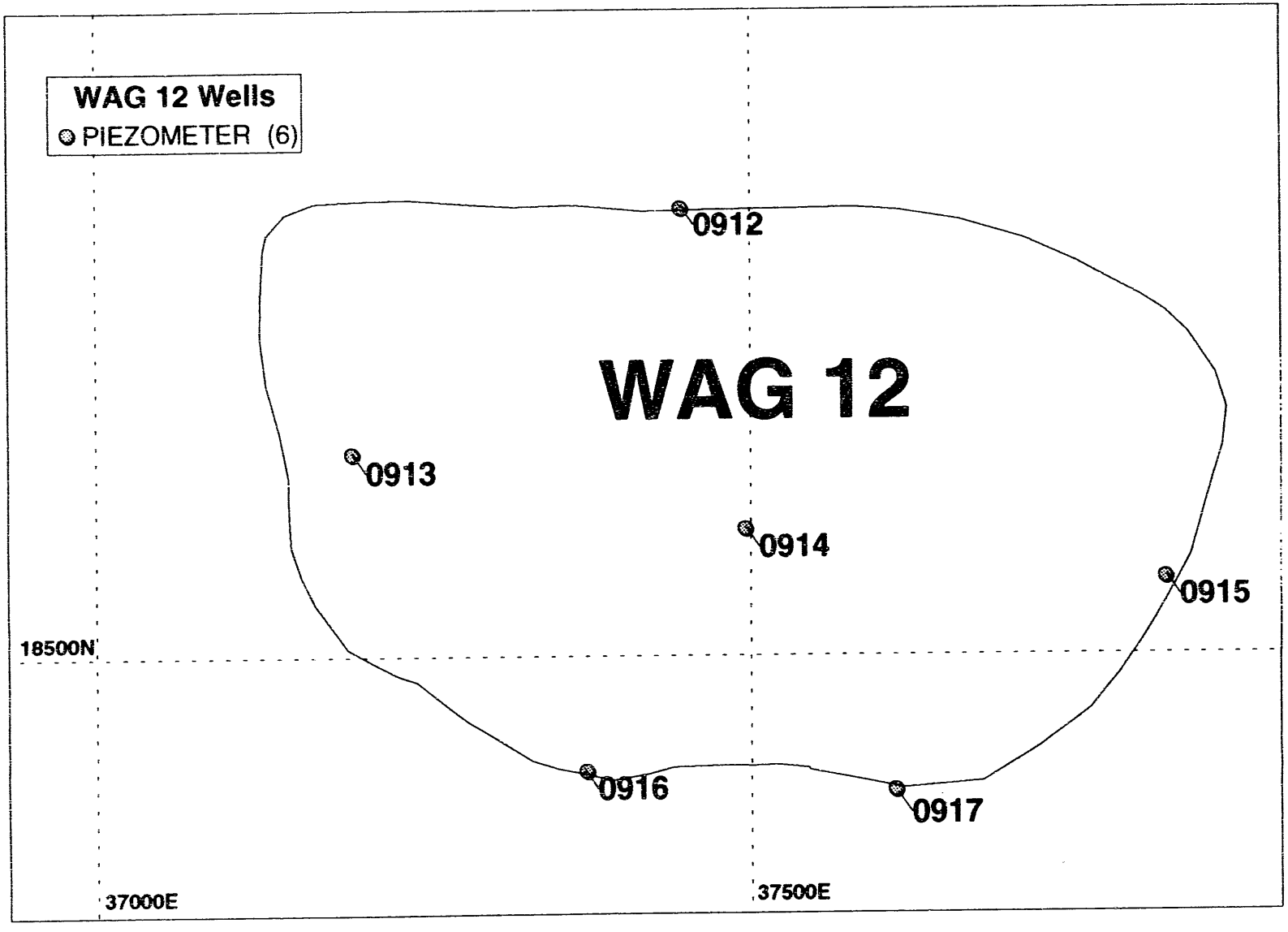


Fig. 11. Locations of wells associated with WAG 12.

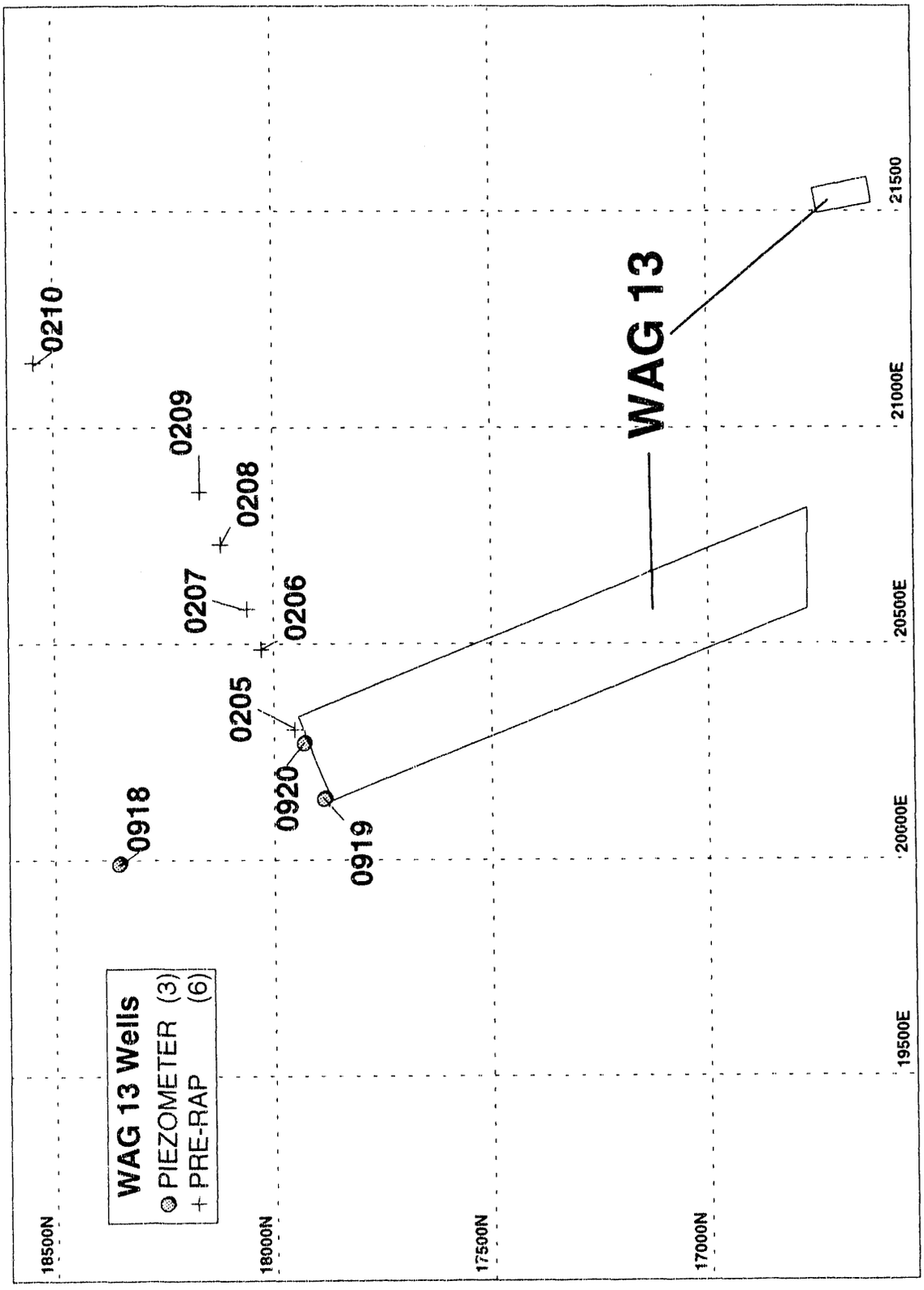


Fig. 12. Locations of wells associated with WAG 13.

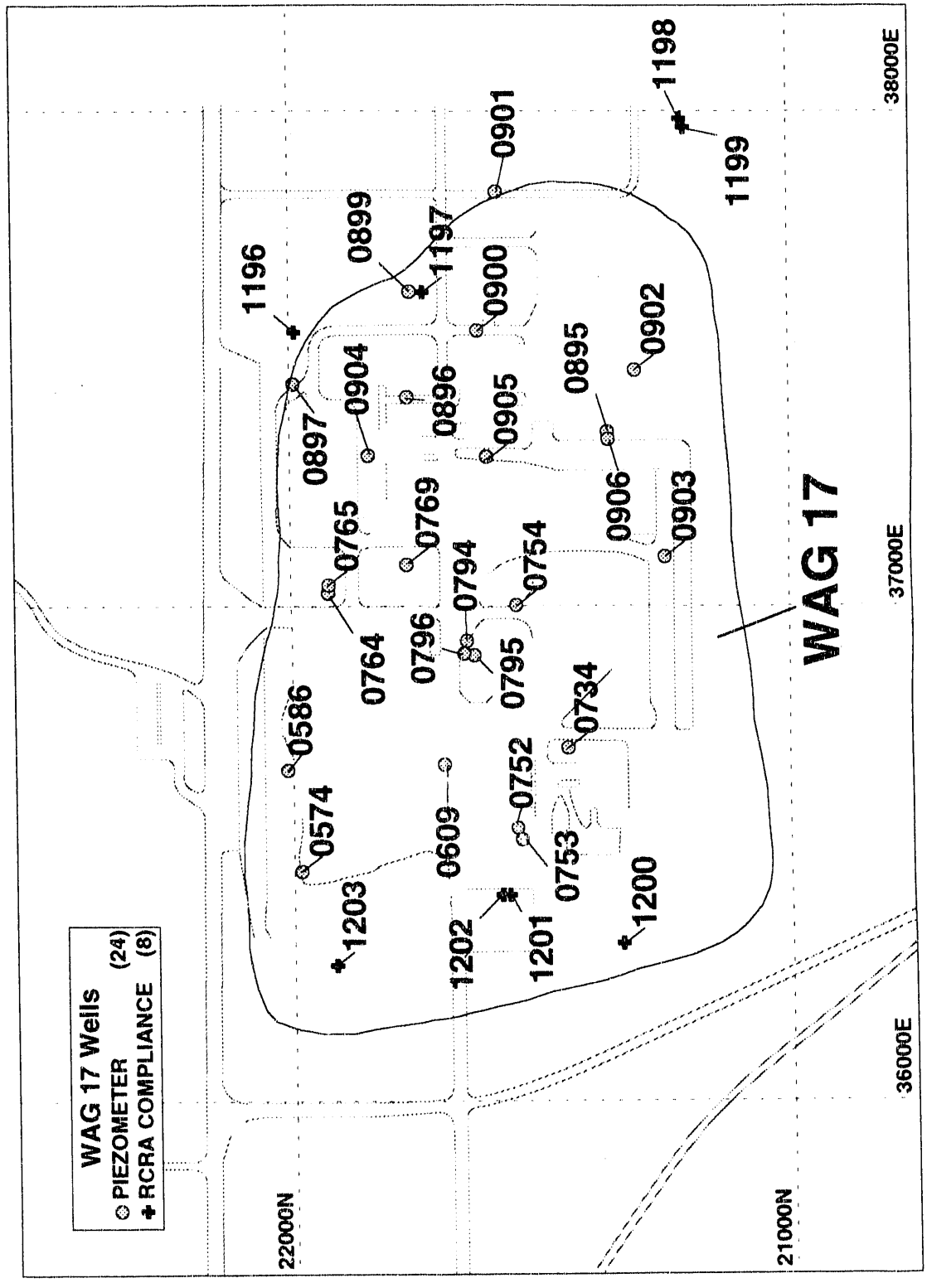


Fig. 13. Locations of wells associated with WAG 17.

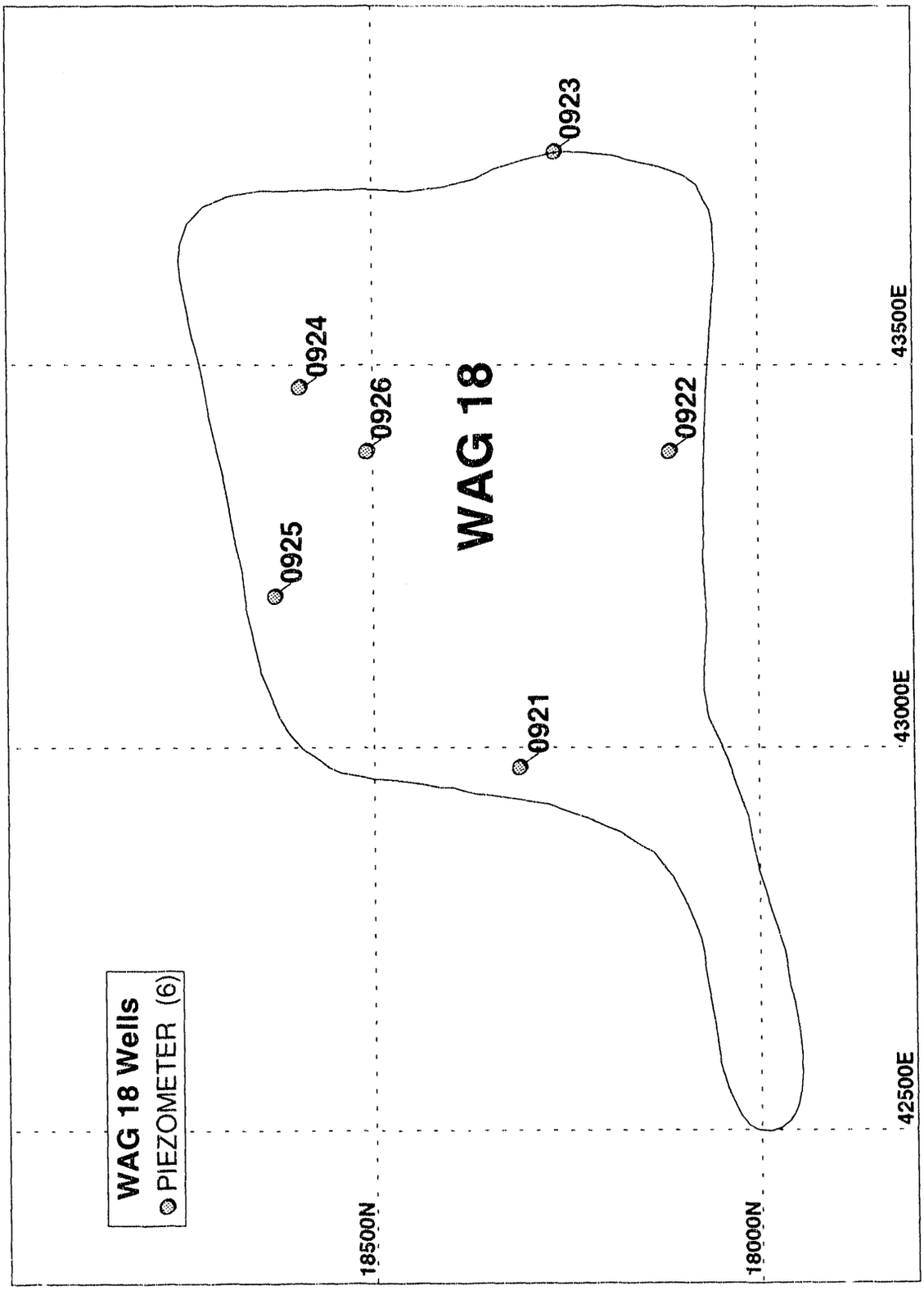


Fig. 14. Locations of wells associated with WAG 18.

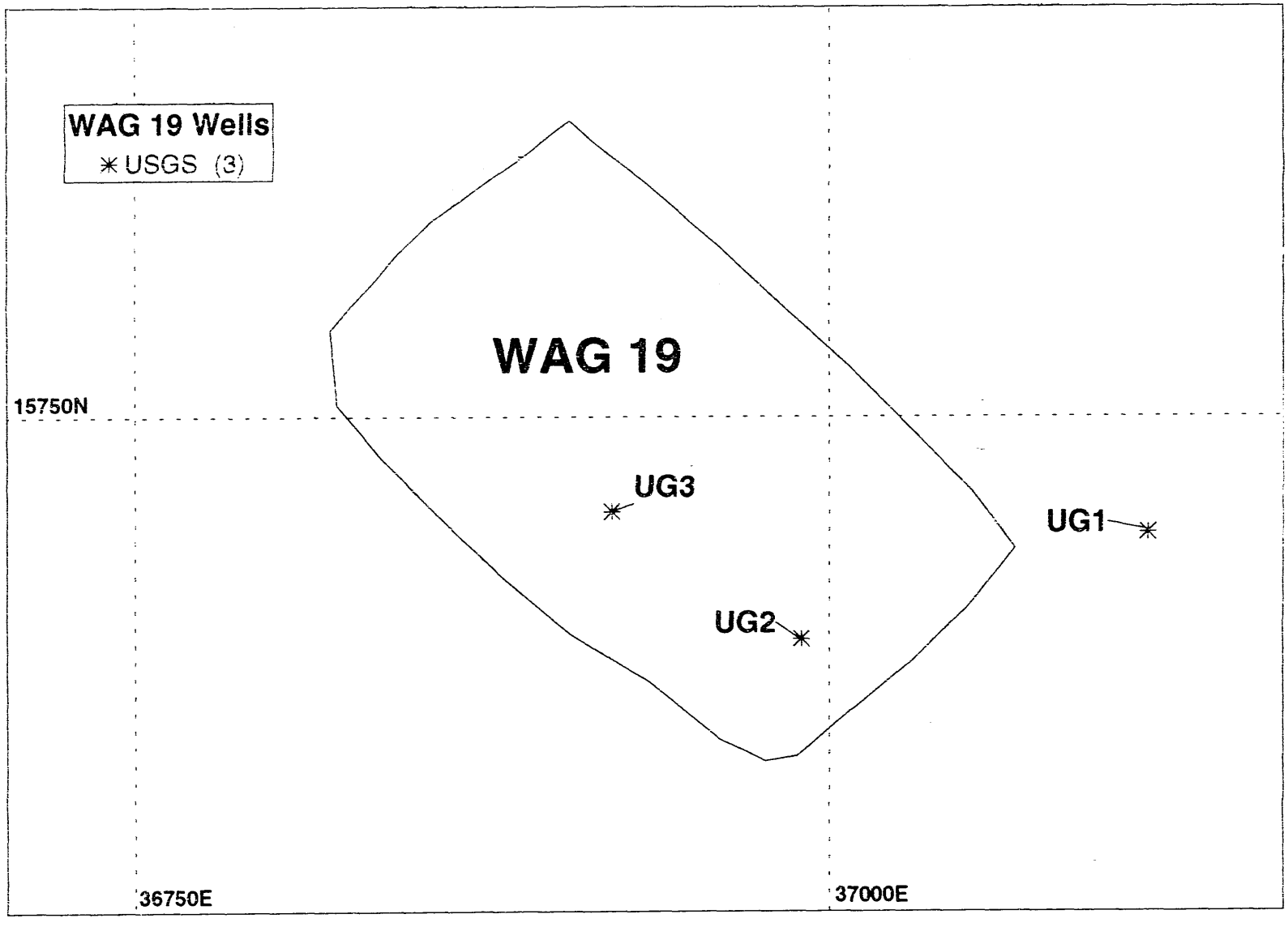


Fig. 15. Locations of wells associated with WAG 19.

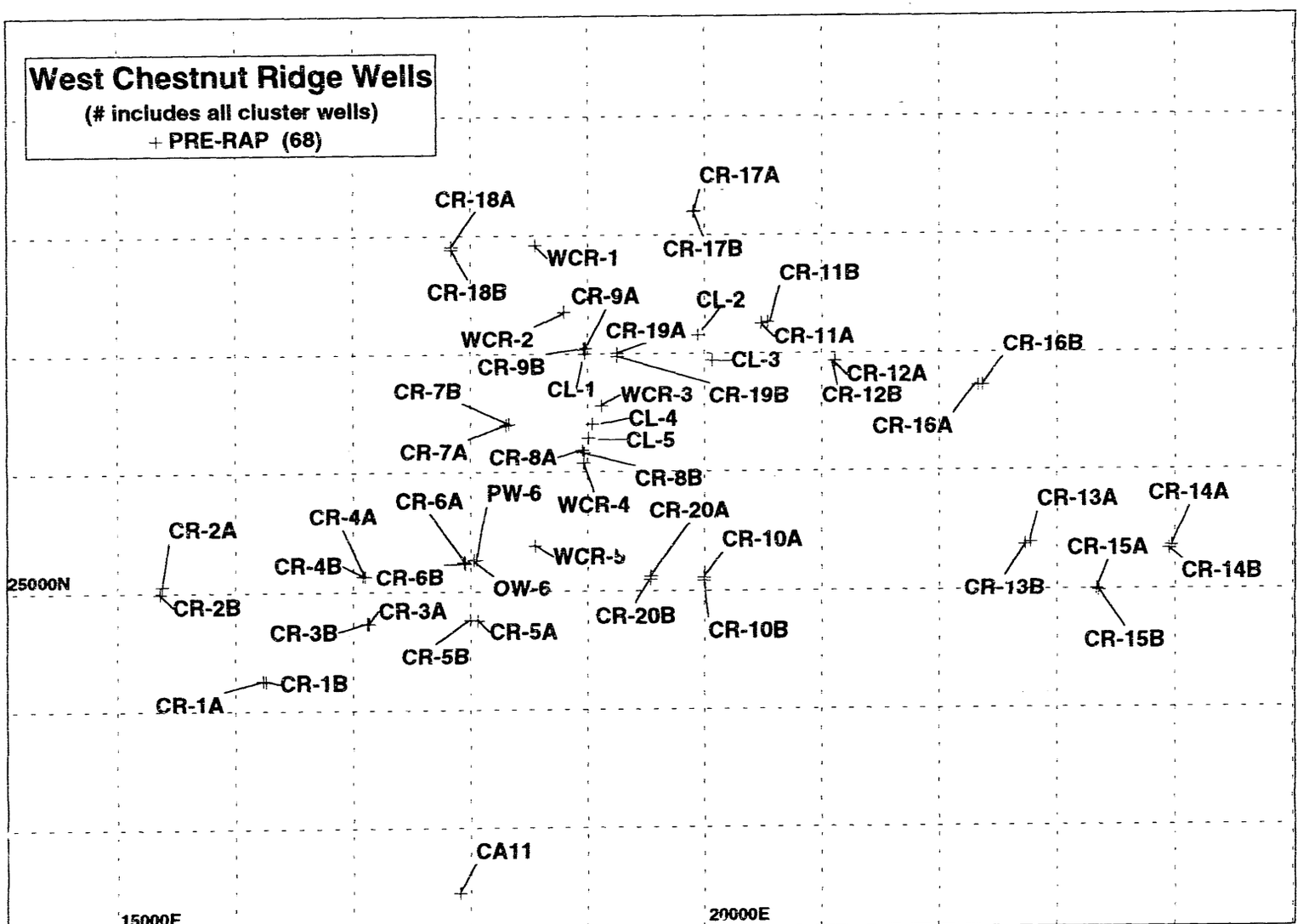


Fig. 16. Locations of wells associated with the West Chestnut Ridge area.

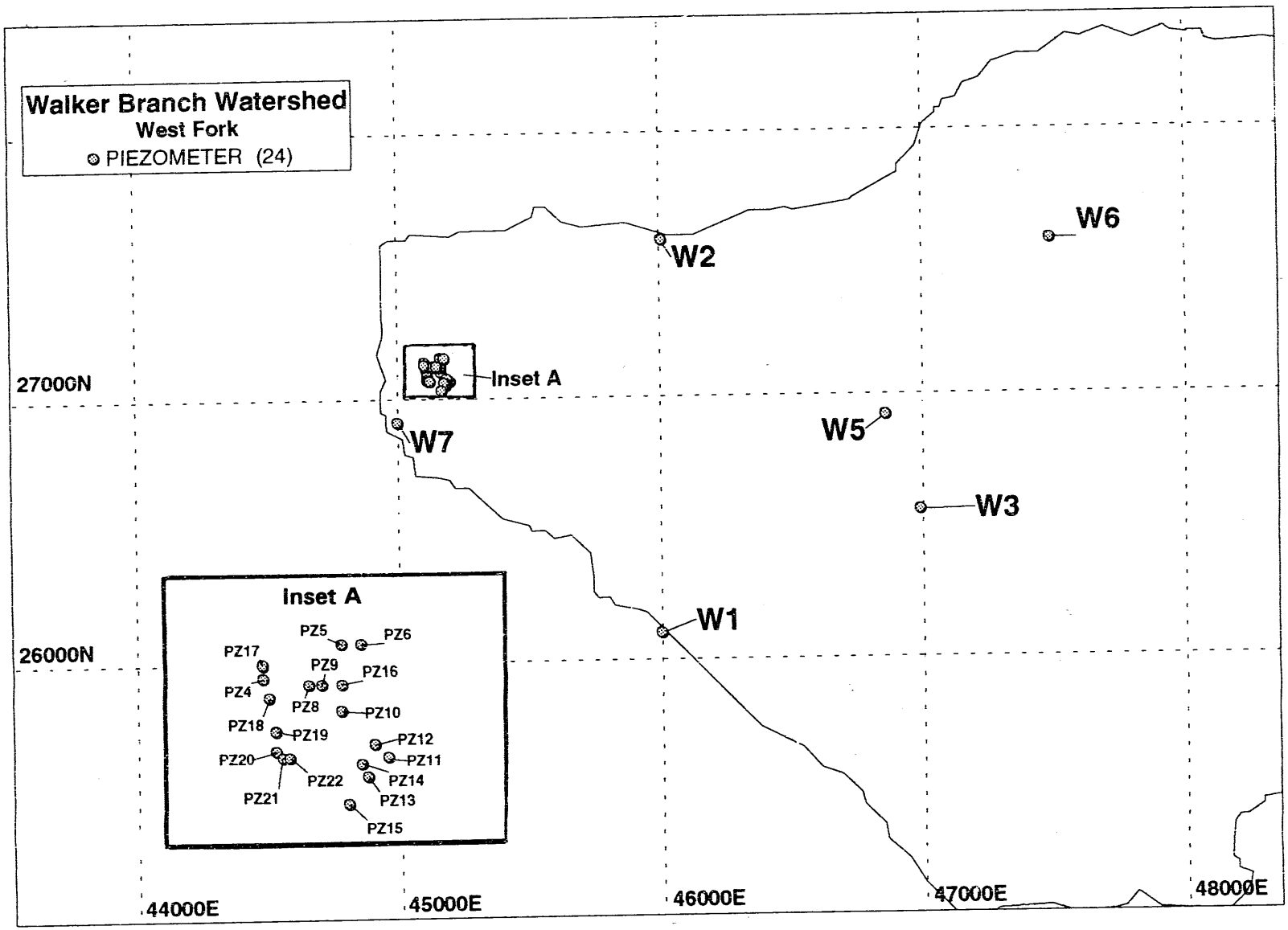


Fig. 17. Locations of wells in Walker Branch Watershed.

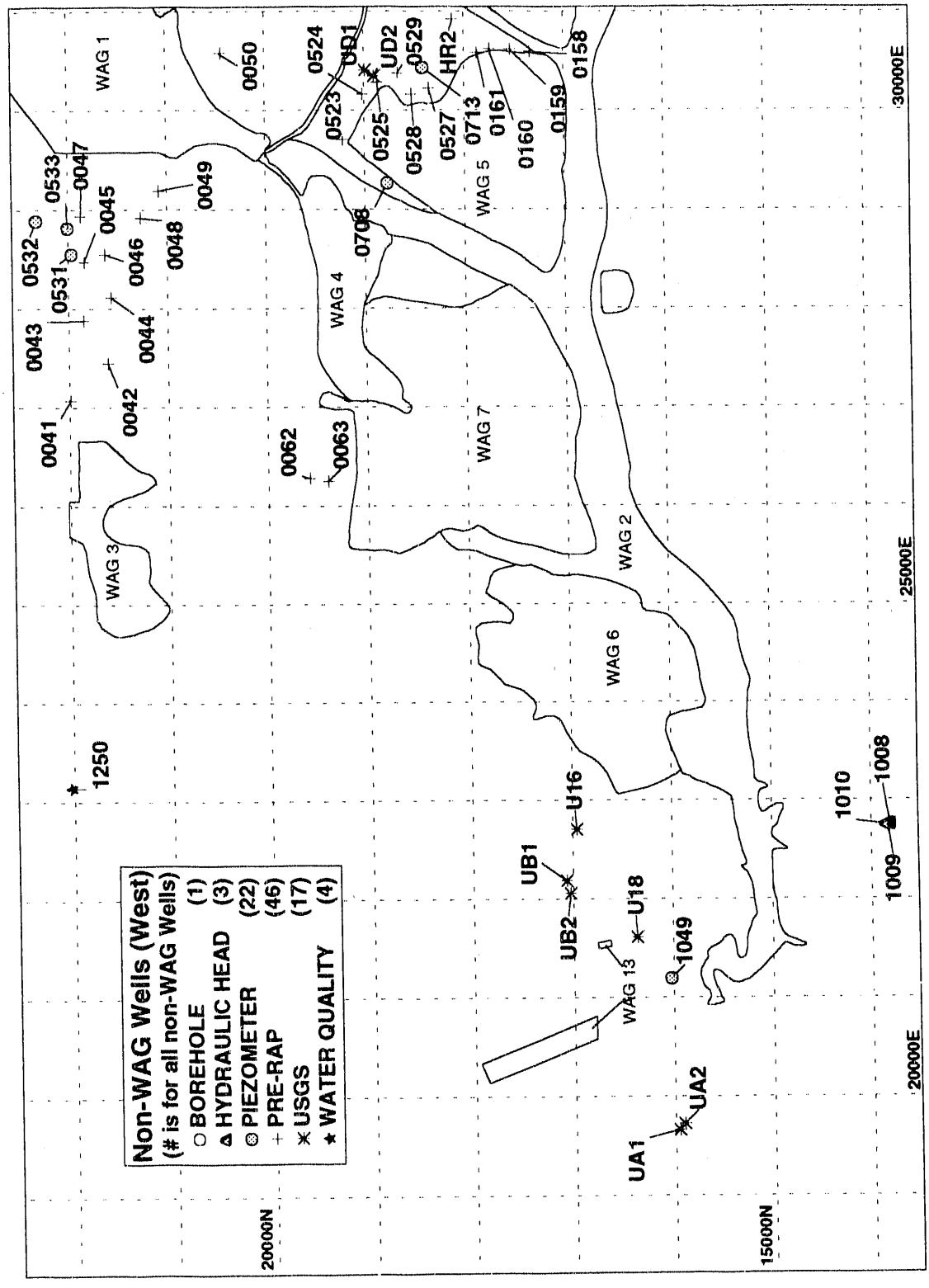


Fig. 18(a). Locations of wells and a corehole not associated with any WAG or area (west ORNL).

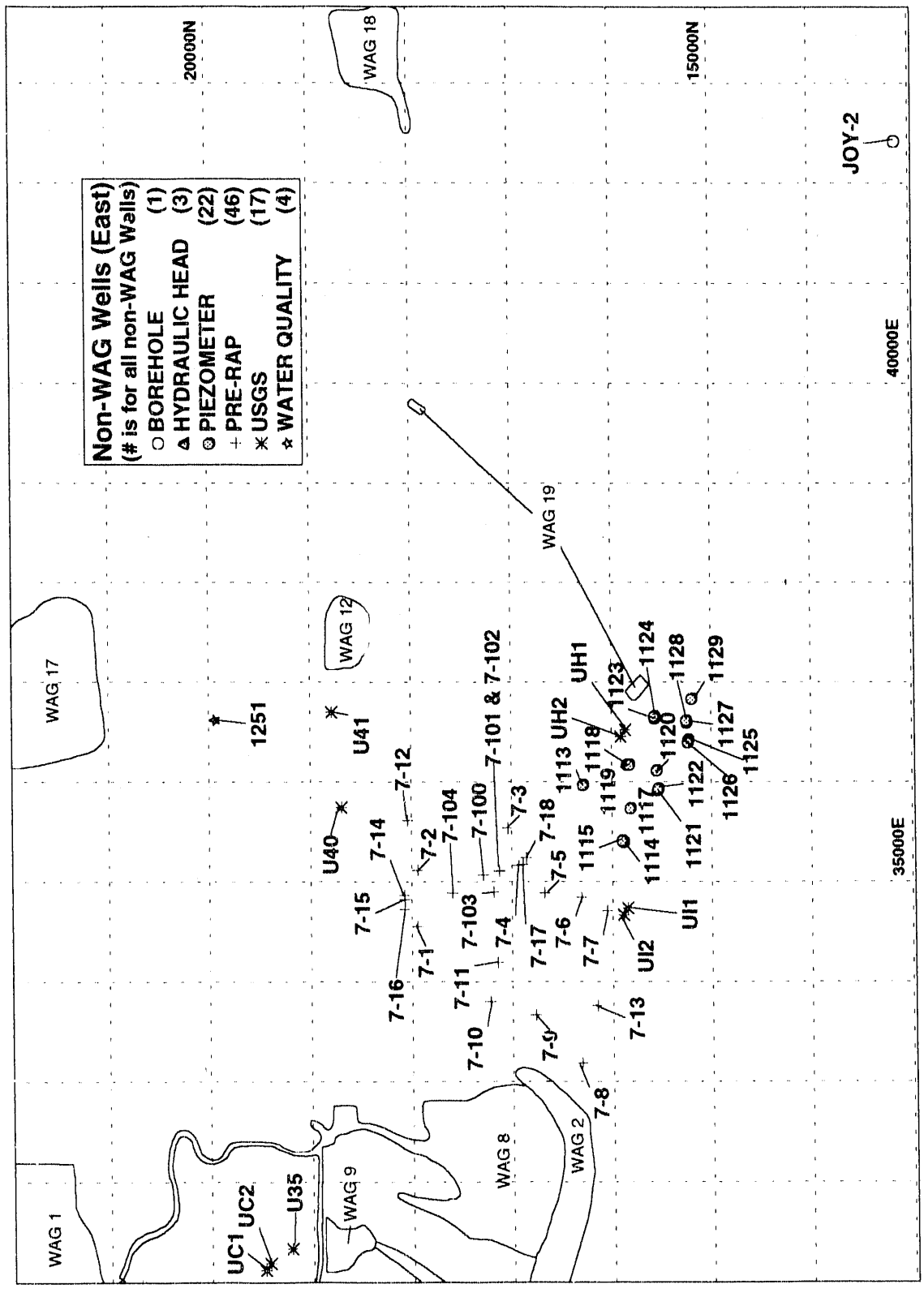
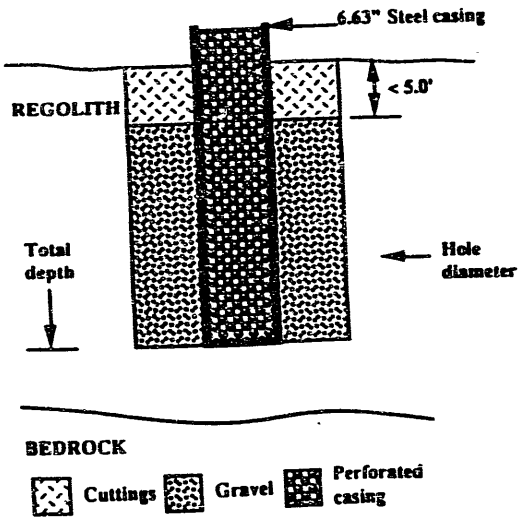
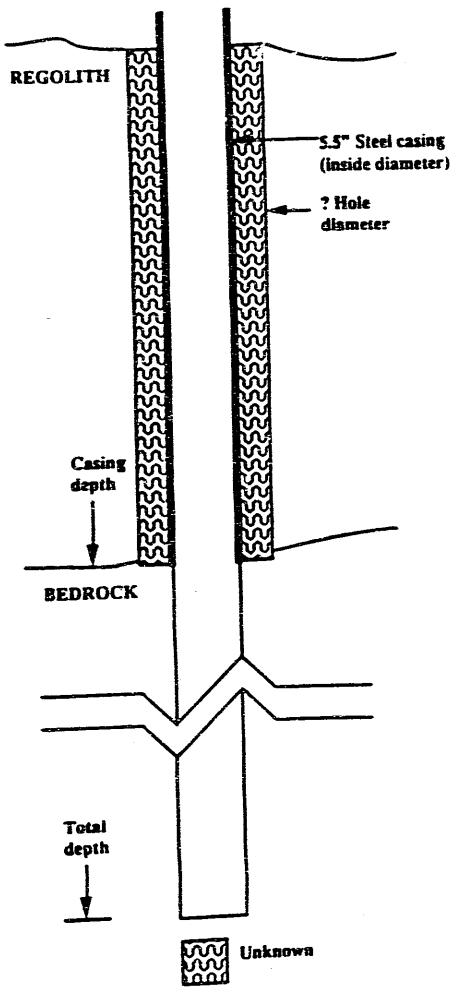


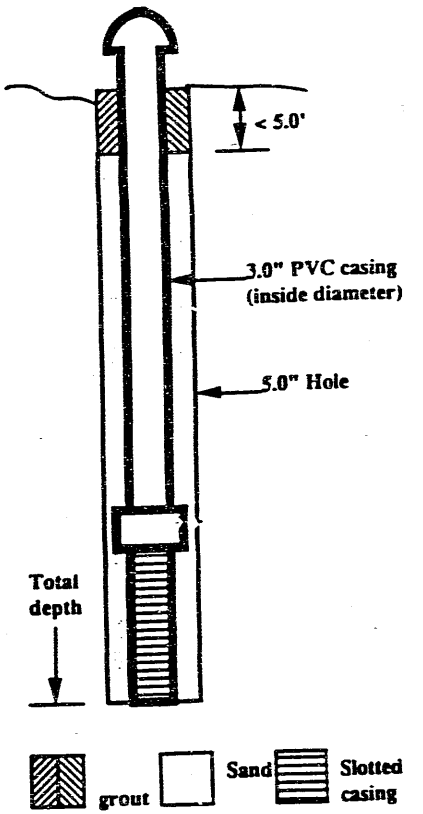
Fig. 18(b). Locations of wells and a corehole not associated with any WAG or area (east ORNL).



(a) well in regolith



(b) open-interval bedrock well



(c) PVC slotted-screen well

Fig. 19. Construction diagram of 3 types of pre-RAP well installations.

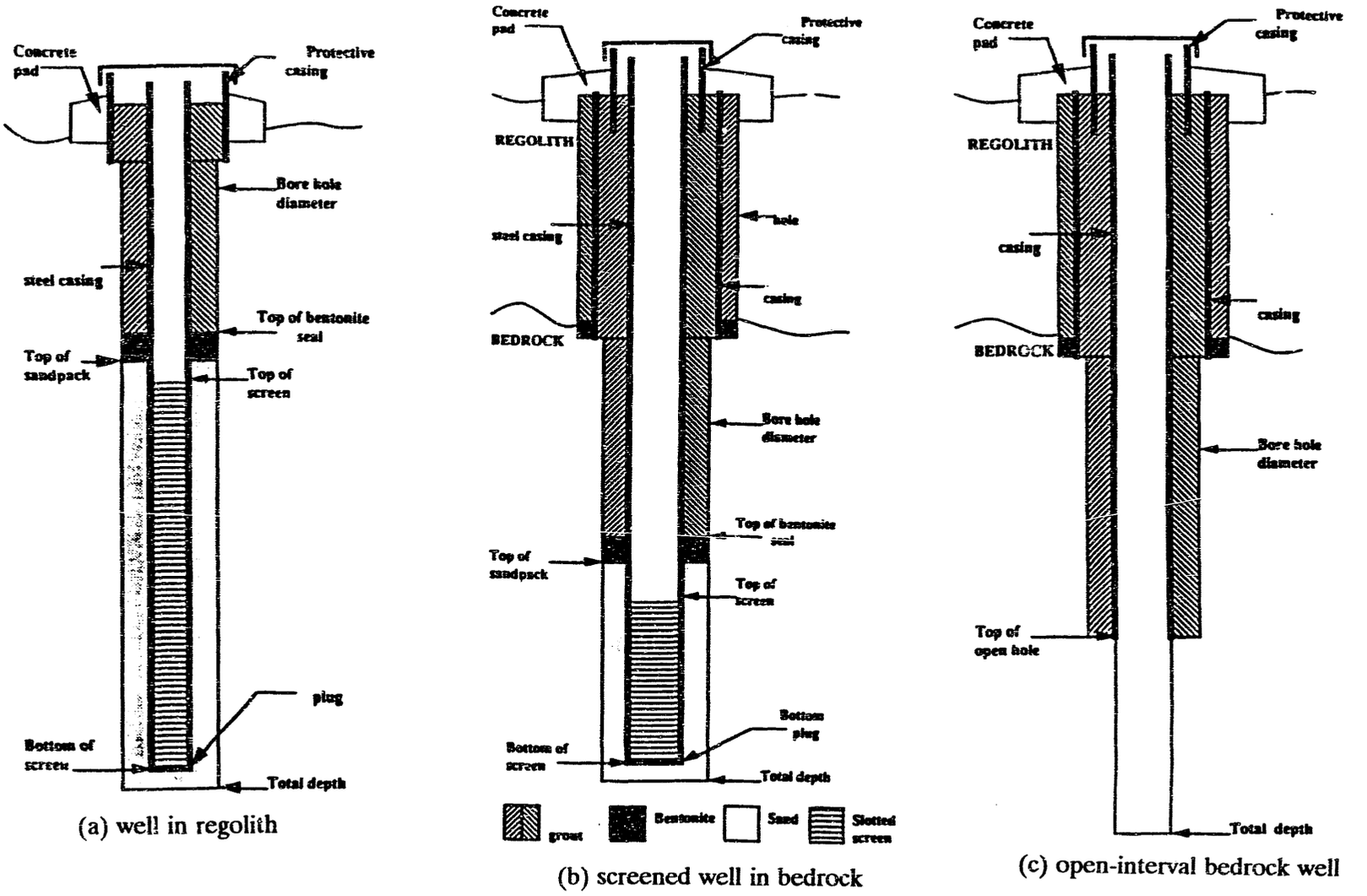


Fig. 20. Construction diagram of 3 types of installations used for RCRA compliance, water quality, and piezometer wells.

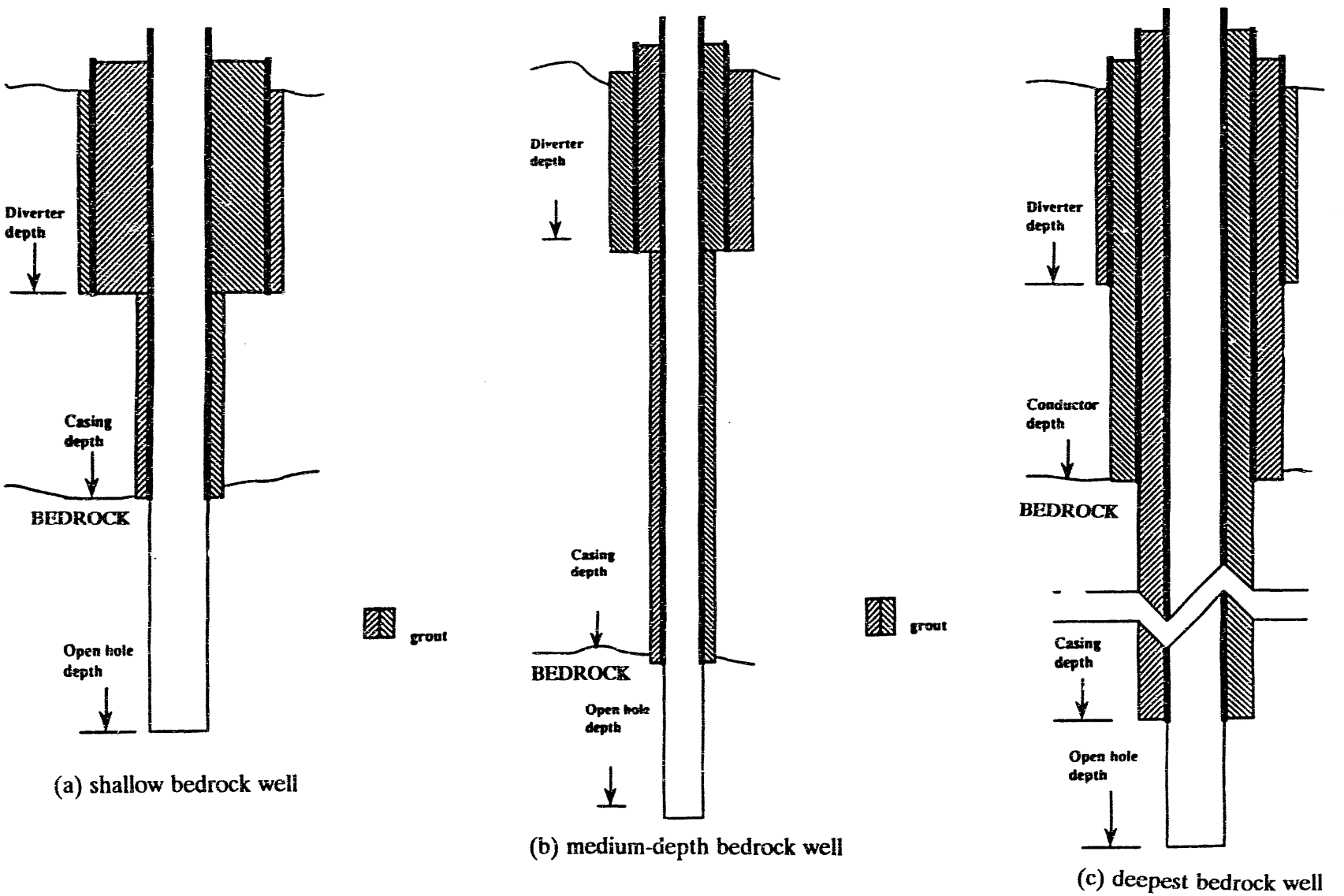


Fig. 21. Construction diagram of hydraulic head, open-interval bedrock well installations.

APPENDIX A

ORNL WELL INVENTORY SORTED BY WELL I.D.

APPENDIX A. Explanation of Headings and Conventions Used in the Tables

Well I. D.—Well name as listed in the ORNL Well Database.

WAG or Area—Number (with the exception of "0") identifies the WAG with which wells/coreholes are associated. A dash before the WAG number identifies wells associated with the WAG but falling outside that WAG's boundary.
The number "0" identifies wells/coreholes that are not associated with any particular WAG or named area.
"WBW" designates wells/coreholes located within the Walker Branch Watershed.
"WCR" designates wells/coreholes located on West Chestnut Ridge.

Northing—In X-10 coordinates.

Easting—In X-10 coordinates.

Depth—Well depth (in feet) as listed in the ORNL Well Database (from construction data).

Measured Depth—Well depth (in feet) calculated from field measurements. Depth is given as the distance from the ground surface to the bottom of the well.

Casing Material—Self-explanatory.

Casing Diameter—Self-explanatory.

Screened, 'Perforated, or *Open Interval—Interval of well (measured in feet from ground surface) with screened casing, perforated casing, or with no casing (i.e., open). A perforated interval is designated by an apostrophe in the table. An uncased or open interval is designated by an asterisk in the table.

Screened, 'Perforated, or *Open Length—Total length in feet of the screened, perforated, or open interval. Open interval lengths are designated with an asterisk; perforated interval lengths with an apostrophe.

Well Type—Designation of well as listed in the ORNL Well Database.

Field Status—Status based on findings of field inventory of wells conducted from December 1991 to May 1992.

APPENDIX A. OAK RIDGE NATIONAL LABORATORY WELL INVENTORY (Wells Sorted by I.D.) .

Well I.D.	WAG or Area	Northing (X-10 Grid)	Easting (X-10 Grid)	Depth	Measured Depth	Casing Material	Casing Diameter	Screened, 'Perforated, or *Open Interval	Screened, 'Perforated, or *Open Length	Well Type (As Designated in Database)	Field Status
		(ft)	(ft)	(ft)	(ft)		(in.)	(ft.)	(ft.)		
0001	1	21184.50	31095.70	300.00		Steel	3.19	*13-300	*287	Pre-RAP	Not Found
0002	1	21214.40	30864.00	100.00		Steel	3.19	*9-100	*91	Pre-RAP	Not Found
0003	3	21629.55	26428.40	251.00		Steel	3.19	*12-251	*239	Pre-RAP	Not Found
0004	1	21213.50	31347.40	100.20		Steel	3.19	*8-100	*92	Pre-RAP	
0005	3	21623.55	26210.00	100.00		Steel	3.18	*10-100	*90	Pre-RAP	Not Found
0006	1	21414.30	31257.20	100.00		Steel	3.18	*11-100	*89	Pre-RAP	Not Found
0007	1	21436.60	30919.30	100.00		Steel	3.19	*9-100	*91	Pre-RAP	Not Found
0008	1	21313.90	30843.20	100.00		Steel	3.19	*8-100	*92	Pre-RAP	Not Found
0009	3	21670.30	26010.00	99.00		PVC	4.00	*12-99	*87	Pre-RAP	
0010	1	21367.80	30721.00	100.00		Steel	3.19	*10-100	*90	Pre-RAP	Not Found
0011	1	21236.70	30711.20	100.00		Steel	3.19	*9-100	*91	Pre-RAP	Not Found
0012	1	21112.30	30768.70	100.00		Steel	3.19	*9-100	*91	Pre-RAP	Not Found
0013	1	21099.10	30979.50	100.00		Steel	3.19	*10-100	*90	Pre-RAP	Not Found
0014	-1	21118.30	31144.00	100.00		Steel	3.19	*10-100	*90	Pre-RAP	Not Found
0015	3	21725.65	25697.75	100.00		Steel	3.19	*15-100	*85	Pre-RAP	
0016A	3	21870.00	25666.00	100.00		Steel	3.19	*12-46	*34	Pre-RAP	
0016B	3	"	"	"		"	"	*49-67	*18	"	
0016C	3	"	"	"		"	"	*70-100	*30	"	
0017	1	21468.40	31068.10	100.00		Steel	3.19	*9-100	*91	Pre-RAP	Not Found
0018	1	21345.80	30409.40	100.00		Steel	3.19	*13-100	*87	Pre-RAP	Not Found
0019	1	21090.10	29942.50	100.00		Steel	3.19	*14-100	*86	Pre-RAP	
0020A	3	22013.00	25821.00	99.00		Steel	3.19	*12-30	*18	Pre-RAP	
0020B	3	"	"	"		"	"	*33-99	*66	"	
0021A	-3	21925.00	26076.00	100.00		Steel	3.19	*12-30	*18	Pre-RAP	
0021B	-3	"	"	"		"	"	*32-52	*20	"	
0021C	-3	"	"	"		"	"	*55-100	*45	"	
0022A	-3	21934.00	26510.00	100.00		Steel	3.19	*11-33	*22	Pre-RAP	
0022B	-3	"	"	"		"	"	*36-51	*15	"	
0022C	-3	"	"	"		"	"	*54-100	*46	"	
0023	-3	21806.63	26680.50	100.00		Steel	3.19	*10-100	*90	Pre-RAP	Not Found
0024	1	21398.80	29901.30	100.00		Steel	3.18	*5-100	*95	Pre-RAP	Not Found
0025	-1	21740.30	29348.70	100.00		Steel	3.19	*6-50	*44	Pre-RAP	Not Found
0026	1	20700.20	29826.30	50.00		Steel	3.18	*20-50	*30	Pre-RAP	Not Found
0027	1	21089.90	30545.20	50.00		Steel	3.19	*8-50	*42	Pre-RAP	Not Found

APPENDIX A. OAK RIDGE NATIONAL LABORATORY WELL INVENTORY (Wells Sorted by I.D.) .

Well I.D.	WAG or Area	Northing (X-10 Grid)	Easting (X-10 Grid)	Depth	Measured Depth	Casing Material	Casing Diameter	Screened, 'Perforated, or *Open Interval	Screened, 'Perforated, or *Open Length	Well Type (As Designated in Database)	Field Status
		(ft)	(ft)	(ft)	(ft)		(in.)	(ft.)	(ft.)		
0028	1	20838.70	30613.00	100.00		Steel	3.19	*23-100	*77	Pre-RAP	Not Found
0029	1	20388.30	29956.00	198.00		Steel	3.19	*8-198	*190	Pre-RAP	
0030	1	21380.70	31665.20	50.00		Steel	3.19	*7-50	*43	Pre-RAP	Not Found
0031	1	21540.30	32054.70	50.00		Steel	3.19	*3-50	*47	Pre-RAP	Not Found
0032	-3	21621.00	26682.10	99.00		Steel	3.19	*9-99	*90	Pre-RAP	
0033	1	22268.80	31860.50	50.00		Steel	3.19	*4-50	*46	Pre-RAP	Not Found
0034	1	21791.80	31615.90	50.00		Steel	3.19	*6-50	*44	Pre-RAP	Not Found
0035	1	21804.05	31195.50	50.00		Steel	3.19	*15-50	*35	Pre-RAP	
0036	1	22279.92	31252.55	50.00		Steel	3.19	*7-50	*43	Pre-RAP	Not Found
0037	1	21813.71	30879.06	50.00		Steel	3.19	*6-50	*44	Pre-RAP	Not Found
0038	1	22348.30	30796.40	50.00		Steel	3.19	*21-50	*29	Pre-RAP	Not Found
0039	1	22296.10	30436.30	50.00		Steel	3.19	*6-50	*44	Pre-RAP	Not Found
0040	1	21781.50	30669.40	50.00		Steel	3.19	*4-50	*46	Pre-RAP	Not Found
0041	0	21989.40	27070.00	33.00		Steel	3.19	*10-50	*40	Pre-RAP	
0042	0	21513.10	27449.15	49.00		Steel	3.19	*7-50	*43	Pre-RAP	
0043	0	21848.75	27884.65	46.00		Steel	3.19	*10-50	*40	Pre-RAP	
0044	0	21576.00	28113.00	49.00		Steel	3.19	*9-50	*41	Pre-RAP	
0045	0	21841.00	28475.00	24.00		Steel	3.19	*12-24	*12	Pre-RAP	
0046	0	21633.85	28551.50	50.00		Steel	3.19	*6-50	*44	Pre-RAP	
0047	0	21868.83	28936.95	50.00		Steel	3.19	*9-50	*41	Pre-RAP	Not Found
0048	0	21263.10	28919.50	50.00		Steel	3.19	*11-50	*39	Pre-RAP	Not Found
0049	0	21079.35	29188.32	47.00		Steel	3.19	*20-50	*30	Pre-RAP	
0050	0	20441.60	30579.70	90.00		Steel	3.19	*6-50	*44	Pre-RAP	Not Found
0052	7	17623.00	26088.00			Galv. Steel	3.00			Pre-RAP	
0053	7	17421.00	25938.00							Pre-RAP	Not Found
0054	7	17643.00	25907.00			Steel	3.00			Pre-RAP	
0055	7	17823.00	26137.00							Pre-RAP	Not Found
0056	7	17821.00	26432.00							Pre-RAP	Not Found
0057	7	17715.00	26315.00							Pre-RAP	Not Found
0058	7	17886.00	26269.00							Pre-RAP	Not Found
0062	0	19586.00	26280.00			Steel	3.00			Pre-RAP	
0063	0	19398.00	26249.00			Steel	3.00			Pre-RAP	
0064	-7	19215.00	26277.00		28.58	Steel	3.00			Pre-RAP	
0065	7	18988.00	25945.00		50.97	Steel	3.00			Pre-RAP	

APPENDIX A. OAK RIDGE NATIONAL LABORATORY WELL INVENTORY (Wells Sorted by I.D.) .

Well I.D.	WAG or Area	Northing (X-10 Grid)	Easting (X-10 Grid)	Depth	Measured Depth	Casing Material	Casing Diameter	Screened, 'Perforated, or *Open Interval	Screened, 'Perforated, or *Open Length	Well Type (As Designated in Database)	Field Status
		(ft)	(ft)	(ft)	(ft)		(in.)	(ft.)	(ft.)		
0065	7	18867.00	25932.00		49.16	Steel	3.00			Pre-RAP	
0067	7	18468.00	26136.00		15.57	Steel	3.00			Pre-RAP	
0068	7	18919.00	26083.00			Steel	3.00			Pre-RAP	
0069	7	18719.00	25883.00							Pre-RAP	Not Found
0070	7	18719.00	25834.00		57.44	Steel	3.00			Pre-RAP	
0071	7	18919.00	25683.00			Steel	3.00			Pre-RAP	
0072	7	19119.00	25883.00			Steel	3.00			Pre-RAP	
0073	7	18919.00	25883.00			Steel	3.00			Pre-RAP	
0074	7	17307.00	25856.00			Steel	4.00			Pre-RAP	
0075	7	17159.00	25984.00							Pre-RAP	Not Found
0076	7	17274.00	26102.00							Pre-RAP	Not Found
0077	7	17407.00	25984.00							Pre-RAP	Not Found
0078	7	17262.00	25965.00							Pre-RAP	Not Found
0079	7	18837.00	26885.00							Pre-RAP	Not Found
0080	7	17145.00	25984.00							Pre-RAP	Not Found
0081	7	17306.00	25865.00			Steel	2.00			Pre-RAP	
0082	7	17304.00	25875.00			Steel	4.00			Pre-RAP	
0083	7	17285.00	26191.00		9.46	Galv. Steel	8.00			Pre-RAP	
0084	7	17162.00	26224.00		6.15	Galv. Steel	5.88			Pre-RAP	
0085	2	16910.00	26252.00		7.97	Galv. Steel	5.88			Pre-RAP	
0086	2	16808.00	26009.00		13.29	Galv. Steel	5.88			Pre-RAP	
0087	2	16746.00	26002.00			Galv. Steel	5.88			Pre-RAP	
0088	2	16695.00	25746.00		11.80	Galv. Steel	5.88			Pre-RAP	
0089	2	16675.00	25556.00			Galv. Steel	5.88			Pre-RAP	
0090	2	16782.00	25473.00		8.95	Galv. Steel	5.88			Pre-RAP	
0091	2	16860.00	25480.00			Galv. Steel	5.88			Pre-RAP	
0092	2	17046.00	25488.00		10.71	Galv. Steel	5.88			Pre-RAP	
0093	7	17058.00	25984.00		126.60	Steel	5.75			Pre-RAP	
0094	7	16960.00	25985.00		136.57	Steel	5.75			Pre-RAP	
0095	2	17209.00	25542.00		8.68	Galv. Steel	5.88			Pre-RAP	
0096	7	17498.00	26251.00		9.53	Galv. Steel	5.88			Pre-RAP	
0097	7	17598.00	26453.00		8.82	Galv. Steel	5.88			Pre-RAP	
0098	7	17715.00	26531.00		9.78	Galv. Steel	5.88			Pre-RAP	
0099	7	17777.00	26575.00		8.97	Galv. Steel	5.88			Pre-RAP	

APPENDIX A. OAK RIDGE NATIONAL LABORATORY WELL INVENTORY (Wells Sorted by I.D.) .

Well I.D.	WAG or Area	Northing (X-10 Grid)	Easting (X-10 Grid)	Depth	Measured Depth	Casing Material	Casing Diameter	Screened, 'Perforated, or *Open Interval	Screened, 'Perforated, or *Open Length	Well Type (As Designated in Database)	Field Status
		(ft)	(ft)	(ft)	(ft)		(in.)	(ft.)	(ft.)		
0100	7	17408.00	25631.00							Pre-RAP	Not Found
0101	7	17495.00	25732.00							Pre-RAP	Not Found
0102	7	17093.00	26117.00							Pre-RAP	Not Found
0103	7	17074.00	25760.00		122.90	Steel	5.75			Pre-RAP	
0104	7	16957.00	25660.00		128.43	Steel	5.75			Pre-RAP	
0105	7	17324.00	25756.00			Steel	6.00			Pre-RAP	
0106	2	17532.00	25550.00			Galv. Steel	6.00			Pre-RAP	
0112	-7	19450.00	27012.00	95.00		Steel	5.50	*40-95	*55	Pre-RAP	
0113	7	18100.00	26586.00			Steel	6.00			Pre-RAP	
0114	7	18148.00	26433.00		115.62	PVC	3.00			Pre-RAP	
0115	7	18026.00	26155.00							Pre-RAP	Not Found
0116	7	17924.00	25807.00							Pre-RAP	Not Found
0117	7	17802.00	25836.00			Steel	6.00			Pre-RAP	
0118	7	17587.00	25648.00			Steel	6.00			Pre-RAP	
0119	7	17139.00	25680.00			Steel	6.00			Pre-RAP	
0120	7	17676.00	26840.00			Galv. Steel	6.00			Pre-RAP	Damaged
0121	7	17306.00	26698.00			Steel	4.00			Pre-RAP	
0122	7	18011.00	26348.00							Pre-RAP	Not Found
0124	7	17916.00	26079.00		9.31	Galv. Steel	5.88			Pre-RAP	
0125	7	17874.00	25995.00		9.91	Galv. Steel	5.88			Pre-RAP	
0126	2	17779.00	25698.00		12.80	Galv. Steel	5.88			Pre-RAP	
0127	7	17476.00	26719.00			Galv. Steel	6.00			Pre-RAP	
0133	2	17934.00	28795.00	7.19		Galv. Steel	6.63	'0-7	'7	Pre-RAP	Damaged
0134	2	17827.00	28733.00	8.38		Steel	6.63	'0-8	'8	Pre-RAP	Not Found
0138	2	17086.00	28425.00							Pre-RAP	Not Found
0151	2	16981.00	29422.00	6.60						Pre-RAP	Not Found
0152	2	16932.00	29899.00							Pre-RAP	Not Found
0157	2	17151.00	30555.00	6.15		Galv. Steel	6.63	'0-6	'6	Pre-RAP	
0158	0	17340.00	30590.00			Galv. Steel	6.63			Pre-RAP	
0159	0	17535.00	30610.00	6.13		Galv. Steel	6.63	'0-6	'6	Pre-RAP	
0160	0	17744.00	30617.00	9.03		Galv. Steel	6.63	'0-9	'9	Pre-RAP	
0161	0	17873.00	30578.00	7.70		Steel	6.63	'0-8	'8	Pre-RAP	Not Found
0179	7	18832.00	26993.00	20.51		Galv. Steel	6.63	'0-21	'21	Pre-RAP	
0180	7	19220.00	27057.00	18.00		Galv. Steel	6.63	'0-18	'18	Pre-RAP	

APPENDIX A. OAK RIDGE NATIONAL LABORATORY WELL INVENTORY (Wells Sorted by I.D.) .

Well I.D.	WAG or Area	Northing (X-10 Grid)	Easting (X-10 Grid)	Depth	Measured Depth	Casing Material	Casing Diameter	Screened, 'Perforated, or *Open Interval	Screened, 'Perforated, or *Open Length	Well Type (As Designated in Database)	Field Status
		(ft)	(ft)	(ft)	(ft)		(in.)	(ft.)	(ft.)		
0181	7	19021.00	27062.00	14.38		PVC	3.00	'0-14	'14	Pre-RAP	
0182	4	18827.00	27038.00	19.67	19.70	Galv. Steel	5.88	'0-20	'20	Pre-RAP	
0183	4	18612.00	26997.00	15.00	14.94	Galv. Steel	5.88	'0-15	'15	Pre-RAP	
0183A	4	18587	27000							Pre-RAP	
0183B	4	18587	26990							Pre-RAP	
0184	4	19418.00	27553.00	15.62		Steel	6.63	'0-16	'16	Pre-RAP	Not Found
0185	4	19183.00	27580.00							Pre-RAP	Not Found
0186	4	19019.00	27549.00	6.00		Galv. Steel	5.88	'0-6	'6	Pre-RAP	
0186A	4	19058.00	27514.00	9.00		Steel	6.88	'0-9	'9	Pre-RAP	Not Found
0187	7	18786.00	27544.00	19.00		Galv. Steel	5.88	'0-19	'19	Pre-RAP	
0188	-4	19602.00	28052.00	19.36		Galv. Steel	6.63	'0-19	'19	Pre-RAP	
0189	4	19404.00	28048.00	18.99		Galv. Steel	6.63	'0-19	'19	Pre-RAP	
0190	4	19208.00	28047.00	15.16		Galv. Steel	6.63	'0-15	'15	Pre-RAP	
0190A	4	19061.00	28253.00	10.46		Steel	6.88	'0-10	'10	Pre-RAP	
0190B	4	19243.00	28098.00	11.74		Galv. Steel	6.88	'0-12	'12	Pre-RAP	
0190C	4	19221.00	27919.00	11.60		Steel	6.88	'0-12	'12	Pre-RAP	
0191	7	19008.00	28034.00	7.00	7.35	Galv. Steel	5.88	'0-7	'7	Pre-RAP	
0192	4	19396.00	28573.00	15.45		Steel	6.63	'0-15	'15	Pre-RAP	
0193	4	19172.00	28565.00							Pre-RAP	Not Found
0194	4	18970.00	28577.00							Pre-RAP	Not Found
0195	2	18787.00	28789.00	7.28		Steel	6.63	'0-7	'7	Pre-RAP	
0196	4	19059.00	28856.00	10.51		Galv. Steel	6.63	'0-11	'11	Pre-RAP	
0197	2	19134.00	28970.00	14.75		Steel	6.63	'0-15	'15	Pre-RAP	
0198	4	19568.00	29106.00							Pre-RAP	Damaged
0199	4	19338.00	29144.00			Steel	4.00			Pre-RAP	Damaged
0200	4	19565.00	29116.00	11.00		Steel	6.63	'0-11	'11	Pre-RAP	
0201	4	19367.00	29183.00	28.57	15.04	PVC	3.00	19-29	10	Pre-RAP	
0202	4	19173.00	28563.00	19.14		Steel	6.63	'0-19	'19	Pre-RAP	Not Found
0203	4	19001.00	28572.00	19.40		Steel	6.63	'0-19	'19	Pre-RAP	
0205	-13	17954.00	20302.00	18.13		Galv. Steel	6.63	'0-18	'18	Pre-RAP	Damaged
0206	-13	18028.00	20487.00	19.65		Galv. Steel	6.63	'0-20	'20	Pre-RAP	
0207	-13	18060.00	20580.00	18.91		Galv. Steel	6.63	'0-19	'19	Pre-RAP	Damaged
0208	-13	18121.00	20729.00	19.11		Galv. Steel	6.63	'0-19	'19	Pre-RAP	Damaged
0209	-13	18168.00	20851.00	18.31		Galv. Steel	6.63	'0-18	'18	Pre-RAP	

APPENDIX A. OAK RIDGE NATIONAL LABORATORY WELL INVENTORY (Wells Sorted by I.D.) .

Well I.D.	WAG or Area	Northing (X-10 Grid)	Easting (X-10 Grid)	Depth	Measured Depth	Casing Material	Casing Diameter	Screened, 'Perforated, or *Open Interval	Screened, 'Perforated, or *Open Length	Well Type (As Designated in Database)	Field Status
		(ft)	(ft)	(ft)	(ft)		(in.)	(ft.)	(ft.)		
0210	-13	18545.00	21150.00	310.00		Steel	6.25	*55-310	*255	Pre-RAP	Not Found
0301	3	21856.00	26106.00	14.00		Steel	6.88	'0-14	'14	Pre-RAP	Not Found
0302	3	21837.00	26293.00	6.00		PVC	4.00	'0-6	'6	Pre-RAP	
0303	3	21855.00	26612.00	6.00		Steel	6.88	'0-6	'6	Pre-RAP	Not Found
0401	4						4.00			Pre-RAP	
0402	4	19190.00	27460.00	3.00		Steel	6.88	'0-3	'3	Pre-RAP	
0404	4	19220.00	27714.00	10.39	42.37	Steel	4.00	'0-10	'10	Pre-RAP	Not Found
0407	4	19349.00	28279.00	7.81		Steel	6.88	'0-8	'8	Pre-RAP	
0409	4									Pre-RAP	
0410	4	19066.00	28472.00	17.02		Steel	6.88	'0-17	'17	Pre-RAP	Not Found
0427	2	16989.00	29425.00	9.97		Steel	6.63	'0-10	'10	Pre-RAP	Not Found
0428	2	16934.00	29692.00	3.92		Steel	6.63	'0-4	'4	Pre-RAP	Not Found
0457	2	17850.00	28719.00	9.60		PVC	3.00	1-10	9	Pre-RAP	
0461	2	16879.00	29585.00	202.00		Steel	4.00	*188-202	*14	Pre-RAP	
0462	2	16888.00	29562.00	151.00		Steel	4.00	*140-151	*11	Pre-RAP	
0463	2	16901.00	29541.00	100.00		Steel	4.00	*88-100	*12	Pre-RAP	
0464	2	16918.00	29523.00	11.00		Steel	4.00	'6-11	'5	Pre-RAP	
0481	3	21647.00	26536.00	18.00		PVC	4.00	8-18	10	Pre-RAP	Not Found
0482	3	21639.00	26202.00	24.00		PVC	4.00	14-24	10	Pre-RAP	
0483	3	21739.00	25829.00	34.00		PVC	4.00	24-34	10	Pre-RAP	
0484	3	21995.00	25704.00	32.00		PVC	4.00	22-32	10	Pre-RAP	
0485	3	21990.00	26055.00	28.00		PVC	4.00	18-28	10	Pre-RAP	
0486	3	21896.00	26302.00	25.00		PVC	4.00	15-25	10	Pre-RAP	
0487	-3	22107.00	26218.00	15.00		PVC	4.00	5-15	10	Pre-RAP	
0491	3	21768.00	26513.00	15.00		PVC	4.00	5-15	10	Pre-RAP	
0492	3	21768.00	26254.00	26.00		PVC	4.00	16-26	10	Pre-RAP	
0493	3	21816.00	26002.00	26.00		PVC	4.00	16-26	10	Pre-RAP	
0494	3	21868.00	25782.00	39.00		PVC	4.00	29-39	10	Pre-RAP	
0495A	-3	21855.00	25384.00	77.00		PVC	4.00	*23-40	*17	Pre-RAP	
0495B	-3	21855.00	25384.00	77.00		PVC	4.00	*43-60	*17	Pre-RAP	
0495C	-3	21855.00	25384.00	77.00		PVC	4.00	*63-77	*14	Pre-RAP	
0496	-3	21968.00	26827.00	60.00		PVC	4.00	*11-60	*49	Pre-RAP	
0498A	-3	21799.00	24701.00	75.00		PVC	4.00	*25-36	*11	Pre-RAP	
0498B	-3	21799.00	24701.00	75.00		PVC	4.00	*39-55	*16	Pre-RAP	

APPENDIX A. OAK RIDGE NATIONAL LABORATORY WELL INVENTORY (Wells Sorted by I.D.) .

Well I.D.	WAG or Area	Northing (X-10 Grid)	Easting (X-10 Grid)	Depth	Measured Depth	Casing Material	Casing Diameter	Screened, 'Perforated, or *Open Interval	Screened, 'Perforated, or *Open Length	Well Type (As Designated in Database)	Field Status
		(ft)	(ft)	(ft)	(ft)		(in.)	(ft.)	(ft.)		
0498C	-3	21799.00	24701.00	75.00		PVC	4.00	*58-75	*17	Pre-RAP	
0499	-3	21955.00	26809.00	83.00		Steel	4.00	*31-83	*52	Pre-RAP	
0523	0	19220.00	29703.00	10.00		PVC	3.00	5-10	5	Pre-RAP	
0524	0	19012.00	30163.00	11.00		PVC	3.00	6-11	5	Pre-RAP	
0525	0	18871.00	30279.00	29.00		PVC	6.00	19-29	10	Pre-RAP	
0527	0	18355.00	30221.00	16.00		PVC	4.00	6-16	10	Pre-RAP	
0528	0	18524.00	30158.00	34.00		PVC	4.00	14-34	20	Pre-RAP	
0529	0	18665.00	30370.00	40.00		PVC	4.00	30-40	10	Pre-RAP	
0530A	4	19472.00	28978.00	17.46		PVC	6.00	5-17	12	Pre-RAP	
0531	0	21967.29	28554.89	75.00		PVC	2.00	60-75	15	Piezometer	
0531A	4	19304.00	28598.00	21.10		PVC	6.00	5-21	16	Pre-RAP	
0532	0	22319.32	28890.15	18.00	16.63	PVC	2.00	7-17	10	Piezometer	Not Found
0532A	4	18855.00	28771.00	9.55		PVC	6.00	5-10	5	Pre-RAP	
0533	0	22006.67	28818.67	17.90	17.70	PVC	2.00	12.7-17.7	5	Piezometer	
0533A	4	19216.00	28314.00	24.90		PVC	6.00	5-25	20	Pre-RAP	
0534	-1	22732.96	29543.30	19.00	15.20	PVC	2.00	9.6-14.6	5	Piezometer	
0534A	4	19115.00	27926.00	15.80		Galv. Steel	6.88	5-16	11	Pre-RAP	Damaged
0535	-1	22235.11	29541.41	15.00	14.42	PVC	2.00	9.5-14.5	5	Piezometer	
0536	-1	21889.90	29485.31	19.00	18.97	PVC	2.00	9-19	10	Piezometer	
0536A	4	19105.00	27210.00	27.90		PVC	6.00	5-28	23	Pre-RAP	Not Found
0537	-1	21477.23	29474.30	16.00	15.52	PVC	2.00	5.5-15.5	10	Piezometer	
0538	-1	22630.29	29736.18	31.90	38.39	PVC	2.00	21-31	10	Piezometer	
0539	-1	22379.31	29807.39	16.00	16.08	PVC	2.00	11-16	5	Piezometer	
0540	1	21955.86	29644.32	18.60	18.07	PVC	2.00	8.6-18.6	10	Piezometer	
0541	1	21829.32	29816.10	16.60	15.20	PVC	2.00	6.6-16.6	10	Piezometer	
0542	1	21600.24	29869.89	15.15	13.38	PVC	2.00	9.15-14.15	5	Piezometer	
0543	1	21335.57	29713.50	13.00	10.23	PVC	2.00	8-13	5	Piezometer	
0544	1	20999.85	29969.91	18.00	15.67	PVC	2.00	8-18	10	Piezometer	Damaged
0545	-1	23004.53	29741.90	17.50	18.16	PVC	2.00	7.5-17.5	10	Piezometer	
0546	-1	22758.18	30034.16	80.00		PVC	2.00	65-75	10	Piezometer	
0547	-1	22620.40	30024.95	46.00	45.01	PVC	2.00	36-46	10	Piezometer	
0548	1	22049.19	29960.92	15.00	14.72	PVC	2.00	5-15	10	Piezometer	
0549	-1	23013.09	30311.39	45.00		PVC	2.00	35-45	10	Piezometer	
0550	1	22379.43	30194.59	27.00	26.14	PVC	2.00	13.8-23.8	10	Piezometer	

APPENDIX A. OAK RIDGE NATIONAL LABORATORY WELL INVENTORY (Wells Sorted by I.D.) .

Well I.D.	WAG or Area	Northing (X-10 Grid)	Easting (X-10 Grid)	Depth	Measured Depth	Casing Material	Casing Diameter	Screened, 'Perforated, or *Open Interval	Screened, 'Perforated, or *Open Length	Well Type (As Designated in Database)	Field Status
		(ft)	(ft)	(ft)	(ft)		(in.)	(ft.)	(ft.)		
0551	1	22067.42	30143.66	16.00	16.27	PVC	2.00	10.8-15.8	5	Piezometer	
0552	1	21830.25	30146.75	60.00	60.50	PVC	2.00	50-60	10	Piezometer	Not Found
0553	1	21584.37	30243.72	19.80	18.66	PVC	2.00	9.8-19.8	10	Piezometer	
0554	1	21319.13	30180.20	13.00	12.74	PVC	2.00	8-13	5	Piezometer	
0555	1	22652.17	30472.94	20.00	20.83	PVC	2.00	10-20	10	Piezometer	
0556	1	22083.68	30541.09	15.80	15.36	PVC	2.00	10.8-15.8	5	Piezometer	
0557	-1	23200.82	30639.36	24.60	24.51	PVC	2.00	14.6-24.6	10	Piezometer	
0558	-1	22800.03	30699.55	20.00	19.20	PVC	2.00	10-20	10	Piezometer	
0559	1	22679.29	30844.32	35.00	32.50	PVC	2.00	20-35	15	Piezometer	
0560	1	22447.75	30700.18	24.80	24.01	PVC	2.00	19.8-24.8	5	Piezometer	
0561	1	22190.16	30659.54	26.40	14.00	PVC	2.00	16.4-26.4	10	Piezometer	
0563	1	21899.82	30615.41	15.00	14.36	PVC	2.00	10-15	5	Piezometer	
0564	1	21836.37	30459.19	30.00	27.71	PVC	2.00	16.7-26.7	10	Piezometer	
0565	1	21721.75	30747.66	16.50	16.13	PVC	2.00	11.5-16.5	5	Piezometer	
0566	1	21755.47	30625.08	25.00	26.70	PVC	2.00	15-25	10	Piezometer	
0567	1	21700.20	30419.37	25.10	19.80	PVC	2.00	15.1-25.1	10	Piezometer	Damaged
0568	1	21351.73	30445.01	18.00	18.60	PVC	2.00	8-18	10	Piezometer	Not Found
0569	1	21037.77	30545.59	12.50	11.71	PVC	2.00	7.5-12.5	5	Piezometer	
0570	1	21046.92	30675.38	15.00	14.62	PVC	2.00	10-15	5	Piezometer	Not Found
0571	1	20920.68	30515.25	17.50	17.07	PVC	2.00	7.5-17.5	10	Piezometer	
0572	-1	23037.69	30872.67	38.00	37.55	PVC	2.00	28-38	10	Piezometer	
0573	1	22590.34	30875.11	27.20	26.96	PVC	2.00	17.2-27.2	10	Piezometer	
0574	17	21985.05	36463.77	14.50	14.06	PVC	2.00	4.2-14.2	10	Piezometer	Damaged
0575	-1	23233.55	31698.83	15.00	15.89	PVC	2.00	10-15	5	Piezometer	
0577	1	22088.85	30734.45	20.00	17.92	PVC	2.00	10-20	10	Piezometer	
0578	1	21878.46	30852.54	14.00	13.46	PVC	2.00	9-14	5	Piezometer	
0579	1	21640.40	30919.87	17.00	17.43	PVC	2.00	7-17	10	Piezometer	
0580	1	20855.37	30770.59	35.00	33.47	PVC	2.00	25-35	10	Piezometer	Not Found
0581	1	22689.91	31115.05	30.00	26.40	PVC	2.00	20-30	10	Piezometer	
0582	1	22454.98	31130.04	28.00	26.28	PVC	2.00	18-28	10	Piezometer	
0583	1	22298.95	30954.85	22.00	20.87	PVC	2.00	16.5-21.5	5	Piezometer	
0584	1	22089.87	31122.90	9.00	11.10	PVC	2.00	4-9	5	Piezometer	
0586	17	22011.15	36668.47	42.00	42.43	PVC	2.00	31.7-41.7	10	Piezometer	Damaged
0587	-1	22874.82	31289.70	40.00	40.27	PVC	2.00	30-40	10	Piezometer	

APPENDIX A. OAK RIDGE NATIONAL LABORATORY WELL INVENTORY (Wells Sorted by I.D.) .

Well I.D.	WAG or Area	Northing (X-10 Grid)	Easting (X-10 Grid)	Depth	Measured Depth	Casing Material	Casing Diameter	Screened, 'Perforated, or *Open Interval	Screened, 'Perforated, or *Open Length	Well Type (As Designated in Database)	Field Status
		(ft)	(ft)	(ft)	(ft)		(in.)	(ft.)	(ft.)		
0588	1	22581.53	31308.45	60.00	42.43	PVC	2.00	30-45	15	Piezometer	
0589	1	22474.41	31331.72	57.00	57.52	PVC	2.00	47-57	10	Piezometer	
0590	1	22191.37	31113.31	12.00	12.64	PVC	2.00	7-12	5	Piezometer	
0591	1	22089.66	31200.10	8.90	10.78	PVC	2.00	3.9-8.9	5	Piezometer	
0592	1	21933.86	31108.27	11.00	12.01	PVC	2.00	6-11	5	Piezometer	
0593	1	21833.08	31191.49	12.00	12.34	PVC	2.00	7-12	5	Piezometer	
0594	1	21619.71	31172.78	17.30	17.08	PVC	2.00	7.3-17.3	10	Piezometer	
0595	-1	23001.43	31424.09	12.00	12.97	PVC	2.00	7-12	5	Piezometer	Not Found
0596	1	22660.72	31384.80	35.00	34.73	PVC	2.00	29-35	6	Piezometer	
0597	1	22288.21	31445.19	9.00	9.04	PVC	2.00	4-9	5	Piezometer	
0598	1	22175.01	31358.87	19.00	18.32	PVC	2.00	9-19	10	Piezometer	
0599	1	22009.55	31417.95	19.50	19.32	PVC	2.00	9.5-19.5	10	Piezometer	
0600	1	21719.22	31475.14	30.00	31.70	PVC	2.00	20-30	10	Piezometer	
0601	1	21497.54	31503.38	13.80	12.47	PVC	2.00	8.8-13.8	5	Piezometer	
0602	1	22856.19	31482.03	21.60	21.22	PVC	2.00	16.6-21.6	5	Piezometer	
0603	1	22575.23	31490.62	60.00	36.08	PVC	2.00	25-35	10	Piezometer	
0604	1	22039.86	31521.98	9.80	19.35	PVC	2.00	4.8-9.8	5	Piezometer	
0605	1	23110.09	31679.10	13.00		PVC	2.00	8-13	5	Piezometer	Not Found
0606	1	22694.91	31639.92	9.40	7.13	PVC	2.00	4.4-9.4	5	Piezometer	
0607	1	22476.84	31512.47	60.00	60.23	PVC	2.00	50-60	10	Piezometer	
0608	1	22180.00	31660.10	20.30	19.37	PVC	2.00	8.5-18.5	10	Piezometer	
0609	17	21696.92	36680.22	33.50	33.37	PVC	2.00	23.2-32.2	10	Piezometer	
0610	1	21410.13	31645.42	14.00	12.66	PVC	2.00	8.25-13.25	5	Piezometer	
0611	1	22790.02	31790.15	8.80	10.31	PVC	2.00	3.8-8.8	5	Piezometer	
0612	1	22589.09	31707.27	10.50	10.17	PVC	2.00	5.5-10.5	5	Piezometer	
0613	1	22305.48	31656.13	12.00	12.45	PVC	2.00	7-12	5	Piezometer	
0614	1	22465.66	31803.05	8.90	7.99	PVC	2.00	3.9-8.9	5	Piezometer	
0615	1	22334.92	31864.64	7.50	6.86	PVC	2.00	2.5-7.5	5	Piezometer	
0616	1	22222.73	31784.19	8.10	7.88	PVC	2.00	3.1-8.1	5	Piezometer	
0617	1	22040.95	31782.10	13.90	13.68	PVC	2.00	8.9-13.9	5	Piezometer	Not Found
0618	1	21739.94	31855.70	18.70	18.21	PVC	2.00	13.7-18.7	5	Piezometer	
0619	1	21570.37	31810.20	12.75	11.90	PVC	2.00	7.75-12.75	5	Piezometer	Not Found
0620	-1	22870.32	31916.94	41.70	41.60	PVC	2.00	31.7-41.7	10	Piezometer	
0621	1	22459.85	31924.45	40.00	35.62	PVC	2.00	25-40	15	Piezometer	

APPENDIX A. OAK RIDGE NATIONAL LABORATORY WELL INVENTORY (Wells Sorted by I.D.) .

Well I.D.	WAG or Area	Northing (X-10 Grid)	Easting (X-10 Grid)	Depth	Measured Depth	Casing Material	Casing Diameter	Screened, 'Perforated, or *Open Interval	Screened, 'Perforated, or *Open Length	Well Type (As Designated in Database)	Field Status
		(ft)	(ft)	(ft)	(ft)		(in.)	(ft.)	(ft.)		
0622	1	22239.98	31960.23	9.50	9.15	PVC	2.00	4.5-9.5	5	Piezometer	
0623	1	21945.64	31949.52	13.70	12.15	PVC	2.00	8.7-13.7	5	Piezometer	
0624	-1	23244.25	32072.68	20.50	17.29	PVC	2.00	10.5-20.5	10	Piezometer	Not Found
0625	1	22040.42	32106.23	13.00	12.23	PVC	2.00	8-13	5	Piezometer	Not Found
0626	1	21687.05	32116.39	13.75	13.07	PVC	2.00	8.1-13.1	5	Piezometer	
0627	1	21410.94	32171.40	11.30	14.06	PVC	2.00	6.3-11.3	5	Piezometer	Damaged
0628	1	22219.28	30957.43	19.00	14.68	PVC	2.00	9-19	10	Piezometer	
0629	-1	22602.32	32135.21	70.00	69.57	PVC	2.00	52.5-67.5	15	Piezometer	
0630	-1	22310.73	32277.67	21.00	20.05	PVC	2.00	11-21	10	Piezometer	
0631	-1	22658.74	32291.91	70.00	70.56	PVC	2.00	50-70	20	Piezometer	
0632	-1	22613.14	32507.40	71.00	71.81	PVC	2.00	51-71	20	Piezometer	
0633	-1	22304.59	32560.46	38.00	38.80	PVC	2.00	28-38	10	Piezometer	
0634	-1	22599.09	32722.00	128.00	85.82	PVC	2.00	60-85	25	Piezometer	
0635	-1	22440.01	32730.30	60.00	59.58	PVC	2.00	45-60	15	Piezometer	
0657	8	16803.36	32190.75	26.00	26.46	PVC	2.00	16-26	10	Piezometer	
0658	8	16957.54	32442.11	26.00	26.14	PVC	2.00	16-26	10	Piezometer	
0659	8	16903.24	32858.70	27.00	24.92	PVC	2.00	17-27	10	Piezometer	
0660	2	16757.68	32848.09	17.00		PVC	2.00	4.25-14.25	10	Piezometer	
0661	8	16746.67	32699.20	31.00	30.50	PVC	2.00	21-31	10	Piezometer	
0662	2	16584.62	32659.72	16.00		PVC	2.00	11-16	5	Piezometer	
0663	2	16493.43	32347.38	11.50		PVC	2.00	6.5-11.5	5	Piezometer	
0664	8	16665.09	32211.59	19.50	19.02	PVC	2.00	9.5-19.5	10	Piezometer	
0668	2	17417.18	28436.03	15.00		PVC	2.00	9.7-14.7	5	Piezometer	
0669	2	17389.37	28407.98	10.00		PVC	2.00	4.7-9.7	5	Piezometer	
0670	9	18697.47	31450.94	40.00		PVC	2.00	29.7-39.7	10	Piezometer	
0671	9	18581.74	31365.71	35.00		PVC	2.00	24.7-34.7	10	Piezometer	
0672	9	18508.96	31420.23	24.00		PVC	2.00	13.7-23.7	10	Piezometer	
0673	-9	18556.40	31561.94	31.50		PVC	2.00	19-29	10	Piezometer	
0674	-9	18647.27	31542.63	11.50		PVC	2.00	6.5-11.5	5	Piezometer	
0675	9	18486.97	31493.50	19.00		PVC	2.00	8.7-18.7	10	Piezometer	
0676	7	18796.91	26805.04	27.00	28.43	PVC	2.00	17-27	10	Piezometer	
0677	7	17341.55	26886.13	12.00		Stainless	2.00	7-12	5	Piezometer	
0678	7	18663.22	27727.56	71.30		PVC	2.00	61.3-71.3	10	Piezometer	
0679	-7	19429.35	27001.86	47.00	45.65	PVC	2.00	32-47	15	Piezometer	

APPENDIX A. OAK RIDGE NATIONAL LABORATORY WELL INVENTORY (Wells Sorted by I.D.) .

Well I.D.	WAG or Area	Northing (X-10 Grid)	Easting (X-10 Grid)	Depth	Measured Depth	Casing Material	Casing Diameter	Screened, 'Perforated, or *Open Interval	Screened, 'Perforated, or *Open Length	Well Type (As Designated In Database)	Field Status
		(ft)	(ft)	(ft)	(ft)		(in.)	(ft.)	(ft.)		
0680	4	18820.12	27320.23	30.00	28.15	PVC	2.00	15-30	15	Piezometer	
0681	4	19072.67	27795.65	5.00		Stainless	2.00	0-5	5	Piezometer	
0682	4	19469.80	28840.01	40.00	39.02	PVC	2.00	20-40	20	Piezometer	
0683	4	19459.74	28839.84	75.00	70.98	PVC	2.00	60-75	15	Piezometer	
0684	4	19502.19	28065.81	51.00	51.43	PVC	2.00	40.7-50.7	10	Piezometer	
0685	4	19399.76	28049.72	50.00	46.56	PVC	2.00	35-50	15	Piezometer	
0686	4	19200.06	28050.41	50.00	38.62	PVC	2.00	35-50	15	Piezometer	
0687	4	19028.51	28031.11	45.00	36.97	PVC	2.00	20-40	20	Piezometer	
0688	4	19121.56	28798.63	30.00	28.00	PVC	2.00	20-30	10	Piezometer	
0689	4	19339.85	29159.27	40.00	36.31	PVC	2.00	25-40	15	Piezometer	
0690	7	19009.82	27060.52	31.00	30.14	PVC	2.00	21-31	10	Piezometer	Not Found
0691	-3	21573.66	25832.30	80.00	80.15	PVC	2.00	60-80	20	Piezometer	
0692	-3	21541.73	26010.24	60.00	60.56	PVC	2.00	40-60	20	Piezometer	
0693	-3	21537.27	26025.19	20.00	20.53	PVC	2.00	10-20	10	Piezometer	
0694	3	21471.21	26201.39	63.00	62.86	PVC	2.00	53-63	10	Piezometer	
0695	-3	21866.89	25457.67	30.00	29.64	PVC	2.00	20-30	10	Piezometer	
0696	-3	21863.87	25473.89	60.00	58.95	PVC	2.00	45-60	15	Piezometer	
0697	-3	21980.54	26279.95	25.00	24.64	PVC	2.00	15-25	10	Piezometer	
0698	-3	21937.72	26771.19	17.25	17.60	PVC	2.00	7.25-17.25	10	Piezometer	
0699	-3	21939.84	26739.21	60.00	60.54	PVC	2.00	50-60	10	Piezometer	
0700	-3	22228.14	26001.15	5.50		Stainless	2.00	0.5-5.5	5	Piezometer	
0701	3	21691.08	25166.80	45.00	40.90	PVC	2.00	32-42	10	Piezometer	
0702	-3	21958.57	25198.99	30.00	29.71	PVC	2.00	20-30	10	Piezometer	
0703	-3	22375.66	24916.77	79.25	79.13	PVC	2.00	59.25-79.25	20	Piezometer	
0704	-3	22146.27	24542.95	13.20	13.65	PVC	2.00	7.95-12.95	5	Piezometer	
0705	-3	21837.32	24548.26	28.25	29.13	PVC	2.00	18.25-28.25	10	Piezometer	
0706	-3	21824.67	24550.12	75.00	29.21	PVC	2.00	10-30	20	Piezometer	
0707	-3	21470.22	24560.86	75.00	74.48	PVC	2.00	59.75-74.75	15	Piezometer	
0708	0	18778.57	29264.52	18.00		PVC	2.00	13-18	5	Piezometer	
0712	2	18483.84	28964.25	9.30		Stainless	2.00	4.3-9.3	5	Piezometer	
0713	0	18410.48	30429.76	27.50		PVC	2.00	17-27	10	Piezometer	
0714	-2	17252.51	30738.22	11.50	9.97	PVC	2.00	8.5-11.5	3	Piezometer	
0718	7	18863.66	26783.95	35.00	33.31	PVC	2.00	25-35	10	Piezometer	
0719	7	18848.63	26915.53	34.50	28.71	PVC	2.00	24.5-34.5	10	Piezometer	

APPENDIX A. OAK RIDGE NATIONAL LABORATORY WELL INVENTORY (Wells Sorted by I.D.) .

Well I.D.	WAG or Area	Northing (X-10 Grid)	Easting (X-10 Grid)	Depth	Measured Depth	Casing Material	Casing Diameter	Screened, 'Perforated, or *Open Interval	Screened, 'Perforated, or *Open Length	Well Type (As Designated In Database)	Field Status
		(ft)	(ft)	(ft)	(ft)		(in.)	(ft.)	(ft.)		
0720	7	18821.23	27839.79	73.00		PVC	2.00	63-73	10	Piezometer	
0721	-1	21033.45	29297.12	5.00	5.43	Stainless	2.00	0-5	5	Piezometer	
0722	1	20094.40	29661.13	11.00		Stainless	2.00	6-11	5	Piezometer	
0723	2	19832.63	29553.92	20.00		PVC	2.00	10-20	10	Piezometer	
0724	2	19538.67	29493.57	8.00		Stainless	2.00	3-8	5	Piezometer	Not Found
0725	2	18357.14	28757.14	9.30		Stainless	2.00	4.3-9.3	5	Piezometer	Not Found
0726	-7	17584.12	28233.32	13.00		PVC	2.00	7.7-12.7	5	Piezometer	
0727	2	17455.58	28353.53	7.50		Stainless	2.00	2.5-7.5	5	Piezometer	
0728	2	16967.60	28171.48	11.00		PVC	2.00	6-11	5	Piezometer	
0729	2	16978.99	27885.11	12.00		PVC	2.00	6.7-11.7	5	Piezometer	
0730	2	16814.57	27904.96	25.00		PVC	2.00	10-20	10	Piezometer	
0731	2	16821.45	26601.06	12.00	12.20	PVC	2.00	6.7-11.7	5	Piezometer	
0732	2	16686.73	26639.86	5.50		Stainless	2.00	0.5-5.5	5	Piezometer	
0733	2	16545.63	26778.18	8.00		Stainless	2.00	3-8	5	Piezometer	
0734	17	21445.61	36713.83	58.00	58.11	PVC	2.00	48-58	10	Piezometer	Damaged
0735	2	16707.87	25907.13	10.00		Stainless	2.00	5-10	5	Piezometer	
0736	2	16562.67	25969.28	9.00		Stainless	2.00	4-9	5	Piezometer	
0737	2	16434.91	25992.60	8.50		Stainless	2.00	3.5-8.5	5	Piezometer	
0738	2	16134.20	25998.81	8.50		Stainless	2.00	3.5-8.5	5	Piezometer	
0739	2	15628.89	23604.03	33.00	29.54	PVC	2.00	23-33	10	Piezometer	
0740	2	15778.95	23372.39	24.00	23.39	PVC	2.00	14-24	10	Piezometer	
0741	2	15596.74	23352.05	22.00	23.23	PVC	2.00	12-22	10	Piezometer	
0742	2	15304.24	23338.64	33.00	35.10	PVC	2.00	23-33	10	Piezometer	
0743	-2	15098.19	23248.64	27.00	25.54	PVC	2.00	17-27	10	Piezometer	
0744	-2	15165.20	23438.70	33.50	33.93	PVC	2.00	23-33	10	Piezometer	Damaged
0747	-2	15488.09	25064.63	22.50	22.84	PVC	2.00	12.5-22.5	10	Piezometer	
0748	-2	15891.13	25534.62	22.50		PVC	2.00	12.5-22.5	10	Piezometer	
0749	-2	16314.91	26038.64	22.00		PVC	2.00	12-22	10	Piezometer	
0750	-2	16553.36	26531.25	16.50		PVC	2.00	6.2-16.2	10	Piezometer	
0751	2	16645.38	28464.62	7.50		Stainless	2.00	2.5-7.5	5	Piezometer	
0752	17	21549.36	36551.06	65.00	65.16	PVC	4.00	55-65	10	Piezometer	
0753	17	21540.70	36527.90	32.50	32.56	PVC	2.00	22.2-32.2	10	Piezometer	
0754	17	21548.71	37001.68	34.00	32.62	PVC	2.00	24-34	10	Piezometer	Damaged
0755	2	16766.68	30124.94	6.00		Stainless	2.00	1-6	5	Piezometer	

APPENDIX A. OAK RIDGE NATIONAL LABORATORY WELL INVENTORY (Wells Sorted by I.D.) .

Well I.D.	WAG or Area	Northing (X-10 Grid)	Easting (X-10 Grid)	Depth	Measured Depth	Casing Material	Casing Diameter	Screened, 'Perforated, or *Open Interval	Screened, 'Perforated, or *Open Length	Well Type (As Designated In Database)	Field Status
		(ft)	(ft)	(ft)	(ft)		(In.)	(ft.)	(ft.)		
0756	-2	16660.58	30291.91	23.00		PVC	2.00	12.5-22.5	10	Piezometer	
0757	-2	16830.04	31229.79	22.00		PVC	2.00	12-22	10	Piezometer	
0758	2	16685.40	31230.27	22.00		PVC	2.00	12-22	10	Piezometer	
0759	2	16559.04	31164.86	21.00		PVC		11-21	10	Piezometer	
0760	-2	16377.03	31073.25	23.00		PVC	2.00	13-23	10	Piezometer	
0761	2	16432.55	32317.24	7.00		Stainless	2.00	2-7	5	Piezometer	
0762	2	16307.21	32343.13	5.00		Stainless	2.00	0-5	5	Piezometer	
0763	-2	16158.13	32307.93	23.00	22.99	PVC	2.00	13-23	10	Piezometer	
0764	17	21925.57	37026.93	22.50	22.78	PVC	2.00	12.2-22.2	10	Piezometer	Damaged
0765	17	21924.09	37043.14	74.00		PVC	4.00	62-72	10	Piezometer	Damaged
0766	2	16857.05	29429.25	13.50	13.59	PVC	2.00	8.5-13.5	5	Piezometer	
0767	2	16858.83	29443.86	38.00		PVC	4.00	28-38	10	Piezometer	
0768	-2	16646.25	29500.14	14.75		PVC	2.00	4.75-14.75	10	Piezometer	
0769	17	21768.10	37083.11	31.00		PVC	2.00	21-31	10	Piezometer	Damaged
0770	2	18128.05	28513.90	15.00	14.68	PVC	2.00	5-15	10	Piezometer	
0771	2	18118.39	28516.21	48.00	44.18	PVC	2.00	38-48	10	Piezometer	
0772	2	18097.66	28565.23	16.00	15.90	PVC	2.00	6-16	10	Piezometer	
0773	2	18080.20	28566.15	51.00	51.49	PVC	2.00	41-51	10	Piezometer	
0774	2	18045.57	28684.65	12.00	11.91	PVC	2.00	7-12	5	Piezometer	
0775	2	18026.45	28681.49	47.00	43.09	PVC	4.00	37-47	10	Piezometer	
0778	7	16971.06	27181.64	15.00		PVC	2.00	10-15	5	Piezometer	
0779	7	16956.84	27184.43	48.50		PVC	2.00	38.5-48.5	10	Piezometer	
0780	2	16813.18	27283.01	12.50		PVC	2.00	7.5-12.5	5	Piezometer	
0781	2	16822.73	27295.10	37.50		PVC	4.00	27.5-37.5	10	Piezometer	
0782	2	16671.83	27367.38	14.50		PVC	2.00	9-14	5	Piezometer	
0783	2	16681.18	27388.40	50.00		PVC	4.00	40-50	10	Piezometer	
0784	-2	16384.00	27270.93	20.00		PVC	2.00	9.5-14.5	5	Piezometer	
0785	-2	16390.85	27284.51	45.00		PVC	2.00	34.7-44.7	10	Piezometer	
0786	-3	21270.54	26419.07	51.00	50.39	PVC	2.00	31-51	20	Piezometer	Damaged
0787	4	16954.06	28890.60	9.00		Stainless	2.00	4.4-9.0	4.6	Piezometer	
0788	-3	21051.93	25387.87	83.00	79.77	PVC	2.00	68-83	15	Piezometer	
0789	3	21174.00	24975.90	28.00	25.70	PVC	2.00	18-28	10	Piezometer	Not Found
0790	3	21491.53	24944.39	48.00	46.45	PVC	2.00	38-48	10	Piezometer	
0791	3	21740.72	24933.41	41.50	39.93	PVC	2.00	26.5-41.5	15	Piezometer	

APPENDIX A. OAK RIDGE NATIONAL LABORATORY WELL INVENTORY (Wells Sorted by I.D.) .

Well I.D.	WAG or Area	Northing (X-10 Grid)	Easting (X-10 Grid)	Depth	Measured Depth	Casing Material	Casing Diameter	Screened, Perforated, or *Open Interval	Screened, Perforated, or *Open Length	Well Type (As Designated in Database)	Field Status
		(ft)	(ft)	(ft)	(ft)		(In.)	(ft.)	(ft.)		
0792	-3	22068.81	24948.90	6.50	11.90	Stainless	2.00	1.5-6.5	5	Piezometer	
0793	-3	21463.35	24560.55	30.00	30.14	PVC	2.00	20-30	10	Piezometer	Damaged
0794	17	21647.96	36929.81	12.00	10.50	PVC	2.00	5-12	7	Piezometer	Not Found
0795	17	21633.40	36901.08	12.00	12.39	PVC	2.00	5-12	7	Piezometer	Not Found
0796	17	21653.93	36903.88	48.00	12.25	PVC	2.00	38-48	10	Piezometer	Not Found
0797	11	34945.9	28346.1	60.00	59.74	PVC	2.00	50-60	10	Piezometer	
0798	11	34862.4	27621.9	47.00	47.09	PVC	2.00	37-47	10	Piezometer	
0799	11	35169.5	27811.3	35.00	31.61	PVC	2.00	25-35	10	Piezometer	
0800	11	35280	28547.3	73.00	72.40	PVC	2.00	63-73	10	Piezometer	
0801	11	35402	28250.1	39.00	39.44	PVC	2.00	29-39	10	Piezometer	
0802	11	35005	28944.1	49.90	47.69	PVC	2.00	34.9-49.9	15	Piezometer	
0803	11	35542.7	27668.4	50.00	46.60	PVC	2.00	40-50	10	Piezometer	
0804	-11	35765	28318.2	79.00	65.53	PVC	2.00	67-77	10	Piezometer	
0805	-11	34848.1	27916.3	60.00		PVC	2.00	32-47	15	Piezometer	
0806	1	20082.90	29657.30	16.00		Stainless	2.07	5.5-15.5	10	RCRA Compliance	
0807	1	20909.30	30008.50	16.30		Stainless	2.07	4.3-14.5	10.2	RCRA Compliance	
0808	1	20910.20	30018.60	55.00		Stainless	4.03	*35-55	*20	RCRA Compliance	
0809	1	21142.90	29652.50	16.00		Stainless	2.07	5-15.3	10.3	RCRA Compliance	
0810	-1	21879.30	29539.20	16.00		Stainless	2.07	5.3-15.3	10	RCRA Compliance	
0811	1	22002.70	29652.30	66.70		Stainless	2.07	46.5-66.5	20	RCRA Compliance	
0812	1	22350.40	29931.40	16.00		Stainless	2.07	5.2-15.2	10	RCRA Compliance	
0813	-1	22615.00	30261.90	63.00		Stainless	4.03	*43-63	*20	RCRA Compliance	
0814	-1	22831.80	30999.20	79.00		Stainless	4.03	48.7-78.7	30	RCRA Compliance	
0815	1	23144.00	31746.30	26.00		Stainless	2.07	15.7-25.7	10	RCRA Compliance	
0816	1	23134.20	31746.70	60.00		Stainless	4.03	*40-60	*20	RCRA Compliance	
0817	1	22754.30	31781.00	11.00		Stainless	2.07	5.4-10.4	5	RCRA Compliance	
0818	1	22564.60	32390.30	100.00		Stainless	4.03	*40-100	*60	RCRA Compliance	
0819	-1	22382.40	32714.90	60.00		Stainless	4.03	*40-60	*20	RCRA Compliance	
0820	1	22341.80	32422.00	20.00		Stainless	2.07	4.8-19.8	15	RCRA Compliance	
0821	1	22340.70	32436.00	80.00		Stainless	4.03	*40-80	*40	RCRA Compliance	
0822	1	22262.80	32116.70	15.60		Stainless	2.07	5-15	10	RCRA Compliance	
0823	1	22057.30	32141.80	15.60		Stainless	2.07	5-15	10	RCRA Compliance	
0824	1	21399.20	31932.00	16.00		Stainless	2.07	5-15	10	RCRA Compliance	
0825	1	21388.30	31666.20	60.00		Stainless	4.03	*41.5-60	*18.5	RCRA Compliance	

APPENDIX A. OAK RIDGE NATIONAL LABORATORY WELL INVENTORY (Wells Sorted by I.D.) .

Well I.D.	WAG or Area	Northing (X-10 Grid)	Easting (X-10 Grid)	Depth	Measured Depth	Casing Material	Casing Diameter	Screened, 'Perforated, or *Open Interval	Screened, 'Perforated, or *Open Length	Well Type (As Designated In Database)	Field Status
		(ft)	(ft)	(ft)	(ft)		(in.)	(ft.)	(ft.)		
0826	1	21387.30	31654.40	16.00		Stainless	2.07	5-15	10	RCRA Compliance	
0827	1	21012.50	30813.50	16.60		Stainless	2.07	4.4-14.6	10.2	RCRA Compliance	
0828	-1	20815.20	30741.40	50.00		Stainless	4.03	29-49	20	RCRA Compliance	
0829	1	21026.10	30557.10	16.10		Stainless	2.07	5-15.1	10.1	RCRA Compliance	
0830	1	21211.70	30659.50	16.00		Stainless	2.07	5-15	10	RCRA Compliance	
0873	1	21692.62	30872.46	22.70		Stainless	2.07	17.2-22.6	5.4	Water Quality	
0874	1	21464.06	30833.78	12.60		Stainless	2.07	7.2-12.5	5.3	Water Quality	
0875	1	21473.94	30943.46	13.10		Stainless	2.07	7.6-13	5.4	Water Quality	
0876	1	21465.27	31058.84	12.90		Stainless	2.07	6.8-12.2	5.4	Water Quality	
0877	1	21276.72	31265.94	16.00		Stainless	2.07	10.3-15.7	5.4	Water Quality	
0878	1	21248.33	31295.73	17.60		Stainless	2.07	11.2-16.6	5.4	Water Quality	
0879	1	21430.25	31309.94	21.00		Stainless	2.07	14.9-20.3	5.4	Water Quality	
0880	1	21248.60	31364.55	16.10		Stainless	2.07	10.3-15.7	5.4	Water Quality	
0881	1	21400.77	31413.46	21.30		Stainless	2.07	15.8-21.2	5.4	Water Quality	
0882	1	21299.26	31397.07	18.30		Stainless	2.07	12.7-18	5.3	Water Quality	
0883	1	21244.75	31299.28	51.00		Stainless	4.03	*39.5-51	*11.5	Water Quality	
0884	1	21359.68	31255.19	17.20		Stainless	2.07	11.7-17.1	5.4	Water Quality	
0885	1	21468.07	30949.28	51.00		Stainless	2.07	40-50	10	Water Quality	
0886	1	21696.30	30884.43	29.50		Stainless	4.03	24.5-29.5	5	Water Quality	
0887	8	16763.01	32312.64	29.00		Stainless	2.07	21.1-26.5	5.4	Water Quality	Not Found
0888	8	16589.43	32373.31	20.10		Stainless	2.07	14.7-20.1	5.4	Water Quality	
0889	8	16642.95	32273.75	21.00		Stainless	2.07	15.4-20.8	5.4	Water Quality	
0890	8	16618.84	32518.96	51.00		Stainless	2.07	40-50	10	Water Quality	
0891	8	16575.21	32488.11	24.00		Stainless	2.07	18.5-23.9	5.4	Water Quality	
0892	8	16872.44	32600.83	24.50		Stainless	2.07	17.2-22.6	5.4	Water Quality	Not Found
0893	8	16609.21	32503.90	21.00		Stainless	2.07	15.6-21	5.4	Water Quality	
0894	8	?16675.54	?32637.83	21.10		Stainless	2.07	15.7-21.1	5.4	Water Quality	
0895	17	21362.67	37353.74	26.00	26.22	PVC	2.00	15.7-25.7	10	Piezometer	
0896	17	21765.46	37423.05	68.00		PVC	2.00	58-68	10	Piezometer	Damaged
0897	17	21991.25	37448.08	22.00	22.49	PVC	2.00	12-22	10	Piezometer	
0898	-9	18627.49	31544.78	18.00		PVC	2.00	8-18	10	Piezometer	
0899	17	21759.16	37634.63	70.00	69.85	PVC	2.00	60-70	10	Piezometer	
0900	17	21623.55	37557.88	36.00	36.87	PVC	2.00	25.7-35.7	10	Piezometer	
0901	-17	21584.41	37838.26	53.50	50.80	PVC	2.00	43.2-53.2	10	Piezometer	

APPENDIX A. OAK RIDGE NATIONAL LABORATORY WELL INVENTORY (Wells Sorted by I.D.) .

Well I.D.	WAG or Area	Northing (X-10 Grid)	Easting (X-10 Grid)	Depth	Measured Depth	Casing Material	Casing Diameter	Screened, 'Perforated, or *Open Interval	Screened, 'Perforated, or *Open Length	Well Type (As Designated in Database)	Field Status
		(ft)	(ft)	(ft)	(ft)		(In.)	(ft.)	(ft.)		
0902	17	21307.57	37478.74	22.00	21.95	PVC	2.00	11.7-21.7	10	Piezometer	Not Found
0903	17	21250.54	37098.38	62.50	63.13	PVC	2.00	52.2-62.2	10	Piezometer	
0904	17	21843.95	37305.19	45.00		PVC	2.00	35-45	10	Piezometer	
0905	17	21606.94	37303.77	42.00	42.59	PVC	2.00	31.7-41.7	10	Piezometer	
0906	17	21361.76	37338.64	49.00		PVC	4.00	37-47	10	Piezometer	
0907	-11	34630.3	28272.2	75.00		PVC	2.00	54-74	20	Piezometer	
0908	-11	34520.7	28682.6	24.00		PVC	2.00	12-22	10	Piezometer	
0909	11	34738.3	28730.4	24.00		PVC	2.00	14-24	10	Piezometer	
0910	11	34955.1	29123.2	29.00		PVC	2.00	18-28	10	Piezometer	
0911	11	35304.2	29078.0	102.00		PVC	2.00	82-102	20	Piezometer	
0912	12	18839.08	37447.46	73.00		PVC	2.00	63-73	10	Piezometer	
0913	12	18653.47	37196.52	67.00		PVC	2.00	57-67	10	Piezometer	
0914	12	18596.27	37496.58	42.00		PVC	2.00	32-42	10	Piezometer	Damaged
0915	12	18557.75	37817.57	20.00	20.36	PVC	2.00	10-20	10	Piezometer	
0916	12	18412.45	37374.17	56.00		PVC	2.00	46-56	10	Piezometer	
0917	12	18396.97	37610.90	50.00		PVC	2.00	40-50	10	Piezometer	
0918	-13	18352.81	19993.17	27.00		PVC	2.00	17-27	10	Piezometer	
0919	-13	17882.24	20143.38	31.00		PVC	2.00	21-31	10	Piezometer	
0920	-13	17930.02	20271.65	25.00		PVC	2.00	15-25	10	Piezometer	
0921	18	18309.51	42974.95	35.00		PVC	2.00	25-35	10	Piezometer	Damaged
0922	18	18113.60	43387.53	41.00		PVC	2.00	31-41	10	Piezometer	Damaged
0923	18	18260.55	43778.82	76.00		PVC	2.00	61-76	15	Piezometer	
0924	18	18592.18	43471.17	51.00		PVC	2.00	36-51	15	Piezometer	
0925	18	18625.05	43198.46	30.00		PVC	2.00	20-30	10	Piezometer	
0926	18	18506.94	43387.62	42.00		PVC	2.00	32-42	10	Piezometer	
0927	7	18014.84	27964.36	400.00		Mild-Steel	6.63	*380-400	*20	Hydraulic Head	
0928	7	17989.34	27966.49	201.20		Mild-Steel	6.63	*182.3-201.2	*18.9	Hydraulic Head	
0929	7	17963.94	27976.47	101.00		Mild-Steel	6.63	*60.3-101	*40.7	Hydraulic Head	
0930	7	17225.06	27562.33	400.50		Mild-Steel	6.63	*380-400.5	*20.5	Hydraulic Head	
0931	7	17214.92	27535.95	200.50		Mild-Steel	6.63	*180.5-200.5	*20	Hydraulic Head	
0932	7	17208.13	27510.61	81.10		Mild-Steel	6.63	*62.3-81.1	*18.8	Hydraulic Head	
0933	7	17213.80	26724.48	399.10		Mild-Steel	6.63	*380.5-399.1	*18.6	Hydraulic Head	
0934	7	17195.99	26705.25	211.50		Mild-Steel	6.63	*189.7-211.5	*21.8	Hydraulic Head	
0935	7	17175.96	26689.95	80.50		Mild-Steel	6.63	*62-80.6	*18.6	Hydraulic Head	

APPENDIX A. OAK RIDGE NATIONAL LABORATORY WELL INVENTORY (Wells Sorted by I.D.) .

Well I.D.	WAG or Area	Northing (X-10 Grid)	Easting (X-10 Grid)	Depth	Measured Depth	Casing Material	Casing Diameter	Screened, 'Perforated, or *Open Interval	Screened, 'Perforated, or *Open Length	Well Type (As Designated in Database)	Field Status
		(ft)	(ft)	(ft)	(ft)		(in.)	(ft.)	(ft.)		
0942	-2	15305.95	24764.04	402.50		Mild-Steel	6.63	*380-402.5	*22.5	Hydraulic Head	
0943	-2	15289.25	24745.16	165.40		Mild-Steel	6.63	*145-165.4	*20.4	Hydraulic Head	
0944	-2	15268.72	24732.51	60.80		Mild-Steel	6.63	*40.8-60.8	*20	Hydraulic Head	
0946	1	21091.05	30646.76	12.61		Stainless	2.10	7.1-12.4	5.3	RCRA Compliance	
0947	1	21061.66	30666.93	81.50		Stainless	4.00	66.3-81.3	15	RCRA Compliance	
0948	7	18959.25	27001.43	83.00		Stainless	4.00	62.1-82.1	20	RCRA Compliance	
0949	7	18977.16	27004.24	33.40		Stainless	2.10	17.2-33.1	15.9	RCRA Compliance	
0950	-4	19594.61	28013.51	49.50		Stainless	2.10	28.7-48.7	20	RCRA Compliance	
0951	-4	19594.29	28028.70	70.30		Stainless	4.00	49.1-69.9	20.8	RCRA Compliance	
0952	-4	19597.79	28670.76	30.50		Stainless	2.10	5.3-30.3	25	RCRA Compliance	
0953	-4	19594.13	28686.09	70.50		Stainless	4.00	49.6-69.6	20	RCRA Compliance	
0954	2	19252.06	29252.93	62.50		Stainless	4.00	41.7-61.7	20	RCRA Compliance	
0955	2	19243.54	29239.15	22.50		Stainless	2.10	12.2-22.2	10	RCRA Compliance	
0956	4	19123.72	28935.51	22.50		Stainless	2.10	12.3-22.3	10	RCRA Compliance	
0957	4	18908.93	28861.00	82.50		Stainless	4.00	52-82	30	RCRA Compliance	
0958	4	18900.37	28857.05	27.50		Stainless	2.10	12.1-27.1	15	RCRA Compliance	
0959	4	18729.07	28682.44	72.50		Stainless	4.00	51.9-71.9	20	RCRA Compliance	
0960	4	18742.04	28674.37	32.50		Stainless	2.10	17.2-32.2	15	RCRA Compliance	
0961	4	18799.18	27371.38	80.30		Stainless	4.00	60-80	20	RCRA Compliance	
0962	4	18809.05	27387.52	38.00		Stainless	2.10	26.6-36.9	10.3	RCRA Compliance	
0985	-3	21833.81	26675.61	35.00		Stainless	2.10	20-35	15	RCRA Compliance	
0986	-3	21813.16	26674.67	62.50		Stainless	4.00	41.7-61.7	20	RCRA Compliance	
0987	-3	21650.14	25857.89	48.20		Stainless	4.00	27.1-47.9	20.8	RCRA Compliance	
0988	-3	21075.73	25471.29	46.00		Stainless	2.10	30.8-45.8	15	RCRA Compliance	
0989	3	21350.00	24650.00	100.00		Stainless	?			Water Quality	P&A
0990	-3	21657.34	24723.62	40.80		Stainless	4.00	25.5-40.5	15	RCRA Compliance	
0991	3	21736.64	25051.49	85.00		Stainless	2.10	70-85	15	RCRA Compliance	
0992	3	21737.04	25069.69	53.50		Stainless	2.10	33-48	15	RCRA Compliance	
0993	-3	21884.35	25619.08	45.00		Stainless	4.00	23.9-44.7	20.8	RCRA Compliance	
0994	3	21895.03	25639.92	80.50		Stainless	4.00	*60-80.5	*20.5	RCRA Compliance	
0995	3	22011.41	25867.56	48.50		Stainless	2.10	32.8-47.8	15	RCRA Compliance	
0996	-3	21920.17	26458.18	62.50		Stainless	4.00	41.1-61.5	20.4	RCRA Compliance	
0997	3	21911.04	26467.50	33.50		Stainless	2.10	13.8-29.7	15.9	RCRA Compliance	
0998	-3	20984.59	26235.94	20.70		Stainless	2.10	4.7-19.7	15	RCRA Compliance	

APPENDIX A. OAK RIDGE NATIONAL LABORATORY WELL INVENTORY (Wells Sorted by I.D.) .

Well I.D.	WAG or Area	Northing (X-10 Grid)	Easting (X-10 Grid)	Depth	Measured Depth	Casing Material	Casing Diameter	Screened, 'Perforated, or *Open Interval	Screened, 'Perforated, or *Open Length	Well Type (As Designated in Database)	Field Status
		(ft)	(ft)	(ft)	(ft)		(in.)	(ft.)	(ft.)		
1004	7	18805.38	27929.18	400.00		Mild-Steel	4.50	*380-400	*20	Hydraulic Head	
1005	7	18809.57	27904.42	238.00		Mild-Steel	4.50	*218-238	*20	Hydraulic Head	
1006	7	18815.87	27875.83	80.00		Mild-Steel	4.50	*60-80	*20	Hydraulic Head	
1008	0	13802.36	22749.62	400.00		Mild-Steel	4.50	*380-400	*20	Hydraulic Head	
1009	0	13827.33	22754.05	253.00		Mild-Steel	4.50	*233-253	*20	Hydraulic Head	
1010	0	13853.02	22751.24	114.00		Mild-Steel	4.50	*94-114	*20	Hydraulic Head	
1026	8	17831.44	31795.70	30.00		PVC	2.00	15-30	15	Piezometer	
1027	8	17460.46	31623.78	27.00		PVC	2.00	14-24	10	Piezometer	
1028	8	17241.06	31520.57	31.00		PVC	2.00	18-28	10	Piezometer	
1029	8	19006.89	32567.26	98.00		PVC	2.00	68-98	30	Piezometer	
1030	8	18938.94	32331.37	46.50		PVC	2.00	26.5-46.5	20	Piezometer	
1031	8	18918.80	32032.02	65.00		PVC	2.00	45-65	20	Piezometer	
1032	8	18963.83	31515.01	40.00		PVC	2.00	20-40	20	Piezometer	
1033	8	19135.18	30573.80	18.00		PVC	2.00	8-18	10	Piezometer	
1049	0	16024.81	21190.03	28.00	26.59	PVC	2.00	17-27	10	Piezometer	
1050	-2	15752.23	21154.83	29.00	27.08	PVC	2.00	18-28	10	Piezometer	Not Found
1052	-2	15005.68	21240.47	70.00	62.57	PVC	2.00	53-63	10	Piezometer	
1053	-2	15044.62	21234.48	34.00	34.32	PVC	2.00	24-34	10	Piezometer	
1054	-2	14760.50	21229.54	34.00	34.27	PVC	2.00	24-34	10	Piezometer	
1055	-2	15693.04	21534.26	29.00	24.01	PVC	2.00	23-13	10	Piezometer	
1056	-2	14912.82	21441.80	26.00	26.43	PVC	2.00	16-26	10	Piezometer	
1057	2	14726.18	21538.44	22.00	22.35	PVC	2.00	12-22	10	Piezometer	
1058	-2	15303.73	21543.10	55.00	53.39	PVC	2.00	43.4-53.4	10	Piezometer	
1059	-2	15320.66	21543.31	27.00	26.48	PVC	2.00	17-27	10	Piezometer	
1060	-2	15466.29	21781.95	21.00	20.67	PVC	2.00	11-21	10	Piezometer	
1061	-2	15533.70	22361.33	61.00	60.13	PVC	2.00	51-61	10	Piezometer	
1062	-2	15552.08	22371.52	31.00	29.89	PVC	2.00	20-30	10	Piezometer	
1063	-2	15356.13	22302.23	16.00	16.48	PVC	2.00	6-16	10	Piezometer	
1064	-2	14929.28	22371.48	57.00	54.57	PVC	2.00	45-55	10	Piezometer	
1065	-2	14732.92	22195.70	80.00	76.66	PVC	2.00	70-80	10	Piezometer	
1066	-2	14735.97	22215.98	48.00	47.97	PVC	2.00	32-47	15	Piezometer	
1067	2	14944.68	22767.31	48.00	41.90	PVC	2.00	32-42	10	Piezometer	
1068	-2	15435.71	22663.57	45.00	45.43	PVC	2.00	35-45	10	Piezometer	
1071	4	19302.85	27233.93	25.00		Stainless	2.10	9.25-24.25	15	RCRA Compliance	

APPENDIX A. OAK RIDGE NATIONAL LABORATORY WELL INVENTORY (Wells Sorted by I.D.).

Well I.D.	WAG or Area	Northing (X-10 Grid)	Easting (X-10 Grid)	Depth	Measured Depth	Casing Material	Casing Diameter	Screened, 'Perforated, or *Open Interval	Screened, 'Perforated, or *Open Length	Well Type (As Designated in Database)	Field Status
		(ft)	(ft)	(ft)	(ft)		(In.)	(ft.)	(ft.)		
1072	-7	19294.30	26168.99	70.00		Stainless	4.00	55-70	15	RCRA Compliance	
1073	-7	19270.61	26177.24	25.60		Stainless	2.10	15.6-25.6	10	RCRA Compliance	
1074	2	18128.06	25707.53	30.00		Stainless	2.10	15-30	15	RCRA Compliance	
1075	2	18135.02	25697.46	73.00		Stainless	4.00	57.8-72.8	15	RCRA Compliance	
1076	7	17882.74	25858.89	20.00		Stainless	2.10	9.4-19.4	10	RCRA Compliance	
1077	7	17872.01	25815.09	82.60		Stainless	4.00	67.6-82.6	15	RCRA Compliance	
1078	7	17406.94	25613.69	20.00		Stainless	2.10	8.75-18.75	10	RCRA Compliance	
1079	7	17389.59	25612.66	70.00		Stainless	4.00	55-70	15	RCRA Compliance	
1080	7	16854.85	25971.36	20.00		Stainless	2.10	9.7-19.7	10	RCRA Compliance	
1081	2	16919.81	26322.67	73.50		Stainless	4.00	58.2-73.2	15	RCRA Compliance	
1082	2	16911.04	26347.58	15.00		Stainless	2.10	5-15	10	RCRA Compliance	
1083	7	16997.52	27175.92	15.00		Stainless	2.10	2.3-12.9	10.6	RCRA Compliance	
1084	7	17282.35	27852.14	15.08		Stainless	2.10	9.5-14.8	5.3	RCRA Compliance	
1085	7	17299.12	27858.72	72.80		Stainless	4.00	57.8-72.8	15	RCRA Compliance	
1086	7	17454.77	28117.01	14.75		Stainless	2.10	4.2-14.6	10.4	RCRA Compliance	
1087	-8	19935.31	29497.73	23.00		Stainless	2.10	12.2-22.5	10.3	RCRA Compliance	
1088	-8	19155.72	30367.64	35.00		Stainless	2.10	19.2-34.2	15	RCRA Compliance	
1089	-8	19159.16	31431.76	30.18		Stainless	2.10	14.1-29.9	15.8	RCRA Compliance	
1090	-8	19157.68	31441.95	73.10		Stainless	4.00	57.4-72.8	15.4	RCRA Compliance	
1091	-8	18785.40	32186.40	22.65		Stainless	2.10	12.4-22.4	10	RCRA Compliance	
1092	-8	18752.79	32378.93	87.50		Stainless	4.00	71.6-86.6	15.0	RCRA Compliance	
1093	-8	18762.57	32402.19	48.25		Stainless	2.10	28-48	20	RCRA Compliance	
1094	2	16682.85	31329.16	70.30		Stainless	4.00	55-70	15	RCRA Compliance	
1095	2	16634.40	31325.24	23.10		Stainless	2.10	12.2-22.9	10.64	RCRA Compliance	
1096	-9	18657.31	31549.54	23.20		Stainless	2.10	12.3-22.3	10	RCRA Compliance	
1097	9	18499.60	31506.26	17.80		Stainless	2.10	7.3-17.3	10	RCRA Compliance	
1100	1	21463.30	31157.39	8.00		Stainless	2.00	5.8-7.8	2	CERCLA	
1101	1	21462.19	31155.27	25.00		Stainless	2.00	14.3-21.3	7	CERCLA	
1102	1	21180.43	31141.45	13.80		Stainless	2.00	6.8-13.8	7	CERCLA	
1103	1	21180.33	31009.21	13.20		Stainless	2.00	6.1-13.1	7	CERCLA	
1104	1	21281.89	30970.03	13.70		Stainless	2.00	6.6-13.6	7	CERCLA	
1109	9	18634.87	31422.87	29.70		Fiberglass	3.00	16.2-26.2	10	CERCLA	
1110	9	18581.39	31533.62	24.90		Fiberglass	3.00	12.7-22.7	10	CERCLA	
1111	9	18518.64	31525.86	24.70		Fiberglass	3.00	12.3-22.3	10	CERCLA	

APPENDIX A. OAK RIDGE NATIONAL LABORATORY WELL INVENTORY (Wells Sorted by I.D.) .

Well I.D.	WAG or Area	Northing (X-10 Grid)	Easting (X-10 Grid)	Depth	Measured Depth	Casing Material	Casing Diameter	Screened, 'Perforated, or *Open Interval	Screened, 'Perforated, or *Open Length	Well Type (As Designated in Database)	Field Status
		(ft)	(ft)	(ft)	(ft)		(in.)	(ft.)	(ft.)		
1112	9	18515.45	31444.65	24.70		Fiberglass	3.00	8.7-18.7	10	CERCLA	
1113	0	16285.47	35971.10	18.00		PVC	2.00	8-18	10	Piezometer	
1114	0	15874.99	35400.49	45.00	39.73	PVC	2.00	30-40	10	Piezometer	
1115	0	15893.39	35414.09	10.00	9.71	PVC	2.00	5-10	5	Piezometer	
1117	0	15810.46	35737.03	40.00		PVC	2.00	25-35	10	Piezometer	
1118	0	15839.43	36179.71	11.00	10.99	PVC	2.00	6-11	5	Piezometer	
1119	0	15817.77	36175.41	40.00	31.74	PVC	2.00	22-32	10	Piezometer	
1120	0	15545.04	36120.50	9.00	5.00	PVC	2.00	2-7	5	Piezometer	
1121	0	15531.59	35919.14	14.00		PVC	2.00	9-14	5	Piezometer	
1122	0	15526.85	35936.04	45.50		PVC	2.00	35.5-45.5	10	Piezometer	
1123	0	15559.14	36643.41	56.00	40.02	PVC	2.00	46-56	10	Piezometer	
1124	0	15562.38	35663.17	10.50	10.69	PVC	2.00	5.5-10.5	5	Piezometer	
1125	0	15224.32	36425.41	26.50		PVC	2.00	16.5-26.5	10	Piezometer	
1126	0	15230.49	36403.34	55.00		PVC	2.00	45-55	10	Piezometer	
1127	0	15238.43	36599.00	25.00	19.66	PVC	2.00	10-20	10	Piezometer	
1128	0	15243.46	36618.53	55.00	55.50	PVC	2.00	45-55	10	Piezometer	
1129	0	15188.67	36838.00	39.50		PVC	2.00	29.5-39.5	10	Piezometer	
1139	-11	34507.6	28672.1	33.50		Stainless	2.10	7.8-32.8	25	RCRA Compliance	
1140	-11	34495.4	28082.6	62.50		Stainless	2.10	32.2-62.3	30.1	RCRA Compliance	
1141	-11	34486.2	28120.3	97.50		Stainless	4.00	82.2-97.2	15	RCRA Compliance	
1142	-11	35100.0	27494.6	?39.5		Stainless	?			RCRA Compliance	P&A
1143	11	35063.8	27538.8	52.50		Stainless	4.00	37.5-52.2	14.7	RCRA Compliance	
1144	-11	35334.1	27389.8	122.30		Stainless	4.00	102.1-122.1	20	RCRA Compliance	
1145	11	35585.1	27642.3	59.10		Stainless	2.10	38-58.9	20.9	RCRA Compliance	
1146	11	35702.4	28304.6	132.50		Stainless	4.00	107.1-117.1	10	RCRA Compliance	
1147	11	35694.8	28321.3	97.90		Stainless	4.00	77.7-97.7	20	RCRA Compliance	
1148	-11	35003.8	29668.2	67.50		Stainless	4.00	52.2-67.2	15	RCRA Compliance	
1149	-11	34976.9	29671.9	35.00		Stainless	2.10	17.5-32.5	15	RCRA Compliance	
1150	-2	19298.55	29620.10	16.30		Stainless	2.10	5.8-15.8	10	RCRA Compliance	
1151	-2	18531.44	31761.37	20.30		Stainless	2.10	4.8-19.8	15	RCRA Compliance	
1152	2	16470.82	32503.04	15.00		Stainless	2.10	4.7-14.7	10	RCRA Compliance	
1153	-2	17395.67	33324.88	18.00		Stainless	2.10	7.8-17.8	10	RCRA Compliance	
1154	-2	16191.49	32693.87	15.70		Stainless	2.10	5.1-15.1	10	RCRA Compliance	
1155	2	16676.57	30538.54	23.00		Stainless	2.10	12.8-22.8	10	RCRA Compliance	

APPENDIX A. OAK RIDGE NATIONAL LABORATORY WELL INVENTORY (Wells Sorted by I.D.) .

Well I.D.	WAG or Area	Northing (X-10 Grid)	Easting (X-10 Grid)	Depth	Measured Depth	Casing Material	Casing Diameter	Screened, 'Perforated, or *Open Interval	Screened, 'Perforated, or *Open Length	Well Type (As Designated in Database)	Field Status
		(ft)	(ft)	(ft)	(ft)		(in.)	(ft.)	(ft.)		
1156	2	17001.93	27876.12	21.40		Stainless	2.10	11-21	10	RCRA Compliance	
1185	-2	16343.85	26464.80	27.50		Stainless	2.10	16.9-26.9	10	RCRA Compliance	
1186	-2	16346.39	26443.78	68.30		Stainless	4.00	52.8-67.8	15	RCRA Compliance	
1187	-2	15183.27	24285.13	85.00		Stainless	4.00	67.7-82.7	15	RCRA Compliance	
1188	-2	15170.51	24267.22	27.50		Stainless	2.10	17.0-27.0	10	RCRA Compliance	
1189	-2	15146.78	23280.95	27.50		Stainless	2.10	12.3-27.3	15	RCRA Compliance	
1190	2	15358.22	23384.36	47.40		Stainless	4.00	37.2-47.2	10	RCRA Compliance	
1191	2	15373.83	23387.98	26.20		Stainless	2.10	15.8-25.8	10	RCRA Compliance	
1192	2	15542.38	23358.39	18.80		Stainless	2.10	7.8-17.8	10	RCRA Compliance	
1193	-2	15021.21	21225.91	85.00		Stainless	2.10	64.6-84.6	20	RCRA Compliance	
1194	-2	15736.11	21046.77	97.50		Stainless	2.10	77.1-97.1	20	RCRA Compliance	
1195	-2	15716.88	21043.63	32.00		Stainless	2.10	16.2-31.2	15	RCRA Compliance	
1196	-17	21988.52	37553.85	18.30		Stainless	2.10	8-18	10	RCRA Compliance	
1197	17	21732.70	37633.94	49.00		Stainless	4.00	33.6-48.6	15	RCRA Compliance	
1198	-17	21214.15	37984.98	43.30		Stainless	2.10	27.8-42.8	15	RCRA Compliance	
1199	-17	21206.57	37967.59	73.00		Stainless	4.00	52.6-72.6	20	RCRA Compliance	
1200	-17	21339.18	36317.79	40.00		Stainless	2.10	29.8-39.8	10	RCRA Compliance	
1201	17	21566.89	36414.64	48.00		Stainless	4.00	37.6-47.6	10	RCRA Compliance	
1202	17	21581.53	36414.77	20.30		Stainless	4.00	10.1-20.1	10	RCRA Compliance	
1203	17	21916.39	36272.97	18.00		Stainless	2.10	7.6-17.6	10	RCRA Compliance	
1244	2	17155.45	25459.01	24.20		Stainless	2.00	9.2-24.2	15	RCRA Compliance	
1245	2	16894.94	25429.95	58.40		Stainless	2.00	38.4-58.4	20	RCRA Compliance	
1246	-11	35085.2	27476.7	86.63		Stainless	2.10	56.4-71.4	15	RCRA Compliance	
1247	-3	21357.58	24659.55	22.70		Stainless	2.10	7.5-22.5	15	RCRA Compliance	
1248	-3	21366.92	24654.08	72.50		Stainless	4.00	52.3-72.3	20	RCRA Compliance	
1250	0	22026.15	23139.95							Water Quality	
1251	0	19941.94	36619.16							Water Quality	
1252	0	22522.13	43261.22							Water Quality	
1253	0	22209.00	40036.56							Water Quality	
4001	1	23058.82	29503.01							Water Quality	
4002	1	22235.05	36321.03							Water Quality	
4TR-10	-4	19547.00	27753.00	29.33		PVC	6.00	5-29	24	Pre-RAP	
4TR-11	-4	19548.00	27765.00	20.75		PVC	6.00	5-21	16	Pre-RAP	
4TR-4	-4	19548.00	27777.00	30.00		PVC	6.00	5-30	25	Pre-RAP	

APPENDIX A. OAK RIDGE NATIONAL LABORATORY WELL INVENTORY (Wells Sorted by I.D.) .

Well I.D.	WAG or Area	Northing (X-10 Grid)	Easting (X-10 Grid)	Depth	Measured Depth	Casing Material	Casing Diameter	Screened, 'Perforated, or *Open Interval	Screened, 'Perforated, or *Open Length	Well Type (As Designated in Database)	Field Status
		(ft)	(ft)	(ft)	(ft)		(in.)	(ft.)	(ft.)		
4TR-5	-4	19542.00	27776.00	28.93		PVC	6.00	5-30	25	Pre-RAP	
4TR-6	-4	19538.00	27772.00	29.45		PVC	6.00	5-29	24	Pre-RAP	
4TR-7	-4	19536.00	27765.00	27.09		PVC	6.00	5-27	22	Pre-RAP	
4TR-8	-4	19537.00	27760.00	30.86		PVC	6.00	5-31	26	Pre-RAP	
4TR-9	-4	19541.00	27756.00	30.81		PVC	6.00	5-31	26	Pre-RAP	
7-1	0	17940.40	34551.40	120.00	119.75	PVC	4.00	60-62	2	Pre-RAP	
7-10	0	17215.10	33799.00	120.00	120.86	PVC	4.00	70-73	3	Pre-RAP	
7-100	0	17280.00	35064.70	32.74		PVC	2.00	23-33	10	Pre-RAP	
7-101	0	17123.00	35105.20	68.00		PVC	2.00	58-68	10	Pre-RAP	
7-102	0	17124.00	35106.60	43.34		PVC	2.00	33-43	10	Pre-RAP	
7-103	0	17181.90	34896.50	36.50		PVC	2.00	26-36	10	Pre-RAP	
7-104	0	17590.00	34885.00							Pre-RAP	
7-11	0	17145.10	34191.30	86.00	86.94	PVC	4.00	39-42	3	Pre-RAP	
7-12	0	18038.00	35614.70	70.00	67.97	PVC	4.00	60-70	10	Pre-RAP	
7-13	0	16159.60	33757.80	28.00	30.14	PVC	4.00	10-13	3	Pre-RAP	
7-14	0	18070.90	34863.30	70.00		PVC	4.00	60-70	10	Pre-RAP	
7-15	0	18068.80	34822.90	70.00		PVC	6.00	50-70	20	Pre-RAP	
7-16	0	18064.70	34724.70	72.00		PVC	4.00	61-72	11	Pre-RAP	
7-17	0	16887.60	35172.50	70.00		PVC	6.00	49-70	21	Pre-RAP	
7-18	0	16858.10	[illegible]6.00	70.00		PVC	4.00	59-70	11	Pre-RAP	
7-2	0	17938.90	35114.60	95.00		PVC	4.00	36-39	3	Pre-RAP	
7-3	0	17034.60	35534.50	89.00		PVC	4.00	68-89	21	Pre-RAP	
7-4	0	16930.30	35158.20	91.00	79.45	PVC	4.00	21-91	70	Pre-RAP	
7-5	0	16678.70	34885.20	95.00	96.84	PVC	4.00	77-95	18	Pre-RAP	
7-6	0	16308.80	34841.70	31.00	30.47	PVC	6.00	21-31	10	Pre-RAP	
7-7	0	16055.70	34706.90	28.00	28.18	PVC	6.00	17-28	11	Pre-RAP	
7-8	0	16314.80	33181.60	30.00	30.35	PVC	6.00	20-30	10	Pre-RAP	
7-9	0	16771.40	33663.50	31.00	29.81	PVC	6.00	20-31	11	Pre-RAP	
A-01	4	18804.00	28705.00	3.73		Aluminum	4.38	'1-4	'3	Pre-RAP	
A-02	4	18785.00	28705.00	3.60		Aluminum	4.38	'1-4	'3	Pre-RAP	
A-03	4	18855.00	28705.00	3.35		Aluminum	3.88	'1-3	'2	Pre-RAP	Not Found
A-04	4	18839.00	28705.00	2.89		Aluminum	4.38	'1-3	'2	Pre-RAP	Not Found
A-05	2	18523.00	28796.00	5.53		Aluminum	3.63	'1-6	'5	Pre-RAP	
A-06	2	18514.00	28908.00	5.26		Aluminum	3.63	'1-5	'4	Pre-RAP	

APPENDIX A. OAK RIDGE NATIONAL LABORATORY WELL INVENTORY (Wells Sorted by I.D.) .

Well I.D.	WAG or Area	Northing (X-10 Grid)	Easting (X-10 Grid)	Depth	Measured Depth	Casing Material	Casing Diameter	Screened, 'Perforated, or *Open Interval	Screened, 'Perforated, or *Open Length	Well Type (As Designated in Database)	Field Status
		(ft)	(ft)	(ft)	(ft)		(in.)	(ft.)	(ft.)		
A-07	2	18530.00	28975.00	5.89		Aluminum	3.63	'1-6	'5	Pre-RAP	
A-08	2	18811.00	28816.00	3.04		Aluminum	3.25	'1-3	'2	Pre-RAP	
A-09	2	18811.00	28902.00	3.12		Aluminum	3.25	'1-3	'2	Pre-RAP	
A-10	2	18811.00	28931.00	4.33		Aluminum	3.63	'1-4	'3	Pre-RAP	
A-11	2	18910.00	28901.00	2.70		Aluminum	3.25	'1-3	'2	Pre-RAP	
A-12	2	18909.00	29000.00	5.01		Aluminum	3.25	'1-5	'4	Pre-RAP	
A-13	2	18909.00	29042.00	5.21		Aluminum	3.25	'1-5	'4	Pre-RAP	
A-14	2	19008.00	28902.00	1.73		Aluminum	3.25	'1-2	'1	Pre-RAP	
A-15	2	19008.00	29000.00	4.79		Aluminum	3.25	'1-5	'4	Pre-RAP	
A-16	2	19008.00	29098.00	4.49		Aluminum	3.25	'1-4	'3	Pre-RAP	
A-17	2	19008.00	29197.00	8.61		Aluminum	3.63	'1-9	'8	Pre-RAP	
A-18	2	19106.00	28902.00	5.30		Aluminum	4.00	'1-5	'4	Pre-RAP	
A-19	2	19106.00	29000.00	3.16		Aluminum	3.63	'1-3	'2	Pre-RAP	
A-20	2	19106.00	29098.00	4.30		Aluminum	4.00	'1-4	'3	Pre-RAP	
A-21	2	19106.00	29197.00	4.43		Aluminum	3.63	'1-4	'3	Pre-RAP	
A-22	2	19185.00	29098.00	4.56		Aluminum	3.63	'1-5	'4	Pre-RAP	
A-23	2	19205.00	29131.00	4.01		Aluminum	3.63	'1-4	'3	Pre-RAP	
A-24	2	19205.00	29198.00	5.00		Aluminum	3.63	'1-5	'4	Pre-RAP	
A-25	2	19205.00	29246.00	3.04		Aluminum	3.63	'1-3	'2	Pre-RAP	
A-26	2	19247.00	29240.00	2.91		Aluminum	3.63	'1-3	'2	Pre-RAP	
A-27	2	19303.00	29285.00	4.03		Aluminum	3.63	'1-4	'3	Pre-RAP	Not Found
A-28	4	19366.00	29312.00	3.26		Aluminum	4.38	'1-3	'2	Pre-RAP	
A-29	4	19402.00	29328.00	4.00		Aluminum	4.38	'1-4	'3	Pre-RAP	Not Found
A-30	2	19402.00	29358.00	3.42		Aluminum	3.63	'1-3	'2	Pre-RAP	
A-31	2	19402.00	29410.00	4.68		Aluminum	3.88	'1-5	'4	Pre-RAP	
A-32	4	19446.00	29321.00	3.71		Aluminum	4.38	'1-4	'3	Pre-RAP	Not Found
A-33	4	19500.00	29312.00	3.83		Aluminum	3.63	'1-4	'3	Pre-RAP	
A-34	2	19500.00	29348.00	3.56		Aluminum	3.63	'1-4	'3	Pre-RAP	
A-35	2	19598.00	29296.00	3.03		Aluminum	3.63	'1-3	'2	Pre-RAP	
A-36	2	19598.00	29296.00	3.08		Aluminum	3.63	'1-3	'2	Pre-RAP	
A-37	2	19598.00	29443.00	5.00		Aluminum	3.63	'1-5	'4	Pre-RAP	
BH-1	7	17648.90	27455.10							Pre-RAP	Not Found
CA11	WCR	22455.00	17910.00	34.40		Steel	4.00			Pre-RAP	Not Found
CH-1	1	23184.76	31969.39				3.5			Corehole	

APPENDIX A. OAK RIDGE NATIONAL LABORATORY WELL INVENTORY (Wells Sorted by I.D.) .

Well I.D.	WAG or Area	Northing (X-10 Grid)	Easting (X-10 Grid)	Depth	Measured Depth	Casing Material	Casing Diameter	Screened, 'Perforated, or *Open Interval	Screened, 'Perforated, or *Open Length	Well Type (As Designated In Database)	Field Status
		(ft)	(ft)	(ft)	(ft)		(in.)	(ft.)	(ft.)		
CH-11A	1	21784.79	29656.75							Corehole	
CH-12	1	21171.97	29651.05							Corehole	
CH-2	1	22596.07	31961.96				3.5			Corehole	
CH-3	1	22192.81	31954.89				3.5			Corehole	
CH-4	1	21757.12	31894.79				3.5			Corehole	
CH-5	1	21118.90	31800.36				3.5			Corehole	
CH-6	1	22919.02	30839.76							Corehole	
CH-7A	1	22499.98	30430.54							Corehole	
CH-8	1	22211.96	30659.35							Corehole	
CH-9	1	21244.27	30850.47							Corehole	
CL-1-A	WCR	27002.36	18976.91		4.59	PVC	2.00	2.5-5	2.5	Pre-RAP	
CL-1-B	WCR	27002.36	18976.91		11.76	PVC	2.00	8-12	4	Pre-RAP	
CL-1-C	WCR	27002.36	18976.91		18.92	PVC	2.00	15.3-19.3	4	Pre-RAP	
CL-1-D	WCR	27002.36	18976.91		33.56	PVC	2.00	30-34	4	Pre-RAP	
CL-2-A	WCR	27158.24	19942.16		4.96	PVC	2.00	2.5-5	2.5	Pre-RAP	
CL-2-B	WCR	27158.24	19942.16		11.85	PVC	2.00	8-12	4	Pre-RAP	
CL-2-C	WCR	27158.24	19942.16			PVC	2.00			Pre-RAP	
CL-2-D	WCR	27158.24	19942.16		35.06	PVC	2.00	30-35	5	Pre-RAP	
CL-3-A	WCR	26940.81	20067.44		5.2	PVC	2.00	2.5-5	2.5	Pre-RAP	
CL-3-B	WCR	26940.81	20067.44		11.64	PVC	2.00	8-12	4	Pre-RAP	
CL-3-C	WCR	26940.81	20067.44		20.12	PVC	2.00	15-20	5	Pre-RAP	
CL-3-D	WCR	26940.81	20067.44		34.7	PVC	2.00	30-35.5	5.5	Pre-RAP	
CL-4-A	WCR	26404.57	19036.86		4.8	PVC	2.00	2-5	3	Pre-RAP	
CL-4-B	WCR	26404.57	19036.86		11.66	PVC	2.00	7.5-12	4.5	Pre-RAP	
CL-4-C	WCR	26404.57	19036.86		19.86	PVC	2.00	14.2-20.5	6.3	Pre-RAP	
CL-4-D	WCR	26404.57	19036.86		30.32	PVC	2.00	24-30	6	Pre-RAP	
CL-5-A	WCR	26289.92	19007.71		4.61	PVC	2.00	2.5-5	2.5	Pre-RAP	
CL-5-B	WCR	26289.92	19007.71		11.94	PVC	2.00	8-12	4	Pre-RAP	
CL-5-C	WCR	26289.92	19007.71			PVC	2.00			Pre-RAP	
CL-5-D	WCR	26289.92	19007.71		35.04	PVC	2.00	29.8-35	5.2	Pre-RAP	
CR-10A	WCR	25115.00	19994.35	56.00	55.89	PVC	4.00	46-56	10	Pre-RAP	
CR-10B	WCR	25086.07	19994.03	176.00	88.49	Steel	8.00	166-176	10	Pre-RAP	
CR-11A	WCR	27256.38	20479.67	100.00	98.77	PVC	4.00	90-100	10	Pre-RAP	
CR-11B	WCR	27266.49	20535.86	162.20	162.34	PVC	4.00	151.7-161.7	10	Pre-RAP	

APPENDIX A. OAK RIDGE NATIONAL LABORATORY WELL INVENTORY (Wells Sorted by I.D.) .

Well I.D.	WAG or Area	Northing (X-10 Grid)	Easting (X-10 Grid)	Depth	Measured Depth	Casing Material	Casing Diameter	Screened, Perforated, or *Open Interval	Screened, Perforated, or *Open Length	Well Type (As Designated in Database)	Field Status
		(ft)	(ft)	(ft)	(ft)		(in.)	(ft.)	(ft.)		
CR-12A	WCR	26934.10	21115.06	100.00	100.7	PVC	4.00	90-100	10	Pre-RAP	
CR-12B	WCR	726934.90	721115.00	264.00		PVC	4.00			Pre-RAP	Not Found
CR-13A	WCR	25391.60	22772.53	101.00	99.93	PVC	4.00	91-101	10	Pre-RAP	Damaged
CR-13B	WCR	25373.50	22728.80	205.00	171.37	PVC	4.00	161.6-171.6	10	Pre-RAP	
CR-14A	WCR	25358.22	23970.27	47.00	45.56	PVC	4.00	37.8-47.8	10	Pre-RAP	
CR-14B	WCR	25328.55	23951.20	243.80		PVC	4.00			Pre-RAP	
CR-15A	WCR	25000.01	23333.23	66.30	65.66	PVC	4.00	58.5-68.5	10	Pre-RAP	
CR-15B	WCR	24987.59	2[illegible]2.66	102.00	100.63	PVC	4.00	92-102	10	Pre-RAP	
CR-16A	WCR	26721.45	[illegible]329.66	100.00	100.02	PVC	4.00	90-100	10	Pre-RAP	
CR-16B	WCR	26724.36	2[illegible]67.34	200.00	119.44	PVC	4.00	109.8-119.8	10	Pre-RAP	
CR-17A	WCR	26201.12	19911.13	[illegible]		PVC	4.00			Pre-RAP	
CR-17B	WCR	26195.73	19901.06	51.40		PVC	4.00			Pre-RAP	
CR-18A	WCR	27909.43	17635.15	28.00		PVC	4.00			Pre-RAP	
CR-18B	WCR	27886.23	17637.37	74.50		PVC	4.00			Pre-RAP	
CR-19A	WCR	27003.63	19255.12	73.00	70.73	PVC	4.00	63-73	10	Pre-RAP	
CR-19B	WCR	26979.12	19252.31	171.00	169.43	PVC	4.00	161-171	10	Pre-RAP	
CR-1A	WCR	24255.68	16238.91	55.50	55.46	PVC	4.00	45-56	11	Pre-RAP	
CR-1B	WCR	24254.19	16256.91	99.00	98.96	PVC	4.00	89-99	10	Pre-RAP	
CR-20A	WCR	25129.41	19537.92	92.80	92.12	PVC	4.00	83-93	10	Pre-RAP	
CR-20B	WCR	25099.84	19532.48	137.00	128.79	PVC	4.00	126.6-136.6	10	Pre-RAP	
CR-2A	WCR	725054.36	715379.37	28.00	28.27	PVC	4.00	18-28	10	Pre-RAP	
CR-2B	WCR	24999.66	15360.93	74.00	74.14	PVC	4.00	65.6-75.6	10	Pre-RAP	
CR-3A	WCR	24734.60	17132.92	76.60	76.64	PVC	4.00	66.5-76.5	10	Pre-RAP	
CR-3B	WCR	24739.15	17118.69	123.00	124.13	PVC	4.00	113-123	10	Pre-RAP	
CR-4A	WCR	25131.49	17104.59	19.30	27.23	PVC	4.00			Pre-RAP	
CR-4B	WCR	25139.96	17062.96	110.00	50.37	PVC	4.00			Pre-RAP	
CR-5A	WCR	24758.16	18059.48	51.00	49.27	PVC	4.00	41-51	10	Pre-RAP	
CR-5B	WCR	24761.43	17997.35	142.50	142.98	PVC	4.00	132.6-142.6	10	Pre-RAP	
CR-6A	WCR	25254.73	17947.81	73.00	72.36	PVC	4.00			Pre-RAP	
CR-6B	WCR	25257.44	17957.39	132.00	128.29	PVC	2.00			Pre-RAP	
CR-7A	WCR	26396.92	18303.59	54.80		PVC	4.00			Pre-RAP	
CR-7B	WCR	26404.30	18327.65	149.00		PVC	4.00			Pre-RAP	
CR-8A	WCR	26185.01	18955.97	73.90	72.76	PVC	4.00			Pre-RAP	
CR-8B	WCR	26159.52	13968.86	159.00	160.22	PVC	4.00			Pre-RAP	

APPENDIX A. OAK RIDGE NATIONAL LABORATORY WELL INVENTORY (Wells Sorted by I.D.) .

Well I.D.	WAG or Area	Northing (X-10 Grid)	Easting (X-10 Grid)	Depth	Measured Depth	Casing Material	Casing Diameter	Screened, Perforated, or *Open Interval	Screened, Perforated, or *Open Length	Well Type (As Designated In Database)	Field Status
		(ft)	(ft)	(ft)	(ft)		(in.)	(ft.)	(ft.)		
CR-9A	WCR	27047.12	18985.42	100.00	100.45	PVC	4.00	90-100	10	Pre-RAP	
CR-9B	WCR	27040.58	18970.15	187.00	184.47	PVC	4.00	177-187	10	Pre-RAP	
FT10	-1	22760.00	29540.00	300.00		Steel	5.25			Pre-RAP	
FT11	-1	23425.00	31245.00	350.00		Steel	5.25			Pre-RAP	
FT1A	-1	24030	29540	208		Steel		*63-208	*145	Pre-RAP	Not Found
FT2	-1	23910.00	29540.00	248.00		Steel	6.25	*21-248	*227	Pre-RAP	Not Found
FT3	-1	24005.00	29655.00	188.00		Steel	6.25	*62-188	*126	Pre-RAP	
FT4A	-1	24050	32120	310		Steel		*37-310	*273	Pre-RAP	
FT5A	-1	24080	32080	269		Steel		*63-269	*206	Pre-RAP	
FT5B	-1			475		Steel	5.25			Pre-RAP	
FT6A	-1	23510	32000	350		Steel		*51-350	*299	Pre-RAP	
FT6B	-1	22984.1	29532.3	450		Steel	6.25			Pre-RAP	
FT7	-1	23460.00	31775.00	350.00		Steel	6.25	*29-350	*321	Pre-RAP	
FT8A	-1	23280	29480	350		Steel		*39-350	*311	Pre-RAP	
FT8B	-1	22463.3	29391.5	450		Steel	6.25			Pre-RAP	Not Found
FT9B	-1	22388.3	28903.0	350		Steel	6.25			Pre-RAP	
HR1	-9	18445.00	31105.00	100.30		Steel	3.50			Pre-RAP	Not Found
HR2	0	18120.00	30920.00	103.50		Steel	4.00			Pre-RAP	Not Found
JOY-2	0	13135.89	42417.25	2718		Uncased				Corehole	
JS-1	-3	21951.00	26170.00	15.00		PVC	4.00	*5-15	*10	Pre-RAP	
JS-2	-3	22129.00	25180.00	14.00		PVC	4.00	4-14	10	Pre-RAP	
JS-3	-3	21819.00	24625.00	16.00		PVC	4.00	6-16	10	Pre-RAP	
OW-6	WCR	25264.31	18029.92			PVC	2.00			Pre-RAP	
PW-6	WCR	25269.34	18051.85			PVC	4.00			Pre-RAP	
PZ10	WBW	27100	45165	3.8		PVC	2			Piezometer	
PZ11	WBW	27065	45200	2.5		PVC	2			Piezometer	
PZ12	WBW	27075	45190	1.6		PVC	2			Piezometer	
PZ13	WBW	27050	45185	2.0		PVC	2			Piezometer	
PZ14	WBW	27060	45180	2.1		PVC	2			Piezometer	
PZ15	WBW	27030	45170	3.5		PVC	2			Piezometer	
PZ16	WBW	27120	45165	4.6		PVC	2			Piezometer	
PZ17	WBW	27135	45105	2.3		PVC	2			Piezometer	
PZ18	WBW	27110	45110	<6.5		PVC	2			Piezometer	
PZ19	WBW	27085	45115	<6.5		PVC	2			Piezometer	

APPENDIX A. OAK RIDGE NATIONAL LABORATORY WELL INVENTORY (Wells Sorted by I.D.) .

Well I.D.	WAG or Area	Northing (X-10 Grid)	Easting (X-10 Grid)	Depth	Measured Depth	Casing Material	Casing Diameter	Screened, 'Perforated, or *Open Interval	Screened, 'Perforated, or *Open Length	Well Type (As Designated In Database)	Field Status
		(ft)	(ft)	(ft)	(ft)		(in.)	(ft.)	(ft.)		
PZ20	WBW	27070	45115	<6.5		PVC	2			Piezometer	
PZ21	WBW	27065	45120	<6.5		PVC	2			Piezometer	
PZ22	WBW	27065	45125	<6.5		PVC	2			Piezometer	
PZ4	WBW	27125	45105	4.9		PVC	2			Piezometer	
PZ5	WBW	27150	45165	3.3		PVC	2			Piezometer	
PZ6	WBW	27150	45180	2.1		PVC	2			Piezometer	
PZ8	WBW	27120	45140	5.4		PVC	2			Piezometer	
PZ9	WBW	27120	45150	3.2		PVC	2			Piezometer	
WP1	4	19151.25	27459.80	7.65		Galv. Steel	1.25		5	Drive Point Well	
WP10	4	19057.41	27448.64	11.19		Galv. Steel	1.25		5	Drive Point Well	
WP11	4	19089.89	27433.19	8.24		Galv. Steel	1.25		5	Drive Point Well	
WP12	4	19107.72	27556.67	9.75		Galv. Steel	1.25		5	Drive Point Well	
WP13	4	19063.65	27554.78	8.05		Galv. Steel	1.25		5	Drive Point Well	
WP14	4	19068.20	27550.40	14.22		Galv. Steel	1.25		5	Drive Point Well	
WP15	4	19112.78	27386.66	12.40		Galv. Steel	1.25		5	Drive Point Well	
WP16	4	19071.60	27369.65	5.79		Galv. Steel	1.25		5	Drive Point Well	
WP2	4	19154.97	27479.02	12.00		Galv. Steel	1.25		5	Drive Point Well	
WP3	4	19125.80	27475.98	7.42		Galv. Steel	1.25		5	Drive Point Well	
WP4	4	19120.42	27514.92	10.34		Galv. Steel	1.25		5	Drive Point Well	
WP5	4	19100.63	27482.12	10.88		Galv. Steel	1.25		5	Drive Point Well	
WP6	4	19148.16	27533.67	3.57		Galv. Steel	1.25		5	Drive Point Well	
WP7	4	19155.75	27523.51	3.22		Galv. Steel	1.25		5	Drive Point Well	
WP8	4	19035.25	27376.24	12.17		Galv. Steel	1.25		5	Drive Point Well	
WP9	4	19089.91	27433.13	7.02		Galv. Steel	1.25		5	Drive Point Well	
SB-1	7	17594.20	27631.70	30.11		PVC	4.00			Pre-RAP	
SB-2	7	17619.50	27630.20			PVC	4.00			Pre-RAP	
SB-20	7	17430.30	27636.10			PVC	4.00			Pre-RAP	
SB-4	7	17583.30	27685.50			PVC	4.00			Pre-RAP	
SB-6	7	17625.70	27531.70			PVC	4.00			Pre-RAP	
SB.0131	1	22420.00	30839.75							Piezometer	
SB.0132	1	22482.50	30796.99							Piezometer	
SB.0187	1	22049.50	31172.00							Piezometer	
SB.0189	1	21553.44	30761.92							Piezometer	
SB.0195	1	21802.80	30982.19							Piezometer	

APPENDIX A. OAK RIDGE NATIONAL LABORATORY WELL INVENTORY (Wells Sorted by I.D.) .

Well I.D.	WAG or Area	Northing (X-10 Grid)	Easting (X-10 Grid)	Depth	Measured Depth	Casing Material	Casing Diameter	Screened, 'Perforated, or *Open Interval	Screened, 'Perforated, or *Open Length	Well Type (As Designated In Database)	Field Status
		(ft)	(ft)	(ft)	(ft)		(in.)	(ft.)	(ft.)		
SB.0197	1	22021.00	30794.00							Piezometer	
SB.0208	1	21409.00	31465.97							Piezometer	
SB.0221	1	22268.92	30838.87							Piezometer	
SB.0224	1	22123.51	30816.25							Piezometer	
T-77	7	17709.40	27594.40			PVC	4.00			Pre-RAP	
T401	2	17454.00	25586.00			PVC	4.00			Pre-RAP	
T403	7	17703.00	25917.00			PVC	4.00			Pre-RAP	
T404	7	17619.00	25857.00			PVC	4.00			Pre-RAP	
T405	7	17556.00	26098.00			PVC	4.00			Pre-RAP	
T408	7	17502.00	26185.00			PVC	4.00			Pre-RAP	
T411	7	17299.00	25798.00			PVC	4.00			Pre-RAP	
T412	7	17309.00	25687.00			PVC	4.00			Pre-RAP	
T416	7	17264.00	26100.00			PVC	4.00			Pre-RAP	
T418	7	17400.00	26548.00			PVC	4.00			Pre-RAP	
T419	7	17342.00	26564.00			PVC	4.00			Pre-RAP	
T5-1	7	17665.00	26842.00			Steel	8.00			Pre-RAP	
T5-2	7	17518.00	26822.00							Pre-RAP	Not Found
T5-3	7	17449.00	26794.00			Steel	3.00			Pre-RAP	
T5-4	7	17340.00	26749.00	34.16		Steel	3.00			Pre-RAP	
T5-5	7	17315.00	26701.00			Galv. Steel	6.00			Pre-RAP	
T5-6	7	17302.00	26629.00			Steel	4.00			Pre-RAP	
T5-7	7	17378.00	26678.00							Pre-RAP	Not Found
T5-8	7	17479.00	26720.00			Steel	3.00			Pre-RAP	
T5-9	7	17555.00	26754.00			Steel	3.00			Pre-RAP	Damaged
T6-1	7	18731.00	27795.00	73.66		Galv. Steel	4.00			Pre-RAP	
T6-2	7	18758.00	27921.00							Pre-RAP	Not Found
T6-3	7	18691.00	28005.00	74.40		Galv. Steel	4.00			Pre-RAP	
T6-4	7	18592.00	28035.00			Galv. Steel	4.00			Pre-RAP	
T6-5	2	18580.00	28962.00							Pre-RAP	Not Found
T6-6	2	18655.00	28945.00							Pre-RAP	Not Found
T6-7	2	18688.00	28879.00							Pre-RAP	Not Found
T6-8	2									Pre-RAP	
T7-1	7	17535	27652			Galv. Steel	4.00			Pre-RAP	
T7-10	7	17385.80	27729.00			Galv. Steel	3.50			Pre-RAP	

APPENDIX A. OAK RIDGE NATIONAL LABORATORY WELL INVENTORY (Wells Sorted by I.D.) .

Well I.D.	WAG or Area	Northing (X-10 Grid)	Easting (X-10 Grid)	Depth	Measured Depth	Casing Material	Casing Diameter	Screened, 'Perforated, or *Open Interval	Screened, 'Perforated, or *Open Length	Well Type (As Designated In Database)	Fleid Status
		(ft)	(ft)	(ft)	(ft)		(In.)	(ft.)	(ft.)		
7-11	7	17385	27785							Pre-RAP	Not Found
7-12	7	17402	27772							Pre-RAP	Not Found
7-13	7	17408	27765	8						Pre-RAP	Not Found
7-14	7	17422	27783							Pre-RAP	
7-15	7	17516.50	27831.00			Galv. Steel	2.00			Pre-RAP	?
7-16	7	17514.70	27621.90			Galv. Steel	10.00			Pre-RAP	
7-17	7	17475	27610							Pre-RAP	
7-18	7	17385	27585							Pre-RAP	
7-19	7	17350	27570							Pre-RAP	Not Found
7-2	7	17801	27596							Pre-RAP	
7-20	7	17435.40	27646.50			Galv. Steel	6.63			Pre-RAP	
7-21	7	17383.30	27729.10	49		PVC	4.00			Pre-RAP	
7-22	7	17395.30	27725.40	49		PVC	4.00			Pre-RAP	
7-23	7	17419.20	27720.00	49		PVC	4.00			Pre-RAP	
7-24	7	17443.30	27714.60	49		PVC	4.00			Pre-RAP	
7-25	7	17483.10	27709.40	49		PVC	4.00			Pre-RAP	
7-26	7	17659.70	27632.30	49		PVC	4.00			Pre-RAP	Not Found
7-27	7	17532.60	27702.60			PVC	4.00			Pre-RAP	
7-28	7	17507	27504			PVC	4.00			Pre-RAP	
7-29	7	17638.40	27698.20			PVC	4.00			Pre-RAP	
7-3	7	17468.00	27659.70	43		Galv. Steel	3.50			Pre-RAP	
7-3A	7	17470.80	27667.70							Pre-RAP	Not Found
7-4	7	17351.50	27632.50			Galv. Steel	3.50			Pre-RAP	
7-4A	7	17350.50	27642.30			Galv. Steel	6.63			Pre-RAP	
7-5	7	17376.90	27540.90			Galv. Steel	3.50			Pre-RAP	
7-6	7	17495.30	27567.80			PVC	4.00			Pre-RAP	
7-7	7	17575.60	27590.40			PVC	4.00			Pre-RAP	
7-8	7	17380	27610							Pre-RAP	
7-9	7	17369.90	27656.60			Galv. Steel	6.63			Pre-RAP	
U16	0	16957.74	22706.48	41.70		Galv. & Stnls. Steel	2.00	38.5-41.7	3.2	USGS	
U18	0	16354.08	21609.07	26.00		Galv. & Stnls. Steel	2.00	18.6-21.8	3.2	USGS	

APPENDIX A. OAK RIDGE NATIONAL LABORATORY WELL INVENTORY (Wells Sorted by I.D.) .

Well I.D.	WAG or Area	Northing (X-10 Grid)	Easting (X-10 Grid)	Depth	Measured Depth	Casing Material	Casing Diameter	Screened, 'Perforated, or *Open Interval	Screened, 'Perforated, or *Open Length	Well Type (As Designated in Database)	Field Status
		(ft)	(ft)	(ft)	(ft)		(in.)	(ft.)	(ft.)		
U19	-2	15888.24	21396.10	30.70		Galv. & Stnls. Steel	2.00	25.9-29.1	3.2	USGS	
U26	7	17013.38	26803.03	13.00		Galv. & Stnls. Steel	2.00	6.0-9.2	3.2	USGS	
U27	7	17441.68	27980.76	11.10		Galv. & Stnls. Steel	2.00	7.9-11.1	3.2	USGS	
U30	1	19962.28	29688.34	19.70		Galv. & Stnls. Steel	2.00	16.5-19.7	3.2	USGS	Not Found
U35	0	19207.69	31340.75	32.30		Galv. & Stnls. Steel	2.00	28.0-31.2	3.2	USGS	
U40	0	18692.32	35746.37	21.40		Galv. & Stnls. Steel	2.00	18.2-21.4	3.2	USGS	
U41	0	18784.85	36698.94	20.60		Galv. & Stnls. Steel	3.00	16.4-19.6	3.2	USGS	
UA1	0	15956.30	19859.23	51.97		Steel & Stnls. Steel	6.30	45.1-50.5	5.4	USGS	
UA2	0	15910.51	19727.59	169.04		Steel	6.30	*140-169	*29	USGS	
UB1	0	17064.40	22183.82	35.47		Steel & Stnls. Steel	6.30	28.4-33.7	5.3	USGS	
UB2	0	17026.17	22059.20	126.07		Steel	6.30	*101-126	*25	USGS	
UC1	0	19474.74	31123.60	86.23		Steel & Stnls. Steel	6.30	81.0-86.2	5.2	USGS	
UC2	0	19428.98	31191.95	206.66		Steel	6.30	*188-207	*19	USGS	
UD1	0	18985.58	30400.21	29.82		Steel & Stnls. Steel	6.25	23.6-29.0	5.4	USGS	
UD2	0	18901.56	30343.96	206.95		Steel	6.30	*180-207	*27	USGS	
UF1	2	16778.51	29516.61	23.50		Steel & Stnls. Steel	6.30	18.0-23.5	5.5	USGS	
UF2	2	16824.27	29448.25	210.97		Steel	6.30	*183-211	*28	USGS	
UG1	-19	15708.58	37114.49	32.02		Steel & Stnls. Steel	6.30	26-31	5	USGS	
UG2	19	15670.28	36989.90	300.79		Steel	6.30	*246-301	*55	USGS	
UG3	19	15716.02	36921.54	200.05		Steel	6.30	*180-200	*20	USGS	

APPENDIX A. OAK RIDGE NATIONAL LABORATORY WELL INVENTORY (Wells Sorted by I.D.) .

Well I.D.	WAG or Area	Northing (X-10 Grid)	Easting (X-10 Grid)	Depth	Measured Depth	Casing Material	Casing Diameter	Screened, Perforated, or *Open Interval	Screened, Perforated, or *Open Length	Well Type (As Designated in Database)	Field Status
		(ft)	(ft)	(ft)	(ft)		(in.)	(ft.)	(ft.)		
UH1	0	15860.68	36523.52	25.95		Steel & Stnls. Steel	6.30	21-26	5	USGS	
UH2	0	15906.42	36455.16	289.04		Steel	6.30	*230-289	*59	USGS	
UI1	0	15843.70	34730.75	24.99		Steel & Stnls. Steel	6.30	20-25	5	USGS	
UI2	0	15889.45	34662.39	209.98		Steel	6.30	*186-210	*24	USGS	
W1	WBW	26100	46000	92		Steel	4.00	87-92	5	Piezometer	
W2	WBW	27590	46010	92		Steel	4.00	87-92	5	Piezometer	
W3	WBW	26560	46990	75		PVC	2.00	70-75	5	Piezometer	
W5	WBW	26920	46860	46		PVC	2.00	41-46	5	Piezometer	
W6	WBW	27580	47490	49		PVC	2.00	44-49	5	Piezometer	
W7	WBW	26910	45000	92		Steel	2.00	87-92	5	Piezometer	
WCR-1	WCR	27920.67	18551.27			Steel	4.00			Pre-RAP	
WCR-2	WCR	27358.28	18794.31			Steel	4.00			Pre-RAP	
WCR-3	WCR	26557.72	19121.52			PVC	2.00			Pre-RAP	
WCR-4	WCR	26074.25	18970.29			Steel	4.00			Pre-RAP	
WCR-5	WCR	25381.57	18550.95			PVC	4.00			Pre-RAP	
WT5-1	7	17169.00	26361.00			Galv. Steel	5.88			Pre-RAP	
WT5-2	7	17272.00	26428.00			Galv. Steel	5.88			Pre-RAP	
WT5-3	7	17358.00	26439.00	14.55		Galv. Steel	5.88			Pre-RAP	
WT5-4	7	17418.00	26452.00			Galv. Steel	5.88			Pre-RAP	
WT5-5	7	17492.00	26489.00	10.74		Galv. Steel	5.88			Pre-RAP	
WT5-6	7	17521.00	26538.00			Galv. Steel	5.88			Pre-RAP	
WT5-7	7	17140.00	26345.00			Galv. Steel	3.00			Pre-RAP	
WT5-8	7	17065.00	26328.00	49.49		Galv. Steel	4.00			Pre-RAP	
WT7-1	7	17102	27235			Galv. Steel	6.63			Pre-RAP	
WT7-2	7	17160	27262	6.74		Galv. Steel	6.00			Pre-RAP	
WT7-3	7	17223	27285	14.47		Galv. Steel	6.00			Pre-RAP	
WT7-4	7	17291	27291			Galv. Steel	6.00			Pre-RAP	
WT7-5	7	17384	27311	8.29		Galv. Steel	6.00			Pre-RAP	
WT7-5A	7	17415	27320			Galv. Steel	3.50			Pre-RAP	
WT7-6	7	17443	27318			Galv. Steel	6.00			Pre-RAP	
WT7-6A	7	17481	27320			Galv. Steel	3.50			Pre-RAP	
WT7-7	7	17512	27322	11.31		Galv. Steel	4.00			Pre-RAP	

APPENDIX A. OAK RIDGE NATIONAL LABORATORY WELL INVENTORY (Wells Sorted by I.D.) .

Well I.D.	WAG or Area	Northing (X-10 Grid)	Easting (X-10 Grid)	Depth	Measured Depth	Casing Material	Casing Diameter	Screened, 'Perforated, or *Open Interval	Screened, 'Perforated, or *Open Length	Well Type (As Designated in Database)	Field Status
		(ft)	(ft)	(ft)	(ft)		(in.)	(ft.)	(ft.)		
WT7-8	7	17336	27117	8.94		Galv. Steel	6.00			Pre-RAP	

APPENDIX B

ORNL WELL INVENTORY SORTED BY WAG/AREA

APPENDIX B. Explanation of Headings and Conventions Used in the Tables

Well I. D.—Well name as listed in the ORNL Well Database.

WAG or Area—Number (with the exception of "0") identifies the WAG with which wells/coreholes are associated. A dash before the WAG number identifies wells associated with the WAG but falling outside that WAG's boundary.
The number "0" identifies wells/coreholes that are not associated with any particular WAG or named area.
"WBW" designates wells/coreholes located within the Walker Branch Watershed.
"WCR" designates wells/coreholes located on West Chestnut Ridge.

Northing—In X-10 coordinates.

Easting—In X-10 coordinates.

Depth—Well depth (in feet) as listed in the ORNL Well Database (from construction data).

Measured Depth—Well depth (in feet) calculated from field measurements. Depth is given as the distance from the ground surface to the bottom of the well.

Casing Material—Self-explanatory.

Casing Diameter -Self-explanatory.

Screened, 'Perforated, or *Open Interval—Interval of well (measured in feet from ground surface) with screened casing, perforated casing, or with no casing (i.e., open). A perforated interval is designated by an apostrophe in the table. An uncased or open interval is designated by an asterisk in the table.

Screened, 'Perforated, or *Open Length—Total length in feet of the screened, perforated, or open interval. Open interval lengths are designated with an asterisk; perforated interval lengths with an apostrophe.

Well Type—Designation of well as listed in the ORNL Well Data base.

Field Status—Status based on findings of field inventory of wells conducted from December, 1991 to May, 1992.

APPENDIX B. OAK RIDGE NATIONAL LABORATORY WELL INVENTORY (Wells Sorted by WAG / Area) .

Well I.D.	WAG or Area	Northing (X-10 Grid)	Easting (X-10 Grid)	Depth	Measured Depth	Casing Material	Casing Diameter	Screened, 'Perforated, or *Open Interval	Screened, 'Perforated, or *Open Length	Well Type (As Designated In Database)	Field Status
		(ft)	(ft)	(ft)	(ft)		(in.)	(ft.)	(ft.)		
0041	0	21969.40	27070.00	33.00		Steel	3.19	*10-50	*40	Pre-RAP	
0042	0	21613.10	27449.15	49.00		Steel	3.19	*7-50	*43	Pre-RAP	
0043	0	21848.75	27884.65	46.00		Steel	3.19	*10-50	*40	Pre-RAP	
0044	0	21576.00	28113.00	49.00		Steel	3.19	*9-50	*41	Pre-RAP	
0045	0	21841.00	28475.00	24.00		Steel	3.19	*12-24	*12	Pre-RAP	
0046	0	21633.85	28551.50	50.00		Steel	3.19	*6-50	*44	Pre-RAP	
0047	0	21868.83	28936.95	50.00		Steel	3.19	*9-50	*41	Pre-RAP	Not Found
0048	0	21263.10	28919.50	50.00		Steel	3.19	*11-50	*39	Pre-RAP	Not Found
0049	0	21079.35	29188.32	47.00		Steel	3.19	*20-50	*30	Pre-RAP	
0050	0	20441.60	30579.70	90.00		Steel	3.19	*6-50	*44	Pre-RAP	Not Found
0062	0	19586.00	26280.00			Steel	3.00			Pre-RAP	
0063	0	19398.00	26249.00			Steel	3.00			Pre-RAP	
0158	0	17340.00	30590.00			Galv. Steel	6.63			Pre-RAP	
0159	0	17535.00	30610.00	6.13		Galv. Steel	6.63	'0-6	'6	Pre-RAP	
0160	0	17744.00	30617.00	9.03		Galv. Steel	6.63	'0-9	'9	Pre-RAP	
0161	0	17873.00	30578.00	7.70		Steel	6.63	'0-8	'8	Pre-RAP	Not Found
0523	0	19220.00	29703.00	10.00		PVC	3.00	5-10	5	Pre-RAP	
0524	0	19012.00	30163.00	11.00		PVC	3.00	6-11	5	Pre-RAP	
0525	0	18871.00	30279.00	29.00		PVC	6.00	19-29	10	Pre-RAP	
0527	0	18355.00	30221.00	16.00		PVC	4.00	6-16	10	Pre-RAP	
0528	0	18524.00	30158.00	34.00		PVC	4.00	14-34	20	Pre-RAP	
0529	0	18665.00	30370.00	40.00		PVC	4.00	30-40	10	Pre-RAP	
0531	0	21967.29	28554.89	75.00		PVC	2.00	60-75	15	Piezometer	
0532	0	22319.32	28890.15	16.00	16.63	PVC	2.00	7-17	10	Piezometer	Not Found
0533	0	22006.67	28818.67	17.80	17.70	PVC	2.00	12.7-17.7	5	Piezometer	
0708	0	18778.57	29264.52	18.00		PVC	2.00	13-18	5	Piezometer	
0713	0	18410.48	30429.76	27.50		PVC	2.00	17-27	10	Piezometer	
1008	0	13802.36	22749.62	400.00		Mild-Steel	4.50	*380-400	*20	Hydraulic Head	
1009	0	13827.33	22754.05	253.00		Mild-Steel	4.50	*233-253	*20	Hydraulic Head	
1010	0	13853.02	22751.24	114.00		Mild-Steel	4.50	*94-114	*20	Hydraulic Head	
1049	0	16024.81	21190.03	28.00	26.59	PVC	2.00	17-27	10	Piezometer	
1113	0	16285.47	35971.10	18.00		PVC	2.00	8-18	10	Piezometer	
1114	0	15874.99	35400.49	45.00	39.73	PVC	2.00	30-40	10	Piezometer	
1115	0	15893.39	35414.09	10.00	9.71	PVC	2.00	5-10	5	Piezometer	

APPENDIX B. OAK RIDGE NATIONAL LABORATORY WELL INVENTORY (Wells Sorted by WAG / Area) .

Well I.D.	WAG or Area	Northing (X-10 Grid)	Easting (X-10 Grid)	Depth	Measured Depth	Casing Material	Casing Diameter	Screened, 'Perforated, or *Open Interval	Screened, 'Perforated, or *Open Length	Well Type (As Designated in Database)	Field Status
		(ft)	(ft)	(ft)	(ft)		(in.)	(ft.)	(ft.)		
1117	0	15810.46	35737.03	40.00		PVC	2.00	25-35	10	Piezometer	
1118	0	15839.43	36179.71	11.00	10.99	PVC	2.00	6-11	5	Piezometer	
1119	0	15817.77	36175.41	40.00	31.74	PVC	2.00	22-32	10	Piezometer	
1120	0	15545.04	36120.50	9.00	5.00	PVC	2.00	2-7	5	Piezometer	
1121	0	15531.59	35919.14	14.00		PVC	2.00	9-14	5	Piezometer	
1122	0	15526.85	35936.04	45.50		PVC	2.00	35.5-45.5	10	Piezometer	
1123	0	15559.14	36643.41	56.00	40.02	PVC	2.00	46-56	10	Piezometer	
1124	0	15562.38	36663.17	10.50	10.69	PVC	2.00	5.5-10.5	5	Piezometer	
1125	0	15224.32	36425.41	26.50		PVC	2.00	16.5-26.5	10	Piezometer	
1126	0	15230.49	36403.34	55.00		PVC	2.00	45-55	10	Piezometer	
1127	0	15238.43	36599.00	25.00	19.66	PVC	2.00	10-20	10	Piezometer	
1128	0	15243.46	36618.53	55.00	55.50	PVC	2.00	45-55	10	Piezometer	
1129	0	15188.67	36838.00	39.50		PVC	2.00	29.5-39.5	10	Piezometer	
1250	0	22026.15	23139.95							Water Quality	
1251	0	19941.94	36619.16							Water Quality	
1252	0	22522.13	43261.22							Water Quality	
1253	0	22209.00	40036.56							Water Quality	
7-1	0	17940.40	34551.40	120.00	119.75	PVC	4.00	50-62	2	Pre-RAP	
7-10	0	17215.10	33799.00	120.00	120.86	PVC	4.00	70-73	3	Pre-RAP	
7-100	0	17280.00	35064.70	32.74		PVC	2.00	23-33	10	Pre-RAP	
7-101	0	17123.00	35105.20	68.00		PVC	2.00	58-68	10	Pre-RAP	
7-102	0	17124.00	35106.60	43.34		PVC	2.00	33-43	10	Pre-RAP	
7-103	0	17181.90	34896.50	36.50		PVC	2.00	26-36	10	Pre-RAP	
7-104	0	17590.00	34385.00							Pre-RAP	
7-11	0	17145.10	34191.30	86.00	86.94	PVC	4.00	39-42	3	Pre-RAP	
7-12	0	16038.00	35614.70	70.00	67.97	PVC	4.00	60-70	10	Pre-RAP	
7-13	0	16159.60	33757.80	28.00	30.14	PVC	4.00	10-13	3	Pre-RAP	
7-14	0	16070.90	34863.30	70.00		PVC	4.00	60-70	10	Pre-RAP	
7-15	0	16068.80	34822.90	70.00		PVC	6.00	50-70	20	Pre-RAP	
7-16	0	16064.70	34724.70	72.00		PVC	4.00	61-72	11	Pre-RAP	
7-17	0	16887.60	35172.50	70.00		PVC	6.00	49-70	21	Pre-RAP	
7-18	0	16858.10	35236.00	70.00		PVC	4.00	59-70	11	Pre-RAP	
7-2	0	17938.90	35114.60	95.00		PVC	4.00	36-39	3	Pre-RAP	
7-3	0	17034.60	35534.50	89.00		PVC	4.00	68-89	21	Pre-RAP	

APPENDIX B. OAK RIDGE NATIONAL LABORATORY WELL INVENTORY (Wells Sorted by WAG / Area) .

Well I.D.	WAG or Area	Northing (X-10 Grid)	Easting (X-10 Grid)	Depth	Measured Depth	Casing Material	Casing Diameter	Screened, Perforated, or *Open Interval	Screened, Perforated, or *Open Length	Well Type (As Designated in Database)	Field Status
		(ft)	(ft)	(ft)	(ft)		(in.)	(ft.)	(ft.)		
7-4	0	16930.30	35158.20	91.00	79.45	PVC	4.00	21-91	70	Pre-RAP	
7-5	0	16678.70	34685.20	95.00	96.84	PVC	4.00	77-95	18	Pre-RAP	
7-6	0	16308.80	34841.70	31.00	30.47	PVC	6.00	21-31	10	Pre-RAP	
7-7	0	16055.70	34706.90	28.00	28.18	PVC	6.00	17-28	11	Pre-RAP	
7-8	0	16314.80	33191.60	30.00	30.35	PVC	6.00	20-30	10	Pre-RAP	
7-9	0	16771.40	33663.50	31.00	29.81	PVC	6.00	20-31	11	Pre-RAP	
HR2	0	18120.00	30920.00	103.50		Steel	4.00			Pre-RAP	Not Found
JOY-2	0	13135.89	42417.25	2718		Uncased				Corehole	
U16	0	16957.74	22706.48	41.70		Galv. & Stnls. Steel	2.00	38.5-41.7	3.2	USGS	
U18	0	16354.08	21609.07	26.00		Galv. & Stainless Steel	2.00	18.6-21.8	3.2	USGS	
U35	0	19207.69	31340.75	32.30		Galv. & Stnls. Steel	2.00	28.0-31.2	3.2	USGS	
U40	0	16692.32	35746.37	21.40		Galv. & Stnls. Steel	2.00	18.2-21.4	3.2	USGS	
U41	0	16784.85	36698.94	20.60		Galv. & Stnls. Steel	3.00	16.4-19.6	3.2	USGS	
UA1	0	15956.30	19659.23	51.97		Steel & Stnls. Steel	6.30	45.1-50.5	5.4	USGS	
UA2	0	15910.51	19727.59	169.04		Steel	6.30	*140-169	*29	USGS	
UB1	0	17064.40	22183.82	35.47		Steel & Stnls. Steel	6.30	28.4-33.7	5.3	USGS	
UB2	0	17026.17	22059.20	126.07		Steel	6.30	*101-126	*25	USGS	
UC1	0	19474.74	31123.60	86.23		Steel & Stnls. Steel	6.30	81.0-86.2	5.2	USGS	
UC2	0	19428.98	31191.95	206.66		Steel	6.30	*188-207	*19	USGS	
UD1	0	18985.58	30400.21	29.82		Steel & Stnls. Steel	6.25	23.6-29.0	5.4	USGS	
UD2	0	18901.56	30343.96	206.95		Steel	6.30	*180-207	*27	USGS	
UH1	0	15860.68	36523.52	25.95		Steel & Stnls. Steel	6.30	21-26	5	USGS	
UH2	0	15906.42	36455.16	289.04		Steel	6.30	*230-289	*59	USGS	

APPENDIX B. OAK RIDGE NATIONAL LABORATORY WELL INVENTORY (Wells Sorted by WAG / Area) .

Well I.D.	WAG or Area	Northing (X-10 Grid)	Easting (X-10 Grid)	Depth	Measured Depth	Casing Material	Casing Diameter	Screened, 'Perforated, or *Open Interval	Screened, 'Perforated, or *Open Length	Well Type (As Designated in Database)	Field Status
		(ft)	(ft)	(ft)	(ft)		(in.)	(ft.)	(ft.)		
UI1	0	15843.70	34730.75	24.99		Steel & Stnls. Steel	6.30	20-25	5	USGS	
UI2	0	15889.45	34662.39	209.98		Steel	6.30	*186-210	*24	USGS	
0001	1	21184.50	31095.70	300.00		Steel	3.19	*13-300	*287	Pre-RAP	Not Found
0002	1	21214.40	30864.00	100.00		Steel	3.19	*9-100	*91	Pre-RAP	Not Found
0004	1	21213.50	31347.40	100.20		Steel	3.19	*8-100	*92	Pre-RAP	
0006	1	21414.30	31257.20	100.00		Steel	3.18	*11-100	*89	Pre-RAP	Not Found
0007	1	21436.60	30919.30	100.00		Steel	3.19	*9-100	*91	Pre-RAP	Not Found
0008	1	21313.90	30843.20	100.00		Steel	3.19	*8-100	*92	Pre-RAP	Not Found
0010	1	21367.80	30721.00	100.00		Steel	3.19	*10-100	*90	Pre-RAP	Not Found
0011	1	21236.70	30711.20	100.00		Steel	3.19	*8-100	*91	Pre-RAP	Not Found
0012	1	21112.30	30768.70	100.00		Steel	3.19	*9-100	*91	Pre-RAP	Not Found
0013	1	21099.10	30979.50	100.00		Steel	3.19	*10-100	*90	Pre-RAP	Not Found
0014	-1	21118.30	31144.00	100.00		Steel	3.19	*10-100	*90	Pre-RAP	Not Found
0017	1	21468.40	31068.10	100.00		Steel	3.19	*9-100	*91	Pre-RAP	Not Found
0018	1	21345.80	30409.40	100.00		Steel	3.19	*13-100	*87	Pre-RAP	
0019	1	21090.10	29942.50	100.00		Steel	3.19	*14-100	*86	Pre-RAP	
0024	1	21396.60	29901.30	100.00		Steel	3.18	*5-100	*95	Pre-RAP	Not Found
0025	-1	21740.30	29348.70	100.00		Steel	3.19	*6-50	*44	Pre-RAP	Not Found
0026	1	20700.20	29826.30	50.00		Steel	3.18	*20-50	*30	Pre-RAP	Not Found
0027	1	21089.90	30545.20	50.00		Steel	3.19	*8-50	*42	Pre-RAP	Not Found
0028	1	20638.70	30613.00	100.00		Steel	3.19	*23-100	*77	Pre-RAP	Not Found
0029	1	20388.30	29956.00	198.00		Steel	3.19	*8-198	*190	Pre-RAP	
0030	1	21380.70	31665.20	50.00		Steel	3.19	*7-50	*43	Pre-RAP	Not Found
0031	1	21540.30	32054.70	50.00		Steel	3.19	*3-50	*47	Pre-RAP	Not Found
0033	1	22268.80	31860.50	50.00		Steel	3.19	*4-50	*46	Pre-RAP	Not Found
0034	1	21791.80	31615.90	50.00		Steel	3.19	*6-50	*44	Pre-RAP	Not Found
0035	1	21804.05	31195.50	50.00		Steel	3.19	*15-50	*35	Pre-RAP	
0036	1	22279.92	31252.55	50.00		Steel	3.19	*7-50	*43	Pre-RAP	Not Found
0037	1	21813.71	30879.06	50.00		Steel	3.19	*6-50	*44	Pre-RAP	Not Found
0038	1	22348.30	30796.40	50.00		Steel	3.19	*21-50	*29	Pre-RAP	Not Found
0039	1	22296.10	30436.30	50.00		Steel	3.19	*6-50	*44	Pre-RAP	Not Found
0040	1	21781.50	30669.40	50.00		Steel	3.19	*4-50	*46	Pre-RAP	Not Found
0534	-1	22732.96	29543.30	19.00	15.20	PVC	2.00	9.6-14.6	5	Piezometer	

APPENDIX B. OAK RIDGE NATIONAL LABORATORY WELL INVENTORY (Wells Sorted by WAG / Area) .

Well I.D.	WAG or Area	Northing (X-10 Grid)	Easting (X-10 Grid)	Depth	Measured Depth	Casing Material	Casing Diameter	Screened, 'Perforated, or *Open Interval	Screened, 'Perforated, or *Open Length	Well Type (As Designated in Database)	Field Status
		(ft)	(ft)	(ft)	(ft)		(in.)	(ft.)	(ft.)		
0535	-1	22235.11	29541.41	15.00	14.42	PVC	2.00	9.5-14.5	5	Piezometer	
0536	-1	21889.90	29485.31	19.00	18.97	PVC	2.00	9-19	10	Piezometer	
0537	-1	21477.23	29474.30	16.00	15.52	PVC	2.00	5.5-15.5	10	Piezometer	
0538	-1	22630.29	29736.18	31.90	38.39	PVC	2.00	21-31	10	Piezometer	
0539	-1	22379.31	29807.39	16.00	16.08	PVC	2.00	11-13	5	Piezometer	
0540	1	21955.86	29644.32	18.60	18.07	PVC	2.00	8.6-18.6	10	Piezometer	
0541	1	21829.32	29816.10	16.60	15.20	PVC	2.00	6.6-16.6	10	Piezometer	
0542	1	21600.24	29869.89	15.15	13.38	PVC	2.00	9.15-14.15	5	Piezometer	
0543	1	21335.57	29713.50	13.00	10.23	PVC	2.00	8-13	5	Piezometer	
0544	1	20999.85	29969.91	16.00	15.67	PVC	2.00	8-18	10	Piezometer	Damaged
0545	-1	23004.53	29741.90	17.50	18.16	PVC	2.00	7.5-17.5	10	Piezometer	
0546	-1	22758.18	30034.16	80.00		PVC	2.00	65-75	10	Piezometer	
0547	-1	22620.40	30024.95	48.00	45.01	PVC	2.00	36-46	10	Piezometer	
0548	1	22049.19	29960.92	15.00	14.72	PVC	2.00	5-15	10	Piezometer	
0549	-1	23013.09	30311.39	45.00		PVC	2.00	35-45	10	Piezometer	
0550	1	22379.43	30194.59	27.00	26.14	PVC	2.00	13.8-23.8	10	Piezometer	
0551	1	22067.42	30143.66	16.00	16.27	PVC	2.00	10.8-15.8	5	Piezometer	
0552	1	21830.25	30146.75	60.00	60.50	PVC	2.00	50-60	10	Piezometer	Not Found
0553	1	21584.37	30243.72	19.80	18.66	PVC	2.00	9.8-19.8	10	Piezometer	
0554	1	21319.13	30160.20	13.00	12.74	PVC	2.00	8-13	5	Piezometer	
0555	1	22652.17	30472.94	20.00	20.63	PVC	2.00	10-20	10	Piezometer	
0556	1	22083.68	30541.09	15.80	15.36	PVC	2.00	10.8-15.8	5	Piezometer	
0557	-1	23200.82	30639.36	24.60	24.51	PVC	2.00	14.6-24.6	10	Piezometer	
0558	-1	22800.03	30699.55	20.00	19.20	PVC	2.00	10-20	10	Piezometer	
0559	1	22679.29	30844.32	35.00	32.50	PVC	2.00	20-35	15	Piezometer	
0560	1	22447.75	30700.18	24.80	24.01	PVC	2.00	19.8-24.8	5	Piezometer	
0561	1	22190.16	30659.54	26.40	14.00	PVC	2.00	16.4-26.4	10	Piezometer	
0563	1	21699.82	30615.41	15.00	14.36	PVC	2.00	10-15	5	Piezometer	
0564	1	21836.37	30459.19	30.00	27.71	PVC	2.00	16.7-26.7	10	Piezometer	
0565	1	21721.75	30747.66	16.50	16.13	PVC	2.00	11.5-16.5	5	Piezometer	
0566	1	21755.47	30625.06	25.00	26.70	PVC	2.00	15-25	10	Piezometer	
0567	1	21700.20	30419.37	25.10	10.80	PVC	2.00	15.1-25.1	10	Piezometer	Damaged
0568	1	21351.73	30445.01	18.00	10.80	PVC	2.00	8-18	10	Piezometer	Not Found
0569	1	21037.77	30545.59	12.50	11.71	PVC	2.00	7.5-12.5	5	Piezometer	

APPENDIX B. OAK RIDGE NATIONAL LABORATORY WELL INVENTORY (Wells Sorted by WAG / Area) .

Well I.D.	WAG or Area	Northing (X 10 Grid)	Easting (X-10 Grid)	Depth	Measured Depth	Casing Material	Casing Diameter	Screened, 'Perforated, or *Open Interval	Screened, 'Perforated, or *Open Length	Well Type (As Designated In Database)	Field Status
		(ft)	(ft)	(ft)	(ft)		(in.)	(ft.)	(ft.)		
0570	1	21046.92	30875.38	15.00	14.62	PVC	2.00	10-15	5	Piezometer	Not Found
0571	1	20920.68	30515.25	17.50	17.07	PVC	2.00	7.5-17.5	10	Piezometer	
0572	-1	23037.69	30872.67	38.00	37.55	PVC	2.00	28-38	10	Piezometer	
0573	1	22590.34	30875.11	27.20	26.96	PVC	2.00	17.2-27.2	10	Piezometer	
0575	-1	23233.55	31698.83	15.00	15.89	PVC	2.00	10-15	5	Piezometer	
0577	1	22088.85	30734.45	20.00	17.92	PVC	2.00	10-20	10	Piezometer	
0578	1	21878.46	30852.54	14.00	13.46	PVC	2.00	9-14	5	Piezometer	
0579	1	21640.40	30919.87	17.00	17.43	PVC	2.00	7-17	10	Piezometer	
0580	1	20855.37	30770.59	35.00	33.47	PVC	2.00	25-35	10	Piezometer	Not Found
0581	1	22689.91	31115.05	30.00	26.40	PVC	2.00	20-30	10	Piezometer	
0582	1	22454.96	31130.04	26.00	26.26	PVC	2.00	16-26	10	Piezometer	
0583	1	22296.95	30954.85	22.00	20.87	PVC	2.00	16.5-21.5	5	Piezometer	
0584	1	22089.87	31122.90	9.00	11.10	PVC	2.00	4-9	5	Piezometer	
0587	-1	22874.82	31289.70	40.00	40.27	PVC	2.00	30-40	10	Piezometer	
0588	1	22581.53	31306.45	60.00	42.43	PVC	2.00	30-45	15	Piezometer	
0589	1	22474.41	31331.72	57.00	57.52	PVC	2.00	47-57	10	Piezometer	
0590	1	22191.37	31113.31	12.00	12.64	PVC	2.00	7-12	5	Piezometer	
0591	1	22089.66	31200.10	8.90	10.78	PVC	2.00	3.9-8.9	5	Piezometer	
0592	1	21933.86	31106.27	11.00	12.01	PVC	2.00	6-11	5	Piezometer	
0593	1	21833.06	31191.49	12.00	12.34	PVC	2.00	7-12	5	Piezometer	
0594	1	21619.71	31172.78	17.30	17.08	PVC	2.00	7.3-17.3	10	Piezometer	
0595	-1	23001.43	31424.09	12.00	12.97	PVC	2.00	7-12	5	Piezometer	Not Found
0596	1	22660.72	31384.60	35.00	34.73	PVC	2.00	29-35	6	Piezometer	
0597	1	22288.21	31445.19	9.00	9.04	PVC	2.00	4-9	5	Piezometer	
0598	1	22175.01	31358.87	19.00	18.32	PVC	2.00	9-19	10	Piezometer	
0599	1	22009.55	31417.95	19.50	19.32	PVC	2.00	9.5-19.5	10	Piezometer	
0600	1	21719.22	31475.14	30.00	31.70	PVC	2.00	20-30	10	Piezometer	
0601	1	21497.54	31503.38	13.80	12.47	PVC	2.00	8.8-13.8	5	Piezometer	
0602	1	22856.18	31482.03	21.60	21.22	PVC	2.00	16.6-21.6	5	Piezometer	
0603	1	22575.23	31490.62	60.00	36.08	PVC	2.00	25-35	10	Piezometer	
0604	1	22039.86	31521.98	9.80	19.35	PVC	2.00	4.8-9.8	5	Piezometer	
0605	1	23110.09	31679.10	13.00		PVC	2.00	8-13	5	Piezometer	Not Found
0606	1	22694.91	31639.92	9.40	7.13	PVC	2.00	4.4-9.4	5	Piezometer	
0607	1	22476.84	31512.47	60.00	60.23	PVC	2.00	50-60	10	Piezometer	

APPENDIX B. OAK RIDGE NATIONAL LABORATORY WELL INVENTORY (Wells Sorted by WAG / Area).

Well I.D.	WAG or Area	Northing (X-10 Grid)	Easting (X-10 Grid)	Depth	Measured Depth	Casing Material	Casing Diameter	Screened, 'Perforated, or *Open Interval	Screened, 'Perforated, or *Open Length	Well Type (As Designated In Database)	Field Status
		(ft)	(ft)	(ft)	(ft)		(in.)	(ft.)	(ft.)		
0608	1	22180.00	31660.10	20.30	19.37	PVC	2.00	8.5-18.5	10	Piezometer	
0610	1	21410.13	31645.42	14.00	12.66	PVC	2.00	8.25-13.25	5	Piezometer	
0611	1	22790.02	31790.15	8.80	10.31	PVC	2.00	3.8-8.8	5	Piezometer	
0612	1	22589.09	31707.27	10.50	10.17	PVC	2.00	5.5-10.5	5	Piezometer	
0613	1	22305.48	31656.13	12.00	12.45	PVC	2.00	7-12	5	Piezometer	
0614	1	22465.66	31803.05	8.90	7.99	PVC	2.00	3.9-8.9	5	Piezometer	
0615	1	22334.92	31864.64	7.50	6.66	PVC	2.00	2.5-7.5	5	Piezometer	
0616	1	22222.73	31734.19	8.10	7.88	PVC	2.00	3.1-8.1	5	Piezometer	
0617	1	22040.95	31782.10	13.90	13.68	PVC	2.00	8.9-13.9	5	Piezometer	Not Found
0618	1	21739.94	31855.70	18.70	18.21	PVC	2.00	13.7-18.7	5	Piezometer	
0619	1	21570.37	31810.20	12.75	11.90	PVC	2.00	7.75-12.75	5	Piezometer	Not Found
0620	-1	22870.32	31916.94	41.70	41.60	PVC	2.00	31.7-41.7	10	Piezometer	
0621	1	22459.85	31924.45	40.00	35.62	PVC	2.00	25-40	15	Piezometer	
0622	1	22239.98	31960.23	9.50	9.15	PVC	2.00	4.5-9.5	5	Piezometer	
0623	1	21945.64	31949.52	13.70	12.15	PVC	2.00	8.7-13.7	5	Piezometer	
0624	-1	23244.25	32072.68	20.50	17.29	PVC	2.00	10.5-20.5	10	Piezometer	Not Found
0625	1	22040.42	32106.23	13.00	12.23	PVC	2.00	8-13	5	Piezometer	Not Found
0626	1	21687.05	32116.39	13.75	13.07	PVC	2.00	8.1-13.1	5	Piezometer	
0627	1	21410.94	32171.40	11.30	14.06	PVC	2.00	6.3-11.3	5	Piezometer	Damaged
0628	1	22219.28	30957.43	19.00	14.68	PVC	2.00	9-19	10	Piezometer	
0629	-1	22602.32	32135.21	70.00	69.57	PVC	2.00	52.5-67.5	15	Piezometer	
0630	-1	22310.73	32277.67	21.00	20.05	PVC	2.00	11-21	10	Piezometer	
0631	-1	22658.74	32291.91	70.00	70.56	PVC	2.00	50-70	20	Piezometer	
0632	-1	22513.14	32507.40	71.00	71.61	PVC	2.00	51-71	20	Piezometer	
0633	-1	22304.59	32560.46	38.00	38.60	PVC	2.00	28-38	10	Piezometer	
0634	-1	22599.09	32722.00	128.00	85.62	PVC	2.00	60-85	25	Piezometer	
0635	-1	22440.01	32730.30	60.00	59.58	PVC	2.00	45-60	15	Piezometer	
0721	-1	21033.45	29297.12	5.00	5.43	Stainless	2.00	0-5	5	Piezometer	
0722	1	20094.40	29561.13	11.00		Stainless	2.00	6-11	5	Piezometer	
0606	1	20982.90	29657.30	16.00		Stainless	2.07	5.5-15.5	10	RCRA Compliance	
0607	1	20909.30	30008.50	16.30		Stainless	2.07	4.3-14.5	10.2	RCRA Compliance	
0608	1	20910.20	30018.60	55.00		Stainless	4.03	*35-55	*20	RCRA Compliance	
0609	1	21142.90	29652.50	16.00		Stainless	2.07	5-15.3	10.3	RCRA Compliance	
0610	-1	21879.30	29539.20	16.00		Stainless	2.07	5.3-15.3	10	RCRA Compliance	

APPENDIX B. OAK RIDGE NATIONAL LABORATORY WELL INVENTORY (Wells Sorted by WAG / Area) .

Well I.D.	WAG or Area	Northing (X-10 Grid)	Easting (X-10 Grid)	Depth	Measured Depth	Casing Material	Casing Diameter	Screened, 'Perforated, or *Open Interval	Screened, 'Perforated, or *Open Length	Well Type (As Designated In Database)	Field Status
		(ft)	(ft)	(ft)	(ft)		(in.)	(ft.)	(ft.)		
0811	1	22002.70	29652.30	66.70		Stainless	2.07	46.5-66.5	20	RCRA Compliance	
0812	1	22350.40	29931.40	16.00		Stainless	2.07	5.2-15.2	10	RCRA Compliance	
0813	-1	22615.00	30261.90	63.00		Stainless	4.03	*43-63	*20	RCRA Compliance	
0814	-1	22831.80	30999.20	79.00		Stainless	4.03	48.7-78.7	30	RCRA Compliance	
0815	1	23144.00	31746.30	26.00		Stainless	2.07	15.7-25.7	10	RCRA Compliance	
0816	1	23134.20	31746.70	60.00		Stainless	4.03	*40-60	*20	RCRA Compliance	
0817	1	22754.30	31781.00	11.00		Stainless	2.07	5.4-10.4	5	RCRA Compliance	
0818	1	22564.60	32390.30	100.00		Stainless	4.03	*40-100	*60	RCRA Compliance	
0819	-1	22382.40	32714.90	60.00		Stainless	4.03	*40-60	*20	RCRA Compliance	
0820	1	22341.80	32422.00	20.00		Stainless	2.07	4.8-19.8	15	RCRA Compliance	
0821	1	22340.70	32436.00	80.00		Stainless	4.03	*40-80	*40	RCRA Compliance	
0822	1	22262.80	32113.70	15.60		Stainless	2.07	5-15	10	RCRA Compliance	
0823	1	22057.30	32141.80	15.60		Stainless	2.07	5-15	10	RCRA Compliance	
0824	1	21399.20	31932.00	16.00		Stainless	2.07	5-15	10	RCRA Compliance	
0825	1	21388.30	31668.20	60.00		Stainless	4.03	*41.5-60	*18.5	RCRA Compliance	
0826	1	21387.30	31654.40	16.00		Stainless	2.07	5-15	10	RCRA Compliance	
0827	1	21012.50	30813.50	16.60		Stainless	2.07	4.4-14.6	10.2	RCRA Compliance	
0828	-1	20615.20	30741.40	50.00		Stainless	4.03	29-49	20	RCRA Compliance	
0829	1	21026.10	30557.10	16.10		Stainless	2.07	5-15.1	10.1	RCRA Compliance	
0830	1	21211.79	30659.50	16.00		Stainless	2.07	5-15	10	RCRA Compliance	
0873	1	21692.62	30872.46	22.70		Stainless	2.07	17.2-22.6	5.4	Water Quality	
0874	1	21464.96	30833.78	12.60		Stainless	2.07	7.2-12.5	5.3	Water Quality	
0875	1	21473.94	30943.46	13.10		Stainless	2.07	7.6-13	5.4	Water Quality	
0876	1	21465.27	31058.84	12.90		Stainless	2.07	6.8-12.2	5.4	Water Quality	
0877	1	21276.72	31265.94	16.00		Stainless	2.07	10.3-15.7	5.4	Water Quality	
0878	1	21248.33	31295.73	17.60		Stainless	2.07	11.2-16.6	5.4	Water Quality	
0879	1	21430.25	31309.94	21.00		Stainless	2.07	14.9-20.3	5.4	Water Quality	
0880	1	21248.60	31364.55	16.10		Stainless	2.07	10.3-15.7	5.4	Water Quality	
0881	1	21400.77	31413.46	21.30		Stainless	2.07	15.8-21.2	5.4	Water Quality	
0882	1	21299.26	31397.07	18.30		Stainless	2.07	12.7-18	5.3	Water Quality	
0883	1	21244.75	31299.28	51.00		Stainless	4.03	*39.5-51	*11.5	Water Quality	
0884	1	21359.68	31255.19	17.20		Stainless	2.07	11.7-17.1	5.4	Water Quality	
0885	1	21468.07	30949.28	51.00		Stainless	2.07	40-50	10	Water Quality	
0886	1	21696.30	30684.43	29.50		Stainless	4.03	24.5-29.5	5	Water Quality	

APPENDIX B. OAK RIDGE NATIONAL LABORATORY WELL INVENTORY (Wells Sorted by WAG / Area) .

Well I.D.	WAG or Area	Northing (X-10 Grid)	Easting (X-10 Grid)	Depth	Measured Depth	Casing Material	Casing Diameter	Screened, Perforated, or *Open Interval	Screened, Perforated, or *Open Length	Well Type (As Designated in Database)	Field Status
		(ft)	(ft)	(ft)	(ft)		(in.)	(ft.)	(ft.)		
0946	1	21091.05	30648.76	12.61		Stainless	2.10	7.1-12.4	5.3	RCRA Compliance	
0947	1	21061.66	30666.93	81.50		Stainless	4.00	66.3-81.3	15	RCRA Compliance	
1100	1	21463.30	31157.39	8.00		Stainless	2.00	5.8-7.8	2	CERCLA	
1101	1	21462.19	31155.27	25.00		Stainless	2.00	14.3-21.3	7	CERCLA	
1102	1	21180.43	31141.45	13.80		Stainless	2.00	6.8-13.8	7	CERCLA	
1103	1	21180.33	31009.21	13.20		Stainless	2.00	6.1-13.1	7	CERCLA	
1104	1	21281.89	30970.03	13.70		Stainless	2.00	6.6-13.6	7	CERCLA	
4001	1	23058.82	29503.01							Water Quality	
4002	1	22235.05	36321.03							Water Quality	
CH-1	1	23184.76	31969.39				3.5			Corehole	
CH-11A	1	21784.79	29656.75							Corehole	
CH-12	1	21171.97	29651.05							Corehole	
CH-2	1	22596.07	31961.96				3.5			Corehole	
CH-3	1	22192.81	31954.89				3.5			Corehole	
CH-4	1	21757.12	31894.79				3.5			Corehole	
CH-5	1	21118.90	31800.36				3.5			Corehole	
CH-6	1	22919.02	30839.76							Corehole	
CH-7A	1	22499.96	30430.54							Corehole	
CH-8	1	22211.96	30659.35							Corehole	
CH-9	1	21244.27	30850.47							Corehole	
FT10	-1	22760.00	29540.00	300.00		Steel	6.25			Pre-RAP	
FT11	-1	23425.00	31245.00	350.00		Steel	6.25			Pre-RAP	
FT1A	-1	24030	29540	208		Steel		*63-208	*145	Pre-RAP	Not Found
FT2	-1	23910.00	29540.00	248.00		Steel	6.25	*21-248	*227	Pre-RAP	Not Found
FT3	-1	24005.00	29655.00	188.00		Steel	6.25	*62-188	*126	Pre-RAP	
FT4A	-1	24050	32120	310		Steel		*37-310	*273	Pre-RAP	
FT5A	-1	24080	32080	269		Steel		*63-269	*206	Pre-RAP	
FT5B	-1			475		Steel	6.25			Pre-RAP	
FT6A	-1	23510	32000	350		Steel		*51-350	*299	Pre-RAP	
FT6B	-1	22984.1	29532.3	450		Steel	6.25			Pre-RAP	
FT7	-1	23460.00	31775.00	350.00		Steel	6.25	*29-350	*321	Pre-RAP	
FT8A	-1	23280	29480	350		Steel		*39-350	*311	Pre-RAP	
FT8B	-1	22463.3	29391.5	450		Steel	6.25			Pre-RAP	Not Found
FT9B	-1	22388.3	28903.0	350		Steel	6.25			Pre-RAP	

APPENDIX B. OAK RIDGE NATIONAL LABORATORY WELL INVENTORY (Wells Sorted by WAG / Area) .

Well I.D.	WAG or Area	Northing (X-10 Grid)	Easting (X-10 Grid)	Depth	Measured Depth	Casing Material	Casing Diameter	Screened, 'Perforated, or *Open Interval	Screened, 'Perforated, or *Open Length	Well Type (As Designated In Database)	Field Status
		(ft)	(ft)	(ft)	(ft)		(in.)	(ft.)	(ft.)		
SB.0131	1	22420.00	30839.75							Piezometer	
SB.0132	1	22462.50	30796.99							Piezometer	
SB.0187	1	22049.50	31172.00							Piezometer	
SB.0189	1	21553.44	30761.92							Piezometer	
SB.0195	1	21502.80	30982.19							Piezometer	
SB.0197	1	22021.00	30794.00							Piezometer	
SB.0206	1	21409.00	31465.97							Piezometer	
SB.0221	1	22268.92	30836.87							Piezometer	
SB.0224	1	22123.51	30816.25							Piezometer	
U30	1	19962.28	29668.34	19.70		Galv. & Stnls. Steel	2.00	16.5-19.7	3.2	USGS	Not Found
0085	2	16910.00	26252.00		7.97	Galv. Steel	5.88			Pre-RAP	
0086	2	16808.00	26009.00		13.29	Galv. Steel	5.88			Pre-RAP	
0087	2	16746.00	26002.00			Galv. Steel	5.88			Pre-RAP	
0088	2	16695.00	25746.00		11.80	Galv. Steel	5.88			Pre-RAP	
0089	2	16675.00	25556.00			Galv. Steel	5.88			Pre-RAP	
0090	2	16782.00	25473.00		8.95	Galv. Steel	5.88			Pre-RAP	
0091	2	16860.00	25480.00			Galv. Steel	5.88			Pre-RAP	
0092	2	17046.00	25486.00		10.71	Galv. Steel	5.88			Pre-RAP	
0095	2	17209.00	25542.00		8.88	Galv. Steel	5.88			Pre-RAP	
0108	2	17532.00	25550.00			Galv. Steel	6.00			Pre-RAP	
0126	2	17779.00	25698.00		12.80	Galv. Steel	5.88			Pre-RAP	
0133	2	17934.00	26795.00	7.19		Galv. Steel	6.63	'0-7	'7	Pre-RAP	Damaged
0134	2	17827.00	26733.00	8.38		Steel	6.63	'0-8	'8	Pre-RAP	Not Found
0138	2	17086.00	26425.00							Pre-RAP	Not Found
0151	2	16961.00	29422.00	6.60						Pre-RAP	Not Found
0152	2	16932.00	29699.00							Pre-RAP	Not Found
0157	2	17151.00	30555.00	6.15		Galv. Steel	6.63	'0-6	'6	Pre-RAP	
0195	2	18787.00	28789.00	7.28		Steel	6.63	'0-7	'7	Pre-RAP	
0197	2	19134.00	28970.00	14.75		Steel	6.63	'0-15	'15	Pre-RAP	
0427	2	16989.00	29425.00	9.97		Steel	6.63	'0-10	'10	Pre-RAP	Not Found
0428	2	16934.00	29692.00	3.92		Steel	6.63	'0-4	'4	Pre-RAP	Not Found
0457	2	17850.00	28719.00	9.60		PVC	3.00	1-10	9	Pre-RAP	
0461	2	16879.00	29585.00	202.00		Steel	4.00	*188-202	*14	Pre-RAP	

APPENDIX B. OAK RIDGE NATIONAL LABORATORY WELL INVENTORY (Wells Sorted by WAG / Area) .

Well I.D.	WAG or Area	Northing (X-10 Grid)	Easting (X-10 Grid)	Depth	Measured Depth	Casing Material	Casing Diameter	Screened, 'Perforated, or *Open Interval	Screened, 'Perforated, or *Open Length	Well Type (As Designated In Database)	Field Status
		(ft)	(ft)	(ft)	(ft)		(in.)	(ft.)	(ft.)		
0462	2	16888.00	29562.00	151.00		Steel	4.00	*140-151	*11	Pre-RAP	
0463	2	16901.00	29541.00	100.00		Steel	4.00	*88-100	*12	Pre-RAP	
0464	2	16918.00	29523.00	11.00		Steel	4.00	'6-11	'5	Pre-RAP	
0660	2	16757.68	32848.09	17.00		PVC	2.00	4.25-14.25	10	Piezometer	
0662	2	16584.82	32659.72	16.00		PVC	2.00	11-16	5	Piezometer	
0663	2	16493.43	32347.38	11.50		PVC	2.00	6.5-11.5	5	Piezometer	
0668	2	17417.18	28436.03	15.00		PVC	2.00	9.7-14.7	5	Piezometer	
0669	2	17389.37	28407.96	10.00		PVC	2.00	4.7-9.7	5	Piezometer	
0712	2	18483.84	28964.25	9.30		Stainless	2.00	4.3-9.3	5	Piezometer	
0714	-2	17252.51	30738.22	11.50	9.97	PVC	2.00	8.5-11.5	3	Piezometer	
0723	2	19832.63	29553.92	20.00		PVC	2.00	10-20	10	Piezometer	
0724	2	19538.67	29493.57	8.00		Stainless	2.00	3-8	5	Piezometer	Not Found
0725	2	16357.14	28757.14	9.30		Stainless	2.00	4.3-9.3	5	Piezometer	Not Found
0727	2	17455.58	28353.53	7.50		Stainless	2.00	2.5-7.5	5	Piezometer	
0728	2	16967.60	26171.48	11.00		PVC	2.00	6-11	5	Piezometer	
0729	2	16978.99	27885.11	12.00		PVC	2.00	6.7-11.7	5	Piezometer	
0730	2	16614.57	27904.96	25.00		PVC	2.00	10-20	10	Piezometer	
0731	2	16621.45	26601.06	12.00	12.20	PVC	2.00	6.7-11.7	5	Piezometer	
0732	2	16686.73	26639.86	5.50		Stainless	2.00	0.5-5.5	5	Piezometer	
0733	2	16545.63	26778.18	8.00		Stainless	2.00	3-8	5	Piezometer	
0735	2	16707.87	25907.13	10.00		Stainless	2.00	5-10	5	Piezometer	
0736	2	16562.67	25969.28	9.00		Stainless	2.00	4-9	5	Piezometer	
0737	2	16434.91	25992.60	8.50		Stainless	2.00	3.5-8.5	5	Piezometer	
0738	2	16134.20	25498.81	8.50		Stainless	2.00	3.5-8.5	5	Piezometer	
0739	2	15628.89	23604.03	33.00	29.54	PVC	2.00	23-33	10	Piezometer	
0740	2	15778.95	23372.39	24.00	23.39	PVC	2.00	14-24	10	Piezometer	
0741	2	15596.74	23352.05	22.00	23.23	PVC	2.00	12-22	10	Piezometer	
0742	2	15304.24	23338.64	33.00	35.10	PVC	2.00	23-33	10	Piezometer	
0743	-2	15098.19	23248.64	27.00	25.54	PVC	2.00	17-27	10	Piezometer	
0744	-2	15165.20	23438.70	33.50	33.93	PVC	2.00	23-33	10	Piezometer	Damaged
0747	-2	15488.09	25064.63	22.50	22.64	PVC	2.00	12.5-22.5	10	Piezometer	
0748	-2	15891.13	25534.62	22.50		PVC	2.00	12.5-22.5	10	Piezometer	
0749	-2	16314.91	26038.64	22.00		PVC	2.00	12-22	10	Piezometer	
0750	-2	16553.36	26531.25	16.50		PVC	2.00	6.2-16.2	10	Piezometer	

APPENDIX B. OAK RIDGE NATIONAL LABORATORY WELL INVENTORY (Wells Sorted by WAG / Area) .

Well I.D.	WAG or Area	Northing (X-10 Grid)	Easting (X-10 Grid)	Depth	Measured Depth	Casing Material	Casing Diameter	Screened, 'Perforated, or *Open Interval	Screened, 'Perforated, or *Open Length	Well Type (As Designated in Database)	Field Status
		(ft)	(ft)	(ft)	(ft)		(in.)	(ft.)	(ft.)		
0751	2	16845.38	28464.82	7.50		Stainless	2.00	2.5-7.5	5	Piezometer	
0755	2	16766.68	30124.94	6.00		Stainless	2.00	1-6	5	Piezometer	
0756	-2	16660.58	30291.91	23.00		PVC	2.00	12.5-22.5	10	Piezometer	
0757	-2	16830.04	31229.79	22.00		PVC	2.00	12-22	10	Piezometer	
0758	2	16685.40	31230.27	22.00		PVC	2.00	12-22	10	Piezometer	
0759	2	16559.04	31164.86	21.00		PVC		11-21	10	Piezometer	
0760	-2	16377.03	31073.25	23.00		PVC	2.00	13-23	10	Piezometer	
0761	2	16432.55	32317.24	7.00		Stainless	2.00	2-7	5	Piezometer	
0762	2	16307.21	32343.13	5.00		Stainless	2.00	0-5	5	Piezometer	
0763	-2	16158.13	32307.93	23.00	22.99	PVC	2.00	13-23	10	Piezometer	
0766	2	16857.05	29429.25	13.50	13.59	PVC	2.00	8.5-13.5	5	Piezometer	
0767	2	16858.83	29443.86	38.00		PVC	4.00	28-38	10	Piezometer	
0768	-2	16646.25	29500.14	14.75		PVC	2.00	4.75-14.75	10	Piezometer	
0770	2	16128.05	28513.90	15.00	14.68	PVC	2.00	5-15	10	Piezometer	
0771	2	16118.39	28516.21	48.00	44.18	PVC	2.00	38-48	10	Piezometer	
0772	2	16097.66	28565.23	16.00	15.90	PVC	2.00	6-16	10	Piezometer	
0773	2	16060.20	28566.15	51.00	51.49	PVC	2.00	41-51	10	Piezometer	
0774	2	16045.57	28684.65	12.00	11.91	PVC	2.00	7-12	5	Piezometer	
0775	2	16026.45	28681.49	47.00	43.09	PVC	4.00	37-47	10	Piezometer	
0780	2	16813.18	27283.01	12.50		PVC	2.00	7.5-12.5	5	Piezometer	
0781	2	16822.73	27295.10	37.50		PVC	4.00	27.5-37.5	10	Piezometer	
0782	2	16671.83	27367.38	14.50		PVC	2.00	9-14	5	Piezometer	
0783	2	16681.18	27388.40	50.00		PVC	4.00	40-50	10	Piezometer	
0784	-2	16384.00	27270.93	20.00		PVC	2.00	9.5-14.5	5	Piezometer	
0785	-2	16390.85	27284.51	45.00		PVC	2.00	34.7-44.7	10	Piezometer	
0942	-2	15305.95	24764.04	402.50		Mild-Steel	6.63	*380-402.5	*22.5	Hydraulic Head	
0943	-2	15289.25	24745.16	165.40		Mild-Steel	6.63	*145-165.4	*20.4	Hydraulic Head	
0944	-2	15268.72	24732.51	60.80		Mild-Steel	6.63	*40.8-60.8	*20	Hydraulic Head	
0954	2	19252.06	29252.93	62.50		Stainless	4.00	41.7-61.7	20	RCRA Compliance	
0955	2	19243.54	29239.15	22.50		Stainless	2.10	12.2-22.2	10	RCRA Compliance	
1050	-2	15752.23	21154.83	29.00	27.08	PVC	2.00	18-28	10	Piezometer	Not Found
1052	-2	15005.68	21240.47	70.00	62.57	PVC	2.00	53-63	10	Piezometer	
1053	-2	15044.62	21234.48	34.00	34.32	PVC	2.00	24-34	10	Piezometer	
1054	-2	14760.50	21229.54	34.00	34.27	PVC	2.00	24-34	10	Piezometer	

APPENDIX B. OAK RIDGE NATIONAL LABORATORY WELL INVENTORY (Wells Sorted by WAG / Area).

Well I.D.	WAG or Area	Northing (X-10 Grid)	Easting (X-10 Grid)	Depth	Measured Depth	Casing Material	Casing Diameter	Screened, 'Perforated, or *Open Interval	Screened, 'Perforated, or *Open Length	Well Type (As Designated In Database)	Field Status
		(ft)	(ft)	(ft)	(ft)		(in.)	(ft.)	(ft.)		
1055	-2	15693.04	21534.26	29.00	24.01	PVC	2.00	23-13	10	Piezometer	
1058	-2	14912.82	21441.80	26.00	26.43	PVC	2.00	16-26	10	Piezometer	
1057	2	14726.18	21538.44	22.00	22.35	PVC	2.00	12-22	10	Piezometer	
1058	-2	15303.73	21543.10	55.00	53.39	PVC	2.00	43.4-53.4	10	Piezometer	
1059	-2	15320.66	21543.31	27.00	26.48	PVC	2.00	17-27	10	Piezometer	
1060	-2	15466.29	21781.95	21.00	20.67	PVC	2.00	11-21	10	Piezometer	
1061	-2	15533.70	22361.33	61.00	60.13	PVC	2.00	51-61	10	Piezometer	
1062	-2	15552.08	22371.52	31.00	29.89	PVC	2.00	20-30	10	Piezometer	
1063	-2	15356.13	22302.23	16.00	16.48	PVC	2.00	6-16	10	Piezometer	
1064	-2	14929.28	22371.48	57.00	54.57	PVC	2.00	45-55	10	Piezometer	
1065	-2	14732.92	22195.70	80.00	76.66	PVC	2.00	70-80	10	Piezometer	
1066	-2	14735.97	22215.98	48.00	47.97	PVC	2.00	32-47	15	Piezometer	
1067	2	14944.68	22767.31	48.00	41.90	PVC	2.00	32-42	10	Piezometer	
1068	-2	15435.71	22663.67	45.00	45.43	PVC	2.00	35-45	10	Piezometer	
1074	2	18128.06	25707.53	30.00		Stainless	2.10	15-30	15	RCRA Compliance	
1075	2	18135.02	25697.46	73.00		Stainless	4.00	57.8-72.8	15	RCRA Compliance	
1081	2	16919.81	26322.67	73.50		Stainless	4.00	58.2-73.2	15	RCRA Compliance	
1082	2	16911.04	26347.58	15.00		Stainless	2.10	5-15	10	RCRA Compliance	
1094	2	16682.85	31329.16	70.30		Stainless	4.00	55-70	15	RCRA Compliance	
1095	2	16634.40	31325.24	23.10		Stainless	2.10	12.2-22.9	10.64	RCRA Compliance	
1150	-2	19298.55	29620.10	16.30		Stainless	2.10	5.8-15.8	10	RCRA Compliance	
1151	-2	18531.44	31761.37	20.30		Stainless	2.10	4.8-19.8	15	RCRA Compliance	
1152	2	16470.82	32503.04	15.00		Stainless	2.10	4.7-14.7	10	RCRA Compliance	
1153	-2	17395.67	33324.88	18.00		Stainless	2.10	7.8-17.8	10	RCRA Compliance	
1154	-2	16191.49	32693.87	15.70		Stainless	2.10	5.1-15.1	10	RCRA Compliance	
1155	2	16676.57	30538.54	23.00		Stainless	2.10	12.8-22.8	10	RCRA Compliance	
1156	2	17001.93	27876.12	21.40		Stainless	2.10	11-21	10	RCRA Compliance	
1185	-2	16343.85	26464.80	27.50		Stainless	2.10	16.9-26.9	10	RCRA Compliance	
1186	-2	16346.39	26443.78	68.30		Stainless	4.00	52.8-67.8	15	RCRA Compliance	
1187	-2	15183.27	24285.13	85.00		Stainless	4.00	67.7-82.7	15	RCRA Compliance	
1188	-2	15170.51	24267.22	27.50		Stainless	2.10	17.0-27.0	10	RCRA Compliance	
1189	-2	15146.78	23280.95	27.50		Stainless	2.10	12.3-27.3	15	RCRA Compliance	
1190	2	15358.22	23384.36	47.40		Stainless	4.00	37.2-47.2	10	RCRA Compliance	
1191	2	15373.83	23387.98	26.20		Stainless	2.10	15.8-25.8	10	RCRA Compliance	

APPENDIX B. OAK RIDGE NATIONAL LABORATORY WELL INVENTORY (Wells Sorted by WAG / Area) .

Well I.D.	WAG or Area	Northing (X-10 Grid)	Easting (X-10 Grid)	Depth	Measured Depth	Casing Material	Casing Diameter	Screened, Perforated, or *Open Interval	Screened, Perforated, or *Open Length	Well Type (As Designated in Database)	Field Status
		(ft)	(ft)	(ft)	(ft)		(in.)	(ft.)	(ft.)		
1192	2	15542.36	23358.39	18.80		Stainless	2.10	7.8-17.8	10	RCRA Compliance	
1193	-2	15021.21	21225.91	85.00		Stainless	2.10	64.6-84.6	20	RCRA Compliance	
1194	-2	15736.11	21046.77	97.50		Stainless	2.10	77.1-97.1	20	RCRA Compliance	
1195	-2	15716.88	21043.63	32.00		Stainless	2.10	16.2-31.2	15	RCRA Compliance	
1244	2	17155.45	25459.01	24.20		Stainless	2.00	9.2-24.2	15	RCRA Compliance	
1245	2	16894.94	25429.95	58.40		Stainless	2.00	38.4-58.4	20	RCRA Compliance	
A-05	2	18523.00	28796.00	5.53		Aluminum	3.63	'1-6	'5	Pre-RAP	
A-06	2	18514.00	28908.00	5.26		Aluminum	3.63	'1-5	'4	Pre-RAP	
A-07	2	18530.00	28975.00	5.89		Aluminum	3.63	'1-6	'5	Pre-RAP	
A-08	2	18811.00	28816.00	3.04		Aluminum	3.25	'1-3	'2	Pre-RAP	
A-09	2	18811.00	28902.00	3.12		Aluminum	3.25	'1-3	'2	Pre-RAP	
A-10	2	18811.00	28931.00	4.33		Aluminum	3.63	'1-4	'3	Pre-RAP	
A-11	2	18910.00	28901.00	2.70		Aluminum	3.25	'1-3	'2	Pre-RAP	
A-12	2	18909.00	29000.00	5.01		Aluminum	3.25	'1-5	'4	Pre-RAP	
A-13	2	18909.00	29042.00	5.21		Aluminum	3.25	'1-5	'4	Pre-RAP	
A-14	2	19008.00	28902.00	1.73		Aluminum	3.25	'1-2	'1	Pre-RAP	
A-15	2	19008.00	29000.00	4.79		Aluminum	3.25	'1-5	'4	Pre-RAP	
A-16	2	19008.00	29098.00	4.49		Aluminum	3.25	'1-4	'3	Pre-RAP	
A-17	2	19008.00	29197.00	8.61		Aluminum	3.63	'1-9	'8	Pre-RAP	
A-18	2	19106.00	28902.00	5.30		Aluminum	4.00	'1-5	'4	Pre-RAP	
A-19	2	19106.00	29000.00	3.16		Aluminum	3.63	'1-3	'2	Pre-RAP	
A-20	2	19106.00	29098.00	4.30		Aluminum	4.00	'1-4	'3	Pre-RAP	
A-21	2	19106.00	29197.00	4.43		Aluminum	3.63	'1-4	'3	Pre-RAP	
A-22	2	19185.00	29098.00	4.56		Aluminum	3.63	'1-5	'4	Pre-RAP	
A-23	2	19205.00	29131.00	4.01		Aluminum	3.63	'1-4	'3	Pre-RAP	
A-24	2	19205.00	29198.00	5.00		Aluminum	3.63	'1-5	'4	Pre-RAP	
A-25	2	19205.00	29246.00	3.04		Aluminum	3.63	'1-3	'2	Pre-RAP	
A-26	2	19247.00	29240.00	2.91		Aluminum	3.63	'1-3	'2	Pre-RAP	
A-27	2	19303.00	29285.00	4.03		Aluminum	3.63	'1-4	'3	Pre-RAP	Not Found
A-30	2	19402.00	29358.00	3.42		Aluminum	3.63	'1-3	'2	Pre-RAP	
A-31	2	19402.00	29410.00	4.68		Aluminum	3.88	'1-5	'4	Pre-RAP	
A-34	2	19500.00	29348.00	3.56		Aluminum	3.63	'1-4	'3	Pre-RAP	
A-35	2	19598.00	29296.00	3.03		Aluminum	3.63	'1-3	'2	Pre-RAP	
A-36	2	19598.00	29296.00	3.08		Aluminum	3.63	'1-3	'2	Pre-RAP	

APPENDIX B. OAK RIDGE NATIONAL LABORATORY WELL INVENTORY (Wells Sorted by WAG / Area) .

Well I.D.	WAG or Area	Northing (X-10 Grid)	Easting (X-10 Grid)	Depth	Measured Depth	Casing Material	Casing Diameter	Screened, 'Perforated, or *Open Interval	Screened, 'Perforated, or *Open Length	Well Type (As Designated In Database)	Field Status
		(ft)	(ft)	(ft)	(ft)		(in.)	(ft.)	(ft.)		
A-37	2	19598.00	29443.00	5.00		Aluminum	3.63	'1-5	'4	Pre-RAP	
T401	2	17454.00	25586.00			PVC	4.00			Pre-RAP	
T6-5	2	18580.00	28962.00							Pre-RAP	Not Found
T6-6	2	18655.00	28945.00							Pre-RAP	Not Found
T6-7	2	18688.00	28879.00							Pre-RAP	Not Found
T6-8	2									Pre-RAP	
U19	-2	15888.24	21396.10	30.70		Galv. & Stnls. Steel	2.00	25.9-29.1	3.2	USGS	
UF1	2	16778.51	29516.61	23.50		Steel & Stnls. Steel	6.30	18.0-23.5	5.5	USGS	
UF2	2	16824.27	29448.25	210.97		Steel	6.30	*183-211	*28	USGS	
0003	3	21629.55	26428.40	251.00		Steel	3.19	*12-251	*239	Pre-RAP	Not Found
0005	3	21623.55	26210.00	100.00		Steel	3.18	*10-100	*90	Pre-RAP	Not Found
0009	3	21670.30	26010.00	99.00		PVC	4.00	*12-99	*87	Pre-RAP	
0015	3	21725.65	25897.75	100.00		Steel	3.19	*15-100	*85	Pre-RAP	
0016A	3	21870.00	25668.00	100.00		Steel	3.19	*12-46	*34	Pre-RAP	
0016B	3	"	"	"		"	"	*49-67	*18	"	
0016C	3	"	"	"		"	"	*70-100	*30	"	
0020A	3	22[illegible]13.00	25821.00	99.00		Steel	3.19	*12-30	*18	Pre-RAP	
0020B	3	"	"	"		"	"	*33-99	*66	"	
0021A	-3	21925.00	26076.00	100.00		Steel	3.19	*12-30	*18	Pre-RAP	
0021B	-3	"	"	"		"	"	*32-52	*20	"	
0021C	-3	"	"	"		"	"	*55-100	*45	"	
0022A	-3	21934.00	26510.00	100.00		Steel	3.19	*11-33	*22	Pre-RAP	
0022B	-3	"	"	"		"	"	*36-51	*15	"	
0022C	-3	"	"	"		"	"	*54-100	*46	"	
0023	-3	21806.63	26680.50	100.00		Steel	3.19	*10-100	*90	Pre-RAP	Not Found
0032	-3	21621.00	26682.10	99.00		Steel	3.19	*9-99	*90	Pre-RAP	
0301	3	21856.00	26106.00	14.00		Steel	6.88	'0-14	'14	Pre-RAP	Not Found
0302	3	21837.00	26293.00	6.00		PVC	4.00	'0-6	'6	Pre-RAP	
0303	3	21855.00	26612.00	6.00		Steel	6.88	'0-6	'6	Pre-RAP	Not Found
0481	3	21647.00	26536.00	18.00		PVC	4.00	8-18	10	Pre-RAP	Not Found
0482	3	21639.00	26202.00	24.00		PVC	4.00	14-24	10	Pre-RAP	
0483	3	21739.00	25829.00	34.00		PVC	4.00	24-34	10	Pre-RAP	

APPENDIX B. OAK RIDGE NATIONAL LABORATORY WELL INVENTORY (Wells Sorted by WAG / Area) .

Well I.D.	WAG or Area	Northing (X-10 Grid)	Easting (X-10 Grid)	Depth	Measured Depth	Casing Material	Casing Diameter	Screened, 'Perforated, or *Open Interval	Screened, 'Perforated, or *Open Length	Well Type (As Designated In Database)	Field Status
		(ft)	(ft)	(ft)	(ft)		(in.)	(ft.)	(ft.)		
0484	3	21995.00	25704.00	32.00		PVC	4.00	22-32	10	Pre-RAP	
0485	3	21990.00	26055.00	28.00		PVC	4.00	18-28	10	Pre-RAP	
0486	3	21896.00	26302.00	25.00		PVC	4.00	15-25	10	Pre-RAP	
0487	-3	22107.00	26218.00	15.00		PVC	4.00	5-15	10	Pre-RAP	
0491	3	21768.00	26513.00	15.00		PVC	4.00	5-15	10	Pre-RAP	
0492	3	21768.00	26254.00	26.00		PVC	4.00	16-26	10	Pre-RAP	
0493	3	21816.00	26002.00	26.00		PVC	4.00	16-26	10	Pre-RAP	
0494	3	21868.00	25782.00	39.00		PVC	4.00	29-39	10	Pre-RAP	
0495A	-3	21855.00	25384.00	77.00		PVC	4.00	*23-40	*17	Pre-RAP	
0495B	-3	21855.00	25384.00	77.00		PVC	4.00	*43-60	*17	Pre-RAP	
0495C	-3	21855.00	25384.00	77.00		PVC	4.00	*63-77	*14	Pre-RAP	
0496	-3	21968.00	26827.00	60.00		PVC	4.00	*11-60	*49	Pre-RAP	
0498A	-3	21799.00	24701.00	75.00		PVC	4.00	*25-36	*11	Pre-RAP	
0498B	-3	21799.00	24701.00	75.00		PVC	4.00	*39-55	*16	Pre-RAP	
0498C	-3	21799.00	24701.00	75.00		PVC	4.00	*58-75	*17	Pre-RAP	
0499	-3	21955.00	26809.00	83.00		Steel	4.00	*31-83	*52	Pre-RAP	
0691	-3	21573.66	25832.30	80.00	80.15	PVC	2.00	60-80	20	Piezometer	
0692	-3	21541.73	26010.24	60.00	60.58	PVC	2.00	40-60	20	Piezometer	
0693	-3	21537.27	26025.19	20.00	20.53	PVC	2.00	10-20	10	Piezometer	
0694	3	21471.21	26201.39	63.00	62.86	PVC	2.00	53-63	10	Piezometer	
0695	-3	21866.89	25457.67	30.00	29.64	PVC	2.00	20-30	10	Piezometer	
0696	-3	21863.87	25473.89	60.00	58.95	PVC	2.00	45-60	15	Piezometer	
0697	-3	21980.54	26279.95	25.00	24.64	PVC	2.00	15-25	10	Piezometer	
0698	-3	21937.72	26771.19	17.25	17.60	PVC	2.00	7.25-17.25	10	Piezometer	
0699	-3	21936.54	26739.21	60.00	60.54	PVC	2.00	50-60	10	Piezometer	
0700	-3	22228.14	26001.15	5.50		Stainless	2.00	0.5-5.5	5	Piezometer	
0701	3	21691.08	25166.80	45.00	40.90	PVC	2.00	32-42	10	Piezometer	
0702	-3	21958.57	25198.99	30.00	29.71	PVC	2.00	20-30	10	Piezometer	
0703	-3	22375.66	24916.77	79.25	79.13	PVC	2.00	59.25-79.25	20	Piezometer	
0704	-3	22146.27	24542.95	13.20	13.65	PVC	2.00	7.95-12.95	5	Piezometer	
0705	-3	21837.32	24548.26	28.25	29.13	PVC	2.00	18.25-28.25	10	Piezometer	
0706	-3	21824.67	24550.12	75.00	29.21	PVC	2.00	10-30	20	Piezometer	
0707	-3	21470.22	24560.86	75.00	74.48	PVC	2.00	59.75-74.75	15	Piezometer	
0786	-3	21270.54	26419.07	51.00	50.39	PVC	2.00	31-51	20	Piezometer	Damaged

APPENDIX B. OAK RIDGE NATIONAL LABORATORY WELL INVENTORY (Wells Sorted by WAG / Area).

Well I.D.	WAG or Area	Northing (X-10 Grid)	Easting (X-10 Grid)	Depth	Measured Depth	Casing Material	Casing Diameter	Screened, *Perforated, or *Open Interval	Screened, *Perforated, or *Open Length	Well Type (As Designated in Database)	Field Status
		(ft)	(ft)	(ft)	(ft)		(in.)	(ft.)	(ft.)		
0788	-3	21051.93	25387.87	83.00	79.77	PVC	2.00	68-83	15	Piezometer	
0789	3	21174.00	24975.90	28.00	25.70	PVC	2.00	18-28	10	Piezometer	Not Found
0790	3	21491.53	24944.39	48.00	46.45	PVC	2.00	38-48	10	Piezometer	
0791	3	21740.72	24933.41	41.50	39.93	PVC	2.00	26.5-41.5	15	Piezometer	
0792	-3	22088.61	24948.90	6.50	11.90	Stainless	2.00	1.5-6.5	5	Piezometer	
0793	-3	21463.35	24560.55	30.00	30.14	PVC	2.00	20-30	10	Piezometer	Damaged
0965	-3	21833.81	26675.61	35.00		Stainless	2.10	20-35	15	RCRA Compliance	
0966	-3	21813.16	26674.87	62.50		Stainless	4.00	41.7-61.7	20	RCRA Compliance	
0967	-3	21650.14	25857.89	48.20		Stainless	4.00	27.1-47.9	20.8	RCRA Compliance	
0968	-3	21075.73	25471.29	46.00		Stainless	2.10	30.8-45.8	15	RCRA Compliance	
0969	3	21350.00	24650.00	100.00		Stainless	?			Water Quality	P&A
0990	-3	21657.34	24723.62	40.80		Stainless	4.00	25.5-40.5	15	RCRA Compliance	
0991	3	21736.64	25051.49	85.00		Stainless	2.10	70-85	15	RCRA Compliance	
0992	3	21737.04	25069.69	53.50		Stainless	2.10	33-48	15	RCRA Compliance	
0993	-3	21884.35	25619.08	45.00		Stainless	4.00	23.9-44.7	20.8	RCRA Compliance	
0994	3	21695.03	25639.92	90.50		Stainless	4.00	*60-80.5	*20.5	RCRA Compliance	
0995	3	22011.41	25867.56	48.50		Stainless	2.10	32.0-47.8	15	RCRA Compliance	
0996	-3	21920.17	26458.18	62.50		Stainless	4.00	41.1-61.5	20.4	RCRA Compliance	
0997	3	21911.04	26467.50	33.50		Stainless	2.10	13.8-29.7	15.9	RCRA Compliance	
0998	-3	20984.59	26235.94	20.70		Stainless	2.10	4.7-19.7	15	RCRA Compliance	
1247	-3	21357.58	24659.55	22.70		Stainless	2.10	7.5-22.5	15	RCRA Compliance	
1246	-3	21366.92	24654.06	72.50		Stainless	4.00	52.3-72.3	20	RCRA Compliance	
JS-1	-3	21951.00	26170.00	15.00		PVC	4.00	*5-15	*10	Pre-RAP	
JS-2	-3	22129.00	25180.00	14.00		PVC	4.00	4-14	10	Pre-RAP	
JS-3	-3	21819.00	24625.00	16.00		PVC	4.00	6-16	10	Pre-RAP	
0182	4	18827.00	27038.00	19.67	19.70	Galv. Steel	5.88	'0-20	'20	Pre-RAP	
0183	4	18612.00	26997.00	15.00	14.94	Galv. Steel	5.88	'0-15	'15	Pre-RAP	
0183A	4	18587	27000							Pre-RAP	
0183B	4	18587	26990							Pre-RAP	
0184	4	19418.00	27553.00	15.62		Steel	6.63	'0-16	'16	Pre-RAP	Not Found
0185	4	19153.00	27580.00							Pre-RAP	Not Found
0186	4	19019.00	27549.00	6.00		Galv. Steel	5.88	'0-6	'6	Pre-RAP	
0186A	4	19058.00	27514.00	9.00		Steel	6.63	'0-9	'9	Pre-RAP	Not Found
0188	-4	19602.00	28052.00	19.36		Galv. Steel	6.63	'0-19	'19	Pre-RAP	

APPENDIX B. OAK RIDGE NATIONAL LABORATORY WELL INVENTORY (Wells Sorted by WAG / Area) .

Well I.D.	WAG or Area	Northing (X-10 Grid)	Easting (X-10 Grid)	Depth	Measured Depth	Casing Material	Casing Diameter	Screened, Perforated, or *Open Interval	Screened, Perforated, or *Open Length	Well Type (As Designated In Database)	Field Status
		(ft)	(ft)	(ft)	(ft)		(in.)	(ft.)	(ft.)		
0189	4	19404.00	28048.00	18.99		Galv. Steel	6.63	'0-19	'19	Pre-RAP	
0190	4	19206.00	28047.00	15.16		Galv. Steel	6.63	'0-15	'15	Pre-RAP	
0190A	4	19061.00	28253.00	10.46		Steel	6.88	'0-10	'10	Pre-RAP	
0190B	4	19243.00	28096.00	11.74		Galv. Steel	6.88	'0-12	'12	Pre-RAP	
0190C	4	19221.00	27919.00	11.60		Steel	6.88	'0-12	'12	Pre-RAP	
0192	4	19396.00	28573.00	15.45		Steel	6.63	'0-15	'15	Pre-RAP	
0193	4	19172.00	28585.00							Pre-RAP	Not Found
0194	4	18970.00	28577.00							Pre-RAP	Not Found
0196	4	19059.00	28856.00	10.51		Galv. Steel	6.63	'0-11	'11	Pre-RAP	
0198	4	19568.00	29108.00							Pre-RAP	Damaged
0199	4	19338.00	29144.00			Steel	4.00			Pre-RAP	Damaged
0200	4	19565.00	29116.00	11.00		Steel	6.63	'0-11	'11	Pre-RAP	
0201	4	19367.00	29183.00	26.57	15.04	PVC	3.00	19-29	10	Pre-RAP	
0202	4	19173.00	28563.00	19.14		Steel	6.63	'0-19	'19	Pre-RAP	Not Found
0203	4	19001.00	28572.00	19.40		Steel	6.63	'0-19	'19	Pre-RAP	
0401	4						4.00			Pre-RAP	
0402	4	19190.00	27480.00	3.00		Steel	6.88	'0-3	'3	Pre-RAP	
0404	4	19220.00	27714.00	10.39	42.37	Steel	4.00	'0-10	'10	Pre-RAP	Not Found
0407	4	19349.00	28279.00	7.81		Steel	6.88	'0-8	'8	Pre-RAP	
0409	4									Pre-RAP	
0410	4	19066.00	28472.00	17.02		Steel	6.88	'0-17	'17	Pre-RAP	Not Found
0530A	4	19472.00	28978.00	17.48		PVC	6.00	5-17	12	Pre-RAP	
0531A	4	19304.00	28598.00	21.10		PVC	6.00	5-21	16	Pre-RAP	
0532A	4	18855.00	28771.00	9.55		PVC	6.00	5-10	5	Pre-RAP	
0533A	4	19218.00	28314.00	24.90		PVC	6.00	5-25	20	Pre-RAP	
0534A	4	19115.00	27926.00	15.80		Galv. Steel	6.88	5-16	11	Pre-RAP	Damaged
0536A	4	19105.00	27210.00	27.90		PVC	6.00	5-28	23	Pre-RAP	Not Found
0680	4	18820.12	27320.23	30.00	28.15	PVC	2.00	15-30	15	Piezometer	
0681	4	19072.67	27795.65	5.00		Stainless	2.00	0-5	5	Piezometer	
0682	4	19469.60	28840.01	40.00	39.02	PVC	2.00	20-40	20	Piezometer	
0683	4	19459.74	28839.84	75.00	70.98	PVC	2.00	60-75	15	Piezometer	
0684	4	19602.19	28065.81	51.00	51.43	PVC	2.00	40.7-50.7	10	Piezometer	
0685	4	19399.76	28049.72	50.00	46.56	PVC	2.00	35-50	15	Piezometer	
0686	4	19200.06	28050.41	50.00	39.62	PVC	2.00	35-50	15	Piezometer	

APPENDIX B. OAK RIDGE NATIONAL LABORATORY WELL INVENTORY (Wells Sorted by WAG / Area) .

Well I.D.	WAG or Area	Northing (X-10 Grid)	Easting (X-10 Grid)	Depth	Measured Depth	Casing Material	Casing Diameter	Screened, *Perforated, or *Open interval	Screened, *Perforated, or *Open Length	Well Type (As Designated in Database)	Field Status
		(ft)	(ft)	(ft)	(ft)		(in.)	(ft.)	(ft.)		
0687	4	19028.51	28031.11	45.00	36.97	PVC	2.00	20-40	20	Piezometer	
0688	4	19121.56	28798.63	30.00	28.00	PVC	2.00	20-30	10	Piezometer	
0689	4	19339.85	29159.27	40.00	35.31	PVC	2.00	25-40	15	Piezometer	
0797	4	19954.06	28890.80	9.00		Stainless	2.00	4.4-9.0	4.6	Piezometer	
0950	4	19594.61	28013.51	49.50		Stainless	2.10	28.7-48.7	20	RCRA Compliance	
0951	4	19594.29	28028.70	70.30		Stainless	4.00	49.1-69.9	20.8	RCRA Compliance	
0952	4	19597.79	28670.76	30.50		Stainless	2.10	5.3-30.3	25	RCRA Compliance	
0953	4	19594.13	28686.09	70.50		Stainless	4.00	49.6-69.6	20	RCRA Compliance	
0956	4	19123.72	26935.51	22.50		Stainless	2.10	12.3-22.3	10	RCRA Compliance	
0957	4	19906.93	28861.00	82.50		Stainless	4.00	52-82	30	RCRA Compliance	
0958	4	18900.37	28857.05	27.50		Stainless	2.10	12.1-27.1	15	RCRA Compliance	
0959	4	18729.07	28682.44	72.50		Stainless	4.00	51.9-71.9	20	RCRA Compliance	
0960	4	18742.04	28674.37	32.50		Stainless	2.10	17.2-32.2	15	RCRA Compliance	
0961	4	18799.18	27371.38	80.30		Stainless	4.00	60-80	20	RCRA Compliance	
0962	4	18809.05	27387.52	33.00		Stainless	2.10	26.6-36.9	10.3	RCRA Compliance	
1071	4	19302.85	27233.93	25.00		Stainless	2.10	9.25-24.25	15	RCRA Compliance	
4TR-10	4	19547.00	27753.00	29.33		PVC	6.00	5-29	24	Pre-RAP	
4TR-11	4	19546.00	27765.00	20.75		PVC	6.00	5-21	16	Pre-RAP	
4TR-4	4	19548.00	27777.00	30.00		PVC	6.00	5-30	25	Pre-RAP	
4TR-5	4	19542.00	27776.00	28.93		PVC	6.00	5-30	25	Pre-RAP	
4TR-6	4	19538.00	27772.00	29.45		PVC	6.00	5-29	24	Pre-RAP	
4TR-7	4	19536.00	27785.00	27.09		PVC	6.00	5-27	22	Pre-RAP	
4TR-8	4	19537.00	27760.00	30.86		PVC	6.00	5-31	26	Pre-RAP	
4TR-9	4	19541.00	27755.00	30.81		PVC	6.00	5-31	26	Pre-RAP	
A-01	4	18804.00	26705.00	3.73		Aluminum	4.38	'1-4	'3	Pre-RAP	
A-02	4	18785.00	26705.00	3.60		Aluminum	4.38	'1-4	'3	Pre-RAP	
A-03	4	18855.00	26705.00	3.35		Aluminum	3.88	'1-3	'2	Pre-RAP	Not Found
A-04	4	18839.00	26705.00	2.89		Aluminum	4.38	'1-3	'2	Pre-RAP	Not Found
A-28	4	19366.00	29312.00	3.25		Aluminum	4.38	'1-3	'2	Pre-RAP	
A-29	4	19402.00	29328.00	4.00		Aluminum	4.38	'1-4	'3	Pre-RAP	Not Found
A-32	4	19446.00	29321.00	3.71		Aluminum	4.38	'1-4	'3	Pre-RAP	Not Found
A-33	4	19500.00	29312.00	3.83		Aluminum	3.63	'1-4	'3	Pre-RAP	
WP1	4	19151.25	27459.80	7.85		Galv. Steel	1.25		5	Drive Point Well	
WP10	4	19057.41	27448.64	11.19		Galv. Steel	1.25		5	Drive Point Well	

APPENDIX B. OAK RIDGE NATIONAL LABORATORY WELL INVENTORY (Wells Sorted by WAG / Area) .

Well I.D.	WAG or Area	Northing (X-10 Grid)	Easting (X-10 Grid)	Depth	Measured Depth	Casing Material	Casing Diameter	Screened, Perforated, or *Open Interval	Screened, Perforated, or *Open Length	Well Type (As Designated in Database)	Field Status
		(ft)	(ft)	(ft)	(ft)		(In.)	(ft.)	(ft.)		
WP11	4	19089.89	27433.19	8.24		Galv. Steel	1.25		5	Drive Point Well	
WP12	4	19107.72	27556.67	9.75		Galv. Steel	1.25		5	Drive Point Well	
WP13	4	19063.65	27554.78	8.05		Galv. Steel	1.25		5	Drive Point Well	
WP14	4	19068.20	27550.40	14.22		Galv. Steel	1.25		5	Drive Point Well	
WP15	4	19112.78	27386.66	12.40		Galv. Steel	1.25		5	Drive Point Well	
WP16	4	19071.60	27369.65	5.79		Galv. Steel	1.25		5	Drive Point Well	
WP2	4	19154.97	27479.02	12.00		Galv. Steel	1.25		5	Drive Point Well	
WP3	4	19125.80	27475.98	7.42		Galv. Steel	1.25		5	Drive Point Well	
WP4	4	19120.42	27514.92	10.34		Galv. Steel	1.25		5	Drive Point Well	
WP5	4	19100.63	27482.12	10.68		Galv. Steel	1.25		5	Drive Point Well	
WP6	4	19148.16	27533.67	3.57		Galv. Steel	1.25		5	Drive Point Well	
WP7	4	19155.75	27523.51	3.22		Galv. Steel	1.25		5	Drive Point Well	
WP8	4	19035.25	27376.24	12.17		Galv. Steel	1.25		5	Drive Point Well	
WP9	4	19089.91	27433.13	7.02		Galv. Steel	1.25		5	Drive Point Well	
0052	7	17623.00	26068.00			Galv. Steel	3.00			Pre-RAP	
0053	7	17421.00	25938.00							Pre-RAP	Not Found
0054	7	17643.00	25907.00			Steel	3.00			Pre-RAP	
0055	7	17823.00	26137.00							Pre-RAP	Not Found
0056	7	17821.00	26432.00							Pre-RAP	Not Found
0057	7	17715.00	26315.00							Pre-RAP	Not Found
0058	7	17886.00	26269.00							Pre-RAP	Not Found
0064	7	19215.00	26277.00		28.58	Steel	3.00			Pre-RAP	
0065	7	18988.00	25945.00		50.97	Steel	3.00			Pre-RAP	
0066	7	18867.00	25932.00		49.16	Steel	3.00			Pre-RAP	
0067	7	18468.00	26136.00		15.57	Steel	3.00			Pre-RAP	
0068	7	18919.00	26083.00			Steel	3.00			Pre-RAP	
0069	7	18719.00	25883.00							Pre-RAP	Not Found
0070	7	18719.00	25834.00		57.44	Steel	3.00			Pre-RAP	
0071	7	18919.00	25683.00			Steel	3.00			Pre-RAP	
0072	7	19119.00	25883.00			Steel	3.00			Pre-RAP	
0073	7	18919.00	25883.00			Steel	3.00			Pre-RAP	
0074	7	17307.00	25856.00			Steel	4.00			Pre-RAP	
0075	7	17159.00	25984.00							Pre-RAP	Not Found
0076	7	17274.00	26102.00							Pre-RAP	Not Found

APPENDIX B. OAK RIDGE NATIONAL LABORATORY WELL INVENTORY (Wells Sorted by WAG / Area)

Well I.D.	WAG or Area	Northing (X-10 Grid)	Easting (X-10 Grid)	Depth	Measured Depth	Casing Material	Casing Diameter	Screened, Perforated, or *Open Interval	Screened, Perforated, or *Open Length	Well Type (As Designated In Database)	Field Status
		(ft)	(ft)	(ft)	(ft)		(in.)	(ft.)	(ft.)		
0077	7	17407.00	25984.00							Pre-RAP	Not Found
0078	7	17282.00	25985.00							Pre-RAP	Not Found
0079	7	18837.00	26885.00							Pre-RAP	Not Found
0080	7	17145.00	25984.00							Pre-RAP	Not Found
0081	7	17306.00	25865.00			Steel	2.00			Pre-RAP	
0082	7	17304.00	25875.00			Steel	4.00			Pre-RAP	
0083	7	17285.00	26191.00		9.46	Galv. Steel	8.00			Pre-RAP	
0084	7	17162.00	26224.00		6.15	Galv. Steel	5.88			Pre-RAP	
0093	7	17058.00	25984.00		126.60	Steel	5.75			Pre-RAP	
0094	7	16960.00	25985.00		136.57	Steel	5.75			Pre-RAP	
0096	7	17496.00	26251.00		9.53	Galv. Steel	5.88			Pre-RAP	
0097	7	17598.00	26453.00		8.82	Galv. Steel	5.68			Pre-RAP	
0098	7	17715.00	26531.00		9.76	Galv. Steel	5.88			Pre-RAP	
0099	7	17777.00	26575.00		8.97	Galv. Steel	5.88			Pre-RAP	
0100	7	17408.00	25631.00							Pre-RAP	Not Found
0101	7	17495.00	25732.00							Pre-RAP	Not Found
0102	7	17093.00	26117.00							Pre-RAP	Not Found
0103	7	17074.00	25760.00		122.90	Steel	5.75			Pre-RAP	
0104	7	16957.00	25660.00		128.43	Steel	5.75			Pre-RAP	
0105	7	17324.00	25756.00			Steel	6.00			Pre-RAP	
0112	-7	19450.00	27012.00	95.00		Steel	5.50	*40-95	*55	Pre-RAP	
0113	7	18100.00	26586.00			Steel	6.00			Pre-RAP	
0114	7	18148.00	26433.00		115.62	PVC	8.00			Pre-RAP	
0115	7	18026.00	26155.00							Pre-RAP	Not Found
0116	7	17924.00	25807.00							Pre-RAP	Not Found
0117	7	17802.00	25836.00			Steel	6.00			Pre-RAP	
0118	7	17587.00	25848.00			Steel	6.00			Pre-RAP	
0119	7	17139.00	25680.00			Steel	6.00			Pre-RAP	
0120	7	17676.00	26840.00			Galv. Steel	6.00			Pre-RAP	Damaged
0121	7	17306.00	26698.00			Steel	4.00			Pre-RAP	
0122	7	18011.00	26348.00							Pre-RAP	Not Found
0124	7	17916.00	26079.00		9.31	Galv. Steel	5.68			Pre-RAP	
0125	7	17874.00	25995.00		9.91	Galv. Steel	5.88			Pre-RAP	
0127	7	17476.00	26719.00			Galv. Steel	6.00			Pre-RAP	

APPENDIX B. OAK RIDGE NATIONAL LABORATORY WELL INVENTORY (Wells Sorted by WAG / Area) .

Well I.D.	WAG or Area	Northing (X-10 Grid)	Easting (X-10 Grid)	Depth	Measured Depth	Casing Material	Casing Diameter	Screened, 'Perforated, or *Open Interval	Screened, 'Perforated, or *Open Length	Well Type (As Designated In Database)	Field Status
		(ft)	(ft)	(ft)	(ft)		(in.)	(ft.)	(ft.)		
0179	7	18832.00	26993.00	20.51		Galv. Steel	6.63	'0-21	'21	Pre-RAP	
0180	7	19220.00	27057.00	18.00		Galv. Steel	6.63	'0-18	'18	Pre-RAP	
0181	7	19021.00	27062.00	14.38		PVC	3.00	'0-14	'14	Pre-RAP	
0187	7	18786.00	27544.00	19.00		Galv. Steel	5.88	'0-19	'19	Pre-RAP	
0191	7	19008.00	28034.00	7.00	7.35	Galv. Steel	5.85	'0-7	'7	Pre-RAP	
0676	7	18796.91	26805.04	27.00	28.43	PVC	2.00	17-27	10	Piezometer	
0677	7	17341.55	26886.13	12.00		Stainless	2.00	7-12	5	Piezometer	
0678	7	18663.22	27727.56	71.30		PVC	2.00	61.3-71.3	10	Piezometer	
0679	-7	19429.35	27001.86	47.00	45.65	PVC	2.00	32-47	15	Piezometer	
0690	7	19009.82	27060.52	31.00	30.14	PVC	2.00	21-31	10	Piezometer	Not Found
0718	7	18863.66	26783.99	35.00	33.31	PVC	2.00	25-35	10	Piezometer	
0719	7	18848.63	26915.53	34.50	28.71	PVC	2.00	24.5-34.5	10	Piezometer	
0720	7	18821.23	27839.79	73.00		PVC	2.00	63-73	10	Piezometer	
0726	-7	17584.12	26233.32	13.00		PVC	2.00	7.7-12.7	5	Piezometer	
0778	7	16971.06	27181.64	15.00		PVC	2.00	10-15	5	Piezometer	
0779	7	16956.84	27184.43	48.50		PVC	2.00	38.5-48.5	10	Piezometer	
0927	7	18014.84	27964.36	400.00		Mild-Steel	6.63	*380-400	*20	Hydraulic Head	
0928	7	17969.34	27966.49	201.20		Mild-Steel	6.63	*182.3-201.2	*18.9	Hydraulic Head	
0929	7	17963.94	27976.47	101.00		Mild-Steel	6.63	*60.3-101	*40.7	Hydraulic Head	
0930	7	17225.06	27562.33	400.50		Mild-Steel	6.63	*380-400.5	*20.5	Hydraulic Head	
0931	7	17214.92	27535.95	200.50		Mild-Steel	6.63	*180.5-200.5	*20	Hydraulic Head	
0932	7	17206.13	27510.61	81.10		Mild-Steel	6.63	*62.3-81.1	*18.8	Hydraulic Head	
0933	7	17213.80	26724.48	399.10		Mild-Steel	6.63	*380.5-399.1	*18.6	Hydraulic Head	
0934	7	17195.99	26705.25	211.50		Mild-Steel	6.63	*189.7-211.5	*21.8	Hydraulic Head	
0935	7	17175.98	26689.95	80.50		Mild-Steel	6.63	*62-80.6	*18.6	Hydraulic Head	
0948	7	18959.25	27001.43	83.00		Stainless	4.00	62.1-82.1	20	RCRA Compliance	
0949	7	18977.16	27004.24	33.40		Stainless	2.10	17.2-33.1	15.9	RCRA Compliance	
1004	7	18805.38	27929.18	400.00		Mild-Steel	4.50	*380-400	*20	Hydraulic Head	
1005	7	18809.57	27904.42	238.00		Mild-Steel	4.50	*218-238	*20	Hydraulic Head	
1006	7	18815.87	27875.83	80.00		Mild-Steel	4.50	*60-80	*20	Hydraulic Head	
1072	-7	19294.30	26168.99	70.00		Stainless	4.00	55-70	15	RCRA Compliance	
1073	-7	19270.61	26177.24	25.60		Stainless	2.10	15.6-25.6	10	RCRA Compliance	
1076	7	17882.74	25858.89	20.00		Stainless	2.10	9.4-19.4	10	RCRA Compliance	
1077	7	17872.01	25815.09	82.60		Stainless	4.00	67.6-82.6	15	RCRA Compliance	

APPENDIX B. OAK RIDGE NATIONAL LABORATORY WELL INVENTORY (Wells Sorted by WAG / Area) .

Well I.D.	WAG or Area	Northing (X-10 Grid)	Easting (X-10 Grid)	Depth	Measured Depth	Casing Material	Casing Diameter	Screened, Perforated, or *Open Interval	Screened, Perforated, or *Open Length	Well Type (As Designated In Database)	Field Status
		(ft)	(ft)	(ft)	(ft)		(in.)	(ft.)	(ft.)		
1078	7	17406.94	25613.69	20.00		Stainless	2.10	8.75-18.75	10	RCRA Compliance	
1079	7	17389.59	25612.66	70.00		Stainless	4.00	55-70	15	RCRA Compliance	
1080	7	16854.85	25971.36	20.00		Stainless	2.10	9.7-19.7	10	RCRA Compliance	
1083	7	16997.52	27175.92	15.00		Stainless	2.10	2.3-12.9	10.6	RCRA Compliance	
1084	7	17282.35	27852.14	15.08		Stainless	2.10	9.5-14.8	5.3	RCRA Compliance	
1085	7	17299.12	27858.72	72.80		Stainless	4.00	57.8-72.8	15	RCRA Compliance	
1086	7	17454.77	28117.01	14.75		Stainless	2.10	4.2-14.6	10.4	RCRA Compliance	
BH-1	7	17648.90	27455.10							Pre-RAP	Not Found
SB-1	7	17594.20	27831.70	30.11		PVC	4.00			Pre-RAP	
SB-2	7	17619.50	27630.20			PVC	4.00			Pre-RAP	
SB-20	7	17430.30	27636.10			PVC	4.00			Pre-RAP	
SB-4	7	17583.30	27685.50			PVC	4.00			Pre-RAP	
SB-6	7	17625.70	27531.70			PVC	4.00			Pre-RAP	
T-77	7	17709.40	27594.40			PVC	4.00			Pre-RAP	
T403	7	17703.00	25917.00			PVC	4.00			Pre-RAP	
T404	7	17619.00	25857.00			PVC	4.00			Pre-RAP	
T405	7	17556.00	26098.00			PVC	4.00			Pre-RAP	
T408	7	17502.00	26185.00			PVC	4.00			Pre-RAP	
T411	7	17299.00	25798.00			PVC	4.00			Pre-RAP	
T412	7	17309.00	25687.00			PVC	4.00			Pre-RAP	
T416	7	17264.00	26100.00			PVC	4.00			Pre-RAP	
T418	7	17400.00	26548.00			PVC	4.00			Pre-RAP	
T419	7	17342.00	26564.00			PVC	4.00			Pre-RAP	
T5-1	7	17665.00	26842.00			Steel	8.00			Pre-RAP	
T5-2	7	17518.00	26822.00							Pre-RAP	Not Found
T5-3	7	17449.00	26794.00			Steel	3.00			Pre-RAP	
T5-4	7	17340.00	26749.00	34.16		Steel	3.00			Pre-RAP	
T5-5	7	17315.00	26701.00			Galv. Steel	6.00			Pre-RAP	
T5-6	7	17302.00	26629.00			Steel	4.00			Pre-RAP	
T5-7	7	17378.00	26678.00							Pre-RAP	Not Found
T5-8	7	17479.00	26720.00			Steel	3.00			Pre-RAP	
T5-9	7	17555.00	26754.00			Steel	3.00			Pre-RAP	Damaged
T6-1	7	18731.00	27795.00	73.66		Galv. Steel	4.00			Pre-RAP	
T6-2	7	18758.00	27921.00							Pre-RAP	Not Found

APPENDIX B. OAK RIDGE NATIONAL LABORATORY WELL INVENTORY (Wells Sorted by WAG / Area) .

Well I.D.	WAG or Area	Northing (X-10 Grid)	Easting (X-10 Grid)	Depth	Measured Depth	Casing Material	Casing Diameter	Screened, 'Perforated, or *Open Interval	Screened. 'Perforated, or *Open Length	Well Type (As Designated In Database)	Field Status
		(ft)	(ft)	(ft)	(ft)		(in.)	(ft.)	(ft.)		
T6-3	7	18691.00	28005.00	74.40		Galv. Steel	4.00			Pre-RAP	
T6-4	7	18592.00	28035.00			Galv. Steel	4.00			Pre-RAP	
T7-1	7	17535	27652			Galv. Steel	4.00			Pre-RAP	
T7-10	7	17385.80	27729.00			Galv. Steel	3.50			Pre-RAP	
T7-11	7	17385	27785							Pre-RAP	Not Found
T7-12	7	17402	27772							Pre-RAP	Not Found
T7-13	7	17408	27765	8						Pre-RAP	Not Found
T7-14	7	17422	27783							Pre-RAP	Not Found
T7-15	7	17516.50	27831.00			Galv. Steel	2.00			Pre-RAP	
T7-16	7	17514.70	27621.90			Galv. Steel	10.00			Pre-RAP	?
T7-17	7	17475	27610							Pre-RAP	
T7-18	7	17385	27585							Pre-RAP	
T7-19	7	17350	27570							Pre-RAP	
T7-2	7	17801	27596							Pre-RAP	Not Found
T7-20	7	17435.40	27646.50			Galv. Steel	6.63			Pre-RAP	
T7-21	7	17383.30	27729.10	49		PVC	4.00			Pre-RAP	
T7-22	7	17395.30	27725.40	49		PVC	4.00			Pre-RAP	
T7-23	7	17419.20	27720.00	49		PVC	4.00			Pre-RAP	
T7-24	7	17443.30	27714.60	49		PVC	4.00			Pre-RAP	
T7-25	7	17483.10	27709.40	49		PVC	4.00			Pre-RAP	
T7-26	7	17659.70	27632.30	49		PVC	4.00			Pre-RAP	Not Found
T7-27	7	17532.60	27702.60			PVC	4.00			Pre-RAP	
T7-28	7	17507	27504			PVC	4.00			Pre-RAP	
T7-29	7	17638.40	27698.20			PVC	4.00			Pre-RAP	
T7-3	7	17468.00	27659.70	43		Galv. Steel	3.50			Pre-RAP	
T7-3A	7	17470.80	27667.70							Pre-RAP	Not Found
T7-4	7	17351.50	27632.50			Galv. Steel	3.50			Pre-RAP	
T7-4A	7	17350.50	27642.30			Galv. Steel	6.63			Pre-RAP	
T7-5	7	17376.90	27540.90			Galv. Steel	3.50			Pre-RAP	
T7-6	7	17495.30	27567.80			PVC	4.00			Pre-RAP	
T7-7	7	17575.60	27590.40			PVC	4.00			Pre-RAP	
T7-8	7	17380	27610							Pre-RAP	
T7-9	7	17369.90	27656.60			Galv. Steel	6.63			Pre-RAP	

APPENDIX B. OAK RIDGE NATIONAL LABORATORY WELL INVENTORY (Wells Sorted by WAG / Area) .

Well I.D.	WAG or Area	Northing (X-10 Grid)	Easting (X-10 Grid)	Depth	Measured Depth	Casing Material	Casing Diameter	Screened, 'Perforated, or *Open Interval	Screened, 'Perforated, or *Open Length	Well Type (As Designated in Database)	Field Status
		(ft)	(ft)	(ft)	(ft)		(In.)	(ft.)	(ft.)		
U26	7	17013.38	26803.03	13.00		Galv. & Stnls. Steel	2.00	6.0-9.2	3.2	USGS	
U27	7	17441.68	27980.76	11.10		Galv. & Stnls. Steel	2.00	7.9-11.1	3.2	USGS	
WT5-1	7	17169.00	26361.00			Galv. Steel	5.88			Pre-RAP	
WT5-2	7	17272.00	26428.00			Galv. Steel	5.88			Pre-RAP	
WT5-3	7	17358.00	26439.00	14.55		Galv. Steel	5.88			Pre-RAP	
WT5-4	7	17418.00	26452.00			Galv. Steel	5.88			Pre-RAP	
WT5-5	7	17492.00	26489.00	10.74		Galv. Steel	5.88			Pre-RAP	
WT5-6	7	17521.00	26538.00			Galv. Steel	5.88			Pre-RAP	
WT5-7	7	17140.00	26345.00			Galv. Steel	3.00			Pre-RAP	
WT5-8	7	17065.00	26328.00	49.49		Galv. Steel	4.00			Pre-RAP	
WT7-1	7	17102	27235			Galv. Steel	6.63			Pre-RAP	
WT7-2	7	17160	27262	6.74		Galv. Steel	6.00			Pre-RAP	
WT7-3	7	17223	27285	14.47		Galv. Steel	6.00			Pre-RAP	
WT7-4	7	17291	27291			Galv. Steel	6.00			Pre-RAP	
WT7-5	7	17384	27311	8.29		Galv. Steel	6.00			Pre-RAP	
WT7-5A	7	17415	27320			Galv. Steel	3.50			Pre-RAP	
WT7-6	7	17443	27318			Galv. Steel	6.00			Pre-RAP	
WT7-6A	7	17481	27320			Galv. Steel	3.50			Pre-RAP	
WT7-7	7	17512	27322	11.31		Galv. Steel	4.00			Pre-RAP	
WT7-8	7	17336	27117	8.94		Galv. Steel	6.00			Pre-RAP	
0657	8	16803.36	32190.75	26.00	26.46	PVC	2.00	16-26	10	Piezometer	
0658	8	16957.54	32442.11	26.00	26.14	PVC	2.00	16-26	10	Piezometer	
0659	8	16903.24	32658.70	27.00	24.92	PVC	2.00	17-27	10	Piezometer	
0661	8	16746.67	32699.20	31.00	30.50	PVC	2.00	21-31	10	Piezometer	
0664	8	16665.09	32211.59	19.50	19.02	PVC	2.00	9.5-19.5	10	Piezometer	
0887	8	16763.01	32312.64	29.00		Stainless	2.07	21.1-26.5	5.4	Water Quality	Not Found
0888	8	16589.43	32373.31	20.10		Stainless	2.07	14.7-20.1	5.4	Water Quality	
0889	8	16642.95	32273.75	21.00		Stainless	2.07	15.4-20.8	5.4	Water Quality	
0890	8	16618.84	32516.96	51.00		Stainless	2.07	40-50	10	Water Quality	
0891	8	16575.21	32488.11	24.00		Stainless	2.07	18.5-23.9	5.4	Water Quality	
0892	8	16872.44	32600.83	24.50		Stainless	2.07	17.2-22.6	5.4	Water Quality	Not Found
0893	8	16609.21	32503.90	21.00		Stainless	2.07	15.6-21	5.4	Water Quality	

APPENDIX B. OAK RIDGE NATIONAL LABORATORY WELL INVENTORY (Wells Sorted by WAG / Area) .

Well I.D.	WAG or Area	Northing (X-10 Grid)	Easting (X-10 Grid)	Depth	Measured Depth	Casing Material	Casing Diameter	Screened, 'Perforated, or *Open Interval	Screened, 'Perforated, or *Open Length	Well Type (As Designated In Database)	Field Status
		(ft)	(ft)	(ft)	(ft)		(in.)	(ft.)	(ft.)		
0694	8	?16675.54	?32637.63	21.10		Stainless	2.07	15.7-21.1	5.4	Water Quality	
1026	8	17831.44	31795.70	30.00		PVC	2.00	15-30	15	Piezometer	
1027	8	17460.46	31623.78	27.00		PVC	2.00	14-24	10	Piezometer	
1028	8	17241.06	31520.57	31.00		PVC	2.00	18-28	10	Piezometer	
1029	8	19006.89	32567.26	98.00		PVC	2.00	68-98	30	Piezometer	
1030	8	18938.94	32331.37	46.50		PVC	2.00	26.5-46.5	20	Piezometer	
1031	8	18918.80	32032.02	65.00		PVC	2.00	45-65	20	Piezometer	
1032	8	18963.83	31515.01	40.00		PVC	2.00	20-40	20	Piezometer	
1033	8	19135.18	30573.80	18.00		PVC	2.00	8-18	10	Piezometer	
1087	-8	19935.31	29497.73	23.00		Stainless	2.10	12.2-22.5	10.3	RCRA Compliance	
1088	-8	19155.72	30367.64	35.00		Stainless	2.10	19.2-34.2	15	RCRA Compliance	
1089	-8	19159.16	31431.76	30.18		Stainless	2.10	14.1-29.9	15.8	RCRA Compliance	
1090	-8	19157.68	31441.95	73.10		Stainless	4.00	57.4-72.8	15.4	RCRA Compliance	
1091	-8	18785.40	32186.40	22.65		Stainless	2.10	12.4-22.4	10	RCRA Compliance	
1092	-8	18752.79	32378.93	87.50		Stainless	4.00	71.6-86.6	15.0	RCRA Compliance	
1093	-8	18762.57	32402.19	48.25		Stainless	2.10	28-48	20	RCRA Compliance	
0670	9	18697.47	31450.94	40.00		PVC	2.00	29.7-39.7	10	Piezometer	
0671	9	18581.74	31365.71	35.00		PVC	2.00	24.7-34.7	10	Piezometer	
0672	9	18508.96	31420.23	24.00		PVC	2.00	13.7-23.7	10	Piezometer	
0673	-9	18556.40	31561.94	31.50		PVC	2.00	19-29	10	Piezometer	
0674	-9	18647.27	31542.63	11.50		PVC	2.00	6.5-11.5	5	Piezometer	
0675	9	18486.97	31493.50	19.00		PVC	2.00	8.7-18.7	10	Piezometer	
0698	-9	18627.49	31544.78	18.00		PVC	2.00	8-18	10	Piezometer	
1096	-9	18657.31	31549.54	23.20		Stainless	2.10	12.3-22.3	10	RCRA Compliance	
1097	9	18499.60	31506.26	17.80		Stainless	2.10	7.3-17.3	10	RCRA Compliance	
1109	9	18634.87	31422.87	29.70		Fiberglass	3.00	16.2-26.2	10	CERCLA	
1110	9	18581.39	31533.62	24.90		Fiberglass	3.00	12.7-22.7	10	CERCLA	
1111	9	18518.64	31525.86	24.70		Fiberglass	3.00	12.3-22.3	10	CERCLA	
1112	9	18515.45	31444.65	24.70		Fiberglass	3.00	8.7-18.7	10	CERCLA	
HR1	-9	18445.00	31105.00	100.30		Steel	3.50			Pre-RAP	Not Found
0797	11	34945.9	28346.1	60.00	59.74	PVC	2.00	50-60	10	Piezometer	
0798	11	34662.4	27621.9	47.00	47.09	PVC	2.00	37-47	10	Piezometer	
0799	11	35189.5	27811.3	35.00	31.61	PVC	2.00	25-35	10	Piezometer	
0800	11	35280	28547.3	73.00	72.40	PVC	2.00	63-73	10	Piezometer	

APPENDIX B. OAK RIDGE NATIONAL LABORATORY WELL INVENTORY (Wells Sorted by WAG / Area) .

Well I.D.	WAG or Area	Northing (X-10 Grid)	Easting (X-10 Grid)	Depth	Measured Depth	Casing Material	Casing Diameter	Screened, 'Perforated, or *Open Interval	Screened, 'Perforated, or *Open Length	Well Type (As Designated In Database)	Field Status
		(ft)	(ft)	(ft)	(ft)		(in.)	(ft.)	(ft.)		
0801	11	35402	28250.1	39.00	39.44	PVC	2.00	29-39	10	Piezometer	
0802	11	35005	28944.1	49.90	47.69	PVC	2.00	34.9-49.9	15	Piezometer	
0803	11	35542.7	27668.4	50.00	46.60	PVC	2.00	40-50	10	Piezometer	
0804	-11	35765	28318.2	79.00	65.53	PVC	2.00	67-77	10	Piezometer	
0805	-11	34848.1	27916.3	60.00		PVC	2.00	32-47	15	Piezometer	
0907	-11	34630.3	28272.2	75.00		PVC	2.00	54-74	20	Piezometer	
0908	-11	34520.7	28882.6	24.00		PVC	2.00	12-22	10	Piezometer	
0909	11	34738.3	28730.4	24.00		PVC	2.00	14-24	10	Piezometer	
0910	11	34955.1	29123.2	29.00		PVC	2.00	18-28	10	Piezometer	
0911	11	35304.2	29078.0	102.00		PVC	2.00	82-102	20	Piezometer	
1139	-11	34507.6	28672.1	33.50		Stainless	2.10	7.8-32.8	25	RCRA Compliance	
1140	-11	34495.4	28062.6	62.50		Stainless	2.10	32.2-62.3	30.1	RCRA Compliance	
1141	-11	34486.2	28120.3	97.50		Stainless	4.00	82.2-97.2	15	RCRA Compliance	
1142	-11	35100.0	27494.6	739.5		Stainless	?			RCRA Compliance	P&A
1143	11	35063.8	27538.8	52.50		Stainless	4.00	37.5-52.2	14.7	RCRA Compliance	
1144	-11	35334.1	27389.8	122.30		Stainless	4.00	102.1-122.1	20	RCRA Compliance	
1145	11	35585.1	27642.3	59.10		Stainless	2.10	38-58.9	20.9	RCRA Compliance	
1146	11	35702.4	28304.6	132.50		Stainless	4.00	107.1-117.1	10	RCRA Compliance	
1147	11	35694.8	28321.3	97.90		Stainless	4.00	77.7-97.7	20	RCRA Compliance	
1148	-11	35003.8	29668.2	67.50		Stainless	4.00	52.2-67.2	15	RCRA Compliance	
1149	-11	34976.9	29671.9	35.00		Stainless	2.10	17.5-32.5	15	RCRA Compliance	
1246	-11	35085.2	27476.7	86.63		Stainless	2.10	56.4-71.4	15	RCRA Compliance	
0912	12	18839.08	37447.46	73.00		PVC	2.00	63-73	10	Piezometer	
0913	12	18653.47	37196.52	67.00		PVC	2.00	57-67	10	Piezometer	
0914	12	18596.27	37496.58	42.00		PVC	2.00	32-42	10	Piezometer	Damaged
0915	12	18557.75	37817.57	20.00	20.36	PVC	2.00	10-20	10	Piezometer	
0916	12	18412.45	37374.17	56.00		PVC	2.00	46-56	10	Piezometer	
0917	12	18396.97	37610.90	50.00		PVC	2.00	40-50	10	Piezometer	
0205	-13	17954.00	20302.00	18.13		Galv. Steel	6.63	'0-18	'18	Pre-RAP	Damaged
0206	-13	18028.00	20487.00	19.65		Galv. Steel	6.63	'0-20	'20	Pre-RAP	
0207	-13	18060.00	20580.00	18.91		Galv. Steel	6.63	'0-19	'19	Pre-RAP	Damaged
0208	-13	18121.00	20729.00	19.11		Galv. Steel	6.63	'0-19	'19	Pre-RAP	Damaged
0209	-13	18168.00	20851.00	18.31		Galv. Steel	6.63	'0-18	'18	Pre-RAP	
0210	-13	18545.00	21150.00	310.00		Steel	6.25	*55-310	*255	Pre-RAP	Not Found

APPENDIX B. OAK RIDGE NATIONAL LABORATORY WELL INVENTORY (Wells Sorted by WAG / Area) .

Well I.D.	WAG or Area	Northing (X-10 Grid)	Easting (X-10 Grid)	Depth	Measured Depth	Casing Material	Casing Diameter	Screened, 'Perforated, or *Open Interval	Screened, 'Perforated, or *Open Length	Well Type (As Designated In Database)	Field Status
		(ft)	(ft)	(ft)	(ft)		(in.)	(ft.)	(ft.)		
0918	-13	18352.81	19993.17	27.00		PVC	2.00	17-27	10	Piezometer	
0919	-13	17882.24	20143.38	31.00		PVC	2.00	21-31	10	Piezometer	
0920	-13	17930.02	20271.65	25.00		PVC	2.00	15-25	10	Piezometer	
0574	17	21985.05	36463.77	14.50	14.06	PVC	2.00	4.2-14.2	10	Piezometer	Damaged
0586	17	22011.15	36668.47	42.00	42.43	PVC	2.00	31.7-41.7	10	Piezometer	Damaged
0609	17	21696.92	36680.22	33.50	33.37	PVC	2.00	23.2-32.2	10	Piezometer	
0734	17	21445.61	36713.83	58.00	58.11	PVC	2.00	48-58	10	Piezometer	Damaged
0752	17	21549.36	36551.06	65.00	65.18	PVC	4.00	55-65	10	Piezometer	
0753	17	21540.70	36527.90	32.50	32.56	PVC	2.00	22.2-32.2	10	Piezometer	
0754	17	21548.71	37001.68	34.00	32.62	PVC	2.00	24-34	10	Piezometer	Damaged
0764	17	21925.57	37026.93	22.50	22.78	PVC	2.00	12.2-22.2	10	Piezometer	Damaged
0765	17	21924.09	37043.14	74.00		PVC	4.00	62-72	10	Piezometer	Damaged
0769	17	21768.10	37083.11	31.00		PVC	2.00	21-31	10	Piezometer	Damaged
0794	17	21647.96	36929.81	12.00	10.50	PVC	2.00	5-12	7	Piezometer	Not Found
0795	17	21633.40	36901.08	12.00	12.39	PVC	2.00	5-12	7	Piezometer	Not Found
0796	17	21653.93	36903.88	48.00	12.25	PVC	2.00	38-48	10	Piezometer	Not Found
0895	17	21362.67	37353.74	26.00	26.22	PVC	2.00	15.7-25.7	10	Piezometer	
0896	17	21765.46	37423.05	68.00		PVC	2.00	58-68	10	Piezometer	Damaged
0897	17	21991.25	37448.08	22.00	22.49	PVC	2.00	12-22	10	Piezometer	
0899	17	21759.16	37634.63	70.00	69.85	PVC	2.00	60-70	10	Piezometer	
0900	17	21623.55	37557.88	36.00	36.87	PVC	2.00	25.7-35.7	10	Piezometer	
0901	-17	21584.41	37838.26	53.50	50.80	PVC	2.00	43.2-53.2	10	Piezometer	
0902	17	21307.57	37478.74	22.00	21.95	PVC	2.00	11.7-21.7	10	Piezometer	Not Found
0903	17	21250.54	37098.38	62.50	63.13	PVC	2.00	52.2-62.2	10	Piezometer	
0904	17	21843.95	37305.19	45.00		PVC	2.00	35-45	10	Piezometer	
0905	17	21606.94	37303.77	42.00	42.59	PVC	2.00	31.7-41.7	10	Piezometer	
0906	17	21361.76	37338.64	49.00		PVC	4.00	37-47	10	Piezometer	
1196	-17	21988.52	37553.85	18.30		Stainless	2.10	8-18	10	RCRA Compliance	
1197	17	21732.70	37633.94	49.00		Stainless	4.00	33.6-48.6	15	RCRA Compliance	
1198	-17	21214.15	37984.98	43.30		Stainless	2.10	27.8-42.8	15	RCRA Compliance	
1199	-17	21206.57	37967.59	73.00		Stainless	4.00	52.6-72.6	20	RCRA Compliance	
1200	17	21339.18	36317.79	40.00		Stainless	2.10	29.8-39.8	10	RCRA Compliance	
1201	17	21566.89	36414.64	48.00		Stainless	4.00	37.6-47.6	10	RCRA Compliance	
1202	17	21581.53	36414.77	20.30		Stainless	4.00	10.1-20.1	10	RCRA Compliance	

APPENDIX B. OAK RIDGE NATIONAL LABORATORY WELL INVENTORY (Wells Sorted by WAG / Area) .

Well I.D.	WAG or Area	Northing (X-10 Grid)	Easting (X-10 Grid)	Depth	Measured Depth	Casing Material	Casing Diameter	Screened, 'Perforated, or *Open Interval	Screened, 'Perforated, or *Open Length	Well Type (As Designated In Database)	Field Status
		(ft)	(ft)	(ft)	(ft)		(in.)	(ft.)	(ft.)		
1203	17	21916.39	36272.97	18.00		Stainless	2.10	7.6-17.6	10	RCRA Compliance	
0921	18	18309.51	42974.95	35.00		PVC	2.00	25-35	10	Piezometer	Damaged
0922	18	18113.60	43387.53	41.00		PVC	2.00	31-41	10	Piezometer	Damaged
0923	18	18260.55	43778.82	76.00		PVC	2.00	61-76	15	Piezometer	
0924	18	18592.18	43471.17	51.00		PVC	2.00	36-51	15	Piezometer	
0925	18	18625.05	43198.46	30.00		PVC	2.00	20-30	10	Piezometer	
0926	18	18506.94	43387.62	42.00		PVC	2.00	32-42	10	Piezometer	
UG1	-19	15708.58	37114.49	32.02		Steel & Stnls. Steel	6.30	26-31	5	USGS	
UG2	19	15670.28	36989.90	300.79		Steel	6.30	*246-301	*55	USGS	
UG3	19	15716.02	36921.54	200.05		Steel	6.30	*180-200	*20	USGS	
PZ10	WBW	27100	45165	3.8		PVC	2			Piezometer	
PZ11	WBW	27065	45200	2.5		PVC	2			Piezometer	
PZ12	WBW	27075	45190	1.6		PVC	2			Piezometer	
PZ13	WBW	27050	45185	2.0		PVC	2			Piezometer	
PZ14	WBW	27060	45180	2.1		PVC	2			Piezometer	
PZ15	WBW	27030	45170	3.5		PVC	2			Piezometer	
PZ16	WBW	27120	45165	4.6		PVC	2			Piezometer	
PZ17	WBW	27135	45105	2.3		PVC	2			Piezometer	
PZ18	WBW	27110	45110	<6.5		PVC	2			Piezometer	
PZ19	WBW	27085	45115	<6.5		PVC	2			Piezometer	
PZ20	WBW	27070	45115	<6.5		PVC	2			Piezometer	
PZ21	WBW	27065	45120	<6.5		PVC	2			Piezometer	
PZ22	WBW	27065	45125	<6.5		PVC	2			Piezometer	
PZ4	WBW	27125	45105	4.9		PVC	2			Piezometer	
PZ5	WBW	27150	45165	3.3		PVC	2			Piezometer	
PZ6	WBW	27150	45180	2.1		PVC	2			Piezometer	
PZ8	WBW	27120	45140	5.4		PVC	2			Piezometer	
PZ9	WBW	27120	45150	3.2		PVC	2			Piezometer	
W1	WBW	26100	46000	92		Steel	4.00	87-92	5	Piezometer	1
W2	WBW	27590	46010	92		Steel	4.00	87-92	5	Piezometer	1
W3	WBW	26560	46990	75		PVC	2.00	70-75	5	Piezometer	1
W5	WBW	26920	45860	46		PVC	2.00	41-46	5	Piezometer	1
W6	WBW	27580	47490	49		PVC	2.00	44-49	5	Piezometer	1

APPENDIX B. OAK RIDGE NATIONAL LABORATORY WELL INVENTORY (Wells Sorted by WAG / Area) .

Well I.D.	WAG or Area	Northing (X-10 Grid)	Easting (X-10 Grid)	Depth	Measured Depth	Casing Material	Casing Diameter	Screened, 'Perforated, or *Open Interval	Screened, 'Perforated, or *Open Length	Well Type (As Designated In Database)	Field Status
		(ft)	(ft)	(ft)	(ft)		(in.)	(ft.)	(ft.)		
W7	WBW	26910	45000	92		Steel	2.00	87-92	5	Piezometer	1
CA11	WCR	22455.00	17910.00	34.40		Steel	4.00			Pre-RAP	Not Found
CL-1-A	WCR	27002.36	18976.91		4.59	PVC	2.00	2.5-5	2.5	Pre-RAP	
CL-1-B	WCR	27002.36	18976.91		11.76	PVC	2.00	8-12	4	Pre-RAP	
CL-1-C	WCR	27002.36	18976.91		18.92	PVC	2.00	15.3-19.3	4	Pre-RAP	
CL-1-D	WCR	27002.36	18976.91		33.56	PVC	2.00	30-34	4	Pre-RAP	
CL-2-A	WCR	27158.24	19942.16		4.96	PVC	2.00	2.5-5	2.5	Pre-RAP	
CL-2-B	WCR	27158.24	19942.16		11.85	PVC	2.00	8-12	4	Pre-RAP	
CL-2-C	WCR	27158.24	19942.16			PVC	2.00			Pre-RAP	
CL-2-D	WCR	27158.24	19942.16		35.06	PVC	2.00	30-35	5	Pre-RAP	
CL-3-A	WCR	26940.81	20067.44		5.2	PVC	2.00	2.5-5	2.5	Pre-RAP	
CL-3-B	WCR	26940.81	20067.44		11.64	PVC	2.00	8-12	4	Pre-RAP	
CL-3-C	WCR	26940.81	20067.44		20.12	PVC	2.00	15-20	5	Pre-RAP	
CL-3-D	WCR	26940.81	20067.44		34.7	PVC	2.00	30-35.5	5.5	Pre-RAP	
CL-4-A	WCR	26404.57	19036.86		4.8	PVC	2.00	2-5	3	Pre-RAP	
CL-4-B	WCR	26404.57	19036.86		11.66	PVC	2.00	7.5-12	4.5	Pre-RAP	
CL-4-C	WCR	26404.57	19036.86		19.86	PVC	2.00	14.2-20.5	6.3	Pre-RAP	
CL-4-D	WCR	26404.57	19036.86		30.32	PVC	2.00	24-30	6	Pre-RAP	
CL-5-A	WCR	26289.92	19007.71		4.61	PVC	2.00	2.5-5	2.5	Pre-RAP	
CL-5-B	WCR	26289.92	19007.71		11.94	PVC	2.00	8-12	4	Pre-RAP	
CL-5-C	WCR	26289.92	19007.71			PVC	2.00			Pre-RAP	
CL-5-D	WCR	26289.92	19007.71		35.04	PVC	2.00	29.8-35	5.2	Pre-RAP	
CR-10A	WCR	25115.00	19994.35	56.00	55.89	PVC	4.00	46-56	10	Pre-RAP	
CR-10B	WCR	25066.07	19994.03	176.00	88.49	Steel	8.00	166-176	10	Pre-RAP	
CR-11A	WCR	27256.38	20479.67	100.00	98.77	PVC	4.00	90-100	10	Pre-RAP	
CR-11B	WCR	27266.49	20535.36	162.20	162.34	PVC	4.00	151.7-161.7	10	Pre-RAP	
CR-12A	WCR	26934.10	21115.06	100.00	100.7	PVC	4.00	90-100	10	Pre-RAP	
CR-12B	WCR	726934.00	721115.00	264.00		PVC	4.00			Pre-RAP	Not Found
CR-13A	WCR	25391.60	22772.53	101.00	99.93	PVC	4.00	91-101	10	Pre-RAP	Damaged
CR-13B	WCR	25373.50	22728.80	205.00	171.37	PVC	4.00	161.6-171.6	10	Pre-RAP	
CR-14A	WCR	25358.22	23970.27	47.00	45.56	PVC	4.00	37.8-47.8	10	Pre-RAP	
CR-14B	WCR	25328.55	23951.20	243.80		PVC	4.00			Pre-RAP	
CR-15A	WCR	25060.04	23333.63	68.30	65.86	PVC	4.00	58.5-68.5	10	Pre-RAP	
CR-15B	WCR	24987.59	23352.66	102.00	100.63	PVC	4.00	92-102	10	Pre-RAP	

APPENDIX B. OAK RIDGE NATIONAL LABORATORY WELL INVENTORY (Wells Sorted by WAG / Area) .

Well I.D.	WAG or Area	Northing (X-10 Grid)	Easting (X-10 Grid)	Depth	Measured Depth	Casing Material	Casing Diameter	Screened, Perforated, or *Open Interval	Screened, Perforated, or *Open Length	Well Type (As Designated In Database)	Field Status
		(ft)	(ft)	(ft)	(ft)		(in.)	(ft.)	(ft.)		
CR-15A	WCR	26721.45	22329.66	100.00	100.02	PVC	4.00	90-100	10	Pre-RAP	
CR-15B	WCR	26724.36	22367.34	200.00	119.44	PVC	4.00	109.8-119.8	10	Pre-RAP	
CR-17A	WCR	26201.12	19911.13	22.00		PVC	4.00			Pre-RAP	
CR-17B	WCR	26195.73	19901.08	51.40		PVC	4.00			Pre-RAP	
CR-18A	WCR	27909.43	17835.15	28.00		PVC	4.00			Pre-RAP	
CR-18B	WCR	27886.23	17837.37	74.50		PVC	4.00			Pre-RAP	
CR-19A	WCR	27003.83	19255.12	73.00	70.73	PVC	4.00	63-73	10	Pre-RAP	
CR-19B	WCR	26979.12	19252.31	171.00	169.43	PVC	4.00	161-171	10	Pre-RAP	
CR-1A	WCR	24255.68	16238.91	55.50	55.46	PVC	4.00	45-56	11	Pre-RAP	
CR-1B	WCR	24254.13	16256.91	99.00	98.96	PVC	4.00	89-99	10	Pre-RAP	
CR-20A	WCR	25129.41	19537.92	92.80	92.12	PVC	4.00	83-93	10	Pre-RAP	
CR-20B	WCR	25099.94	19532.48	137.00	128.79	PVC	4.00	126.8-136.8	10	Pre-RAP	
CR-2A	WCR	725054.96	715379.37	28.90	28.27	PVC	4.00	18-28	10	Pre-RAP	
CR-2B	WCR	24989.66	15380.93	74.00	74.14	PVC	4.00	65.8-75.8	10	Pre-RAP	
CR-3A	WCR	24734.80	17132.92	76.80	76.64	PVC	4.00	66.5-76.5	10	Pre-RAP	
CR-3B	WCR	24739.15	17118.69	123.00	124.13	PVC	4.00	113-123	10	Pre-RAP	
CR-4A	WCR	25131.49	17104.59	19.30	27.23	PVC	4.00			Pre-RAP	
CR-4B	WCR	25139.98	17082.96	110.00	50.37	PVC	4.00			Pre-RAP	
CR-5A	WCR	24758.16	18059.48	51.00	49.27	PVC	4.00	41-51	10	Pre-RAP	
CR-5B	WCR	24761.43	17997.35	142.60	142.98	PVC	4.00	132.6-142.6	10	Pre-RAP	
CR-6A	WCR	25254.73	17947.81	73.00	72.38	PVC	4.00			Pre-RAP	
CR-6B	WCR	25237.44	17957.39	132.00	128.29	PVC	2.00			Pre-RAP	
CR-7A	WCR	26396.92	18303.59	54.80		PVC	4.00			Pre-RAP	
CR-7B	WCR	26404.30	18327.85	149.00		PVC	4.00			Pre-RAP	
CR-8A	WCR	26185.01	18955.07	73.90	72.76	PVC	4.00			Pre-RAP	
CR-8B	WCR	26159.52	18968.86	159.00	160.22	PVC	4.00			Pre-RAP	
CR-9A	WCR	27947.12	18965.42	100.00	100.45	PVC	4.00	90-100	10	Pre-RAP	
CR-9B	WCR	27940.58	18970.15	187.00	184.47	PVC	4.00	177-187	10	Pre-RAP	
OW-6	WCR	25264.31	18029.92			PVC	2.00			Pre-RAP	
PW-6	WCR	25269.34	18051.85			PVC	4.00			Pre-RAP	
WCR-1	WCR	27920.67	18551.27			Steel	4.00			Pre-RAP	
WCR-2	WCR	27358.28	18794.31			Steel	4.00			Pre-RAP	
WCR-3	WCR	26557.72	19121.52			PVC	2.00			Pre-RAP	
WCR-4	WCR	26074.25	18970.29			Steel	4.00			Pre-RAP	

APPENDIX B. OAK RIDGE NATIONAL LABORATORY WELL INVENTORY (Wells Sorted by WAG / Area) .											
Well I.D.	WAG or Area	Northing (X-10 Grid)	Easting (X-10 Grid)	Depth	Measured Depth	Casing Material	Casing Diameter	Screened, *Perforated, or *Open Interval	Screened, *Perforated, or *Open Length	Well Type (As Designated in Database)	Field Status
		(ft)	(ft)	(ft)	(ft)		(in.)	(ft.)	(ft.)		
WCR-5	WCR	25391.57	18550.95			PVC	4.00			Pre-RAP	

APPENDIX C

PLUGGING AND ABANDONMENT PROCEDURES

APPROVALS

Plugging and Abandonment Plan for Wells and Coreholes at Oak Ridge National Laboratory Oak Ridge, Tennessee (ORNL/ER-119)

Appendix C—Plugging and Abandonment Procedures

ORNL Groundwater Protection Coordinator	Date
ER Project Manager	Date

APPENDIX C. Plugging and Abandonment Procedures

C.1 PURPOSE

The purpose of this appendix is to describe detailed procedures for the P&A of wells at ORNL.

C.2 SCOPE

These procedures are intended to provide for effective P&A of wells in order to prevent the migration of fluids along the corehole or entry of surface fluids into the corehole.

C.3 RESPONSIBILITIES

A Well P&A Field Operations Planning Form (see Appendix D) will be prepared and submitted to the ORNL GPC for approval. The original plan, with all signatures, must be available before field activities begin. Any deviations from these procedures shall be approved by the ER Program project manager and the GPC prior to implementation. In particular, the results of pressure grouting, as required for wells that have split or perforated casings, should be evaluated when sufficient experience has been gained with the various wells encountered to determine whether the procedure should be modified or eliminated.

A geologist or qualified engineer shall be on site to record and verify all information and procedures required by this P&A Plan and the ORNL Well Plugging and Abandonment Report (see Appendix E). That individual is also responsible for recording any radiation exposure levels to personnel and equipment contamination and decontamination, as determined by qualified Health Physics (HP) personnel, and for recording any actions taken in accordance with *the Project Waste Management Plan.*

The ER Program project manager will specify a time limit for submittal of the ORNL Well Plugging and Abandonment Report (Appendix E) to the project oversight personnel after completion of the fieldwork on each well. After verifying its accuracy and completeness, the project oversight personnel will provide the report to the GPC.

C.4 REQUIRED EQUIPMENT

The following equipment, at a minimum, shall be required

- rotary drill rig, water truck, and support vehicles—all in good mechanical condition, properly equipped to complete the specified work;
- grout mixers and mixing tanks (including a separate mixer and holding tank for shear mixing bentonite and water prior to adding the cement), grout pumps, water pumps, and hoses;

- portable mud pan and mud balance;
- plastic sheeting (4 mil thickness);
- containers for collecting and transporting potentially hazardous or radioactive drilling fluid, drill cuttings, fluid grout, groundwater, and well casing;
- hot water pressure washer with an operating range equal to or greater than 800 psi and at least 180°F;
- excavating equipment and tools to remove the upper one to three ft of well casing where required; and
- A downhole camera and supporting equipment.

C.5 PLUGGING AND ABANDONMENT PROCEDURES

At the completion of each well or corehole plugging procedure, a steel rod measuring 1/2 in. in diameter by 8 in. in length shall be set within the grout at the top of the casing. The purpose of this rod is to assist in locating the abandoned well by the use of a metal detecting instrument, if for some unforeseen reason this becomes desirable.

C.5.1 Procedures for Shallow 3-in.-diam Aluminum Wells

- Measure and record the diameter and depth of the well and the depth to water.
- Prepare the well site for P&A by spreading the plastic sheeting around the well and cutting off the casing as near ground level as practical without excavation.
- Calculate the minimum volume of coarse granular bentonite chips required to plug the well to a level 1 ft below the ground surface by determining the inside volume of the open corehole, as follows.

$$V = \frac{3.14 \times r^2}{144} \times D \qquad (1)$$

where

V = volume in cubic feet,
r = inside radius of corehole inches,
D = depth, in feet, of total well installation below ground surface minus 1 ft.

- Place bentonite chips into the well at a slow steady rate, up to a level 1 ft below the ground surface. Throughout this process, continually measure the depth to the bentonite with a measuring tape that is retractable into an enclosed case small enough to be disposed of in the well at the top of the bentonite if the level of contamination makes this expedient. If the bentonite bridges in the casing, the blockage will be removed by

manipulation of the measuring tape, and the rate of placement will be reduced so that bridging will not reoccur. If water in the well is displaced to a level where it could discharge to the ground surface, it will be lowered by bailing or pumping to prevent this. The water will be contained and disposed of properly.

- Fill the remaining 1 ft section of the casing below the ground surface with a commercial nonshrink grout (equal or similar to MASTERFLOW 928™, a product of Master Builders Technology, Inc.) mixed according to the manufacture's instructions.

- Split any part of the casing that protrudes above the ground surface in sufficient places so that the split portions can be folded (by pressing or hammering) inward over the top of the bentonite column.

- If the well was not surrounded by a concrete pad when constructed, place over the top of the well a low mound (approximately 6 in.) of tamped clayey soil that will support vegetation.

- As prescribed in Sect. 3.5.2.5, decontaminate equipment and tools.

C.5.2 Procedures for Wells in the Waste Trenches

- Measure and record the diameter and depth of the well and depth to water. If the measurement indicates that the well is not open to its full depth, no attempt shall be made to dislodge any obstruction in the well, and the depth of the blockage shall be documented in the Well Plugging and Abandonment Report. Plastic sheeting shall be placed so as to protect the ground surface from contamination by the operation.

- Calculate the minimum volume of coarse granular chips and powdered bentonite required to plug the well to a level 3.5 ft below the ground surface by determining the inside volume of the well, including screen and casing, using equation (1), where

  V = volume in cubic feet,
  r = inside radius of well pipe in inches,
  D = depth, in feet, of total well installation below ground surface minus 3 ft.

- Place bentonite chips into the well at a slow steady rate, up to a level 3.5 ft below the ground surface. Throughout this process, continually measure the depth to the bentonite with a measuring tape that is retractable into an enclosed case of a size that can be disposed of into the well at the top of the bentonite, if advisable because of the level of contamination. If the bentonite bridges in the casing, the blockage will be removed by manipulation of the measuring tape, and the rate of placement reduced so that bridging will not reoccur.

- Place sufficient powdered bentonite on top of the coarse granular bentonite to bring the bentonite to a level 3 ft below the ground surface. Follow this with Type 1 cement grout to a depth of 1 ft below the surface. Mix Type 1 cement grout to a water/cement ratio (by volume) of 0.7 part potable water to 1 part portland cement (5.2 gal of water to one 94 lb bag of cement). This mix will yield a grout with a density of 114.2 lb/ft^3 (15.3 lb/gal).

- After the grout has set (minimum 24 h), remove the casing to a depth of 1 ft below the ground surface. If the grout level was more than 1 ft below the ground surface prior to casing removal, grout must be added to bring the grout to that level. Grout can be added either before or after the casing is removed; however, the grout must set for at least 24 h before the casing excavation can be backfilled.

- Backfill the casing excavation with the excavated soil placed in layers no thicker than 6 in. Compact each 6-in. layer of placed soil with three passes of a power-operated tamping machine. Provide additional clay (CL, as described by the Unified Soil Classification System) soil to replace the volume of the casing removed and any volume decrease due to compaction. Grade the completed backfill so that it will not pond surface water.

- As prescribed in Sect. 3.5.2.5, decontaminate equipment and tools.

C.5.3 Procedures for Wells with Screened or Perforated Intakes

- Prepare the well site for P&A. Remove any protective posts present. Where possible, any sampling hardware shall be salvaged for future use by ORNL. Spread plastic sheeting, set up equipment, and prepare the containment facility to collect potentially contaminated groundwater, grout, drilling fluids, and drilling debris from the decommissioning operation.

- Measure and record the diameter and depth of the well and the depth to water. Compare the measured well depth with the recorded depth, and, if the measurement indicates that a well 2 in. or greater in diameter may be blocked, inspect the well with a downhole camera. After viewing with the camera, decide whether to remove the obstruction by either drilling with a bit of lesser diameter than the casing, or by dislodging it by percussion methods.

- If records do not document that the casing/corehole annulus was properly grouted at the time of installation, and the casing is 2 in. or more in diameter and more than 10 ft in length, perforate or split the casing throughout its length from a depth of 10 ft below the ground surface to the top of the well screen. Measure the well depth after splitting or perforating the casing to ensure that the well is open for grouting.

- Calculate the minimum volume of grout required to fill the well to the ground surface by determining the inner volume of the well, including the screen and casing, using equation (1), where

  V = volume in cubic feet,
  r = inside radius of well pipe in inches,
  D = depth, in feet, of total well installation below ground surface.

- Type 1 cement/bentonite grout mix shall be 94 lb of Type 1 cement, 3.8 lb of powdered bentonite, and 8 gal of potable water. This mix will yield a grout slurry of approximately 1.6 ft^3 having a density of 103 lb/ft^3 (13.8 lb/gal), which results in a gravity grouting pressure of 0.7 psi per foot of the grout column. Mix the bentonite and water thoroughly by shear mixing prior to being mixed with the cement. Use Type 1 cement/bentonite

grout shall be used in wells in which the casing is not split of perforated, and where the well screen length is 10 ft or less.

- Microfine cement grout mix shall be one part microfine cement (a portland/slag based mixture with at least 50% of particle size less than 4 μm) to one part potable water, by weight. Microfine cement is commonly supplied in 44-lb (20-kg) bags, therefore a one-bag, 1-to-1 mix will yield approximately 0.94 ft^3 of grout slurry having a density of 94 lb/ft^3 (12.5 lb/gal), which results in a gravity grouting pressure of 0.65 psi per foot of the grout column. Use microfine cement grout in all wells in which the casing is split or perforated, in wells with screens more than 10 ft in length, and in any wells constructed with casings perforated over most of their length.

- Measure and mark the tremie pipe and insert it to the bottom of the well.

- Pump the prescribed type of grout into the well through the tremie pipe. The tremie pipe may be raised as grouting progresses, but the bottom of the pipe shall always shall be submerged at least 10 ft below the grout surface. Continue pumping the grout until undiluted grout reaches the ground surface. Determine when grout is undiluted by monitoring the density of the grout with a mud balance; the density of the grout at the top of the well shall be equal to or greater than 95% of the density of the specified grout mix. After the grout pipe has been withdrawn, additional grout may be required to fill the well to within 3 ft of the ground surface.

- Wells grouted with microfine cement grout shall be pressure grouted through a packer set in the well casing at the ground surface or, if the casing has been slit or perforated above a depth of 10 ft below the ground surface, set into the casing at a depth of 10 ft below the ground surface. Attach the grout line to the packer and pump microfine cement grout to the well at a slowly increasing pressure. The maximum pressure applied will be no greater than 9 psi. The ground surface will be carefully observed during pressure grouting, and if any grout appears at the ground surface, the pressure on the well shall immediately be relieved and the pressure grouting of that well terminated. Pressure grouting shall also be terminated if the well takes a quantity of grout equal to twice the minimum calculated volume of the well. When the maximum pressure is applied for period of 10 min with no significant grout takes, terminate pressure grouting.

- After the grout has set a minimum of 24 h, remove the casing to a depth of 3 ft below the ground surface. If the grout level was less than 3 ft below the ground surface prior to casing removal, add grout must be added to bring the grout to that level. Grout can be added either before or after the casing is removed; however, the grout must set for at least 24 h before the casing excavation can be backfilled.

- Backfill the casing excavation with the excavated soil placed in layers no thicker than 6 in. Compact each 6-in. layer of placed soil with three passes of a power-operated tamping machine. Provide additional clay (CL, as described by the Unified Soil Classification System) soil to replace the volume of the casing removed and any volume decrease due to compaction. Grade the completed backfill so that it will not pond surface water.

- As prescribed in Sect. 3.5.2.5, decontaminate equipment and tools.

C.5.4 Procedures for Non-Screened Bedrock Wells

- Prepare the well site for P&A. If present, remove protective posts. Where possible, salvage any sampling hardware for future use by ORNL. Spread plastic sheeting, set up equipment, and prepare the containment facility to collect potentially contaminated groundwater, grout, drilling fluids, and drilling debris from the decommissioning operation.

- Measure and record the diameter and depth of the well and the depth to water. Compare the measured well depth to the recorded depth, and, if the measurement indicates a well 2 in. or greater in diameter may be blocked, inspect it with a downhole camera. After viewing with the camera, decide whether to remove the obstruction either by drilling with a bit of lesser diameter than the casing or rock-corehole or by dislodging it by percussion methods. Also, if the well casing is to be split or perforated, and neither the length of the open-hole section or the length of the casing is known, inspect the well with the downhole camera to determine the length of the well casing.

- If records do not document that the casing/corehole annulus was properly grouted at the time of installation, and the casing is 2 in. or more in diameter and more than 10 ft in length, perforate or split the casing throughout its length from a depth of 10 ft below the ground surface to the top of the open-hole section. The well depth should be measured after splitting or perforating the casing to ensure that the well is open for grouting.

- If the well casing will not be split or perforated, calculate the minimum volume of grout required to fill the well to the ground surface by determining the inner volume of the well, including the open-hole section and casing, using equation (1), where

  V = volume in cubic feet,
  r = inside radius of well pipe in inches,
  D = depth, in feet, to the bottom of the open corehole from the ground surface.

  However, if the open-corehole section of the well is smaller than the inside of the well casing, the volumes of the open and cased volumes of the well will have to be calculated separately as is shown below for wells with slit or perforated casing.

- If the well casing will be split or perforated, calculate the minimum volume of grout required to fill the open-hole section of the well by determining its volume using equation (1), where

  V = calculated volume in cubic feet,
  r = inside radius of the well pipe in inches,
  D = length, in feet, from the bottom of the casing to the bottom of the open. corehole

- If the well casing will be split or perforated, also calculate the minimum volume of microfine cement grout required to fill the cased portion of the well by determining the

inner volume of the casing from the top of the open-hole portion of the well to the ground surface using equation (1), where

V = calculated volume in cubic feet,
r = inside radius of the well pipe in inches,
D = length, in feet, of the well pipe from the top of the open portion of the well to the ground surface.

- Type 1 cement/bentonite grout mix shall be 94 lb of Type 1 cement, 3.8 lb of powdered bentonite, and 8 gal of potable water. This will produce a slurry of approximately 1.6 ft^3 having a density of 103 lb/ft^3 (13.8 lb/gal), which results in a grout pressure of (7 psi per foot of the grout column. Mix the bentonite and water thoroughly by shear mixing prior to mixing with the cement. Use Type 1 cement/bentonite grout 1) to grout the open-hole section of all bedrock wells in which the open-hole section has a calculated volume more than 5 ft^3; and 2) to grout both the open-hole section (regardless of dimensions) and cased section of those bedrock wells where the casing is not split or perforated.

- Microfine cement grout mix shall be one part microfine cement (a portland/slag based mixture with at least 50% of particle size less than 4 μm) to one part potable water, by weight. Microfine cement is commonly supplied in 44-lb (20-kg) bags; therefore a one-bag, 1-to-1 mix will yield approximately 0.94 ft^3 of grout slurry having a density of 94 lb/ft^3 (12.5 lb/gal), which results in a gravity grouting pressure of 0.65 psi per foot of the grout column. Use microfine cement grout 1) to grout the cased section of all open-hole bedrock wells where the casing is split or perforated; and 2) to grout the open-hole section of those bedrock wells where the casing is split or perforated and the open hole section has a calculated volume of 5 ft^3 or less.

- Insert a tremie pipe to the bottom of the well. Measure and mark the tremie pipe and insert it to the bottom of the well.

- In open-hole bedrock wells that will be grouted with only one type of grout, either Type 1 cement/bentonite grout or microfine cement grout, pump the grout into the well through the tremie pipe initially placed at the bottom of the well. The tremie pipe may be raised as grouting progresses, but shall always be submerged at least 10 ft below the grout surface. Continue pumping the grout until undiluted grout reaches the ground surface. Determine when grout is undiluted by monitoring the density of the grout with a mud balance; the density of the grout at the top of the well shall be equal to or greater than 95% of the density of the specified grout mix. After withdrawing the grout pipe, add grout as needed to fill the well to within 3 ft of the ground surface.

- In those open-hole bedrock wells in which two types of grout will be used, grouting will be in two separate operations. First, insert a measured and marked tremie pipe to the bottom of the well. Pump the quantity of Type 1 cement/bentonite grout calculated to fill the open-hole section of the well through the tremie pipe. The tremie pipe may be raised as grouting progresses, but shall always be at least 10 ft below the level of the grout in the corehole. When the calculated quantity has been pumped into the well, remove the tremie pipe and allow the grout to set for at least 24 h prior to continuing to grout the cased portion of the well. After the grout has set for at least 24 h, again lower a measured tremie pipe into the well to the top of the firm Type 1

cement/bentonite grout and record its depth. If the tremie is not down to the calculated depth of the top the Type 1 cement/bentonite grout, jet it down to that level. Then pump microfine cement grout through the tremie pipe initially placed on the top of the Type 1 cement/bentonite grout. The tremie pipe may be raised as grouting progresses, but shall always be at least 10 ft below the grout surface. Continue pumping the grout until undiluted grout reaches the ground surface. Determine when grout is undiluted by monitoring the density of the grout with a mud balance; the density of the grout at the top of the well shall be equal to or greater than 95% of the density of the specified grout mix. After withdrawing the grout pipe, add additional grout as needed to fill the well to within 3 ft of the surface. During the grouting of either the open corehole or perforated or split casing section of the well, if twice the calculated volume of grout is injected without the grout's reaching the desired level, the original well corehole may have intersected solution cavities if the well is in limestone or dolomite strata. Strong consideration should then be given to a temporary cessation (12 to 24 h) of grouting, so that the grout will have a chance to set rather than to flow off into the cavity. (It is not the purpose of P&A to plug natural cavities.) When grouting is resumed, it should be with Type 1 cement/bentonite grout.

- Wells grouted with microfine cement grout shall be pressure grouted through a packer set in the well casing at the ground surface, or, if the casing has been slit or perforated above a depth of 10 ft below the ground surface, set the packer into the casing at a depth of 10 ft below the ground surface. Attach the grout line to the packer and pump microfine cement grout to the well at a slowly increasing pressure. The maximum pressure applied will be no greater than 9 psi. Carefully observe the ground surface during pressure grouting, and, if any grout appears at the ground surface, immediately relieve the pressure on the well and the terminate the pressure grouting. Also terminate pressure grouting if the well takes a quantity of grout equal to twice the minimum calculated volume of the well. When the maximum pressure is applied for period of 10 min with no significant grout takes, terminate pressure grouting.

- After the grout has set (a minimum of 24 h), remove the casing to a depth of 3 ft below the ground surface. If the grout level was less than 3 ft below the ground surface prior to casing removal, add grout to bring it to that level. Grout can be added either before or after the casing is removed; however, the grout must set for at least 24 h before the casing excavation can be backfilled.

- Backfill the casing excavation with the excavated soil placed in layers no thicker than 6 in. Compact each 6-in. layer of soil placed with three passes of a power-operated tamping machine. Provide additional clay (CL, as described by the Unified Soil Classification System) soil to replace the volume of the casing removed and any volume decrease due to compaction. Grade the completed backfill so that it will not pond surface water.

- As prescribed in Sect. 3.5.2.5, decontaminate equipment and tools.

C.6. CONTINGENCY ABANDONMENT WITH CASING REMOVAL

If it becomes necessary to decommission a well by completely removing the casing and grouting the well corehole the following procedures shall apply.

C.6.1. Removal of PVC Casing

- Measure and record the diameter and depth of the well and the depth to water. Compare the depth to documentation of the well's installation to verify the depth of casing to be removed.

- Prepare the well site for P&A by removing protective casing, guard posts, sampling hardware, and concrete pad. Where possible, salvage any sampling hardware for future use by ORNL. Spread plastic sheeting, set up the drill rig and equipment, and prepare the containment facility to collect potentially contaminated groundwater, grout, drilling fluids, and drilling debris.

- Drill the casing out with a tricone bit or over-drill it with a hollow-stem auger equipped with a pilot bit or guide rod. Properly dispose of drill cuttings and casing. Drill or ream the well to the depth of the original well corehole, with a bit at least 1/4 in. larger in diameter than the diameter of the original corehole. If a tricone bit rotary drilling system is used, all original grout and PVC shall be removed from the corehole before removing the drill string.

- Calculate the minimum volume of grout required to fill the redrilled corehole to the ground surface by determining the inner volume of the redrilled corehole, using equation (1), where

  V = calculated volume in cubic feet,
  r = radius of the bit used in drilling plus 1/4 in.,
  D = depth, in feet, of redrilled corehole.

- The grout mix proportion shall be 94 lb of Type 1 cement, 3.8 lb of powdered bentonite, and 8 gal of potable water. This mix will yield a grout slurry of approximately 1.6 ft^3 having a density of 103 lb/ft^3 (13.8 lb/gal), which results in a gravity grouting pressure of 0.7 psi per foot of the grout column. Mix the bentonite and water thoroughly by shear mixing prior to mixing with the cement.

- Insert a measured and marked tremie pipe to the bottom of the well. If the corehole has collapsed or is otherwise blocked, redrill it using a mud-rotary drilling system with a drilling fluid designed to inhibit the corehole from collapsing and to reduce infiltration into the strata penetrated by the corehole. At the completion of redrilling the corehole, the drilling fluid shall be left in the corehole in a state that will stabilize the corehole walls for grout placement by the tremie method.

- Pump the grout through the tremie pipe initially inserted to the bottom of the corehole. The tremie pipe may be raised, but shall always be at least 10 ft below the grout surface. Continue pumping the grout until undiluted grout reaches the ground surface. Determinate when grout is undiluted by monitoring the weight of the grout with a mud balance; the weight of the at the top of the well shall be equal to or greater than 95% of the density of the specified grout mix. Tremie grouting should be completed in one continuous operation. After withdrawing the grout pipe, add grout to fill the well to within 3 ft of the surface.

- After the grout has set (a minimum of 24 h), excavate it to a depth of 3 ft below the ground surface. If the grout level was less than 3 ft below the ground surface prior to its excavation, add grout to bring it to that level before excavating. However, the grout must set for at least 24 h before the excavation can be backfilled.

- Backfill the excavation with the excavated soil placed in layers no thicker than 6 in. Compact each 6-in. layer of placed soil with three passes of a power-operated tamping machine. Provide additional clay (CL, as described by the Unified Soil Classification System) soil to replace the volume of the casing removed and any volume decrease due to compaction. Grade the completed backfill will be graded so that it will not pond surface water.

- As prescribed in Sect. 3.5.2.5, decontaminate equipment and tools.

C.6.2 Removal of Steel Casing

- Measure and record the diameter and depth of the well and the depth to water. Compare the depth to documentation of the well's installation to verify the depth of casing to be removed.

- Prepare the well site for P&A by removing protective casing, guard posts, sampling hardware, and concrete pad. Where possible, salvage any sampling hardware for future use by ORNL. Spread plastic sheeting, set up the drill rig and equipment, and prepare the containment facility to collect potentially contaminated groundwater, grout, drilling fluids, and drilling debris.

- Attempt to pull or jack the casing from the well corehole. If the casing cannot be pulled or jacked out, use a hollow-stem auger or wash-over pipe to drill over the full length of the casing and screen which shall then be withdrawn with the drill stem, and dispose of properly. Drill or ream the well to the depth of the original well corehole with a bit at least 1/4 in. larger in diameter than the original corehole. Remove all original grout from the corehole before removing the drill string.

- Calculate the minimum volume of grout required to fill the redrilled corehole to the ground surface by determining the inner volume of the redrilled corehole, using equation (1), where

  V = calculated volume in cubic feet,
  r = radius of the bit used in drilling plus 1/4 in.,
  D = depth, in feet, of redrilled corehole.

- The grout mix proportion shall be 94 lb of Type 1 cement, 3.8 lb of powdered bentonite, and 8 gal of potable water. This mix will produce a grout slurry of approximately 1.6 ft^3 having a density of 103 lb/ft^3 (13.8 lb/gal), which results in a gravity grouting pressure of 0.7 psi per foot of the grout column. Thoroughly mix the bentonite and water by shear mixing prior to mixing with the cement.

- Insert a measured and marked tremie pipe to the bottom of the well. If the corehole has collapsed or is otherwise blocked, redrill it using a mud-rotary drilling system with a

drilling fluid designed to inhibit the corehole from collapsing and to reduce infiltration into the strata penetrated by the corehole. At the completion of redrilling the corehole, leave the drilling fluid in the corehole in a state that will stabilize the corehole walls for grout placement by the tremie method.

- Pump grout through the tremie pipe initially inserted to the bottom of the corehole. The tremie pipe may be raised, but shall always be at least 10 ft below the grout surface. Continue pumping the grout until undiluted grout reaches the ground surface. Determine when grout is undiluted by monitoring the weight of the grout with a mud balance; the weight of the at the top of the well shall be equal to or greater than 95% of the density of the specified grout mix. Tremie grouting should be completed in one continuous operation. After withdrawing the grout pipe, add grout to fill the well to within 3 ft of the surface.

- After the grout has set (a minimum of 24 h), excavate it to a depth of 3 ft below the ground surface. If the grout level was less than 3 ft below the ground surface prior to its excavation, add grout to bring it to that level before excavating; however, the grout must set for at least 24 h before the excavation can be backfilled.

- Backfill the excavation with the excavated soil placed in layers no thicker than 6 in. Compact each 6-in. layer of placed soil with three passes of a power-operated tamping machine. Provide additional clay (CL, as described by the Unified Soil Classification System) soil to replace the volume of the casing removed and any volume decrease due to compaction. Grade the completed backfill so that it will not pond surface water.

- As prescribed in Sect. 3.5.2.5, decontaminate equipment and tools.

APPENDIX D

WELL PLUGGING AND ABANDONMENT FIELD OPERATIONS PLANNING FORM

WELL PLUGGING AND ABANDONMENT
FIELD OPERATIONS PLANNING FORM
(Use additional sheets as necessary for any numbered items)

1. Total number of wells to be decommissioned by this plan ___

2. Complete table below

Well Number	North Coord.	East Coord.	Date Install.	Total Depth (ft)	Inside Diameter (in.)	Casing Length (ft)	Screen Length (ft)	Approx. Depth to Water (ft)	Casing Material	Elev. Ground Surface (ft)

WELL PLUGGING AND ABANDONMENT FIELD OPERATIONS PLANNING FORM

Sheet 2

3) Reason wells are to be abandoned _____

4) Required site preparation (removal of posts, pads, pumps, etc.) _____

5) Proposed method of abandonment _____

6) Health and safety considerations for well abandonment crew _____

7) Desired startup date _____
Required completion date _____
Date Program Plan Submitted _____

8) Comments _____

WELL PLUGGING AND ABANDONMENT
FIELD OPERATIONS PLANNING FORM

9) Project Manager: Name _____ Dept. _____
Phone _____ Signature _____

10) Well Custodian: Name _____ Dept. _____
Phone _____ Signature _____

11) Proposed technical oversight company_____

12) Proposed drilling subcontractor_____

13) Group that will manage well abandonment program_____

14) Program plan approval subject to following stipulations: _____
_____
_____
_____

15) Approved by: _____ Date _____
Environmental Restoration Program Project Manager

16) Approved by: _____ Date _____
Groundwater Program Coordinator

APPENDIX E

ORNL WELL PLUGGING AND ABANDONMENT REPORT

ORNL WELL PLUGGING AND ABANDONMENT REPORT Sheet 1

Prepared by_____ Date _____

PART A

GENERAL INFORMATION

Well number_____ Location _____

Project name _____

Coordinates: North_____ East _____

Abandonment contractor _____ Driller _____

Oversight contractor_____ Geologist _____

Well abandonment: Date started _____ Date completed _____

PART B

WELL DATA FILE REVIEW

Note: Depths are measured from ground surface to the nearest 0.1 ft.

1. Depth to bottom well below ground surface (from data file) (ft) _____
2. Measured depth from ground surface to bottom of well (ft) _____
3. Depth from ground surface to static water level (ft)_____
4. Total drilled depth of corehole (ft) _____ Diameter of drilled hole (in) _____
5. Ground surface elevation (mean sea level) (ft) _____
6. Reason for well abandonment_____

_____

_____

ORNL WELL PLUGGING AND ABANDONMENT REPORT Sheet 2

7. Well Casing

Type of Material	Schedule or Thickness	Nominal I.D. (in)	From (ft)	To (ft)

8. Well Screen

Type of Material	Nominal I.D. (in)	Slot Type	From (ft)	To (ft)

9. Well Sump

Type of Material	Schedule or Thickness	Nominal I.D. (in)	From (ft)	To (ft)

10. Annular Grout

Type of Grout	Annular Thickness (in)	From (ft)	To (ft)

11. Type of Material in Annular Space, if not Grout

Material	From (ft)	To (ft)

12. Filter Pack

From (ft)	To (ft)

ORNL WELL PLUGGING AND ABANDONMENT REPORT Sheet 3

PART C

PLUGGING DATA

1. Plugging Materials Calculated and Actually Placed.

   Volume of all well/materials calculated by equation:

$$V = \frac{3.14 \times r^2}{144} \times D$$

   a. If a waste burial trench well:

      V = Volume, in cubic feet, for plugging with bentonite.
      r = 1/2 inside diameter of casing in inches.
      D = Depth, in feet, from bottom of well to 3 ft below ground surface.

      r = ____
      D = ____

Calculated Vol. (cubic ft)	Bentonite Actually Placed Volume (cubic feet)	Difference Between Calculated & Placed Volume (Use "+" or "-" sign, or "0")	Volume of Type 1 Cement Grout Actually Placed

   b. If a Cased and Screened Well, or an Open-Hole Bedrock Well with only one type of Grout Injected:

      V = Volume, in cubic feet, for plugging with grout,
      r = 1/2 inside diameter of casing, in inches,
      D = Depth, in feet, to bottom of well from ground surface.

      r = ____
      D = ____

Type of Grout	Calculated Volume (cubic feet)	Volume Grout Actually Placed (cubic feet)	Difference Between Calculated & Placed Volume (Use "+" or "-" sign, or "0")

ORNL WELL PLUGGING AND ABANDONMENT REPORT Sheet 4

c. If an Open-Hole Bedrock Well and two types of Grout Injected:

(1) For Open-Hole Section of Bedrock Well

V = Volume, in cubic feet, of open-hole section to be plugged with Type 1 cement/bentonite grout,
r = 1/2 inside diameter of corehole, in inches,
D = Length, in feet, from bottom of corehole to bottom of casing.

r = ____
D = ____

Type of Grout	Calculated Volume (cubic feet)	Volume Grout Actually Placed (cubic feet)	Difference Between Calculated & Placed Volume (Use "+" or "-" sign, or "0")

(2) For Cased Section of Bedrock Well

V = Volume, in cubic feet, of cased section in to be plugged with microfine cement grout,
r = 1/2 inside diameter of casing, in inches,
D = Depth, in feet, from bottom of casing to ground surface.

r = ____
D = ____

Type of Grout	Calculated Volume (cubic feet)	Volume Grout Actually Placed (cubic feet)	Difference Between Calculated & Placed Volume (Use "+" or "-" sign, or "0")

ORNL WELL PLUGGING AND ABANDONMENT REPORT Sheet 5

2. Describe the actual method used to abandon this well, including observations via downhole camera and removal of obstructions, if applicable_____

3. Footage actually abandoned (From/To)_____

4. Was well perforated? If so, at what depths? _____

5. Was well casing over-cored? If so, what diameter and depth? _____

6. Was well casing pulled? If so, what length and diameter? _____

7. Abandonment problems or deviations from abandonment specifications_____

8. Grout mix used _____

9. Maximum pressure applied through packer, if applicable, and volume of grout injected due to applied pressure_____

ORNL WELL PLUGGING AND ABANDONMENT REPORT Sheet 6

10. Site Cleanup (Include volumes, site locations and methods)

a. Disposal of well pad, posts and other materials _____

_____

_____

b. Disposal of well screen(s) and casing _____

_____

_____

c. Disposal of drilling mud _____

_____

_____

d. Disposal of excess grout _____

_____

_____

11. Date site cleanup completed _____

12. Site inspected by _____ Date _____

13. Report prepared by _____ Date _____

14. Data accuracy verified by _____ Date _____

15. Comments

_____

_____

_____

_____

_____

_____

_____

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